

Pace University

DigitalCommons@Pace

Pace Law Faculty Publications

School of Law

9-1-2014

The State Response to Climate Change: 50 State Survey

Laura Jensen

Elisabeth Haub School of Law at Pace University

Kelly Nishikawa

Pace Law School

Benjamin Lowenthal

Pace Law School

Follow this and additional works at: <https://digitalcommons.pace.edu/lawfaculty>



Part of the [Energy and Utilities Law Commons](#), [Environmental Law Commons](#), and the [State and Local Government Law Commons](#)

Recommended Citation

Laura Jensen, Kelly Nishikawa, & Benjamin Lowenthal, The State Response to Climate Change: 50 State Survey in *Global Climate Change and U.S. Law* (Michael B. Gerrard & Jody Freeman eds., 2d ed. 2014), <http://digitalcommons.pace.edu/lawfaculty/973/>.

This Article is brought to you for free and open access by the School of Law at DigitalCommons@Pace. It has been accepted for inclusion in Pace Law Faculty Publications by an authorized administrator of DigitalCommons@Pace. For more information, please contact dheller2@law.pace.edu.

Chapter 11: The State Response to Climate Change: 50 State Survey

Pace Law School Center for Environmental Legal Studies
Compiled and Edited by Laura Jensen, Kelly Nishikawa, and Benjamin Lowenthal*

Posted September 1, 2014 and reflecting developments through April 2014

This survey accompanies GLOBAL CLIMATE CHANGE AND U.S. LAW, Second Edition (Michael B. Gerrard and Jody Freeman, eds.) (American Bar Association 2014), which is available [here](#).** It compiles state legislation, rules and executive orders that specifically address climate change as of the end of April 2014. It also includes a wide variety of state activities that may have an impact on greenhouse gases including legislation related to energy efficiency and renewable energy. The focus of this material is to provide readers with an understanding of the range of state activity that may contribute to greenhouse gas reduction and climate change. Some types of energy efficiency, alternative fuels and renewable energy legislation (such as tax credits for hybrid vehicles) are very similar from state to state; some laws have a short duration and therefore may not be codified (such as temporary tax credits); energy legislation is being enacted at an increasing pace. As a result, not all energy efficiency, alternative fuels and renewable energy legislation and other activity in every state are included in this compilation.

The material in this survey demonstrates how several states have taken analogous approaches to addressing climate change. For example, a growing number of states have adopted renewable portfolio standards and many states have adopted California's greenhouse gas emissions standards for motor vehicles. In addition, states have formed regional initiatives to address climate change. Such actions, along with several other initiatives discussed herein, show how the states have emerged as leaders in addressing climate change.

*PLEASE NOTE: THE LATEST INFORMATION ON EACH STATE IS ADDED TO THE END OF THE STATE SECTION TO ALLOW FOR CHRONOLOGICAL REFERENCE.****

* This chapter has been edited and updated by students at Pace Law School's Global Center for Environmental Legal Studies overseen by Associate Director of Environmental Law Programs Laura Jensen. The following individuals have contributed to this iteration of the chapter: John Bowie ('14), Lisa Covert ('14), Michael DiCato ('14), Benjamin Lowenthal ('13), Kelly Nishikawa ('15), Kimberly Pierce Cortes ('14), Erik Roth ('15), T.J. Ruane ('14), Debra Stone ('13), Levan Thomas ('16), Charter Williams ('15), and Laura Young ('14). Special thanks to Kelly Nishikawa and Ben Lowenthal for their heroic efforts on this project.

** http://shop.americanbar.org/eBus/Default.aspx?TabID=251&productId=215104&sc_cid=5350250-NR_B2&sc_channel=website

*** Please note that the Global Center for Environmental Legal Studies will continue to compile legislation, rules, and executive orders that relate to climate change. We request that readers with new information or information that differs from that included in this chapter forward such information to Laura Jensen with the subject line "Chapter 11 Update" at EnvironmentalProgram@law.pace.edu.

Table of Contents

ALABAMA	4
ALASKA	10
ARIZONA	19
ARKANSAS	30
CALIFORNIA	33
COLORADO	68
CONNECTICUT	85
DELAWARE	104
FLORIDA	119
GEORGIA	128
HAWAI'I	132
IDAHO	142
ILLINOIS	146
INDIANA	161
IOWA	164
KANSAS	174
KENTUCKY	183
LOUISIANA	192
MAINE	195
MARYLAND	211
MASSACHUSETTS	232
MICHIGAN	257
MINNESOTA	276
MISSISSIPPI	286
MISSOURI	288
MONTANA	294
NEBRASKA	303
NEVADA	308
NEW HAMPSHIRE	317
NEW JERSEY	332
NEW MEXICO	348
NEW YORK	360
NORTH CAROLINA	408

NORTH DAKOTA	415
OHIO.....	421
OKLAHOMA.....	432
OREGON.....	438
PENNSYLVANIA.....	461
RHODE ISLAND.....	480
SOUTH CAROLINA.....	495
SOUTH DAKOTA	499
TENNESSEE.....	505
TEXAS.....	513
UTAH.....	518
VERMONT.....	528
VIRGINIA	546
WASHINGTON	559
WEST VIRGINIA.....	575
WISCONSIN	581
WYOMING.....	597

ALABAMA

1984: Climate Change Adaptation, Energy Efficiency, Greenhouse (GHG) Gas Reduction, and Renewable Energy

In 1984, the Alabama Department of Economic and Community Affairs (ADECA) Energy Division began offering financial assistance for the installation of qualifying biomass energy systems in commercial, industrial and institutional facilities. Assistance was provided in the form of an interest subsidy on loans used to finance the projects, the maximum amount for any one project being \$75,000.¹

1997: Green Building, Energy Efficiency, and Greenhouse Gas Reduction

In 1997, the Energy Division of Alabama Department of Economic and Community Affairs (ADECA) established the Local Government Energy Loan Program in order to advance energy efficiency for government and educational entities faced with budget restraints without funds to upgrade equipment and/or buildings for energy efficiency.²

The program offers no-interest loans for a term of up to ten years to small rural government agencies, including schools, for energy-efficiency equipment and building upgrades. The fund has an endowment of \$2 million per year. The maximum loan amount is \$350,000 for local governments, colleges and universities, and \$350,000 per school campus not to exceed \$500,000 per school system (until the loan has been fully repaid).³

In 1997, ADECA also established the Alabama STAR (Savings Through Analysis and Retrofits) Program providing prevailing interest-rate loans for energy-efficiency improvements to tax-exempt, public, and non-profit schools. Eligible improvements include lighting retrofits, heating, ventilation, and air conditions (HVAC) equipment, load management devices, and sewage and water systems improvements, among other measures. The fund has an endowment of \$4.6 million per year. Individual loans cannot exceed \$2 million.⁴

¹ *Biomass Energy Program*, U.S DEP'T OF ENERGY (June 10, 2013), <http://energy.gov/savings/biomass-energy-program>; HERVE BILLIET, ANTHONY HOLDEN, & ANDREA KERBY, ALABAMA'S BIOMASS ENERGY PROGRAM, at 5 (2009), <http://uahcmr.com/wp-content/uploads/2010/09/Alabamas-Biomass-Energy-Program.pdf>.

² ALA. DEP'T OF ECON. AND CMTY. AFFAIRS, LOCAL GOVERNMENT ENERGY LOAN PROGRAM, at 3 (Dec., 2013), <http://www.adeca.alabama.gov/Divisions/energy/Local%20Gov%20Energy%20Loan%20Program/Local%20Government%20Energy%20Loan%20Program%20Application%20Booklet.pdf>

³ *Energy Financing Programs*, ALA. DEP'T OF ECON. AND CMTY. AFFAIRS (Aug. 22, 2013), <http://www.adeca.alabama.gov/Divisions/energy/Pages/EnergyFinancing.aspx>.

⁴ *State Energy Efficiency Index*, THINK ENERGY (June 10, 2013), http://www.think-energy.net/energy_efficiency_funds.htm; U.S. AID, FUNDS FOR ENERGY EFFICIENCY PROGRAMS, at 43 (Feb. 15, 2014), (http://pdf.usaid.gov/pdf_docs/PNACR595.pdf).

In December 1997, the University of Alabama released a report on the highest-ranking recommendations for a state climate change action plan.⁵ The report was based on the first phase of the project, a greenhouse gas (GHG) emissions inventory partially funded by EPA, conducted from 1990-1995.⁶

2003: Regional Initiatives and Greenhouse Gas Reduction

In 2003 Alabama Partners for Clean Air (APCA) was established.⁷ APCA is an affiliation of public, private and nonprofit agencies and organizations working to implement voluntary transportation projects, program and strategies that will reduce emissions from mobile sources to improve air quality in Alabama counties. APCA activities contribute to attainment or maintenance of the National Ambient Air Quality standards (NAAQS) for ground-level ozone and particulate matter.⁸

2007: Greenhouse Gas Reduction

In May 2007, Alabama along with thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas (GHG) emissions accurately, transparently and consistently across borders and industry sectors.”⁹ The Registry is a nonprofit collaboration among U.S. states and other North American territories and provinces that set consistent and transparent standards to calculate verify and publicly report GHG emissions into a single data base.¹⁰ This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”¹¹ As of March 2008, thirty-nine total states were participating in the Climate Registry.¹²

On June 14, 2007, Governor Riley signed a bill, making the Center for Alternative Fuels activities part of Alabama law¹³ to promote, develop and encourage the use of alternative motor vehicle fuels.¹⁴ The Center was created within Alabama’s Department of Agriculture and Industries to act as an information clearinghouse for available federal

⁵ WILLIAM J. HERZ, ROBERT A. GRIFFIN & WILLIAM D. GUNTHER, POLICY PLANNING TO REDUCE GREENHOUSE GAS EMISSIONS IN ALABAMA, at ii (1997), http://www.epa.gov/statelocalclimate/documents/pdf/Alabama_action_plan.pdf.

⁶ *Id.*

⁷ *APCA Goals*, ALA. PARTNERS FOR CLEAN AIR (Feb. 19, 2014), <http://www.alabamacleanair.org/about-us/>.

⁸ *Id.*

⁹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

¹⁰ *Id.*

¹¹ *Id.*

¹² The Climate Registry, General Reporting Protocol 1 (May 2008), <http://www.theclimateregistry.org/downloads/GRP.pdf>.

¹³ *Center for Alternative Fuels*, ALA. DEP’T OF AGRIC. & INDUS. (Feb. 19, 2014), http://agi.alabama.gov/alternative_fuels.

¹⁴ ALA. CODE §2-2-90 (2007).

grant funds, to provide a definition of alternative fuels and to set standards for alternative fuels.¹⁵

2008: Renewable Energy

In July 2008, Alabama and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.¹⁶ The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards were designed to help develop greater energy efficiency, conservation, and clean energy resources.¹⁷

In August 2008, Alabama encouraged clean energy in its Biofuels for Schools Program (since renamed the Alabama Biodiesel Incentive Program¹⁸), administered by Alabama Department of Economic and Community Affairs (ADECA). This program is limited to \$50,000 and provides up to \$2,500 to public school system applicants to convert the traditional fuel storage tanks on their school buses into B20 fuel storage tanks.¹⁹

Also in 2008, Governor Riley awarded \$1.1 million in grants to six local governments to develop alternative energy technologies.²⁰

2009: American Recovery & Reinvestment Act (ARRA)

On March 12, 2009, the DOE announced that Alabama was eligible for \$55,570,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).²¹ With the assistance of ARRA funding, Alabama made \$9.26 million available in its weatherization program.²²

¹⁵ *Id.* §2-2-91.

¹⁶ Press Release, Nat'l Governors Ass'n, NGA Awards Clean Energy Grants to 12 States (June 29, 2008), http://www.nga.org/cms/home/news-room/news-releases/page_2008/col2-content/main-content-list/title_nga-awards-clean-energy-grants-to-12-states.html; see also *National Governors' Association Awards Grants for Clean Energy*, GOVERNMENT TECHNOLOGY (June 20, 2008), <http://www.govtech.com/technology/National-Governors-Association-Awards.html>.

¹⁷ *Id.*

¹⁸ *Alabama Laws and Incentives for Biodiesel*, U.S. DEP'T OF ENERGY (Nov. 12, 2013), <http://www.afdc.energy.gov/laws/laws/AL/tech/3251>.

¹⁹ *Biofuels for School*, PROJECT VOTE SMART (Aug. 14, 2008), <http://votesmart.org/public-statement/370134/> (original press release not found).

²⁰ Tina Caparella, *Biodiesel Tax Credits Extended, Renderer to Build Biogas Plants*, RENDER <http://www.rendermagazine.com/articles/2008-issues/2008-december/2008-12-biofuels-bulletin/> (June 11, 2013); see also Craig Myers, *Baldwin Landfill Receives Energy Production Grant*, ALA. LOCAL NEWS (Dec. 17, 2008), http://blog.al.com/live/2008/12/baldwin_landfill_receives_ener.html.

²¹ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf; see also *State Energy Program State Allocations of Funding: American Recovery and Reinvestment Act of 2009*, U.S. DEP'T OF ENERGY (June 22, 2010), http://www1.eere.energy.gov/wip/pdfs/sep_arra_2009_state_allocations_062210.pdf.

²² *Governor Riley Awards \$9.26 Million in Grants for Weatherization*, ALA. FORESTRY COMM'N. (June 30, 2009), <http://www.forestry.alabama.gov/pr.aspx?ID=1756> (original press release not found).

An October 2009 report on the success of the Biomass Energy Program (an initiative of ADECA Energy Division that has promoted wood waste as an alternative biomass energy source for more than two decades²³) concluded that since its conception in 1984, the Program: yielded a net savings of nearly \$95 million in energy costs, reduced the potential amount of wood waste otherwise disposed of in landfills by 312,155 pounds per year, and saved 1.5 million tons of carbon dioxide from otherwise being produced.²⁴

In November 2009, economic stimulus grants awarded by Governor Riley helped seventy schools in fourteen public school systems to save energy and reduce utility bills by upgrading equipment and making other improvements.²⁵ Riley announced that more than \$4 million in grants would be used in school systems to replace outdated heating, cooling and lighting systems with new energy efficient equipment.²⁶

2010: Energy Efficiency

In early 2010, Alabama Department of Economic and Community Affairs (ADECA) launched the Alabama Energy Efficient Appliance Program with funds from the DOE to encourage residents to replace costly to operate, old, and inefficient appliances with new energy-efficient models.²⁷

In November 2010, ADECA launched a \$60 million revolving loan program designed to help existing industrial and commercial businesses finance energy-saving improvements to their facilities.²⁸ The program, Alabama*SAVES*TM (Sustainable and Verifiable Energy Savings), funded partly through the DOE as part of the American Recovery and Reinvestment Act (ARRA) and partly by private investment,²⁹ provides two-percent interest-rate loans of \$250,000 to \$4 million to help existing industrial and commercial businesses to finance energy-saving improvements to their facilities.³⁰

2011: Energy Efficiency

In March 2011, Alabama Department of Economic and Community Affairs (ADECA) announced it had distributed 33,975 rebates, amounting to more than \$3.7

²³ *Renewable Energy*, AMAZING ALABAMA (Jan. 31, 2014), <http://www.amazingalabama.com/key-industry-targets-renewables.html>.

²⁴ ALABAMA'S BIOMASS ENERGY PROGRAM, *supra* note 2 at 28.

²⁵ Press Release, Office of the Governor, Grants to Help Ala. Schools Cut Energy Costs (Nov. 24, 2009), http://web.archive.org/web/20100107023633/http://governorpress.alabama.gov/pr/pr-2009-11-24-01-school_grants.asp.

²⁶ *Id.*

²⁷ John Shyrock, *ADECA Says Appliance Rebates May Be Available*, 12 WSFA.COM (Mar. 14, 2011), <http://www.wsfa.com/Global/story.asp?S=14250327>.

²⁸ Press Release, Office of the Governor, Alabama*SAVES* to Help Industries Save Energy, Boost Profits (Nov. 30, 2010), http://www.alabamasaves.com/EAlabamaSavesLaunch21_LC2.pdf; *Grants to Help Alabama Schools Cut Energy Costs*, ALA. REAL ESTATE RAMA (Nov. 29, 2009), <http://alabama.realestaterama.com/2009/11/24/grants-to-help-alabama-schools-cut-energy-costs-ID099.html>.

²⁹ *Id.*

³⁰ Press Release, *supra* note 20.

million, since it launched the Alabama Energy Efficient Appliance Program in early 2010.³¹ In July 2011, ADECA announced an expansion of the Alabama *SAVES*TM loan program, reducing the minimum loan requirement from \$250,000 to \$50,000.³² This adjustment made the program more accessible to small businesses in the state.

In August and October 2011, Governor Bentley awarded \$774,140 to eight school systems³³ and \$1.4 million to eleven local governments, respectively.³⁴ The recipients used these funds to upgrade outdated equipment to more energy efficient models.

On November 15, 2011, Governor Bentley issued an executive order requiring all state departments and agencies to reduce energy consumption by 30% by fiscal year 2015 relative to 2005 levels.³⁵ In a press release, Bentley highlighted the state government's significant energy consumption and the associated waste of taxpayer dollars.³⁶

2012: Energy Efficiency, Green Jobs, Green Energy, and Greenhouse Gas Reduction

Effective March 6, 2012, by order of the Alabama Public Service Commission, Alabama Power offered a Rate Rider Plug In Electric Vehicle (PEV) Business Electric Vehicle Time-of-Use (BEVT) rate for electricity purchased PEVs used for non-residential purposes.³⁷ The electricity used for vehicle charging is metered separately from all other electricity use. Additionally, Alabama Power offers a Residential PEV rate for customers that can verify possession of a qualified PEV.³⁸

On May 3, 2012, House Bill 518 was enacted into law, creating The Alabama Public Interest Energy and Fuel Research and Development Grants Program within the Alabama's Department of Agriculture and Industries' (ADAI) Center for Alternative Fuels.³⁹ The Program created an advisory commission to make recommendations and

³¹ Shyroch *supra* note 20.

³² Press Release, Office of the Governor, Energy Upgrade Loans Now Available for Smaller Alabama Businesses (July 14, 2011), <http://www.alabamasaves.com/PR.AlabamaSAVESLoanChange.pdf>.

³³ Press Release, Office of the Governor, Bentley Awards \$774,140 to Help School Systems Cut Energy Costs (Aug. 26, 2011), http://www.media.alabama.gov/AgencyTemplates/adece/adece_pr4.aspx?id=5520.

³⁴ Press Release, Office of the Governor, Bentley Awards \$1.4 Million to Help Local Governments Save Money By Cutting Energy Costs (Oct. 17, 2011), http://www.media.alabama.gov/AgencyTemplates/adece/adece_pr4.aspx?id=5747.

³⁵ Ala. Exec. Order No. 25 (2011), <http://governor.alabama.gov/newsroom/2011/11/executive-order-number-25/>; *see also* Press Release, Office of the Governor, Governor Bentley Orders State Agencies to Promote Energy Efficient Practices (Dec. 28, 2011), <http://governor.alabama.gov/newsroom/2011/12/governor-bentley-orders-state-agencies-to-promote-energy-efficient-practices/>.

³⁶ Press Release, *supra* note 29.

³⁷ ALA. PUB. SERV. COMM'N, RATE RIDER PEV PLUG-IN ELECTRIC VEHICLE (OPTIONAL) (Mar. 6, 2012), <https://www.pscpublicaccess.alabama.gov/pscpublicaccess/ViewFile.aspx?Id=c4cfe342-0492-4606-8221-62bf84b74f70>.

³⁸ *Id.*

³⁹ ALA. CODE § 2-2-111 (2012).

provides special funding for public interest energy and fuel research and development projects.⁴⁰

On August 8, 2012, Governor Bentley awarded a \$9,975 grant to the Alabama Clean Fuels Coalition to help educate the public about the benefits of alternative fuels such as “biodiesel, compressed natural gas, and propane.”⁴¹ The Alabama Clean Fuels Coalition, established in 1993 as part of the DOE’s Clean Cities Program, coordinates alternative-fuel vehicle activities in Alabama.⁴²

Also in August 2012, Governor Bentley awarded three Small Business Lighting Retrofit Program grants, totaling \$15,000,⁴³ from the Alabama Department of Economic and Community Affairs-based program funded by the DOE.⁴⁴ The program provides a maximum grant of \$5,000 per business location to help Alabama small businesses convert to energy efficient lighting.⁴⁵

On September 4, 2012, the NGA announced the creation of a policy academy that consisted of four participating states—Alabama, Arkansas, Illinois and Iowa—focusing on energy efficiency in the industrial sector in order to improve productivity and competitiveness.⁴⁶ The Policy Academy on Enhancing Industry Through Energy Efficiency and Combined Heat and Power, which initially ran from September 2012 to April 2013, included workshops, site visits, expert technical assistance, networking and a grant opportunities to support related activities.⁴⁷ The first workshop took place in October 2012 in Portland, Oregon.⁴⁸ It provided a forum for state policymakers to learn from experts on best practices related to industrial energy efficiency and sustainability.⁴⁹

Also in 2012, the U.S. Department of Agriculture (USDA), through its Intermediary Relending Program, awarded a \$500,000 loan to the ADAI for the creation of a revolving loan program. The program would provide affordable financing to Alabama businesses and communities to assist with alternative fuel production, delivery

⁴⁰ *Id.*

⁴¹ Press Release, Office of the Governor, Bentley Awards Grant to Aid Alternative Fuels Workshop (Aug. 8, 2012), http://www.media.alabama.gov/AgencyTemplates/adeca/adeca_pr4.aspx?id=6828.

⁴² *Who We Are*, ALA. CLEAN FUELS COAL. (Feb. 20, 2012), http://www.alabamacleanfuels.org/Who_We_Are/who_we_are.cfm.

⁴³ See Press Release, Office of the Governor, Roanoke Business to Cut Energy Use With Help of Grants (Aug. 6, 2012), http://www.media.alabama.gov/AgencyTemplates/adeca/adeca_pr4.aspx?id=6816; See also Press Release, Office of the Governor, Bentley Awards Grant for Energy-Efficient Lighting Upgrades (Aug. 8, 2012), http://www.media.alabama.gov/AgencyTemplates/adeca/adeca_pr4.aspx?id=6829.

⁴⁴ Aug. 6 Press Release *Supra* note 41.

⁴⁵ *Id.*

⁴⁶ Press Release, Nat’l Governors Ass’n, NGA to Work with Four States on Improving Industrial Energy Efficiency (Sept. 4, 2012), http://www.nga.org/cms/home/news-room/news-releases/page_2012/col2-content/nga-to-work-with-four-states-on.html.

⁴⁷ *Id.*

⁴⁸ *Policy Academy on Enhancing Industry Through Energy Efficiency and Combined Heat and Power*, NGA CTR. FOR BEST PRACTICES (Oct. 18, 2012), <http://www.nga.org/cms/home/nga-center-for-best-practices/meeting--webcast-materials/page-eet-meetings-webcasts/col2-content/main-content-list/policy-academy-on-enhancing-indu.html>.

⁴⁹ *Id.*

and energy savings investments.⁵⁰ The first low-interest loan from ADAI created seven jobs.⁵¹

In its second year, AlabamaSAVES™ ended 2012 by nearly tripling loan volume from 4 loans in 2011 to 11 loans in 2012, financing a total of nearly \$11 million in energy projects.⁵²

2013: Greenhouse Gas Reduction and Energy Efficiency

On March 21, 2013, Governor Bentley issued an executive order establishing the Alabama Department of Transportation to appoint and employ a fleet manager to develop a Statewide Fleet Management Program.⁵³ The Program will propose fleet management policies, procedures, and guidelines for all state agency, board, commission, and department fleets. The Program will also address future cooperation between the Department of Finance and the Green Fleet Review Committee, which ensure compliance with the Green Fleets Policy.⁵⁴

2014: Green Jobs, Green Energy, and Energy Efficiency

The Alabama Department of Agriculture and Industries (ADAI) has entered into an agreement with the USDA Rural Development's Intermediary Relending Program to provide funding for the purpose of increasing local economic activity and employment in rural communities and of funding green energy projects. The ADAI is the conduit for these revolving loan funds and ultimate recipients may borrow between \$25,000 and \$125,000.⁵⁵

ALASKA

1997: Energy Efficiency, Green Building, and Green Technology

In 1997, Alaska Energy Authority (AEA) began its Rural Power Systems Upgrades (RPSU) Program, which has since expanded with federal funding from the Denali Commission.⁵⁶ The RPSU concentrates on powerhouse and electrical distribution

⁵⁰ Press Release, US Dep't of Agric., USDA Seeks Applications for the Intermediary Relending Program (IRP) to Promote Job Creation and Boost the Rural Economy (Apr. 8, 2013), <http://www.rurdev.usda.gov/STELPRD4020124.html>.

⁵¹ *Id.*

⁵² *AlabamaSAVES Ends 2012 with 50kW Solar PV System on Alpaca Farm in Gurley, AL*, ABUNDANT POWER (Apr. 2, 2013), <http://www.abundantpower.com/Files/PR.2013.04.01.pdf>.

⁵³ Ala. Exec. Order No. 38 (2013), <http://governor.alabama.gov/newsroom/2013/03/executive-order-number-38/>.

⁵⁴ *Id.*; *Fuel-Efficient Green Fleets Policy and Fleet Management Program Development*, DOE (Feb. 28, 2014), <http://www.afdc.energy.gov/laws/law/AL/6546>; ALA. CODE §§ 41-17A-1-A-6 (2012).

⁵⁵ *Intermediary Relending Program*, ALA. DEP'T. AGRIC. & INDUS. (Feb. 28, 2014), http://www.agi.state.al.us/alternative_fuels/intermediary-relending-program-irp?pn=2.

⁵⁶ *Alaska Energy Authority – Rural Power Systems Upgrades*, OFFICE OF MGMT. & BUDGET (Mar. 20, 2014), https://omb.alaska.gov/ombfiles/15_budget/DCCED/Proposed/2015proj52498.pdf.

upgrades with a primary focus on the design and construction process to include energy efficiency, reliability, safety, and sustainability.⁵⁷

2004: Renewable Energy and Energy Efficiency

In 2004, the Alaska legislature enacted Senate Bill (SB) 337,⁵⁸ which granted the Alaska Energy Authority (AEA) the power to give loans to particular entities that focus on, among other facets: energy efficiency, energy conservation and alternative energy facilities and equipment.⁵⁹ Potential recipients of the AEA power loans are: local utilities and governments; regional and village corporations and councils; and independent power producers for the development or upgrade of small-scale power production facilities, conservation facilities, and bulk fuel storage facilities.⁶⁰

2005: Renewable Energy and Energy Efficiency

On March 25, 2005, the Alaska Energy Authority (AEA) adopted a regulation that created the Alternative Energy and Energy Efficiency (AEEE) program.⁶¹ The AEEE program promotes using renewable resources as alternatives to fossil fuel-based power and heat, as well as enhancing energy production and end-use efficiency.⁶² The AEEE program is divided into eight separate program areas: Alaska Energy Inventory; AEA Biomass Energy; AEA Combined Heat and Power; Energy Efficiency and Conservation; AEA Geothermal; Hydroelectric; AEA Ocean and River Energy; and the AEA Wind Program.⁶³

2006: Climate Change Adaptation

In May 2006, the Alaska Legislature adopted House Concurrent Resolution 30,⁶⁴ creating an Alaska Climate Impact Commission. The Commission is charged with assessing the impacts and costs of climate change to Alaska and developing recommendations for preventative measures potentially implemented by Alaskan communities and governments.⁶⁵ The eleven-member commission released its final report in March 2008.⁶⁶

⁵⁷ *CESA Member Alaska*, CLEAN ENERGY STATES ALLIANCE (Mar. 18, 2014), <http://www.cleanenergystates.org/membership/cesa-member-profiles/alaska-energy-authority/>.

⁵⁸ H.R. 337, 23rd Leg., 2nd Reg. Sess. (Alaska 2004), <http://www.legis.state.ak.us/PDF/23/Bills/SB0337Z.PDF>.

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ Alaska Admin. Code tit. 3, § 108.300 (West, 2005).

⁶² *AEA Alternative Energy*, ALASKA ENERGY AUTH. (Mar. 18, 2014), [http://www.akenergyauthority.org/programs/alternative\(2\).html](http://www.akenergyauthority.org/programs/alternative(2).html).

⁶³ *CESA Member Alaska*, *supra*.

⁶⁴ H.R. Con. Res. 30, 24th Leg., 2nd Reg. Sess. (Alaska 2006), http://www.legis.state.ak.us/basis/get_bill_text.asp?hsid=HCR030A&session=24.

⁶⁵ *Id.*

⁶⁶ ALASKA STATE LEGISLATURE, FINAL COMMISSION REPORT ALASKA CLIMATE IMPACT ASSESSMENT COMMISSION (2008), http://housemajority.org/coms/cli/cli_finalreport_20080301.pdf.

2007: Climate Change Agreements and American Recovery and Reinvestment Act

On September 14, 2007, Governor Palin signed Administrative Order 238, which created the Climate Change Sub-Cabinet and tasked the new Sub-Cabinet with developing a climate change strategy.⁶⁷ The Sub-Cabinet, comprised of the commissioners of the Departments of Commerce, Community and Economic Development; Environmental Conservation; Natural Resources; Fish and Game; and Transportation and Public Facilities, is charged with compiling Alaska's climate change information and recommending policies to deal with the effects of, and to combat, climate change.⁶⁸

On September 21, 2007, Governor Palin signed Alaska on as an observer to the Western Climate Initiative,⁶⁹ a collaboration launched in February 2007 between the Governors of Arizona, California, New Mexico, Oregon and Washington, to meet regional challenges raised by climate change.⁷⁰

2008: Renewable Energy

Effective August 20, 2008, the Alaska Legislature established the Renewable Energy Grant Program (REGP) administered by the Alaska Energy Authority (AEA), pursuant to House Bill (HB) 152.⁷¹ The Program established a five-year Renewable Energy Fund for renewable energy projects (extended in 2012) of \$50 million per year, subject to yearly legislative approval.⁷² HB 152 also established a seven-member advisory board to consult with the AEA in the development of grant eligibility requirements as it developed criteria for the yearly legislatively approved REGP grants.⁷³

2009: Renewable Energy; American Recovery & Reinvestment Act (ARRA), and Green Jobs

In January 2009, the Alaska Energy Authority (AEA) and the Alaska Center for Energy and Power released *Alaska Energy: A First Step Toward Energy Independence, A Guide for Alaskan Communities to Utilize Local Energy Resources*.⁷⁴ The report was designed "to increase the likelihood that energy solutions will become a reality [by engaging] Alaskans in the solution and [inviting] their active participation in the selection

⁶⁷ Alaska Admin. Order No. 238 (2007), <http://www.gov.state.ak.us/admin-orders/238.html>.

⁶⁸ *Id.*

⁶⁹ Press Release, Office of the Governor, Gov. Forms Alaska Sub-Cabinet (Sept. 14, 2007), <http://web.archive.org/web/20070813014807/http://www.gov.state.ak.us/news.php?id=608>.

⁷⁰ *Climate Change in Alaska*, STATE OF ALASKA (Mar. 1, 2014), <http://www.climatechange.alaska.gov/>.

⁷¹ H.R. 152, 25th Leg., 2nd Reg. Sess. (Alaska 2008), <http://www.legis.state.ak.us/PDF/25/Bills/HB0152Z.PDF>; Alaska Stat. § 42.45.045 (West 2008).

⁷² *Current Energy Policy and Planning in Alaska*, ALASKA CTR. FOR ENERGY & POWER (Mar. 14, 2014), <http://energy-alaska.wikidot.com/current-energy-policy-and-planning-in-alaska>.

⁷³ *Id.*

⁷⁴ ALASKAN ENERGY AUTHORITY & ALASKA CENTER FOR ENERGY AND POWER, ALASKA ENERGY, A FIRST STEP TOWARD ENERGY INDEPENDENCE, A GUIDE FOR ALASKAN COMMUNITIES TO UTILIZE LOCAL ENERGY RESOURCES (2009), [http://www.akenergyauthority.org/PDF files/AK Energy Final.pdf](http://www.akenergyauthority.org/PDF%20files/AK%20Energy%20Final.pdf).

and ownership of their alternative energy sources.”⁷⁵

On January 16, 2009, Governor Palin publicly praised the AEA for its release of a comprehensive guide entitled, *Alaska Energy: A First Step Toward Energy Independence*, which includes the goal of generating 50% of Alaska’s electricity from renewable resources by 2025.⁷⁶ On the non-renewable energy front, Palin urged President Obama to discuss construction of the Alaska Natural Gas Pipeline (ANGP) in an upcoming meeting with Canadian Prime Minister Harper, in a letter dated February 6, 2009.⁷⁷ The letter to President Obama mentions Alaska’s recent signing of a license with TransCanada, a Canadian pipeline company, a contract that would provide “up to \$500 million of state matching funds in order to assist the company in holding an open season and obtaining a [FERC] Certificate of Public Convenience and Necessity and similar certification in Canada.”⁷⁸ The proposed ANGP is projected to supply a minimum of four billion cubic feet per day of natural gas to North American markets as early as 2019.⁷⁹

On March 12, 2009, the U.S Department of Energy (DOE) announced that Alaska was eligible for \$28,232,000 under the State Energy Program (SEP) of the ARRA.⁸⁰ The goals established for the 2008 SEP included: increasing energy efficiency, reducing reliance on imported energy, reducing the impacts of energy production and use on the environment, and improving the reliability of electricity and fuel supply.⁸¹ The following investments from 2009 ARRA funds were made by Alaska towards energy efficiency projects and programs: \$10 million in Alaska state facilities, \$8 million in schools and municipalities, \$2.5 million in low income housing, \$3.7 in a village facility energy efficiency program, and \$4 million in resources and tools for communities and business.⁸²

According to the Pew Charitable Trusts’ June 2009 report, in 1998 Alaska’s clean energy economy had grown 9.4% relative to 2007.⁸³ Specifically, Alaska’s average annual growth for clean energy jobs between 1998 and 2007 was 1.14%,⁸⁴ despite attracting no venture capital funding between 2006 and 2008.⁸⁵

⁷⁵ *Id.* at 4.

⁷⁶ Ron Devito, *Gov Palin’s Alaska Energy Plan*, U.S. FOR PALIN, (Jan. 20, 2009) <http://us4palin.com/gov-palins-alaska-energy-plan/>.

⁷⁷ Ron Devito, *Gov Palin Urges Obama to Discuss Gas Pipeline*, US FOR PALIN (Feb. 7, 2009) <http://us4palin.com/gov-palin-urges-obama-to-discuss-gas-pipeline/>.

⁷⁸ *Id.*

⁷⁹ Press Release, Office of the Governor, Governor Talks Energy with Obama (Dec. 2, 2008), <http://web.archive.org/web/20090429214250/http://gov.state.ak.us/archive.php?id=1561&type=1>.

⁸⁰ U.S. DEP’T OF ENERGY, NAT’L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁸¹ *Id.* at 5.

⁸² ALASKA DEP’T OF LABOR & WORKFORCE DEV., RENEWABLE ENERGY AND ENERGY EFFICIENCY WORKFORCE DEVELOPMENT PLAN DRAFT at 3 (2010), http://labor.state.ak.us/awib/2013-jan-mtg-binder/ASESP_DRAFT_Workforce_Plan.pdf.

⁸³ *Clean Energy Economy*, THE PEW CHARITABLE TRUSTS, (May 8, 2009), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

⁸⁴ THE PEW CHARITABLE TRUSTS, THE CLEAN ENERGY ECONOMY: REPOWERING JOBS, BUSINESSES AND INVESTMENTS ACROSS AMERICA at

On August 20, 2009, Governor Parnell testified before a field hearing of the U.S. Senate Appropriations Subcommittee on Homeland Security in an effort to promote the development of a National Arctic Doctrine.⁸⁶ Governor Parnell touted the Alaskan Arctic's wealth of "traditional and renewable sources of energy" and stated that "[Alaska] can be America's test-bed for renewable and alternative sources of energy."⁸⁷

In September 2009, Governor Parnell continued to promote utilization of Alaska's natural gas reserves through outer continental shelf development. In a letter to U.S. Secretary of Interior, Ken Salazar, Governor Parnell promoted a *Draft Proposed Outer Continental Shelf Oil and Gas Leasing Program 2010 – 2015*, highlighting the proposal's economic, national security, and environmental benefits.⁸⁸

Also in 2009, the Alaska legislature made \$100 million available for the Renewable Energy Grant Program (REGP) for the 2009 fiscal year,⁸⁹ pursuant to the REGP enacted in 2008.

2010: Greenhouse Gas Reduction, Renewable Energy, Green Jobs, Green Technology, Energy Efficiency, and American Recovery & Reinvestment Act (ARRA)

In March 2010, Governor Parnell joined nineteen other governors in a letter to the U.S. Environmental Protection Agency (EPA) urging it to stop its plan to regulate greenhouse gases (GHGs).⁹⁰ The following week, the State of Alaska filed a motion to intervene in a lawsuit against EPA filed in the D.C. Circuit Court pertaining to these same GHG regulations.⁹¹

29 (2009), [http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/Clean Energy Economy.pdf](http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/Clean%20Energy%20Economy.pdf).

⁸⁵ *Id.*, at 53.

⁸⁶ *Strategic Importance of the Arctic in U.S. Policy*, Special Hearing Before the Special Subcommittee on Appropriations, 111th Cong. 4-7 (Alaska 2009) (statement of Governor Sean Parnell, State of Alaska), http://www.fas.org/irp/congress/2009_hr/arctic.pdf; see also Press Release, Office of the Governor, Governor Parnell Testifies on Arctic Policy (Aug. 20, 2009), <http://gov.alaska.gov/parnell/press-room/full-press-release.html?pr=5020>.

⁸⁷ *Id.*

⁸⁸ Letter from Sean Parnell, Alaska Gov., to Ken Salazar, U.S. Secretary of Interior, (Sept. 2, 2009), http://gov.alaska.gov/parnell_media/resources_files/081112salazarletter.pdf; see also Mary Pemberton, *Alaska Governor Urges Federal Government to Allow Offshore Oil Dev. and Exploration*, THE GAEA TIMES (Sept. 3, 2009), <http://news.gaeatimes.com/alaska-governor-urges-federal-government-to-allow-offshore-oil-development-and-exploration-159285/>.

⁸⁹ *Current Energy Policy and Planning in Alaska*, ALASKA CENTER FOR ENERGY & POWER (Mar. 13, 2014), <http://energy-alaska.wikidot.com/current-energy-policy-and-planning-in-alaska>.

⁹⁰ Press Release, Office of the Governor, Congress Urged to Stop EPA Regulations (Mar. 11, 2010), <http://gov.alaska.gov/parnell/press-room/full-press-release.html?pr=5293>.

⁹¹ Press Release, Office of the Governor, State Challenges EPA (Mar. 17, 2010), <http://gov.alaska.gov/parnell/press-room/full-press-release.html?pr=5299>.

In June 2010, Governor Parnell signed Senate Bills (S.B.) 243⁹² and 277,⁹³ both focused on encouraging development of renewable energy. S.B. 243 was designed to stimulate geothermal energy exploration by reducing the royalties collected on land leased for such exploration. S.B. 277 was also enacted to stimulate investment in renewable energy by exempting facilities from regulation (by the Regulatory Commission of Alaska and municipalities) that generate electricity entirely from renewable energy resources when that electricity is sold to regulated utilities.⁹⁴ It was especially focused on the Fire Island Wind Project, Alaska's first commercial-scale wind power facility,⁹⁵ which began delivering renewable energy to Alaskan residents in the fall of 2012.⁹⁶

Also in 2010, Governor Parnell signed House Bill (H.B.) 306⁹⁷ and S.B. 220⁹⁸ (known as the Alaska Sustainable Energy Act).⁹⁹ HB 306 "set a goal for Alaska to generate 50 percent of its electricity through renewable resources by 2025, primarily through hydroelectric projects"¹⁰⁰ and set a goal to increase energy efficiency on a per capita basis by 15% by 2020.¹⁰¹

S.B. 220 implemented "a statewide energy policy,"¹⁰² in part by creating an Energy Efficiency Revolving Fund in the Alaska Housing and Finance Corporation, which opened the opportunity for schools, municipalities and state governments to obtain low-interest funding for projects that promoted energy efficiency improvement to public buildings. The Fund is comprised of \$250 million in bonds, and in 2010 was expected to create 1,500 to 2,000 construction jobs.¹⁰³ S.B. 220 also created the Emerging Energy Technology Fund within the AEA.¹⁰⁴ Pursuant to this Fund, the AEA makes grants to eligible applicants for demonstration projects of technologies that promote, enhance, or expand the diversity of energy supply sources related to renewable sources of energy and conservation of energy, among other things.¹⁰⁵ Successful applicants need to demonstrate the capability to be commercially viable within five years.¹⁰⁶

⁹² S. 243, 26th Leg., (Alaska 2010), <http://www.legis.state.ak.us/PDF/26/Bills/SB0243Z.PDF>.

⁹³ S. 277, 26th Leg., (Alaska 2010), <http://www.legis.state.ak.us/PDF/26/Bills/SB0277Z.PDF>.

⁹⁴ Press Release, Office of the Governor, Governor Signs Renewable Energy Legislation (June 2, 2010), <http://gov.alaska.gov/parnell/press-room/full-press-release.html?pr=5391>.

⁹⁵ CIRI WIND ENERGY (October 20, 2010), <http://www.ciri.com/content/company/FireIsland.aspx>.

⁹⁶ Fire Island Wind Project (Mar. 7, 2012), <http://www.fireislandwind.com>.

⁹⁷ H.R. 306, 26th Leg., (Alaska 2010), <http://www.legis.state.ak.us/PDF/26/Bills/HB0306Z.PDF>.

⁹⁸ S. 220, 26th Leg., (Alaska 2010), <http://www.legis.state.ak.us/PDF/26/Bills/SB0220Z.PDF>.

⁹⁹ Press Release, Office of the Governor, Governor Parnell Signs Energy Policy (June 16, 2010), <http://www.gov.alaska.gov/parnell/press-room/full-press-release.html?pr=5424>.

¹⁰⁰ *Id.*

¹⁰¹ H.R. 306.

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ S. 220; Alaska Stat. § 42.45.375 (West 2010).

¹⁰⁵ *Emerging Energy Technology Fund*, ALASKA ENERGY AUTH. (Mar 18, 2014), <http://www.akenergyauthority.org/EETFundGrantProgram.html>.

¹⁰⁶ *Id.*

Also in 2010, the U.S. Department of Labor awarded the Alaska Workforce Investment Board (AWIB) a \$3.6 million ARRA grant for “green job” training. This grant was contingent upon the formation of the Alaska State Energy Sector Partnership along with the AWIB’s adoption of an energy sector workforce plan for Alaska.¹⁰⁷ The grant application proposed to train over 700 workers over three years to increase the supply of workers with energy-efficiency skills to support energy efficient user technology in the hydroelectric, wind turbine, geothermal, and biomass industries.¹⁰⁸

2011: Energy Efficiency and Green Building

On January 5, 2011, the Alaska Energy Authority (AEA) awarded a \$146,000 grant to the Cold Climate Housing Research Center to develop a statewide energy efficiency report.¹⁰⁹ The grant was funded by a partnership with the Department of Energy (DOE) on the basis that the research would help Alaska to meet its goal of increasing statewide energy efficiency by 15% by 2020.¹¹⁰

Also on January 5, 2011 and funded by the ARRA in an effort to meet the 15% energy efficiency goal proposed by HB 306 in 2010, the AEA announced the launch of its Alaska Commercial Energy Audit Program.¹¹¹ The program provided qualifying owners of commercial buildings up to \$7,000 to conduct energy audits.¹¹² Between 2011 and 2012, the program aided 146 private businesses in paying for energy audits.¹¹³

In May 2011, the Institute of Social and Economic Research at the University of Alaska Anchorage published the twenty-third edition of *Alaska Energy Statistics 1960-2008* for the AEA,¹¹⁴ whose stated mission is to “reduce the cost of energy in Alaska.”¹¹⁵ The report provides a detailed analysis of the amount of electricity each utility then existing in Alaska generated, the type of fuel used for generation, and carbon dioxide

¹⁰⁷ ALASKA DEP’T OF LABOR & WORKFORCE DEV., RENEWABLE ENERGY AND ENERGY EFFICIENCY WORKFORCE DEVELOPMENT PLAN DRAFT at 3 (2010), http://labor.state.ak.us/awib/2013-jan-mtg-binder/ASESP_DRAFT_Workforce_Plan.pdf.

¹⁰⁸ Alaska State Energy Sector Partnership Training Grant, ALASKA DEP’T OF LABOR & WORKFORCE DEV. (Mar. 14, 2014), <http://labor.alaska.gov/awib/2011-feb-mtg-binder/ASESPOverview-02-14-11.pdf>.

¹⁰⁹ Press Release, Alaska Indus. Dev. and Exp. Auth., AEA Awards Grant for Energy Efficiency Study, (Jan. 5, 2011), http://www.akenergyauthority.org/PDF%20files/PressReleases/1-5-11_EnergyEfficiencyGrant.pdf.

¹¹⁰ *Id.*

¹¹¹ Press Release, Alaska Indus. Dev. and Exp. Auth., AEA Launches Commercial Energy Audit Program (Jan. 5, 2011), http://www.akenergyauthority.org/PDF%20files/PressReleases/1-5-11_EnergyAuditProgram.pdf.

Alaska Commercial Energy Audit Program, Program Guidelines, Alaska Energy Auth. (Jan. 4, 2011), <http://www.akenergyauthority.org/Efficiency/audits/CommercialAuditProgramGuidelines.pdf>.

¹¹² *Alaska Commercial Energy Audit Program*, ALASKA ENERGY AUTH. (Mar. 8, 2014), <http://www.akenergyauthority.org/efficiencyaudits.html>.

¹¹³ *Id.*

¹¹⁴ GINNY FAY, ALEJANDRA VILLALOBOS MELÉNDEZ, BEN SAYLOR & SARAH CHRISTINE GERD, ALASKA ENERGY STATISTICS 1960-2008, at 6 (2011), <http://www.iser.uaa.alaska.edu/Publications/AlaskaEnergyStatisticsCY2008Report.pdf>.

¹¹⁵ ALASKA ENERGY AUTH. (Mar. 12, 2013), <http://www.akenergyauthority.org/>.

emissions levels.¹¹⁶ The report also includes a special section detailing Alaska's 2008 amounts of energy produced, used, and exported.¹¹⁷

On July 14, 2011, the Alaskan legislature passed,¹¹⁸ and Governor Parnell signed into law, S.B. 42,¹¹⁹ authorizing the AEA to pursue a large hydroelectric project (the Susitna-Watana Hydro project¹²⁰), which is projected to supply about half of Southcentral Alaska's energy demand.¹²¹ The project will also help Alaska to meet its goal of obtaining 50% of its energy from renewable sources by 2025.¹²²

In December 2011, the AEA released a new report, *Recommendations for Alaska Energy Efficiency and Conservation Public Education and Outreach*,¹²³ which included research-based recommendations for public messaging with the purpose of engaging the public in energy conservation efforts.¹²⁴

2012: Renewable Energy and American Recovery & Reinvestment Act (ARRA)

In February 2012, again funded by the ARRA, the Alaska Energy Authority (AEA) relaunched its Energy Audit Program (initiated in 2011), providing qualifying owners of commercial buildings up to \$7,000 in costs for conducting an energy audit.¹²⁵

Effective May 3, 2012, the legislature enacted HB 250,¹²⁶ which amended the Renewable Energy Grant fund established in 2009 that was originally set to expire in 2013. The bill extended the fund through June of 2023.¹²⁷

On June 14, 2012, Senate Bill 25, the Alaska Sustainable Strategy for Energy Transmission and Supply (ASSETS) Act, created new programs and powers within the

¹¹⁶ Press Release, Alaska Indus. Dev. and Exp. Auth., AEA Issues New Energy Statistics Report (May 23, 2011), <http://www.alaskapower.org/pdf/AEARelasesAlaskaEnergyStatisticsReport05.23.11.pdf>.

¹¹⁷ *Id.*

¹¹⁸ S. 42, 27th Leg., (Alaska 2011), <http://www.legis.state.ak.us/PDF/27/Bills/SB0042Z.PDF>.

¹¹⁹ Press Release, Office of the Governor, Governor Parnell Signs Sustina Hydro Bill (Jul. 14, 2011), <http://gov.alaska.gov/parnell/press-room/full-press-release.html?pr=5847>.

¹²⁰ *Official Project Documents*, SUSTINA-WATANA HYDRO (Mar. 13, 2014), <http://www.susitna-watanahydro.org/submit-comments-review-documents/>.

¹²¹ Press Release, Office of the Governor, Governor's Bill Paves Way for Susitna Dam (Jan. 14, 2011), <http://gov.alaska.gov/parnell/press-room/full-press-release.html?pr=5618>.

¹²² *Id.*

¹²³ ALASKA ENERGY AUTH., RECOMMENDATIONS FOR ALASKA ENERGY EFFICIENCY AND CONSERVATION PUBLIC EDUCATION AND OUTREACH (2011), http://www.akenergyauthority.org/Efficiency/12-2011_Recommendations-PublicEducationandOutreach.pdf.

¹²⁴ *Id.*, at 3.

¹²⁵ Press Release, Alaska Energy Authority, AEA Launches 2012 Energy Audit Program Geared Toward Energy Efficiency in Private Commercial Sector (Feb. 16, 2012), <http://www.akenergyauthority.org/PDF%20files/PressReleases/AEA%20Launches%202012%20Commercial%20Energy%20Program%2002%2016%2012.pdf>.

¹²⁶ H.R. 250, 27th Leg., 2nd Reg. Sess. (2012), <http://www.legis.state.ak.us/PDF/27/Bills/HB0250Z.PDF>; Alaska Stat. § 42.45.045 (West 2012).

¹²⁷ H.R. 250.

Alaska Industrial Development and Export Authority (AIDEA).¹²⁸ The ASSETS program was created with a purpose of addressing Alaska's energy needs by offering qualified energy development financing options.¹²⁹ According to Governor Parnell, ASSETS will bring the state closer to its goal of generating 50% of its energy from renewable sources by 2025.¹³⁰

Through December 2012: the AEA Administered Renewable Energy Fund (established in 2008) made \$114.5 million in grant payments;¹³¹ 51 of 114 upgrades were completed pursuant to AEA's Rural Power Systems Upgrade Program; AEA's Alternative Energy and Energy Efficiency (AEEE) program (established in 2005) managed and funded projects and initiatives totaling \$234 million in state and federal funding;¹³² and AEA's Emerging Energy Technology Fund (established in 2010) received 70 proposals and 16 projects were selected for funding in 2012.¹³³ At the start of 2012, Alaska had 15.3 megawatts of installed energy capacity and by the end of 2012, Alaska's total installed capacity increased to 63.8 megawatts.¹³⁴

2013: American Recovery & Reinvestment Act (ARRA) and Energy Efficiency

In 2013, for the third year in a row, Alaska Energy Authority (AEA) announced funding for energy efficiency audits for privately owned commercial buildings across Alaska.¹³⁵ The AEA stated "results of past year program participants indicate average energy savings of roughly 1/3 resulting from economic efficiency investments..."¹³⁶ On June 30, 2013, the AEA established the Village Energy Efficiency Program (VEEP),¹³⁷ funded by the ARRA, which provides financial assistance to public facilities in rural communities with no greater than 8,000 residents.¹³⁸ Funding is provided to conduct "energy audits, implement cost-saving energy efficiency improvements in public buildings and facilities, and implement conservation programs."¹³⁹ On July 1, 2013, The VEEP program announced funding availability of \$900,000.¹⁴⁰

¹²⁸ S. 25, 27th Leg. (Alaska 2012), <http://www.legis.state.ak.us/PDF/27/Bills/SB0025Z.PDF>; *Sustainable Energy Transmission and Supply Development Fund*, ALASKA INDUS. DEV. AND EXP. AUTH. (Mar. 13, 2014), <http://www.aidea.org/Programs/EnergyDevelopment.aspx>.

¹²⁹ *Sustainable Energy Transmissions*, *supra*.

¹³⁰ Press Release, Office of the Governor, Governor Signs Economic Development, Energy Bills (June 12, 2012), <http://gov.alaska.gov/parnell/press-room/full-press-release.html?pr=6169>; ALASKA STAT. § 44.88.650 (West 2012).

¹³¹ *CESA Member Alaska*, *supra*.

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Alaska Commercial Energy Audit Program*, *supra*.

¹³⁶ *Id.*

¹³⁷ Alaska Admin. Code tit. 3, §§ 108.400-499 (West, 2013).

¹³⁸ *End Use Efficiency VEEP*, ALASKA ENERGY AUTH. (Mar. 20, 2014), <http://www.akenergyauthority.org/programs/alternativeVEEP.html>.

¹³⁹ Alaska Admin. Code § 108.400.

¹⁴⁰ *Project Fact Sheet*, ALASKA ENERGY AUTH. (Mar. 20, 2014), http://www.akenergyauthority.org/BoardMaterials/7-25-2013/8A_AEAPFS.pdf.

As of July 27, 2013, through the AEA-administered Renewable Energy Fund (established in 2008), \$227.5 million were appropriated for 251 approved renewable energy project applications.¹⁴¹

Also in 2013, the AEA submitted a report on the Sustina-Watana Hydro project accomplishments and projections.¹⁴² The report estimated that after 12 years of operation (beginning in 2025), the cost of power created by the project will equal that of natural gas and will remain stable, while natural gas prices will continue to increase well beyond hydroelectric prices in the years beyond.¹⁴³

2014: Greenhouse Gas Reduction

On January 6, 2014, the Alaska Energy Authority (AEA) released a program fact sheet on the current status of the Bulk Fuel Upgrades Program, funded by the state of Alaska and the Denali Commission since 2000.¹⁴⁴ The Program undertakes the design and construction of modern, code-compliant bulk fuel facilities in rural Alaska.¹⁴⁵ The increased storage capacity of the bulk tank storage will provide communities the option of utilizing only truck delivery, potentially eliminating all need for flying in fuel and reducing the number of overall deliveries.¹⁴⁶ With the 2014 addition of EPA's fuel efficiency and GHG standards for medium- and heavy-duty trucks,¹⁴⁷ the elimination of air cargo delivery will presumably reduce overall GHG emissions for Alaska fuel delivery. As of January 2014, in partnership with the Denali Commission, AEA has completed more than \$304 million in Rural Bulk Fuel and Rural Power System Update projects.¹⁴⁸

ARIZONA

1995: Renewable Energy

Arizona provides numerous incentives for residences and businesses to utilize energy sources that mitigate climate change. Under the Solar Energy Credit Law the state has since January 1995 provided taxpayers credits for installing solar or wind energy devices at their residences in Arizona.¹⁴⁹ The credit is 25% of the cost of a qualifying solar or wind energy device (with a \$1,000 maximum allowable limit) against

¹⁴¹ *Project Fact Sheet, supra.*

¹⁴² ALASKA ENERGY AUTH., SUSTINE-WATANA HYDRO REPORT TO THE LEGISLATURE 2013 (2013), <http://susitna-watanahydro.org/annualreport13/annualreport.html>.

¹⁴³ *Id.* at 8.

¹⁴⁴ *Program Fact Sheet: Bulk Fuel Program*, ALASKA ENERGY AUTH. (Mar. 20, 2014), <http://www.akenergyauthority.org/FactSheets/PFS-BulkFuel.pdf>.

¹⁴⁵ *Id.*

¹⁴⁶ CRW ENG'G GROUP, CONCEPTUAL DESIGN REPORT BULK FUEL UPGRADES CITY OF BETTLES (2010), <ftp://ftp.aidea.org/Bulk%20Fuel/Bettles%20Business%20Plans/Bettles%20BFU%20CDR%209-9-10.pdf>.

¹⁴⁷ *Paving the Way Toward Cleaner, More Efficient Trucks*, US EPA OFFICE OF TRANSP. & AIR QUALITY (Mar. 20, 2014), <http://www.epa.gov/otaq/climate/documents/420f11032.pdf>.

¹⁴⁸ *CESA Member Alaska, supra.*

¹⁴⁹ Ariz. Rev. Stat. § 43-1083 (LexisNexis 2006).

the taxpayer's personal income tax.¹⁵⁰ Devices that qualify for the credit include wind generators, wind-powered pumps, solar-powered water-heating systems, and solar-powered lighting systems.¹⁵¹

1997: Renewable Energy

Since 1997, Arizona has offered a sales tax exemption of up to \$5,000 for qualifying solar energy devices.¹⁵² Among the power generators meeting the law's criteria are wind-powered water pumps, wind-powered electric generators, solar-powered lights, and solar-powered water-heating systems.¹⁵³ The law is set to expire on January 1, 2011.¹⁵⁴ On April 17, 2013 Governor Brewer signed House Bill (H.B.) 2259 amending § 42-1083.¹⁵⁵ However, the Bill did not alter the credits allotted for installing solar or wind devices.¹⁵⁶ On April 29, 2013 Brewer signed H.B. 2535 amending § 42-5075, but again the Bill did not alter the relevant tax credit for solar and wind installations.¹⁵⁷

2005: Renewable Energy

On February 11, 2005, Governor Napolitano issued Executive Order (EO) 2005-05 mandating that the design and construction of every new state-funded structure derive at least 10% of its energy from a qualifying renewable resource.¹⁵⁸ The Order also requires that Arizona's Administration and Transportation Departments, as well as the state's School Facilities Board, annually present a report to Napolitano's office and to the Department of Administration describing their efforts to derive energy from a renewable power source and assessing what actions are necessary to improve those efforts.¹⁵⁹

2006: Climate Change Agreements, Renewable Portfolio Standards, Renewable Energy, and Greenhouse Gas Reduction

On February 28, 2006, the governors of Arizona and New Mexico signed an agreement to create the Southwest Climate Change Initiative.¹⁶⁰ Both states now require that their Climate Change Advisory Groups work together to find methods to slow global climate change and reduce emissions of greenhouse gases (GHGs).¹⁶¹ In February 2006, the Arizona Corporation Commission introduced new Renewable Energy Standards that

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.* §§ 42-5061, 42-5075(B)(14).

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ H.B. 2259, 51st Leg., 1st Reg. Sess. (2013).

¹⁵⁶ *Id.*

¹⁵⁷ H.B. 2535, 51st Leg., 1st Reg. Sess. (2013).

¹⁵⁸ Ariz. Exec. Order No. 2005-05 (2005).

¹⁵⁹ *Id.*

¹⁶⁰ Press Release, State of Ariz. Executive Office, Governors Napolitano and Richardson Launch Southwest Climate Change Initiative (Feb. 28, 2006), http://web.archive.org/web/20060827085557/http://www.governor.state.az.us/press/2006/0602/022806_SouthwestClimateChangeInitiative.pdf.

¹⁶¹ *Id.*

will, once adopted as a final rule, require 15% of the energy generated by regulated electric utilities to be from renewable sources by 2025. The rules will also require an increasing percentage of the state's total resource portfolio to come from distributed generation.¹⁶² These standards were passed and adopted in November 2006.¹⁶³ Arizona also has appliance efficiency standards for twelve appliances.¹⁶⁴

On June 21, 2006, Governor Napolitano signed into law a bill that provides solar energy tax incentives for commercial and industrial projects.¹⁶⁵ The law requires Arizona's Department of Commerce to establish a solar energy income tax credit.¹⁶⁶ It also removes the \$5,000 tax exemption limit for retail and prime contracting classification and prohibits solar energy systems for on-site consumption from being added to property value.¹⁶⁷ The tax credit would apply retroactively to the beginning of 2006.¹⁶⁸ In May 2007 Napolitano signed H.B. 2491, increasing the 2006 solar energy income tax credit to include third-party organizations with installed or manufactured solar energy devices.¹⁶⁹ The tax previously was only available to taxpayers with installed solar energy devices and third-party organizations that financed solar energy devices.¹⁷⁰

In addition, on September 8, 2006, Governor Napolitano signed an EO geared toward reducing GHG emissions.¹⁷¹ The EO establishes a statewide goal to reduce Arizona's future GHG emissions to the 2000 emissions level by the year 2020, and to 50% below the 2000 level by 2040.¹⁷² It also created a Climate Change Executive Committee whose task it will be to develop a strategy to implement the recommendations in Arizona's Climate Change Action Plan¹⁷³ and to explore ways to meet Napolitano's challenge of reaching the 2000 emissions level even sooner, by Arizona's Centennial in 2012.¹⁷⁴

2007: Climate Change Agreements

In February 2007, Governor Napolitano established the Western Climate Initiative (WCI) with the governors of California, New Mexico, Oregon, and Washington in order

¹⁶² Press Release, Ariz. Corp. Comm'n, 15 Percent of Arizona's Energy to Come from Renewables by 2025 (Feb. 28, 2006), <http://web.archive.org/web/20060426043808/http://www.cc.state.az.us/news/pr02-28-06.htm>.

¹⁶³ ARIZ. ADMIN. CODE § R14-2-1804 (2007); *see also* The Proposed Rulemaking for the Renewable Energy Standard and Tariff Rules, Docket No. RE-OOOOOC-05-0030, <http://www.azcc.gov/divisions/utilities/electric/res.pdf>

¹⁶⁴ H.B. 2390, 47th Leg., 1st Reg. Sess. (Ariz. 2005).

¹⁶⁵ H.B. 2429, 47th Leg., 2nd Reg. Sess. (Ariz. 2006).

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ H.B. 2491, 48th Leg., 1st Reg. Sess. (Ariz. 2007).

¹⁷⁰ *Id.*

¹⁷¹ Ariz. Exec. Order No. 2006-13 (2006).

¹⁷² *Id.*

¹⁷³ *See* ARIZONA CLIMATE CHANGE ADVISORY GROUP, CLIMATE CHANGE ACTION PLAN (Aug. 2006), <http://www.azclimatechange.gov/download/O40F9347.pdf>.

¹⁷⁴ *Id.*

to reduce GHG emissions and tackle climate change.¹⁷⁵ On August 22, 2007, the Initiative set a regional GHG emission reduction goal of 15% below 2005 levels by 2020, or approximately 33% below business-as-usual levels.¹⁷⁶ This regional target is compatible with and does not replace the states' individual GHG reduction targets.¹⁷⁷ Montana, Utah, and four Canadian provinces have joined the Initiative since 2007.¹⁷⁸ The WCI announced draft essential requirements for the reporting of GHG emissions in July 2008.¹⁷⁹ It also released *Design Recommendations for the WCI Regional Cap-and-Trade Program* on September 23, 2008.¹⁸⁰

The aforementioned document recommends that carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions should all fall under the cap-and-trade scheme.¹⁸¹ Regulated sources are electricity generation, combustion at industrial and commercial facilities, industrial process, fuel combustion from industrial, residential and commercial sources that are below the threshold for direct regulation, and transportation combustion of gasoline/diesel (excluding biofuels).¹⁸² Each of these sources must emit at least 25,000 metric tons of carbon dioxide equivalent annually in order to participate in the trade.¹⁸³ The first compliance periods begins in 2012 and includes half of the economy-wide regulated emissions from the Initiative's member jurisdiction for the electricity generation, industrial combustion and industrial process sectors.¹⁸⁴ The second compliance period begins in 2015, adding the other regulated sectors and includes 90% of the economy-wide regulated emissions.¹⁸⁵

In May 2007, Arizona and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report GHG emissions accurately, transparently and consistently across borders and industry sectors.”¹⁸⁶ This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”¹⁸⁷ Additionally, on October 29, 2007, Arizona joined a coalition with nine other states, New Zealand, Norway, nine European Union countries, the European Commission, and two Canadian provinces to form the International Carbon Action Partnership (ICAP) in order

¹⁷⁵ W. CLIMATE INITIATIVE, <http://www.wci-inc.org>, (Aug. 25, 2013).

¹⁷⁶ *Statement of Regional Goal*, W. CLIMATE INITIATIVE (Aug. 27, 2007), http://azclimatechange.gov/download/082207_statement.pdf.

¹⁷⁷ *Id.*

¹⁷⁸ W. CLIMATE INITIATIVE, <http://www.wci-inc.org> (Aug. 24, 2013).

¹⁷⁹ *Id.*

¹⁸⁰ *Design Recommendations for the WCI Regional Cap-and-Trade Program*, W. CLIMATE INITIATIVE (Sept. 23, 2008),

http://www.ecy.wa.gov/climatechange/WCIdocs/092308WCI_ReportSec1_DesignRecs.pdf.

¹⁸¹ *Id.* at 1.

¹⁸² *Id.* at 1-2.

¹⁸³ *Id.* at 3.

¹⁸⁴ *Id.* at 17.

¹⁸⁵ *Id.*

¹⁸⁶ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007),

http://www.theclimateresistry.org/downloads/States_Join_Press_Release.pdf.

¹⁸⁷ *Id.*

to combat global warming.¹⁸⁸ ICAP will provide a forum for governments to share information regarding cap-and-trade systems and will work to ensure that market programs are compatible.¹⁸⁹ In addition, ICAP will promote low-carbon products and services, innovations, and cost effective reductions.¹⁹⁰

2008: Greenhouse Gas Reduction and Renewable Energy

In April 2008, Governor Napolitano signed Senate Bill (S.B.) 1384, extending the Arizona Emissions Bank from 2009 until 2019.¹⁹¹ Permitted sources may generate credits for reducing certain emissions by an amount greater than that required by applicable law, rule, permit or order. Those credits can then be deposited in the Emissions Bank. Created in 2002, the Emissions Bank issues permits covering particulate matter, sulfur oxides, carbon monoxide, nitrogen oxides, and volatile organic compounds.¹⁹² All reductions that have occurred after August 17, 1999 and are permanent, quantifiable and enforceable may be eligible under the program.¹⁹³

In May 2008, Governor Napolitano vetoed H.B. 2017, which would have prohibited state agencies from “adopting or enforcing programs that would have in any way regulated the emission of greenhouse gas or motor vehicle fuel economy, without legislative approval through specific legislative authorization.”¹⁹⁴

Arizona biofuel standards were revised in June 2008 when Governor Napolitano signed H.B. 2621.¹⁹⁵ The Bill establishes the Biofuels Conversion Program, which awards grants for the conversion of existing and the installation of new biofuels storage and dispensing equipment.¹⁹⁶ Under this Program, eight companies were awarded \$728,150 for eleven projects, and awards were not to exceed \$75,000.¹⁹⁷ Companies leveraged more than \$1.6 million to provide Arizona more than \$2.3 million in biofuels projects.¹⁹⁸ The Bill also revises standards for various aspects of biofuel use including its storage and sale.¹⁹⁹ Examples include the requirement that biodiesel dispensers be labeled with the volume percentage of biodiesel in the product being dispensed and that

¹⁸⁸ Press Release, Int’l Carbon Action P’ship, Launch Ceremony: Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007), http://icapcarbonaction.com/index.php?option=com_content&view=article&id=5:what-is-icaps-goal&catid=2:press-releases&Itemid=34.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ S.B. 1384, 48th Leg., 2nd Reg. Sess. (Ariz. 2008).

¹⁹² ARIZ. REV. STAT. ANN. § 49-410 (West 2002).

¹⁹³ *Id.*

¹⁹⁴ Letter from Janet Napolitano, Ariz. Governor, to Jim Weiers, Speaker of the House of the Ariz. H.R. (May 15, 2008), <http://www.governor.state.az.us/dms/upload/HB2017VetoLetter.pdf>.

¹⁹⁵ H.B. 2621, 48th Leg., 1st Reg. Sess. (Ariz. 2008).

¹⁹⁶ *Id.* at 1.

¹⁹⁷ *Biofuels Convention Program*, Governor’s Office of Energy Policy, <http://www.azenergy.gov/Biofuels.aspx> (Sept. 4, 2013).

¹⁹⁸ *Id.*

¹⁹⁹ H.B. 2621 at 5.

product transfer documents contain this percentage in the product being transferred.²⁰⁰

On December 16, 2008, the Arizona Corporate Commission approved the 2009 Renewable Energy Standard and Tariff (REST) Implementation Plans for Arizona's Public Utilities.²⁰¹ In the short term, the utilities must attain a 2% renewable resource based energy generation in 2009.²⁰² The plan mandates a 15% renewable resource energy production by 2025.²⁰³

2009: Climate Change Agreements, American Recovery & Reinvestment Act (ARRA), Green Jobs, Greenhouse Gas Reduction, and Renewable Energy

In further progress of its cap-and-trade program, the WCI released the third draft of the *Background Document and Progress Report for Essential Requirements of Mandatory Reporting for the Western Climate Initiative* on January 6, 2009 for public comment.²⁰⁴ The reporting threshold is set at 10,000 metric tons of carbon dioxide in a year, well below the 25,000 metric ton threshold for participation in the cap-and-trade program.²⁰⁵ It is recommended that stationary combustion sources be subject to the reporting requirement as well as the sources listed in Table 1 of the document. These listed sources must report combustion and non-combustion emissions.²⁰⁶ Due to strong stakeholder support, it is recommended that reporting begin in 2011 for facilities that began operation before 2010.²⁰⁷ This will be in preparation for the commencement of the cap-and-trade program in 2012.

On March 12, 2009, the U.S. Department of Energy announced that Arizona was eligible for \$55,447,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).²⁰⁸

In July 2009, WCI issued a White Paper on Offset Definition and Eligibility Criteria for comments to its stakeholders.²⁰⁹ The paper is the initial phase in development of the definition of an offset, and a major focus of the paper is additionality.²¹⁰ WCI's

²⁰⁰ H.B. 2621 at 7.

²⁰¹ Press Release, Ariz. Corp. Comm'n, Commission Approves Utilities' 2009 Renewable Energy Plans (Dec. 16, 2008), <http://www.azcc.gov/Divisions/Administration/news/081216RES%20Implementation%202009.pdf>.

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Background Document and Progress Report for Essential Requirements of Mandatory Reporting for the Western Climate Initiative*, W. CLIMATE INITIATIVE (Jan. 6, 2009), http://www.westernclimateinitiative.org/dmdocuments/mandatory_reporting_3rd_draft_010609.74.pdf.

²⁰⁵ *Id.* at 10.

²⁰⁶ *Id.* at 11.

²⁰⁷ *Id.* at 16.

²⁰⁸ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

²⁰⁹ *Comments on the Western Climate Initiative White Paper on Offset Definition and Eligibility Criteria*, W. CLIMATE INITIATIVE (2009), <http://www.offsetsgroup.ca/pdf/Comments%20on%20WCI%20Offset%20Definition%20and%20Eligibility%20Criteria.pdf>.

²¹⁰ *Id.*

Cap Setting and Allowance Distribution Committee released its *Draft Statement of Principles on Competitiveness* and the *Review of Proposed Options for Addressing Industrial Competitiveness Impacts* in August 2009.²¹¹ The purpose of the draft was to “guide the process by which WCI will evaluate competitiveness effects of a regional cap-and-trade program,” and also reviewed how other cap-and-trade programs address this issue.²¹² On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the WCI, and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.²¹³

According to The Pew Charitable Trusts’ June 2009 Clean Energy Economy Fact Sheet for Arizona, Arizona’s clean energy economy grew by 11,578 jobs and 1,123 businesses from 1998 to 2007.²¹⁴ As of June 2009, Arizona had attracted over \$31 million in venture capital investment in clean energy industries.²¹⁵

On August 31, 2009, the attorneys general of New Jersey, Arizona, Connecticut, Delaware, and California sent senate leaders a letter urging them to pass climate change legislation that is stronger than the Waxman-Markey Bill.²¹⁶ The attorneys general’s suggestions to the senators included that the bill contain measures that give states enforcement authority, requires public disclosure of all offset project documentation, and provides standing for citizen suits.²¹⁷

On September 15, 2009, Governor Brewer announced the disbursement of \$9.5 million in grants to rural Arizona communities for the development and implementation of energy efficiency projects.²¹⁸ The grants, which were issued in conjunction with Arizona’s Energy Efficiency and Conservation Block Grant (EECBG) Program under the ARRA of 2009, will be distributed to communities with populations of less than 35,000,

²¹¹ *WeCAN Comments on the WCI’s Draft Statement of Principles on Competitiveness*, W. CLIMATE ADVOCATES NETWORK (2009), http://www.resource-solutions.org/pub_pdfs/WeCAN%20Competitiveness%20Comments%20to%20WCI%2008_09.pdf.

²¹² *Id.*

²¹³ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

²¹⁴ *Clean Energy Economy*, The Pew Charitable Trusts (May 8, 2009), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

²¹⁵ *Id.*

²¹⁶ Letter from Edmund G. Brown Jr., Att’y Gen. Cal., Terry Goddard, Att’y Gen. Ariz., Richard Blumenthal, Att’y Gen. Conn., Richard Gebelien, Att’y Gen. Del., Anne Milgram, Att’y Gen. N.J., to Harry Reid, U.S. Senate Majority Leader, Mitch McConnell, U.S. Senate Minority Leader, Barbara Boxer, Chair, Comm. on Env’t and Public Works, U.S. Senate, James Inhofe, Ranking Member, Comm. on Env’t and Public Works, U.S. Senate (Aug. 31, 2009), http://ag.ca.gov/globalwarming/pdf/letter_to_Senate_re_Climate_Legislation.pdf. The Waxman-Markey Bill died in the Senate; see *H.R. 2454 (111th): American Clean Energy and Security Act of 2009*, GOVTRACK.US, <http://www.govtrack.us/congress/bills/111/hr2454> (Sept. 19, 2013).

²¹⁷ *Id.*

²¹⁸ Press Release, Office of the Governor, Funding Now Available for Rural Arizona Energy Efficiency & Conservation Projects (Sept. 15, 2009), http://www.azgovernor.gov/dms/upload/PR_091509_EECBG%20for%20Rural%20_2_.pdf.

and are projected to reduce utility costs and create jobs in the areas hit hard by the economic recession.²¹⁹ \$1.3 million was awarded to 15 communities for energy related projects and \$1.4 million was awarded to 23 communities in EECBG grants.²²⁰ Also in the fall of 2009, the Arizona Public Service Co. (APS) issued close to \$178,000 to Maricopa County for the installation of solar and other energy efficiency projects.²²¹ The projects will not only save Maricopa County over \$2 million in energy costs, but are also expected to reduce carbon emissions by 13 tons, an “amount equal to the annual emissions of 1,992 cars.”²²²

Later in September 2009, Arizona Department of Environmental Quality (ADEQ) Director, Benjamin H. Grumbles, issued a statement applauding EPA’s announcement that it will require big companies to report and monitor GHG emissions.²²³ Grumbles also noted that ADEQ was pleased with EPA’s recent modifications of emissions reporting requirements for the lime industry.²²⁴

On October 13, 2009, Governor Brewer issued a statement urging EPA to consider the long term negative impacts new federal rules²²⁵ will have on water delivery and jobs in many Arizona communities.²²⁶ According to Brewer, the costs of the new rules could shut down the Navajo Generating Station (NGS), and consequently endanger the operation of the Central Arizona Project (CAP), a water supply system powered by NGS.²²⁷ CAP currently delivers Colorado River water, reducing demands on the state’s limited groundwater supply and “provid[ing] a renewable surface water supply to roughly 80% of Arizona’s water users and taxpayers.”²²⁸ In 2011 Salt River Project, the operator of the Navajo Generating Station submitted to the U.S. Environmental Protection Agency (EPA) a report on the results of additional visibility modeling.²²⁹ In 2012 an updated report was submitted and on January 18, 2013 the EPA issued a proposed Best Available

²¹⁹ *Id.*

²²⁰ Press Release, Office of the Governor, Governor Jan Brewer Announces Energy Awards for Rural Communities (Sept. 3, 2010), <http://www.azenergy.gov/doclib/energy/9-3-10%20governor%20jan%20brewer%20announces%20energy%20awards%20for%20rural%20communities.pdf>.

²²¹ Press Release, Maricopa Cnty., Maricopa County Saving Thousands on Energy Dollars (Oct. 8, 2009), http://www.maricopa.gov/pr_detail.aspx?releaseID=1217.

²²² *Id.*

²²³ Press Release, Ariz. Dep’t of Env’tl. Quality, ADEQ Director Grumbles’ Statement Following EPA’s Decision to Require Greenhouse Gas Monitoring, Reporting (Sept. 22, 2009), <http://www.azdeq.gov/function/news/2009/download/0922.pdf>.

²²⁴ *Id.*

²²⁵ Assessment of Anticipated Visibility Improvements at Surrounding Class I Areas and Cost Effectiveness of Best Available Retrofit Technology for Four Corners Power Plant and Navajo Generating Station, 74 FR 44313 (proposed Aug. 28, 2009), <https://federalregister.gov/a/E9-20826>.

²²⁶ Press Release, Office of the Governor, Governor Jan Brewer Warns EPA of New Regs’ Impact to Central Arizona Project, Arizona’s Jobs & Economic Future (Oct. 13, 2009), http://www.azgovernor.gov/dms/upload/PR_101309_NewEPARulesEndangerCAP.pdf.

²²⁷ *Id.*

²²⁸ *Id.*

²²⁹ *Timeline of visibility and regional haze-related actions affecting the Navajo Generating Station*, NAVAJO GENERATING STATION, <http://www.ngspower.com/timeline.aspx> (Sept. 4, 2013).

Retrofit Technology (BART) rule.²³⁰ In July 2013 a Technical Working Group reviewed the EPA's rule and proposed an alternative rule which they in turn submitted to the EPA.²³¹ As of September 2013 the rule is in its comment phase, which is set to conclude on October 4, 2013.²³²

In November 2009, on the heels of Arizona's implementation of a Renewable Energy Tax incentive, Governor Brewer announced that the world's largest solar cell manufacturer, China-based Suntech Power Holdings, would relocate its headquarters to Arizona.²³³ Suntech established their headquarters in Goodyear, Arizona, but then it was shut down in March 2013.²³⁴

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.²³⁵ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.²³⁶ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities."²³⁷ North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.²³⁸

2010: Market-Based Solutions, Climate Change Agreements, Renewable Energy, and Energy Efficiency

In July 2010, the Arizona Corporation Commission adopted an Electric Energy Efficiency Resource Standard with the goal of reducing public utility energy consumption by 22% by 2020.²³⁹ The Commission later adopted a similar Gas Energy Efficiency Standard in August 2010 with the goal of reducing gas consumption by 6% by 2020, relying primarily on energy efficiency programs.²⁴⁰

²³⁰ *Id.*

²³¹ *Id.*

²³² *Id.*

²³³ Press Release, Office of the Governor, World's Leading Solar Manufacturer to Locate in Arizona (Nov. 16, 2009), http://www.azgovernor.gov/dms/upload/PR111609_Suntech.pdf.

²³⁴ Press Release, Suntech, Suntech to Close Arizona Factory (March 12, 2013), <http://phx.corporate-ir.net/phoenix.zhtml?c=192654&p=irol-newsArticle&ID=1794801&highlight=>.

²³⁵ See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

²³⁶ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

²³⁷ NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

²³⁸ See *id.*

²³⁹ ARIZONA CORP. COMM'N, <http://www.cc.state.az.us/divisions/administration/energyefficiency.asp> (Dec. 27, 2010).

²⁴⁰ *Id.*

The WCI partners, including Arizona, released their *Design for the WCI Regional Program Report*, a culmination of two years of work in July 2010.²⁴¹ The report details the WCI partners' strategies for reducing their GHG emissions by 15% below 2005 levels by 2020, and uses a market-based approach of emissions trading among selected industries. The program is expected to launch in January 2012.²⁴² The first phase of the program started January 2013 and the second phase is scheduled to begin in 2015.²⁴³

In August 2010, Governor Brewer signed EO 2010-14 (the Governor's Policy on Climate Change, superseding EO 2010-06), which ushered in several significant changes to Arizona's climate change policies.²⁴⁴ First, under EO 2010-14, Arizona will continue to be a member of the Arizona-Sonora Regional Climate Change Initiative (ASRCCI), created by an agreement signed in June 2005, in order to further cooperation "on developing a regional inventory of GHG emissions and identifying emissions reduction and energy efficiency opportunities."²⁴⁵ Second, Arizona will no longer require businesses to join The Climate Registry as reporters – they will instead be asked to join voluntarily, since the U.S. EPA developed its GHG reporting rule.²⁴⁶ Third, EO 2010-14 also established the Climate Change Oversight Group, and charged it with monitoring the WCI and advising the Governor on Arizona's position in relation to the WCI's actions.²⁴⁷ The Group must also monitor federal legislation, rules and EOs relating to climate change, and must advise the Governor on what position Arizona should take in response. The Group is set to expire on December 31, 2012.²⁴⁸ Fourth, under EO 2010-14, Arizona pulled out of the cap-and-trade program of the WCI, citing the economic downturn as impetus for the change in policy. However, the State will remain a member of the WCI.²⁴⁹ Finally, EO 2010-14 stated that Arizona's goal is to have all state vehicles, with the exception of certain law enforcement vehicles, run on alternative fuels or meet low-GHG emission standards by January 2012. The program was implemented by the Arizona Department of Transportation, in consultation with the Arizona Department of Environmental Quality.²⁵⁰

Governor Brewer announced that the Arizona Commerce Authority (ACA) would distribute \$2.7 million in grants to renewable energy manufacturers, in order to allow

²⁴¹ *Design for the WCI Regional Program*, W. CLIMATE INITIATIVE (July 27, 2010), http://www.westernclimateinitiative.org/dmdocuments/Design_for_the_WCI_Regional_Program.282.pdf.

²⁴² *Id.*

²⁴³ *The WCI Cap & Trade Program*, W. CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/the-wci-cap-and-trade-program> (Sept. 5, 2013).

²⁴⁴ Ariz. Exec. Order No. 2010-14 (2010).

²⁴⁵ *Id.*

²⁴⁶ *Id.*

²⁴⁷ *Id.*

²⁴⁸ *Id.*

²⁴⁹ *Id.*

²⁵⁰ *Id.*; see also *Arizona Laws and Incentives for Acquisition / Fuel Use*, U.S. DEP'T OF ENERGY <http://www.afdc.energy.gov/laws/laws/AZ/reg/3249> (Sept. 4, 2013).

them to expand their facilities. The grants were awarded to six companies in August 2010 and will create nearly 180 jobs.²⁵¹

In December 2010, the ACA announced that it awarded \$1 million to the Inter-Tribal Council of Arizona through its Weatherization Assistance Program, to provide energy upgrades to an estimated 126 homes from 19 Arizona Native American Tribes. Through weatherization assistance, more than 6.2 million low-income families have received funding since 1997 to make their homes more energy-efficient.²⁵²

2011: Green Jobs and Climate Change Agreements

Governor Brewer announced in February 2011 that a solar component manufacturing firm, Gestamp Solar Steel, would base its operations in Arizona, creating an estimated 300 jobs.²⁵³ Similarly, in March 2011, Brewer announced that the First Solar Manufacturing Company will expand its operations in Arizona, and is expected to create 600 jobs.²⁵⁴

In May 2011, Governor Brewer signed an EO moving the state's energy office to the Governor's Office as the new Governor's Office of Energy Policy.²⁵⁵

In November 2011, Arizona and five other states exited from the WCI in order to join North America 2050, an organization which promotes carbon dioxide capture and sequestration techniques, offset projects for emissions trading programs and a focus on sustainable biomass in order to achieve meaningful emissions reductions.²⁵⁶

2012: Renewable Energy

Twice in 2012, Arizona moved up the national ranking for solar production. In March, Governor Brewer announced Arizona moved into third place nationally thanks to

²⁵¹ Press Release, Office of the Governor, Governor Jan Brewer Announces \$2.7 Million In Grants to Renewable Energy Manufacturers (August 26, 2010), http://www.azgovernor.gov/dms/upload/PS_082610_BrewerAnnounces2-7MillionEnergyJobGrants.pdf.

²⁵² Press Release, Ariz. Commerce Authority, Boost for Weatherization Assistance in Arizona's Tribal Communities (Dec. 10, 2010), http://www.azcommerce.com/assets/12_10_2010.pdf.

²⁵³ Press Release, Office of the Governor, Governor Jan Brewer Announces Solar Component Manufacturing Firm to Locate U.S. Headquarters in Surprise (Feb. 22, 2011), http://azgovernor.gov/dms/upload/PR_022211_SolarComponentManufacturingFirmGESTAMP.pdf.

²⁵⁴ Press Release, Office of the Governor, Governor Jan Brewer Announces Expansion of First Solar Manufacturing Company to Mesa (Mar. 17, 2011), http://azgovernor.gov/dms/upload/PR_031711_BrewerAnnouncesExpansionFirstSolarManufacturingCompanyMesa.pdf.

²⁵⁵ Ariz. Exec. Order No. 2011-02 (2011), *see also* GOVERNOR'S OFFICE OF ENERGY POLICY, http://www.azenergy.gov/About_Us/Default.aspx (Aug. 28, 2013).

²⁵⁶ Geoffrey Craig, *Six States Leave Western Climate Initiative to Join New Group That Promotes Carbon Sequestration*, ELECTRIC UTILITY WEEK (Nov. 28, 2011), <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/ElectricPower/6695863>; *see also* NORTH AMERICA 2050, na2050.org (Feb. 23, 2013).

a 333% increase in solar production from 2010 to 2011.²⁵⁷ In September, Arizona moved into second place thanks to the addition of another 111 megawatts, trailing only California in terms of solar production.²⁵⁸

2014: Renewable Energy

In February 2014, Governor Brewer announced the establishment of *emPOWER Arizona: Executive Energy Assessment and Pathways*, a master energy plan for the state.²⁵⁹ The Plan examined the 10 year energy outlook for the state and aimed to set out best practices to increase solar energy development and foster statewide coordination to reduce energy consumption among other goals.²⁶⁰ It also established an Energy Advisory Board to oversee, review and update the plan.²⁶¹

ARKANSAS

1999: Green Technology

Act 976 of 1999 offers an energy technology development tax credit of up to 50% of the amount spent during the taxable year on a facility located within the state which designs, develops, or produces photovoltaic devices, electric vehicle equipment, or fuel cells.²⁶²

2001: Renewable Energy

On April 19, 2001, Governor Huckabee signed into law the Arkansas Renewable Energy Development Act that required the state's electric utilities to offer net metering for solar, wind, hydroelectric, geothermal, and biomass systems, as well as fuel cells and microturbines fueled by renewable sources.²⁶³

2003: Market-Based Solutions and Fuels

Since 2003, the Arkansas Biodiesel Incentive Act has offered a tax refund to businesses that use biobased products, including ethanol and biodiesel.²⁶⁴ The Act also provides biodiesel suppliers an income tax credit of up to 5% of the costs of the facilities and equipment used in the wholesale or retail distribution of biodiesel fuels.²⁶⁵ In

²⁵⁷ Press Release, Office of the Governor, Report: Arizona Solar Energy Development Up 333 Percent in 2011 (Mar. 22, 2012), http://azgovernor.gov/dms/upload/PR_032212_SolarReport.pdf.

²⁵⁸ Press Release, Office of the Governor, National Report: Arizona #2 in Solar Energy Development (Sept. 11, 2012), http://azgovernor.gov/dms/upload/PR_091112_SolarReport.pdf.

²⁵⁹ EmPOWER Arizona: (2013), <http://azgovernor.gov/dms/upload/EmPowerAZ.pdf>

²⁶⁰ Press Release, Office of the Governor, Gov. Brewer Establishes EmPOWER Arizona (February 18, 2014), http://azgovernor.gov/dms/upload/PR_021814_MasterEnergyPlan.pdf.

²⁶¹ *Id.*

²⁶² ARK. CODE ANN. § 15-4-2104 (West 1999) (repealed 2009).

²⁶³ ARK. CODE ANN. § 23-18-601 (West 2001).

²⁶⁴ ARK. CODE ANN. § 15-4-2801 (West 2003).

²⁶⁵ *Id.*

addition, the Act allows the Alternative Fuels Commission to provide grants for the production of biodiesel of up to \$0.10 per gallon for a maximum of five million gallons per producer per year for a period not to exceed five years.²⁶⁶ This Act expired on June 30, 2007.²⁶⁷

The Arkansas Alternative Fuels Commission Act of 2003 established a seven-member alternative fuels commission to develop, coordinate, and promote the utilization of alternative motor fuels throughout the state.²⁶⁸ The Commission was also charged with providing grants and loans for research and projects supporting alternative fuels.²⁶⁹

2005: Transportation

Recent legislation enacted in 2005 directs the Arkansas Office of Procurement to develop and implement a plan for all state agencies to reduce petroleum consumption of their vehicles by at least 10% by January 1, 2009, through measures that include alternative fuels and hybrid vehicles.²⁷⁰ As an incentive, the Energy Office of the Arkansas Department of Economic Development offers state agencies rebates on the purchase of hybrid vehicles equal to the sales tax paid for the vehicles.²⁷¹ The rebates are funded through oil overcharge funds and are available on a first-come, first-served basis.²⁷²

2007: Greenhouse Gas Reduction

In April 2007, Governor Beebe signed House Bill (H.B.) 2460, creating the Governor's Commission on Global Warming (GCGW).²⁷³ The GCGW was charged with determining the ecological and economic impacts of global warming on Arkansas and identifying and recommending policies for reducing global warming pollutants. The GCGW released its final report on October 30, 2008, which contains 54 policy recommendations.²⁷⁴ It was recommended that the state reduce its GHG emissions 20% below 2000 levels by 2020, 35% below 2000 levels by 2525, and 50% below 2000 levels by 2035.²⁷⁵ These recommendations fall into four categories: energy supply; residential, commercial, and industrial; transportation and land use; agriculture, forestry and waste.²⁷⁶

²⁶⁶ *Id.*

²⁶⁷ *Business Incentives and Credits*, ARK. DEP'T OF FIN. AND ADMIN. (Sept. 4, 2013), <http://www.dfa.arkansas.gov/offices/exciseTax/TaxCredits/Pages/BusinessIncentivesandTaxCreditPrograms.aspx#5>.

²⁶⁸ ARK. CODE ANN. §§ 15-10-601 to -701 (West 2006).

²⁶⁹ *Id.* § 15-10-701.

²⁷⁰ ARK. CODE ANN. § 19-11-217 (West 2005).

²⁷¹ JOINT FISCAL OFFICE, LEGISLATIVE REPORT ON HYBRID ELECTRIC VEHICLES (2005), <http://www.leg.state.vt.us/jfo/reports/2005-01%20hybrid%20electric%20vehicle%20report.pdf>.

²⁷² *Id.*

²⁷³ H.B. 2460, 86th General Assemb., Reg. Sess. (Ark. 2007).

²⁷⁴ *Final Report*, Ark. Governor's Commission on Global Warming, at 2 (Oct. 2008), http://www.c2es.org/docUploads/Arkansas%20climate%20plan_1.pdf.

²⁷⁵ *Id.*

²⁷⁶ *Id.* at EX-14.

2009: American Recovery & Reinvestment Act

On March 12, 2009, the Department of Energy announced that Arkansas was eligible for \$39,416,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).²⁷⁷ Governor Beebe also signed an agreement to support federal climate change legislation.²⁷⁸ The agreement contains two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.²⁷⁹

2010: Energy Efficiency and Renewable Energy

The Arkansas Energy Office (AEO), through ARRA funds, has implemented several programs geared toward increasing energy efficiency and renewable energy sources in the state. In February 2010, the AEO provided grants to fund a training program at community colleges for jobs in energy efficiency. As part of the training program, the grants will allow up to 600 participating students to take 60 courses.²⁸⁰

Governor Beebe announced in October 2010 that the AEO would expand the Industry Energy Technology Revolving Loan program, allowing more private companies to participate and use the revolving loan funds for energy efficiency projects, such as phasing out inefficient equipment and installing renewable energy systems. This \$3.5 million program was fully funded by ARRA.²⁸¹

2011: Energy Efficiency and Transportation/Fuels

In March 2011, the American Council for an Energy-Efficient Economy (ACEE) released a report, *Advancing Energy Efficiency in Arkansas: Opportunities for a Clean Energy Economy*.²⁸² The report examines various methods and policies through which Arkansas could increase its energy efficiency. If Arkansas were to implement the suggested projects and policies across its commercial, residential, industrial, and

²⁷⁷ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

²⁷⁸ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20100116190854/http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

²⁷⁹ *Governors' Energy and Climate Coalition*, GEORGETOWN CLIMATE CENTER, <http://www.georgetownclimate.org/state-action/governors-energy-and-climate-coalition> (Aug. 28, 2013).

²⁸⁰ Press Release, Office of the Governor, 600 Arkansans to Receive Training for Green Jobs (Feb. 26, 2010), http://governor.arkansas.gov/newsroom/index.php?do:newsDetail=1&news_id=2165.

²⁸¹ Press Release, Ark. Office of the Recovery and Reinvestment Act, Arkansas Expands Energy Loan Program, Changes Name (Oct. 19, 2010), http://recovery.arkansas.gov/newsroom/index.php?do:newsDetail=1&news_id=509.

²⁸² Press Release, Ark. Econ. Dev. Comm'n, Arkansas Energy Efficiency Investments Could Create Thousands of Local Jobs and Save Customers Billions (Mar. 29, 2011), [http://arkansasenergy.org/news/readarticle.aspx?id=8549&article=Arkansas+energy+efficiency+investment+s+could+create+thousands+of+local+jobs+and+save+customers+billions+\(1\)](http://arkansasenergy.org/news/readarticle.aspx?id=8549&article=Arkansas+energy+efficiency+investment+s+could+create+thousands+of+local+jobs+and+save+customers+billions+(1)).

transportation sectors, it could generate more than 11,000 jobs, \$240 million in state revenue, and \$3.2 billion in savings on consumers' energy bills by 2025.²⁸³

Using \$2.2 million in ARRA funds, Arkansas launched a rebate program for alternative fueled vehicles.²⁸⁴ The state reimbursed up to half the extra cost of buying or converting vehicles to natural gas. Applications were due by the end of 2011 and all unused funds were then returned to the federal government. As of December 11, 2011, \$392,235 had been spent to convert 58 cars and trucks.

2012: Energy Efficiency

In February 2012, the AEO announced "Track and Save," a new program allowing residents to check energy meters out from libraries to track their energy consumption.²⁸⁵

In September 2012, the National Governors Association (NGA) announced coordination with four states, Alabama, Arkansas, Illinois and Iowa, in a policy academy that will focus on energy efficiency in the industrial sector in order to improve productivity and competitiveness.²⁸⁶ The Policy Academy on Enhancing Industry Through Energy Efficiency and Combined Heat and Power will include two workshops, site visits, expert technical assistance, networking and a grant opportunity to support related activities.²⁸⁷

CALIFORNIA

1991: Transportation/Fuels

In 1991, California mandated efficiency standards to guide the purchase of fuels, vehicles, and tires for state motor fleets.²⁸⁸ Legislation from 2005 requires the formulation of alternative fuel targets for state fleets, to be set for 2012, 2017, and 2022.²⁸⁹ Furthermore, California integrates environmental considerations into all of its state purchasing guidelines.²⁹⁰

1996: Renewable Energy

²⁸³ *Id.*

²⁸⁴ Press Release, Ark. Econ. Dev. Comm'n, Rebates Fuel Alternative Vehicles (Dec. 11, 2011), <http://www.arkansasenergy.org/news/read-article.aspx?id=8791&article=Rebates+fuel+alternative+vehicles>.

²⁸⁵ Press Release, Ark. Econ. Dev. Comm'n, Track and Save Program (Feb. 1, 2012), <http://www.arkansasenergy.org/news/read-article.aspx?id=8831&article=Track+and+Save+Program>.

²⁸⁶ Press Release, Nat'l Governors Ass'n, NGA to Work with Four States on Improving Industrial Energy Efficiency (Sept. 4, 2012), http://www.nga.org/cms/home/news-room/news-releases/page_2012/col2-content/nga-to-work-with-four-states-on.html.

²⁸⁷ *Id.*

²⁸⁸ CAL. PUB. RES. CODE § 25722 (West 2001).

²⁸⁹ CAL. HEALTH & SAFETY CODE § 43866 (West 2005).

²⁹⁰ CAL. GOV'T CODE § 65041 (West 2002).

Starting in 1996 California required its major utilities to collect revenue from their customers to support the state's Renewable Resource Trust Fund.²⁹¹ Collectively, the utilities must pay the following amounts annually: \$228,000,000 for energy efficiency and conservation activities; \$135,000,000 for renewable energy; and \$62,500,000 for research, development, and demonstration.²⁹² Senate Bill (S.B.) 1036, signed in October 2007, repeals the Renewable Resource Trust Fund.²⁹³

1998: Climate Action Plan

California first developed a climate change action plan in 1998.²⁹⁴

2002: Renewable Portfolio Standard and Greenhouse Gas Reduction

In 2002, in further support of renewable power sources, California adopted a renewable portfolio standard program, mandating utilities to obtain 20% of their electricity from renewables by 2017.²⁹⁵ The standards were later accelerated, requiring 20% renewables by 2010 and 33% by 2020.²⁹⁶ The list of eligible sources is probably the most extensive in the nation, including biomass, solar thermal, photovoltaics, wind, geothermal, fuel cells, small hydropower, digester gas, landfill gas, ocean wave, ocean thermal, and tidal current.²⁹⁷

In 2002, the California legislature directed the California Air Resources Board (CARB) to adopt regulations requiring the maximum feasible and cost-effective reduction of greenhouse gas (GHG) emissions from motor vehicles beginning in model year 2009.²⁹⁸ Chapter 5 includes a more in depth discussion of the vehicle GHG reduction requirement.

2005: Greenhouse Gas Reduction

In 2005, by executive order (EO), California established the following milestones for reduction in all GHG emissions: by 2010, emissions reduced to 2000 levels; by 2020, reduced to 1990 levels; and, by 2050, reduced to 80% below 1990 levels.²⁹⁹ EO S-20-04 directs state-owned buildings to reduce energy use 20% by 2015 (based on 2003 building energy use).³⁰⁰

²⁹¹ Assemb. B. 1890, 1996 Leg., Reg. Sess. (Cal. 1996). CAL. PUB. RES. CODE §§ 25740-25751 (West 2006).

²⁹² *Id.* § 25751, Assemb. B. 1, 2000 Leg., Reg. Sess. (Cal. 2000).

²⁹³ S.B. 1036, 2007 Leg., Reg. Sess. (Cal. 2007).

²⁹⁴ Executive Summary, Cal. Energy Comm'n, 1997 Global Climate Change: Greenhouse Gas Emissions Reduction Strategies for California (Jan. 1998), http://infohouse.p2ric.org/ref/07/06221/global_climate_change/97GLOBALVOL1.PDF.

²⁹⁵ CAL. PUB. UTIL. CODE § 387 (West 2006) (repealed 2011); CAL. PUB. UTIL. CODE § 399.11 – 399.17 (West 2012).

²⁹⁶ *Id.*

²⁹⁷ *Id.* §§ 399.11 – 399.17.

²⁹⁸ CAL. HEALTH & SAFETY CODE § 43018.5 (West 2002).

²⁹⁹ Cal. Exec. Order No. S-3-05 (2005).

³⁰⁰ Cal. Exec. Order No. S-20-04 (2004).

In 2005, the California Public Utility Commission (CPUC) ordered that the value of \$8/ton of carbon dioxide be included in the cost calculations for long-term utility planning and in the evaluation of bids for future electricity or demand-side management. This signifies that the CPUC believed that it was prudent to address the risk of the future regulation of carbon dioxide.³⁰¹

2006: Climate Change Agreements, Greenhouse Gas Reduction, and Market-Based Solutions

On July 31, 2006, Governor Schwarzenegger and British Prime Minister Blair signed a mission statement, which “commit[s] both California and Great Britain] to urgent action to reduce greenhouse gas emissions and promote low carbon technologies.”³⁰² The agreement establishes a forum for California and Great Britain to share experiences and research efforts, and to educate “the public on the need for aggressive action to address climate change and promote energy diversity.”³⁰³ It also commits both California and Great Britain to: (1) evaluate and implement market-based mechanisms that spur innovation; (2) study the economics of climate change; (3) collaborate on technology research; and (4) enhance linkages between the scientific communities of California and Great Britain.³⁰⁴

Additionally, California passed several pieces of legislation in 2006 aimed at reducing the state’s GHG emissions. In August, Governor Schwarzenegger signed his Million Solar Roofs Plan into law.³⁰⁵ This plan aimed to have one million green roofs in the state by 2018.³⁰⁶ Signed as S.B. 1, this legislation gave the CPUC the authority to regulate municipal-owned utilities under the plan, expand the offer of the solar net met program to 2.5% of customers, and to require developers of more than fifty single family homes to offer solar system installation in the homes.³⁰⁷ Under this Plan on December 1, 2008, Schwarzenegger announced the completion of the first of a proposed 150 installations of solar roofing on commercial buildings in Southern California.³⁰⁸

On September 27, 2006, Governor Schwarzenegger signed the California Global

³⁰¹ This measure is discussed in more detail in Chapter 10.

³⁰² Press Release, Office of the Governor, Gov. Schwarzenegger, British Prime Minister Tony Blair Sign Historic Agreement to Collaborate on Climate Change, Clean Energy (July 31, 2006), <http://gov.ca.gov/news.php?id=2918>.

³⁰³ *Id.*

³⁰⁴ *Id.*

³⁰⁵ S.B. 1, 2006 Leg., Reg. Sess. (Cal. 2006), http://www.energy.ca.gov/2009-SOPR-1/documents/sb_1_bill_20060821_chaptered.pdf; see also *Schwarzenegger Signs Legislation to Complete Million Solar Roofs Plan*, PROJECT VOTE SMART (Aug. 21, 2006), <http://votesmart.org/public-statement/202003/> (original press release not found).

³⁰⁶ *Id.*

³⁰⁷ S.B. 1, 2006 Leg., Reg. Sess. (Cal. 2006), http://www.leginfo.ca.gov/pub/05-06/bill/sen/sb_0001-0050/sb_1_bill_20060821_chaptered.pdf.

³⁰⁸ Press Release, State of Cal. Office of the Governor, Gov. Schwarzenegger Applauds Completion of Commercial Rooftop Solar Installation Project (Dec. 1, 2008), <http://www.gov38.ca.gov/press-release/11152/>, <http://gov.ca.gov/index.php?/print-version/press-release/11152/>.

Warming Solutions Act, Assembly Bill (AB) 32.³⁰⁹ The Bill aims to reduce the state's global warming emissions to 1990 levels by 2020 and institutes a mandatory emissions reporting system to monitor compliance.³¹⁰ The Bill also allows for market mechanisms to provide incentives to businesses to reduce GHG emissions while safeguarding local communities.³¹¹ In April 2007, CARB released *Proposed Early Actions to Mitigate Climate Change in California*.³¹² This draft report's proposed early actions are part of the AB 32 implementation process, and CARB must adopt the measures as regulations by 2010.³¹³

On September 29, 2006, Governor Schwarzenegger signed S.B. 1368.³¹⁴ The new law directed the California Energy Commission (CEC) to set a GHG performance standard for electricity procured by local publicly owned utilities, whether it is generated within state borders or imported from plants in other states, and will apply to all new long-term electricity contracts.³¹⁵ Earlier in the same week, on September 26, Schwarzenegger signed S.B. 107, which requires California's three major biggest utilities – Pacific Gas & Electric, Southern Edison, and San Diego Gas & Electric – to produce at least 20% of their electricity using renewable sources by 2010.³¹⁶

In addition to state-level efforts, on October 16, 2006, Governor Schwarzenegger and New York Governor Pataki announced plans to link emissions trading between the carbon markets being developed for California and the states participating in the Regional Greenhouse Gas Initiative (RGGI).³¹⁷ California and the RGGI states hope to achieve their emissions reduction targets in a more efficient manner by combining markets.³¹⁸

In December 2006, the CPUC signed onto the Western Public Utility Commissions' Joint Action Framework on Climate Change, an inter-state agreement with the public utility commissions of New Mexico, Oregon, and Washington.³¹⁹ Under the agreement, the utility commissions will work together to recommend ways to identify, develop, and implement greater energy efficiency, demand response capability, low-carbon technologies, and GHG emissions standards.

³⁰⁹ Assemb. B. 32, 2006 Leg., Reg. Sess. (Cal. 2006).

³¹⁰ *Id.*

³¹¹ *Id.*

³¹² Cal. Env'tl. Prot. Agency, Air Res. Bd., *Proposed Early Actions to Mitigate Climate Change in California*, (Apr. 20, 2007), http://www.climatechange.ca.gov/climate_action_team/reports/2007-04-20_ARB_early_action_report.pdf.

³¹³ CAL. HEALTH & SAFETY CODE § 38560.5(b) (West 2006).

³¹⁴ S.B. 1368, 2006 Leg., Reg. Sess. (Cal. 2006).

³¹⁵ *Id.*

³¹⁶ S.B. 107, 2006 Leg., Reg. Sess. (Cal. 2006).

³¹⁷ *California, New York Agree to Explore Linking Greenhouse Gas Emission Credit Trading Markets; Gov. Schwarzenegger Tours Carbon Trading Floor*, PROJECT VOTE SMART (Oct. 16, 2006), <http://gov.ca.gov/index.php?/press-release/4449/> (original press release not found).

³¹⁸ *Id.*

³¹⁹ *Four Western States to Cooperate on Greenhouse Gas Emissions*, U.S. DEP'T OF ENERGY, ENERGY EFFICIENCY AND RENEWABLE ENERGY (Dec. 6, 2006), https://www1.eere.energy.gov/femp/news/news_detail.html?news_id=10438.

2007: Climate Change Agreements, Cap-&-Trade, Greenhouse Gas Reduction, Energy Efficiency, and Fuels

In February 2007, Governor Schwarzenegger established the Western Climate Initiative (WCI) with the governors of California, Arizona, New Mexico, Oregon, and Washington in order to reduce GHG emissions and tackle climate change.³²⁰ On August 22, 2007, the WCI set a regional GHG emission reduction goal of 15% below 2005 levels by 2020 or approximately 33% below business-as-usual levels.³²¹ This regional target is compatible with and does not replace the states' individual GHG reduction targets.³²² Montana, Utah, and four Canadian provinces joined the WCI subsequent to 2007.³²³ The WCI announced draft essential requirements for the reporting of GHG emissions in July 2008.³²⁴ It also released *Design Recommendations for the WCI Regional Cap-and-Trade Program* on September 23, 2008.³²⁵

The aforementioned document recommends that carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions should all fall under the cap-and-trade scheme.³²⁶ Regulated sources are electricity generation, combustion at industrial and commercial facilities, industrial process, fuel combustion from industrial, residential and commercial sources that are below the threshold for direct regulation, and transportation combustion of gasoline/diesel (excluding biofuels).³²⁷ Each of these sources must emit the equivalent of at least 25,000 metric tons of carbon dioxide annually in order to participate in the trade.³²⁸ The first compliance period began in 2012 and included half of the economy-wide regulated emissions from the WCI's member jurisdiction for the electricity generation, industrial combustion and industrial process sectors.³²⁹ The second compliance period begins in 2015, adding the other regulated sectors and includes 90% of the economy-wide regulated emissions.³³⁰

In May 2007, California and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report GHG emissions accurately, transparently and consistently across borders and industry sectors.”³³¹ This was viewed as a “critical first

³²⁰ W. CLIMATE INITIATIVE, <http://www.wci-inc.org> (Aug. 31, 2013).

³²¹ *Statement of Regional Goal*, WESTERN CLIMATE INITIATIVE (Aug. 27, 2007), http://azclimatechange.gov/download/082207_statement.pdf.

³²² *Id.*

³²³ W. CLIMATE INITIATIVE, <http://www.wci-inc.org> (Aug. 31, 2013).

³²⁴ *Id.*

³²⁵ *Design Recommendations for the WCI Regional Cap-and-Trade Program*, W. CLIMATE INITIATIVE (Sept. 23, 2008), <http://www.westernclimateinitiative.org/the-wci-cap-and-trade-program/design-recommendations>.

³²⁶ *Id.* at 8.

³²⁷ *Id.* at 8-9.

³²⁸ *Id.* at 10.

³²⁹ *Id.* at 24.

³³⁰ *Id.*

³³¹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

step in developing robust programs to reduce greenhouse gas emissions.”³³² The California Climate Action Registry completed one of these programs in September 2007: the Forest Sector Protocol.³³³ This protocol provides the procedures for reporting biological carbon stocks and carbon dioxide emissions from forests.³³⁴

In connection with the California Global Warming Solutions Act of 2006’s target of reducing statewide GHG emissions to 1990 levels by 2020, CARB approved early action measures to ensure progress toward this goal in June and again in October 2007.³³⁵ These measures include a low-carbon fuel standard; a restriction on “do-it-yourself” automotive refrigerants, which will curb refrigerant losses from vehicle air conditioning systems; the increased use of equipment that captures landfill methane; retrofitting trucks and trailers with devices that reduce aerodynamic drag; establishing port electrification that requires docked ships to shut off their auxiliary engines; the use of alternative chemistry development, emissions abatement, and recovery and recycling to reduce perfluorocarbon emissions; the reduction of propellants in consumer products; regulations to ensure proper tire inflation; and a ban on the use of sulfur hexafluoride for non-essential uses when available alternatives exist.³³⁶

Governor Schwarzenegger signed AB 532 in October 2007, extending the date for solar energy equipment installation on all state buildings, parking facilities, and swimming pools from January 1, 2007 to January 1, 2009.³³⁷ Further, AB 532 required that solar energy equipment be installed on state buildings and parking facilities constructed on or after January 1, 2008, which was extended from January 1, 2003.³³⁸

In October 2007, Governor Schwarzenegger signed AB 809, which added conduit hydroelectric facilities of 30 megawatts (MW) or less that commenced operation before January 1, 2006 and those that commenced operation after December 31, 2005, which do not adversely impact stream uses, volume or flow, as well as existing hydroelectric generation facilities that make efficiency improvements, to the state’s eligible renewable energy resources.³³⁹ California’s energy suppliers must also disclose to all customers the mix of resources they use to generate power.³⁴⁰ The disclosure forms have been standardized, and utilities are expected to deliver them four times each year.³⁴¹

³³² *Id.*

³³³ *Forest*, CAL. CLIMATE ACTION REGISTRY (May 2007), <http://www.climateregistry.org/project-protocols.html>

³³⁴ *Forest Project Protocol*, CAL. CLIMATE ACTION REGISTRY (Sept. 2007), http://www.climateregistry.org/resources/docs/protocols/industry/forest/forest_sector_protocol_version_2.1_sept2007.pdf.

³³⁵ *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*, CAL. ENVTL. PROT. AGENCY, AIR RES. BD. (Oct. 2007), http://www.arb.ca.gov/cc/ccea/meetings/ea_final_report.pdf.

³³⁶ *Id.*

³³⁷ Assemb. B. 532, 2007 Leg., Reg. Sess. (Cal. 2007).

³³⁸ *Id.*

³³⁹ Assemb. B. 809, 2007 Leg., Reg. Sess. (Cal. 2007).

³⁴⁰ *Id.* §§ 398.1-.5.

³⁴¹ *Id.*

On October 25, 2007, CARB approved regulations to help attain the state's goal of reducing GHG emissions.³⁴² The regulations included "Smartway Truck Efficiency" measures that reduce aerodynamic drag in trucks and trailers, port electrification for docked ships, a reduction of perfluorocarbons from the semiconductor industry, a reduction of propellants in consumer products, proper tire inflation, and a reduction of sulfur hexafluoride from the non-electricity sector.³⁴³ CARB projects that these measures will reduce GHG emissions by three million metric tons annually.³⁴⁴

California has established appliance efficiency standards for seventeen products and estimates these regulations will save consumers \$3 billion over fifteen years.³⁴⁵ In October 2007, Governor Schwarzenegger signed several other energy bills that set efficiency standards. AB 662 empowers the CEC to increase appliance water efficiency standards,³⁴⁶ and AB 1560 mandates that the Commission include water efficiency and conservation standards in the current energy efficiency building standards.³⁴⁷ AB 1109 creates the California Lighting Efficiency and Toxics Reduction Act, which banned the manufacturing and sale of incandescent light bulbs and mandates that the Commission establish energy efficiency standards for general purpose light bulbs.³⁴⁸

Additionally in October 2007, Governor Schwarzenegger signed AB 1470, enacting the Solar Water Heating and Efficiency Act of 2007, which sets a goal of replacing natural gas water heaters within the state with 200,000 solar water-heating systems by 2017.³⁴⁹ AB 1470 directs that this should be accomplished through a financial incentive program created by the CPUC and funded by surcharges added to natural gas bills.³⁵⁰

In October 2007, Governor Schwarzenegger signed AB 1103, which requires electric utilities to keep energy consumption records for nonresidential buildings that they service and also requires building owners and operators to give prospective buyers, lessees, and lenders benchmarking information regarding a building's energy consumption.³⁵¹ The Waste Heat and Carbon Reductions Act (AB 1613) enables the CPUC to require utilities to increase energy efficiency by buying excess electricity from combined heat and power systems that capture waste heat.³⁵²

In October 2007, Governor Schwarzenegger signed AB 118, creating the Alternative and Renewable Fuel and Vehicle Technology Program, which will provide

³⁴² Press Release, Cal. Env'tl. Prot. Agency, Air Res. Bd., ARB Approves Tripling of Early Action Measures Required Under AB 32 (Oct. 25, 2007), <http://www.arb.ca.gov/newsrel/nr102507.htm>.

³⁴³ *Id.*

³⁴⁴ *Id.*

³⁴⁵ Cal. Energy Comm'n, *Appliance Efficiency Regulations*, (Sept. 7, 2006), <http://www.energy.ca.gov/2006publications/CEC-400-2006-002/CEC-400-2006-002-REV2.PDF>.

³⁴⁶ Assemb. B. 662, 2007 Leg., Reg. Sess. (Cal. 2007).

³⁴⁷ Assemb. B. 1560, 2007 Leg., Reg. Sess. (Cal. 2007).

³⁴⁸ Assemb. B. 1109, 2007 Leg., Reg. Sess. (Cal. 2007).

³⁴⁹ Assemb. B. 1470, 2007 Leg., Reg. Sess. (Cal. 2007).

³⁵⁰ *Id.*

³⁵¹ Assemb. B. 1103, 2007 Leg., Reg. Sess. (Cal. 2007).

³⁵² Assemb. B. 1613, 2007 Leg., Reg. Sess. (Cal. 2007).

grants and loans for the development and implementation of alternative fuel and vehicle technologies that will help attain the state's climate change policies.³⁵³ AB 118 also created the Alternative and Renewable Fuel and Vehicle Technology Fund in order to finance the Program and requires an annual transfer of \$10,000,000 to the Fund from the Public Interest Research, Development, and Demonstration Fund.³⁵⁴ Increases in vehicle and vessel registration fees and identification plate service fees would generate further revenue for the Fund.³⁵⁵

Additionally, on October 29, 2007, California joined a coalition with nine other states, New Zealand, Norway, nine European Union countries, the European Commission, and two Canadian provinces to form the International Carbon Action Partnership (ICAP) in order to combat global warming.³⁵⁶ ICAP provides a forum for governments to share information regarding cap-and-trade systems and works to ensure that market programs are compatible.³⁵⁷ In addition, ICAP promotes low-carbon products and services, innovations, and cost effective reductions.³⁵⁸

2008: Transportation, Greenhouse Gas Reduction, Renewable Energy, Green Building, Green Technology, Energy Efficiency, Climate Change Agreements, and Renewable Portfolio Standards

On March 27, 2008, CARB voted to triple the number of zero emissions vehicles that had been proposed for automakers to produce from 2012 through 2014.³⁵⁹ The amendment raises the number of pure zero emission vehicles required from 2,500 to 7,500. In addition, CARB approved the allocation of nearly \$200 million for cleaner school buses.³⁶⁰ The program will replace the oldest school buses still operating in the state as well as replace or retrofit an additional 4,500 high-polluting buses serving public schools.

In June 2008, CARB released a draft Scoping Plan to reduce state GHG emissions to 1990 levels by 2020 as mandated by AB 32.³⁶¹ Key plan suggestions include developing a state cap-and-trade program that will link to the WCI's regional cap-and-trade program, increasing California's renewable portfolio standard from 20% by 2010 to 33% by 2020, setting new vehicle efficiency standards, setting higher building and

³⁵³ Assemb. B. 118, 2007 Leg., Reg. Sess. (Cal. 2007).

³⁵⁴ *Id.*

³⁵⁵ *Id.*

³⁵⁶ Press Release, Int'l Carbon Action P'ship, Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007), http://icapcarbonaction.com/index.php?option=com_content&view=article&id=5:what-is-icaps-goal&catid=2:press-releases&Itemid=34.

³⁵⁷ *Id.*

³⁵⁸ *Id.*

³⁵⁹ Press Release, Cal. Env'tl. Prot. Agency, ARB Passes New ZEV Amendment (Mar. 27, 2008), <http://www.arb.ca.gov/newsrel/nr032708b.htm>.

³⁶⁰ Press Release, Cal. Env'tl. Prot. Agency, Air Res. Bd., ARB approves \$200 Million for Cleaner School Buses from Proposition 1B Funding, (Mar. 27, 2008), <http://www.arb.ca.gov/newsrel/nr032708.htm>.

³⁶¹ *Climate Change Draft Scoping Plan: A Framework for Change*, CAL. AIR RES. BD. (June 2008), <http://www.arb.ca.gov/cc/scopingplan/document/draftscopingplan.pdf>.

appliance efficiency standards, and implementing a low carbon fuel standard.³⁶² The Its Scoping Plan was released in October 2008.³⁶³ The Plan proposes the largest sectorial reductions to come from transportation. These reductions will be implemented via the light-duty vehicle GHG standards (to be set under the authority of S.B. 375) and the Low-Carbon Fuel Standard.³⁶⁴ CARB voted on the Scoping Plan in November 2008.

Commercial, residential and industrial owners are eligible for a property tax exemption of up to 100% of the value of certain types of solar energy systems.³⁶⁵ Residential owners can also take tax deductions for the interest on loans for energy efficiency updates.³⁶⁶ In addition, California requires all utilities to offer net metering for solar and wind systems with a capacity of up to 1 MW.³⁶⁷ The state's investor-owned utilities are also required to offer net metering for biogas and fuel cell systems.³⁶⁸

In order to stimulate voluntary action toward GHG emissions reductions, California also created a climate action registry.³⁶⁹ The registry is a non-profit entity mandated to help various governmental and private actors set baselines for measuring emissions; develop reduction programs; and synchronize their programs with federal and international best practices.³⁷⁰ It acts as both an informational clearinghouse and policy-making hub.³⁷¹ Its mandate is broad and encompassing, as it covers not only "traditional" sources of GHG emissions and remediation, such as fossil fuel-based power generators, but also forest management practices.³⁷² Supporting the goals of the Registry, at least every two years the Energy Resources Conservation and Development Commission must make a comprehensive energy sector assessment, including forecasts for supply, production, transportation, delivery, distribution, demand, and prices.³⁷³ These reports are meant to foster energy policies that are environmentally sound and maintain energy grid reliability.³⁷⁴ The Registry closed in December 2010.³⁷⁵

In April, the CPUC created the California Institute for Climate Solutions (CICS).³⁷⁶ The goals of CICS are to support research that either leads to reductions in GHG emissions in the electric and natural gas sectors or mitigates the impacts of climate

³⁶² *California's Air Resources Board Draft GHG Reduction Plan*, CENTER FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.pewclimate.org/node/6014> (Sept. 1, 2013).

³⁶³ California Air Resources Board, *Climate Change Proposed Scoping Plan*, CAL. AIR RES. BD. (Oct. 2008), <http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf>.

³⁶⁴ *Id.*

³⁶⁵ CAL. REV. & TAX. CODE § 73 (West 2011).

³⁶⁶ *Id.* § 17208.1.

³⁶⁷ *Id.* § 2827.

³⁶⁸ *Id.*

³⁶⁹ S.B. 1771, 2000 Leg., Reg. Sess. (Cal. 2000).

³⁷⁰ *Id.*

³⁷¹ *Id.*

³⁷² *Id.*

³⁷³ CAL. PUB. RES. CODE § 25301 (West 2002).

³⁷⁴ *Id.*

³⁷⁵ THE CLIMATE REGISTRY, <http://www.climateregistry.org> (Sept. 6, 2013).

³⁷⁶ Press Release, Cal. Pub. Util. Comm'n, CPUC Establishes Institute for Climate Solutions to Build on State's Environmental Leadership (Apr. 10, 2008), http://docs.cpuc.ca.gov/PUBLISHED/NEWS_RELEASE/81168.htm.

change in California and to hasten the deployment of technologies that have the “highest potential to reduce emissions in the electric and natural gas sectors.”³⁷⁷ Also in April, the CPUC approved a plan to evaluate the feasibility of a Clean Hydrogen Power Generation plant to advance clean coal technology.³⁷⁸ The plant would convert coal into predominantly hydrogen and carbon monoxide gases. The hydrogen would then be used as a fuel source while the carbon monoxide gas would be sequestered underground.

In May 2008, the CPUC approved one of the largest wind power contracts in America.³⁷⁹ The contract provides for the development of at least 1,500 MW from wind generating facilities to be constructed in the Tehachapi Wind Resource Area.³⁸⁰ It is estimated that by 2015, “the development will have the capacity of three large gas fired power plants, but will produce zero greenhouse gas emissions.”³⁸¹

The CPUC showed its support for other renewable energy resource technologies when it authorized the Pacific Gas & Electric Company to include manure management projects in the portfolio of projects supported by the ClimateSmart Program.³⁸² Methane emissions from livestock operations are a significant source of climate change gases. This project aims to capture and destroy the methane before it is released into the atmosphere. Manure management is now the second type of project to be included in the ClimateSmart program in addition to forestry offsets.³⁸³

In July 2008, the California Building Standards Commission voted to adopt the nation’s first statewide green building code.³⁸⁴ The Code establishes green building standards that aim to reduce GHG emissions from structures. It includes mandatory components with a delayed effective date for housing as well as voluntary standards for non-residential occupancies.³⁸⁵

³⁷⁷ *Id.*

³⁷⁸ Press Release, Cal. Pub. Util. Comm’n, CPUC Approves Clean Coal Study in Ongoing Efforts to Reduce Greenhouse Gas Emissions (Apr. 10, 2008), http://docs.cpuc.ca.gov/PUBLISHED/NEWS_RELEASE/81153.htm.

³⁷⁹ Press Release, Cal. Pub. Util. Comm’n, CPUC Approves One of the Largest Wind Power Contracts in the U.S. (May 15, 2008), http://docs.cpuc.ca.gov/WORD_PDF/NEWS_RELEASE/82717.PDF.

³⁸⁰ *Id.*

³⁸¹ *Id.* (quoting Commissioner Rachelle Chong).

³⁸² Press Release, Cal. Pub. Util. Comm’n, CPUC Approves Biogas Management Project for PG&E (June 12, 2008), http://docs.cpuc.ca.gov/WORD_PDF/NEWS_RELEASE/84074.PDF; see also *ClimateSmart Program Concludes and Celebrates Accomplishments*, PG&E (Nov. 10, 2011), <http://www.pgecurrents.com/2011/11/10/climatesmart™-program-concludes-and-celebrates-accomplishments/>. The ClimateSmart Program was launched in 2007 and concluded in 2011, and it was the nation’s first utility program to give customers an opportunity to voluntarily balance out their energy-related GHG emissions.

³⁸³ *Id.*

³⁸⁴ CAL. CODE REGS. tit. 24, § 11 (2008).

³⁸⁵ *Id.*

In August 2008, Governor Schwarzenegger joined Colorado's Governor Ritter and the Alliance of Automobile Manufacturers to launch the EcoDriving Program.³⁸⁶ The Program is part of a nationwide effort to save consumers money on their gasoline, reduce fuel consumption and cut carbon dioxide emissions.³⁸⁷ Later that month, California joined forces with other out-of-state entities. Schwarzenegger announced that the six Mexican Border States and California have joined together with Pacific Gas & Electric and the California Climate Action Registry in a memorandum of understanding (MOU) to combat climate change.³⁸⁸ Both the public and private signatories will focus on reducing GHGs while working to create clean air and water and reduced exposure to toxic pollutants.³⁸⁹

In September 2008, California won a \$500,000 grant from the federal Department of Energy to implement an energy-efficient model state code for building construction and renovation.³⁹⁰ Also, in that month, Governor Schwarzenegger signed AB 3018.³⁹¹ This Bill, entitled the California Green Collar Jobs Act of 2008, requires the California Workforce Investment Board to create a special committee to be called the Green Collar Jobs Council.³⁹² The Council will develop a strategic initiative to address the need of a highly skilled green workforce in the state. The Bill provides six specific duties for the council as it develops the initiative.³⁹³

The *California Long Term Energy Efficiency Strategic Plan* was released by the CPUC in September 2008.³⁹⁴ The Plan aims to eliminate market barriers impeding the state from achieving its long-term energy goals.³⁹⁵ It discusses strategies in various areas, including the residential, commercial, industrial and agricultural sectors. In the residential sector, the Plan proposes that new buildings will produce zero net energy by 2020 and also contains policies seeking to make low income residential units more energy efficient.³⁹⁶ It proposes that new and a significant number of existing buildings

³⁸⁶ Gov. Schwarzenegger Joins Automobile Alliance to Launch EcoDriving Program to Save Consumers Money at Gas Pump, PROJECT VOTE SMART (Aug. 18, 2008), <http://votesmart.org/public-statement/370168/> (original press release not found).

³⁸⁷ *Id.*

³⁸⁸ Gov. Schwarzenegger Joins Mexican Border States to Fight Climate Change and Increase Green Investment Through Public Private Partnerships, PROJECT VOTE SMART (Aug. 15, 2008), <http://votesmart.org/public-statement/370171/> (original press release not found).

³⁸⁹ *Id.*

³⁹⁰ Press Release, U.S. Dep't of Def., DOE Announces \$6.6 Million in Competitive Grant Selections For Innovative State Efficiency, Renewable Initiative (Sept. 8, 2008), http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/Press_Release_-_Competitive_Grant_Selections_-_9808_.pdf.

³⁹¹ Assemb. B. 3018, 2008 Leg., Reg. Sess. (Cal. 2008).

³⁹² *Id.*

³⁹³ *Id.*

³⁹⁴ *California Long Term Energy Efficiency Strategic Plan*, CAL. PUB. UTIL. COMM'N (Sept. 2008), <http://www.cpuc.ca.gov/NR/rdonlyres/D4321448-208C-48F9-9F62-1BBB14A8D717/0/EEStrategicPlan.pdf>.

³⁹⁵ *Id.* at 1.

³⁹⁶ *Id.* at 9.

produce zero net emissions by 2030.³⁹⁷ The Plan outlines various, specific market manipulation strategies to make energy efficiency more cost-effective.

Governor Schwarzenegger announced on September 26, 2008 that he would organize a global climate summit to take place in California in November 2008 where political leaders from across the globe can discuss climate change issues.³⁹⁸ The summit was held in California from November 18-19, 2008 and resulted in a MOU on deforestation.³⁹⁹ However, this sentiment to address climate change issues shifted four days later when he vetoed S.B. 1762.⁴⁰⁰ This Bill proposed to create the California Climate Change Institute where the University of California would conduct research and development with the purpose of achieving the state-mandated GHG emission cuts.⁴⁰¹ In explaining the veto, Governor Schwarzenegger reflected the opinion of other state agencies that it was undesirable to place the Institute solely within the University of California system.⁴⁰² He also found the Bill to be “premature” in anticipation of CARB’s Scoping Plan to reduce GHG emissions.⁴⁰³

On October 1, 2008, Governor Schwarzenegger signed S.B. 375.⁴⁰⁴ This Bill requires the State Air Resources Board to set regional caps on GHG emissions from automobiles and light trucks.⁴⁰⁵ In an effort to achieve these caps, the Bill creates a “Sustainable Communities Strategy,” directing metropolitan planning organizations to produce long-term housing transportation plans with the goal of reducing GHG emissions.⁴⁰⁶ The Bill also states that if the Commission on State Mandates determines that the Bill mandates costs, these costs will be reimbursed by the state.⁴⁰⁷

The CARB was allocated a \$5.6 million special fund and 25.8 positions in the 2008-09 State Budget for implementation of the Global Warming Solutions Act of 2006.⁴⁰⁸ Specifically, these resources are for the implementation of the Low-Carbon Fuel Standard and for the development of other GHG reduction measures.⁴⁰⁹

³⁹⁷ *Id.* at 30.

³⁹⁸ Samantha Young, *Schwarzenegger to Convene Global Climate Summit*, USA TODAY (Sept. 26, 2008, 7:40 PM), http://usatoday30.usatoday.com/news/nation/2008-09-26-3903170357_x.htm.

³⁹⁹ GOVERNOR’S GLOBAL CLIMATE SUMMIT, http://www.climatechange.ca.gov/events/2008_summit/ (Sept. 6, 2013).

⁴⁰⁰ S.B. 1762, 2008 Leg., Reg. Sess. (Cal. 2008), http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_1751-1800/sb_1762_bill_20080903_enrolled.pdf.

⁴⁰¹ *Id.*

⁴⁰² John Howard, *Governor Rejects Climate-Change Institute at UC*, CAPITOL WEEKLY (Oct. 2, 2008, 12:00 AM), <http://www.capitolweekly.net/article.php?xid=xg5leuvix2dpv5>.

⁴⁰³ *Id.*

⁴⁰⁴ S.B. 375, 2008 Leg., Reg. Sess. (Cal. 2008), <http://www.pewclimate.org/docUploads/SB%20375.pdf>.

⁴⁰⁵ *Id.* at 86.

⁴⁰⁶ *Id.*

⁴⁰⁷ *Id.*

⁴⁰⁸ STATE OF CALIFORNIA, BUDGET OF THE CALIFORNIA GOVERNMENT, FISCAL YEAR 2009 (2008), http://www.dof.ca.gov/budget/historical/2008-09/documents/State_Budget-Veto_Message_2008-09.pdf.

⁴⁰⁹ *Id.* at 21.

Governor Schwarzenegger announced a partnership between California and SunEdison, a solar energy service provider, to install solar panels on fifteen California State University campuses.⁴¹⁰ These panels will provide a total of 8 MW of electricity, the equivalent of removing 48,937 cars from the road.⁴¹¹ Schwarzenegger also helped launch a 5 MW solar thermal power plant in Bakersfield on October 23, 2008.⁴¹² This plant is the first solar thermal power plant to come online in the state in over fifteen years and it is a demonstration for utility-scale solar thermal power generation. A larger solar thermal power plant is being built in San Luis Obispo with a 177 MW capacity.⁴¹³

Two energy measures were on the ballot in California's 2008 election. Proposition 7 required California's utilities to increase their purchase of electricity generated from renewable resources by 2% annually to meet the Renewables Portfolio Standard requirements of 20% by 2010 to 40% by 2020 and 50% by 2025.⁴¹⁴ Proposition 10 sought to provide a total of \$5 million to fund alternative energy research and to subsidize high fuel economy or alternative fuel vehicle purchases.⁴¹⁵ A majority of voters rejected these propositions.⁴¹⁶

Governor Schwarzenegger welcomed an innovative, first-of-its-kind airplane flight, which landed in San Francisco on November 14, 2008.⁴¹⁷ The flight has potential to cut more than 25 metric tons of GHG emissions on a single, trans-Pacific flight. This would occur by new communication technology, which allows air traffic controllers to communicate with pilots mid-flight. This earlier communication allows pilots to have a more continuous descent to arrival so that less fuel is consumed.⁴¹⁸

Three days after the flight landed in San Francisco, Governor Schwarzenegger signed EO S-14-08 to streamline the renewable energy project approval process and to increase the Renewable Energy Standard to 33% by 2020.⁴¹⁹

⁴¹⁰ Press Release, The Cal. State Univ., Governor Schwarzenegger, the California State University and SunEdison Announce Green Power Partnership (Oct. 21, 2008), <http://www.calstate.edu/pa/news/2008/photovoltaic.shtml>.

⁴¹¹ *Id.*

⁴¹² Press Release, Office of the Governor, Governor Schwarzenegger Participates in Launch of New Solar Energy Facility (Oct. 23, 2008), <http://boitano.net/column/200810/Governor%20Schwarzenegger%20Participates%20in%20Launch%20of%20New%20Solar%20Energy%20Facility%20-%20Press%20Release%20by%20Governor%20Arnold%20Schwarzenegger.htm>.

⁴¹³ *Id.*

⁴¹⁴ *PROP 7: Renewable Energy Generation*, CAL. GEN. ELECTION, <http://voterguide.sos.ca.gov/past/2008/general/title-sum/prop7-title-sum.htm> (Sept. 1, 2013).

⁴¹⁵ *PROP 10: Alternative Fuel Vehicles and Alternative Energy*, CAL. GEN. ELECTION, <http://voterguide.sos.ca.gov/past/2008/general/argu-rebut/argu-rebutt10.htm> (Sept. 1, 2013).

⁴¹⁶ *Supplement to the Statement of Vote Statewide Summary by County for State Ballot Measures*, CAL. SEC'Y OF STATE, <http://www.sos.ca.gov/elections/sov/2008-general/ssov/10-ballot-measures-statewide-summary-by-county.pdf> (Sept. 1, 2013).

⁴¹⁷ Arnold Schwarzenegger, Governor of Cal., Address: Governor Schwarzenegger Welcomes Groundbreaking Green Flight to California, <http://gov.ca.gov/news.php?id=11040> (Sept. 1, 2013).

⁴¹⁸ *Id.*

⁴¹⁹ Cal. Exec. Order No. S-14-08 (2008), <http://gov.ca.gov/news.php?id=11072>.

To further promote its cap-and-trade program, the WCI released the third draft of the *Background Document and Progress Report for Essential Requirements of Mandatory Reporting for the Western Climate Initiative* on January 6, 2009 for public comment.⁴²⁰ The draft sets the reporting threshold at 10,000 metric tons of carbon dioxide in a year, which is well below the 25,000 metric ton threshold for participation in the cap-and-trade program.⁴²¹ It recommends that stationary combustion sources be subject to the reporting requirement as well as the sources listed in Table 1 of the document. These listed sources must report combustion and non-combustion emissions.⁴²² Due to strong stakeholder support, the plan recommends that reporting begin in 2011 for facilities that began operation before 2010.⁴²³ This is in preparation for the commencement of the cap-and-trade program in 2012.

On November 14, 2008, Governor Schwarzenegger issued EO S-13-08⁴²⁴ implementing a plan for sea level rise and climate change impacts.⁴²⁵ The EO designated four key actions: (1) a statewide climate change assessment that identifies the state's most vulnerable areas and devises adaptation strategies by early 2009; (2) the request for a National Academy of Science expert panel to advise on sea level rise impacts; (3) interim guidance to state agencies on planning for "sea level rise in designated coastal and floodplain areas for new projects;" and (4) the production of a report on critical existing and planned infrastructure projects vulnerable to sea level rise.⁴²⁶

A few days after addressing sea level rise impacts, Governor Schwarzenegger took a step towards reducing the climate change impacts created by tropical deforestation.⁴²⁷ In collaboration with governors from Illinois, Wisconsin, and six states and provinces in Indonesia and Brazil, he signed a MOU "focused on reducing emissions from deforestation and land degradation (REDD) programs."⁴²⁸ Among the MOU's chief provisions were a commitment to promoting carbon sequestration, "develop[ing] rules to ensure that forest-sector emission reductions and sequestration could pass the strict criteria outlined in California's AB 32 Scoping Plan," development of an action plan by early 2009.⁴²⁹

In December 2008, Schwarzenegger announced the approval of a Sunrise

⁴²⁰ *Background Document and Progress Report for Essential Requirements of Mandatory Reporting For the Western Climate Initiative*, W. CLIMATE INITIATIVE (Jan. 6, 2009), http://www.westernclimateinitiative.org/dmddocuments/mandatory_reporting_3rd_draft_010609.74.pdf.

⁴²¹ *Id.* at 10.

⁴²² *Id.* at 11.

⁴²³ *Id.* at 16.

⁴²⁴ Exec. Order No. S-13-08 (2008), <http://gov.ca.gov/news.php?id=11036>.

⁴²⁵ Press Release, Office of the Governor, Gov. Schwarzenegger Issues Executive Order Directing State Agencies to Plan for Sea Level Rise and Climate Impacts (Nov. 14, 2008), <http://lists.cacities.org/pipermail/coastalcities/2008-November/000024.html>.

⁴²⁶ *Id.*

⁴²⁷ Press Release, Office of the Governor, Gov. Schwarzenegger Partners with Other States to Reduce Greenhouse Gas Emissions from Deforestation (Nov. 19, 2008), <http://www.gov38.ca.gov/press-release/11101/>.

⁴²⁸ *Id.*

⁴²⁹ *Id.*

Powerlink Project that will assist the state in reaching its 33% renewable energy goal.⁴³⁰

In response to legislation adopted in 2007, the Governor's Office of Planning and Research (OPR) issued a preliminary draft of California Environmental Quality Act (CEQA) guideline amendments in early January 2009.⁴³¹ The amendments will advise state agencies on how to analyze GHG impacts created by new projects.⁴³² Once submitted to California's Natural Resources Agency, that agency has until January 1, 2010 to begin the formal rulemaking process.⁴³³ The amendments were approved in February 2010 and became effective on March 18, 2010.⁴³⁴

2009: Climate Change Adaptation, Renewable Energy, Cap & Trade, Climate Change Agreements, Green Jobs, Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, Renewable Portfolio Standards, American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

On January 21, 2009, Governor Schwarzenegger sent a letter to President Obama requesting that the EPA promptly address California's Clean Air Act waiver request.⁴³⁵ A month later, Schwarzenegger and eleven other governors signed a letter to President Obama, urging him to form a strong state/federal leader partnership in administering and initiating a national climate change program.⁴³⁶ This letter was predicated upon the President's letter to the Governors' Global Climate Summit in which he offered the governors a partnership with the White House in addressing climate change issues. The letter writers believe that their states have played a leading role in confronting these issues and stated, "It is crucial that we build on our states' momentum."⁴³⁷ The letter also contains suggestions for how a national climate change program should be implemented. One of these suggestions is for the national government to recognize the private investments that have been made in current cap-and-trade programs and to preserve the clean energy plans that are funded by the proceeds from these programs.⁴³⁸

⁴³⁰ Press Release, Office of the Governor, Gov. Schwarzenegger Issues Statement on CPUC's Approval of Sunrise Powerlink Project (Dec. 18, 2008), <http://www.gov38.ca.gov/press-release/11281/>.

⁴³¹ *Preliminary Draft CEQA Guideline Amendments for Greenhouse Gas Emissions and Public Workshop Announcement*, STATE OF CAL., GOVERNOR'S OFFICE OF PLANNING AND RESEARCH (Jan. 29, 2009), http://bofdata.fire.ca.gov/board_committees/policy_committee/current_projects/current_projects/p2.0climate-ceqa-opr.pdf; see also S.B. 97, 2007 Leg., Reg. Sess. (2007).

⁴³² *Id.*

⁴³³ *Id.*

⁴³⁴ *CEQ Guidelines*, CAL. NATURAL RES. AGENCY, <http://ceres.ca.gov/ceqa/guidelines/> (Sept. 7, 2013).

⁴³⁵ Press Release, Office of the Governor, Governor Schwarzenegger Sends Letter to President Obama Urging Reconsideration of California's Waiver Request for Cleaner Cars (Jan. 21, 2009), <http://www.cleancarscampaign.org/web-content/cleanairact/docs/gov-to-pres-waiver-01.21.2009.pdf>.

⁴³⁶ Letter from Arnold Schwarzenegger, Governor of Cal., M. Jodi Rell, Governor of Conn., Charlie Crist, Governor of Fla., Kathleen Sebelius, Governor of Kan., Martin O'Malley, Governor of Md., Deval Patrick, Governor of Mass., John S. Corzine, Governor of N.J., Bill Richardson, Governor of N.M., David Paterson, Governor of N.Y., Theodore R. Kulongoski, Governor of Or., Christine O. Gregoire, Governor of Wash., Jim Doyle, Governor of Wis., to Barack Obama, President of the United States of America (Jan. 29, 2009), <http://web.archive.org/web/20090214185812/http://www.wisgov.state.wi.us/docview.asp?docid=15821>.

⁴³⁷ *Id.* at 1.

⁴³⁸ *Id.* at 2.

On January 23, 2009, CARB created a Regional Targets Advisory Committee (RTAC) tasked with making recommendations on factors to include and methodologies to use in CARB's target setting process mandated by S.B. 375.⁴³⁹

On January 28, 2009, the CPUC reported that Californians' installations of solar power in 2008 had doubled the amount installed in the previous year.⁴⁴⁰ On that same day the legislature introduced S.B. 104, a measure that would allow CARB to regulate nitrogen trifluoride, or NF3.⁴⁴¹ NF3 was not among the GHGs addressed in AB 32.⁴⁴² A 2008 study done by the University of California, Irvine found that the gas has "a global-warming potential 17,000 greater than carbon dioxide," and "persists in the atmosphere for centuries."⁴⁴³

In late February 2009, Governor Schwarzenegger proposed the creation of a state Department of Energy to facilitate one-stop permitting for renewable energy projects.⁴⁴⁴ Current procedures divide the task of permitting among nine agencies.⁴⁴⁵ Consolidation into one agency is aimed at expediting completion of projects that can take ten to twelve years in California.⁴⁴⁶

On February 26, 2009, CARB issued two proposed rules targeting emissions of fluorinated gases.⁴⁴⁷ The first rule regulates semiconductor manufacturers that utilize fluorinated gases above a certain level.⁴⁴⁸ The rule sets performance based emissions standards for the gases and owners and operators using fluorinated gases have until 2012 or 2014 to comply.⁴⁴⁹ The second rule targets sulfur hexafluoride (SF6), a GHG that has an impact 20,000 times greater than carbon dioxide.⁴⁵⁰ The rule phases out use of SF6 in non-utility, non-semiconductor applications.⁴⁵¹

⁴³⁹ S.B. 375, 2009 Leg., Reg. Sess. (Cal. 2009); *see also* S.B. 375 Regional Targets Advisory Committee, CAL. ENVTL. PROT. AGENCY, AIR RES. BD., (last modified May 13, 2010), <http://www.arb.ca.gov/cc/sb375/rtac/rtac.htm>.

⁴⁴⁰ Gov. Schwarzenegger Highlights Report Showing Californians Doubled Solar Installations in 2008, PROJECT VOTE SMART (Jan. 28, 2009), <http://votesmart.org/public-statement/407171/> (original press release not found).

⁴⁴¹ Bill to Regulate a Harmful 'Greenhouse' Gas 17,000 Times More Damaging Than Carbon Dioxide, AMERICAN CHRONICLE (Jan. 28, 2009), <http://amchron.soundenterprises.net/articles/view/89122>; *see also* S.B. 104, 2009 Leg., Reg. Sess. (Cal. 2009).

⁴⁴² *Id.*

⁴⁴³ *Id.*

⁴⁴⁴ Debra Kahn, *Calif. Governor Proposes One-stop Permitting for Electricity Transmission*, N.Y. TIMES (Feb. 24, 2009), <http://www.nytimes.com/gwire/2009/02/24/24greenwire-schwarzenegger-proposes-onestop-permitting-for--9837.html>.

⁴⁴⁵ *Id.*

⁴⁴⁶ *Id.*

⁴⁴⁷ Notice of Public Hearing, Cal. Envtl. Prot. Agency, Air Res. Bd., Notice of Public Hearing to Consider the Adoption of a Proposed Regulation to Reduce Greenhouse Gas Emissions From California Semiconductor Operations, <http://www.arb.ca.gov/regact/2009/semi2009/seminotice.pdf> (Sept. 2, 2013).

⁴⁴⁸ *Id.*

⁴⁴⁹ *Id.*

⁴⁵⁰ *Id.*

⁴⁵¹ *Id.*

While CARB was addressing SF6 emissions, California's Environmental Protection Agency sent a letter to U.S. Environmental Protection Agency's Administrator, Lisa Jackson, with its design recommendations for a federal climate program.⁴⁵² Among the recommendations are: preservation of state programs already in place, retirement of federal allowances, linking to trading programs outside of North America, and setting GHG emission caps 50% to 85% below 2000 levels by 2050.⁴⁵³

The California legislature also targeted climate change in February 2009. California State Senator Pavley introduced S.B. 523, a Bill that creates a "feed-in tariff" on renewable electricity.⁴⁵⁴ The Bill was amended in the Senate, but it died in 2010.⁴⁵⁵

On March 5, 2009, CARB issued a proposed regulation that would implement the Low Carbon Fuel Standard.⁴⁵⁶ The regulation would promote the alternative-fuel vehicles market and increase the diversity of available alternative fuels.⁴⁵⁷ The regulation would require that fuels entering the California market would "meet and average declining standard of 'carbon intensity.'"⁴⁵⁸

Also in early March 2009, CARB began rulemaking aimed at recognizing "early action" in GHG reductions.⁴⁵⁹ The rule will designate which projects are eligible for "early action" credits and will likely include a cut-off date.⁴⁶⁰ The rule was projected to be finalized in 2010.⁴⁶¹

California's Climate Action Team issued a draft of its *Second Biennial Climate Change Impact Assessment* in March 2009.⁴⁶² The report consolidates 37 scientific studies by various state agencies. The forecasted impacts through the year 2100 include \$100 billion in property losses from sea level rise, a 14 to 28% reduction in irrigation areas, and a 58% increase in wildfires.

On March 12, 2009, the U.S. Department of Energy (DOE) announced that California was eligible for \$226,093,000 under the State Energy Program of the

⁴⁵² Letter from Linda S. Adams, Sec'y for Env'tl. Prot., Lisa Jackson, Adm'r of the U.S. Env'tl. Prot. Agency (Feb. 24, 2009), http://www.dtsc-ssfl.com/files/lib_correspond/letters/3703_LetterfromLAdamstoLJackson.pdf.

⁴⁵³ *Id.*

⁴⁵⁴ S.B. 523, 2009 Leg., Reg. Sess. (Cal. 2009), http://info.sen.ca.gov/pub/09-10/bill/sen/sb_0501-0550/sb_523_bill_20090227_introduced.pdf.

⁴⁵⁵ *SB-523 Solar Feed-in Tariff Pilot Program*, CAL. LEGISLATIVE INFO., <http://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml> (Sept. 7, 2013).

⁴⁵⁶ Press Release, Cal. Env'tl. Prot. Agency, Air Res. Bd., California Proposed Regulation Targeting Greenhouse Gas Emissions From Fuels (Mar. 5, 2009), <http://www.arb.ca.gov/newsrel/2009/nr030509.htm>.

⁴⁵⁷ *Id.*

⁴⁵⁸ *Id.*

⁴⁵⁹ *Recognition of Early Action Reduction in a Cap-and-Trade System*, CAL. AIR RES. BD. (Mar. 10, 2009), <http://www.arb.ca.gov/cc/capandtrade/meetings/031009/presentation.pdf>.

⁴⁶⁰ *Id.*

⁴⁶¹ *Id.*

⁴⁶² CLIMATE ACTION TEAM, DRAFT BIENNIAL REPORT (2009), <http://www.energy.ca.gov/2009publications/CAT-1000-2009-003/CAT-1000-2009-003-D.PDF>.

American Recovery and Reinvestment Act (ARRA).⁴⁶³

On April 23, 2009, Governor Schwarzenegger applauded CARB's Low Carbon Fuel Standard.⁴⁶⁴ The standard requires fuel producers to reduce carbon in fuels sold in California and a 10% reduction by 2020 with increasing future reduction targets.⁴⁶⁵

On May 1, 2009, Governor Schwarzenegger sent a letter to U.S. Energy Secretary Chu requesting that modifications be made to the ARRA funding guidelines for smart grid technology.⁴⁶⁶ The current guidelines would hold large California utilities to the same funding caps as smaller utilities.⁴⁶⁷ Later that week, California became the first state in the nation to apply for ARRA funding for its ambitious energy initiatives under the State Energy Program.⁴⁶⁸

Governor Schwarzenegger applauded a solar power deal between Pacific Gas & Electric and Brightsource in a statement issued on May 13, 2009.⁴⁶⁹ The deal will expand solar contracts by 1,310 MWs – enough to power \$530,000 homes during peak usage.⁴⁷⁰ Later that month, Schwarzenegger highlighted advancements in fuel cell technology while participating in the annual 1,700 mile hydrogen road tour.⁴⁷¹ California is expanding on its existing hydrogen network of 26 fueling stations that currently support 300 hydrogen vehicles.⁴⁷²

On May 21, 2009 Governor Schwarzenegger also signed an agreement to support federal climate change legislation.⁴⁷³ The agreement contains two principles: the support

⁴⁶³ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁴⁶⁴ *Gov. Schwarzenegger Applauds Adoption of World's First-Ever Low Carbon Fuel Standard*, PROJECT VOTE SMART (Apr. 23, 2009), <http://votesmart.org/public-statement/419843/> (original press release not found).

⁴⁶⁵ *Id.*

⁴⁶⁶ Letter from Arnold Schwarzenegger, Governor of the State of Cal., to Steven Chu, Sec'y of Energy (Apr. 30, 2009), <http://votesmart.org/public-statement/420929/#.UiTjJhZQFnQ>.

⁴⁶⁷ *Id.*

⁴⁶⁸ *Gov. Schwarzenegger Announces California First State in Nation to Apply for Energy Program Recovery Act Funding*, PROJECT VOTE SMART (May 5, 2009), <http://votesmart.org/public-statement/426322/> (original press release not found).

⁴⁶⁹ Tracy Seipel, *PG&E Strikes Huge Solar Deal with Brightsource*, SAN JOSE MERCURY NEWS (May 13, 2009, 10:50 AM), http://www.mercurynews.com/ci_12359880.

⁴⁷⁰ *Id.*

⁴⁷¹ Governor Arnold Schwarzenegger, Press Conference: Gov. Schwarzenegger Joins Annual Hydrogen Road Tour to Highlight Advances in Fuel-Cell Technology (May 27, 2009), (transcript available at <http://www.kcoy.com/Global/story.asp?S=10447758>).

⁴⁷² *Id.*

⁴⁷³ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20100116190854/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.⁴⁷⁴

On May 22, 2009, California's Secretary of Environmental Protection, Linda Adams, appointed a seventeen member Economic and Allocation Advisory Committee to develop recommendations for the mandates of AB 32 and its associated cap-and-trade program.⁴⁷⁵ On January 11, 2010, the EAAC presented final allocation recommendations to the state.⁴⁷⁶

On June 18, 2009, Governor Schwarzenegger commended the CPUC on its approval of California Edison's Solar Roof Program, which will deploy 500 MW of photovoltaic technology.⁴⁷⁷ Later that month, Schwarzenegger again recognized the CPUC's solar advancements following the release of its annual Assessment of California Solar Initiative (CSI).⁴⁷⁸ The report indicated that installed solar capacity nearly doubled in 2008 from 2007 and that the California Solar Initiative has reached 13% of its overall goal.⁴⁷⁹

In late June 2009, Governor Schwarzenegger congratulated Oregon on its legislature's passage of a low carbon fuel standard.⁴⁸⁰ A few days later, he applauded the EPA's announcement that it would grant California a waiver to implement its more stringent auto emissions standards.⁴⁸¹

On June 29, 2009, Governor Schwarzenegger announced that \$10 million of ARRA funding would go toward launching eleven California Green Job Corps pilot programs.⁴⁸² The programs will provide green jobs training to 1,500 at-risk youth.⁴⁸³

⁴⁷⁴ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION, (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

⁴⁷⁵ CALIFORNIA CLIMATE CHANGE PORTAL, ECONOMIC AND ALLOCATION ADVISORY COMMITTEE, <http://www.climatechange.ca.gov/eaac/> (Sept. 2, 2013).

⁴⁷⁶ *Id.*

⁴⁷⁷ *Gov. Schwarzenegger Applauds Approval of Edison Solar Roof Program*, CENTRAL COAST NEWS, (June 19, 2009), <http://www.kcoy.com/story/10560353/061809-gov-schwarzenegger-applauds-approval-of-edison-solar-roof-program>.

⁴⁷⁸ *Governor Schwarzenegger Praises Success of California Solar Initiative*, PROJECT VOTE SMART (June 30, 2009), <http://votesmart.org/public-statement/436466/governor-schwarzenegger-praises-success-of-california-solar-initiative#.UiTsSBZQFnR> (original press release not found).

⁴⁷⁹ *Id.*

⁴⁸⁰ *Governor Schwarzenegger Praises Oregon for Passing Low Carbon Fuel Standard Modeled after California's*, PROJECT VOTE SMART (June 25, 2009), <http://votesmart.org/public-statement/436445/> (original press release not be found).

⁴⁸¹ Press Release, Office of the Governor, Gov. Schwarzenegger Applauds EPA Decision Granting California Authority to Reduce Greenhouse Gas Emissions (June 30, 2009), <http://www.cleancarscampaign.org/web-content/newsroom/docs/GAS-waiverstatement.pdf>.

⁴⁸² *Valerie Gotten, Gov. Schwarzenegger Announces California Green Jobs Corp Funding Recipients*, CALIFORNIA NEWswire (June 30, 2009), http://californianewswire.com/2009/06/30/CNW4986_170633.php/gov-schwarzenegger-announces-california-green-jobs-corp-funding-recipients/.

⁴⁸³ *Id.*

Hydrogen Energy International will receive \$308 million in ARRA funding for its Hydrogen Energy California project that is anticipated to provide clean energy to 150,000 homes.⁴⁸⁴

On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the WCI, and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.⁴⁸⁵

In July 2009, the WCI, including California, issued an Offsets Whitepaper for comments to its stakeholders.⁴⁸⁶ The paper was the initial phase in developing a definition of an offset and a major focus of the paper was additionality.⁴⁸⁷ WCI's Cap Setting and Allowance Distribution Committee released its *Draft Statement of Principles on Competitiveness* and the *Review of Proposed Options for Addressing Industrial Competitiveness Impacts* in August 2009.⁴⁸⁸ The purpose of the draft was to "guide the process by which WCI will evaluate competitiveness effects of a regional cap-and-trade program," and it also reviewed how other cap-and-trade programs address this issue.⁴⁸⁹

In August 2009, Governor Schwarzenegger gave his support for an extension of the federal Cash for Clunkers Program.⁴⁹⁰ He also encouraged his own state legislature to pass AB 96,⁴⁹¹ which provides support to small gas stations to install enhanced vapor recovery systems.⁴⁹² The California Recovery Task Force announced a low interest loan program for energy efficient and renewable energy projects.⁴⁹³ Schwarzenegger continued to support the growth of green jobs in California with the creation of California

⁴⁸⁴ *ARRA Funding for Clean Energy Project in Bakersfield, CA*, ALL AM. PATRIOTS (July 2, 2009), <http://www.allamericanpatriots.com/48754127-arra-funding-for-clean-energy-project-in-bakersfield-ca> (original press release not found).

⁴⁸⁵ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>. Van Ness Feldman, *Weekly Climate Change Policy Update – June 29, 2009*, <http://www.vnf.com/news-policyupdates-373.html>.

⁴⁸⁶ *Comments on the Western Climate Initiative White Paper on Offset Definition and Eligibility Criteria*, W. CLIMATE INITIATIVE (2009), <http://www.offsetsgroup.ca/pdf/Comments%20on%20WCI%20Offset%20Definition%20and%20Eligibility%20Criteria.pdf>.

⁴⁸⁷ *Id.*

⁴⁸⁸ *WeCAN Comments on the WCI's Draft Statement of Principles on Competitiveness*, W. CLIMATE ADVOCATES NETWORK (2009), http://www.resource-solutions.org/pub_pdfs/WeCAN%20Competitiveness%20Comments%20to%20WCI%2008_09.pdf.

⁴⁸⁹ *Id.*

⁴⁹⁰ *Gov. Schwarzenegger Issues Statement Supporting Extension of Cash for Clunkers Program*, PROJECT VOTE SMART (Aug. 5, 2009), <http://votesmart.org/public-statement/448243/> (original press release not be found).

⁴⁹¹ Assemb. B. 96, 2009 Leg., Reg. Sess. (Cal. 2009).

⁴⁹² *Gov. Schwarzenegger Signs Legislation to Aid Small Gas Stations Making the Transition to Cleaner Technologies*, PROJECT VOTE SMART (Aug. 6, 2009), <http://votesmart.org/public-statement/448244/> (original press release not be found).

⁴⁹³ Aileen Dalen, *Recovery Funded Ultra-Low Interest Loans Available to Spur Economic Growth and Energy Efficiency Projects in California*, SMALL SCHOOL DISTRICTS' ASS'N (Aug. 17, 2009), <http://www.ssda.org/vnews/display.v/ART/4a897bee622f1>.

Energy Workforce Training Program (CEWTP), which was projected to train 20,000 workers.⁴⁹⁴

On August 31, 2009 the attorneys general of New Jersey, Arizona, Connecticut, Delaware, and California sent U.S. Senate leaders a letter urging them to pass climate change legislation that is stronger than the Waxman-Markey Bill.⁴⁹⁵ The attorneys general highlighted some provisions that are of special interest to the States, such as: the preservation of state authority, strong federal enforcement provisions, state enforcement authority oversight and transparency of Agricultural and Forestry Offset Program, displacement of Clean Air Act authority, and standing for citizen suits.⁴⁹⁶

On September 15, 2009, Governor Schwarzenegger signed EO S-21-09, which will increase California's Renewable Energy Portfolio Standard to 33% by 2020.⁴⁹⁷ Schwarzenegger wrapped up September 2009 by kicking off the second annual Governor's Global Climate Summit in Los Angeles.⁴⁹⁸ While at the Summit, he signed an agreement with the Governor of China's Jiangsu Province to reduce GHG emissions.⁴⁹⁹ Schwarzenegger also joined thirty global leaders in signing a declaration reaffirming their commitment to addressing climate change.⁵⁰⁰

In early October, Governor Schwarzenegger announced two clean energy grant projects. One awarded \$26.5 million in ARRA grant funding for clean air initiatives in Southern California.⁵⁰¹ The funding will go towards projects "to retrofit and replace diesel engines in construction vehicles, cargo handling equipment, school buses, heavy-

⁴⁹⁴ Press Release, Office of the Governor, Governor Schwarzenegger Announces Nation's Largest State-Sponsored Green Jobs Training Program (Aug. 31, 2009), <http://www.sdicregionalconsortium.org/Newsletter/2009/September%201/pressrelease13105.pdf>.

⁴⁹⁵ Letter from Edmund G. Brown Jr., Att'y Gen. Cal., Terry Goddard, Att'y Gen. Ariz., Richard Blumenthal, Att'y Gen. Conn., Richard Gebelien, Att'y Gen. Del., Anne Milgram, Att'y Gen. N.J., to Harry Reid, U.S. Senate Majority Leader, Mitch McConnell, U.S. Senate Minority Leader, Barbara Boxer, Chair, Comm. on Env't and Public Works, U.S. Senate, James Inhofe, Ranking Member, Comm. on Env't and Public Works, U.S. Senate (Aug. 31, 2009), http://ag.ca.gov/globalwarming/pdf/letter_to_Senate_re_Climate_Legislation.pdf.

⁴⁹⁶ *Id.*

⁴⁹⁷ Gov. Schwarzenegger Signs Executive Order to Advance State's Renewable Energy Portfolio Standard to 33 % by 2020, SOLAR SERVER, <http://www.solarserver.com/solar-magazine/solar-news/archive-2009/california-governor-schwarzenegger-signs-executive-order-to-advance-states-renewable-energy-portfolio-standard-to-33-by-2020.html> (last updated Dec. 19, 2011); *see also* Cal. Exec. Order S-21-09 (2009).

⁴⁹⁸ Cindy Holden, *Governor Schwarzenegger and United Nations Open Governors' Global Climate Summit* 2, CALIFORNIA NEWswire (Sept. 30, 2009), http://californianewswire.com/2009/09/30/CNW5609_213013.php/.

⁴⁹⁹ Governor Schwarzenegger Announces Partnership with Jiangsu Province of China to Advance Climate Policies, PROJECT VOTE SMART (Oct. 2, 2009), <http://votesmart.org/public-statement/459574/> (original press release not found).

⁵⁰⁰ Press Release, United Nations Dev. Programme, 30 Global Leaders Sign Declaration Before Next Climate Agreement (Oct. 2, 2009), <http://www.undp.org/content/undp/en/home/presscenter/pressreleases/2009/10/02/30-global-leaders-sign-declaration-in-advance-of-next-climate-agreement/>.

⁵⁰¹ Press Release, Team Cal., Gov. Schwarzenegger Announces \$26.5 Million in Clean-Air Grants for Southern California (Oct. 1, 2009), http://www.teamca.org/news_archive.php?op=view&id=567.

duty trucks and locomotives in the Southern California air basin, which includes the Los Angeles, Orange, San Bernardino and Riverside counties.”⁵⁰² A second grant award, totaling \$27 million, will launch the first phase of the newly created CEWTP green jobs program.⁵⁰³

On October 12, 2009, Governor Schwarzenegger and the U.S. Department of the Interior Secretary signed a MOU that “commits the federal government to work with California on a science-based process for reviewing, approving and permitting renewable energy applications in California, which will greatly help the state achieve its goal of reaching 33% renewable energy by 2020.”⁵⁰⁴ Schwarzenegger also commended the announcement of \$3.4 billion of federal funding for smart grid technology.⁵⁰⁵

On October 28, 2009, Governor Schwarzenegger announced that Pacific Gas & Electric agreed to commit to increase net metering for solar rooftops from 2.5 to 3.5%.⁵⁰⁶ The existing 2.5% cap impedes California Solar Initiatives projects such as its goal of one million solar roofs by 2018.⁵⁰⁷

On November 2, 2009, Governor Schwarzenegger “celebrated the opening of the world’s largest landfill gas to liquefied natural gas facility in California.”⁵⁰⁸ The facility is projected to reduce GHG emissions by 30,000 tons per year.⁵⁰⁹ A few weeks later, Schwarzenegger applauded the CEC’s of “first-in-the-nation” efficiency standards for televisions.⁵¹⁰

On November 24, 2009, Governor Schwarzenegger announced California had received \$175 million in ARRA funding for smart grid investment projects.⁵¹¹

⁵⁰² *Id.*

⁵⁰³ *CA Gov. Schwarzenegger Announces Award of \$27 Million to Fuel Clean Energy Jobs Training Program*, ALL AM. PATRIOTS (Oct. 5, 2009), <http://www.allamericanpatriots.com/48754602-ca-gov-schwarzenegger-announces-award-of-27-million-to-fuel-clean-energy-jobs-tr>(original press release not found).

⁵⁰⁴ Press Release, Dep’t of the Interior, Gov. Schwarzenegger and Secretary Salazar Sign MOU to Expedite Renewable Energy Development in California (Oct. 12, 2009), http://www.doi.gov/news/pressreleases/2009_10_12_release.cfm.

⁵⁰⁵ *Gov. Schwarzenegger Applauds President Obama’s Investment in Smart Grid, Providing Boost to Renewable Energy Projects*, PROJECT VOTE SMART (Oct. 27, 2009), <http://votesmart.org/public-statement/464142/> (original press release not found).

⁵⁰⁶ *Cindy Holden, Gov. Schwarzenegger Secures Commitment to Continue Net Metering for Solar*, CALIFORNIA NEWSWIRE (Oct. 26, 2009), http://californianewswire.com/2009/10/28/CNW5870_183043.php/.

⁵⁰⁷ *Id.*

⁵⁰⁸ *Gov. Schwarzenegger Celebrates Opening of World’s Largest Landfill Gas to Liquefied Natural Gas Facility in California*, PROJECT VOTE SMART (Nov. 2, 2009), <http://votesmart.org/public-statement/464139/> (original press release not found).

⁵⁰⁹ *Id.*

⁵¹⁰ *Gov. Schwarzenegger Applauds Adoption of First-in-the-Nation TV Energy Efficiency Standards*, PROJECT VOTE SMART (Nov. 18, 2009), <http://votesmart.org/public-statement/469789/> (original press release not found).

⁵¹¹ *Governor Schwarzenegger Issues Statement on \$175 Million in Recovery Funds for Smart Grid Projects from U.S. Department of Energy*, PROJECT VOTE SMART (Nov. 24, 2009), <http://votesmart.org/public-statement/470830/> (original press release not found).

In early December 2009, California released its *Climate Adaptation Strategy* final report.⁵¹² Governor Schwarzenegger also took action on two of the report's recommendations – creation of the Climate Adaptation Advisory Panel and “announcing a new Google Earth-based application, Cal-Adapt.”⁵¹³ Cal-Adapt was launched on June 7, 2011 by the CEC and the California Natural Resources Agency.⁵¹⁴ The tool allows planners, government agencies, and the public to identify climate change risks in specific areas throughout the state. Cal-Adapt compiles climate data to provide information on sea-level rise, wildfire dangers, temperature changes, and snowpack fluctuations, which helps both the government and the public respond to these changes.

On December 3, 2009, the Environment America Research & Policy Center released its *America on the Move* report, which found California is a world leader in fighting climate change.⁵¹⁵ That same week, Schwarzenegger commended the City of Los Angeles on its plug-in electric vehicle collaboration.⁵¹⁶ The program creates a commitment to the development of the infrastructure necessary for seamless electric vehicle use in the region.⁵¹⁷ On December 9, 2009, a *Next 10* report indicated that California's green business have grown 45%, and green jobs by 36%, from 1995 to 2006.⁵¹⁸

Governor Schwarzenegger was an active participant in the United Nations Climate Change Conference in Copenhagen held in December 2009. He joined The Climate Registry in launching its *Climate Registered* program, which “showcase[d] voluntary greenhouse gas emission reductions among organizations.”⁵¹⁹ Schwarzenegger also announced a new coalition of subnational leaders that are collaborating on advancing a new regional taskforce to “fast track the results of the Copenhagen [Conference].”⁵²⁰ During the Conference, the California Environmental Protection Agency Secretary and

⁵¹² Press Release, Office of the Governor, Gov. Schwarzenegger Releases First-of-its-Kind Comprehensive Climate Adaptation Strategy (Dec. 2, 2009), <http://www.gov38.ca.gov/press-release/13933/>.

⁵¹³ *Id.*

⁵¹⁴ Press Release, Cal. Natural Res. Agency & The Cal. Energy Comm'n, California Natural Resource Agency to Launch Online Climate Change Tool (June 2, 2011), http://www.energy.ca.gov/releases/2011_releases/2011-06-02_Cal-Adapt_ma.pdf.

⁵¹⁵ Gov. Schwarzenegger Issues Statement on Report Finding California Leads in the Fight Against Climate Change, PROJECT VOTE SMART (Dec. 3, 2009), <http://votesmart.org/public-statement/472187/> (original press release not found).

⁵¹⁶ Governor Schwarzenegger Applauds City of Los Angeles for Plug-in Electric Vehicle Collaboration, CENTRAL COAST NEWS (Dec. 2, 2009), <http://www.kcoy.com/Global/story.asp?S=11607882> (original press release not found).

⁵¹⁷ *Id.*

⁵¹⁸ Gov. Schwarzenegger Issues Statement on California's Expansion in Green Jobs and Businesses, PROJECT VOTE SMART (Dec. 9, 2009), <http://votesmart.org/public-statement/473902/> (original press release not found).

⁵¹⁹ Gov. Schwarzenegger Issues Statement on Launch of Climate Registered Program at Copenhagen Conference, PROJECT VOTE SMART (Dec. 14, 2009), <http://votesmart.org/public-statement/475471/> (original press release not found).

⁵²⁰ Cindy Holden, *Ca. Gov. Schwarzenegger Urges World Leaders to Embrace Subnational Leadership in Climate Change Fight*, CALIFORNIA NEWswire (Dec. 16, 2009), http://californianewswire.com/2009/12/16/CNW6312_205703.php/.

the Danish Environmental Minister signed a MOU for California and Denmark to collaborate on green chemistry via information sharing.⁵²¹ The collaboration will help California implement its Green Chemistry Program created in 2008.⁵²²

On December 17, 2009, the CPUC approved a 4,500 MW renewable energy transmission project.⁵²³ At the close of 2009, Governor Schwarzenegger announced 244 renewable energy projects that have the potential to produce 70,000 MW of clean energy annually.⁵²⁴

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.⁵²⁵ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.⁵²⁶ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities."⁵²⁷ North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.⁵²⁸

2010: Cap & Trade, Energy Efficiency, Green Jobs, Green Technology, Greenhouse Gas Reduction, Renewable Energy, and Transportation/Fuels

During a January 2010 tour of Cobalt Biofuels, a green tech company, Governor Schwarzenegger highlighted his proposed tax exemption for the purchase of green tech manufacturing equipment.⁵²⁹ As part of his California Jobs Initiative legislation package, the initiative would exempt this equipment from sales tax in order to promote clean

⁵²¹ Gov. Schwarzenegger Issues Statement on Groundbreaking Collaboration with Denmark on Green Chemistry, PROJECT VOTE SMART (Dec. 14, 2009), <http://votesmart.org/public-statement/475473/> (original press release not found).

⁵²² *Id.*

⁵²³ Gov. Schwarzenegger Applauds CPUC Decision to Approve 4,500 MW Transmission Project, PROJECT VOTE SMART (Dec. 17, 2009), <http://votesmart.org/public-statement/475475/> (original press release not found).

⁵²⁴ Cindy Holden, *Calif. Gov. Schwarzenegger Announces 244 Proposed Renewable Energy Projects Throughout State*, CALIFORNIA NEWSWIRE (Dec. 29, 2009), http://californianewswire.com/2009/12/30/CNW6385_014323.php/.

⁵²⁵ See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

⁵²⁶ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

⁵²⁷ NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

⁵²⁸ See *id.*

⁵²⁹ Valerie Gotten, *Calif. Gov. Schwarzenegger Highlights Plan to Spur Clean Technology Growth in California*, CALIFORNIA NEWSWIRE (Jan. 12, 2010), http://californianewswire.com/2010/01/12/CNW6482_215403.php/calif-gov-schwarzenegger-highlights-plan-to-spur-clean-technology-growth-in-california/.

technology job growth.⁵³⁰ The legislation was later passed and was signed by Schwarzenegger on March 24, 2010.⁵³¹

On January 21, 2010, Governor Schwarzenegger sent a letter to U.S. Senate Majority Leader Harry Reid and Minority Leader Mitch McConnell urging them to oppose any efforts to block the Environmental Protection Agency's proposed regulation of GHGs under the Clean Air Act.⁵³²

In February, Governor Schwarzenegger sent letters to the board of supervisors of ten California counties with heavy concentrations of renewable resources urging them to expedite the permitting process for renewable energy projects in their counties.⁵³³ Later that month, Schwarzenegger signed legislation that raised the net metering requirements in California.⁵³⁴ Net metering allows home and business owners who install solar generators on their property to be paid by their electric utility for the surplus power they produce.⁵³⁵ The bill will raise the requirement from 2.5% to 5%.⁵³⁶

In March 2010, Governor Schwarzenegger announced a plan that would expedite the siting and permitting processes for large-scale renewable energy projects.⁵³⁷ The program will ensure that agencies have the necessary resources to prioritize the stringent environmental review process for the projects.⁵³⁸

On April 1, 2010, Governor Schwarzenegger issued a statement applauding the Obama administration's adoption of the National Clean Cars Rule, modeled after California's emission standards.⁵³⁹ In mid-April, the application process opened for the Clean Energy Business Financing Program that will provide low interest loans to clean energy manufacturing businesses.⁵⁴⁰

⁵³⁰ *Id.*

⁵³¹ Press Release, Team Cal., Gov. Schwarzenegger Signs Legislation for Green Tech Manufacturing Equipment Sales Tax Exemption to Create Jobs (Mar. 24, 2010), http://www.teamca.org/news_archive.php?op=view&id=842.

⁵³² Letter from Arnold Schwarzenegger, Governor of the State of Cal., to Harry Reid, Senate Majority Leader (Jan. 21, 2010), <http://votesmart.org/public-statement/479500/>.

⁵³³ Letter from Arnold Schwarzenegger, Governor of the State of Cal., to Kern County Board of Supervisors, (Feb. 18, 2010), <http://votesmart.org/public-statement/484755/>.

⁵³⁴ *California Raises Solar Net Metering Cap*, ENVIRONMENT NEWS SERVICE (Feb. 27, 2010), <http://www.ens-newswire.com/ens/feb2010/2010-02-27-091.html>.

⁵³⁵ *Id.*

⁵³⁶ *Id.*

⁵³⁷ *Gov. Schwarzenegger Announces Actions to Help Preserve State Lands and Habitats, Build Renewable Energy Projects*, PROJECT VOTE SMART (Mar. 22, 2010), <http://votesmart.org/public-statement/491896/> (original press release not found).

⁵³⁸ *Id.*

⁵³⁹ *Governor Schwarzenegger Issues Statement on National Clean Cars Rule*, PROJECT VOTE SMART (Apr. 1, 2010), <http://votesmart.org/public-statement/495975/> (original press release not found).

⁵⁴⁰ Press Release, The Cal. Energy Comm'n, Gov. Schwarzenegger Announces Loan Applications for Clean Energy Business Financing Program Available California Clean Energy Manufacturers May Receive Up to \$5 Million (Apr. 15, 2010), http://www.energy.ca.gov/releases/2010_releases/2010-04-15_Clean_Energy_Business.html.

The CEC approved \$29.6 million in funding for three separate grants to create jobs in clean energy and increase California's energy efficiency in May 2010.⁵⁴¹ The programs will assist in installing energy efficiency technology in municipal and commercial buildings and are expected to collectively create more than 1,200 jobs and save more than 170,000 MW hours of electricity per year. In addition, the energy savings are expected to result in reducing carbon dioxide emissions equivalents by 52,000 tons per year.⁵⁴²

In June 2010, the CEC announced a \$114.3 million program to build charging stations for electric cars and fueling stations for ethanol-powered vehicles throughout the state.⁵⁴³ Funding comes from the State (\$15.4 million), ARRA (\$49.6 million), and private funds (\$49.3 million). The funding will be distributed between three alternative fueling projects.⁵⁴⁴

The U.S. Department of Energy awarded \$122 million to a team of California researchers led by the California Institute of Technology to fund their research of artificial photosynthesis.⁵⁴⁵ The goal is to develop an "integrated solar energy-to-chemical fuel conversion system" and make it viable on a commercial scale. The conversion system differs from conventional photovoltaic panels in that it would mimic plants' production of energy through photosynthesis by combining sunlight, water, and carbon dioxide.⁵⁴⁶

The WCI partners released their *Design for the WCI Regional Program Report*, a culmination of two years of work, in July 2010.⁵⁴⁷ The report details the WCI partners' strategies for reducing their GHG emissions by 15% below 2005 levels by 2020 and uses a market-based approach of emissions trading among selected industries.

In September 2010, the CARB adopted emissions reduction targets under S.B. 375.⁵⁴⁸ The targets have been tailored to each of California's eighteen Metropolitan Planning Organizations and thus vary in different parts of the State. The overall goal for the combined targets is a percentage reduction in GHG emissions by 2020 or 2035. The

⁵⁴¹ Press Release, The Cal. Energy Comm'n, Energy Commission Rewards \$29.6 Million in Stimulus Funds for Clean Jobs Training, Energy Upgrades (May 20, 2010), http://www.energy.ca.gov/releases/2010_releases/2010-05-20_awards_clean_jobs_training.html.

⁵⁴² *Id.*

⁵⁴³ Press Release, The Cal. Energy Comm'n, Electric Cars, Alternative Vehicles Get Big Push With \$114.3 Million in State, Federal and Private Funds (June 24, 2010), http://www.energy.ca.gov/releases/2010_releases/2010-06-24_electric_cars_alt_fuels_main-release.html.

⁵⁴⁴ *Id.*

⁵⁴⁵ Dep't of Energy, *California Team to Receive Up to \$122 Million for Energy Innovation Hub to Develop Method to Produce Fuels from Sunlight*, EERE NETWORK NEWS (July 22, 2010), http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=16182.

⁵⁴⁶ *Id.*

⁵⁴⁷ *Design for the WCI Regional Program*, W. CLIMATE INITIATIVE (July 27, 2010), http://www.westernclimateinitiative.org/dmdocuments/Design_for_the_WCI_Regional_Program.282.pdf.

⁵⁴⁸ Press Release, Cal. Air Res. Bd., California Takes the First Step Toward More Livable, Sustainable Communities (Sept. 23, 2010), <http://www.arb.ca.gov/newsrel/newsrelease.php?id=154>; see also S.B. 375, 2008 Leg., Reg. Sess. (Cal. 2008).

targets will assist the Metropolitan Planning Organizations in developing sustainable strategies for growth.⁵⁴⁹ On the same day the CARB adopted another regulation requiring that 33% of California's energy come from renewable sources by 2020, which will assist with implementing the goals of AB 32.⁵⁵⁰ In addition, the CARB announced in September 2010 that California's Hybrid Truck and Bus Voucher Incentive Program has resulted in the purchase of 650 hybrid trucks by private fleets, most of the trucks being beverage and package delivery vehicles. The program originates under AB 118, and funding for additional trucks will be available for 2011.⁵⁵¹

In October 2010, California launched the Climate Generation Program, a competition that challenges high school students to design and initiate programs to reduce their school's carbon footprint.⁵⁵² The competition originates from the British Council's Climate Championship Program, and while sixty countries participate worldwide, California and Minnesota are currently the only two states eligible to participate.⁵⁵³ Prizes include total grants per state of up to \$5,000 and student scholarships.⁵⁵⁴

In early November 2010, the CEC approved eight grants for electric vehicles, biofuels, and other renewable transportation sources, through its Alternative and Renewable Fuel and Vehicle Transportation Program. The grants, a total of \$9.6 million, include electric vehicle manufacturing and biofuel production.⁵⁵⁵ The CEC further granted an additional \$6.3 million in December 2010, with \$8.4 million in matching private funds.⁵⁵⁶

On November 16, 2010, the CEC announced the launch of a new EnergySmart Jobs program, which will train California Conservation Corps (CCC) members to conduct energy audits. The program will also provide free energy audits and recommendations to commercial retail outlets, including grocery stores. It is expected to create 214 new jobs and provide energy efficiency training for 400 people.⁵⁵⁷

⁵⁴⁹ *Id.*

⁵⁵⁰ Press Release, California Commits to More Clean, Green Energy (Sept. 23, 2010), <http://www.arb.ca.gov/newsrel/newsrelease.php?id=155>.

⁵⁵¹ Press Release, Cal. Air Res. Bd., Air Resources Board Incentive Program Puts 650 Clean Hybrid Trucks on California Roads (Sept. 27, 2010), <http://www.arb.ca.gov/newsrel/newsrelease.php?id=156>; *see also* Assemb. B. 118, 2007 Leg., Reg. Sess. (Cal. 2007).

⁵⁵² Press Release, Cal. Air Res. Bd., Statewide High School Competition Takes on Climate Change (Oct. 19, 2010), <http://www.arb.ca.gov/newsrel/newsrelease.php?id=163>.

⁵⁵³ *Id.*

⁵⁵⁴ *Climate Generation: Champion the Cause*, WILL STEGER FOUNDATION (July 1, 2010), <http://www.willstegerfoundation.org/component/k2/item/990-climate-generation-champion-the-cause>.

⁵⁵⁵ Press Release, The Cal. Energy Comm'n, Energy Commission awards \$9.6 million for Electric Vehicles, Biofuel, and More (Nov. 4, 2010), http://www.energy.ca.gov/releases/2010_releases/20101104_Electric_Vehicle+Biofuel_nr.html.

⁵⁵⁶ Press Release, The Cal. Energy Comm'n, Energy Commission Awards Nearly \$6.4 Million for Electric Vehicles, Biofuel, and More (Dec. 1, 2010), http://www.energy.ca.gov/releases/2010_releases/20101201_award_EV_Biofuels_more_NR.html.

⁵⁵⁷ Press Release, The Cal. Energy Comm'n, Energy Smart Jobs Program Launches in Sacramento (Nov. 16, 2010), http://www.energy.ca.gov/releases/2010_releases/20101116_energysmart_job_ma.html.

The CEC approved two new solar power projects in Southern California in December 2010. The projects will jointly produce 650 MW of solar power. Between August and December 2010, the CEC licensed more than 4,100 MW of solar power; collectively, the nine solar power projects are estimated to provide more than 9,000 jobs.⁵⁵⁸

On December 16, 2010, the CARB gave its approval to the AB 32 cap-and-trade regulation, which places a statewide limit on emissions and covers 80% of California's GHGs. The regulation oversees 360 businesses and encompasses the sources of 80% of California's emissions and is designed to work with other local and international initiatives such as the WCI.⁵⁵⁹ It will be implemented in two phases, the first in 2012, when all major industrial facilities and all utilities will begin trading, and a second phase in 2015, when distributors of transportation fuels will also be brought into the program.⁵⁶⁰

2011: Climate Change Agreements, Green Jobs, Green Technology, Renewable Energy, and Transportation/Fuels

Between January and April 2011, the CEC awarded approximately \$9 million in grants for various energy research projects that will explore a host of issues, such as alternative fuels,⁵⁶¹ grid reliability⁵⁶² and energy conservation.⁵⁶³

In April 2011, Governor Brown signed SBX11, establishing the Clean Technology and Renewable Energy Job Training, Career Technical Education, and Dropout Prevention Program.⁵⁶⁴

In July 2011, in response to a lawsuit filed by the Western Watersheds Project aimed at blocking the Ivanpah solar project⁵⁶⁵ to protect desert turtles, Governor Brown

⁵⁵⁸ Press Release, The Cal. Energy Comm'n, CA Energy Commission Approves 650 MW of Solar Power in California Desert (Dec. 15, 2010), http://www.energy.ca.gov/releases/2010_releases/2010-12-15_Approval_palen+rice_NR.html.

⁵⁵⁹ Press Release, Cal. Env'tl. Prot. Agency, Air Res. Bd., California Air Resources Board Gives Green Light to California's Emissions Trading Program (Dec. 16, 2010), <http://www.arb.ca.gov/newsrel/newsrelease.php?id=170>.

⁵⁶⁰ *Id.*

⁵⁶¹ Press Release, The Cal. Energy Comm'n, Energy Commission Awards Nearly \$1 Million for Research Project (Mar. 23, 2011), http://www.energy.ca.gov/releases/2011_releases/20110323_award_research_project.html.

⁵⁶² Press Release, The Cal. Energy Comm'n, Energy Commission Awards Nearly \$3.5 Million for Research Projects (Feb. 24, 2011), http://www.energy.ca.gov/releases/2011_releases/20110224_awards_research_projects.html.

⁵⁶³ Press Release, The Cal. Energy Comm'n, Energy Commission Awards \$4.6 Million for Research Projects (Apr. 20, 2011), http://www.energy.ca.gov/releases/2011_releases/20110420_cec_awrds_millions_for_research_nr.html.

⁵⁶⁴ SBX11, 2011 Leg., Reg. Sess. (Cal. 2011), *see also* Press Release, Office of the Governor, Gov. Brown Signs Legislation (Apr. 18, 2011), <http://gov.ca.gov/news.php?id=16988>.

⁵⁶⁵ IVANPAH SOLAR ELECTRIC GENERATING SYSTEM, <http://ivanpahsolar.com/> (Sept. 8, 2013).

filed a brief asking the court to deny the suit and save a project expected to generate enough energy for 140,000 California homes.⁵⁶⁶

The Alternative and Renewable Fuel and Vehicle Technology Program continued its innovative approach to transportation funding. On September 8, 2011, the Program approved a plan allocating \$100 million to fund charging station infrastructure, hydrogen fuel cell and natural gas vehicle technology, biofuel development and production, and other projects.⁵⁶⁷

Governor Brown signed three bills into law in September 2011 to advance alternative energy projects. S.B. 585 helps schools finance solar installations and will help schools save approximately \$14 million in energy costs over the next 25 years.⁵⁶⁸ AB 1150 authorizes the CPUC to collect funds for the Self-Generation Incentive Program, which makes approximately \$83 million available in rebates every year.⁵⁶⁹ Lastly, S.B. 16 requires the Department of Fish and Game to expedite the permitting process for renewable energy projects.⁵⁷⁰

On November 10, 2011, the WCI, of which California is the only remaining American partner, announced the creation of WCI, Inc., a non-profit corporation designed to provide administrative and technical support to states and provinces implementing GHG emission trading programs.⁵⁷¹ WCI, Inc. will be able to track compliance of allowance and offset certificates, administer allowance auctions, and monitor the market for allowance auctions and allowance and offset certificate trading.⁵⁷²

From April 2011 to November 2011, the CEC awarded over \$80 million to energy research, natural gas and propane shuttle buses, plug-in vehicles and energy storage, energy efficiency upgrades, biofuel and natural gas technology, and geothermal projects.⁵⁷³

⁵⁶⁶ Press Release, Office of the Governor, Governor Brown Files Legal Brief to Prevent Delay to Major Solar Project, Help State Meet Renewable Energy Goals and Create Green Jobs (July 22, 2011), <http://gov.ca.gov/news.php?id=17135>.

⁵⁶⁷ Press Release, The Cal. Energy Comm'n, California Energy Commission Refines Far-Reaching Green Transportation Energy Plan (Sept. 8, 2011), http://www.energy.ca.gov/releases/2011_releases/2011-09-08_green_transportation_nr.html.

⁵⁶⁸ S.B. 585, 2011 Leg., Reg. Sess. (Cal. 2011); *see also* Press Release, Office of the Governor, Governor Brown Acts to Help Californians Save Money and Clean the Air with Solar Power (Sept. 22, 2011), <http://gov.ca.gov/news.php?id=17230>.

⁵⁶⁹ Assemb. B. 1150, 2011 Leg., Reg. Sess. (Cal. 2011).

⁵⁷⁰ S.B. 16, 2011 Leg., Reg. Sess. (Cal. 2011).

⁵⁷¹ Press Release, W. Climate Initiative, Western Climate Initiative Jurisdictions Establish Non-Profit Corporation to Support Greenhouse Gas Emissions Trading Programs (Nov. 10, 2011), <http://www.westernclimateinitiative.org/news-and-updates/137-western-climate-initiative-jurisdictions-establish-non-profit-corporation-to-support-greenhouse-gas-emissions-trading-programs>.

⁵⁷² *Id.*

⁵⁷³ *See* CAL. ENERGY COMM'N, http://www.energy.ca.gov/releases/2011_releases/index.html (Sept. 3, 2013).

On December 15, 2011, Governor Brown held the *Governor's Conference on Extreme Climate Risks and California's Future*.⁵⁷⁴ The conference brought together leaders from the environmental, business, and public health sectors to discuss the community impacts of extreme weather events and how communities can prepare and adapt.⁵⁷⁵ Topics included human and economic impacts, climate solutions, and perspectives on California's leadership on climate change, and the entire conference is available on the governor's website.⁵⁷⁶ Also in December, the CEC announced a \$646,661 research grant to the University of California, Davis to improve the state's ability to forecast wind energy generation and deal with the intermittent nature of wind power.⁵⁷⁷

On December 19, 2011, the WCI released the process to review and recommend offset protocols.⁵⁷⁸ The final process will require a step-by-step description of how partners will review current offset protocols relating to how they plan to meet the offset criteria, leading to high quality exchanges of credits across the region.⁵⁷⁹ On January 12, 2012, WCI addressed public stakeholders in San Francisco to present the steps necessary to develop a North American GHG emissions trading program to which participating states and provinces will adhere to.⁵⁸⁰

2012: Energy Efficiency, Climate Change Adaptation, Climate Change Memorandum of Understanding, Green Technology, Greenhouse Gas Reduction, Renewable Energy, and Transportation/Fuels

In January 2012, the CEC announced a first-in-the-nation energy efficiency standard for battery charges.⁵⁸¹ The proposed standards would save nearly 2,000 gigawatt hours (GWh) each year, enough to power 350,000 homes.⁵⁸² Once implemented, the standard would eliminate one million metric tons of carbon emissions annually.⁵⁸³

⁵⁷⁴ Press Release, Office of the Governor, Governor Releases Updated Schedule of Climate Conference (Dec. 14, 2011), <http://gov.ca.gov/news.php?id=17342>.

⁵⁷⁵ *Id.*

⁵⁷⁶ *Id.*

⁵⁷⁷ Press Release, The Cal. Energy Comm'n, Energy Commission Awards \$646,661 to UC Davis for Wind Forecast Research (Dec. 14, 2011), http://www.energy.ca.gov/releases/2011_releases/2011-12-14_wind_forecasting_nr.html.

⁵⁷⁸ Press Release, W. Climate Initiative, Final Offset Protocol Review and Recommendation Process Available (Dec. 19, 2011), <http://www.westernclimateinitiative.org/news-and-updates/140-final-offset-protocol-review-and-recommendation-process-available>.

⁵⁷⁹ *Id.*

⁵⁸⁰ Press Release, W. Climate Initiative, Stakeholder Update: WCI Unveils Steps to Develop North American Greenhouse Gas Emissions Trading Program (Jan. 12, 2012), <http://www.westernclimateinitiative.org/news-and-updates/142-stakeholder-update-presentation-available>.

⁵⁸¹ Press Release, The Cal. Energy Comm'n, Energy Commission Plugs in Energy Efficiency Rules for Battery-Charged Appliances (Jan. 12, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-01-12_battery_chargers_nr.html.

⁵⁸² *Id.*

⁵⁸³ *Id.*

On January 13, 2012, Governor Brown announced that he had signed a MOU with the U.S. Secretary of the Interior expanding the existing federal-state partnership designed to expedite renewable energy projects.⁵⁸⁴ The MOU also covers transmission projects. It brought in new partners including the California Independent System Operator, the CPUC, and the California State Lands Commission.⁵⁸⁵

On February 22, 2012, the WCI released its final recommendations for the requirements and process of GHG offset project review and approval.⁵⁸⁶ The recommendations approve the recommendations proposed in 2008 and 2010 for the cap-and-trade offset system and a transparent process for the approval of offsets.⁵⁸⁷

The CEC awarded almost \$2 million to fund research into sustainable communities and workforce training for smart grid jobs in February 2012.⁵⁸⁸ On February 8, 2012 the CEC approved the 2011 *Integrated Energy Policy Report*, the state's main energy planning document.⁵⁸⁹ The report makes recommendations to ensure reliable energy supplies for the state's growing population and economy, achieve clean energy goals, and promote clean tech jobs and investments.

From February to April 2012, the CEC awarded nearly \$1.8 million to California communities to help them prepare for the use of electric vehicles. The grants went to the following regions: Central Coast,⁵⁹⁰ San Diego,⁵⁹¹ San Francisco,⁵⁹² Sacramento,⁵⁹³ North

⁵⁸⁴ Press Release, Office of the Governor, Secretary Salazar, Governor Brown Expand Partnership to Expedite Renewable Energy Projects in California (Jan. 13, 2012), <http://gov.ca.gov/news.php?id=17381>.

⁵⁸⁵ *Id.*; Memorandum of Understanding between Ken Salazar, Sec'y of the Dep't of the Interior, and Edmund G. Brown Jr., Governor of the State of Cal. (Jan. 13, 2012), <http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=274678>.

⁵⁸⁶ Press Release, W. Climate Initiative, Final Recommendations Offset System Process Available (Feb. 22, 2012), <http://www.westernclimateinitiative.org/news-and-updates/143-final-recommendations-offset-system-process-available>.

⁵⁸⁷ *Id.*

⁵⁸⁸ Press Release, The Cal. Energy Comm'n, Energy Commission Awards Almost \$2 Million for Research Projects (Feb. 8, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-02-08_pier_nr.html.

⁵⁸⁹ Press Release, The Cal. Energy Comm'n, State's Energy Policy Report Goes to Governor, Legislature (Feb. 8, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-02-08_2011_IEPR_nr.html.

⁵⁹⁰ Press Release, The Cal. Energy Comm'n, Central Coast Prepares for Electric Vehicles with Energy Commission Grant (Feb. 8, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-02-08_central_coast_nr.html.

⁵⁹¹ Press Release, The Cal. Energy Comm'n, San Diego Region Prepares for Electric Vehicles with Energy Commission Grant (Feb. 8, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-02-08_san_diego_electric_vehicles_nr.html.

⁵⁹² Press Release, The Cal. Energy Comm'n, Bay Area Prepares for Electric Vehicles with Energy Commission Grant (Feb. 8, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-02-08_bay_area_nr.html.

⁵⁹³ Press Release, The Cal. Energy Comm'n, Sacramento Area Prepares for Electric Vehicles with Energy Commission Grant (Feb. 8, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-02-08_sacramento_electric_vehicles_nr.html.

Coast,⁵⁹⁴ the San Joaquin Valley,⁵⁹⁵ Los Angeles,⁵⁹⁶ Monterey Bay,⁵⁹⁷ and Coachella Valley.⁵⁹⁸

In March 2012, the CEC awarded more than \$8.5 million to nineteen different companies to help bring natural gas and propane powered vehicles to the state.⁵⁹⁹ The money will fund the difference in cost over traditional powered vehicles and could pay for as many as 357 new natural gas vehicles and 110 propane-powered vehicles.⁶⁰⁰ Also in March, the CEC approved the 2011 Public Interest Energy Research (PIER) Annual Report, which summarizes the program's achievements of the year including initiation of 111 electricity projects.⁶⁰¹

On April 9, 2012, the Governor's Office of Planning and Research held a conference entitled, *Confronting Climate Change: A Focus on Local Government Impacts, Actions and Resources*.⁶⁰² The conference focused on resources available to communities and strategies to reduce the risk and impacts of climate change.⁶⁰³

On April 11, 2012 an additional \$2.5 million was awarded to help bring more buses and trucks powered by natural gas to the California highways.⁶⁰⁴ On April 18, 2012, the California High Speed Rail Authority (CHSRA) joined a 2010 MOU between state agencies committed to allowing renewable energy production on state owned

⁵⁹⁴ Press Release, The Cal. Energy Comm'n, North Coast Prepares for Electric Vehicles with Energy Commission Grant (Mar. 14, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-03-14_north_coast_nr.html.

⁵⁹⁵ Press Release, The Cal. Energy Comm'n, San Joaquin Valley Prepared for Electric Vehicles with Energy Commission Grant (Mar. 14, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-03-14_san_joaquin_valley_nr.html.

⁵⁹⁶ Press Release, The Cal. Energy Comm'n, Energy Commission Grant Prepares LA Region for Electric Vehicles (Apr. 11, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-04-11_losanangeles_region_electric_vehicle_nr.html.

⁵⁹⁷ Press Release, The Cal. Energy Comm'n, Energy Commission Grant Prepares Monterey Bay Area for Electric Vehicles (Apr. 11, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-04-11_monterey_region_electric_vehicle_nr.html.

⁵⁹⁸ Press Release, The Cal. Energy Comm'n, Energy Commission Grant Prepares Coachella Valley for Electric Vehicles (Apr. 11, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-04-11_coachella_region_electric_vehicle_nr.html.

⁵⁹⁹ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$8.5 Million to Bring Natural Gas and Propane-Powered Vehicles to California (Mar. 15, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-03-15_natural_gas_and_propane-powered_vehicles.html.

⁶⁰⁰ *Id.*

⁶⁰¹ Press Release, The Cal. Energy Comm'n, Energy Commission Approves Energy Research Report (Mar. 21, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-03-21_approved_energy_research_report_nr.html.

⁶⁰² Press Release, Governor's Office of Planning and Research, Climate Change Conference Focuses on Local Governments (Apr. 6, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-04-06_April_9_LA_Conference.pdf.

⁶⁰³ *Id.*

⁶⁰⁴ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$2.5 Million to Get Natural Gas-Powered Vehicles Rolling (Apr. 11, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-04-11_natural_gas_vehicles_nr.html.

land.⁶⁰⁵ The signatories will work together to study, plan, and develop renewable energy infrastructure on state land.

The CEC held a workshop on April 30, 2012 discussing the effects of climate change on the state's energy systems.⁶⁰⁶

On May 9, 2012, the CEC adopted a 2012-2013 Investment Plan Update designed to increase the use of green vehicles and alternative fuels.⁶⁰⁷ The next day, the CEC approved \$15 million in funding for alternative fuel and electric vehicle research.⁶⁰⁸ The award was made as part of the CEC's Alternative and Renewable Fuel and Vehicle Technology Program, which provides approximately \$100 million annually for green transportation research and development.⁶⁰⁹ Additional program awards during 2012 included: \$35 million on May 31,⁶¹⁰ \$23 million on June 13,⁶¹¹ \$500,000 on July 11,⁶¹² \$2 million on August 9,⁶¹³ \$580,000 on September 12,⁶¹⁴ \$20 million on October 10,⁶¹⁵ \$300,000 on November 14,⁶¹⁶ and \$2.5 million on December 12.⁶¹⁷

⁶⁰⁵ Press Release, The Cal. Energy Comm'n, Development of Renewable Energy on State Property Gets Boost (Apr. 18, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-04-18_renewable_energy_nr.html.

⁶⁰⁶ Press Release, The Cal. Energy Comm'n, Workshop to Examine the Effects of Climate Change on California's Energy Systems (Apr. 27, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-04-27_examine_effect-climate_change_ma.html.

⁶⁰⁷ Press Release, The Cal. Energy Comm'n, Energy Commission Keeps State on Track to Reach Green Transportation Goals (May 9, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-05-09_energy_commission_green_on_track_nr.html.

⁶⁰⁸ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$15 Million to Advance Green Transportation (May 10, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-05-10_advance_green_transportation_awards_nr.html.

⁶⁰⁹ *Id.*

⁶¹⁰ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$35 Million for Green Transportation in California (May 31, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-05-31_green_transportation_nr.html.

⁶¹¹ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$23 Million to Encourage Use of Alternative Transportation Fuels (June 13, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-06-13_alt_transportation_fuels_award_nr.html.

⁶¹² Press Release, The Cal. Energy Comm'n, Energy Commission Awards \$500,000 to Advance Green Transportation (July 11, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-07-11_award_advance_green_transportation_nr.html.

⁶¹³ Press Release, The Cal. Energy Comm'n, Energy Commission Awards Nearly \$2 Million to Support Alternative Fuel Production and Vehicles (Aug. 9, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-08-09_award_altfuel_nr.html.

⁶¹⁴ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$580,000 for Clean Transportation Projects (Sept. 12, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-09-12_clean_transportation_projects_nr.html.

⁶¹⁵ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$20 Million for Clean Transportation Projects (Oct. 10, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-10-10_energy_commission_awards_nr.html.

⁶¹⁶ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$300,000 for Electric Vehicle Charging Infrastructure (Nov. 14, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-11-14_ev_charging_nr.html.

⁶¹⁷ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$2.5 Million for Clean Transportation Projects (Dec. 12, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-12-12_awards_clean_transportation_nr.html.

On May 24, 2012, the CPUC voted to reinterpret an earlier cap on its net-metering program that would have soon prevented the state's largest electric provider from accepting any additional participants in the program.⁶¹⁸ The reinterpretation more than doubles the potential for rooftop solar on homes and small businesses in the state.⁶¹⁹

On July 11, 2012, the CEC awarded almost \$1.2 million to ten projects as part of the Commission's Public Interest Research Program.⁶²⁰ The list included an award to Scripps Institution of Oceanography to improve climate change forecasting.⁶²¹ Also in July, the CEC announced the release of a new report, *Our Changing Climate 2012*, an overview of scientific studies designed to inform policymakers and communities about the latest research and tools for effective action.⁶²²

As part of California's goal to spread awareness about climate change, Governor Brown announced the launch of a new website to refute common arguments made by climate change deniers in August 2012.⁶²³ The website contains information about climate science, the scientific consensus about climate change, and common climate denier arguments along with the facts to disprove those arguments.⁶²⁴

In September 2012, Governor Brown signed into law a number of bills related to climate and energy. The first, the Energy Security Coordination Act of 2013, authorized the Office of Planning and Research to act as a liaison with the U.S. Department of Defense (DOD) in recognition of the State and DOD as two of the largest consumers of energy with strong commitments to energy research.⁶²⁵ Brown also signed legislation relating to high-occupancy toll lanes, parking for alternatively fueled vehicles, and alternative energy financing.⁶²⁶ The Choose Clean Cars Act of 2012 would exempt low-

⁶¹⁸ *California's Net-Metering Program Gains New Lease on Life*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2012/californias-net-metering-program-gains-new-lease-life> (Sept. 5, 2013).

⁶¹⁹ *Id.*

⁶²⁰ Press Release, The Cal. Energy Comm'n, Energy Commission Awards Nearly \$1.2 Million for Energy Research Projects (July 11, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-07-11_award_energy_research_nr.html.

⁶²¹ *Id.*

⁶²² Press Release, The Cal. Energy Comm'n, New Research on Climate Change in California to be Released (July 27, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-07-27_new_research_on_climate_change_ma.html. The full report is available through the California Climate Portal. *Reports on the Third Assessment from the California Climate Change Center*, CAL. CLIMATE CHANGE PORTAL, http://www.climatechange.ca.gov/adaptation/third_assessment/ (Sept. 5, 2013).

⁶²³ Press Release, Office of the Governor, Governor Brown Launches Climate Change: Just the Facts Website to Refute Global Warming Deniers (Aug. 13, 2012), <http://gov.ca.gov/news.php?id=17673>.

⁶²⁴ *Climate Change: Just the Facts*, CAL. GOVERNOR'S OFFICE OF PLANNING & RESEARCH, http://www.opr.ca.gov/s_climatechange/facts.php (Sept. 5, 2013).

⁶²⁵ S.B. 1409, 2012 Leg., Reg. Sess. (Cal. 2012), http://leginfo.ca.gov/pub/11-12/bill/sen/sb_1401-1450/sb_1409_bill_20120927_chaptered.html; Press Release, Office of the Governor, Governor Brown Signs Energy Security Coordination Act (Sept. 27, 2012), <http://gov.ca.gov/news.php?id=17758>.

⁶²⁶ Press Release, Office of the Governor, Governor Brown Signs Legislation to Advance Clean Energy Transportation in California (Sept. 28, 2012), <http://gov.ca.gov/news.php?id=17764>.

emission and hybrid cars from the toll required in high occupancy toll lanes.⁶²⁷ AB 2583 creates parking incentives for alternative fuel vehicles to encourage the purchase of such vehicles.⁶²⁸ Two other bills establish guidelines for the use of revenue from the state's cap-and-trade program; the first requires that the revenue be used for environmental purposes and the second requires that at least 25% be spent on programs that benefit disadvantaged communities.⁶²⁹ California also removed a barrier to renewable energy investment by signing S.B. 594, which allows customers to aggregate electricity demand if they have multiple meters on the property, allowing them to invest in larger renewable energy projects to offset that use.⁶³⁰ Finally, S.B. 1128 expands the authority of the California Alternative Energy and Advanced Transportation Financing Authority.⁶³¹

Also in September, the CEC awarded a \$380,000 loan through the Energy Conservation Assistance Act (ECAA) program to Siskiyou County School District for efficiency upgrades and a photovoltaic system.⁶³² The CEC awarded an additional \$5 million to communities in Northern California for similar upgrades in October 2012.⁶³³ The CEC made two additional research awards in 2012. The first was \$1 million in October to Pacific Gas & Electric Company for a demonstration of a compressed air energy storage plant.⁶³⁴ The second, in November, was \$1.5 million to eighteen separate projects aimed at building efficiency, renewable energy production, grid reliability, and related projects.⁶³⁵ Eight more communities received \$12 million through the ECAA program in December.⁶³⁶

2013: Renewable Energy and Climate Change Adaptation

⁶²⁷ Assemb. B. 2405, 2012 Leg., Reg. Sess. (Cal. 2012), http://leginfo.ca.gov/pub/11-12/bill/asm/ab_2401-2450/ab_2405_bill_20120927_chaptered.html.

⁶²⁸ Assemb. B. 2583, 2012 Leg., Reg. Sess. (Cal. 2012), http://leginfo.ca.gov/pub/11-12/bill/asm/ab_2551-2600/ab_2583_bill_20120927_chaptered.html.

⁶²⁹ *California passes Guidelines for \$1 Billion of Cap-and-Trade Revenue*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2012/california-passes-guidelines-1-billion-cap-trade-revenue> (Sept. 5, 2013).

⁶³⁰ *California Load-Aggregation Law Will Encourage Distributed Renewable Generation*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2012/california-load-aggregation-law-will-encourage-distributed-renewable-gen> (Sept. 5, 2013).

⁶³¹ S.B. 1128, 2012 Leg., Reg. Sess. (Cal. 2012), http://leginfo.ca.gov/pub/11-12/bill/sen/sb_1101-1150/sb_1128_bill_20120927_chaptered.html.

⁶³² Press Release, The Cal. Energy Comm'n, Siskiyou County School District Awarded \$380,000 to Improve Lighting Efficiency (Sept. 12, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-09-12_siskiyou_county.html.

⁶³³ Press Release, The Cal. Energy Comm'n, Nearly \$5 Million in Energy Loan Awarded to Northern California Communities (Oct. 10, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-10-10_energy_loans_award_nr.html.

⁶³⁴ Press Release, The Cal. Energy Comm'n, PG&E Awarded \$1 Million for Energy Storage Research (Oct. 10, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-10-10_pge_energy_storage_research_nr.html.

⁶³⁵ Press Release, The Cal. Energy Comm'n, Energy Commission Awards \$1.5 Million for Energy Research (Nov. 14, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-11-14_eisg_nr.html.

⁶³⁶ Press Release, The Cal. Energy Comm'n, Energy Commission Awards \$12 Million in Energy Loans to California Cities, School District (Dec. 12, 2012), http://www.energy.ca.gov/releases/2012_releases/2012-12-12_awards_energy_loans_ca_school_dist_nr.html.

In January 2013, the CEC continued to award grants through the Alternative and Renewable Fuel and Vehicle Technology Program, including: \$1.8 million for microgrid projects,⁶³⁷ \$3.2 million for electric vehicle charging and alternative fuels,⁶³⁸ \$17 million for a biodiesel facility and electric vehicle charging stations,⁶³⁹ and \$4.5 million for clean vehicle rebates.⁶⁴⁰

Through the ECAA program, the CEC awarded \$900,000 to Yuba Community College in January,⁶⁴¹ \$4.8 million in February to the cities of Patterson, San Pablo, and California City, as well as Santa Barbara Community College,⁶⁴² and another \$1 million in February to Inyo County for a photovoltaic system.⁶⁴³

On February 28, 2013, the CEC announced an award of nearly \$5 million for a biorefinery in Fresno County that will convert sugar beets into ethanol.⁶⁴⁴ That same day, the CEC approved and submitted to Governor Brown the 2012 Integrated Energy Policy Report Update.⁶⁴⁵ The report forms the basis for long-range energy policies and planning and specific agencies are required by statute to carry out their energy-related duties and responsibilities based upon the information and analyses contained in the report.⁶⁴⁶

COLORADO

⁶³⁷ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$1.8 Million for UC San Diego Microgrid Projects (Jan. 9, 2013), http://www.energy.ca.gov/releases/2013_releases/2013-01-09_UCSD_nr.html.

⁶³⁸ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$3.2 Million for Clean Transportation Projects (Jan. 10, 2013), http://www.energy.ca.gov/releases/2013_releases/2013-01-10_transportation_nr.html.

⁶³⁹ Press Release, The Cal. Energy Comm'n, Energy Commission Awards More Than \$17 Million to Support Green Transportation (Feb. 13, 2013), http://www.energy.ca.gov/releases/2013_releases/2013-02-13_green_transportation_awards.html.

⁶⁴⁰ Press Release, The Cal. Energy Comm'n, Energy Commission Awards \$4.5 Million for Clean Vehicle Rebates (Feb. 28, 2013), http://www.energy.ca.gov/releases/2013_releases/2013-02-28_clean_vehicle_rebates_nr.html.

⁶⁴¹ Press Release, The Cal. Energy Comm'n, Yuba Community College District Awarded \$900,000 Loan to Improve Lighting Efficiency (Jan. 9, 2013), http://www.energy.ca.gov/releases/2013_releases/2013-01-09_Yuba_nr.html.

⁶⁴² Press Release, The Cal. Energy Comm'n, Energy Commission Awards \$4.8 Million in Energy Loans to Cities, Colleges (Feb. 13, 2013), http://www.energy.ca.gov/releases/2013_releases/2013-02-13_loans_cities-n-colleges_nr.html.

⁶⁴³ Press Release, The Cal. Energy Comm'n, Energy Commission Awards Nearly \$1 Million for Solar Project in Inyo County (Feb. 28, 2013), http://www.energy.ca.gov/releases/2013_releases/2013-02-28_inyo_county_nr.html.

⁶⁴⁴ Press Release, The Cal. Energy Comm'n, Energy Commission Awards Nearly \$5 Million for Biorefinery Development in Fresno County (Feb. 28, 2013), http://www.energy.ca.gov/releases/2013_releases/2013-02-28_fresno_county_biorefinery_nr.html.

⁶⁴⁵ Press Release, The Cal. Energy Comm'n, State's Energy Policy Update Goes to Governor, Legislature (Feb. 28, 2013), http://www.energy.ca.gov/releases/2013_releases/2013-02-28_energypolicy_update_nr.html.

⁶⁴⁶ 2012 Integrated Energy Policy Report Update, CALIFORNIA ENERGY COMMISSION, <http://www.energy.ca.gov/2012publications/CEC-100-2012-001/CEC-100-2012-001-CMF.pdf> (Sept. 6, 2013).

1998: Climate Change Agreements/MOUs

The Colorado Department of Public Health and Environment developed a climate change action plan for the state in September 1998.⁶⁴⁷ This Plan is an informational tool containing material related to the climate change debate.⁶⁴⁸ Colorado also has a Climate Change Advisory Group.⁶⁴⁹ Since 1999, the Colorado Public Utilities Commission (CPUC) has required investor-owned utilities producing more than 100 megawatts (MW) to disclose their fuel mix to their customers twice yearly via mail.⁶⁵⁰

2004: Renewable Energy

On November 2, 2004, the citizens of Colorado voted to approve Amendment 37, becoming the first state with a voter-approved Renewable Energy Standard.⁶⁵¹ Prior to Amendment 37, Colorado only required its electric utilities to offer their customers dual metering – a lower rate for all electricity generated by the customer’s generator, but the full rate for electricity purchased from the utility.⁶⁵² In 2005, in compliance with the Amendment, the CPUC added rules creating additional interconnection and net metering requirements for utilities with more than 40,000 customers.⁶⁵³ Net metering is now available for customers of these utilities with generators producing up to 2 MWs of energy.⁶⁵⁴ Furthermore, these utilities must generate 3% of their electricity from renewable power sources between 2007 and 2010; 6% between 2011 and 2014; and 10% after 2014.⁶⁵⁵

2006: Transportation/Fuels and Greenhouse Gas Reduction

On June 1, 2006, Governor Owens signed into law a bill that promotes low-emission Western coal-fueled electricity generation by requiring the CPCU to consider integrated combined cycle electric generation facilities.⁶⁵⁶ These facilities combine two technologies that use coal in a cleaner way.⁶⁵⁷ Colorado also offers a tax credit for hybrid vehicles.⁶⁵⁸

⁶⁴⁷ COLO. DEP’T OF PUB. HEALTH AND ENV’T, CLIMATE CHANGE & COLORADO, A TECHNICAL ASSESSMENT (1998), <http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheadname1=Content-Disposition&blobheadname2=Content-Type&blobheadvalue1=inline%3B+filename%3D%22Climate+Change+%26+Colorado-A+Technical+Assessment%3A+1998.pdf%22&blobheadvalue2=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251808873748&ssbinary=true>.

⁶⁴⁸ *Id.*

⁶⁴⁹ See *The Colorado Climate Project*, THE ROCKY MOUNTAIN CLIMATE ORG., http://www.rockymountainclimate.org/colorado_1.htm (Sept. 11, 2011).

⁶⁵⁰ COLO. CODE REGS. § 723-3 (2013).

⁶⁵¹ COLO. REV. STAT. ANN. § 40-2-124 (West 2013).

⁶⁵² *Id.* §§ 40-9.5-301 – 40-9.5-305.

⁶⁵³ COLO. CODE REGS. § 723-3 (2013).

⁶⁵⁴ *Id.*

⁶⁵⁵ COLO. REV. STAT. ANN. § 40-2-124 (West 2013).

⁶⁵⁶ H.B. 1281, 65th General Assemb., 2nd Reg. Sess. (Colo. 2006).

⁶⁵⁷ *Id.*

⁶⁵⁸ COLO. REV. STAT. ANN. §§ 39-22-516 and 39-33-102 (West 2005).

In November 2006, City of Boulder voters approved the Climate Action Plan Tax on electricity that generates greenhouse gas (GHG) emissions.⁶⁵⁹ This was the first municipal energy tax on residential power usage designed to combat climate change. Local electric utilities collect the tax based on the customer's use of GHG producing electricity. Thus, residents that elect to receive a portion of their energy from wind power are exempt to that extent from the tax.⁶⁶⁰

2007: Renewable Energy, Climate Change Agreements/MOUs, and Greenhouse Gas Reduction

In March 2007, Governor Ritter signed House Bill (H.B.) 1281, requiring large investor-owned utilities to generate 20% of their electricity from renewable sources by 2020.⁶⁶¹ This law also requires municipal and rural utilities to generate 10% of their electricity from renewable sources by 2020. In the same month Ritter also signed Senate Bill (S.B.) 100, requiring utilities subject to rate regulation to develop plans to improve transmission capacity in prime wind-power locations that currently lack transmission capacity.⁶⁶²

In May 2007, Colorado and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”⁶⁶³

On November 7, 2007, Governor Ritter announced the Colorado Climate Action Plan.⁶⁶⁴ This Plan calls for Ritter to issue an executive order (EO) calling for a statewide effort to achieve a reduction in GHG emissions to 20% below 2005 levels by 2020 and 80% below 2005 levels by 2050.⁶⁶⁵ Additionally, the plan calls for an Agricultural Offset Program, clean car GHG emission standards within the next two years, an Industrial Energy Efficiency Program to persuade industry to employ efficiency measures, renewable energy development reports, federal funding for clean-coal technologies, geologic sequestration, Electric Resource Plans for emission reductions at each utility,

⁶⁵⁹ *Climate Action Home Page*, CITY OF BOULDER, COLO., <https://bouldercolorado.gov/climate> (Sept. 11, 2011).

⁶⁶⁰ *Id.*

⁶⁶¹ H.B. 1281, 66th General Assemb., 1st Reg. Sess. (2007).

⁶⁶² S.B. 100, 66th General Assemb., 1st Reg. Sess. (2007).

⁶⁶³ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

⁶⁶⁴ Governor Bill Ritter, Jr., *Colorado Climate Action Plan: A Strategy to Address Global Warming*, COLORADO THE OFFICIAL STATE WEB PORTAL (Nov. 2007), <http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheadername1=Content-Disposition&blobheadername2=Content-Type&blobheadervalue1=inline%3B+filename%3D%22Colorado+Climate+Action+Plan.pdf%22&blobheadervalue2=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251819436674&ssbina ry=true>.

⁶⁶⁵ *Id.*

the adoption of California's vehicle GHG emissions standards, and mandatory reporting of GHG emissions by major emitters.⁶⁶⁶

2008: Renewable Energy, Green Jobs, Green Technology, Energy Efficiency, Climate Change Agreements/MOUs, and Transportation/Fuels

On April 24, 2008, Governor Ritter signed into law H.B. 1270.⁶⁶⁷ This law further defines, as well as broadens, citizens' rights to increase their homes' energy-efficiency, including installing renewable energy generation devices when practical.

On May 27, 2008, Governor Ritter signed several energy bills into law. H.B. 1350 added to its legislative declaration the intent to "facilitate the efficient use of energy."⁶⁶⁸ It also added such terms as "energy efficient improvement" and "renewable energy improvement" to its definitions section.⁶⁶⁹ Ritter also passed S.B. 147 relating to the requirement that state-assisted facilities be designed, constructed and renovated pursuant to a high performance standard certification program.⁶⁷⁰ This Bill repealed the exemptions that were previously available to low-income housing and facilities that were built with mineral impact revenues.⁶⁷¹ Finally, Ritter signed into law S.B. 184.⁶⁷² This Bill allowed Colorado to provide below-market loans for improvements to low-income and moderate-income homes.⁶⁷³

On June 2, 2008, the New Energy Technologies Bill (H.B. 1164) became law.⁶⁷⁴ It amended its previous version, which required the Public Utilities Commission, to seriously consider implementing cost-effective "new clean energy and energy-efficient technologies" when making decisions relating to "generation acquisitions for electric utilities." The Bill also suggests the CPUC consider "the risk of higher future costs associated with the emission of greenhouse gases such as carbon dioxide" when examining utility proposals to acquire resources. Additionally, the amended version states, "it is in the best interests of the citizens of Colorado to develop and utilize solar energy resources in increasing amounts."⁶⁷⁵

In June 2008, Governor Ritter announced the kickoff of a 12-month, statewide energy efficiency and conservation campaign.⁶⁷⁶ *The New Energy Economy: Bringing It Home* will provide basic advice and tips on how to save money at home and at work,

⁶⁶⁶ *Id.*

⁶⁶⁷ COLO. REV. STAT. ANN. § 38-30-168 (West 2008).

⁶⁶⁸ H.B. 1350, 66th General Assemb., 2nd Reg. Sess. (2008).

⁶⁶⁹ *Id.*

⁶⁷⁰ S.B. 147, 66th General Assemb., 2nd Reg. Sess. (2008).

⁶⁷¹ *Id.*

⁶⁷² S.B. 184, 66th General Assemb., 2nd Reg. Sess. (2008).

⁶⁷³ *Id.*

⁶⁷⁴ H.B. 1164, 66th General Assemb., 2nd Reg. Sess. (2008).

⁶⁷⁵ *Id.*

⁶⁷⁶ Press Release, Colo. Official Web Portal, Gov. Ritter Announces Energy Efficiency and Conservation Campaign (June 23, 2008), <http://web.archive.org/web/20080917222345/http://www.colorado.gov/cs/Satellite?c=Page&cid=1214213309535&pagename=GovRitter%2FGOVRLayout&rendermode=preview>.

using television and radio advertisements to educate people about low-cost, simple ways to save energy.⁶⁷⁷

Also in June 2008, Colorado launched a \$10 million New Energy Communities Initiative.⁶⁷⁸ As a partnership between the Colorado Department of Local Affairs and the Governor's Energy Office (GEO), the Initiative's aim is to "maximize energy efficiency and conservation, enhance community livability, promote economic development in downtowns, and address climate change by reducing carbon emissions."⁶⁷⁹ The money will go to at least five regional efforts, and will focus on three areas: greening public facilities, greening downtowns, and greening homes.⁶⁸⁰

In July 2008, Colorado and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.⁶⁸¹ The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards are designed to help develop greater energy efficiency, conservation, and clean energy resources.⁶⁸² Colorado's grant will go to the Colorado Carbon Fund, which provides verifiable carbon offsets for consumers.⁶⁸³

In August 2008, Governor Ritter joined California's Governor Schwarzenegger and the Alliance of Automobile Manufacturers to launch the EcoDriving Program.⁶⁸⁴ The Program is part of a nationwide effort to save consumers money on their gasoline, reduce fuel consumption and cut carbon dioxide emissions.⁶⁸⁵

On November 13, 2008, the Southwest Energy Efficiency Project (SWEEP) awarded Governor Ritter the 2008 Leadership in Energy Efficiency Award.⁶⁸⁶ In an effort to create jobs and strengthen Colorado's economy, the GEO will issue a total of \$370,000 in New Energy Economic Development (NEED) grants to eight organizations

⁶⁷⁷ *Id.*

⁶⁷⁸ Press Release, Colo. Official Web Portal, Governor Ritter Announces \$10 Million New Energy Communities Initiative (June 19, 2008), <http://www.colorado.gov/cs/Satellite%3Fc%3DPage&cid%3D1213867983962&pagename%3DGovRitter%252FGOVRLayout>.

⁶⁷⁹ *Id.*

⁶⁸⁰ *Id.*

⁶⁸¹ Press Release, Colo. Official Web Portal, Colorado One of Twelve States to Receive Clean Energy Grant (July 1, 2008), <http://www.colorado.gov/cs/Satellite%3Fc%3DPage&cid%3D1214905942885&pagename%3DGovRitter%252FGOVRLayout>.

⁶⁸² *Id.*

⁶⁸³ *Id.*

⁶⁸⁴ Press Release, Colo. Official Web Portal, Ritter, Schwarzenegger Launch EcoDriving (Aug. 18, 2008), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1219055003438&pagename=GovRitter%2FGOVRLayout&rendermode=preview>.

⁶⁸⁵ *Id.*

⁶⁸⁶ Press Release, Colo. Official Web Portal, Sw. Energy Efficiency Project, Gov. Ritter Receives Energy Efficiency Award (Nov. 13, 2008), <http://www.swenergy.org/programs/awards/2008-awards.pdf>.

working in the areas of biomass, energy efficiency, and wind and solar technologies including a municipality, non-profit, and private companies.⁶⁸⁷

2009: Renewable Energy, Energy Efficiency, Green Jobs, American Recovery & Reinvestment Act (ARRA), Climate Change Agreements/MOUs, Transportation/Fuels, and Green Technology

On January 27, 2009, Governor Ritter announced the appointment of former state representative Alice Madden to the position of Climate Change Coordinator.⁶⁸⁸ During her time as a state lawmaker, Madden co-sponsored 2007 legislation that “doubled the state’s renewable energy standard.”⁶⁸⁹

In early February, Governor Ritter expressed gratitude to Colorado U.S. Senator Udall for his introduction of an amendment to the economic recovery package that would reinstate State Energy Program (SEP) funding.⁶⁹⁰ SEP provides federal funding for renewable energy and energy efficiency programs administered by state agencies.⁶⁹¹

On March 6, 2009, Governor Ritter’s Energy Office announced it was slated to begin a bidding process for funding shovel-ready energy efficient and renewable energy infrastructure projects with American Recovery and Reinvestment Act (ARRA) funds.⁶⁹² The following week, Ritter and lawmakers showcased state economic initiatives and proposed legislation aimed at clean energy projects and job creation during a state energy expo.⁶⁹³ The proposed legislation included a bill that “promote[d] low speed neighborhood electric vehicles.”⁶⁹⁴

⁶⁸⁷ Press Release, Colo. Official Web Portal, Gov. Ritter announces \$370,000 in Energy Grants (Jan. 21, 2009), <http://www.colorado.gov/cs/Satellite%3F%3DPage&cid%3D1232546175286&pagename%3DGovRitter%252FGOVRLayout>.

⁶⁸⁸ Press Release, Colo. Official Web Portal, Gov. Ritter Names Former State Rep. Alice Madden as Colorado’s New Climate Change Coordinator (Jan. 27, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1233066784761&pagename=GovRitter%2FGOVRLayout>.

⁶⁸⁹ *Id.*

⁶⁹⁰ Press Release, Colo. Official Web Portal, Gov. Ritter Urges Bipartisan Support of Sen. Udall Energy Amendment (Feb. 4, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1233759742313&pagename=GovRitter%2FGOVRLayout>.

⁶⁹¹ *Id.*

⁶⁹² Press Release, Colo. Official Web Portal, New Energy Projects to Play a Big Role in Recovery (Mar. 6, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1236342368651&pagename=GovRitter%2FGOVRLayout>.

⁶⁹³ Press Release, Colo. Official Web Portal, New Energy Expo Highlights Economic Opportunities and 2009 Legislative Priorities (Mar. 12, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1236860353667&pagename=GovRitter%2FGOVRLayout>.

⁶⁹⁴ *Id.*

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Colorado was eligible for \$49,222,000 under the SEP of the American Recovery & Reinvestment Act (ARRA).⁶⁹⁵

On April 7, 2009, Governor Ritter applauded Xcel Energy and Suncorp Power on their plans to build the nation's "second-largest high-efficiency photovoltaic solar plant."⁶⁹⁶ A week later he issued a statement supporting EPA's endangerment finding on GHGs.⁶⁹⁷

Governor Ritter signed the Renewable Energy Finance Act, or S.B. 51, in late April 2009.⁶⁹⁸ The Bill provides Colorado homeowners with new financing options for solar electricity and encourages public utilities to increase accessibility to solar rebate programs.⁶⁹⁹

In May 2009, Governor Ritter signed several bills that advance Colorado's New Energy Economy initiatives. The Solar Ready Homes Bill⁷⁰⁰ requires homebuilders to give prospective buyers the option of pre-wiring for solar and also gives buyers the "ability to incorporate solar-technology purchases into their original mortgage."⁷⁰¹ During visits to several Colorado schools, Ritter signed H.B. 1312 creating loans for schools to purchase electric and hybrid buses and to produce on-site wind and solar.⁷⁰² Ritter also signed H.B. 1126, creating incentives for the development of solar thermal energy systems,⁷⁰³ and S.B. 124, which increased funding for "research and development of agricultural energy-related projects."⁷⁰⁴

⁶⁹⁵ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁶⁹⁶ Press Release, Colo. Official Web Portal, Gov. Ritter Statement on New Solar Power Plant (Apr. 7, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1239108781373&pagename=GovRitter%2FGOVRLayout>.

⁶⁹⁷ Press Release, Colo. Official Web Portal, Gov. Ritter Supports EPA Decision on Greenhouse Gas Emissions (Apr. 17, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1239977076149&pagename=GovRitter%2FGOVRLayout>.

⁶⁹⁸ Press Release, Colo. Official Web Portal, Gov. Ritter Signs Renewable Energy Finance Act (Apr. 22, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1240404111414&pagename=GovRitter%2FGOVRLayout>.

⁶⁹⁹ *Id.*

⁷⁰⁰ H.B. 1149, 67th General Assemb., 1st Reg. Sess. (Colo. 2009).

⁷⁰¹ Press Release, Colo. Official State Web Portal, Gov. Ritter Signs 'Solar Ready Homes' Bill (May 4, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1241443584034&pagename=GovRitter%2FGOVRLayout>.

⁷⁰² Press Release, Colo. Official State Web Portal, Gov. Ritter Visits Schools, Signs New Energy Economy Bills (May 15, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1242391618928&pagename=GovRitter%2FGOVRLayout>; *see also* H.B. 1312, 67th General Assemb., 1st Reg. Sess. (Colo. 2009).

⁷⁰³ H.B. 1126, 67th General Assemb., 1st Reg. Sess. (Colo. 2009).

⁷⁰⁴ S.B. 124, 67th General Assemb., 1st Reg. Sess. (Colo. 2009).

On May 19, 2009, Governor Ritter applauded the Obama administration's announcement that it would roll out new automobile emission and efficiency standards, which came into effect in 2012.⁷⁰⁵ Ritter described it as a "perfect fit" with Colorado's New Energy Economy's goal of a "20 percent reduction in greenhouse gas emissions by 2020 and an 80 percent reduction by 2050."⁷⁰⁶ Later that same week, he again commended EPA's recommendation for reconsideration of an air emission permit issued to the proposed Desert Rock Energy Facility in the Four Corners Region.⁷⁰⁷ While applauding this recommendation, Ritter's May 22 letter to EPA Administrator Lisa Jackson also urged the agency to address the environmental impacts from the existing plants in the Four Corners Region.⁷⁰⁸

Governor Ritter also signed an agreement to support federal climate change legislation in May 2009.⁷⁰⁹ The agreement contains two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.⁷¹⁰

In June 2009, Governor Ritter signed more New Energy Economy legislation, which promoted energy efficient vehicles.⁷¹¹ The bills provided for low speed electric vehicles,⁷¹² a green truck program,⁷¹³ and income tax credits for hybrid and alternative fuel vehicles.⁷¹⁴

⁷⁰⁵ Press Release, Colo. Official State Web Portal, Gov. Ritter Applauds President Obama for Setting National Auto Emission and Mileage Standards (May 19, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1242738086664&pagename=GovRitter%2FGOVRLayout>; see also Press Release, The White House, Obama Administration Finalizes Historic 54.5 MPG Fuel Efficiency Standards (Aug. 28, 2012), <http://www.whitehouse.gov/the-press-office/2012/08/28/obama-administration-finalizes-historic-545-mpg-fuel-efficiency-standard>.

⁷⁰⁶ *Id.*

⁷⁰⁷ Press Release, Colo. Official State Web Portal, Gov. Ritter Commends EPA for Reconsidering Desert Rock Air Quality (May 22, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1243000952957&pagename=GovRitter%2FGOVRLayout>.

⁷⁰⁸ *Id.*

⁷⁰⁹ Press Release, Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20100116190854/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

⁷¹⁰ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION (May 21, 2009), <http://web.archive.org/web/20090817025755/https://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

⁷¹¹ Press Release, Colo. Official State Web Portal, Gov. Ritter to Visit Communities Across Colorado to Sign Legislation (May 28, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1243515596118&pagename=GovRitter%2FGOVRLayout>; see also Press Release, Colo. Official State Web Portal, Gov. Ritter Signs New Energy Economy Legislation (June 4, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&cid=1244121595008&pagename=GovRitter%2FGOVRLayout>.

⁷¹² S.B. 75, 67th General Assemb., 1st Reg. Sess. (Colo. 2009).

⁷¹³ H.B. 1298, 67th General Assemb., 1st Reg. Sess. (Colo. 2009).

⁷¹⁴ H.B. 1331, 67th General Assemb., 1st Reg. Sess. (Colo. 2009).

On June 2, 2009, Governor Ritter addressed Colorado's first graduates of its Veteran Green Jobs Academy, a new program that provides green job training and placement to military veterans.⁷¹⁵ The graduates completed an 8-week Home Energy Auditor Training Program, which provides national certification in energy auditing and new home rating.⁷¹⁶ The following week, The Pew Charitable Trusts report on green job growth indicated that Colorado's clean jobs have grown at a rate of 18.2% from 1998 to 2007, which is twice the national average over that time span.⁷¹⁷

According to The Pew Charitable Trusts' June 2009 Clean Energy Economy Fact Sheet, Colorado's clean energy jobs economy grew by 17,008 jobs and 1,778 businesses from 1998 to 2007.⁷¹⁸ In 2009 Colorado ranked fifth in the nation in clean energy capital investment, attracting over \$622 million between 2006 and 2009.⁷¹⁹

On July 9, 2009, Governor Ritter addressed those in attendance at the Colorado Natural Gas Association's 21st annual Rocky Mountain Natural Gas Strategy Conference and Investment Forum.⁷²⁰ Ritter emphasized the important role of natural gas in Colorado's New Energy Economy stating, "[w]e can't begin to address climate change in a meaningful way without using more natural gas."⁷²¹

On July 14, 2009, Governor Ritter announced that his Energy Office would apply for \$4.7 million in ARRA funding from the DOE's \$300 million set aside to furnish rebates for purchasers of ENERGY STAR® qualified home appliances.⁷²² GEO partnered with fifty community sponsors on the construction of ENERGY STAR® homes.⁷²³ The partnerships resulted in the construction of nearly 2,350 new homes that qualified for the ENERGY STAR® label.⁷²⁴ Later that week, Ritter announced that six

⁷¹⁵ Press Release, Colo. Official State Web Portal, Gov. Ritter Addresses 1st Graduating Class of Green Job Vets (June 2, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1243943883299&pagename=GovRitter%2FGOVRLayout>.

⁷¹⁶ *Id.*

⁷¹⁷ Press Release, Colo. Official State Web Portal, New PEW Report Finds Colorado a Leader in Clean Energy Jobs (June 10, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1244637971880&pagename=GovRitter%2FGOVRLayout>.

⁷¹⁸ *Clean Energy Economy Colorado Fact Sheet*, THE PEW CHARITABLE TRUSTS, http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf (Sept. 12, 2013).

⁷¹⁹ *Id.*

⁷²⁰ Press Release, Colo. Official State Web Portal, Gov. Ritter Touts Natural Gas as Key Part of New Energy Economy (July 9, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1247146939189&pagename=GovRitter%2FGOVRLayout>.

⁷²¹ *Id.*

⁷²² Press Release, Colo. Official State Web Portal, Gov. Ritter Announces Efficiency Programs to Help Homeowners (July 14, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1247607117494&pagename=OIT-2%2FOIT2Layout>.

⁷²³ *Id.*

⁷²⁴ *Id.*

rural Colorado schools would install wind turbines as part of the state's Wind for Schools Program.⁷²⁵

In late July 2009, Governor Ritter addressed national Senate Subcommittees on Green Jobs and the New Economy.⁷²⁶ Ritter's remarks highlighted Colorado's aggressive approach to clean energy and green jobs even during the recent economic downturn and he hoped Colorado's efforts would inspire national legislators as they debate federal energy and climate change legislation.⁷²⁷

On July 29, 2009, Governor Ritter applauded the opening of Solix Biofuels Inc.'s algae-to-biofuels plant.⁷²⁸ The Coyote Gulch Demonstration facility in southwest Colorado uses low-cost photo bioreactors to grow algae inside of plastic bags rather than open ponds.⁷²⁹ Solix hopes the technique will establish a "commercially viable biofuel that will help solve climate change and petroleum scarcity without competing with global food supply."⁷³⁰

In early August 2009, Governor Ritter commended Excel Energy's decision to withdraw a proposed Solar Fee, which would have penalized those investing in clean energy.⁷³¹ Later that week, the state's solar energy development received a boost with the announcement that Golden, Co.'s National Renewable Energy Laboratory secured a \$20 million ARRA grant to advance its solar energy research.⁷³²

On August 14, 2009, Governor Ritter joined Denver Mayor Hickenlooper in announcing that wind energy business REpower USA Corp. would be relocating its headquarters from Oregon to Denver.⁷³³ REpower, which is "responsible for USA sales,

⁷²⁵ Press Release, Colo. Official State Web Portal, Six Rural Colorado Schools to Install Wind Turbines (July 16, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1247751377601&pagename=GovRitter%2FGOVRLayout>.

⁷²⁶ Press Release, Colo. Official State Web Portal, Gov. Ritter Touts New Energy Economy Jobs in DC (July 21, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1248095309038&pagename=GovRitter%2FGOVRLayout>.

⁷²⁷ *Id.*

⁷²⁸ Press Release, Colo. Official State Web Portal, Gov. Ritter Praises Opening of SW Colorado Algae-to-Biofuels Plant (July 29, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1248577375352&pagename=GovRitter%2FGOVRLayout>.

⁷²⁹ *Id.*

⁷³⁰ *Id.*

⁷³¹ Press Release, Colo. Official State Web Portal, Gov. Ritter Praises Xcel for Withdrawing Solar Fee Proposal (Aug. 4, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1249391305153&pagename=GovRitter%2FGOVRLayout>.

⁷³² Press Release, Colo. Official State Web Portal, Gov. Ritter Congratulates National Renewable Energy laboratory for Landing \$20M Grant (Aug. 6, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1249568663294&pagename=OIT-2%2FOIT2Layout>.

⁷³³ Press Release, Colo. Official State Web Portal, Gov. Ritter & Mayor Hickenlooper Announce Relocation of New Energy Economy Business to Colorado (Aug. 14, 2009),

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1250251877426&pagename=GovRitter%2FGOVRLayout>

project management and service for REpower turbines,” is taking advantage of tax incentives made possible by recent state legislation creating the Colorado Job Growth Incentive Program.⁷³⁴

In September 2009, Governor Ritter issued a statement applauding U.S. Interior Secretary Ken Salazar’s Climate Change Response Strategy noting, “Colorado and the Interior West are particularly susceptible to the consequences of climate change.”⁷³⁵ Ritter’s office also announced in September that the DOE had awarded \$3.8 million in stimulus funding for a research project that will explore the long-term carbon sequestration suitability in geologic formations in the northwestern part of the state.⁷³⁶

On September 18, 2009, Governor Ritter accompanied local, state, and federal officials on a sustainability tour of Denver.⁷³⁷ The tour’s highlights included a Union Station stop and light rail ride. It culminated in a tour of the South Lincoln Park neighborhood, which the U.S. Department of Housing and Urban Development Secretary Shaun Donovan announced would receive \$10 million in ARRA funding for its energy efficiency initiatives.⁷³⁸

In September 2009, Colorado continued to promote green job development. Governor Ritter announced Veterans Green Jobs was awarded a \$1.1 million contract to weatherize and make energy efficiency improvements in nearly 250 residences in the Southern Colorado’s San Luis Valley.⁷³⁹ Ritter also announced the creation of a Green Jobs Certification program at Red Rocks Community College that “will serve as a national template for how to prepare and credential workers in green building.”⁷⁴⁰

out.

⁷³⁴ *Id.*; see also H.B. 1001, 67th General Assemb., 1st Reg. Sess. (Colo. 2009).

⁷³⁵ Press Release, Colo. Official State Web Portal, Gov. Ritter Praises Salazar’s Climate Plan to Protect Public Lands (Sept. 14, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251566638467&pagename=GOVRWrapper>.

⁷³⁶ Press Release, Colo. Official State Web Portal, Recovery Funds to Help Study Carbon Sequestration in NW Colo. (Sept. 17, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=OIT-2%2FOIT2Layout&cid=1251566722903&pagename=OIT2Wrapper>.

⁷³⁷ Press Release, Colo. Official State Web Portal, Gov. Ritter Lauds Sustainability Tour, Touts ‘Livable Places’ (Sept. 18, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251566734158&pagename=GOVRWrapper>.

⁷³⁸ *Id.*

⁷³⁹ Press Release, Colo. Official State Web Portal, Gov. Ritter Announces Veterans Green Jobs Will Provide San Luis Valley Energy Work (Sept. 22, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251566765040&pagename=GOVRWrapper>.

⁷⁴⁰ Press Release, Colo. Official State Web Portal, Gov. Ritter Announces New Green Jobs College Certificate Program (Sept. 30, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251566888023&pagename=GOVRWrapper>.

In mid-October 2009, Colorado's renewable energy potential grew with SunRun Corp's announcement that it would expand its solar leasing services to Colorado.⁷⁴¹ SunRun's new Colorado services were facilitated by the passage of S.B. 51, which "allows solar companies to build rooftop systems that homeowners can lease instead of own, dramatically reducing upfront costs for consumers."⁷⁴² Governor Ritter participated in an October 19th ceremony at the National Renewable Energy Laboratory celebrating "flipping the switch" on Siemens Energy's new 2.3 MW wind turbine.⁷⁴³ The project is part of the nation's largest public-private partnership for wind generation.⁷⁴⁴ The following day, Ritter emphasized the transmission challenges that impede advancing clean and renewable energy initiatives while addressing over 600 energy stakeholders at the 3rd Annual New Energy Economy Conference.⁷⁴⁵ He "called for more regional and state-to-state cooperation and to consider new approaches for how transmission is paid for and built."⁷⁴⁶

In late October 2009, Governor Ritter again joined Denver Mayor Hickenlooper in welcoming the latest member of the state's renewable energy economy, SMA Solar Technology.⁷⁴⁷ German based SMA built the largest solar inverter production facility in the United States and production began in 2010 creating an initial 300 new jobs.⁷⁴⁸ That same week, Ritter applauded the projected green jobs created by Xcel Energy's addition of "nearly 260 megawatts of on-site solar power generation to its renewable energy compliance plan."⁷⁴⁹

Several Colorado companies and utilities secured federal grant funding for renewable energy initiatives in late October 2009. Among those acknowledged by Governor Ritter's office were Fort Collins and Pueblo utilities' awards totaling over \$25

⁷⁴¹ Press Release, Colo. Official State Web Portal, Gov. Ritter Welcomes New Solar-Leasing Firm SunRun to Colorado (Oct. 13, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251567061398&pagename=GOVRWrapper>.

⁷⁴² *Id.*

⁷⁴³ Press Release, Colo. Official State Web Portal, Gov. Ritter Helps 'Flip Switch' on New Wind Research Project (Oct. 19, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251567446939&pagename=GOVRWrapper>.

⁷⁴⁴ *Id.*

⁷⁴⁵ Press Release, Colo. Official State Web Portal, Gov. Ritter Addresses 3rd Annual New Energy Economy Conference (Oct. 20, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251567453966&pagename=GOVRWrapper>.

⁷⁴⁶ *Id.*

⁷⁴⁷ Press Release, Colo. Official State Web Portal, Mayor Hickenlooper and Gov. Ritter Welcome Solar Inverter Manufacturer & 300 New Jobs to Denver (Oct. 26, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251567786094&pagename=GOVRWrapper>.

⁷⁴⁸ *Id.*

⁷⁴⁹ Press Release, Colo. Official State Web Portal, Gov. Ritter Applauds Xcel Energy's New Solar Plan as Job-Creator (Oct. 28, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251567861868&pagename=GOVRWrapper>.

million for “smart grid investments”⁷⁵⁰ and a \$4.78 million grant to Flint Geothermal for a geological mapping project aimed at identifying the state’s geothermal resources.⁷⁵¹

On December 2, 2009, Governor Ritter issued a one hundred page Renewable Energy Development Infrastructure (REDI) Report that mapped out how the state can reduce its carbon emissions by 20% over the next decade.⁷⁵² The Report promotes development of wind energy and transmission lines, increased production of natural gas and a reduced reliance on coal-fire power.⁷⁵³ The following week, Ritter awarded fourteen recipients NEED grants totaling \$1.5 Million.⁷⁵⁴ The NEED recipients’ “projects include converting a gas boiler system to a woody biomass heating system at Western State College, using solar power to offset irrigation costs for an Alamosa farm, and retrofitting an HVAC system with efficiencies at Buena Vista schools.”⁷⁵⁵

2010: Energy Efficiency, Green Jobs, Climate Change Agreements/MOUs, Transportation/Fuels, and Renewable Energy

In January 2010, Colorado was chosen with five other states to participate in the NGA Center for Best Practices policy academy.⁷⁵⁶ The academy will focus on practices for improving energy efficiency in existing buildings and reducing emissions.⁷⁵⁷ Also in January, Governor Ritter applauded six clean-tech companies on their ARRA grant awards totaling \$75.2 million in funding.⁷⁵⁸ The companies, which include solar panel

⁷⁵⁰ Press Release, Colo. Official State Web Portal, Gov. Ritter Congratulates Colorado Companies, Utilities for Landing Department of Energy Grants (Oct. 27, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=OIT-2%2FOIT2Layout&cid=1251567849263&pagename=OIT2Wrapper>.

⁷⁵¹ Press Release, Colo. Official State Web Portal, Gov. Ritter Congratulates Colorado Recipients for \$18M in Recovery Act Geothermal Grants (Oct. 29, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251567891656&pagename=GOVRWrapper>.

⁷⁵² Press Release, Colo. Official State Web Portal, New Report Maps Path Forward on State Electricity, Carbon Goals (Dec. 2, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251568650885&pagename=GOVRWrapper>. A copy of the REDI report can be accessed at [http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheadername1=Content-Disposition&blobheadername2=Content-Type&blobheadervalue1=inline;+filename%3D%22REDI+Report+\(Full+Version\).pdf%22&blobheadervalue2=application/pdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251746588129&ssbinary=true](http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheadername1=Content-Disposition&blobheadername2=Content-Type&blobheadervalue1=inline;+filename%3D%22REDI+Report+(Full+Version).pdf%22&blobheadervalue2=application/pdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251746588129&ssbinary=true).

⁷⁵³ *Id.*

⁷⁵⁴ Press Release, Colo. Official State Web Portal, Gov. Ritter Announces \$1.5M in New Energy Economic Development Grants (Dec. 11, 2009), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=OIT-2%2FOIT2Layout&cid=1251569195614&pagename=OIT2Wrapper>.

⁷⁵⁵ *Id.*

⁷⁵⁶ Press Release, Colo. Official State Web Portal, Colorado to Help Develop Energy-Efficiency Plans for Existing Buildings (Jan. 5, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251569557073&pagename=GOVRWrapper>.

⁷⁵⁷ *Id.*

⁷⁵⁸ Press Release, Colo. Official State Web Portal, Gov. Ritter Congratulates 6 Colo. Companies for Securing \$75M (Jan. 8, 2010),

and wind tower manufacturers, will use the funds to expand production and create jobs.⁷⁵⁹

ARRA also issued grants benefiting eighteen Colorado communities with the development of strategies for improving energy efficiency and creating jobs in the state's rural and agricultural regions.⁷⁶⁰ The funds totaled \$2.2 million and will fund Community Energy Coordinator positions throughout the state.⁷⁶¹

In early February 2010, Governor Ritter and state legislators announced legislation that will raise renewable energy requirements for large utilities from 20% by 2020 to 30% by 2020.⁷⁶² On February 4, 2010, Ritter testified before the state legislature's House Transportation and Energy Committee in favor of the Bill.⁷⁶³ The legislature approved the Bill on March 8, 2010.⁷⁶⁴ Ritter signed it into law on March 22, 2010.⁷⁶⁵

In March 2010, the U.S. EPA recognized the GEO with the 2010 ENERGY STAR® Partner of the Year Award.⁷⁶⁶ Governor Ritter was also recognized in March by the Vote Solar Initiative with a Solar Champion Award for his leadership in promoting the solar industry in Colorado.⁷⁶⁷

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251569857108&pagename=GOVRWrapper>.

⁷⁵⁹ *Id.*

⁷⁶⁰ Press Release, Colo. Official State Web Portal, Gov. Ritter Announces Recovery Act Energy Partnerships for Colorado Communities (Jan. 11, 2010),

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251569886968&pagename=GOVRWrapper>.

⁷⁶¹ *Id.*

⁷⁶² Press Release, Colo. Official State Web Portal, Gov. Ritter Announces Major Boost to Renewable Energy Standard (Feb. 4, 2010),

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251570814621&pagename=GOVRWrapper>.

⁷⁶³ Press Release, Colo. Official State Web Portal, Gov. Ritter Testifies in Favor of Clean Energy Bill (Feb. 4, 2010),

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251570848873&pagename=GOVRWrapper>.

⁷⁶⁴ Press Release, Colo. Official State Web Portal, Gov. Ritter Thanks Lawmakers for Boosting Renewable Energy Standard (Mar. 8, 2010),

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251572412416&pagename=GOVRWrapper>.

⁷⁶⁵ Press Release, Colo. Official State Web Portal, Gov. Ritter Signs Historic Renewable Energy Bill (Mar. 22, 2010),

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251573387639&pagename=GOVRWrapper>.

⁷⁶⁶ Press Release, Colo. Official State Web Portal, EPA Awards Colorado Governor's Energy Office with 2010 Energy Star Partner of the Year (Mar. 1, 2010),

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251572237305&pagename=GOVRWrapper>.

⁷⁶⁷ Press Release, Colo. Official State Web Portal, Gov. Ritter Named National 'Solar Champion' (Mar. 17, 2010),

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLLayout&cid=1251573226054&pagename=GOVRWrapper>.

On March 5, 2010, Governor Ritter joined lawmakers, Xcel Energy, and environmentalists in announcing an agreement on the proposed Colorado Clean Air-Clean Jobs Act.⁷⁶⁸ The Act will require Xcel to retire or retrofit its existing Front Range coal-fired power plants to run on cleaner natural gas or other cleaner energy by 2017.⁷⁶⁹ Colorado lawmakers passed the Act on March 31, 2010.⁷⁷⁰

In April 2010, Governor Ritter congratulated the University of Colorado-Boulder on its ARRA grant award totaling \$2.4 million for smart grid workforce training.⁷⁷¹ The funding will support the development of a graduate engineering program in smart grid technology.⁷⁷²

Governor Ritter signed S.B. 100⁷⁷³ in May 2010, allowing homeowners and businesses to cover the upfront costs of energy efficiency and renewable energy projects.⁷⁷⁴ The Bill also allows multiple counties to work together to secure financing for such projects. While local districts have had the ability to offer financing for energy improvement projects since Ritter signed H.B. 1350 in 2008, H.B. 1350⁷⁷⁵ prevented local districts from crossing county lines in financing such projects.⁷⁷⁶

In May 2010, the GEO announced that it would provide two grants totaling \$800,000 for increasing natural gas use as a transportation fuel for local governments, private companies, and the public.⁷⁷⁷ The grant will fund the construction of two separate natural gas fueling stations, as part of an increased effort to expand the number of compressed natural gas (CNG) fueling stations throughout Colorado.⁷⁷⁸

⁷⁶⁸ Press Release, Colo. Official State Web Portal, Gov. Ritter, Xcel & Coalition Announce Energy Plan (Mar. 5, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251572398732&pagename=GOVRWrapper>.

⁷⁶⁹ *Id.*

⁷⁷⁰ Press Release, Colo. Official State Web Portal, Gov. Ritter Congratulates Lawmakers, Coalition of Energy Companies and Environmentalists for Passing House Bill 1365 (Mar. 31, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251573545532&pagename=GOVRWrapper>.

⁷⁷¹ Press Release, Colo. Official State Web Portal, Gov. Ritter Congratulates CU-Boulder for Receiving Recovery Act Funding to Build Smart Grid Workforce (Apr. 8, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=OIT-2%2FOIT2Layout&cid=1251573703858&pagename=OIT2Wrapper>.

⁷⁷² *Id.*

⁷⁷³ S.B. 100, 65th General Assemb., 1st Reg. Sess. (Colo. 2005).

⁷⁷⁴ Press Release, Colo. Official State Web Portal, Governor Ritter Promotes Regional Energy Efficiency and Renewable Projects (May 5, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251574336551&pagename=GOVRWrapper>.

⁷⁷⁵ H.B. 1350, 66th General Assemb., 2nd Reg. Sess. (Colo. 2008).

⁷⁷⁶ *Id.*

⁷⁷⁷ Press Release, Colo. Official State Web Portal, Governor Ritter Awards \$800K to Boost Natural Gas as Transportation Fuel (May 17, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251574687588&pagename=GOVRWrapper>.

⁷⁷⁸ *Id.*

The GEO was awarded \$1 million through ARRA to expand its weatherization training program. The program is expected to train 460 workers, and the additional funds will assist in expanding 8 existing training centers and establishing 26 new centers.⁷⁷⁹

H.B. 1342⁷⁸⁰ was signed into law in June 2010. It allows communities to create community-owned “solar gardens,” and makes it possible for homeowners who do not otherwise have access to solar panels (such as mobile home owners) to own a portion of the solar gardens. Colorado expects to have 100,000 solar rooftops by 2020.⁷⁸¹ H.B. 1349⁷⁸² was also signed into law in June, establishing the Re-Energize Colorado Program to develop renewable energy projects in state parks. It mandates that state parks must offset 100% of the electricity they consume through renewable energy by 2020.⁷⁸³

In July 2010, the GEO announced that, in partnership with local utility companies, it would conduct a detailed study to evaluate the possibility of linking rooftop solar and small-scale hydropower energy sources into the grids of municipalities and rural electricity providers.⁷⁸⁴ Distributed generation of renewable energy can delay the need for new power plants and can reduce the stress on existing power plants during peak energy times.⁷⁸⁵

The GEO received a second weatherization grant in August 2010. The \$950,000 grant was distributed to three weatherization agencies and funded a pilot project aimed at installing in-home energy monitors to help residents track their energy usage.⁷⁸⁶ The project also included an educational component to help residents reduce their energy use through behavioral practices.⁷⁸⁷

⁷⁷⁹ Press Release, Colo. Official State Web Portal, Governor Ritter Applauds \$1M Recovery Act Grant for Weatherization Job Training (June 4, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251575065994&pagename=GOVRWrapper>.

⁷⁸⁰ H.B. 1342, 67th General Assemb., 2nd Reg. Sess. (Colo. 2010).

⁷⁸¹ Press Release, Colo. Official State Web Portal, Governor Ritter Cultivates New “Solar Gardens” in Colo. (June 5, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251575069016&pagename=GOVRWrapper>.

⁷⁸² H.B. 1349, 67th General Assemb., 2nd Reg. Sess. (Colo. 2010).

⁷⁸³ Press Release, Colo. Official State Web Portal, Governor Ritter Establishes Energy Program in Parks (June 8, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251575098186&pagename=GOVRWrapper>.

⁷⁸⁴ *A Blueprint for a New Energy Economy*, COLO. GOVERNOR’S ENERGY OFFICE, http://www.colorado.gov/governor/images/NEE_Blueprint.pdf (Sept. 13, 2013).

⁷⁸⁵ *Id.*

⁷⁸⁶ Press Release, Colo. Official State Web Portal, Governor Ritter Applauds \$950,000 Grant to Help Residents Reduce Energy Costs (Aug. 19, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251579868091&pagename=GOVRWrapper>.

⁷⁸⁷ *Id.*

An additional \$2.2 million in renewable energy and energy efficiency grants that were funded through ARRA were granted. Twenty-three grant projects were selected, including solar power installation for an affordable housing unit in Denver, energy efficiency upgrades for a non-profit preschool in Gilpin County and a small hydro-electric project in the town of Basalt.⁷⁸⁸

2011: Energy Efficiency

In September 2011, Colorado received funding from the DOE to help expand the Energy Performance Contracting program to the private sector. The funding helps to buy down the cost of investment grade energy audits helping to remove barriers to energy efficiency projects.⁷⁸⁹

2012: Renewable Energy and Green Technology

On May 24, 2012, Governor Hickenlooper signed into law H.B. 12-1315 to refocus the Colorado Energy Office on building the state's national reputation as a leader in clean energy and energy innovation.⁷⁹⁰ The Bill secured funding for five years and established the office's Innovative Energy Fund and the Clean & Renewable Energy Fund.⁷⁹¹

2013: Climate Change Adaptation, Energy Efficiency, and Renewable Energy

On May 28, 2013 H.B. 1293 was enacted directing the Governor to establish a climate change position within the executive branch to deal with climate change issues.⁷⁹² The person appointed to this position is required to develop climate actions plans that the state could use to address climate change and reduce its GHG emissions and must report to the General Assembly regarding how climate change affects the State.

⁷⁸⁸ Press Release, Colo. Official State Web Portal, Governor Ritter Announces \$2.2 M in New Energy Economic Grants (Aug. 26, 2010), <http://www.colorado.gov/cs/Satellite?c=Page&childpagemame=OIT-2%2FOIT2Layout&cid=1251579943568&pagemame=OIT2Wrapper>.

⁷⁸⁹ Press Release, Governor's Energy Office, Governor's Energy Office Selected for DOE Funding Award (Sept. 16, 2011), http://www.colorado.gov/cs/Satellite?c=Document_C&childpagemame=GovEnergyOffice%2FDocument_C%2FCBONAddLinkView&cid=1251605099110&pagemame=CBONWrapper.

⁷⁹⁰ Press Release, Governor's Energy Office, Gov. Hickenlooper Signs Colorado Energy Office Bill (May 24, 2012), <http://www.colorado.gov/cs/Satellite?c=Page&childpagemame=GovHickenlooper%2FCBONLayout&cid=1251623005369&pagemame=CBONWrapper>.

⁷⁹¹ *Id.*

⁷⁹² H.B. 1293, 70th General Assemb., 2nd Reg. Sess. (Colo. 2013), http://www.leg.state.co.us/clics/clics2013a/csl.nsf/fsbillcont3/FD5B92C7D67F90F787257AEE0058A740?open&file=1293_enr.pdf.

On the same day, Governor Hickenlooper signed S.B. 212 into law enabling cities and counties in Colorado to sell bonds and use the proceeds to provide loans to commercial building owners for energy efficiency retrofits.⁷⁹³

On June 5, 2013 Governor Hickenlooper signed the controversial S.B. 252 into law doubling the renewable energy target for rural electric cooperatives.⁷⁹⁴ Under the new law rural electric cooperatives now have to supply 20% of electricity from renewable sources by 2020. On June 5th Hickenlooper also signed S.B. 279 into law requiring that each school district, institute charter school, and each district charter school ensures that each project for a new or substantially renovated building or structure is submitted to or verified by the highest energy efficiency standards practicable.⁷⁹⁵

CONNECTICUT

1990: Climate Change Adaptation

In 1990, Connecticut passed legislation requiring specific actions aimed at reducing carbon dioxide emissions.⁷⁹⁶ The Act established a wide range of energy conservation measures, including revisions to the building code, aimed at increasing energy efficiency,⁷⁹⁷ and set goals for improving public transportation.⁷⁹⁸ It also authorized the Connecticut Department of Energy and Environmental Protection (DEEP) Commissioner to require trees or grass to be planted to offset carbon dioxide emissions associated with air discharge permits.⁷⁹⁹

1998: Renewable Portfolio Standard

In 1998, Connecticut passed a renewable portfolio standard (RPS) that requires each electricity supplier and electric-distribution company that provides standard service, transitional standard offer, or supplier-of-last-resort service, to generate 4% of its retail electricity sales using renewable energy by January 1, 2004 and increasing to 10% by

⁷⁹³ S.B. 212, 70th General Assemb., 2nd Reg. Sess. (Colo. 2013), http://www.leg.state.co.us/clics/clics2013a/csl.nsf/fsbillcont3/DC81393AA33AA4E387257AEE00570B0E?Open&file=212_enr.pdf.

⁷⁹⁴ S.B. 252, 70th General Assemb., 2nd Reg. Sess. (Colo. 2013), http://www.leg.state.co.us/clics/clics2013a/csl.nsf/fsbillcont3/D1B329AEB8681D4D87257B3900716761?open&file=252_enr.pdf.

⁷⁹⁵ S.B. 279, 70th General Assemb., 2nd Reg. Sess. (Colo. 2013), [http://www.leg.state.co.us/clics/clics2013a/csl.nsf/billcontainers/119A8136123F7F8187257AEE0057C13C/\\$FILE/279_enr.pdf](http://www.leg.state.co.us/clics/clics2013a/csl.nsf/billcontainers/119A8136123F7F8187257AEE0057C13C/$FILE/279_enr.pdf).

⁷⁹⁶ 1990 Conn. Acts 219 (Reg. Sess.); CONNECTICUT GENERAL ASSEMBLY, <http://search.cga.state.ct.us/dtsearch.asp?cmd=getdoc&DocId=10399&Index=I%3A%5Czindex%5C1990&HitCount=0&hits=&hc=0&req=&Item=970> (Sept. 14, 2013).

⁷⁹⁷ 1990 Conn. Acts 219 § 3 (Reg. Sess.).

⁷⁹⁸ *Id.* § 16.

⁷⁹⁹ *Id.* § 6.

January 1, 2010.⁸⁰⁰ Connecticut also has appliance energy efficiency standards in place for nine products.⁸⁰¹

2004: Greenhouse Gas Reduction and Renewable Energy

In 2004 Connecticut passed Connecticut Public Act 04-252, creating a voluntary short-term goal of reducing regional greenhouse gas (GHG) emissions to 1990 levels by 2010 and by 10% below 1990 levels by 2020.⁸⁰² Among its many provisions, the Act charged the Governor's Steering Committee on Climate Change with developing a climate change action plan.⁸⁰³ The plan was completed in February 2005 and contains fifty-five recommendations for drastically reducing the state's GHG emissions.⁸⁰⁴

In 2004, Governor Rowland issued Executive Order (EO) 32, requiring state government agencies and universities to purchase an increasing amount of their electricity generated from renewable resources.⁸⁰⁵ Specifically, the Order mandates that these entities obtain 20% of the electricity used in 2010, 50% of the electricity used in 2020, and 100% of the electricity used in 2050 from renewable resources.

2007: Climate Change Agreements and Renewable Energy

In May 2007, Connecticut and thirty other states created The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”⁸⁰⁶

In 2007, Connecticut enhanced its RPS by requiring 27% of the state's electricity to be generated from renewable resources by 2020.⁸⁰⁷

2008: Greenhouse Gas Reduction, Climate Change Adaption, Climate Change Agreements/Memoranda of Understanding, Green Jobs, and Market-Based Solutions

⁸⁰⁰ CONN. GEN. STAT. § 16-244c (2013).

⁸⁰¹ *Id.* § 16a-48.

⁸⁰² 2004 Conn. Acts 252 (Reg. Sess.); see *New England Governors/Eastern Canadian Premiers, Climate Change Action Plan 2001*, NEW ENGLAND GOVERNORS/EASTERN CANADIAN PREMIERS (Aug. 2001), <http://negc.org/uploads/file/Reports/ClimateChangeAP%5B1%5D.pdf>; <http://www.negc.org/documents/NEG-ECP%20CCAP.PDF>.

⁸⁰³ 2004 Conn. Acts 242 § 2.

⁸⁰⁴ *Connecticut Climate Change, 2005 Connecticut Climate Change Action Plan*, CONNECTICUT CLIMATE CHANGE (Jan. 2005), <http://www.ctclimatechange.com/StatActionPlan.html> (Mar. 5, 2006).

⁸⁰⁵ Conn. Exec. Order No. 32 (2008), <http://www.ctenergy.org/pdf/ExOrder32.pdf>.

⁸⁰⁶ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

⁸⁰⁷ 2007 Conn. Acts 242 (Reg. Sess.), <http://www.cga.ct.gov/2007/ACT/PA/2007PA-00242-R00HB-07432-PA.htm>.

Public Act 04-252 required the development of a GHG inventory detailing emissions in the state.⁸⁰⁸ By March 2008, Connecticut had completed an inventory for the base years 1990 and 2000.⁸⁰⁹ Connecticut created more GHG emission standards by amendments to Public Act 04-252.

Connecticut approved amendments to House Bill (H.B.) 5600 in June 2008.⁸¹⁰ H.B. 5600 declared that the state would reduce GHG emissions to a level 10% below its 1990 emissions level by 2020 and to a level 80% below its 2001 emissions level by 2050.⁸¹¹ Subsections (b) through (d) of this Bill lay out how these reduction levels will be achieved. Subsection (b) states that, beginning in 2010, the Governor's Steering Committee on Climate Change must submit biannual reports to the Secretary of the Office of Policy and Management and to the Commissioner of DEEP containing policy and regulatory suggestions to reduce GHG emissions.⁸¹² Subsection (c) of H.B. 5600 requires the Commissioner of DEEP to report to the joint standing committees of the General Assembly that are focused on environmental, energy and transportation issues. This report will include a schedule of proposed regulations, policies and strategies to reduce GHGs and will occur every three years beginning in 2012.⁸¹³ Finally, subsection (d) of H.B. 5600 anticipates a federally mandated GHG emissions cap-and-trade program. In the event that this sort of program is created, at least one year prior to its effective date, the Commissioner of DEEP and the Secretary of the Office of Policy and Management shall report to the aforementioned committees. This Report will explain the difference between the requirements for the federal program and the state's cap-and-trade program, as well as identify further regulations or legislation needed to achieve consistency with the federal program.⁸¹⁴

Connecticut convened the first-ever summit on climate change for the insurance industry in the United States.⁸¹⁵ Connecticut is also collaborating with Northeast States for Coordinated Air Use Management (NESCAUM) to develop a voluntary GHG emission registry,⁸¹⁶ and is an active participant in the Regional Greenhouse Gas Initiative (RGGI), thereby agreeing to cap and decrease carbon dioxide emissions from the electricity generators by 10% by 2018.⁸¹⁷

⁸⁰⁸ 2004 Conn. Acts 252 § 3 (Reg. Sess.).

⁸⁰⁹ *Connecticut Greenhouse Gas Emissions and Sinks Inventory: Summary*, U.S. ENVIRONMENTAL PROTECTION AGENCY, [http://web.archive.org/web/20060302195204/http://yosemite.epa.gov/OAR/globalwarming.nsf/UniqueKeyLookup/RAMR6JTQS6/\\$File/CTInventorySummary_10-28b.pdf](http://web.archive.org/web/20060302195204/http://yosemite.epa.gov/OAR/globalwarming.nsf/UniqueKeyLookup/RAMR6JTQS6/$File/CTInventorySummary_10-28b.pdf) (Sept. 14, 2013).

⁸¹⁰ H.B. 5600, 2008 Gen Assemb., Reg. Sess. (Conn. 2008).

⁸¹¹ 2008 Conn. Legis. Serv. 9 (West).

⁸¹² *Id.*

⁸¹³ *Id.*

⁸¹⁴ *Id.*

⁸¹⁵ *Connecticut Making Progress Reducing Greenhouse Gas Emissions, Says Governor's Steering Committee on Climate Change*, DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (Feb. 15, 2006), <http://www.ct.gov/deep/cwp/view.asp?A=2712&Q=324632>.

⁸¹⁶ *Climate and Energy*, NESCAUM, <http://www.nescaum.org/focus-areas/climate-and-energy> (Sept. 14, 2013).

⁸¹⁷ REGIONAL GREENHOUSE GAS INITIATIVE, <http://www.rggi.org/> (Sept. 14, 2013).

The Department of Environmental Protection (DEP) regulates carbon dioxide emissions via section 22a-174-31 of RGGI.⁸¹⁸ This regulation defines the sources subject to its terms as any unit that, after December 31, 2000, serves an electricity generator with a nameplate capacity equal to or greater than 25 megawatts of electrical output (MWe). The regulation also delineates the measuring and recording procedures of each source's carbon dioxide allowance (an authorization to emit one ton of carbon dioxide). The annual budget of all of the sources combined is 10,695,036 tons from 2009 through 2014, and the budget is to decrease annually thereafter, as defined in the regulation. Each source's allowances are sold by the Commissioner of the Department of Energy (DOE) or by a contractor or trustee selected by the Commissioner in consultation with the Department of Public Utility Control. Carbon dioxide offset allowances may be awarded if a source performs an enumerated project that offsets GHG emissions. Auction proceeds are allocated to the following: 7.5% to the DEP.; 23% to support development of renewable energy sources under the Connecticut Clean Energy Fund; and 69.5% to Connecticut Light & Power (receiving 75% of this 69.5%), United Illuminating (18.75% of the 69.5%), and Connecticut Municipal Electric Energy Cooperative (6.25% of the 69.5%).

Governor Rell further encouraged GHG emission reductions in her 2008 State of the State address.⁸¹⁹ She proposed a business tax credit of up to \$50,000 per business for businesses that offset their GHG emissions. She also stated that she would propose legislation that required buses to limit unnecessary idling. She encouraged residential benefits, such as the restoration of a sales tax exemption for ENERGY STAR® appliances and an enhancement of the Furnace and Boiler Replacement Rebate Program. She also proposed a “green collar” jobs initiative and that all agencies adopt climate change action plans.⁸²⁰

In July 2008, Governor Rell announced that she would require an amended provision to Connecticut's RGGI to provide relief for ratepayers if the allowances' costs exceed a certain level.⁸²¹ In August of 2008, she announced the Connecticut Solar Lease Program,⁸²² which is designed to lower the costs of leasing solar systems by using rebates and tax credits for households with an income less than or equal to 150% of the median income in their area.

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.⁸²³ Each of these allowances sold at a clearing price of \$3.07, raising

⁸¹⁸ CONN. AGENCIES REGS. § 22a-174-31 (2008).

⁸¹⁹ Governor M. Jodi Rell, Governor of Conn., State of the State Address (Feb. 6, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=405310>.

⁸²⁰ *Id.*

⁸²¹ Press Release, Governor of Conn., Governor Rell Will Require Relief for Ratepayers Under Greenhouse Gas Laws (July 6, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=418848>.

⁸²² Press Release, Governor of Conn., Governor Rell Announces New Program to Help Make Renewable Energy More Affordable (Aug. 8, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=420978>.

⁸²³ News Release, RGGI Inc., RGGI States' First CO₂ Auction Off to a Strong Start (Sept. 29, 2013), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

a total of \$38,575,783.⁸²⁴ These proceeds were used to fund renewable energy and energy efficiency technologies and programs in the states that offered allowances.⁸²⁵ The next week, Governor Rell announced a program in which owners of homes using oil or propane heat can pay \$75 for their furnaces cleaned, tuned and tested by approved contractors.⁸²⁶ The homeowners will then receive a heating system audit.

During Connecticut's "Innovation and Technology Week," Governor Rell announced the creation of Connecticut Clean Tech Fund.⁸²⁷ The Fund provides \$9 million to encourage state entrepreneurs to develop technologies that address global issues including climate change issues. On November 22, 2008, Rell announced a program to provide incentives for the state's biodiesel industry.⁸²⁸ Seven biodiesel distribution companies received \$350,000 in grants. Three days later Rell announced that 29 communities would receive state grants to assist them in preserving open spaces.⁸²⁹

On December 7, 2008, Governor Rell announced the recipients of the biofuel Production Facility Grant Program recipients.⁸³⁰ Biofuel producers received \$2.2 million in grants and universities received \$900,000 for research. On December 11, Rell announced her support of the EPA's decision not to pursue a proposed alteration to the Clean Air Act's New Source Review, which would result in increased emissions.⁸³¹ The change would have required modified power plants to install modern pollution control devices only if it was proven that the modification would not alter the plant's hourly emissions. Rell led other northeastern governors in opposing this lenient standard.⁸³²

Governor Rell nominated Representative DelGobbo to be a Commissioner of the Connecticut Department of Public Utility Control (DPUC) on December 16, 2008.⁸³³ DelGobbo assisted Rell in drafting her *Connecticut Energy Vision for a Cleaner, Greener State* in 2006 and also helped write the Energy Independence Act of 2005. Rell also nominated another clean energy advocate as Commissioner of the DPUC, Amalia Vazquez Bzdyra.⁸³⁴

⁸²⁴ *Id.* at 1.

⁸²⁵ *Id.*

⁸²⁶ Press Release, Governor of Conn., Governor Rell Announces New Energy Audit Program to for Homes with Oil and Propane Heat (Nov. 3, 2008),

<http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=426210>.

⁸²⁷ Press Release, Governor of Conn., Governor Rell Announces Launch of \$9 Million Connecticut Clean Tech Fund (Nov. 13, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=428002>.

⁸²⁸ Press Release, Governor of Conn., Governor Rell Announces Grants to Boost Connecticut's Biodiesel Industry (Nov. 22, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=428590>.

⁸²⁹ Press Release, Governor of Conn., Governor Rell Announces \$10.2 Million in Open Space Grants to 29 Communities (Nov. 25, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=428710>.

⁸³⁰ Press Release, Governor of Conn., Governor Rell Announces State Grants to Spur Biofuel Production, Research and Testing (Dec. 7, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=429538>.

⁸³¹ Press Release, Governor of Conn., Governor Rell: EPA Backs Off Power Plant Rule Change (Dec. 11, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=429734>.

⁸³² *Id.*

⁸³³ Press Release, Governor of Conn., Governor Rell Nominates State Representative DelGobbo to DPUC (Dec. 16, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=429942>.

⁸³⁴ Press Release, Governor of Conn., Governor Rell Appoints Amalia Vazquez Bzdyra to Department of Public Utility Control (Dec. 16, 2008), <http://www.ct.gov/governorrell/cwp/view.asp?A=3293&Q=429944>.

The second RGGI auction took place on December 17, 2008 and each of the ten states participated.⁸³⁵ All of the available 31,505,898 allowances were sold, 3.5 times lower than the demand of 108,709,000 allowances.⁸³⁶ The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.⁸³⁷

On December 31, 2008, RGGI participants and Pennsylvania (an observer) signed a letter of intent to reduce carbon emissions from the transportation sector.⁸³⁸ Specifically, these states intend to incorporate a Low Carbon Fuel Standard (LCFS), which requires reductions in the average lifecycle GHG per unit of useful energy in motor vehicles.⁸³⁹ The next day, the first compliance period in the RGGI program began. It required that the carbon dioxide emissions from regulated sources be equal to their allowances.⁸⁴⁰

2009: Transportation, Greenhouse Gas Reduction, Climate Change Adaptation, Climate Change Agreements, Energy Efficiency, Green Jobs, Green Technology, and American Recovery & Reinvestment Act (ARRA)

Governor Rell promulgated EO 22 on January 9, 2009.⁸⁴¹ This Order mandates the Department of Administrative Services (DAS) to reduce the State's fleet of cars and trucks by 20%, which would effectively reduce carbon emissions. The Order also requires that the EPA must label any car or truck purchased by the DAS as "best in its class" for gas mileage unless the DAS finds that purchasing this vehicle would be too expensive.⁸⁴²

Two weeks later, Governor Rell released proposed regulations for green building construction.⁸⁴³ These regulations correspond with the LEED rating system and would

⁸³⁵ Auction 2, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auctions-1-20?id=116 (Sept. 15, 2013).

⁸³⁶ Press Release, RGGI Inc., Post-Settlement Auction Report Shows Robust Market for RGGI Carbon Dioxide Emissions Allowances (Jan. 6, 2009), <http://www.rggi.org/docs/Auction%2020Post%20Settlement%20Auction%20Report.pdf>.

⁸³⁷ *Id.*

⁸³⁸ Letter from Gina McCarthy, Comm'r Conn. Dep't of Env'tl. Prot., John A. Hughes, Sec'y Del. Dep't of Natural Res. and Env'tl. Control, David P. Littell, Comm'r Me. Dep't of Env'tl. Prot., Shari T. Wilson, Sec'y Md. Dep't of the Env't, Laurie Burt, Comm'r Mass. Dep't of Env'tl. Prot., Philip Guidice, Comm'r Mass. Dep't of Energy Res., Pete Grannis, Comm'r N.Y. Dep't Env'tl. Conservation, Bob Callendar, Vice President for Programs N.Y. State Research and Dev. Auth., Thomas S. Burack, Comm'r N.H. Dep't of Env'tl. Serv., Mark N. Mauriello, Acting Comm'r N.J. Dep't of Env'tl. Prot., John Hanger, Acting Sec'y Pa. Dep't of Env'tl. Prot., W. Michael Sullivan, Dir. R.I. Dep't of Env'tl. Mgmt., Laura Q. Pelosi, Comm'r Vt. Dep't of Env'tl. Conservation (Dec. 31, 2008), http://web.archive.org/web/20110811022823/http://www.mass.gov/Eoea/docs/pr_lcfs_attach.pdf.

⁸³⁹ *Id.* at 1.

⁸⁴⁰ *Id.*

⁸⁴¹ Press Release, Governor of Conn., Governor Rell: Cut State Fleet by 20 Percent, Reduce Future Costs of State Cars (Jan. 9, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&QI=431520>.

⁸⁴² *Id.*

⁸⁴³ Press Release, Governor of Conn., Gov. Rell Submits Proposed Regulations for Construction of 'Green' Buildings (Jan. 24, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=432568>.

apply to new building construction costing \$5 million or more, and to building renovations costing \$2 million or more. The regulations would require buildings to be 21% more energy efficient than the current state building code, the use of low-flow fixtures, 10% of building materials be manufactured within 500 miles of the building's locations, and that new sites have access to public transportation.⁸⁴⁴

Governor Rell and eleven other governors signed a letter to President Obama, urging him to form a strong state/federal leader partnership in initiating a national climate change program on January 29, 2009.⁸⁴⁵ This letter was predicated upon the President's letter to the Governors' Global Climate Summit where he offered the governors a partnership with the White House in addressing climate change issues. These governors believe that their states have played a leading role in confronting these issues and stated, "It is crucial that we build on our states' momentum."⁸⁴⁶ The letter also contained suggestions for how a national climate change program should be implemented, including the suggestion that the national government recognize private investments that have been made in current cap-and-trade programs and preserve the clean energy plans that are funded by the proceeds from these programs.⁸⁴⁷

In February 2009, Governor Rell also issued EO 23, which established guidelines to train and develop Connecticut's green collar work force.⁸⁴⁸ The Order required the creation of the Green Collar Jobs Council, reallocated funds by the Secretary of the Office of Policy and Management to the 21st Century Green Jobs Training Initiative, expedited the creation of eight certificate credit programs and the training of 320 students within the next two years by the Community College System, allocated 25% of federal stimulus funds to shovel-ready green jobs, and give priority to green energy projects when awarding grants from the Small Manufacturers Competitiveness Fund.⁸⁴⁹ That same month, Rell also proposed to allocate \$7.5 million towards the creation of the Connecticut Conservation Corps, which is modeled after the Civilian Conservation Corps of the 1930's.⁸⁵⁰ This modern Corps would create jobs to work on environmental conservation projects.

⁸⁴⁴ *Id.*

⁸⁴⁵ Letter from Arnold Schwarzenegger, Governor of Cal., M. Jodi Rell, Governor of Conn., Charlie Crist, Governor of Fla., Kathleen Sebelius, Governor of Kan., Martin O'Malley, Governor of Md., Deval Patrick, Governor of Mass., John S. Corzine, Governor of N.J., Bill Richardson, Governor of N.M., David Paterson, Governor of N.Y., Theodore R. Kulongoski, Governor of Or., Christine O. Gregoire, Governor of Wash., Jim Doyle, Governor of Wis., to Barack Obama, President of the United States of America (Jan. 29, 2009), <http://web.archive.org/web/20090214185812/http://www.wisgov.state.wi.us/docview.asp?docid=15821>.

⁸⁴⁶ *Id.* at 1.

⁸⁴⁷ *Id.* at 2.

⁸⁴⁸ Press Release, Governor of Conn., Gov. Rell's Executive Order No. 23 Establishes Blueprint for Green Collar Job Creation (Feb. 3, 2009), <http://www.ct.gov/governorrell/cwp/browse.asp?A=3675&BMDRN=2000&BCOB=0&C=24396>.

⁸⁴⁹ *Id.*

⁸⁵⁰ Press Release, Governor of Conn., Governor Rell Promotes Plan for CT Conservation Corps to Put People to Work and Tackle Environmental Projects (Feb. 10, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=433784>.

On March 9, 2009, the EPA recognized Connecticut as one of the nation's top green power purchasers.⁸⁵¹

On March 12, 2009, the Department of Energy (DOE) announced that Connecticut was eligible for \$38,542,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).⁸⁵²

The third RGGI auction was held on March 18, 2009.⁸⁵³ The auction sold 31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse at future market prices for RGGI allowances.⁸⁵⁴

In a letter to U.S. Senate Majority Leader Harry Reid and the Senate Committee on Energy and Natural Resources, Governor Rell protested the proposed expansion of the Federal Energy Regulatory Commission's (FERC) electric transmission line.⁸⁵⁵ In support of her position, Rell stated that the power to site transmission lines is a "critical state right" and cited specific examples in which FERC decisions acted to the State's detriment.⁸⁵⁶ The next week, the State's DEP received \$1.73 million from ARRA to fund three initiatives: a program to retrofit emissions systems in state-owned diesel-fueled vehicles, a truck stop electrification project, and a project to replace a high-emission diesel engine with a low-emission engine.⁸⁵⁷ Rell stated that these projects were selected because they were deemed to benefit the greatest number of people. The DEP assisted in finding other sources of funding for the non-selected projects.⁸⁵⁸

Governor Rell announced that \$163 million more in stimulus funding would go towards public transportation, pedestrian, and bicycle projects.⁸⁵⁹ Projects include upgrading 106 buses to hybrid, repairing rail lines, and building bike paths. Connecticut also started the application process for energy stimulus funds.⁸⁶⁰ Specifically, \$39 million is available for projects that increase energy efficiency, enhance energy

⁸⁵¹ Press Release, Governor of Conn., EPA Recognizes Connecticut As One of Nation's Top Green Power Purchasers (Mar. 9, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=435526>.

⁸⁵² U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁸⁵³ Press Release, RGGI Inc., States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

⁸⁵⁴ *Id.*

⁸⁵⁵ Press Release, Governor of Conn., Governor Rell Fights Expanded Powers for Federal Energy Regulators (Mar. 19, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=436554>.

⁸⁵⁶ *Id.*

⁸⁵⁷ Press Release, Governor of Conn., Governor Rell: Connecticut Getting \$1.73 Million from Stimulus for Projects to Reduce Diesel Emissions (Mar. 22, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=437080>.

⁸⁵⁸ *Id.*

⁸⁵⁹ Press Release, Governor of Conn., Governor Rell: \$163 Million in Stimulus Funds to Bolster Bus, Rail and Greenway Projects (Mar. 23, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=437140>.

⁸⁶⁰ Press Release, Governor of Conn., Gov. Rell: State Makes Formal Applications for \$29 Million in Energy Stimulus Funds (Mar. 24, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=437204>.

independence, enhance electricity reliability, and reduce the impacts of energy production on the environment.

On April 1, 2009, Governor Rell announced that \$8.8 million from ARRA was available for projects that reduce diesel emissions.⁸⁶¹ Individual competitive grants worth up to \$2 million are available to municipalities. Two days later, Rell announced that \$24 million of ARRA funding was available for energy efficiency projects.⁸⁶² The funding has been allocated to local governments for projects including energy audit programs, retrofitting, and transportation programs that conserve energy, and create more energy efficient building codes. Rell also announced that \$14 million from the RGGI auction proceeds will be allocated to state and local governments and private and nonprofit agencies that promote energy conservation and clean energy programs.⁸⁶³

Governor Rell announced on April 23, 2009 that Connecticut was sending its energy plan to the DOE in order to receive the \$38 million available to it for energy programs.⁸⁶⁴ The plan's breakdown includes \$8 million for fuel cell initiatives and projects, \$5 million for geothermal system programs, and \$4 million for solar thermal system rebates. The next day, Rell announced that small cities and towns would receive a total of \$9.5 million for energy efficiency programs from the Energy Efficiency and Conservation Block Grants.⁸⁶⁵ She also announced that she and other New England governors wrote a letter to Congress in response to the draft American Clean Energy and Security Act of 2009, which would put a moratorium on state level cap-and-trade programs from 2012 to 2017 due to a proposed federal program.⁸⁶⁶ The governors urged Congress to continue to provide the states with funding for clean energy programs despite the moratorium.

Governor Rell also signed an agreement to support federal climate change legislation.⁸⁶⁷ The agreement contains two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this

⁸⁶¹ Press Release, Governor of Conn., Gov. Rell: \$8.8 Million in Competitive Grants Available to Reduce Diesel Emissions (Apr. 1, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=437798>.

⁸⁶² Press Release, Governor of Conn., Gov. Rell: \$24 Million in Stimulus Funds Approved for State, Local Energy Efficiency Projects (Apr. 3, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=438012>.

⁸⁶³ Press Release, Governor of Conn., Governor Rell: Energy Programs to Share in \$14 Million from Emission Allowance Auctions (Apr. 18, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=438712>.

⁸⁶⁴ Press Release, Governor of Conn., Gov. Rell: State Energy Plan Includes More Incentives for Fuel Cells, Geothermal Systems (Apr. 23, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=438960>.

⁸⁶⁵ Press Release, Governor of Conn., Governor Rell: Small Cities, Towns to Share \$9.5 Million In Stimulus Grants for Energy Efficiency Projects (Apr. 24, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=439002>.

⁸⁶⁶ Press Release, Governor of Conn., Governor Rell, Other RGGI Governors Ask Congress to Support Other Clean Energy Programs (Apr. 24, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=439024>.

⁸⁶⁷ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION, (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

legislation.⁸⁶⁸ Rell also announced Connecticut Clean Tech Fund's first investment of \$500,000 to Oil Purification Systems, which has developed a way to remove contaminants from engine oil, virtually eliminating the need for oil changes.⁸⁶⁹ The state also sought \$18.9 million in stimulus money for hybrid buses and bus fuel cells.⁸⁷⁰ The state also encouraged green collar training with a CONNSTEP-created two-day program to assist companies in implementing green initiatives.⁸⁷¹ Green collar jobs were also supported when Connecticut received \$15.4 million for its State Energy Plan under the ARRA.⁸⁷²

Prices fell at the fourth RGGI auction, which was held on June 17, 2009, to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.⁸⁷³ This auction produced \$4.7 million for the state.⁸⁷⁴ On June 23, 2009, representatives from RGGI, the Western Climate Initiative (WCI), and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking their regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.⁸⁷⁵

In July 2009, Governor Rell joined other New England governors in pursuing the development of high-speed rail in this region.⁸⁷⁶ Rell also vetoed S.B. 1068 which would have required the Department of Economic and Community Development to apply for federal funds to develop a clean jobs program on the grounds that this would be unnecessary and inconsistent with current state efforts concerning green jobs.⁸⁷⁷

Governor Rell then directed the state Department of Labor to work with seven other Northeastern states to request \$3.9 million in ARRA funding to go towards green

⁸⁶⁸ *Statement of Principles*, Governors' Energy and Climate Coalition (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

⁸⁶⁹ Press Release, Governor of Conn., Governor Rell Announces First Investment through Connecticut Clean Tech Fund (June 2, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=441016>.

⁸⁷⁰ Press Release, Governor of Conn., Gov. Rell: State Seeking \$18.9 Million in Federal Stimulus Funds in Hybrid Buses and Bus Fuel Cells (June 5, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=441218>.

⁸⁷¹ Press Release, Governor of Conn., Governor Rell Announces Training to Boost Green-Collar Workforce (June 8, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=441380>.

⁸⁷² Press Release, Governor of Conn., Governor Rell: \$15.4 Million in Stimulus Funds To Bolder Clean Energy Programs, Green Collar Jobs (June 24, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=442338>.

⁸⁷³ Auction 4, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auctions-1-20?id=114 (Sept. 15, 2013), <http://www.rggi.org/co2-auctions/results>.

⁸⁷⁴ Press Release, Gov. Rell Says Latest Regional Carbon Auction Brings \$4.7 Million to Connecticut (June 22, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=442132>.

⁸⁷⁵ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (JUNE 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

⁸⁷⁶ Press Release, Conn. Dep't of Transp., New England Governors Pursuing Joint Regional Vision for High Speed Rail (July 13, 2009), <http://www.ct.gov/dot/cwp/view.asp?A=1373&Q=443280>.

⁸⁷⁷ Press Release, Governor of Conn., Governor Rell Vetoes Seven Bills, Including "Calorie Bill" and Long Island Sound Commission (July 2, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=442944>.

jobs initiatives.⁸⁷⁸ Connecticut received \$9.5 million in federal stimulus funds to go towards energy efficiency projects in 143 small cities throughout the state.⁸⁷⁹

On August 31, 2009, the attorneys general of New Jersey, Arizona, Connecticut, Delaware, and California sent Senate leaders a letter urging them to pass climate change legislation that is stronger than the Waxman-Markey Bill.⁸⁸⁰ The attorneys general's suggestions to the senators included that the Bill include measures that give state enforcement authority, require public disclosure of all offset project documentation, and provide standing for citizen suits.

Governor Rell released the state's first comprehensive economic plan, which included investment tax credits for those that start up green technology companies.⁸⁸¹ Rell also announced that a new train station on the Metro-North line would be built in the state, increasing public transportation opportunities for residents.⁸⁸² Residents will also benefit from the \$13,550,000 the state received from the U.S. Department of Housing and Urban Development, with some of this money going towards energy efficiency projects in small cities.⁸⁸³ Connecticut also directed that \$4 million of its federal stimulus funds will go towards helping homeowners and businesses install solar-powered hot water heating systems.⁸⁸⁴

The regional consortium of eight Northeast states was awarded \$3.9 million in federal stimulus funds to develop a "Green Job Bank," a comprehensive system for careers in emerging environmental technologies, training and educational

⁸⁷⁸ Press Release, Governor of Conn., Governor Rell: Stimulus Funds to Help Region Identify Green Jobs, Training Opportunities (Aug. 18, 2009),

<http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=445260>.

⁸⁷⁹ Press Release, Governor of Conn., Governor Rell: State Getting \$9.5 Million in Stimulus Grants for Energy Efficiency Projects (Sept. 14, 2009),

<http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=446860>.

⁸⁸⁰ Letter from Edmund G. Brown Jr., Att'y Gen. Cal., Terry Goddard, Att'y Gen. Ariz., Richard Blumenthal, Att'y Gen. Conn., Richard Gebelien, Att'y Gen. Del., Anne Milgram, Att'y Gen. N.J., to Harry Reid, U.S. Senate Majority Leader, Mitch McConnell, U.S. Senate Minority Leader, Barbara Boxer, Chair, Comm. on Env't and Public Works, U.S. Senate, James Inhofe, Ranking Member, Comm. on Env't and Public Works, U.S. Senate (Aug. 31, 2009),

http://ag.ca.gov/globalwarming/pdf/letter_to_Senate_re_Climate_Legislation.pdf. The Waxman-Markey Bill died in the Senate; see *H.R. 2454 (111th): American Clean Energy and Security Act of 2009*, GOVTRACK.US, <http://www.govtrack.us/congress/bills/111/hr2454> (Sept. 19, 2013).

⁸⁸¹ Press Release, Governor of Conn., Governor Rell Announces State's First-Ever Comprehensive Economic Strategic Plan (Sept. 16, 2009),

<http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=446946>.

⁸⁸² Press Release, Governor of Conn., Governor Rell Announces \$103 Million for New Metro-North Train Station in West Haven (Sept. 17, 2009),

<http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=447098>.

⁸⁸³ Press Release, Governor of Conn., Governor Rell Announces 29 Towns Awarded Small City Funding (Oct. 13, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=448724>.

⁸⁸⁴ Press Release, Governor of Conn., Governor Rell: \$4 Million in Stimulus Funds to Help Homeowners 'Go Solar' with Hot Water Systems (Oct. 14, 2009),

<http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=448850>.

opportunities.⁸⁸⁵ This strongly complements Governor Rell's EO No. 23, which was issued in February 2009, establishing a comprehensive blueprint for green collar job creation within the state.⁸⁸⁶ Efforts will be directed toward introducing an electronic "Green Job Bank" that would include current green employment listings.⁸⁸⁷

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.⁸⁸⁸ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.⁸⁸⁹ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities."⁸⁹⁰ North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.⁸⁹¹

2010: Climate Change Agreements, Climate Change Adaptation, Green Building, Green Jobs, Green Technology, Market-Based Solutions, Renewable Energy, American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

Connecticut and the ten other RGGI states (Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey⁸⁹², New York, Pennsylvania (observer state), Rhode Island, and Vermont) signed a memorandum of understanding (MOU) agreeing to analyze low-carbon fuel supply options and determine the feasibility of achieving carbon reduction goals.⁸⁹³ The MOU included a 10% reduction in carbon intensity of fuels, and a framework for a regional LCFS ensuring the sustainable use of renewable fuels in the region.⁸⁹⁴ The initiative will promote fuels that reduce GHG emissions, reduce exposure to gasoline price spikes, foster energy independence and create new jobs through clean energy technologies.⁸⁹⁵

⁸⁸⁵ Press Release, Governor of Conn., Governor Rell: State Awarded Stimulus Funds To Identify Green Jobs, Training Opportunities (Nov. 18, 2009), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=451004>.

⁸⁸⁶ *Id.*

⁸⁸⁷ *Id.*

⁸⁸⁸ See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

⁸⁸⁹ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

⁸⁹⁰ NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

⁸⁹¹ See *id.*

⁸⁹² Governor Christie pulled New Jersey out of RGGI on May 26, 2011. See Christopher Baxter, *Gov. Christie Announces N.J. Pulling out of Regional Environmental Initiative*, THE STAR LEDGER (May 26, 2011), http://www.nj.com/politics/index.ssf/2011/05/gov_christie_to_announce_nj_pu.html.

⁸⁹³ Press Release, Governor of Conn., Governor Rell: Connecticut Joins 10 Other States to Develop New Fuel Options for Future (Jan. 3, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=453118>.

⁸⁹⁴ *Id.*

⁸⁹⁵ *Id.*

The states planned to develop a framework detailing a standard for the amount of carbon in motor fuels that could be extended to cover fuels used to heat homes and buildings.⁸⁹⁶

In January 2010, Governor Rell announced that the state is dedicating \$4.5 million in federal stimulus funds to help homeowners, businesses, and nonprofit groups pay for the installation of geothermal heat pump systems.⁸⁹⁷ This will lower fuel and electricity bills and promote the use of alternative energy, since geothermal technology harnesses the Earth's natural thermal energy for heating and cooling.⁸⁹⁸ The Geothermal Heat Pump Incentive Program is financed through ARRA and will be administered by the Connecticut Clean Energy Fund (CCEF). CCEF officials say there is enough funding available to support the installation of about 300 geothermal heat pump systems per year until April 2012 when the federal program ends, and systems can supply up to 100% of a customer's peak heating and cooling load.⁸⁹⁹

Beginning January 25, 2010, Connecticut consumers could receive rebates of \$50 to \$100 for buying ENERGY STAR® appliances and \$500 for purchasing ENERGY STAR® central air systems under a \$3.4 million stimulus-funded program.⁹⁰⁰ The program will provide rebates for more than 42,000 appliance purchases, covering ENERGY STAR® qualified refrigerators, freezers, washers, air conditioners and central air systems.⁹⁰¹ In April, the program extended to include water heaters. Rebates range from \$100 to \$400 for the following qualifying systems: Electric Heat Pump, Gas Storage, Gas Tankless, Solar, Electric Backup Solar, and Gas Backup following ENERGY STAR® qualified water heaters.⁹⁰²

Governor Rell celebrated the groundbreaking of the \$198 million Gateway Community College campus project in downtown New Haven.⁹⁰³ The new campus is the state's first gold-certified LEED⁹⁰⁴ public building. As a LEED project, the new campus utilizes renewable and alternative energy technologies, including solar, hot water, and photovoltaics, reducing carbon dioxide emissions and the demand on the existing energy utilities.⁹⁰⁵

⁸⁹⁶ *Id.*

⁸⁹⁷ Press Release, Governor of Conn., Gov. Rell: \$4.5 Million in Stimulus Funds to Boost Use of Geothermal Heating/Cooling Systems (Jan. 4, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3675&Q=453170>.

⁸⁹⁸ *Id.*

⁸⁹⁹ *Id.*

⁹⁰⁰ Press Release, Governor of Conn., Gov. Rell: \$3.4 Million in Stimulus Funds to be Used for Appliance Rebate Program (Jan. 21, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=454360>.

⁹⁰¹ *Id.*

⁹⁰² Press Release, Governor of Conn., Governor Rell: Appliance Rebate Program Will Expand to Include Water Heaters (Apr. 11, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=458686>.

⁹⁰³ Press Release, Governor of Conn., Governor Rell Breaks Ground On New Gateway Community College Campus (Jan. 26, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=454530>.

⁹⁰⁴ LEED stands for Leadership in Energy and Environmental Design, and is a voluntary program that establishes standards for producing energy efficient buildings. *Id.*

⁹⁰⁵ *Id.*

One hundred and twenty-one small and mid-sized municipalities shared \$6.7 million in federal stimulus funds to help pay for energy efficiency projects that lower costs to local taxpayers starting in February 2010.⁹⁰⁶ Projects included new windows, solar panels and other items to be purchased and installed, helping put money back into local economies. The funding helped to pay for energy audits, retrofits, financial incentive programs, and renewable technologies for municipal buildings.⁹⁰⁷

In February 2010, Governor Rell announced that thirteen municipalities and non-profit organizations would receive America the Beautiful grants to show their commitment to urban forestry. These grants cover a range of urban forestry activities, including the development of a municipal forest plan, the inventory and maintenance of significant trees, and the planting of new trees.⁹⁰⁸

The DEP launched a state-of-the-art online electronic reporting system for power plants, factories and other facilities for their emissions data.⁹⁰⁹ The new Emissions Inventory Tracking (EMIT) system allows for easier reporting and implementation on the administrative level as certain facilities are required to report air emissions data for pollutants such as oxides of nitrogen, volatile organic compounds, sulfur dioxide, particulate matter, carbon monoxide, and lead under the Clean Air Act.⁹¹⁰

Connecticut towns received \$20 million in Qualified Energy Conservation Bonds (QECBs), which is funded by ARRA, for energy projects.⁹¹¹ These bonds are a tax credit bond designed to go directly to governments, and up to 30% of the total may be issued as private activity bonds. The principal, but not interest, will be repaid. Instead of interest, holders of QECBs will receive federal tax credits, which then can be applied against their tax liability. Of the total \$20 million, about \$6.3 million goes directly to the state's largest municipalities: Bridgeport, Hartford, New Haven, Stamford, and Waterbury.⁹¹² Approximately \$16 million will be dedicated to alternative and renewable energy projects on state property.⁹¹³

Connecticut announced on May 28, 2010 that \$1.2 million in ARRA funds support six regional energy projects, including projects like single stream recycling and the creation of regional energy managers, that help municipalities reduce energy costs,

⁹⁰⁶ Press Release, Governor of Conn., Governor Rell: \$6.7 Million in Stimulus Funds Headed to Towns for Energy Efficient Projects (Feb. 12, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=455678>.

⁹⁰⁷ *Id.*

⁹⁰⁸ Press Release, Governor of Conn., Governor Rell Announces grants for Urban Forestry Projects (Feb. 13, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=455682>.

⁹⁰⁹ Press Release, Governor of Conn., Governor Rell Announces New, Online System for Reporting, Monitoring Vital Clean Air Data (Feb. 14, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=455684>.

⁹¹⁰ *Id.*

⁹¹¹ Press Release, Governor of Conn., Governor Rell: \$36 Million in Stimulus Bonds to Help Lower Financing Costs of Green Energy Projects (Mar. 23, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=457552>.

⁹¹² *Id.*

⁹¹³ *Id.*

promote use of alternative and renewable fuel sources, and provide education and job training in energy technology.⁹¹⁴

In June 2010, Governor Rell signed H.B. 5164, an Act Implementing the Recommendation of the Program Review and Investigations Committee Concerning the Alignment of Postsecondary Education and Employment in the Green Industry,⁹¹⁵ into law. It requires the state's public colleges, universities, community-technical colleges and vocational-technical high schools to coordinate their development of a "green technology" curriculum.⁹¹⁶ As of October 1, 2010, higher education institutions located in Connecticut are required to publicize the green jobs training they offer and to work together to develop "career ladders" for the green technology industry.⁹¹⁷ The state Departments of Education and Higher Education are required to develop a complete list of all of the "green tech" courses and programs available at public colleges, universities, community colleges and vo-tech schools. Those schools must collaborate with employers to find out what additional training programs they need to prepare future employees.⁹¹⁸

A partnership led by the CCEF received \$4.17 million in federal stimulus funds for energy efficiency, conservation and renewable energy programs in Connecticut.⁹¹⁹ The project will save nearly \$150 million in energy costs while leveraging \$4.70 for every federal dollar invested. CCEF's partners include AFC First Financial, Clean Water Fund, Connecticut Energy Efficiency Fund, Earth Markets, Efficiency 2.0, MIT Field Intelligence Lab/Empower Devices, SmartPower, and the Student Conservation Association.⁹²⁰ The project has been implemented by 14 rural, suburban, and low-income communities throughout Connecticut with the goal of having at least 10% of households set specific, measurable goals of 20% energy savings and clean energy usage, with the potential to reduce the production of nearly 250,000 metric tons of carbon dioxide emissions. Examples of project initiatives include an "innovative online platform involving energy advisors and leader boards for communities, an on-the-ground clean energy community corps, financing to assist homeowners with energy efficiency measures and clean energy installations, performance-based incentives to reward communities for meeting targets, and a monitoring program to support both continuous program improvement and investment impact analysis."⁹²¹

⁹¹⁴ Press Release, Governor of Conn., Governor Rell: Regional Energy Projects Will Share \$1.2 Million in Federal Stimulus Block Grants (May 28, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=460898>.

⁹¹⁵ 2010 Conn. Legis. Serv. 10-156 (West).

⁹¹⁶ Press Release, Governor of Conn., Governor Rell Signs Green Technology Education Bill (June 8, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=461276>.

⁹¹⁷ *Id.*

⁹¹⁸ *Id.*

⁹¹⁹ Press Release, Governor of Conn., Governor Rell: Connecticut Partnership to Receive Nearly \$4.2 Million in Stimulus for Energy Programs (June 15, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=461662>.

⁹²⁰ *Id.*

⁹²¹ *Id.*

At the end of June 2010, Connecticut joined with Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont and the District of Columbia to work together on regional transportation initiatives that will ultimately reduce harmful GHG emissions and improve air quality.⁹²² Connecticut signed a declaration of intent with its regional partners to create the Transportation and Climate Initiative (TCI). It is estimated that about 40% of GHG emissions in Connecticut are caused by transportation factors.⁹²³

Governor Rell announced in July 2010 that \$11.25 million would go towards preserving open space in Connecticut, making progress towards the state goal of protecting 21% of Connecticut's land, or 673,210 acres, by the year 2023.⁹²⁴ The Recreation and Natural Heritage Trust will receive \$6.25 million, and \$5 million to help cities, towns and land conservation organizations with the purchase and preservation of local open space under Connecticut's Open Space and Watershed Land Acquisition Grant Program.⁹²⁵ Additionally, a portion of the available grant funding is dedicated to the Urban Green Community Garden Initiative, which targets distressed communities to reclaim existing urban open space into usable public green areas and community gardens.⁹²⁶

Public electric vehicle (EV) charging stations, donated by Northeast Utilities and Enfield-based Control Modules Industries, were installed at the State Capitol Complex.⁹²⁷ Governor Rell and her EV Infrastructure Council set a goal of 25,000 plug-in vehicles on state roads by 2020.⁹²⁸ Other recommendations in the final EV Council report include: incentive programs for consumers; auto dealers and manufacturers and EV research and development (R&D); tax incentives for individuals and businesses for EV purchases; allowing EVs in High Occupancy Vehicle Lanes; installing charging stations at state buildings and attractions, such as state parks, museums, rest stops, train stations, libraries and public parking lots; clean vehicle parking incentives; reviewing and targeting state lending programs to support existing and start-up EV businesses; aggressively recruiting California-based EV companies to make Connecticut their East Coast affiliate; offering grants and loans for alternative vehicle and fueling infrastructure; offering tax exemptions and tax credits for EV components manufacturers; and pursuing federal grants to support EV infrastructure and research. Chaired by the Department of Public Utility Commissioner DelGobbo, the Council is comprised of representatives from the Departments of Public Utility Control, Economic and Community Development,

⁹²² Press release, Governor of Conn., Governor Rell: Connecticut Joins Multi-State Effort to Improve Air Quality and Create "Green Jobs" (June 27, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=462260>.

⁹²³ *Id.*

⁹²⁴ Press Release, Governor of Conn., Governor Rell: State to Dedicate \$11.25M To Preserve Open Space (July 7, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=462828>.

⁹²⁵ *Id.*

⁹²⁶ *Id.*

⁹²⁷ Press Release, Governor of Conn., Governor Rell: Electric Vehicle Charging Station To Be Installed at State Capitol Complex (Aug. 17, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=464722>.

⁹²⁸ Press Release, Governor of Conn., Electric Vehicle Council Sets Goal For 25,000 EVs on State Roads by 2020 (Sept. 2, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=465410>.

Environmental Protection, Motor Vehicles, Administrative Services, Transportation, Utilities, environmental groups, and the business community.⁹²⁹

In September 2010, Governor Rell welcomed the all-electric Nissan LEAF by signing a collaborative agreement to help advance EVs in the state. The LEAF is powered by a lithium-ion battery pack instead of an internal combustion engine. There are no tailpipe emissions, and the vehicle can get up to 100 miles on a single battery charge on less than the cost of gasoline.⁹³⁰

2011: Climate Change Agreements, Transportation/Fuels, and Renewable Energy

In February 2011, Governor Malloy announced the launch of a new pilot program, Operation Fuel, which will help women and minority-owned businesses lower their energy consumption and costs.⁹³¹ Eligible businesses will receive grants to help pay their energy bills, and the program will also provide seminars on energy conservation.⁹³²

In May 2011, Governor Malloy criticized New Jersey Governor Christie for pulling New Jersey out of RGGI.⁹³³ In doing so, Malloy reaffirmed Connecticut's commitment to RGGI and outlined the millions generated for energy efficiency and renewable energy through the program.⁹³⁴

Connecticut was one of nine states to join the Northeast EV Network in October 2011. The Network helps the states increase their economic growth, and reduce their GHG emissions. Moreover, it focuses on building infrastructure for clean vehicles and fuels, and attracts public and private investment to support the infrastructure development.⁹³⁵ Participating states include Connecticut, Delaware, Washington, D.C., Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.⁹³⁶ The Network is part of the Transportation and Climate Initiative (TCI), a regional collaboration between twelve Northeast and Mid-Atlantic states that aims to reduce GHG emissions from the transportation sector and develop a clean energy

⁹²⁹ *Id.*

⁹³⁰ Press Release, Governor of Conn., Gov. Rell, CL&P Welcome Nissan LEAF All-electric Car to Connecticut (Sept. 28, 2010), <http://www.ct.gov/governorrell/cwp/view.asp?A=3872&Q=466382>.

⁹³¹ Press Release, Governor of Conn., Tuesday: Gov. Malloy Joins Energy Providers, Operation Fuel to Announce Innovative Program to Help Minority- and Women-Owned Small Businesses (Feb. 14, 2011), <http://www.governor.ct.gov/malloy/cwp/view.asp?A=4010&Q=473814>.

⁹³² Press Release, Governor of Conn., Gov. Malloy Joins Operation Fuel and Energy Providers to Announce Innovative New Program Aimed at Reducing Small Business Energy Costs (Feb. 15, 2011), <http://www.ct.gov/malloy/cwp/view.asp?A=4010&Q=473950>.

⁹³³ Press Release, Governor of Conn., Gov. Malloy Statement on Gov. Christie Pulling out of the Regional Greenhouse Gas Initiative (May 26, 2011), <http://www.governor.ct.gov/malloy/cwp/view.asp?A=4010&Q=480130>.

⁹³⁴ *Id.*

⁹³⁵ Northeast Electric Vehicle Network, TRANSPORTATION & CLIMATE INITIATIVE, <http://www.transportationandclimate.org/content/northeast-electric-vehicle-network> (Sept. 20, 2013).

⁹³⁶ *Northeast States Form Regional Electric Vehicle Network*, GEORGETOWN CLIMATE CENTER (Oct. 19, 2011) <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

economy. The TCI was launched in June 2010 and is facilitated by the Georgetown Climate Center.⁹³⁷

In December 2011, following a competitive bidding process, Connecticut selected two commercial renewable energy projects for power purchase agreements, giving the projects the right to enter into 20-year power purchase agreements with the state's two electric distribution companies.⁹³⁸

2012: Climate Change Agreements, Renewable Energy, Renewable Portfolio Standard, and Market-Based Solutions

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of \$1.93.⁹³⁹ The auction generated \$41.6 million in proceeds, which the RGGI participating states invested in consumer-oriented energy efficiency initiatives.⁹⁴⁰

On April 4, 2012, the Public Utilities Regulatory Authority approved the ZREC/LREC (zero-emissions/low-emissions) renewable energy program.⁹⁴¹ Through the program, Connecticut's largest electric utilities accept bids from renewable energy developers.⁹⁴² The winning bidders receive 15-year contracts for payments in the form of renewable energy credits.⁹⁴³ Also in April, the state announced the installation of a new monitoring system in state buildings that allows for detection of energy inefficiencies in building operations.⁹⁴⁴

On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.⁹⁴⁵ The auction of the 20.9 million allowances generated \$40.4 million in funds, and represents 57% of the allowances offered for sale by all nine participating states.⁹⁴⁶

⁹³⁷ *Transportation and Climate Initiative*, GEORGETOWN CLIMATE CENTER, <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative> (Sept. 15, 2013).

⁹³⁸ Press Release, Governor of Conn., Governor Malloy Announces Procurement of Cheaper and Cleaner Energy for Connecticut (Dec. 23, 2011), <http://www.governor.ct.gov/malloy/cwp/view.asp?A=4010&Q=493298>.

⁹³⁹ Press Release, RGGI Inc., RGGI Auction Sells 21.5 Million CO₂ Allowances (Mar. 16, 2012), http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

⁹⁴⁰ *Id.*

⁹⁴¹ Press Release, Conn. Dep't of Energy and Env'tl. Prot., PURA Approves Renewable Energy Program That Will Drive Economic Activity in the State (Apr. 4, 2012), <http://www.ct.gov/deep/cwp/view.asp?A=4173&Q=517316>.

⁹⁴² *Id.*

⁹⁴³ *Id.*

⁹⁴⁴ Press Release, Conn. Dep't of Energy and Env'tl. Prot., Energy Monitoring System to Reduce Energy Use at State Buildings (Apr. 5, 2012), <http://www.ct.gov/deep/cwp/view.asp?A=4173&Q=517318>.

⁹⁴⁵ Press Release, RGGI Inc., RGGI Auction Sells 20.9 Million CO₂ Allowances (June 8, 2012), http://www.rggi.org/docs/PR060812_Auction16.pdf.

⁹⁴⁶ *Id.*

On June 14, 2012, Governor Malloy reaffirmed Connecticut's commitment to energy efficiency at the annual summit meeting of the Northeast Energy Efficiency Partnership.⁹⁴⁷ Malloy highlighted the release of Connecticut's Integrated Resource Plan and the passage of legislation increasing funding for efficiency projects.⁹⁴⁸

On September 7, 2012, the RGGI states announced the results of its seventeenth quarterly auction for carbon dioxide allowances.⁹⁴⁹ The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, which represents 65% of the allowances offered for sale by all nine states.⁹⁵⁰

On October 5, 2012, Governor Malloy unveiled Connecticut's draft Comprehensive Energy Strategy.⁹⁵¹ The plan calls for increasing natural gas availability and reexamining the state's RPS with the intention of raising the standard and increasing the mix of renewable options.⁹⁵² The final version of the plan was released on February 19, 2013 and includes goals related to energy use in transportation and investing in microgrids.⁹⁵³

On November 19, 2012, RGGI reported that RGGI investments avoided 12 million tons of carbon dioxide emissions from 2009 to 2011.⁹⁵⁴ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement, and climate change adaptation programs.⁹⁵⁵

2013: Climate Change Agreements and Transportation/Fuels

On February 7, 2013, RGGI announced significant program improvements implemented in the Updated Model Rule after a two-year comprehensive program review.⁹⁵⁶ Improvements include a reduction of the 2014 regional cap by 45% from 165 million to 91 million tons, and a cap further declining by 2.5% each year from 2015 to 2020; additional adjustments to the cap from 2014 to 2020 in order to account for

⁹⁴⁷ Press Release, Governor of Conn., Gov. Malloy: Connecticut Can Lead the Nation in Energy Efficiency (June 14, 2012), <http://www.governor.ct.gov/malloy/cwp/view.asp?A=4010&Q=505996>.

⁹⁴⁸ *Id.*

⁹⁴⁹ Press Release, RGGI Inc., RGGI Auction Sells 24.5 Million CO₂ Allowances (Sept. 7, 2012), http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

⁹⁵⁰ *Id.*

⁹⁵¹ Press Release, Governor of Conn., Gov. Malloy: Comprehensive Energy Strategy Will Create Jobs, Give Consumers More Choice & Protect the Environment (Oct. 5, 2012), <http://www.governor.ct.gov/malloy/cwp/view.asp?A=4010&Q=512072>.

⁹⁵² *Id.*

⁹⁵³ Press Release, Governor of Conn., Gov. Malloy: Comprehensive Energy Strategy Will Bring Cheaper, Cleaner, More Reliable Power to Connecticut (Feb. 19, 2013), <http://www.governor.ct.gov/malloy/cwp/view.asp?A=4010&Q=519238>.

⁹⁵⁴ Press Release, RGGI, Inc., RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings (Nov. 19, 2012), <http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

⁹⁵⁵ *Id.*

⁹⁵⁶ Press Release, RGGI, Inc., RGGI States Propose Lowering Regional CO₂ Emissions Cap 45%, Implementing a More Flexible Cost-Control Mechanism (Feb. 7, 2013), http://www.rggi.org/docs/PressReleases/PR130207_ModelRule.pdf.

privately banked allowances, which will be deemed “old” allowances starting in 2014; the creation of a cost containment reserve of allowances which may be accessed only when the price of allowances in a given year exceeds a predetermined level; updates to the offsets program, including a protocol for forestry offsets; the decision not to reoffer unsold allowances from 2012 and 2013; the requirement that regulated entities obtain allowances for at least 50% of their emissions in each of the first two years of the three year compliance period; and developing tools to track electricity imported into participating states from non-participating states in order to address those emissions.⁹⁵⁷ Each RGGI state will implement these measures in their respective statutory regimes.⁹⁵⁸

On April 16, 2013, an independent market monitor of RGGI confirmed that there continues to be no material concerns regarding the auction process or in the competitiveness of the secondary market for RGGI allowances.⁹⁵⁹ During 2012, the average auction-clearing price was \$1.93 for carbon dioxide allowances.⁹⁶⁰

Connecticut amended their Low Emission Vehicles II Program, which was effective on August 1, 2013, that incorporates California’s GHG emission standards for motor vehicles.⁹⁶¹ California’s standards require that tailpipe GHG emissions from new vehicles be reduced by 22% by the 2012 model year and 30% by the 2016 model year.⁹⁶²

DELAWARE

2000: Climate Change Agreements

Delaware developed a Climate Change Action Plan in 2000 with funding from the Delaware State Energy Office and the United States Environmental Protection Agency’s State and Local Climate Change Program.⁹⁶³ The Center for Energy and Environmental Policy (CEEP) at the University of Delaware researched and wrote the Action Plan with input from the Delaware Climate Change Consortium, a group comprised of representatives from government, environment, business, labor, and community organizations.⁹⁶⁴ The CEEP had previously completed an inventory of Delaware’s greenhouse gas (GHG) emissions and sinks for the 1990 base year.⁹⁶⁵ This inventory

⁹⁵⁷ *Id.*

⁹⁵⁸ *Id.*

⁹⁵⁹ Press Release, RGGI, Inc., 2012 Annual Market Monitor Report: In Fifth Year, RGGI CO₂ Allowance Market Remains Competitive (Apr. 16, 2013), http://www.rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

⁹⁶⁰ *Id.*

⁹⁶¹ CONN. AGENCIES REGS. § 22a-174-36b (2013).

⁹⁶² CAL. CODE REGS. tit. 13, § 1961.1 (2005).

⁹⁶³ *Delaware Climate Change Action Plan*, CENTER FOR ENERGY AND ENVIRONMENTAL POLICY (Jan. 2000), <http://web.archive.org/web/20120320221201/http://www.ceep.udel.edu/publications/globalenvironments/reports/deccap/fullreport.pdf>.

⁹⁶⁴ *Id.*

⁹⁶⁵ *Id.* at 15; see also *Regional Greenhouse Gas Emissions Inventory*, DELAWARE VALLEY REGIONAL PLANNING COMMISSION, <http://www.dvrpc.org/reports/09038A.pdf>, (Apr. 6, 2006).

serves as a benchmark for modeling and analyzing the state's emissions in the Action Plan.⁹⁶⁶

The Action Plan included a set of policy options that could reduce Delaware's GHG emissions by 7% below the state's 1990 level by 2010.⁹⁶⁷ This would result in a decrease of almost 25% in the state's GHG emissions.⁹⁶⁸ Delaware is also a participant in the Regional Greenhouse Gas Initiative (RGGI), where beginning in 2015 the carbon dioxide cap on emissions will decrease by 2.5% per year, for a total reduction of 10% by 2018.⁹⁶⁹

2005: Renewable Portfolio Standard

In July 2005, Delaware enacted a renewable portfolio standard (RPS). The standard requires the state's retail electricity suppliers to use renewable energy to generate at least 10% of the electricity they sell in Delaware by 2019.⁹⁷⁰

2007: Greenhouse Gas Reduction and Renewable Portfolio Standard

In May 2007, Delaware and thirty other states founded The Climate Registry to "measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors." This was viewed as a "critical first step in developing robust programs to reduce greenhouse gas emissions."⁹⁷¹

In July 2007, Governor Minner signed Senate Bill (S.B.) 19, increasing Delaware's RPS by mandating that 2% of Delaware's electricity come from solar photovoltaic and an additional 18% come from wind, ocean tidal, ocean thermal, fuel cells powered by renewable fuels, hydroelectric facilities with a maximum capacity of 30 megawatts (MW), sustainable biomass, anaerobic digestion, and/or landfill gas by 2019.⁹⁷² Governor Minner also signed S.B. 35, which increased the system benefit surcharge by 18¢ per bill per month and directed that resultant revenue be deposited in the Green Energy Fund to support energy efficiency programs.⁹⁷³

2008: Climate Change Agreements, Greenhouse Gas Reduction, and Renewable Energy

⁹⁶⁶ *Delaware Climate Change Action Plan*, CENTER FOR ENERGY AND ENVIRONMENTAL POLICY 16 (Jan. 2000), <http://web.archive.org/web/20120320221201/http://www.ceep.udel.edu/publications/globalenvironments/reports/deccap/fullreport.pdf>.

⁹⁶⁷ *Id.* at 1.

⁹⁶⁸ *Id.*

⁹⁶⁹ REGIONAL GREENHOUSE GAS INITIATIVE, <http://www.rggi.org/> (Oct. 6, 2008).

⁹⁷⁰ S.B. 74, 143rd Gen. Assemb., Reg. Sess. (Del. 2005).

⁹⁷¹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

⁹⁷² S.B. 19, 144th Gen. Assemb., Reg. Sess. (Del. 2007).

⁹⁷³ S.B. 35, 144th Gen. Assemb., Reg. Sess. (Del. 2007).

Delaware further developed its RGGI program when Governor Minner signed S.B. 263 in June 2008.⁹⁷⁴ The Bill provides the framework for Delaware's RGGI program as well as the authority for the Department of Natural Resources and Environmental Control (DNREC) to implement the program.⁹⁷⁵ The Bill also provided that 65% of the state's RGGI proceeds be directed to the Sustainable Energy Utility (SEU), which will use the proceeds to promote energy efficiency, energy conservation, renewable energy, and energy financing.

The DNREC Division of Air and Waste Management drafted proposed Regulation No. 1147, *Regional Greenhouse Gas Initiative to Address Carbon Dioxide Emissions Generating Units*.⁹⁷⁶ Public hearings on this draft proposal occurred on September 22, 2008 and the regulation was ultimately passed and went into effect on November 11, 2008.⁹⁷⁷ This regulation regulates "units" that served an electricity generator with a nameplate capacity equal to or greater than 25 MW after December 31, 2004. Each unit is required to have an operating permit and a compliance certificate. Delaware's Carbon Dioxide Trading Program's annual carbon dioxide base budget is 7,559,787 tons for 2009 through 2014. Thereafter the budget will decrease on an annual basis until 2018. Beginning in 2009, DNREC auctioned 60% of the allowances available and allocated the remaining 40% to applicable units. The percentage of allowances auctioned increases by 8% annually so that 100% of available allowances will be auctioned in 2014. Finally, the DNREC will award carbon dioxide offset allowances when the sources of regulated units perform certain enumerated projects, such as landfill methane capture and destruction or carbon sequestration.

In July 2008, Delaware and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.⁹⁷⁸ The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards are designed to help develop greater energy efficiency, conservation, and clean energy resources.⁹⁷⁹

⁹⁷⁴ Press Release, State of Del., Gov. Minner Signs Legislation Authorizing Delaware's Participation in Regional Greenhouse Gas Initiative, (June 30, 2008), <http://web.archive.org/web/20090107233442/http://www.governor.delaware.gov/news/2008/06june/063008rggibillsigning.shtml>.

⁹⁷⁵ S.B. 263, 144th Gen Assemb., Reg. Sess. (Del. 2008).

⁹⁷⁶ Regulation No. 1147, *Regional Greenhouse Gas Initiative to Address Carbon Dioxide Emissions from Electric Generating Units*, STATE OF DELAWARE, <http://web.archive.org/web/20081006064151/http://www.awm.delaware.gov/Info/Regs/Pages/RGGI.aspx> (Sept. 21, 2013).

⁹⁷⁷ Secretary's Order No. 2008-A-0055, Proposed Regulation No. 1147: CO₂ Budget Training Program *Regional Greenhouse Gas Initiative (RGGI) to Address Carbon Dioxide (CO₂) Emissions from Electric Generating Units (EGUs)* (Oct. 15, 2008), <http://www.dnrec.delaware.gov/dwhs/Info/Regs/Documents/RGGI%2008%20ORD.pdf>.

⁹⁷⁸ Press Release, Nat'l Governors Ass'n, NGA Awards Clean Energy Grants to 12 States (June 30, 2008), <http://web.archive.org/web/20080703234533/http://www.nga.org/portal/site/nga/menuitem.6c9a8a9ebc6ae07eee28aca9501010a0/?vgnextoid=feecd9b353ada110VgnVCM1000001a01010aRCRD>.

⁹⁷⁹ *Id.*

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.⁹⁸⁰ Each of these allowances sold at a clearing price of \$3.07, raising a total of \$38,575,783.⁹⁸¹ These proceeds will be used to fund renewable energy and energy efficiency technologies and programs in the states that offered allowances.⁹⁸² The second auction took place on December 17, 2008, and each of the ten states participated.⁹⁸³ All of the available 31,505,898 allowances were sold, 3.5 times lower than the demand of 108,709,000 allowances.⁹⁸⁴ The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.⁹⁸⁵

On December 31, 2008, RGGI participants and Pennsylvania (an observer state) signed a letter of intent to reduce carbon emissions from the transportation sector.⁹⁸⁶ Specifically, these states intend to develop a framework for a Low Carbon Fuel Standard (LCFS), which requires reductions in the average lifecycle GHG per unit of useful energy in motor vehicles, in the Northeast/Mid-Atlantic region.⁹⁸⁷

2009: American Recovery & Reinvestment Act (ARRA), Climate Change Agreements, Energy Efficiency, Green Building, Green Jobs, Renewable Energy, and Transportation/Fuels

On March 12, 2009, the Department of Energy (DOE) announced that Delaware was eligible for \$24,231,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).⁹⁸⁸ Delaware also made \$13,733,688 available for weatherization programs.⁹⁸⁹

⁹⁸⁰ Press Release, RGGI Inc., RGGI States' First CO₂ Auction Off to a Strong Start (Sept. 29, 2008), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

⁹⁸¹ *Id.* at 1.

⁹⁸² *Id.*

⁹⁸³ Auction 2, REGIONAL GREENHOUSE GAS INITIATIVE INC.,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/116 (Sept. 21, 2013).

⁹⁸⁴ News Release, RGGI Inc., Post-Settlement Auction Report Shows Robust Market for RGGI Carbon Dioxide Emissions Allowances (Jan. 6, 2009),

<http://www.rggi.org/docs/Auction%202%20Post%20Settlement%20Auction%20Report.pdf>.

⁹⁸⁵ *Id.*

⁹⁸⁶ Letter from Gina McCarthy, Comm'r Conn. Dep't of Env'tl. Prot., John A. Hughes, Sec'y Del. Dep't of Natural Res. and Env'tl. Control, David P. Littell, Comm'r Me. Dep't of Env'tl. Prot., Shari T. Wilson, Sec'y Md. Dep't of the Env't, Laurie Burt, Comm'r Mass. Dep't of Env'tl. Prot., Philip Guidice, Comm'r Mass. Dep't of Energy Res., Pete Grannis, Comm'r N.Y. Dep't Env'tl. Conservation, Bob Callendar, Vice President for Programs N.Y. State Research and Dev. Auth., Thomas S. Burack, Comm'r N.H. Dep't of Env'tl. Serv., Mark N. Mauriello, Acting Comm'r N.J. Dep't of Env'tl. Prot., John Hanger, Acting Sec'y Pa. Dep't of Env'tl. Prot., W. Michael Sullivan, Dir. R.I. Dep't of Env'tl. Mgmt., Laura Q. Pelosi, Comm'r Vt. Dep't of Env'tl. Conservation (Dec. 31, 2008),

http://web.archive.org/web/20110811022823/http://www.mass.gov/Eoea/docs/pr_lcfs_attach.pdf.

⁹⁸⁷ *Id.* at 1.

⁹⁸⁸ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁹⁸⁹ Press Release, State of Del., Gov. Markell Joins Sens. Carper and Kaufman to Announce \$38 Million to Increase Delaware's Energy Efficiency (Mar. 23, 2009), <http://governor.delaware.gov/news/2009/03march/20090323-energy-efficiency.shtml#TopOfPage>.

The third RGGI auction was held on March 18, 2009.⁹⁹⁰ The auction sold 31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse at future market prices for RGGI allowances.⁹⁹¹ Prices fell at the fourth auction to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.⁹⁹²

On March 17, 2009, Governor Markell announced that he was appointing Collin O'Mara, a nationally recognized climate prosperity leader, to be the Secretary of the DNREC.⁹⁹³ At a speaking engagement on April 2, Markell labeled his environmental strategy, *Climate Prosperity*.⁹⁹⁴ This strategy had three components: green savings, green opportunities, and green talent. He stated, the "goal is to create a functioning marketplace for green products that reduce energy and water consumption, adopt renewable energy, and reduce vehicles miles traveled."⁹⁹⁵

In May 2009, Governor Markell discussed the importance of alternative energy development in the Outer Continental Shelf, especially offshore wind development in Delaware, with Vice President Biden.⁹⁹⁶ He also delivered the keynote address at the Solar Energy Industries Association national conference, discussing the importance of ensuring that alternative technologies be produced domestically.⁹⁹⁷

In May 2009 Governor Markell directed the DNREC to seek to intervene in the Public Service Commission's (PSC) consideration of Delmarva Power's (the largest utility in the state) integrated resource plan.⁹⁹⁸ DNREC "will advocate that Delmarva's resource plan 'reflects the State's interest in sustainable energy practices, the health of its citizens, and the potential effect of supply generation on the state's air quality and exposure to risk from climate change.'"⁹⁹⁹ Later that month, Markell applauded the activation of the first wind turbine in New Castle County, which was funded in part by

⁹⁹⁰ Press Release, RGGI, Inc., States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

⁹⁹¹ *Id.*

⁹⁹² *Auction 4*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/114 (Sept. 21, 2013).

⁹⁹³ Press Release, State of Del., Markell Nominates Climate Prosperity Leader to Head DNREC (Mar. 17, 2009), <http://governor.delaware.gov/news/2009/03march/20090317-markell-nominates-climate-leader.shtml#TopOfPage>.

⁹⁹⁴ Press Release, State of Del., Markell Lays Out Environmental Vision for Delaware (Apr. 2, 2009), <http://governor.delaware.gov/news/2009/04april/120090402-environmental-vision.shtml#TopOfPage>.

⁹⁹⁵ *Id.*

⁹⁹⁶ Press Release, State of Del., Vice President Biden, Gov. Markell, Underscore Renewable Energy Potential on Outer Continental Shelf (May 4, 2009), <http://governor.delaware.gov/news/2009/05may/20090504-renewableenergy.shtml> - TopOfPage.

⁹⁹⁷ Press Release, State of Del., Markell: Delaware can be Green Leader (June 6, 2009), <http://governor.delaware.gov/news/2009/06june/20090609-keynote.shtml> - TopOfPage.

⁹⁹⁸ Press Release, State of Del., Markell: DNREC Should Seek Seat at the Table During Critical Energy Discussion (Mar. 3, 2009), <http://governor.delaware.gov/news/2009/03march/20090303-critical-energy-discussion.shtml#TopOfPage>.

⁹⁹⁹ *Id.*

the Delaware Green Energy Fund.¹⁰⁰⁰ It is estimated that this turbine will power Ion Power Inc.'s manufacturing facility.

In June 2009, Delaware received \$5 million in ARRA funding for weatherization programs.¹⁰⁰¹ The state also received \$2.6 million from the June RGGI auction.¹⁰⁰² Governor Markell then signed three pieces of significant energy legislation: S.B. 49, which prohibits deed restrictions preventing homeowners from installing solar panels; House Bill (H.B.) 70 prohibiting deed restrictions preventing homeowners from installing wind turbines on their homes; and S.B. 85, which guarantees that businesses and residents that produce excess electricity will be able to sell back their excess electricity for profit.¹⁰⁰³ Markell also signed S.B. 59 to update building codes to increase building energy efficiency and S.B. 106, requiring utilities to reduce energy consumption 15% by 2015.¹⁰⁰⁴

In order to protect the state's wind technology, Governor Markell and other governors wrote a letter to Congress, in May 2009, communicating their opposition to proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.¹⁰⁰⁵ Markell also signed an agreement with a coalition of governors to support federal climate change legislation.¹⁰⁰⁶ The agreement contained two principles: the support of comprehensive federal legislation and the promotion of a federal-state partnership in implementing this legislation.¹⁰⁰⁷

¹⁰⁰⁰ Press Release, State of Del., Markell Administration Applauds First Commercial Wind Turbine in New Castle County (Mar. 16, 2009), <http://governor.delaware.gov/news/2009/03march/20090316-windturbine.shtml#TopOfPage>.

¹⁰⁰¹ Press Release, State of Del., Markell: Weatherization Funding Will Help Delaware's Economy, Environment (June 18, 2009), <http://governor.delaware.gov/news/2009/06june/20090618-weatherizingfund.shtml> - TopOfPage.

¹⁰⁰² Press Release, State of Del., Delaware Expects \$2.6 Million for Investment in Renewable Energy and Efficiency Programs (June 19, 2009), <http://governor.delaware.gov/news/2009/06june/20090619-renewable.shtml> - TopOfPage.

¹⁰⁰³ Press Release, State of Del., Markell Signs Legislation to Expand Alternative Energy Use (July 9, 2009), <http://governor.delaware.gov/news/2009/07july/20090709-alternativeenergy.shtml> - TopOfPage.

¹⁰⁰⁴ Press Release, State of Del., Markell Signs Landmark Energy Legislation Into Law (July 29, 2009), <http://governor.delaware.gov/news/2009/07july/20090729-energy.shtml> - TopOfPage.

¹⁰⁰⁵ Letter from Donald L. Carcieri, Governor of R.I., Deval Patrick, Governor of Mass., Jack Markell, Governor of Del., John Baldacci, Governor of Me., Martin O'Malley, Governor of Md., John H. Lynch, Governor of N.H., Jon S. Corzine, Governor of N.J., David A. Paterson, Governor of N.Y., James H. Douglas, Governor of Vt., Timothy M. Kaine, Governor of Va. to Harry Reid, Majority Leader, U.S. Senate, Mitch McConnell, Minority Leader, U.S. Senate, Nancy Pelosi, Speaker, U.S. House of Representatives, John Boehner, Minority Leader, U.S. House of Representatives (May 4, 2009), http://web.archive.org/web/20090507010001/http://www.gov.ri.gov/documents/East_Coast_Govs_Transmission_Ltr.pdf.

¹⁰⁰⁶ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20090816230453/http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

¹⁰⁰⁷ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION, (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

On June 23, 2009, representatives from RGGI, the WCI, and the MGGRA¹⁰⁰⁸ met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.¹⁰⁰⁹ Governor Markell also encouraged state residents to take advantage of the federal Car Allowance Rebate System to get inefficient vehicles off of the road.¹⁰¹⁰

On August 31, 2009, the attorneys general of New Jersey, Arizona, Connecticut, Delaware, and California sent U.S. Senate leaders a letter urging them to pass climate change legislation stronger than the Waxman-Markey Bill.¹⁰¹¹ Their suggestions to the senators included that the Senate bill include measures that give state enforcement authority, require public disclosure of all offset project documentation, and provide standing for citizen suits.

Governor Markell co-hosted the Clean Energy Economy Forum in September 2009 where President Obama's vision for a comprehensive energy plan to jump-start the clean energy sector was discussed.¹⁰¹² Markell and Pennsylvania Governor Rendell discussed their state's efforts to protect the environment and create economic growth by making their states leaders in clean energy. Markell then signed S.B. 153, incentivizing electric vehicles.¹⁰¹³ Soon after the Delaware Transit Corporation won a \$1.5 million federal grant to install solar panels at its facility.¹⁰¹⁴ At the end of that month, the state received over \$9.5 million in ARRA funding for energy efficiency and conservation.¹⁰¹⁵

¹⁰⁰⁸ The MGGRA is a commitment, by six Midwest governors and one Canadian province, to the reduction of greenhouse gas emissions through a regional cap-and-trade program. Although there has not been a formal suspension, the states and province are no longer formally participating in it. *See Midwest Greenhouse Gas Regional Accord*, CENTER FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mgggra> (Sept. 22, 2013).

¹⁰⁰⁹ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (JUNE 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

¹⁰¹⁰ Press Release, State of Del., State Officials Urge Delawareans to Trade in Gas-Guzzling Vehicles for Fuel-Efficient Models (Aug. 7, 2009), <http://governor.delaware.gov/news/2009/08august/20090807-cars.shtml> - TopOfPage.

¹⁰¹¹ Letter from Edmund G. Brown Jr., Att'y Gen. Cal., Terry Goddard, Att'y Gen. Ariz., Richard Blumenthal, Att'y Gen. Conn., Richard Gebelien, Att'y Gen. Del., Anne Milgram, Att'y Gen. N.J., to Harry Reid, U.S. Senate Majority Leader, Mitch McConnell, U.S. Senate Minority Leader, Barbara Boxer, Chair, Comm. on Env't and Public Works, U.S. Senate, James Inhofe, Ranking Member, Comm. on Env't and Public Works, U.S. Senate (Aug. 31, 2009), http://ag.ca.gov/globalwarming/pdf/letter_to_Senate_re_Climate_Legislation.pdf. The Waxman-Markey Bill died in the Senate; *see H.R. 2454 (111th): American Clean Energy and Security Act of 2009*, GOVTRACK.US, <http://www.govtrack.us/congress/bills/111/hr2454> (Sept. 19, 2013).

¹⁰¹² Press Release, State of Del., Markell to Host Clean Energy Forum with Rendell and Officials From the Obama-Biden Administration (Sept. 15, 2009), <http://governor.delaware.gov/news/2009/09september/20090915-webcast.shtml>.

¹⁰¹³ Press Release, State of Del., Markell Signs Law Promoting Electric Vehicles (Sept. 21, 2009), <http://governor.delaware.gov/news/2009/09september/20090921-electricvehicles.shtml> - TopOfPage.

¹⁰¹⁴ Press Release, State of Del., Delaware Transit Corporation Awarded Solar Panel Funding (Sept. 21, 2009), <http://governor.delaware.gov/news/2009/09september/20090921-solar.shtml> - TopOfPage.

¹⁰¹⁵ Press Release, State of Del., Markell: Energy Efficiency and Conservation Projects Will Create Jobs, Save Delawareans Money and Help the Environment (Sept. 24, 2009), <http://governor.delaware.gov/news/2009/09september/20090924-jobs.shtml> - TopOfPage.

The fifth RGGI action was held on September 9, 2009.¹⁰¹⁶ The auction sold 28,408,945 allowances of the 2009 vintage at a clearing price of \$2.19 per allowance and 2,172,540 allowances of the 2012 vintage at a clearing price of \$1.87 per allowance.¹⁰¹⁷

NRG Energy acquired Bluewater Wind in November of 2009, which brought Delaware closer to becoming the first state in the nation to develop an offshore wind farm.¹⁰¹⁸ Following this announcement, three states, Maryland, Delaware, and Virginia, signed a memorandum of understanding (MOU) creating a formal partnership that built on the region's significant offshore wind resources to generate clean, renewable energy and a sustainable market, which brought about new economic opportunities.¹⁰¹⁹ The MOU directed the Mid-Atlantic States to focus on leveraging resources and information to bring offshore wind energy to the region. The states will also examine ways to coordinate regional supply chain facilities to secure supply, deployment, and operations and maintenance functions to support offshore wind energy facilities.¹⁰²⁰ This offshore wind development will create green jobs for Delawarean workers and clean energy alternatives for families and businesses.

The sixth RGGI auction was held on December 2, 2009 and at the auction all of Delaware's 763,841 allowances for the 2009 vintage that were offered sold at a price of \$2.05.¹⁰²¹ Sixty-five percent of RGGI auction proceeds will be distributed to the SEU and up to 15% of proceeds will be given to low-income consumers through programs administered through the Department of Health and Social Services. Up to 10% of the auction proceeds will be used for GHG reduction projects and the remaining 10% may be used to administer RGGI and climate change programs in DNREC.¹⁰²²

In December 2009, Governor Markell joined ten other Northeast and Mid-Atlantic states in announcing a MOU that highlighted their commitment toward developing a regional LCFS in a regional effort to reduce GHG emissions from fuels from vehicles and other uses.¹⁰²³ The LCFS program is a market-based, fuel-neutral program that would apply to the transportation sector, and potentially apply to fuels used

¹⁰¹⁶ *Auction 5*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/113 (Oct. 14, 2013).

¹⁰¹⁷ *Id.*

¹⁰¹⁸ Press Release, State of Del., Markell: NRG-Bluewater Wind Deal 'Marks Important Steps Toward' Building Nation's First Offshore Wind Farm (Nov. 9, 2009), <http://governor.delaware.gov/news/2009/11november/20091109-nrgbluewater.shtml#TopOfPage>.

¹⁰¹⁹ Press Release, State of Del., Mid-Atlantic Governors Commit To Offshore Wind Partnership (Nov. 10, 2009), <http://governor.delaware.gov/news/2009/11november/20091110-windpartnership.shtml#TopOfPage>.

¹⁰²⁰ *Id.*

¹⁰²¹ Press Release, State of Del., Sixth RGGI Auction Expected to Yield \$1.6 Million for Delaware's Investments in Renewable Energy and Efficiency Programs (Dec. 4, 2009), <http://governor.delaware.gov/news/2009/12december/20091204-renewableenergy.shtml#TopOfPage>.

¹⁰²² *Id.*

¹⁰²³ Press Release, State of Del., Delaware Joins 10 Other Northeast and Mid-Atlantic States in Pact to Improve Air Quality and Reduce Greenhouse Gas Emissions From Fuels (Dec. 30, 2009), <http://governor.delaware.gov/news/2009/12december/20091230-pact.shtml#TopOfPage>.

for heating buildings.¹⁰²⁴ The states agreed to analyze LCFS options, determine the feasibility of achieving a range of reduction goals, including a 10% reduction in carbon intensity of fuels, and develop a framework for a regional LCFS to ensure sustainable use of renewable fuels in the region.¹⁰²⁵

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.¹⁰²⁶ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.¹⁰²⁷ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities."¹⁰²⁸ North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.¹⁰²⁹

2010: Energy Efficiency, Climate Change Agreements, Green Jobs, Renewable Energy, Renewable Portfolio Standard, and Transportation/Fuels

Governor Markell signed Executive Order (EO) 18 in February 2010, which focused on fostering economic development while reducing the impact of state government on the environment and reducing operating expenses.¹⁰³⁰ The Order sets ambitious goals in five key areas including: energy conservation and efficiency; environmentally responsible and energy conscious construction; use of clean, renewable energy; clean transportation; and recycling.¹⁰³¹ To attain the Order's goal in energy conservation and efficiency, the EO further states that all state executive branch agencies will aim to achieve an overall reduction in energy consumption of at least 10% by the end of fiscal year 2011, 20% by fiscal year 2013, and 30% by fiscal year 2015 as compared with fiscal year 2008.¹⁰³² Moreover, to realize the Order's goal in environmentally responsible and conscious construction, the EO states, the state will integrate the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) practices into construction, renovation, and facility operation, aiming for LEED Silver

¹⁰²⁴ *Id.*

¹⁰²⁵ *Id.*

¹⁰²⁶ See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

¹⁰²⁷ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

¹⁰²⁸ NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

¹⁰²⁹ See *id.*

¹⁰³⁰ *Executive Order Eighteen—Leading by Example Towards a Clean Energy Economy & Sustainable Natural Environment*, STATE OF DELAWARE (Feb. 17, 2010),

http://governor.delaware.gov/orders/exec_order_18.shtml; see also Press Release, State of Del., State Government Leading By Example to Save Money and Cut Resource Waste (Feb. 17, 2010),

<http://governor.delaware.gov/news/2010/1002february/20100217-leadingbyexample.shtml#TopOfPage>.

¹⁰³¹ Del. Exec. Order No. 18 (2010).

¹⁰³² *Id.*

standards.¹⁰³³ To attain the Order's goal in the use of clean, and renewable energy, the EO states that at least 20% of the annual electricity demand for buildings owned or operated by the state executive branch should come from clean, renewable sources by the end of fiscal year 2012, increasing to 30% by the end of fiscal year 2013.¹⁰³⁴ To reach the Order's goal in the use of clean transportation, the EO states, all agencies will reduce expenses by reducing petroleum consumption by 25%, vehicle emissions by 25%, and vehicle miles traveled by 15% by the end of fiscal year 2012 as compared with fiscal year 2008. Finally, to accomplish the Order's goal in recycling, the EO states, all state executive branch agencies will aim to achieve a 75% rate of diverted waste from landfills by the end of fiscal year 2012.¹⁰³⁵

Following a hearing on the federal government's efforts to be more energy efficient, Senator Tom Carper, Chairman of the Subcommittee on Federal Financial Management, Government Information, Federal Services and International Security, held a field hearing to examine how state and local governments can save taxpayer dollars and create jobs through energy efficiency.¹⁰³⁶ Carper's hearing, titled *Blue, Gold, and Green: How Delaware State and Local Governments are Cutting Their Energy Costs*, focused on Delaware because of Governor Markell's EO 18 calling for Delaware's government to pursue a clean energy economy and become more energy efficient.¹⁰³⁷

Governor Markell announced in April 2010 his intention to seek legislation, called the Clean Energy Jobs Act, which would facilitate the potential installation of approximately 300 MW of new solar photovoltaic systems by 2029.¹⁰³⁸ Within the Act there is the potential for installation of 1000 MW of utility-scale generation, probably in offshore wind power.¹⁰³⁹

The seventh RGGI auction was held on March 10, 2010.¹⁰⁴⁰ The auction sold 40,612,408 allowances of the 2010 vintage at a clearing price of \$2.07 per allowance and 2,091,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.¹⁰⁴¹ The eighth RGGI auction was held on June 9, 2010.¹⁰⁴² The auction sold 40,685,585 allowances of the 2010 vintage at a clearing price of \$1.88 per allowance and 2,137,993 allowances of the 2012 vintage at a clearing price of \$ 1.86 per allowance.¹⁰⁴³

¹⁰³³ *Id.*

¹⁰³⁴ *Id.*

¹⁰³⁵ *Id.*

¹⁰³⁶ Press Release, State of Del., *Blue, Gold, and Green: How Delaware State and Local Governments Are Cutting Their Energy Costs* (Feb. 19, 2010), <http://governor.delaware.gov/news/2010/1002february/20100219-green.shtml#TopOfPage>.

¹⁰³⁷ *Id.*

¹⁰³⁸ Press Release, State of Del., *Markell Introduces Delaware Clean Energy Jobs Act* (Mar. 10, 2010), <http://governor.delaware.gov/news/2010/1003march/20100310-cleanenergyjobs.shtml#TopOfPage>.

¹⁰³⁹ *Id.*

¹⁰⁴⁰ *Auction 7, REGIONAL GREENHOUSE GAS INITIATIVE*, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/111 (Oct. 14, 2013).

¹⁰⁴¹ *Id.*

¹⁰⁴² *Auction 8, REGIONAL GREENHOUSE GAS INITIATIVE*, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/110 (Oct. 14, 2013).

¹⁰⁴³ *Id.*

In June 2010, Delaware hosted a historic gathering of transportation, energy and environmental officials to discuss cooperative efforts at reducing mobile GHG emissions in the Northeast Region.¹⁰⁴⁴ Twelve jurisdictions within RGGI announced the creation of the Transportation and Climate Initiative (TCI) to reduce GHG emissions, promote sustainable growth, reduce vehicle-miles traveled and help build the clean energy economy.¹⁰⁴⁵ Signatories will work cooperatively over a three-year period to develop and implement strategies to reduce mobile sources of GHG emissions and improve environmental sustainability among communities.¹⁰⁴⁶ The TCI was launched in June 2010 and is facilitated by the Georgetown Climate Center.¹⁰⁴⁷

Energize Delaware is an initiative of the Delaware SEU, a nonprofit organization created to advance a sustainable energy future.¹⁰⁴⁸ Under Energize Delaware, residents and businesses will have one contact person for education, resources and programs that will include low and no-cost steps to save thousands on energy bills and new clean energy sources. These programs will focus on conservation, efficiencies and the use of renewable energy sources, like solar, wind and geothermal.¹⁰⁴⁹ Energize Delaware also offers rebates on certain ENERGY STAR® appliances for residents, and started a standard lighting program for businesses and other non-residential energy consumers by using RGGI proceeds from previous auctions.¹⁰⁵⁰

Four bipartisan bills were signed into law the summer of 2010. These renewable energy laws make up the Clean Energy Jobs package and are designed to put more people to work in expanding industries, such as wind and solar power.¹⁰⁵¹ The laws put protections in place for ratepayers while also protecting the environment by reducing dependence on fossil fuels and improving air quality. Senate substitute (SS) No. 1 for S.B. 119 extends and expands Delaware's RPS requiring that 25% of Delaware's electricity come from renewable energy sources by the year 2025; includes solar energy targets; and provides incentives for local labor and manufacture of renewable energy systems.¹⁰⁵² For the first time, the Delaware Electric Cooperative and municipal electric companies will be included in the standard, which is significant since these entities

¹⁰⁴⁴ Press Release, State of Del., Delaware Hosts Summit of Transportation, Environmental and Energy Officials (June 10, 2010), <http://governor.delaware.gov/news/2010/1006june/20100610-summit.shtml#TopOfPage>.

¹⁰⁴⁵ *Id.*

¹⁰⁴⁶ *Id.*

¹⁰⁴⁷ *Transportation and Climate Initiative*, GEORGETOWN CLIMATE CENTER, <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative> (Mar. 9, 2012).

¹⁰⁴⁸ Press Release, State of Del., Governor Markell, Senator McDowell Announce 10,000th Energy-Efficient Appliance Rebate, Milestone Marks Impact of Energy, Money Savings (June 22, 2010), <http://governor.delaware.gov/news/2010/1006june/20100622-rebate.shtml#TopOfPage>.

¹⁰⁴⁹ *Id.*

¹⁰⁵⁰ Press Release, State of Del., Sixth RGGI Auction Expected to Yield \$1.6 Million for Delaware's Investments in Renewable Energy and Efficiency Programs (Dec. 4, 2009), <http://governor.delaware.gov/news/2009/12december/20091204-renewableenergy.shtml#TopOfPage>.

¹⁰⁵¹ Press Release, State of Del., Governor's Weekly Message to Delawareans (Aug. 20, 2010), <http://governor.delaware.gov/news/2010/1008august/20100820-weekly.shtml>.

¹⁰⁵² S.B. 19, 145th Gen. Assemb., Reg. Sess. (Del. 2010).

provide about a third of Delaware's electricity. SS 1 for S.B. 119 also provides consumer protections by limiting any rate impacts.¹⁰⁵³ S.B. 266 updates the Green Energy Fund law to address the large backlog of projects across the state currently awaiting incentive funds.¹⁰⁵⁴ S.B. 267 strengthens Delaware's net metering law by increasing the amount of energy customers can sell back to their electric supply grid. Homes and businesses may sell back 110% of their aggregate consumption; customers, such as a business campus or agricultural operations can aggregate several meters for multiple locations making it easier to finance larger renewable energy installations; and homeowner associations and similar groups of customers sharing a unique set of interests will be able to cooperatively finance and build community-scale renewable energy projects both on and off-site.¹⁰⁵⁵ S.B. 316 makes it possible for property owners to install and use ground-mounted solar energy systems on land zoned residential where the lots are one-half acre or greater in size without being restricted by the use of covenants, restrictions, and conditions in deeds, contracts and other legal instruments which might seek to prohibit or unreasonably restrict such construction.¹⁰⁵⁶

The ninth RGGI auction was held on September 8, 2010.¹⁰⁵⁷ The auction sold 34,407,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,312,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.¹⁰⁵⁸ The tenth RGGI auction was held on December 10, 2010.¹⁰⁵⁹ The auction sold 24,755,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,172,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.¹⁰⁶⁰

2011: Energy Efficiency, Climate Change Agreements, Transportation/Fuels, and Renewable Energy

On February 24, 2011, Governor Markell announced that eleven Kent County towns would receive funding under the Energy Efficiency and Conservation Block Grant in order to retrofit municipal buildings in an effort to save energy. The retrofits are expected to save the towns more than \$45,000 per year on energy costs.¹⁰⁶¹

The eleventh RGGI auction was held on March 9, 2011.¹⁰⁶² The auction sold 41,995,813 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance and

¹⁰⁵³ *Id.*

¹⁰⁵⁴ S.B. 266, 145th Gen. Assemb., Reg. Sess. (Del. 2010).

¹⁰⁵⁵ S.B. 267, 145th Gen. Assemb., Reg. Sess. (Del. 2010).

¹⁰⁵⁶ S.B. 316, 145th Gen. Assemb., Reg. Sess. (Del. 2010).

¹⁰⁵⁷ Auction 9, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/109 (Oct. 14, 2013).

¹⁰⁵⁸ *Id.*

¹⁰⁵⁹ Auction 10, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/174 (Oct. 14, 2013).

¹⁰⁶⁰ *Id.*

¹⁰⁶¹ Press Release, State of Del., Governor Markell Joins DNREC Secretary O'Mara to Announce Municipal Energy Efficiency Investments in Kent County (Feb. 24, 2011),

<http://governor.delaware.gov/news/2011/1102february/20110224-energy.shtml>.

¹⁰⁶² Auction 11, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/108 (Oct. 14, 2013).

2,144,710 allowances of the 2012 vintage at a clearing price of \$ 1.89 per allowance.¹⁰⁶³ The twelfth RGGI auction was held on June 8, 2011.¹⁰⁶⁴ The auction sold 12,537,000 allowances of the 2011 vintage at a clearing price of \$1.89 and 943,000 allowances of the 2012 vintage at a clearing price of \$1.89 per allowance.¹⁰⁶⁵ The thirteenth RGGI auction was held on September 7, 2011 and the auction sold 7,487,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.¹⁰⁶⁶

Delaware was one of nine states to join the Northeast Electric Vehicle Network in October 2011. The Network helps the states increase economic growth and reduce their GHG emissions, and focuses on building infrastructure for clean vehicles and fuels, as well as attracting public and private investment to support the infrastructure development. Participating states include Connecticut, Delaware, Washington, D.C., Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.¹⁰⁶⁷ The Network is part of the TCI. A nearly \$1 million Electric Vehicle Readiness Grant from the DOE was awarded to New York State Energy Research and Development Authority (NYSERDA) on behalf of the TCI in September 2010 and will be used to fund the Network's efforts to deploy electric vehicles throughout the Northeast.¹⁰⁶⁸

Also in October 2011, the Vote Solar Institute awarded Delaware an "A" rating, ranking the state's policies supporting renewable resources among the strongest in the country.¹⁰⁶⁹ Delaware has moved from an "F" to an "A" rating for interconnection policies as the state has been working to make it easier for small renewable resources to connect to the grid.¹⁰⁷⁰

The fourteenth RGGI auction was held on December 7, 2011 and the auction sold 27,293,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.¹⁰⁷¹

2012: Climate Change Agreements

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of

¹⁰⁶³ *Id.*

¹⁰⁶⁴ Auction 12, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/187 (Oct. 14, 2013).

¹⁰⁶⁵ *Id.*

¹⁰⁶⁶ Auction 13, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/201 (Oct. 14, 2013).

¹⁰⁶⁷ *Northeast States Form Regional Electric Vehicle Network*, GEORGETOWN CLIMATE CENTER (Oct. 19, 2011) <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

¹⁰⁶⁸ *Id.*

¹⁰⁶⁹ Press Release, State of Del., Delaware Moves to the Head of the Class on Grid Interconnection (Oct. 21, 2011) <http://news.delaware.gov/2011/10/21/delaware-moves-to-the-head-of-the-class-on-grid-interconnection/>.

¹⁰⁷⁰ *Id.*

¹⁰⁷¹ Auction 14, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/204 (Oct. 14, 2013).

\$1.93.¹⁰⁷² The auction generated \$41.6 million in proceeds, which the RGGI participating states will invest in consumer-oriented energy efficiency initiatives.¹⁰⁷³ On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.¹⁰⁷⁴ The auction of the 20.9 million allowances generated \$40.4 million in funds, and represents 57% of the allowances offered for sale by all nine participating states.¹⁰⁷⁵ On September 7, 2012, the RGGI states announced the results of its seventeenth quarterly auction for carbon dioxide allowances.¹⁰⁷⁶ The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, which represents 65% of the allowances offered for sale by all nine states.¹⁰⁷⁷

On November 19, 2012, RGGI reported that RGGI investments avoided 12 million tons of carbon dioxide emissions from 2009 to 2011.¹⁰⁷⁸ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement, and climate change adaptation programs.¹⁰⁷⁹

2013: Greenhouse Gas Reduction and Climate Change Agreements

On February 7, 2013, RGGI announced significant program improvements implemented in the Updated Model Rule after a two-year comprehensive program review.¹⁰⁸⁰ Improvements include a reduction of the 2014 regional cap by 45% from 165 million to 91 million tons, and a cap further declining by 2.5% each year from 2015 to 2020; additional adjustments to the cap from 2014 to 2020 in order to account for privately banked allowances which will be deemed “old” allowances starting in 2014; the creation of a cost containment reserve of allowances which may be accessed only when the price of allowances in a given year exceeds a predetermined level; updates to the offsets program, including a protocol for forestry offsets; the decision not to reoffer unsold allowances from 2012 and 2013; the requirement that regulated entities obtain allowances for at least 50% of their emissions in each of the first two years of the three year compliance period; and developing tools to track electricity imported into

¹⁰⁷² Press Release, RGGI Inc., RGGI Auction Sells 21.5 Million CO₂ Allowances (Mar. 16, 2012), http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

¹⁰⁷³ *Id.*

¹⁰⁷⁴ Press Release, RGGI Inc., RGGI Auction Sells 20.9 Million CO₂ Allowances (June 8, 2012), http://www.rggi.org/docs/PR060812_Auction16.pdf.

¹⁰⁷⁵ *Id.*

¹⁰⁷⁶ Press Release, RGGI Inc., RGGI Auction Sells 24.5 Million CO₂ Allowances (Sept. 7, 2012), http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

¹⁰⁷⁷ *Id.*

¹⁰⁷⁸ Press Release, RGGI, Inc., RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings (Nov. 19, 2012), <http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

¹⁰⁷⁹ *Id.*

¹⁰⁸⁰ Press Release, RGGI, Inc., RGGI States Propose Lowering Regional CO₂ Emissions Cap 45%, Implementing a More Flexible Cost-Control Mechanism (Feb. 7, 2013), http://www.rggi.org/docs/PressReleases/PR130207_ModelRule.pdf.

participating states from non-participating states in order to address those emissions.¹⁰⁸¹ Each RGGI state will implement these measures in their respective statutory regimes.¹⁰⁸²

On April 16, 2013, an independent market monitor of RGGI confirmed that there continues to be no material concerns regarding the auction process or in the competitiveness of the secondary market for RGGI allowances.¹⁰⁸³ During 2012, the average auction-clearing price was \$1.93 for carbon dioxide allowances.¹⁰⁸⁴

On March 13, 2013, RGGI announced the results of its nineteenth quarterly auction in which 37,835,405 allowances were sold at a clearing price of \$2.80 per allowance.¹⁰⁸⁵ On June 5, 2013, RGGI announced the results of its twentieth quarterly auction in which 38,782,076 allowances were sold at a clearing price of \$3.21 per allowance.¹⁰⁸⁶

On July 23, 2013 Environment America Research & Policy Center's report named Delaware the 7th in the nation per capital for cumulative solar installations and 5th per capita for solar installations from 2012.¹⁰⁸⁷

On September 4, 2013, RGGI announced the results of its twenty-first quarterly auction in which 38,409,043 allowances were sold at a clearing price of \$2.67 per allowance.¹⁰⁸⁸

Governor Markell signed EO 41 on September 12, 2013, "creating a *Governor's Committee on Climate and Resiliency* to oversee development of an implementation plan to maintain and build upon Delaware's leadership in responsibility reducing greenhouse gas emissions and develop agency-specific actionable recommendations for improving Delaware's preparedness and resiliency to climate impacts."¹⁰⁸⁹ The Committee's responsibilities include reporting to Markell no later than December 31, 2014, on the completion of a plan to reduce GHG emissions, with agency-specific, actionable recommendations to improve preparedness and resiliency to climate impacts on public

¹⁰⁸¹ *Id.*

¹⁰⁸² *Id.*

¹⁰⁸³ Press Release, RGGI, Inc., 2012 Annual Market Monitor Report: In Fifth Year, RGGI CO₂ Allowance Market Remains Competitive (Apr. 16, 2013), http://www.rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

¹⁰⁸⁴ *Id.*

¹⁰⁸⁵ Auction 19, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auctions-1-21?id=222 (Feb. 9, 2014).

¹⁰⁸⁶ Auction 20, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auctions-1-21?id=229 (Feb. 9, 2014).

¹⁰⁸⁷ Press Release, State of Del., Delaware Named a Top State for Solar Energy (July 23, 2013), <http://www.dnrec.delaware.gov/News/Pages/Delaware-Named-a-Top-State-for-Solar-Energy.aspx>.

¹⁰⁸⁸ Auction 21, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auctions-1-21?id=233 (Feb. 9, 2014).

¹⁰⁸⁹ Press Release, State of Del., Governor Markell Executive Order: Preparing Delaware for Emerging Climate Impacts and Seizing Economic Opportunities from Reducing Emissions (Sept. 12, 2013), <http://news.delaware.gov/2013/09/12/governor-markell-executive-order-preparing-delaware-for-emerging-climate-impacts-and-seizing-economic-opportunities-from-reducing-emissions/>. See Del. Exec. Order No. 40 (2013), <http://governor.delaware.gov/orders/EO41.pdf>.

health and safety, infrastructure, natural ecosystems, agriculture, tourism, and other industries.

On December 2, 2013, the RGGI states submitted a comment to the EPA for “consideration as EPA develops guidelines for state programs to reduce carbon dioxide (CO₂) emissions from power plants under Clean Air Act section 111(d).”¹⁰⁹⁰ In the comment the RGGI states encouraged the EPA to view the RGGI program success as a benchmark for national action and recommended, “EPA’s new rules encourage states to develop market-based GHG emission reduction programs designed to work for their region(s).”¹⁰⁹¹

On December 4, 2013, RGGI announced the results of its twenty-second quarterly auction in which 38,329,378 allowances were sold at a clearing price of \$3.00 per allowance.¹⁰⁹²

On December 9, 2013 Delaware and seven other Northeast and Mid-Atlantic States – Connecticut, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont – petitioned the EPA to require upwind states to reduce the air pollution generated within their borders downwind.¹⁰⁹³ This petition asks EPA to require nine upwind states – Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, Virginia, and West Virginia – to join the downwind states in the Ozone Transport Region, set forth under section 176A of the Clean Air Act, which would require these states to “take actions consistent with the air pollution efforts of the downwind states through use of readily available control technologies and reliance on cleaner fuels to generate power.”¹⁰⁹⁴

FLORIDA

1997: Market-Based Solutions

Since 1997, Florida has offered a sales and use tax exemption for solar power generators.¹⁰⁹⁵

2003: Transportation

¹⁰⁹⁰ Press Release, Regional Greenhouse Gas Initiative, RGGI States Recommend that EPA Support Flexible Market-Based Carbon Pollution Programs (Dec. 2, 2013), http://www.rggi.org/docs/PressReleases/PR120213_EPAComments_Final.pdf.

¹⁰⁹¹ *Id.*

¹⁰⁹² Auction 22, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auction-22 (Feb. 9, 2014).

¹⁰⁹³ Press Release, State of Del., Delaware, Seven Other Northeast and Mid-Atlantic States Seek to Curb Pollution from Seven Upwind States (Dec. 9, 2013), <http://news.delaware.gov/2013/12/09/northeast-and-mid-atlantic-states-seek-to-curb-air-pollution-from-upwind-states/>.

¹⁰⁹⁴ *Id.*

¹⁰⁹⁵ FLA. STAT. ANN. § 212.08 (West 2013).

As of July 1, 2003, the state allowed hybrid vehicles, certified and labeled in accordance with federal regulations, to drive in high occupancy vehicle lanes at any time, regardless of the number of passengers.¹⁰⁹⁶

2006: Climate Change Adaptation and Market-Based Solutions

Governor Bush signed a \$100 million Renewable Energy Technologies and Energy Efficiency Act in June 2006, creating the Florida Energy Commission to advise the legislature on state energy policies based on principles of reliability, affordability, efficiency, and diversity. The Act required that the first report of the Commission, due before December 2007, include recommended steps and a schedule for the development of a state climate action plan. The Act provides rebates for photovoltaic and solar thermal technology installations on commercial buildings and a sales tax exemption for the purchase of energy efficient products.¹⁰⁹⁷ The Act also provides matching grants for research and development of alternative energy vehicles and “next generation” technologies.¹⁰⁹⁸ It also authorizes a corporate income tax credit for businesses that invest in renewable energy-production.¹⁰⁹⁹

2007: Climate Change Agreements, Greenhouse Gas Reduction, and Green Building

In May 2007, Florida and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”¹¹⁰⁰

Governor Crist signed three executive orders (EO) in July 2007, introducing the state’s energy policy. EO 07-126 entitled, *Leadership by Example: Immediate Actions to Reduce Greenhouse Gas Emissions from Florida State Government*, mandates that the state government reduce its greenhouse gas (GHG) emissions by 10% by 2012, 25% by 2017, and 40% by 2025.¹¹⁰¹ Crist recommended that to attain these goals the Department of Management Services (DMS) adopt the U.S. Green Building Council’s LEED standards for new state government buildings and all existing DMS buildings, lease only energy-efficient buildings, purchase only energy efficient vehicles, and use ethanol and biofuels when possible.¹¹⁰²

EO 07-127 entitled, *Immediate Actions to Reduce Greenhouse Gas Emissions within Florida*, calls for a statewide reduction of utility GHG emissions to 2000 levels by

¹⁰⁹⁶ *Id.* § 316.0741.

¹⁰⁹⁷ S.B. 888, 2006 Leg., Reg. Sess. (Fla. 2006).

¹⁰⁹⁸ *Id.*

¹⁰⁹⁹ *Id.*

¹¹⁰⁰ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007),

http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

¹¹⁰¹ Fla. Exec. Order 07-126 (Fla. 2007).

¹¹⁰² *Id.*

2017, 1990 levels by 2025, and 80% of 1990 levels by 2050.¹¹⁰³ The EO further calls for the adoption of California's motor vehicle emission standards: a 22% reduction by 2012 and a 30% reduction by 2016; a statewide diesel engine idle reduction standard; an increase in new construction energy performance by at least 15% from the 2007 Energy Code; a 15% increase in energy efficiency for energy-efficient consumer appliances; an increase to 20% of electricity generated by renewables, especially wind and solar sources; and the establishment of a net-metering program.¹¹⁰⁴

On July 13, 2007 Governor Crist approved EO 07-128, establishing the Florida Governor's Action Team on Energy and Climate Change, which is charged with creating an Energy and Climate Change Action Plan to achieve the GHG targets set out in EO 07-127.¹¹⁰⁵

2008: Climate Change Adaptation, Renewable Portfolio Standards, and Green Building

On February 14, 2008, Governor Crist released Florida's *First Comprehensive Assessment of Greenhouse Gas Emissions Produced by the State Government*.¹¹⁰⁶ The study will be used to track GHG emissions in order to make state vehicles and buildings more efficient, as outlined in EO 07-126.¹¹⁰⁷

At the 2008 Serve to Preserve Florida Summit on Climate Change, Governor Crist signed House Bill (H.B.) 7135, creating various climate change mitigation strategies.¹¹⁰⁸ This Bill contains the Florida Climate Protection Act, which enabled the Department of Environmental Protection to develop a GHG cap-and-trade program for electric-utilities. It also mandated that the Public Service Commission (PSC) develop a renewable portfolio standard (RPS) by February 1, 2009. The Act additionally required that all gasoline contain 10% ethanol by 2011, and it required updated and expanded appliance efficiency standards. Finally, the Act required that a nationally recognized green building certification program certify all new state-financed building construction and renovations.¹¹⁰⁹ The purpose of these initiatives was to achieve the GHG emission levels and the renewable energy standard set forth in EO 07-127.

In July 2008, Florida and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.¹¹¹⁰ The NGA

¹¹⁰³ Fla. Exec. Order 07-127 (Fla. 2007).

¹¹⁰⁴ *Id.*

¹¹⁰⁵ Fla. Exec. Order 07-128 (2007).

¹¹⁰⁶ Press Release, Serve to Preserve, Governor Crist Announces Baseline Measurement for State Government Greenhouse Gas Emissions (Feb. 14, 2008), http://web.archive.org/web/20080828092105/http://www.myfloridacclimate.com/env/home/news_events/governor_crist_announces_baseline_measurement_for_state_government_greenhouse_gas_emissions.

¹¹⁰⁷ *Id.*

¹¹⁰⁸ H.B. 7135, 2008 Leg., Reg. Sess. (Fla. 2008).

¹¹⁰⁹ *Id.*

¹¹¹⁰ Press Release, Nat'l Governors Ass'n, NGA Awards Clean Energy Grants to 12 States (June 30, 2008), <http://web.archive.org/web/20080703234533/http://www.nga.org/portal/site/nga/menuitem.6c9a8a9ebc6ae07eee28aca9501010a0/?vgnnextoid=feecd9b353ada110VgnVCM1000001a01010aRCRD>.

Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards are designed to help develop greater energy efficiency, conservation, and clean energy resources.¹¹¹¹

In September 2008, Florida won a \$495,708 grant from the federal Department of Energy (DOE) to implement an energy efficient model state code for building construction and renovation.¹¹¹² Florida also made progress toward curbing its GHG emissions in the transportation sector when the Environmental Regulation Commission adopted California's Motor Vehicles Emissions Standards.¹¹¹³ In November, Governor Crist visited California to co-host the Governors' Global Climate Summit.¹¹¹⁴

2009: Climate Change Adaptation, Energy Efficiency, Renewable Energy, Renewable Portfolio Standards, American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

Governor Crist addressed the Florida Energy & Climate Commission's first meeting on January 15, 2009.¹¹¹⁵ At the first meeting, the Commission discussed Proposed Rule 62-16, containing a proposed renewable energy and energy efficiency grant program, solar rebate program, and renewable energy investment tax credit.¹¹¹⁶ The Commission also discussed a draft rule of the Green Governments Grant Program. A workshop on the development of these draft rules was held on March 20, 2009.¹¹¹⁷

At the Commission's meeting on January 26, 2009, the Florida Oceans and Coastal Council presented its *Climate Change Report*.¹¹¹⁸ The Council found that Florida's reef building corals are 1 to 1.5 Celsius closer to their upper temperature limits than they were one hundred years ago, sea level rise around Florida has been one inch or less per decade, and that this rate will continue or accelerate in the future with the potential to damage coastal development and ecosystems, especially in the Pensacola and Miami-to-Palm-Beach corridors, which are vulnerable to salt water intrusion in the public

¹¹¹¹ *Id.*

¹¹¹² Press Release, U.S. Dep't of Energy, DOE Announces \$6.6 Million in Competitive Grant Selections For Innovative State Efficiency, Renewable Initiative (Sept. 8, 2008), <http://web.archive.org/web/20080916023724/http://energy.gov/6515.htm>.

¹¹¹³ Press Release, Fla. Dep't of Env'tl. Prot., Statement from Florida Department of Environmental Protection Secretary Michael W. Sole Regarding the Environmental Regulation Commission's Adoption of the California Motor Vehicle Emission Standards Rule (Dec. 2, 2008), http://web.archive.org/web/20100420130607/http://www.dep.state.fl.us/secretary/news/2008/12/1202_01.htm.

¹¹¹⁴ *Governor Crist Joins Governors, International Leaders to Address Climate Change*, PROJECT VOTE SMART (Nov. 19, 2008), <http://votesmart.org/public-statement/397536/> (original press release not found).

¹¹¹⁵ Press Release, Fla. Governor, Governor Crist Announces First Meeting of the Florida Energy & Climate Commission (Jan. 15, 2009), <http://web.archive.org/web/20090118133500/http://flgov.com/release/10460>.

¹¹¹⁶ *See generally Meetings and Workshops*, FLA. ENERGY AND CLIMATE COMM'N (Jan. 15, 2009).

¹¹¹⁷ *See generally Meetings and Workshops*, FLA. ENERGY AND CLIMATE COMM'N (Mar. 20, 2009).

¹¹¹⁸ *See generally Meetings and Workshops*, FLA. ENERGY AND CLIMATE COMM'N (Jan. 26, 2009).

water supply.¹¹¹⁹ The Council recognized that Florida has already started to experience the effects of climate change and that the severity of these effects will depend upon how rapidly sources of harmful levels of GHG emissions can be eliminated.

Governor Crist publicly supported President Obama's directive to the U.S. EPA to reconsider "California's request for a federal waiver to regulate vehicle tailpipe emissions under the Clean Air Act" on January 26, 2009.¹¹²⁰

Governor Crist and eleven other governors signed a letter to President Obama on January 29, 2009, urging the President to form a strong state/federal leader partnership in initiating a national climate change program.¹¹²¹ This letter was predicated upon the President's letter to the Governors' Global Climate Summit where he offered the governors a partnership with the White House in addressing climate change issues. The governors believed that their states have played a leading role in confronting these issues and stated, "It is crucial that we build on our states' momentum."¹¹²² The letter also contained suggestions for how a national climate change program should be implemented. One of these suggestions is for the national government to recognize private investments that have been made in current cap-and-trade programs and to preserve the clean energy plans that are funded by the proceeds from these programs.¹¹²³

In February 2009, Governor Crist discussed environmental conservation and renewable energy investment opportunities in Florida with Ted and Beau Turner and T. Boone Pickens.¹¹²⁴ Also in February, Crist applauded Florida Atlantic University's installation of a solar panel roof on one of its campuses.¹¹²⁵ Two days later, he released his proposed 2009-2010 budget that promoted clean emission and renewable energy policies.¹¹²⁶

¹¹¹⁹ *The Effects of Climate Change on Florida's Ocean & Coastal Resources*, FLORIDA OCEANS AND COASTAL COUNCIL, http://www.floridaoceanscouncil.org/reports/Climate_Change_Report.pdf (Sept. 26, 2013).

¹¹²⁰ *Statement by Governor Charlie Crist Regarding President Barack Obama's Announcement on Tailpipe Emission Standards*, PROJECT VOTE SMART (Jan. 26, 2009), [http://votesmart.org/public-statement/407218/\(original press release not found\)](http://votesmart.org/public-statement/407218/(original%20press%20release%20not%20found)).

¹¹²¹ Letter from Arnold Schwarzenegger, Governor of Cal., M. Jodi Rell, Governor of Conn., Charlie Crist, Governor of Fla., Kathleen Sebelius, Governor of Kan., Martin O'Malley, Governor of Md., Deval Patrick, Governor of Mass., John S. Corzine, Governor of N.J., Bill Richardson, Governor of N.M., David Paterson, Governor of N.Y., Theodore R. Kulongoski, Governor of Or., Christine O. Gregoire, Governor of Wash., Jim Doyle, Governor of Wis., to Barack Obama, President of the United States of America (Jan. 29, 2009), <http://web.archive.org/web/20090214185812/http://www.wisgov.state.wi.us/docview.asp?docid=15821>.

¹¹²² *Id.* at 1.

¹¹²³ *Id.* at 2.

¹¹²⁴ *Governor Crist Tours Youth Conservation Center*, WCTV (Feb. 17, 2009), <http://www.wctv.tv/news/headlines/39728472.html>.

¹¹²⁵ *Governor Crist Applauds Florida Atlantic University's Solar Roof*, PROJECT VOTE SMART (Feb. 18, 2009), <http://votesmart.org/public-statement/409853/governor-crist-applauds-florida-atlantic-universitys-new-solar-roof#.UkYKaxbtPLw> (original press release not found).

¹¹²⁶ Press Release, Agency for Workforce Innovation, Governor Crist Unveils 2009-10 Budget, Legislative Priorities Aimed at Strengthening Florida's Economy (Feb. 20, 2009), http://www.floridajobs.org/publications/news_rel/Crist_09_10_budget.htm.

In February 2009, under Florida's American Recovery and Reinvestment Act (ARRA) money, the state received \$30.4 million in Energy Efficiency and Conservation Block Grants with \$126 million going towards energy efficiency and renewable energy projects and \$14.4 million going towards the solar rebate program.¹¹²⁷

On March 12, 2009, the DOE announced that Florida is eligible for \$126,089,000 under the State Energy Program of the ARRA.¹¹²⁸ On March 23, Governor Crist wrote a letter to Secretary of Energy Chu stating that Florida meets the requirements of Section 410 of the ARRA, a condition that must be met in order to receive funding through the State Energy Program.¹¹²⁹ At the end of the month, Crist announced that Florida would receive more than \$168 million through the Energy Efficiency and Conservation Block program funded by the ARRA.¹¹³⁰

On April 30, 2009, Governor Crist announced that the Senate passed a state RPS¹¹³¹ referred to in the Bill as a "Clean Portfolio Standard." The state RPS required public utilities to obtain 7% of their electricity from clean energy sources by 2013, 12% by 2016, 18% by 2019, and 20% by 2021.¹¹³² The Bill eventually died in the House's Energy and Utilities Policy Committee. Crist also signed an agreement with the governors from the 31 other states and territories in the Governors' Energy and Climate Coalition to support federal climate change legislation.¹¹³³ The agreement contains two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.¹¹³⁴

In May 2009, Governor Crist signed H.B. 167, creating a rebate program for energy efficient products.¹¹³⁵ Two months later, he announced that nine energy efficient

¹¹²⁷ *The Florida Office of Economic Recovery, State & Local Governments, Energy Efficiency and Conservation Block Grant Program Florida Recovery Act*, FLORIDA ECONOMIC RECOVERY, <http://flarecovery.com/about/state-and-local-projects/renewable-energy/energy-efficiency-block-grant-to-fund-green-government-grant-program> (Sept. 26, 2013).

¹¹²⁸ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

¹¹²⁹ Letter from Charlie Crist, Governor of Fla., to Steven Chu., Sec'y U.S. Dep't of Energy (Mar. 23, 2009).

¹¹³⁰ *State, Local and Tribal Governments to Receive \$168.8 Million in Stimulus Funds for Energy Efficiency and Conservation*, PROJECT VOTE SMART (Mar. 31, 2009), <http://votesmart.org/public-statement/416083/> (original press release not found).

¹¹³¹ *Statement by Governor Charlie Crist Regarding the Senate's Passage of the Renewable Portfolio Standard*, PROJECT VOTE SMART (Apr. 30, 2009), <http://votesmart.org/public-statement/423183/> (original press release not found).

¹¹³² S.B. 1154, 2009 Leg., Reg. Sess. (Fla. 2009).

¹¹³³ Press Release, Georgetown Climate Center, Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20090817025744/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

¹¹³⁴ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION (May 21, 2009), <http://web.archive.org/web/20090817025755/https://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

¹¹³⁵ Press Release, Fla. Governor, Governor Crist Signs Bill Creating Energy Efficient Rebate Program (May 18, 2009), <http://web.archive.org/web/20110102195934/http://www.flgov.com/release/10755>.

and renewable energy projects received grants totaling \$15 million.¹¹³⁶ Crist then encouraged the growth of biofuel feedstocks in his state at the Farm to Fuel Summit.¹¹³⁷ In August, he announced that Buckeye Technologies would produce 12 megawatts (MW) of electricity from renewable wood resources in Taylor County.¹¹³⁸

2010: Climate Change Adaptation, Energy Efficiency, Green Jobs, Market-Based Solutions, Renewable Energy, and American Recovery & Reinvestment Act (ARRA)

In January 2010, Governor Crist reminded eligible residents of the help available to them through the state's Low-Income Home Energy Assistance Program (LIHEAP), which provides emergency financial assistance to low-income families to help heat their homes.¹¹³⁹ In early 2009, a total of \$101 million was made available from the U.S. Department of Health and Human Services for LIHEAP. The Department of Community Affairs (DCA) has already assisted thousands of Floridians with these funds and expects to assist more than 150,000 residents overall with crisis utility payments.¹¹⁴⁰

Governor Crist also reminded residents of the state's Weatherization Assistance Program (WAP), which received more than \$175 million in funding through ARRA. These funds will provide up to \$6,500 in energy improvements to the homes of more than 19,000 Floridians.¹¹⁴¹ Weatherization provides significant energy efficient improvements to homes, including replacing or repairing water heaters, windows, and doors, and installing insulation and weather stripping, thereby reducing the energy burden on residents.¹¹⁴²

Also in January 2010, Governor Crist announced that \$12.4 million in ARRA grants would go to Boley Centers Inc., Florida State College at Jacksonville, Opportunities Industrialization Centers of America Inc., and Workforce Connection.¹¹⁴³ The grants, known collectively as Pathways Out of Poverty, support programs that provide training and create jobs in energy efficient and renewable energy industries in disadvantaged areas such as Broward County, Duval County, Marion County, and

¹¹³⁶ *Governor Crist Highlights Florida's Renewable Energy Technology Industry*, PROJECT VOTE SMART (July 29, 2009), <http://votesmart.org/public-statement/447962/> (original press release not found).

¹¹³⁷ *Governor Crist Encourages Investment and Increased Use of Florida's Biofuels at the Farm to Fuel Summit*, PROJECT VOTE SMART (July 30, 2009), <http://votesmart.org/public-statement/447965/> (original press release not found).

¹¹³⁸ Press Release, Fla. Governor, Buckeye Technologies Builds Additional Renewable Energy Capacity in Taylor County with Energy Independence Project (Aug. 11, 2009), <http://web.archive.org/web/20090831232812/http://www.flgov.com/release/10954>.

¹¹³⁹ Press Release, Fla. Governor, Governor Crist Reminds Floridians About Low-Income Home Energy Assistance Program (Jan. 19, 2010), <http://web.archive.org/web/20100329004639/http://www.flgov.com/release/11294>.

¹¹⁴⁰ *Id.*

¹¹⁴¹ *Id.*

¹¹⁴² *Id.*

¹¹⁴³ Press Release, Fla. Governor, Governor Crist Announces Additional \$12.4 Million in Green Jobs Grants (Jan. 22, 2010), <http://web.archive.org/web/20100411085429/http://www.flgov.com/release/11302>.

Pinellas County.¹¹⁴⁴ Approximately 2,500 Floridians expected to receive training through these grants.

The Broward County Minority Builders Coalition also received a \$3.2 million ARRA grant, which they will use to train 1,000 workers in technologies that improve energy efficiency. The coalition, which includes Workforce One of Broward County, will train and place workers in occupations involving design and installation of solar energy panels and systems, weatherization of buildings, and LEED certification.¹¹⁴⁵

Governor Crist recommended \$2.1 billion for the 2010-11 budget to safeguard Florida's natural resources. Crist highlighted projects that will secure Florida's economic future, and proposed investments in the Florida Forever land conservation program, renewable energy, water supply, Everglades restoration, and state park improvements.¹¹⁴⁶ The programs Crist highlighted and suggested funding for included: Florida Forever, green energy technologies, everglades restoration, sustainable water resources, underground petroleum tank cleanup and State Park repairs, protection of Florida's fish and wildlife, and agriculture projects.¹¹⁴⁷

In February 2010, Governor Crist announced that \$10 million in ARRA grants would go to the Florida Solar Energy Center in Cocoa Beach. The grant, known as the SunSmart School and E-Shelters (Emergency Shelters) Program, will provide opportunities for state agencies, local governments and businesses to deploy renewable energy and energy-efficient technologies.¹¹⁴⁸ The grant promoted renewable energy through installation of solar energy systems, also known as photovoltaic (PV) systems, and also provided power during outages through the program's PV systems at the schools and shelters where the Program is administered. Additionally, the Program supports solar-energy education initiatives for students, and renewable energy curriculum training for teachers.¹¹⁴⁹

The Florida ENERGY STAR® Appliance Rebate Program provided rebates on approximately 68,000 appliances purchased from Florida retailers, including: refrigerators, freezers, washers, dishwashers, tank-less gas water heaters, and room air conditioners.¹¹⁵⁰ Those that qualify get a rebate of 20% off the retail price and \$75 for recycling the old appliance, up to \$1,500 per household.¹¹⁵¹

¹¹⁴⁴ *Id.*

¹¹⁴⁵ *Id.*

¹¹⁴⁶ Press Release, Fla. Governor, Governor Crist Recommends \$2.1 Billion Environmental Budget, Revives Florida Forever (Jan. 22, 2010), <http://web.archive.org/web/20100408073614/http://www.flgov.com/release/11304>.

¹¹⁴⁷ *Id.*

¹¹⁴⁸ Press Release, Fla. Governor, Governor Crist Announces \$10 Million for Solar Energy in Schools and Emergency Shelters (Feb. 15, 2010), <http://web.archive.org/web/20100326075055/http://www.flgov.com/release/11365>.

¹¹⁴⁹ *Id.*

¹¹⁵⁰ Press Release, Fla. Governor, Governor Crist Urges Floridians to Plan for Purchase of Energy Star Appliances (Apr. 14, 2010), <http://web.archive.org/web/20100418185451/http://www.flgov.com/release/11516>.

¹¹⁵¹ *Id.*

In October 2010, Florida purchased 26,800 acres of land from the U.S. Sugar Corporation to continue the restorations of the Everglades, an important defense against sea level rise for the state.¹¹⁵²

2011: Renewable Energy

In February 2011, the Wind Capital Group made plans to develop the first wind farm in Florida. The \$250 million, 150 MW project will span 10,000 acres and will also be the first large wind project in the Southeast.¹¹⁵³ However, this project has yet to begin construction.

Florida held an Energy Summit in October 2011 to bring together stakeholders to discuss the development of Florida's energy sector. Topics ranged from biofuels to alternative vehicles to solar.¹¹⁵⁴

2012: Renewable Energy

In March 2012, the Florida Office of Energy released its first annual report since transferring to the Department of Agriculture and Consumer Services on July 1, 2011.¹¹⁵⁵ The report highlights the shift of the Office's focus from administering grants to developing an energy policy for the state.¹¹⁵⁶

On April 14, 2012 Florida enacted H.B. 7117, a bipartisan energy Bill that includes renewable energy tax credits for production and investment as well as support for efficiency improvements and rebates for renewable technologies.¹¹⁵⁷

¹¹⁵² Press Release, Fla. Governor, Statement by Governor Charlie Crist Regarding the Purchase of Nearly 26,800 Acres of Land for Everglades Restoration From the U.S. Sugar Corporation (Oct. 12, 2010), <http://web.archive.org/web/20101018142937/http://www.flgov.com/release/11900>.

¹¹⁵³ *In Case You Missed It: February 18, 2011*, FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES (Feb. 18, 2011), http://web.archive.org/web/20111103134846/http://freshfromflorida.com/newsroom/newsletters/in_case_you_missed_it/2011/02182011.html.

¹¹⁵⁴ Press Release, Fla. Dep't of Agric. and Consumer Services, Commissioner Adam Putnam Provides Vision on the Future of Energy in Florida (Oct. 27, 2011), <http://www.freshfromflorida.com/News-Events/Press-Releases/2011-Press-Releases/Commissioner-Adam-Putnam-Provides-Vision-on-the-Future-of-Energy-in-Florida>.

¹¹⁵⁵ Press Release, Fla. Dep't of Agric. and Consumer Services, Commissioner Putnam Releases First Annual Report of Office of Energy Since Transfer to Florida Department of Agriculture and Consumer Services (Mar. 22, 2012), <http://www.freshfromflorida.com/News-Events/Press-Releases/2012-Press-Releases/Commissioner-Putnam-Releases-First-Annual-Report-of-Office-of-Energy-Since-Transfer-to-Florida-Department-of-Agriculture-and-Consumer-Services>.

¹¹⁵⁶ *Id.*

¹¹⁵⁷ *Florida Revives Lapsed Tax Credits for Renewable Electricity*, CENTER FOR CLIMATE & ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2012/florida-revives-lapsed-tax-credits-renewable-electricity> (Sept. 26, 2013).

On August 15, 2012, Florida hosted the Second Annual Florida Energy Summit.¹¹⁵⁸ At the Summit Commissioner Putnam highlighted the state's renewed emphasis on an "all-of-the-above" energy strategy.¹¹⁵⁹

2013: Transportation/Fuel

On May 31, 2013 Governor Scott signed H.B. 4001 into law, which repealed the Florida Renewable Fuel Standard Act.¹¹⁶⁰ This Bill removed the requirement that all gasoline offered for sale in Florida include a percentage of ethanol.¹¹⁶¹

In an attempt to incentivize natural gas use in Florida, Governor Scott signed H.B. 579 on June 14, 2013.¹¹⁶² The Bill repealed the fee program for motor vehicles fueled by alternative fuels, repealed the sales tax on alternative fuels, established a new fuel tax structure for motor vehicles powered by natural gas, and created a natural gas fuel fleet vehicle rebate program.¹¹⁶³

GEORGIA

2001: Market-Based Solutions

On April 28, 2001, Governor Barnes signed into law Georgia's Cogeneration and Distributed Generation Act of 2001.¹¹⁶⁴ The Act's net metering requirement allows customer generators to be compensated at a higher price than the avoided cost rate¹¹⁶⁵ if the utility uses the power to supply a green pricing program.¹¹⁶⁶

2004: Greenhouse Gas Reduction

In 2004, legislators authorized the development of a Carbon Registry in Georgia.¹¹⁶⁷ One purpose of the Registry is to encourage voluntary actions to reduce

¹¹⁵⁸ Press Release, Fla. Dep't of Agric. and Consumer Services, Commissioner Adam Putnam Welcomes More Than 500 to Second Annual Florida Energy Summit (Aug. 15, 2012), <http://web.archive.org/web/20130307232919/http://freshfromflorida.com/newsroom/press/2012/08152012.html>.

¹¹⁵⁹ Press Release, Fla. Dep't of Agric. and Consumer Services, Commissioner Adam Putnam Calls for an All-of-the-Above Approach to Energy Policy (Aug. 16, 2012), <http://web.archive.org/web/20130307232456/http://freshfromflorida.com/newsroom/press/2012/08162012.html>.

¹¹⁶⁰ H.B. 4001, 2013 Leg., Reg. Sess. (Fla. 2013), <http://www.flsenate.gov/Session/Bill/2013/4001/BillText/Filed/PDF>.

¹¹⁶¹ *Id.*

¹¹⁶² H.B. 579, 2013 Leg., Reg. Sess. (Fla. 2013), <http://flsenate.gov/Session/Bill/2013/0579/BillText/er/PDF>.

¹¹⁶³ *Id.*

¹¹⁶⁴ GA. CODE ANN. §§ 46-3-50 – 46-3-56 (West 2001).

¹¹⁶⁵ Avoided cost is the marginal cost for the same amount of energy acquired through another means such as through purchase from an alternate supplier.

¹¹⁶⁶ GA. CODE ANN. § 46-3-56 (West 2001).

¹¹⁶⁷ GA. CODE ANN. §§ 12-6-220 – 12-6-232 (West 2006).

greenhouse gas (GHG) emissions.¹¹⁶⁸ The law directs the Georgia Forestry Commission and The University of Georgia to define a Carbon Registry protocol for Georgia by using Traditional Industries Program research funds.¹¹⁶⁹ The Registry's protocol was developed in July 2007.¹¹⁷⁰

Georgia offers an income tax credit of 10 to 20% of the cost to purchase or lease a zero or low-emission vehicle.¹¹⁷¹ Hybrid electric vehicles (EVs) with fewer than two passengers will also be authorized to use high occupancy vehicle lanes if the U.S. Congress or U.S. Department of Transportation approves such authorization through legislative or regulatory action.¹¹⁷²

2008: Fuels, Green Jobs, and Renewable Energy

In the summer of 2008, Governor Perdue signed House Bill (H.B.) 272, authorizing sales tax and use tax exemptions for conventional fuels used in the manufacturing process.¹¹⁷³ These exemptions expired in 2011. Perdue also announced the State's first solar manufacturing plant later that summer.¹¹⁷⁴ It is estimated that the plant will provide one hundred local jobs.

2009: American Recovery & Reinvestment Act (ARRA) and Green Technology

On March 12, 2009, the Department of Energy (DOE) announced that Georgia is eligible for \$82,495,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).¹¹⁷⁵ ARRA funding and the Georgia Environmental Facilities Authority provided \$63.1 million to fund 135 energy efficiency projects in September 2009.¹¹⁷⁶ That same month, the state also held an ENERGY STAR® sales tax holiday.¹¹⁷⁷

¹¹⁶⁸ *Id.* § 12-6-223.

¹¹⁶⁹ *Id.* § 12-6-224.

¹¹⁷⁰ *The Georgia Carbon Sequestration Registry: Protocol*, GEORGIA CARBON SEQUESTRATION REGISTRY (July, 2007), <http://www.gacarbon.org/downloads/GFC%20Carbon%20Registry%20Protocol%20v1.0.pdf>.

¹¹⁷¹ GA. CODE ANN. § 48-7-40.16 (West 2005).

¹¹⁷² GA. CODE ANN. § 32-9-4 (West 2010).

¹¹⁷³ H.B. 272, 149th Gen. Assemb., Reg. Sess. (Ga. 2008).

¹¹⁷⁴ Press Release, Office of the Governor, Georgia Welcomes its First Solar Cell Manufacturing Facility (June 5, 2008), http://web.archive.org/web/20100528002255/http://gov.georgia.gov/00/press/detail/0,2668,78006749_115144080_115139031,00.html.

¹¹⁷⁵ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

¹¹⁷⁶ Press Release, Office of the Governor, Energy Efficiency Project to Help State Meet Governor's Energy Challenge (Sept. 2, 2009), http://web.archive.org/web/20100527221758/http://gov.georgia.gov/00/press/detail/0,2668,78006749_148266833_148263780,00.html.

¹¹⁷⁷ Press Release, Office of the Governor, Georgia to Hold Annual ENERGY STAR, WaterSense Sales Tax Holiday (Sept. 29, 2009), http://web.archive.org/web/20100527221830/http://gov.georgia.gov/00/press/detail/0,2668,78006749_148266833_149347052,00.html.

Governor Perdue announced in December 2009 that as a result of a partnership between Diamond Alternative Energy, a wholly owned subsidiary of Valero Energy Corporation, and American Process, Inc. (API) the city of Thomaston will be home to a new biorefinery demonstration plant. The demonstration plant will use API's proprietary biorefinery technology for the production of cellulosic fuels and chemicals.¹¹⁷⁸ The new facility will demonstrate that cellulosic biorefineries are feasible and economically viable on a scale that will allow rapid commercial replication.¹¹⁷⁹

2010: Energy Efficiency, Renewable Energy, and Green Technology

By March 2010, 64 communities in Georgia had earned grant funds for small-to-medium sized cities and counties totaling \$13.3 million for energy efficiency and renewable energy projects through the Energy Efficiency and Conservation Block Grant (EECBG) program from ARRA.¹¹⁸⁰ Between February 2009 and March 2010, the Georgia Environmental Finance Authority awarded \$185 million in stimulus funds for following energy efficiency and renewable energy programs; \$99 million for the Weatherization Assistance Program to weatherize approximately 13,000 low-income homes statewide; \$63.1 million for 135 energy efficiency projects in state facilities; \$10 million for 16 renewable energy and energy efficiency (commercial, industrial, and residential) projects; \$4.5 million for 14 solar energy projects through the Clean Energy Property Rebate Program; and \$8.6 million for the ENERGY STAR® Appliance Rebate Program.

In April 2010 ZF Group, a leading global automotive supplier for driveline and chassis technology, announced that it would expand its Georgia plant to manufacture gearboxes for wind turbine energy generation.¹¹⁸¹

The Water Stewardship Act of 2010 went into effect on June 2, 2010.¹¹⁸² It included incentives for increasing water stewardship and new conservation requirements. Beginning in July 2012, the Act required efficient water fixtures in all new residential and commercial construction; installation of efficient cooling towers in new industrial construction; and sub-metering for all new residential and commercial multi-unit projects so that each unit will receive consumption reports to encourage conservation

¹¹⁷⁸ Press Release, Office of the Governor, Biorefinery Demonstration Plant Planned for Upson County (Dec. 21, 2009), http://web.archive.org/web/20110511161522/http://www.georgia.gov/00/press/detail/0,2668,78006749_153128635_154425525,00.html.

¹¹⁷⁹ *Id.*

¹¹⁸⁰ Press Release, Office of the Governor, Cities, Counties Receive Grants for Energy Efficiency, Renewable Energy (Mar. 25, 2010), http://www.georgia.gov/00/press/detail/0,2668,78006749_157123599_157926274,00.html.

¹¹⁸¹ Press Release, Office of the Governor, ZF Group Announces Plans for Gainesville Wind Energy Plant (Apr. 23, 2010), http://web.archive.org/web/20110511083355/http://www.georgia.gov/00/press/detail/0,2668,78006749_157126501_159115795,00.html.

¹¹⁸² S.B. 370, 2010 Leg., Reg. Sess. (Ga. 2010).

measures.¹¹⁸³ The Act further instructs eight different state agencies to consider local government and water provider grant and loan programs to encourage retrofit programs on existing construction, which could range from retrofitting water fixtures to installing drought resistant landscapes to using grey water and implementing conservation pricing.¹¹⁸⁴ It also tasks the Georgia Environmental Protection Division with setting standards for water loss and leak detection for all medium and large public water systems, which account for 91% of Georgia's water customers.¹¹⁸⁵

2011: Renewable Energy

In January 2011, Georgia Power announced that, in partnership with Dalton Utilities and United Renewable Energy, it would construct a new solar facility that will eventually produce up to 1 megawatt of electricity.¹¹⁸⁶ The project will develop in three phases; the first phase was completed in late March 2011, the second phase began construction in January 2012, and the third and final phase is scheduled to be completed by January 2014.¹¹⁸⁷

2012: Energy Efficiency

Governor Deal signed senate Bill (S.B.) 113 on April 12, 2012. S.B. 113 changed the definition of "public works construction" projects for local governments in the Georgia Code to exempt projects local governments may enter into that would normally be covered under the *Guaranteed Energy Savings Performance Contracting Act*.¹¹⁸⁸ This Bill requires local governments to issue a request for proposal when entering into a guaranteed energy savings performance contract and additionally publicly advertise the energy services contract opportunity.¹¹⁸⁹

2013: Energy Efficiency

Governor Deal signed S.B. 242 on May 6, 2013, amending the Georgia Code section 36-42-8, and authorizing the downtown development authorities to provide financing to property owners citywide for the purpose of installing or modifying improvements to their property in order to reduce energy or water consumption or to install an improvement to such property that produces energy from renewable resources.¹¹⁹⁰

¹¹⁸³ Press Release, Office of the Governor, Governor Signs Water Stewardship Act (June 2, 2010), http://www.georgia.gov/00/press/detail/0.2668.78006749_160096907_160096913.00.html.

¹¹⁸⁴ *Id.*

¹¹⁸⁵ *Id.*

¹¹⁸⁶ Press Release, Georgia Power, Georgia Power Strikes Solar Power Deal With Dalton Utilities (Jan. 31, 2011), http://www.georgiapower.com/news/iframe_pressroom.asp.

¹¹⁸⁷ *Solar Project: Dalton Solar Plant*, GEORGIA POWER (Jan. 26, 2012), <http://www.georgiapower.com/about-energy/energy-sources/solar/solar-projects/dalton.cshtml>.

¹¹⁸⁸ S.B. 113, 2012 Leg., Reg. Sess. (Ga. 2012), <http://www.legis.ga.gov/Legislation/20112012/126527.pdf>.

¹¹⁸⁹ *Id.*

¹¹⁹⁰ S.B. 242, 2013 Leg., Reg. Sess. (Ga. 2013), <http://www.legis.ga.gov/Legislation/20132014/136293.pdf>.

HAWAII

1990: Market-Based Solutions and Renewable Energy

Since 1990, Hawaii'i has offered income tax credits to both individual residents and corporations buying and installing renewable power generators.¹¹⁹¹ Currently, the credit is 35% of the purchase price and installation costs of a solar power generator; the credit is 20% for wind power systems.¹¹⁹²

1998: Climate Change Agreements

Hawaii'i enacted their first climate change action plan in 1998.¹¹⁹³

2001: Market-Based Solutions

Legislation enacted in 2001 and revised in 2004 and 2005 requires utilities in Hawaii'i to offer net metering to customers with renewable power systems.¹¹⁹⁴ Utilities are barred from requiring that their customers make additional payments for net metering.¹¹⁹⁵

2004: Renewable Portfolio Standards

In 2004, Hawaii'i established a renewable portfolio standard (RPS) requiring utilities to generate 10% of their electricity from renewable power generators by 2011 and 20% by 2021.¹¹⁹⁶ The same legislation mandates that, once every five years, Hawaii'i's Public Utilities Commission (PUC) must fund a study by the University of Hawaii'i's Natural Energy Institute to determine whether the RPS should be revised.¹¹⁹⁷ Based on the study's findings, the PUC can revise the RPS.¹¹⁹⁸

2005: Renewable Energy

Since 2005, Hawaii'i has banned covenants or zoning laws restricting residents from installing solar power systems.¹¹⁹⁹ The same legislation requires homeowner associations to adopt rules providing for the installation of solar power generators.¹²⁰⁰

¹¹⁹¹ HAW. REV. STAT. ANN. § 235-12.5 (LexisNexis 2009).

¹¹⁹² *Id.*

¹¹⁹³ STATE OF HAW. DEP'T OF BUS., ECON. DEV. & TOURISM ENERGY, RES., AND TECH. DIV. AND DEP'T OF HEALTH CLEAN AIR BRANCH, HAWAII CLIMATE CHANGE ACTION PLAN (1998), <http://ase.tufts.edu/polsci/faculty/portney/climatePlan/HawaiiActionPlan1998.pdf>.

¹¹⁹⁴ *Id.* §§ 269-101 – 269-111.

¹¹⁹⁵ *Id.*

¹¹⁹⁶ *Id.* § 269-91 – 269-94.

¹¹⁹⁷ *Id.*

¹¹⁹⁸ *Id.*

¹¹⁹⁹ *Id.* § 196-7.

¹²⁰⁰ *Id.*

2006: Renewable Energy, Green Building, Market-Based Solutions, and Transportation/Fuels

Since 2006 Hawaiian government agencies planning the construction or renovation of state-funded facilities must consider the potential costs and benefits of solar-powered water-heating systems.¹²⁰¹

In June 2006, Hawai'i became the first state in the nation to require the installation of solar water heating systems on new single-family homes.¹²⁰² Act 204 prohibits the issuing of building permits for single-family homes that do not have solar water heaters, and the Act took effect on January 1, 2010.¹²⁰³ It also allows homebuilders to use gas-demand-water heaters if the home contains another gas appliance.

Hawai'i adopted several energy related laws in 2006. Senate Bill (S.B.) 2957 encouraged the use of renewable energy and renewable fuels by raising the tax credit for specific renewable technologies, making the tax credit permanent and establishing a pilot financing program for residential solar hot water heating systems.¹²⁰⁴ It also supports production of biodiesel and cellulosic ethanol and establishes the Hawai'i Renewable Hydrogen Program to move the state towards a renewable hydrogen economy.¹²⁰⁵ House Bill (H.B.) 2175 appropriates \$5 million for solar power systems for public schools and instructs state agencies to maximize energy efficiency.¹²⁰⁶ The Bill also encourages the construction of green buildings by giving them priority when they apply for construction permits and sets green building standards for state buildings.¹²⁰⁷ Finally, the legislation requires 20% of the state's new vehicles to be hybrids or alternative fuel vehicles with the percentage increasing over time.¹²⁰⁸ S.B. 3185 established a public benefits fund for energy efficiency programs and allows the PUC to set penalties for failing to meet the state's RPS.¹²⁰⁹

2007: Climate Change Agreements and Greenhouse Gas Reduction

In May 2007, Hawai'i and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”¹²¹⁰

¹²⁰¹ HAW. REV. STAT. § 196-9 (West 2006).

¹²⁰² HAW. REV. STAT. § 196-9 – (official classification pending) (20068).

¹²⁰³ *Id.*

¹²⁰⁴ S.B. 2957, 23rd Leg., Reg. Sess. (Haw. 2006).

¹²⁰⁵ *Id.*

¹²⁰⁶ H.B. 2175, 23rd Leg., Reg. Sess. (Haw. 2006).

¹²⁰⁷ *Id.*

¹²⁰⁸ *Id.*

¹²⁰⁹ S.B. 3185, 23rd Leg., Reg. Sess. (Haw. 2006).

¹²¹⁰ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

In June 2007, Governor Lingle signed H.B. 226, *The Global Warming Solutions Act of 2007*, which directed a statewide decrease in GHG emissions to 1990 levels or lower by January 1, 2020.¹²¹¹ The Act also created the Greenhouse Gas Emissions Reduction Task Force, which it charged with preparing a work plan and regulatory scheme aimed at achieving this goal.¹²¹²

In 2007, Hawai'i passed H.B. 226 establishing a "GHG emissions reduction task force to prepare a work plan and regulatory scheme for implementing reductions to achieve the statewide GHG limit."¹²¹³

2008: Renewable Energy, Climate Change Agreements, Green Building, Green Technology, Market-Based Solutions, and Transportation/Fuels

On January 28, 2008, Hawai'i and the U.S. Department of Energy (DOE) formed a partnership that will seek to move the state's energy system from one that is fueled primarily by oil to one that is powered mainly by renewable energy.¹²¹⁴ The agreement, called the Hawai'i Clean Energy Initiative, aims to have 70% of all of Hawai'i's energy needs generated by renewable energy sources by 2030.¹²¹⁵ As part of the partnership, the DOE will help Hawai'i develop its renewable energy sources in both the public and private sectors.¹²¹⁶

In March 2008, Governor Lingle announced a collaborative public-private partnership with the DOE's National Renewable Energy Laboratory (NREL) "as part of the Administration's ongoing efforts to increase the state's energy independence."¹²¹⁷ The memorandum of understanding (MOU) established a NREL partner site at UPC Wind's Kaheawa Wind Farm on Maui.¹²¹⁸ The partnership expanded the Hawai'i Clean Energy Initiative signed in January 2008.¹²¹⁹

Also in March 2008, the Hawai'i PUC issued a ruling allowing residents and businesses with electrical generators powered by renewable sources to generate twice as

¹²¹¹ H.B. 226, 24th Leg., Reg. Sess. (Haw. 2007).

¹²¹² *Id.*

¹²¹³ H.B. 226, 24th Leg., Reg. Sess. (Haw. 2007); *Hawaii*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/statelocalclimate/state/tracking/individual/hi.html> (Oct. 1, 2013); see also *Adapting to Climate Change*, STATE OF HAW. OFFICE OF PLANNING, <http://planning.hawaii.gov/czm/initiatives/adapting-to-climate-change-2/> (Oct. 1, 2013). See U.S. Environmental Protection Agency, *Action Plans*, <http://yosemite.epa.gov/oar%5Cglobalwarming.nsf/content/ActionsStateActionPlans.html> (Sept. 7, 2006).

¹²¹⁴ Press Release, U. S. Dep't of Energy, Hawaii and DOE Sign Agreement to Promote Hawaiian Clean Energy (Jan. 28, 2008), http://www.eere.energy.gov/news/news_detail.cfm/news_id=11547.

¹²¹⁵ *Id.*

¹²¹⁶ *Id.*

¹²¹⁷ Press Release, Nat'l Renewable Energy Lab., *NREL Enters Wind Energy Research Partnership in Hawaii* (Apr. 1, 2008), <http://www.nrel.gov/news/press/2008/579.html?print>.

¹²¹⁸ *Id.*

¹²¹⁹ *Id.*

much power.¹²²⁰ The ruling doubles the limit on net energy metering generators to 100 kilowatts for customers on Oahu, Maui, and the Big Island.¹²²¹

Three bills were signed into law in July 2008 that seek to increase renewable energy generation and reduce the state's dependence on foreign oil. H.B. 2863 streamlines the permitting process for the siting, development, construction, and operation of new renewable energy facilities of at least 200 megawatts (MW) of electricity.¹²²² Act 208 establishes a full-time renewable energy facilitator within the Hawai'i Department of Business, Economic Development, and Tourism.¹²²³ Finally, Act 209 expands existing loan programs to enable farmers to develop renewable energy for their farms.¹²²⁴ The maximum loan given will be \$1.5 million or 85% of the project cost, whichever is less, for up to forty years.

In July 2008, Hawai'i and eleven other states received a \$50,000 competitive grant from the National Governors Association (NGA) to study electric vehicle (EV) policy issues.¹²²⁵ The NGA Center for Best Practices awarded grants of \$50,000 to states as part of its Clean Energy States Grant Program. The awards are designed to help develop greater energy efficiency, conservation, and clean energy resources.¹²²⁶

In September 2008, the Hawai'i Department of Business, Economic Development and Tourism was awarded a \$500,000 federal DOE grant to pursue increased use of renewable energy.¹²²⁷

In November 2008, Hawai'i was one of seven states selected by the NGA Center for Best Practices to participate in its Policy Academy for Advanced Energy Strategies for Buildings.¹²²⁸ The Academy will assist in the development of planning and implementation strategies for increased energy efficiency in Hawai'i's public and private buildings.¹²²⁹

On November 18, 2008, Governor Lingle announced a partnership between the Taiwan Industrial Research Institute (TIRI) and Lockheed Martin, Corp. to develop an

¹²²⁰ Protective Order, In the Matter of Public Utilities Commission, (2008) (No. 24089), 2006-0084. <http://web.archive.org/web/20081018171226/http://hawaii.gov/dcca/areas/dca/dno/dno2008>.

¹²²¹ B. J. Reyes, *PUC Increases Limits for Renewable Energy*, THE HONOLULU STAR-BULLETIN (Mar. 22, 2008), <http://archives.starbulletin.com/2008/03/22/news/story04.html>.

¹²²² H.B. 2863, 24th Leg., Reg. Sess. (Haw. 2008).

¹²²³ HAW. REV. STAT. § 201-12.5 (2009).

¹²²⁴ HAW. REV. STAT. § 155-1 (2013).

¹²²⁵ Press Release, Haw. Clean Energy Initiative, State Secures \$1.7 Million in Energy Grants (Sept. 11, 2008), http://www.hawaiicleanenergyinitiative.org/storage/pdf-news-releases/09.11.08_1.7M%20in%20Energy%20Grants%20for%20Hawaii.pdf.

¹²²⁶ *Id.*

¹²²⁷ *Id.*

¹²²⁸ *Hawaii Chosen to Study Advanced Energy Conservation Planning*, PROJECT VOTE SMART (Nov. 13, 2008), <http://votesmart.org/public-statement/397003/#.UkrRFRbtPLw> (original press release not found).

¹²²⁹ *Id.*

Ocean Thermal Energy Conversion (OTEC) pilot plant in Hawai'i.¹²³⁰ OTEC would generate clean renewable energy from the difference in temperature between the ocean's surface and the much colder water and the lower depths.¹²³¹ The technology would provide a consistent base power and facilitate greater energy independence in a state that currently relies on imported fossil fuels for 94% of its energy needs.¹²³²

On December 2, 2008, Governor Lingle launched a partnership with Better Place, Inc., a world leader in sustainability mobility, aimed at the creation of an electric-car network in the state.¹²³³ Hawai'i Energy Companies and Better Place signed a MOU to collaborate on developing the infrastructure and energy sources necessary to supply the "network of public charging spots and battery stations."¹²³⁴ The goal of large-scale EV deployment would further Hawai'i Clean Energy Initiative's goal of 70% clean energy 2030.¹²³⁵ A week later, a partnership with Phoenix Motorcars was announced as part of Lingle's plan to bring EV infrastructure to Maui by 2009.¹²³⁶

2009: American Recovery & Reinvestment Act (ARRA), Green Jobs, Energy Efficiency, Green Buildings, and Renewable Energy

On March 12, 2009, the DOE announced that Hawai'i is eligible for \$25,930,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).¹²³⁷ That same week Governor Lingle announced that two DOE personnel would be assisting Hawai'i with the implementation of wind and solar systems integration.¹²³⁸

According to The Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for Hawai'i, Hawai'i's clean energy economy grew by 2,732 jobs and 356 businesses from 1998 to 2007.¹²³⁹ Moreover, Hawai'i attracted more than \$12 million in capital investment in clean energy between 2006 and 2009.¹²⁴⁰

¹²³⁰ *State of Governor Lingle Announces New Ocean Thermal Energy Partnership*, PROJECT VOTE SMART (Nov. 18, 2008), <http://votesmart.org/public-statement/398371/> (original press release not found).

¹²³¹ *Id.*

¹²³² *Id.*

¹²³³ Press Release, Better Place, Governor Lingle and Better Place Announce Partnership to Offer National Blueprint for Clean Energy in Transportation (Dec. 2, 2008), <http://web.archive.org/web/20090226130517/http://www.betterplace.com/press-room/press-releases-detail/governor-lingle-and-better-place-announce-partnership-to-offer-national-blu/>.

¹²³⁴ *Id.*

¹²³⁵ *Id.*

¹²³⁶ Press Release, Phoenix Motorcars, Governor Lingle, Mayor Tavares and Phoenix Motorcars Announce Intent to Bring Electric Vehicles to Maui by 2009 (Dec. 9, 2009), <http://web.archive.org/web/20081213201649/http://www.phoenixmotorcars.com/news-and-events/releases/2008/pr-081209.php>.

¹²³⁷ U.S. Dep't of Energy, Nat'l Energy Tech. Lab., State Energy Program Formula Grants, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

¹²³⁸ Press Release, Haw. Clean Energy Initiative, U.S. Department of Energy Increases Federal Commitment to Hawaii's Clean Energy Initiative (Mar. 17, 2009), http://www.hawaiiicleanenergyinitiative.org/storage/pdf-news-releases/03.17.09_US%20DOE%20to%20Increase%20Funding%20for%20HCEI.pdf.

¹²³⁹ *Clean Energy Economy Hawaii Fact Sheet*, THE PEW CHARITABLE TRUSTS,

On October 6, 2009, the Hawai'i Department of Accounting and General Services (DAGS) issued a \$33.9 million contract to energy services company Noresco, LLC for a project aimed at improving energy efficiency in state office buildings.¹²⁴¹ The projected increase in energy efficiency will “reduce emissions of carbon dioxide equivalent by 9,917 tons each year.”¹²⁴²

In late October 2009, Governor Lingle announced she would travel to China for a two-week trip promoting tourism and clean energy partnerships.¹²⁴³ Lingle hoped to identify potential partnerships for Hawaiian businesses “to share their expertise in clean energy” and secure Chinese investments in the state that will aid Hawaii in attaining its clean energy goals.¹²⁴⁴

On October 29, 2009, as part of the Hawai'i Clean Energy Initiative, the state issued a request for proposals for an undersea cable environmental impact statement (EIS).¹²⁴⁵ The proposed undersea cable would connect four Hawaiian islands and would allow for the transmission of wind power generated in Maui to be transferred throughout the state's islands.¹²⁴⁶ On that same day, Governor Lingle announced that the state received \$6 million in federal grant money to conduct renewable energy projects, including “upgrad[ing] the energy efficiency of about 400 homestead homes with solar water heaters and compact fluorescent lamps” and “install[ing] photovoltaics on state buildings.”¹²⁴⁷

As part of a November 2009 visit to China, Governor Lingle met with representatives from the China Academy of Engineering (CAE) and the National Reform and Development Commission to exchange ideas on clean energy and energy efficiency initiatives.¹²⁴⁸ As a result of the meeting, the CAE chairman agreed to co-sponsor the

http://www.pge.com/includes/docs/pdfs/about/careers/powerpathway/newseventsmedia/the_cleanedge_economy_allstates_factsheet.pdf (Oct. 1, 2013).

¹²⁴⁰ *Id.*

¹²⁴¹ *Governor, State of Hawai'i Continues Energy Conservation to Lower Electricity Costs, Decrease Dependence on Oil*, PROJECT VOTE SMART (Oct. 6, 2009), <http://votesmart.org/public-statement/459660/> (original press release not found).

¹²⁴² *Id.*

¹²⁴³ *Governor Lingle to Promote Tourism, Clean Energy Partnerships, Economic Development Opportunities in China*, PROJECT VOTE SMART (Oct. 28, 2009), <http://votesmart.org/public-statement/464335/> (original press release not found).

¹²⁴⁴ *Id.*

¹²⁴⁵ Press Release, State of Haw., Governor, Request for Proposal for Undersea Cable EIS Released (Oct. 29, 2009),

http://www.hawaiienergyfuture.com/articles/20091029_NR_Energy_HCEI_Undersea_Cable_RFP.pdf.

¹²⁴⁶ *Id.*

¹²⁴⁷ Press Release, State of Haw., Governor Lingle Announces Agreement on \$6 Million in Energy Projects (Oct. 29, 2009), <http://archive.lingle.hawaii.gov/govgallery/news/releases/2009-news-releases/governor-lingle-announces-agreement-on-6-million-in-energy-projects>.

¹²⁴⁸ Press Release, State of Haw., Governor Lingle Promotes Hawai'i Tourism, Clean Energy Partnership, Export Opportunities in China (Nov. 3, 2009), <http://archive.lingle.hawaii.gov/govgallery/news/releases/2009-news-releases/governor-lingle-promotes-hawaii2018i-tourism-clean-energy-partnership-export-opportunities-in-china>.

2010 Asia-Pacific Clean Energy Summit and Expo that was held in Hawaii the following September.¹²⁴⁹

In late 2009, Governor Lingle released \$1 million for energy improvements in Hawaii's state parks. The funds were used to "design renewable energy sources to power park facilities such as water system pumps, sewer system pumps, booster pumps, trail lighting and rental cabins and kitchens."¹²⁵⁰ Lingle also released \$710,000 for energy improvements of Army National Guard buildings, including more efficient heating, air conditioning, and photovoltaic roofing.¹²⁵¹

2010: Renewable Energy, Climate Change Agreements, Energy Efficiency, Market-Based Solutions, and Transportation/Fuels

In January 2010, Governor Lingle honored several clean energy companies with the Governor's Innovation Award.¹²⁵² Recipients included Honolulu Seawater Air Conditioning, a company "developing a project to cool downtown Honolulu buildings using deep seawater as a renewable energy source," saving 75% of electricity used for air conditioning.¹²⁵³

On January 25, 2010, Governor Lingle announced proposed legislation that will create clean energy investment bonds.¹²⁵⁴ The Hawai'i Clean Energy Investment (HCEI) Bonds program will assist homeowners and businesses with installing energy efficiency improvements by "allowing them to borrow the money from the state and then repay the loans over a period of years via an annual assessment on their real property tax bill."¹²⁵⁵ On the heels of the bond proposal, Lingle announced that HCEI was on track at the two-year anniversary of its creation of meeting its goal of 70% clean energy by 2030.¹²⁵⁶

¹²⁴⁹ *Id.* The Asia-Pacific Clean Energy Summit and Expo was held on August 30 – September 2, 2010. *Hawaii - Transforming to a Clean Energy Economy*, 2010 ASIA PACIFIC CLEAN ENERGY SUMMIT AND EXPO, <http://www.ct-si.org/events/APCE/> (Oct. 3, 2013).

¹²⁵⁰ Press Release, State of Haw., Governor Lingle Releases \$1 Million for Energy Efficiency Improvements at State Parks (Nov. 17, 2009), <http://archive.lingle.hawaii.gov/govgallery/news/releases/2009-news-releases/governor-lingle-releases-1-million-for-energy-efficiency-improvements-at-state-parks>.

¹²⁵¹ Press Release, State of Haw., Governor Lingle Releases \$710,000 for Energy Efficiency Improvements at Hawai'i Army National Guard Buildings (Nov. 18, 2009), <http://archive.lingle.hawaii.gov/govgallery/news/releases/2009-news-releases/governor-lingle-releases-710-000-for-energy-efficiency-improvements-at-hawai-i-army-national-guard-buildings>.

¹²⁵² Press Release, State of Haw., Innovation Award Winners Focus on Clean Energy (Jan. 14, 2010), <http://archive.lingle.hawaii.gov/govgallery/news/releases/2010-news-releases/innovation-award-winners-focus-on-clean-energy>.

¹²⁵³ *Id.*

¹²⁵⁴ Press Release, State of Haw., Governor Lingle Proposes Hawai'i Clean Energy Investment Bonds (Jan. 25, 2010), <http://archive.lingle.hawaii.gov/govgallery/news/releases/2010-news-releases/governor-lingle-proposes-hawai-i-clean-energy-investment-bonds>.

¹²⁵⁵ *Id.*

¹²⁵⁶ Press Release, State of Haw., Hawai'i Clean Energy Initiative on Track at Two-Year Mark (Jan. 27, 2010), <http://archive.lingle.hawaii.gov/govgallery/news/releases/2010-news-releases/hawai-i-clean-energy-initiative-on-track-at-two-year-mark>.

In June 2010, Hawai'i launched the EV Ready Grants Program, which provided for the installation of electric vehicle charging equipment.¹²⁵⁷ The Program will be funded through \$3 million of ARRA grants and complements Hawai'i's EV rebate program, which started in January 2011 and ran until March 2012 when it ran out of funds. During the time the program was running, it provided up to \$4,500 in rebates to consumers who purchase EVs.¹²⁵⁸

Hawai'i and the Prefecture of Okinawa, in partnership with the DOE and the Japanese Ministry of Economy, Trade and Industry, signed a memorandum of cooperation, creating the Hawai'i-Okinawa Partnership on Clean and Efficient Energy Development and Deployment in June 2010.¹²⁵⁹ One of the goals of the Partnership is to exchange technical information on clean energy and evaluate the potential for joint research projects "into technology issues affecting both countries."¹²⁶⁰

In September 2010, the Energy Services Coalition ranked Hawai'i as the second state in the United States in per capita investment in energy savings performance contracting.¹²⁶¹ The Energy Services Coalition is a non-profit organization comprised of public and private organizations.¹²⁶²

Due to the success of the Hawai'i Energy Solar Water Heating Rebate Program, Hawai'i's State Energy Office is diverting its remaining ARRA funds to meet consumer demand for solar water heaters. Through the program, which has serviced 600 households so far, purchasers of solar water heaters can save up to \$849 per year in energy costs.¹²⁶³

2011: Market-Based Solutions and Renewable Energy

Governor Abercrombie signed H.B. 1520 into law in July 2011, authorizing an investigation by the PUC into on-bill financing for utility customers.¹²⁶⁴ On-bill

¹²⁵⁷ Press Release, Dep't of Bus., Econ. Dev. & Tourism, Hawai'i EV Ready Grant Program: Grant Opportunity Announcement (June 9, 2010), <http://hawaii.gov/recovery/news/NR.EV%20Grants.6.9.10.pdf>.

¹²⁵⁸ *Id.*; *Hawaii Electric Vehicle Rebate Program Runs Out of Money*, PACIFIC BUSINESS NEWS (Mar. 18, 2012), http://www.bizjournals.com/pacific/blog/morning_call/2012/05/hawaii-electric-vehicle-rebate-program.html.

¹²⁵⁹ Press Release, State of Haw., Hawai'i-Okinawa Partnership on Clean and Efficient Energy Development and Deployment (June 17, 2010), <http://archive.lingle.hawaii.gov/govgallery/news/releases/2010-news-releases/hawai2018i-okinawa-partnership-on-clean-and-efficient-energy-development-and-deployment>.

¹²⁶⁰ *Id.*

¹²⁶¹ Laura Brown, *Energy Conservation Investment Tops \$100 Million*, HAWAII REPORTER (Sept. 20, 2010), <http://www.hawaiireporter.com/energy-conservation-investment-tops-100-million/123>.

¹²⁶² ENERGY SERVICES COALITION, <http://www.energyservicescoalition.org/about/index.html> (Oct. 3, 2013).

¹²⁶³ Press Release, Dep't of Bus., Econ. Dev. & Tourism, Solar Water Heating Rebates Available (Apr. 29, 2011), <http://hawaii.gov/recovery/news/NR.Solar-20Water-20Heating-20Rebates.4.29.11.pdf>.

¹²⁶⁴ H.B. 1520, 26th Leg., Reg. Sess., (Haw. 2011); Press Release, Hawaii 24/7, Governor Signs Bill to Help Reduce Energy Usage (July 8 2011), <http://www.hawaii247.com/2011/07/08/governor-signs-bill-to-help-reduce-energy-usage/>.

financing allows utility customers to purchase a renewable energy system or device and pay for it over time with energy savings.¹²⁶⁵ The Bill did not include funding for the investigation, but private partners led by the Blue Planet Foundation offered to help the PUC cover the costs of the program.¹²⁶⁶

In September 2011, Hawai'i was awarded \$6.8 million from the DOE for solar projects.¹²⁶⁷ The funds will be used to help integrate solar technology into the grid and develop smart grid-enabled photovoltaic (PV) inverters.¹²⁶⁸

2012: Climate Change Agreements and Renewable Energy

In February 2012, Hawai'i announced a new agreement with the Republic of Korea to pursue mutual interests in smart grid development in the Hawaiian Islands.¹²⁶⁹ Governor Abercrombie highlighted the agreement as demonstrative of Hawai'i's commitment to clean energy development and implementation.¹²⁷⁰

On May 25, 2012, Governor Abercrombie approved over \$3.4 million for energy conservation and sustainable design projects statewide as part of the Capital Improvements Projects program.¹²⁷¹

On June 27, 2012, Governor Abercrombie signed into law S.B. 2787 and S.B. 2785.¹²⁷² S.B. 2787 authorizes the PUC to “develop, adopt and enforce reliability standards and interconnection requirements, as well as contract for the performance of related duties with a party that will serve as the Hawai'i electricity reliability administrator.”¹²⁷³ S.B. 2785 “establishes a regulatory structure for the installation and implementation of an interisland high-voltage electric transmission cable system and for the construction of on-island transmission infrastructure.”¹²⁷⁴

¹²⁶⁵ *Id.*

¹²⁶⁶ *Id.*

¹²⁶⁷ *Energy Department Awards Hawai'i \$6.8 million for Solar Projects*, PROJECT VOTE SMART (Sept. 1, 2011), <http://votesmart.org/public-statement/635628/> (original press release not found).

¹²⁶⁸ *Id.*

¹²⁶⁹ Press Release, State of Haw., Governor Abercrombie Secures Agreement with Republic of Korea for Smart Grid Development (Feb. 3, 2012), <http://governor.hawaii.gov/blog/governor-abercrombie-secures-agreement-with-republic-of-korea-for-smart-grid-development/>.

¹²⁷⁰ *Id.*

¹²⁷¹ Press Release, State of Haw., Governor Releases \$8.1 Million for Energy Conservation, Watershed Protection, Management of Water Resource (May 25, 2012), <http://governor.hawaii.gov/blog/governor-releases-8-1-million-for-energy-conservation-watershed-protection-management-of-water-resources/>.

¹²⁷² S.B. 2787, 26th Leg., Reg. Sess. (Haw. 2012); S.B. 2785, 26th Leg., Reg. Sess. (Haw. 2012); Press Release, State of Haw., Energy and Economic Development Measures Become Law (June 27, 2012), <http://governor.hawaii.gov/blog/energy-and-economic-development-measures-become-law/>.

¹²⁷³

¹²⁷⁴ *Id.*

In August 2012, Hawai'i announced another international collaboration with China, to start a clean energy investment and deployment program in Hawai'i.¹²⁷⁵

2013: Transportation/Fuels and Energy Conservation

On April 6, 2013 Governor Abercrombie presented a \$200,000 check from the state Department of Agriculture that went towards funding a biofuel and high protein feed program in Hilo.¹²⁷⁶ This zero waste conversion project takes 14 days and uses unmarketable papaya, however, this technology can be applied to any plant material as a carbon source.¹²⁷⁷

On April 9, 2013 the State announced a \$100,000 federal grant through the U.S. Department of Agriculture's Rural Energy for America Program that allows "for investment grade energy audits for Hawaii agricultural producers and rural small businesses interested in energy efficient practices."¹²⁷⁸ These energy audits "will provide approved farms, agricultural producers and other rural small businesses with an investment grade audit that will examine current energy usage, recommend actions and investments to reduce energy usage, and show associated energy savings and financial returns."¹²⁷⁹ Applicants for the program will still be responsible for paying a small share of the audit cost, and after the audit is completed "the applicant may be able to recoup the upfront cost of the audit through Hawaii Energy . . . which has augmented this federal grant with a \$25,000 commitment through its existing Whole Building Assistance incentive offer."¹²⁸⁰

To further advance Hawai'i's clean energy goals, Governor Abercrombie signed S.B. 1087 on June 27, 2013.¹²⁸¹ S.B. 1087 established a green infrastructure loan program, Green Energy Market Securitization (GEMS), to make green infrastructure loans and expend funds to finance the purchase or installation of green infrastructure equipment for clean energy technology, demand response technology, and energy use reduction and demand side management infrastructure, programs, and services.¹²⁸² Payment for these green infrastructure "devices would be made over time through one's electricity bill and paid for with the energy savings. The state's Department of Business,

¹²⁷⁵ Press Release, State of Haw., China-Hawai'i Clean Energy Collaboration to Set Framework for Energy Investment (Aug. 13, 2012), <http://governor.hawaii.gov/blog/china-hawaii-clean-energy-collaboration-to-set-framework-for-energy-investment/>.

¹²⁷⁶ Press Release, State of Haw., State of Hawaii Invests in Innovative Zero Waste Fuel Program (Apr. 16, 2013), <http://governor.hawaii.gov/blog/state-of-hawaii-invests-in-innovative-zero-waste-biofuel-program/>.

¹²⁷⁷ *Id.*

¹²⁷⁸ Press Release, Dep't of Bus., Econ. Dev. & Tourism, State Offers Energy Efficiency Audits to Rural Small Businesses and Agricultural Producers (Apr. 9, 2013), http://www.hawaiicleanenergyinitiative.org/storage/pdf-news-releases/NR_AgEnergyAudits_4.09.13.pdf.

¹²⁷⁹ *Id.*

¹²⁸⁰ *Id.*

¹²⁸¹ See Press Release, State of Haw., Governor Signs Bill Advancing Hawaii's Clean Energy Goals (June 27, 2013), <http://governor.hawaii.gov/blog/governor-signs-bill-advancing-hawaiis-clean-energy-goals/>.

¹²⁸² S.B. 1087, 27th Leg., Reg. Sess. (Haw. 2013), http://www.capitol.hawaii.gov/session2013/bills/SB1087_CD1_.htm.

Economic Development, and Tourism (DBEDT) will facilitate the GEMS financing program via the Hawaii State Energy Office.”¹²⁸³

In September 2013, for the second year in a row Hawai’i was honored with the top rank in the nation for energy savings performance contracting (ESPC) investment per capita, with an investment of \$132.25.¹²⁸⁴ ESPC is “an innovative approach to implement energy and water efficiency retrofits in buildings using guaranteed energy savings to pay for projects.”¹²⁸⁵

On October 14, 2013 the Hawai’i State Energy Office announced a new fuel contract between the Hawaiian Electric Company and Hawai’i BioEnergy (HBE) that called for Hawaiian Electric to purchase approximately 10 million gallons of locally produced biofuels annually from HBE over 20 years for the utility’s Kahe Power Plant in Kapolei.¹²⁸⁶

On November 1, 2013 Governor Abercrombie announced that President Obama appointed him to serve on the President’s Task Force on Climate Preparedness and Resilience.¹²⁸⁷ The “task force consists of a select group of governors, mayors and other leaders who will develop recommendations on how the federal government can better support local preparedness and resilience-building efforts.”¹²⁸⁸

IDAHO

2002: Climate Change Adaptation

In 2002, Idaho formed the Carbon Sequestration Advisory Committee.¹²⁸⁹ The Committee was established primarily to “recommend policies or programs to enhance the ability of Idaho agricultural and non-industrial private forest landowners to participate in systems of carbon trading.”¹²⁹⁰ The Committee also promotes research and raises awareness concerning carbon sequestration in the agricultural and forestry sectors.¹²⁹¹ The Committee consists of sixteen members, including relevant heads of state departments, as well as farmers, livestock producers, members of the electricity,

¹²⁸³ See Press Release, State of Haw., Governor Signs Bill Advancing Hawaii’s Clean Energy Goals (June 27, 2013), <http://governor.hawaii.gov/blog/governor-signs-bill-advancing-hawaiis-clean-energy-goals/>.

¹²⁸⁴ Press Release, Dep’t of Bus., Econ. Dev. & Tourism, State of Hawaii Honored with National Energy Award for Second Consecutive Year (Sept. 6, 2013), http://www.hawaiicleanenergyinitiative.org/storage/pdf-news-releases/NR_HIRaceTopREV_090613.pdf.

¹²⁸⁵ *Id.*

¹²⁸⁶ Press Release, Dep’t of Bus., Econ. Dev. & Tourism, Newly Approved Local Biofuels Contract Aligns with State’s Long-Term Energy Goals (Oct. 14, 2013), http://www.hawaiicleanenergyinitiative.org/storage/pdf-news-releases/NR_Biofuels%20Contract_Rev.pdf.

¹²⁸⁷ Press Release, State of Haw., President Obama Appoints Gov. Abercrombie to Task Force on Climate Preparedness and Resilience (Nov. 1, 2013), <http://governor.hawaii.gov/blog/president-obama-appoints-gov-abercrombie-to-task-force-on-climate-preparedness-and-resilience/>.

¹²⁸⁸ *Id.*

¹²⁸⁹ IDAHO CODE ANN. §§ 22-5201 — 22-5206 (West 2010).

¹²⁹⁰ *Id.* § 22-5203.

¹²⁹¹ *Id.*

transportation, and biofuels sectors, and one member representing an environmental protection or conservation organization.¹²⁹²

2006: Greenhouse Gas Reduction and Green Building

In 2006, Idaho adopted a two-year moratorium on permitting new coal-fired power plants.¹²⁹³ The moratorium does not apply to coal-fired power plants owned or constructed by a public utility regulated by the Idaho Public Utilities Commission or by a cooperative or municipality, nor does it apply to the operations of the Idaho National Laboratory.¹²⁹⁴

Idaho has only passed a few statutes that relate to greenhouse gas (GHG) reduction. The state gives certified distributors a fuel tax deduction of up to 10% based on the percentage of ethanol in a blended motor fuel or the agricultural, animal fat, or waste products contained in biodiesel fuel.¹²⁹⁵ It also exempts “special gaseous fuels,” including compressed natural gas, and hydrogen, from the standard 25¢ per gallon fuel excise tax when distributed for use in permitted vehicles.¹²⁹⁶

Regarding residential buildings, Idaho adopted the Energy Conservation Code portion of the 2003 International Code Council’s (ICC) International Building Code.¹²⁹⁷ Local municipalities that elect to enforce building codes must also adopt the ICC standard.¹²⁹⁸ The code specifies minimum levels of energy efficiency for heating and cooling systems, window design, and other elements of building construction and maintenance.¹²⁹⁹

2007: Greenhouse Gas Reduction and Transportation/Fuels

In May 2007, Governor C.L. “Butch” Otter issued Executive Order (EO) 2007-05, which directs the Department of Environmental Quality to complete a statewide emissions inventory, work with state government to implement GHG reductions within each agency, provide recommendations for the governor, and serve as a central point for coordinating GHG reduction efforts and information for the state.¹³⁰⁰

On December 21, 2007, Governor Otter signed EO 2007-21, establishing a policy to reduce fossil fuel use and GHG emissions from state vehicles.¹³⁰¹ The policy directs all state agencies to decrease the amount of gasoline and diesel used in state vehicles.¹³⁰²

¹²⁹² *Id.*

¹²⁹³ H.B. 791, 58th Leg., 2nd Reg. Sess. (Idaho 2006).

¹²⁹⁴ *Id.*

¹²⁹⁵ IDAHO CODE ANN. § 63-2407 (West 2009).

¹²⁹⁶ *Id.* §§ 63-2401 — 63-2402. *See also id.* §§ 63-2423 — 63-2434 (concerning rebates for special fuels taxes in specific categories).

¹²⁹⁷ *Id.* § 39-4109.

¹²⁹⁸ *Id.* § 39-4116.

¹²⁹⁹ *Id.* § 39-4109.

¹³⁰⁰ Idaho Exec. Order No. 2007-05 (2007).

¹³⁰¹ Idaho Exec. Order No. 2007-21 (2007).

¹³⁰² *Id.*

In addition, it directs the state government to minimize the purchase of sport utility vehicles and to give priority in purchasing and leasing to fuel efficient/low emission vehicles.¹³⁰³

2009: American Recovery & Reinvestment Act (ARRA), Market-Based Solutions, Green Jobs, and Green Technology

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Idaho is eligible for \$28,572,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).¹³⁰⁴

On July 7, 2009, Governor Otter issued a statement urging opposition to proposed federal cap-and-trade legislation.¹³⁰⁵ Otter stated that the American Clean Energy and Security Act of 2009 (ACESA) would “raise taxes and energy costs while eliminating jobs and slowing our economy.”¹³⁰⁶

According to The Pew Charitable Trusts’ June 2009 Clean Energy Economy Fact Sheet for Idaho, Idaho’s clean energy economy grew by 4,517 jobs and 428 businesses from 1998 to 2007.¹³⁰⁷ Idaho attracted more than \$27 million in venture capital investment in clean energy industries between 2006 and 2009.¹³⁰⁸

In October 2009, Governor Otter recognized the work of some Idaho companies at his Innovation Summit, including a winery’s project utilizing solar energy, and a tech company’s “new light-emitting diode technology that can be used in energy-efficient lights.”¹³⁰⁹

2010: American Recovery & Reinvestment Act (ARRA) and Renewable Energy

Idaho has distributed its ARRA funds in various ways. In February 2010, the Office of Energy Resources launched a \$2.75 million program under ARRA to install solar panels on public schools. The program allows each Idaho school district to request a solar panel installation for one of its schools.¹³¹⁰ In October 2010, Governor Otter

¹³⁰³ *Id.*

¹³⁰⁴ U.S. DEP’T OF ENERGY, NAT’L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

¹³⁰⁵ Press Release, Idaho Governor, Join Me in Urging the Senate to Scrap Costly Cap-and-Trade Legislation (July 7, 2009), http://gov.idaho.gov/mediacenter/press/pr2009/prjul09/pr_039.html.

¹³⁰⁶ *Id.*

¹³⁰⁷ *Clean Energy Economy*, THE PEW CHARITABLE TRUSTS, (May 8, 2009), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

¹³⁰⁸ *Id.*

¹³⁰⁹ Press Release, Idaho Governor, Innovation is Helping Idaho Companies Move Forward (Oct. 16, 2009), http://web.archive.org/web/20101112210112/http://gov.idaho.gov/mediacenter/press/pr2009/proct09/pr_069.html.

¹³¹⁰ *Solar Panels for Schools Project*, Idaho Governor’s Office of Energy Resources, http://www.energy.idaho.gov/stimulus/solar_program.htm (Oct. 5, 2013).

launched the Idaho Energy Efficiency Research Institute in partnership with the Center for Advanced Energy Studies.¹³¹¹ The Institute's primary goal is to help Idaho residents and businesses to conserve energy and save money, through programs such as energy efficiency training for architects.¹³¹²

On February 9, 2011, Governor Otter announced that the Idaho Strategic Energy Alliance released an innovative new energy report for the state, the *Idaho Energy Primer*. The Primer is an educational booklet designed to inform Idaho citizens of their state's energy efficiency use and sources, including renewable energy.¹³¹³

In March 2011, Governor Otter signed four bills into law that will enable Idaho to better tap into its geothermal energy resources. Collectively, House Bill (H.B.) 52¹³¹⁴, 53¹³¹⁵, 54¹³¹⁶, and 56¹³¹⁷ are designed to make it easier for Idaho to lease state-owned geothermal land to private developers, in an effort to promote and develop geothermal energy.¹³¹⁸

2012: Renewable Energy

On February 1, 2012, Governor Otter signed an EO creating the Idaho Nuclear Energy Commission.¹³¹⁹ Idaho is home to the Idaho National Laboratory, the lead laboratory for nuclear energy research and development in the United States.¹³²⁰ The Commission will study the opportunities and challenges associated with the laboratory's location in the state.¹³²¹

At a meeting in December 2012, the Governors of the Western Governors' Association, which includes the states of Alaska, American Samoa, Arizona, California, Colorado, Guam, Hawai'i, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Northern Mariana Islands, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming, lauded the west as the nation's "energy breadbasket," and

¹³¹¹ Press Release, Governor Otter Joins Public, Private Partners in Backing Energy Efficiency Research Institute (Nov. 16, 2010), http://gov.idaho.gov/mediacenter/press/pr2010/proct10/pr_081.html.

¹³¹² *Id.*

¹³¹³ Press Release, Idaho Governor, First-of-its-Kind Energy Information Guide Unveiled in Idaho (Feb. 9, 2011), http://gov.idaho.gov/mediacenter/press/pr2011/prfeb11/pr_011.html.

¹³¹⁴ H.B. 52, 61st Leg., 1st Reg. Sess. (Idaho 2011).

¹³¹⁵ H.B. 53, 61st Leg., 1st Reg. Sess. (Idaho 2011).

¹³¹⁶ H.B. 54, 61st Leg., 1st Reg. Sess. (Idaho 2011).

¹³¹⁷ H.B. 56, 61st Leg., 1st Reg. Sess. (Idaho 2011).

¹³¹⁸ Press Release, Idaho Governor, Bills Clear the Way for More Development of Clean, Sustainable Geothermal Sources (Mar. 15, 2011), http://gov.idaho.gov/mediacenter/press/pr2011/prmar11/pr_017.html.

¹³¹⁹ Press Release, Idaho Governor, Governor Creates Nuclear Energy Commission (Feb. 1, 2012), http://gov.idaho.gov/mediacenter/press/pr2012/2Feb/pr_04.html.

¹³²⁰ *Id.*

¹³²¹ *Id.*

Governor Otter highlighted Idaho's role as an electricity exporter and the challenges with energy transmission.¹³²²

ILLINOIS

1994: Climate Change Agreements

Illinois completed a climate change action plan in June 1994, which serves as an informational tool for the state.¹³²³

1997: Renewable Energy

In 1997, Illinois developed the Renewable Energy Resources Trust Fund, offering grants and loans supporting renewable power sources.¹³²⁴ The Fund is the product of mandatory contributions from public utilities and other electricity providers in Illinois.¹³²⁵

1999: Renewable Energy and Market-Based Solutions

Another provider of renewable energy grants is the Illinois Clean Energy Community Foundation.¹³²⁶ Endowed with the \$250,000 settlement that the state received for approving a utility merger, the Foundation, since 1999, has offered grants to projects designed to develop renewable power generators and improve energy efficiency.¹³²⁷ In addition, the Foundation sponsors clean-energy programs for communities across Illinois.¹³²⁸

In 1999, Illinois enacted a law requiring utilities to list the percentages of different energy sources in their fuel mixes on customers' electric bills.¹³²⁹ In addition, utilities must disclose the amount of carbon dioxide, nitrous oxide, and sulfur-dioxide emissions produced by their facilities.¹³³⁰

2001: Renewable Energy

Legislation in 2001 mandated that utilities set a goal to derive 5% of the state's electricity from renewable resources by 2010 and 15% by 2020.¹³³¹ In 2005, the Illinois Commerce Commission issued a resolution elaborating on the 2001 law, requiring

¹³²² Press Release, Western Governors' Ass'n, Western Governors Discuss the West as "Nation's Energy Breadbasket" (Dec. 3, 2012), http://gov.idaho.gov/pdf/12-3-2012_Western_Governors_Discuss_the_West_as.pdf.

¹³²³ *A Climate Change Action Plan for Illinois*, ILL. DEP'T OF ENERGY AND NATURAL RES. (June 1994), <http://web.archive.org/web/20000829032613/http://dnr.state.il.us/orep/inrin/eq/iccp/toc.htm>.

¹³²⁴ 20 ILL. COMP. STAT. ANN. 687/6-4 (West 20065).

¹³²⁵ *Id.* 687/6-5.

¹³²⁶ 220 ILL. COMP. STAT. ANN. 5/16-111.1 (West 20065).

¹³²⁷ *Id.*

¹³²⁸ *Id.*

¹³²⁹ Ill. Exec. Order No. 5/16-127 (2006).

¹³³⁰ *Id.*

¹³³¹ 20 ILL. COMP. STAT. ANN. 688/5 (West 2001).

utilities to increase their generation of renewable energy by 1% annually until 2013.¹³³² The resolution also specifies that wind power must constitute 75% of each utility's renewable energy.¹³³³

2002: Renewable Energy

A 2002 Executive Order (EO) required that buildings used or owned by state agencies controlled by the Governor of Illinois must derive 5% of their power from renewable energy sources by 2010.¹³³⁴ By 2015, these buildings must depend on renewable energy for 15% of their power needs.¹³³⁵

2006: Greenhouse Gas Reduction

In January 2006, the Illinois Environmental Protection Agency created the Illinois Conservation and Climate Initiative, a voluntary program that awards credits to farmers for practices that reduce greenhouse gas (GHG) emissions such as conservation tillage, planting grasses and trees, and capturing methane from animal operations. After third party verification of the offsets, the credits will be sold on the Chicago Climate Exchange.¹³³⁶ The Renewable Energy Resources Trust Fund supports the Renewable Energy Resources Program, which, since January 2006, has provided rebates of up to \$10,000 for new solar power generators.¹³³⁷

On October 5, 2006, Governor Blagojevich signed EO 2006-11 establishing a state Climate Change Advisory Group.¹³³⁸ The Advisory Group studied a wide range of policies and actions aimed at reducing GHG emissions.¹³³⁹

2007: Transportation/Fuels, Climate Change Agreements, Greenhouse Gas Reduction, and Renewable Portfolio Standards

Governor Blagojevich signed House Bill (H.B.) 4137 on January 12, 2007, which mandated that state agencies purchase flexible-fuel, fuel-efficient hybrid, or biodiesel vehicles and expanded the green vehicle rebate program.¹³⁴⁰

¹³³² Response to Governor's Sustainable Energy Plan for the State of Illinois, Ill. Commerce Comm'n § 05-0437 (July 19, 2005). See 20 ILL. COMP. STAT. ANN. 688/5 (West 2001).

¹³³³ *Id.*

¹³³⁴ Ill. Exec. Order No. 6 (2002).

¹³³⁵ *Id.*

¹³³⁶ ILLINOIS CONSERVATION, <http://web.archive.org/web/20060509113514/http://www.illinoisclimate.org/> (Oct. 7, 2013).

¹³³⁷ *Id.* 687/6-3; *New Guidelines for Solar Energy Rebate Program*, ILL. DEP'T OF COMMERCE AND CLEAN ENERGY, http://web.archive.org/web/20061018160926/http://www.commerce.state.il.us/dceo/Bureaus/Energy_Reycling/Energy/Clean+Energy/RERP.htm (Oct. 7, 2013).

¹³³⁸ Ill. Exec. Order No. 2006-11 (2006).

¹³³⁹ *Id.*

¹³⁴⁰ 30 ILL. COMP. STAT. ANN. 500/25-75 (West 2007).

In February 2007, Governor Blagojevich established a GHG reduction goal to reduce emissions to below 1990 levels by 2020 and 60% below 1990 levels by 2050. The Climate Change Advisory Group is charged with researching and recommending cost-effective ways to meet these goals.

In May 2007, Illinois and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”¹³⁴¹

In July 2007, the Climate Change Advisory Group released nineteen recommendations for meeting the state’s goal of reducing GHG emissions to below 1990 levels by 2020.¹³⁴² These recommendations included: smart growth requirements; renewable transportation fuels standard; expansion of mass transit; energy-efficiency standards for appliances and equipment; renewable portfolio standard; carbon capture and storage; reforestation programs; energy-efficiency incentive programs; cap-and-trade program; and no-till farming and methane capture programs.¹³⁴³ The Group considers further strategies for meeting the governor’s goal of reducing yearly carbon dioxide emissions by 90 million metric tons by 2020.¹³⁴⁴

In August 2007, Governor Blagojevich signed Senate Bill (S.B.) 1592 into law, creating a mandatory Renewable Energy Standard (RES) and Energy Efficiency Portfolio Standard (EEPS).¹³⁴⁵ The RES requires that utilities generate 2% of their electricity from renewables by 2008, 10% by 2015, and 25% by 2025.¹³⁴⁶ The EEPS further mandates that utilities decrease electricity usage by 2% by 2015.¹³⁴⁷ Wind power must supply 75% of the renewable energy requirements. Other eligible renewable sources include solar, biomass, and existing hydropower sources.¹³⁴⁸

Additionally, on November 15, 2007, Governor Blagojevich joined the governors of Iowa, Kansas, Michigan, Minnesota, and Wisconsin, as well as the Premier of the Canadian Province of Manitoba in signing the Midwestern Regional Greenhouse Gas Reduction Accord (MGGRA) to reduce GHG emissions and achieve energy security.¹³⁴⁹

¹³⁴¹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20080309011530/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

¹³⁴² *Illinois Climate Change Advisory Group, Final Recommendations to the Governor*, ILL. ENVTL. PROT. AGENCY, <http://www.epa.state.il.us/air/climatechange/documents/final-recommendations.html> (Oct. 7, 2013).

¹³⁴³ *Id.*

¹³⁴⁴ *Id.*

¹³⁴⁵ S.B. 1592, 95th Gen. Assemb., Reg. Sess. (Ill. 2007).

¹³⁴⁶ *Id.*

¹³⁴⁷ *Id.*

¹³⁴⁸ *Id.*

¹³⁴⁹ *Midwestern Greenhouse Gas Accord 2007*, MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, <http://web.archive.org/web/20080607015927/http://www.wisgov.state.wi.us/docview.asp?docid=12497>.

Signed at the Midwestern Governors Association Energy Security and Climate Change Summit held in Milwaukee, Wisconsin, the Accord aimed to establish GHG emission targets, including a 60 to 80% reduction in emissions, create a market-based, multi-sector cap-and-trade system, and create a tracking and crediting system.¹³⁵⁰ The Final Model Rule was released in April 2010 and although the MGGRA has not been formally suspended, the participating states are no longer actively pursuing the goals.¹³⁵¹

Also at the Summit, Illinois, Iowa, Kansas, Michigan, Minnesota, Wisconsin, Nebraska, and North Dakota, adopted an Energy Security and Climate Stewardship Platform.¹³⁵² The Platform's goals for the Midwest region included promoting energy efficiency, advances in biobased products, electricity production from renewables, and advanced coal and carbon capture and storage.¹³⁵³ Platform members also signed cooperative regional initiatives that will work to create a Carbon Management Infrastructure Partnership, a bioproduct procurement program, electricity transmission adequacy for new wind energy, renewable fuels corridors, advanced bioenergy permitting, and low-carbon energy transmission infrastructure.¹³⁵⁴

2008: Renewable Energy, Greenhouse Gas Reduction, and Climate Change MOUs

In May 2008, Governor Blagojevich announced that Illinois would provide \$19.8 million for the construction of a 45 million gallon per year biodiesel plant.¹³⁵⁵ In September of that year, the state awarded \$4 million for the construction of an 88 million gallon per year ethanol plant located in southwestern Illinois.¹³⁵⁶ The state legislature then passed a carbon dioxide emission standard for new coal-fired power plants in January 2009.¹³⁵⁷ This legislation requires that by 2025, 25% of the state's electricity will be generated from clean coal facilities.¹³⁵⁸ The Bill defines a clean coal facility as an electricity generating facility that captures and sequesters 50% of the carbon emissions it produces if the facility begins operations before 2016, 70% of the carbon emissions it produces if the facility begins operations during 2016 or 2017, and 90% of the carbon emissions it produces if the facility begins operations after 2017.¹³⁵⁹

¹³⁵⁰ *Id.*

¹³⁵¹ *Id.*; *Midwest Greenhouse Gas Reduction Accord*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mggra> (Oct. 11, 2013).

¹³⁵² *Energy Security and Climate Stewardship Platform for the Midwest*, MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, <http://www.midwesterngovernors.org/resolutions/Platform.pdf>.

¹³⁵³ *Id.*

¹³⁵⁴ *Id.*

¹³⁵⁵ Press Release, Ill. Gov't News Network, Gov. Blagojevich Announces \$19.8 Million in Support for Danville Biodiesel Plant that Will Save Hundreds of Jobs (May 15, 2008), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=6833>.

¹³⁵⁶ Press Release, Ill. Gov't News Network, Governor Blagojevich Announces Plans for State-of-the-Art Biofuels Production Facility in Southwestern Illinois (Sept. 9, 2008), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7134>.

¹³⁵⁷ S.B. 1987, 95th Gen. Assemb., Reg. Sess. (Ill. 2009), <http://www.ilga.gov/legislation/publicacts/95/PDF/095-1027.pdf> (Feb. 18, 2009).

¹³⁵⁸ *Id.* at 20.

¹³⁵⁹ *Id.* at 4.

In November 2008, Governor Blagojevich's Climate Change Advisory Council released its recommendations to achieve its goals of reducing GHGs to 1990 levels by 2020 and 60% below 1990 levels by 2050.¹³⁶⁰ The Council voted on 24 strategies to reach this goal. The strategies are organized into four categories: transport; power/energy; commercial, industrial, agricultural; and cap-and-trade. Two days later, Blagojevich announced that Illinois River Energy, LLC would receive \$4 million to use towards the construction of an ethanol production facility.¹³⁶¹

Later that month, Governor Blagojevich announced that he would sign an international memorandum of understanding (MOU) to reduce deforestation while attending the Governor's Global Climate Summit.¹³⁶² He also announced that he would sign the Global Climate Solutions Declaration, which established common principles among the signatories to create a low carbon economy, enhance energy security, and provide ongoing support for national governments.¹³⁶³

2009: Greenhouse Gas Reduction, Cap & Trade, Climate Change Agreements, Energy Efficiency, Green Building, Market-Based Solutions, Renewable Energy, American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

In January 2009, the advisory group to the MGGRA released preliminary trade design recommendations.¹³⁶⁴ The Group recommended that carbon dioxide, nitrous oxide, hydro-fluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions be reduced 15 to 25% below 2005 levels by 2020 and 60 to 80% below 2005 levels by 2050. It also recommended that the following sources be subject to these reductions: power plants, industrial facilities, industrial combustion sources, industrial process sources, and transportation fuels.¹³⁶⁵ It recommended that an offset component be incorporated in the program and that allowance value be used only for climate-related purposes by participating states.¹³⁶⁶ However, the group refused to comment on whether allowances should be auctioned or allocated, maintaining that this decision must be made by each

¹³⁶⁰ ILLINOIS CLIMATE CHANGE ADVISORY GROUP, REPORT (2009),

<http://www.epa.state.il.us/air/climatechange/documents/iccag-summary.pdf>.

¹³⁶¹ Press Release, Ill. Gov't News Network, Governor Blagojevich Announces Plans for State-of-the-Art Biofuels Production Facility in Northern Illinois (Nov. 12, 2008),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7265>.

¹³⁶² Press Release, Ill. Gov't News Network, Governor Blagojevich to Sign International Agreement to Reduce Greenhouse Gas Emissions from Deforestation (Nov. 18, 2008),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7286>.

¹³⁶³ Press Release, Ill. Gov't News Network, Governor Blagojevich to Sign International Declaration to Fight Climate Change (Nov. 19, 2008),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7290>.

¹³⁶⁴ *GHG Accord Meeting Info/Materials*, MIDWEST GREENHOUSE GAS REDUCTION ACCORD, http://web.archive.org/web/20081219043355/http://www.midwesternaccord.org/Meeting%20material%20pages/GHG-meeting-8_109.html (Oct. 10, 2013).

¹³⁶⁵ Letter from Minn. Office of Energy Sec. and Minn. Pollution Control Agency, to Ellen R. Anderson, Minn. Sen., Yvonne Prettner Solon, Minn. Sen., and Bill Hilty, Minn. H.R. (Jan. 15, 2009)

<http://www.leg.state.mn.us/docs/2009/mandated/090099.pdf>.

¹³⁶⁶ *Id.* at 3.

state.¹³⁶⁷

On February 18, 2009, representatives from the three University of Illinois campuses signed the Sustainable University Compact, which sets out twelve environmental objectives, including purchasing renewable energy, implementing green building practices, and developing sustainable transportation options.¹³⁶⁸ A week later, Governor Blagojevich announced that seven state parks that had been closed during the previous administration would be reopened.¹³⁶⁹ The following month, he announced that the state was giving a \$2 million incentive package to Wanxiang America to develop a solar panel manufacturing facility in Rockford.¹³⁷⁰ As part of the agreement, the company agreed to also develop a 200-acre solar farm in a public-private cooperative.

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Illinois is eligible for \$101,321,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).¹³⁷¹ In May, Governor Quinn announced that 59 projects will receive \$21 million to preserve parks and open spaces.¹³⁷² Two days later, he signed an agreement with the Illinois Department of Central Management Services and the capital city of Springfield to purchase wind power for state facilities.¹³⁷³

In May 2009 Governor Quinn joined the Governor's Energy and Climate Coalition, which supports federal climate change legislation.¹³⁷⁴ The agreement between the Coalition partners contains two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.¹³⁷⁵

In June 2009, the MGGRA Advisory Group released its draft final

¹³⁶⁷ *Id.*

¹³⁶⁸ Press Release, Ill. Gov't News Network, Governor Quinn Joins with University of Illinois Community to Celebrate Signing of the Sustainable University Compact (Feb. 18, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7389>.

¹³⁶⁹ Press Release, Ill. Gov't News Network, Governor Quinn Calls on IDNR to Reopen State Parks (Feb. 26, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7397>.

¹³⁷⁰ Press Release, Ill. Gov't News Network, Governor Quinn Announces \$2 Million in Incentives for Wanxiang America to Manufacture Solar Panels in Rockford (Mar. 23, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7423>.

¹³⁷¹ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

¹³⁷² Press Release, Ill. Gov't News Network, Governor Quinn Announces More Than \$21 Million for Parks and Open Space (May 6, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7566>.

¹³⁷³ Press Release, Ill. Gov't News Network, Governor Quinn Signs Wind Power Purchase Agreement With the City of Springfield (May 6, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7565>.

¹³⁷⁴ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20090816230453/http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

¹³⁷⁵ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION, (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

recommendations for the design of a regional cap-and-trade program.¹³⁷⁶ It recommended emission reduction goals of 20% below 2005 levels by 2020 and 80% below 2005 levels by 2050. The Advisory Group also recommended that the program cover electricity generation and imports; industrial combustion sources; industrial process sources; fuels serving industrial, commercial, and residential buildings; and transportation fuels.¹³⁷⁷ The recommendations also included exemptions for biofuels, authorization of offset projects, and free allocation of allowances. The governors of the member states were required to approve these recommendations before they could be implemented, which they did.¹³⁷⁸

Governor Quinn signed various bills into law at the 2009 Sustainable University Symposium: H.B. 1013, the Green Buildings Act, requires state-owned building to implement sustainable practices; H.B. 2437, requires every state-owned building to use environmental cleaning products; H.B. 1042, amends the Green Governments Illinois Act; and S.B. 1932 requires state facilities to apply compost materials for all land maintenance.¹³⁷⁹

On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the Western Climate Initiative (WCI), and MGGRA met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.¹³⁸⁰

In July 2009 Governor Quinn hosted a summit where he joined seven other Midwest states in signing a MOU to coordinate ARRA applications and advocacy for high-speed rail.¹³⁸¹ After the summit, he signed S.B. 1906, requiring the state and the Illinois Finance Authority to make available up to \$3 billion in guaranteed energy financing for renewable energy and clean coal projects.¹³⁸² Illinois also received \$100 million from ARRA funding for its State Energy Plan.¹³⁸³ The Illinois Department of Commerce and Economic Opportunity then released guidelines for entities interested in

¹³⁷⁶ *Midwest Greenhouse Gas Reduction Accord Releases Recommendations*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2009/midwestern-greenhouse-gas-reduction-accord-releases-recommendations> (Oct. 10, 2013).

¹³⁷⁷ *Id.* at 5.

¹³⁷⁸ *News*, MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD, <http://web.archive.org/web/20100511090324/http://www.midwesternaccord.org/news.html> (Oct. 11, 2013).

¹³⁷⁹ Press Release, Ill. Gov't News Network, Governor Quinn Signs Green Bills Into Law at 2009 Sustainable University Symposium (July 24, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7699>.

¹³⁸⁰ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

¹³⁸¹ Mem. of Understanding, from Governor of State of Ill., Governor of State of Ind., Governor of State of Iowa, Governor of State of Mich., Governor of State of Minn., Governor of State of Mo., Governor of State of Ohio, Governor of State of Wis., and Mayor of City of Chi., to Fed. R.R. Admin. (July 27, 2009), <http://web.archive.org/web/20090801132216/http://www.wisgov.state.wi.us/docview.asp?docid=17199>.

¹³⁸² Press Release, Ill. Gov't News Network, Governor Quinn Signs Renewable Energy Bill (July 29, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7709>.

¹³⁸³ Press Release, Ill. Gov't News Network, Quinn Administration Receives Over \$100 Million in Recovery Funding to Boost State Energy Efforts (Aug. 14, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7748>.

applying for this funding.¹³⁸⁴ Quinn also appointed a sustainability advocate to be part of the Chicago Transit Board.¹³⁸⁵

In September 2009, the MGGRA governors decided to no longer pursue the regional cap-and-trade program. Instead, the Midwestern Governors' Association released the Midwestern Energy Infrastructure Accord.¹³⁸⁶ The Accord focuses on developing smart grid, carbon capture and sequestration, and biofuels in the Midwest. Governor Quinn then joined Governors Schwarzenegger (California) and Doyle (Wisconsin) in drafting and signing a memo with regional leaders from Brazil and Indonesia, urging national leaders to put strong anti-deforestation measures in any instrument that may come out of the Copenhagen climate negotiations.¹³⁸⁷

Governor Quinn also signed a letter endorsing the 25x25 Vision, creating a state goal to produce 25% of Illinois' energy from renewable sources by 2025.¹³⁸⁸ He also announced his support for the Illinois Smart Grid Collaboration, a public-private partnership led by the Illinois Institute of Technology and the University of Illinois at Urbana-Champaign (UIUC) to undergo innovative research on smart grid technologies.¹³⁸⁹ The Collaboration planned to apply for \$60 million in ARRA funding for regional smart grid demonstration projects, and if it receives this funding, the state will invest up to \$30 million for two advanced technology and investment centers.

In September 2009, Illinois received \$20 million in ARRA grants to fund 27 alternative transportation projects across the state.¹³⁹⁰ In October 2009, the state celebrated its 200th E85 station.¹³⁹¹ That same month, Illinois received \$252 million in ARRA funding for low-income weatherization programs.¹³⁹²

¹³⁸⁴ Press Release, Ill. Gov't News Network, Quinn Administration Announces Guidelines for State Energy Grants (Aug. 20, 2009),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7774>.

¹³⁸⁵ Press Release, Ill. Gov't News Network, Governor Quinn Appoints Long Time Transportation and Sustainability Advocate to CTA Board (Aug. 20, 2009),

<http://www3.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7773>.

¹³⁸⁶ MIDWESTERN GOVERNORS' ASS'N, MIDWESTERN ENERGY INFRASTRUCTURE ACCORD, (2009),

<http://www.midwesterngovernors.org/Publications/InfrastructureAccord.pdf>.

¹³⁸⁷ Colin Sullivan, *Leaders From Indonesia, Brazil Join 3 U.S. States in Deforestation Accord*, N.Y. TIMES (Oct. 2, 2009), <http://www.nytimes.com/cwire/2009/10/02/02climatewire-leaders-from-indonesia-brazil-join-3-us-stat-93701.html>.

¹³⁸⁸ Press Release, Ill. Gov't News Network, Governor Quinn Backs Agriculture Energy Efforts (Sept. 1, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7807>.

¹³⁸⁹ Press Release, Ill. Gov't News Network, Governor Quinn Backs Illinois Smart Grid Collaboration (Sept. 9, 2009),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7832>.

¹³⁹⁰ Press Release, Ill. Gov't News Network, Governor Quinn Announces 27 Communities to Receive Grants for Alternative Transportation and Beautification Projects (Sept. 17, 2009),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7855>.

¹³⁹¹ Press Release, Ill. Gov't News Network, Governor Quinn Celebrates 200th Illinois E85 Station (Oct. 23, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7951>.

¹³⁹² Press Release, Ill. Gov't News Network, Governor Quinn Announces Availability of Recovery Funds for Low-Income Home Weatherization Efforts (Oct. 15, 2009),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7929>.

Eligible Illinois households can apply for winter heating assistance through the Low Income Home Energy Assistance Program (LIHEAP). The state received \$174.6 million in federal funds to assist low-income families for the 2009-2010 winter season and made energy assistance payments on behalf of more than 300,000 households this winter with a combination of both federal and non-federal funding.¹³⁹³ LIHEAP is a state and federally funded energy assistance program for low-income families that makes heating bill payments on behalf of households. A single-person household can qualify with a monthly income of up to \$1,354; a two-person household up to \$1,821; and a family of four up to \$2,756.¹³⁹⁴ Applications were accepted for the LIHEAP summer cooling program between July 19 and July 30, 2010 or until funds are exhausted. Through LIHEAP, utility bill payments are made on behalf of households with incomes of up to 150% of the federal poverty level.¹³⁹⁵

Governor Quinn signed legislation in November 2009 that provides a state backed guarantee supporting construction of energy efficiency projects that will create jobs across Illinois.¹³⁹⁶ S.B. 1906 (Public Act 96-0103) clarifies the Illinois Finance Authority's (IFA) existing bonding authority for renewable energy and clean coal projects.¹³⁹⁷ The legislation will allow the state government and the IFA to work in partnership to make up to \$3 billion in guaranteed energy project financing available for qualified renewable energy and clean coal efforts as well as a loan guarantee for \$225 million for agricultural businesses. It also provided guarantees to back qualified renewable energy projects such as wind, biodiesel or biomass initiatives that are related to agriculture.¹³⁹⁸

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.¹³⁹⁹ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.¹⁴⁰⁰ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create

¹³⁹³ Press Release, Ill. Gov't News Network, Governor Quinn Encourages Households to Apply for Home Heating Assistance (Nov. 2, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=7978>.

¹³⁹⁴ *Id.*

¹³⁹⁵ Press Release, Ill. Gov't News Network, Governor Quinn Announces Start of LIHEAP Summer Cooling Program (July 8, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8605>.

¹³⁹⁶ Press Release, Governor Quinn Signs Legislation to Support Energy Efficiency Projects (Nov. 12, 2009), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8015>.

¹³⁹⁷ S.B. 1906, 96th Gen. Assemb., Reg. Sess. (Ill. 2009), <http://www.ilga.gov/legislation/publicacts/96/PDF/096-0103.pdf>.

¹³⁹⁸ *Id.*

¹³⁹⁹ See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

¹⁴⁰⁰ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

economic opportunities.”¹⁴⁰¹ North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.¹⁴⁰²

2010: Green Jobs, Energy Efficiency, Green Building, Market-Based Solutions, and Renewable Energy

In January 2010, Governor Quinn announced a \$1.7 million state grant for the Illinois Community College Sustainability Network (ICCSN) to expand green education and training throughout the Illinois community college network. Part of the funding will be used to establish Green Jobs Centers at three Illinois campuses.¹⁴⁰³

Guidelines for the ENERGY STAR® Appliance Rebate Program were announced at the end of January 2010 and will be managed by the Midwest Energy Efficiency Alliance (MEEA) on behalf of the Illinois Department of Commerce and Economic Opportunity. Illinois received \$12.4 million in ARRA funding to implement the Program, which provides consumers with a point-of-sale rebate on ENERGY STAR® qualified refrigerators, freezers, washers, dishwashers, air conditioners, and water heaters, as well as highly efficient heating and air conditioning systems.¹⁴⁰⁴ The second phase of the Program, running from April 16-25, provides a flat 15% rebate to consumers who purchase energy efficient appliances at participating retail stores. Consumers who turn in their old appliances for recycling will also be eligible for an additional mail-in rebate of \$50-\$100.¹⁴⁰⁵

UIUC was the first recipient of a Large Customer Energy Efficiency Grant to help large energy users reduce the amount of energy they expend.¹⁴⁰⁶ The program is one component of Illinois’ Energy Plan, and the UIUC will receive more than \$848,000 for a campus-wide energy efficiency initiative that will save \$1 million per year in energy costs.¹⁴⁰⁷ The energy-saving measures include energy wheels in several new and renovated buildings, thermal pipe insulation, variable air Volume hoods and controls, heating ventilating and air conditioning controls, exhaust controls, and geothermal systems.¹⁴⁰⁸

¹⁴⁰¹ NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

¹⁴⁰² See *id.*

¹⁴⁰³ Press Release, Ill. Gov’t News Network, Governor Quinn Announces \$1.7 Million Grant for Illinois Community College Sustainability Network (Jan. 14, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8172>.

¹⁴⁰⁴ Press Release, Ill. Gov’t News Network, Governor Quinn Announces Guidelines for Illinois’ ENERGY STAR® Appliance Rebate Program (Jan. 19, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8188>.

¹⁴⁰⁵ *Id.*

¹⁴⁰⁶ Press Release, Ill. Gov’t News Network, Governor Quinn Announces Grant to Improve Energy Efficiency for Large Customers (Jan. 21 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8191>.

¹⁴⁰⁷ *Id.*

¹⁴⁰⁸ *Id.*

Exelon Corporation and Caterpillar joined some of the world's largest energy corporations as a member of the FutureGen Alliance in the beginning of 2010. FutureGen Alliance is an Illinois based "non-profit membership organization created to benefit the public interest, and the interests of science through research, development and demonstration of near-zero emissions coal technology."¹⁴⁰⁹ FutureGen is designed to be the cleanest coal-fueled power plant in the world, focused on converting coal into hydrogen and electricity, while capturing and safely storing the carbon dioxide in sandstone formations a mile beneath the site.¹⁴¹⁰ Construction on the Meredosia power plant and carbon dioxide pipeline and storage facility is scheduled to start in the summer of 2014 and the plant is scheduled to begin commercial operations in the fall of 2017.¹⁴¹¹

At the end of March 2010, Ingersoll Machine Tools, Inc. received \$5 million "to develop wind energy turbine components and create and retain more than 150 green jobs at its facility in Rockford."¹⁴¹² The grant was awarded through the Green Industry Business Development Program, a component of Illinois' Energy Plan funded by ARRA.

Governor Quinn launched the final phase of Illinois' ENERGY STAR® Appliance Rebate Program in April 2010¹⁴¹³ and September 2010.¹⁴¹⁴ The Program gave a 15% rebate on energy efficient home appliances for qualified refrigerators, freezers, washers, dishwashers, and air conditioners purchased at any of over 600 participating retail stores.

In May 2010, \$13.1 million in federal stimulus funds were made available through the Energy Efficiency and Conservation Block Grant (EECBG) Program to help local governments with populations under 35,000 implement energy efficiency and conservation efforts.¹⁴¹⁵ Each regional agency will provide a local Request for Application (RFA) for the Program. Possible projects include creation of a strategic energy plan, residential and commercial building audits, energy retrofits, or purchasing hybrid, electric or alternative-fueled vehicles.¹⁴¹⁶

¹⁴⁰⁹ *The Alliance*, FUTUREGEN ALLIANCE, <http://www.futuregenalliance.org/the-alliance/> (Oct. 11, 2013).

¹⁴¹⁰ Press Release, Ill. Gov't News Network, Governor Quinn, Senator Durbin Announce Caterpillar Joining FutureGen Alliance (Feb. 8, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8234>.

¹⁴¹¹ *FutureGen 2.0*, FUTUREGEN ALLIANCE (Sept. 2013), http://www.futuregenalliance.org/wp-content/uploads/2013/09/FINAL-FutureGen-Facts_09-24-13.pdf.

¹⁴¹² Press Release, Ill. Gov't News Network, Governor Quinn Announces \$5 Million to Support Clean Energy and Create Green Jobs (Mar. 31, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8332>.

¹⁴¹³ Press Release, Ill. Gov't News Network, Governor Quinn Launches Final Phase of Illinois' ENERGY STAR® Appliance Rebate Program (Apr. 16, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8372>.

¹⁴¹⁴ Press Release, Ill. Gov't News Network, Governor Quinn Announces Additional \$3 Million for Illinois' ENERGY STAR® Appliance Rebate Program (Sept. 9, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8842>.

¹⁴¹⁵ Press Release, Ill. Gov't News Network, Governor Quinn Announces Federal Stimulus Grants for Energy Efficiency and Conservation (May 17, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8452>.

¹⁴¹⁶ *Id.*

In May 2010, Governor Quinn signed S.B. 3429,¹⁴¹⁷ which initiates a study of the energy performance of state-owned buildings with hopes of furthering the state's goal of adopting more comprehensive energy efficiency benchmarks for existing state buildings.¹⁴¹⁸ The Illinois Energy Efficiency Committee conducted the study, focusing on existing buildings as a place to begin targeting upgrades to improve the efficiency of those buildings.¹⁴¹⁹

In June 2010, S&C Electric Company, which is located in Illinois, received a \$1 million grant to increase its manufacturing capacity for energy-efficient electrical switching and protection products. The Company's products will facilitate connection of renewable sources, such as wind to the electric system, and facilitate development of smart grid technologies.¹⁴²⁰ In addition, S&C planned to use part of the funding to install a green roof at its facility to reduce annual energy consumption by 474 million BTUs and carbon dioxide emissions by 29 tons.¹⁴²¹

In August 2010, Governor Quinn announced the completion of new geothermal heating and cooling systems at four Rantoul schools, including Eastlawn Primary Grade Level Center, Pleasant Acres Primary Grade Level Center, Broadmeadow Intermediate Grade Level Center, and Northview Intermediate Grade Level Center.¹⁴²² Funded in part through a \$480,000 federal stimulus grant, the geothermal systems replaced outdated heating and air conditioning systems. This project resulted in more than 118,000 therms of natural gas being saved, enough to heat approximately 125 homes for a year.¹⁴²³

In October 2010, solar panels were installed in the Illinois Executive Mansion as part of the 10/10/10 Global Work Party. It is estimated that the new, one kilowatt solar array will reduce GHG emissions by 30 tons of carbon dioxide over the next 25 years, which is equivalent to approximately 100,000 car miles or the planting of 1,100 trees.¹⁴²⁴

Funk Linko, a Chicago Heights, Illinois manufacturer, received a \$5 million federal stimulus grant for retooling the company's existing steel mill equipment to

¹⁴¹⁷ S.B. 3429, 96th Gen. Assemb., Reg. Sess. (Ill. 2010), <http://ilga.gov/legislation/publicacts/96/PDF/096-0896.pdf>.

¹⁴¹⁸ Press Release, Ill. Gov't News Network, Governor Quinn Signs Legislation to Study Energy Performance of State Buildings (May 22, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8467>.

¹⁴¹⁹ *Id.*

¹⁴²⁰ Press Release, Ill. Gov't News Network, Governor Quinn Announces More Than \$1 Million to Support Renewable Energy Development, Green Jobs (June 17, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8543>.

¹⁴²¹ *Id.*

¹⁴²² Press Release, Ill. Gov't News Network, Governor Quinn Announces Completion of Energy Efficiency Improvements in Rantoul Schools (Aug. 27, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8808>.

¹⁴²³ *Id.*

¹⁴²⁴ Press Release, Ill. Gov't News Network, Governor Quinn Announces Solar Panels to be Installed at Illinois Executive Mansion (Oct. 10, 2010), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8960>.

produce low-emission and high-speed rail locomotives, and wind energy components for wind power generation.¹⁴²⁵

2011: Renewable Portfolio Standard, Transportation/Fuels, Green Technology, and Renewable Energy

On December 22, 2011, Governor Quinn announced that several 25-year contracts for solar and wind energy were formed in order to help Illinois meet its Renewable Portfolio Standard (RPS) guidelines.¹⁴²⁶ The RPS requires that 25% of the energy supplied to smaller consumers must come from renewable sources by 2025. The winning solar and wind vendors will provide energy to the state's two major utilities, Ameren and ComEd, which will then redistribute it to consumers throughout the state.¹⁴²⁷

Governor Quinn announced the installation of electric vehicle (EV) charging stations throughout the Chicagoland area in February 2011.¹⁴²⁸ Funding comes partly from ARRA (\$1 million) and partly from state capital investment (also \$1 million). The project will create eighteen permanent and temporary jobs as part of the "Illinois Jobs Now!" Program, and is expected to result in the largest concentration of DC quick-charge stations in the world. DC quick-charge stations represent a new technology that drastically reduces the amount of time it takes to charge an EV.¹⁴²⁹

That same month, Illinois further aimed to develop its EV infrastructure when Governor Quinn announced a MOU with Mitsubishi Motors North American (MMNA).¹⁴³⁰ Under the MOU, MMNA will loan a limited number of EVs to Illinois in order to test the EV's in the state's fleet and will also provide Illinois with recommendations on adopting EV technology statewide. In addition, Quinn committed to exploring opportunities for joint research and industrial development and to establishing courses on EV technology in community colleges and technical schools.¹⁴³¹ Thanks in large part to these efforts, the all-electric Nissan Leaf was released early in the state.¹⁴³²

¹⁴²⁵ Press Release, Ill. Gov't News Network, Governor Quinn Highlights \$5 Million Investment to Advance Renewable Energy in Illinois, Create Jobs (Oct. 21, 2010),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8998>.

¹⁴²⁶ Press Release, Ill. Gov't News Network, Governor Quinn Announces Long-Term Renewable Energy Agreements to Boost Illinois' Green Economy (Dec. 22, 2010),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=9123>

¹⁴²⁷ *Id.*

¹⁴²⁸ Press Release, Ill. Gov't News Network, Governor Quinn Announces Partnership to Boost Sustainability in Illinois (Feb. 18, 2011),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=9230>

¹⁴²⁹ *Id.*

¹⁴³⁰ Press Release, Ill. Gov't News Network, Governor Quinn, Mitsubishi Motors Announce Innovative Partnership to Promote Sustainability (Feb. 4, 2011),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=9201>.

¹⁴³¹ *Id.*

¹⁴³² Press Release, Ill. Gov't News Network, Governor Quinn Announces Electric Car Coming to Illinois This Fall (Aug. 25, 2011),

<http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=18&RecNum=9680>.

Governor Quinn announced a comprehensive energy plan to invest in renewable energy and energy efficiency in May 2011.¹⁴³³ The plan aims to advance Illinois's mandated goal of 25% of energy from renewable sources by 2025.¹⁴³⁴ Also in May, the Illinois Energy Now Program announced it would begin accepting applications for projects to be completed between June 1, 2011 and May 15, 2012.¹⁴³⁵ The Illinois Energy Now Program provides assistance to communities and public schools to fund energy efficiency projects.¹⁴³⁶

In August 2011, Governor Quinn signed into law two bills, H.B. 1558¹⁴³⁷ and H.B. 1487,¹⁴³⁸ creating a council to study offshore wind energy projects in Lake Michigan.¹⁴³⁹ Quinn also signed the Higher Education Green Jobs and Technology Act, H.B. 166, which will promote collaboration between the state's colleges and universities to promote green jobs and industry.¹⁴⁴⁰

2012: Energy Efficiency, Climate Change MOUs, Market-Based Solutions, and Transportation/Fuels

On March 5, 2012, Illinois issued its first Home Performance ENERGY STAR® certificate to a homeowner in Elmwood Park.¹⁴⁴¹ The homeowner performed extensive duct-sealing and added additional insulation to the attic and basement, resulting in an approximate savings of 35% or \$440 per year.¹⁴⁴²

Also in March 2012, Illinois signed a MOU with several other Great Lakes States and federal agencies regarding offshore wind energy.¹⁴⁴³ The MOU requires regulatory

¹⁴³³ Press Release, Ill. Gov't News Network, Governor Quinn Unveils Comprehensive Energy Plan (May 9, 2011), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=18&RecNum=9392>.

¹⁴³⁴ *Id.*

¹⁴³⁵ Press Release, Ill. Dep't of Commerce & Econ. Opportunity, State Announces Program Guidelines for Public Sector Energy Efficiency Electric and Gas Programs (May 31, 2011), <http://web.archive.org/web/20120131083856/http://www.illinoisbiz.biz/dceo/News/pr05312011.htm>.

¹⁴³⁶ *Id.*

¹⁴³⁷ H.B. 1558, 97th Gen. Assemb., Reg. Sess. (Ill. 2011).

¹⁴³⁸ H.B. 1487, 97th Gen. Assemb., Reg. Sess. (Ill. 2011).

¹⁴³⁹ Press Release, Ill. Gov't News Network, Governor Quinn Signs Legislation to Advance Wind Energy in Illinois (Aug. 7, 2011), <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=18&RecNum=9607>.

¹⁴⁴⁰ H.B. 166, 98th Gen. Assemb., Reg. Sess. (Ill. 2011); Press Release, Ill. Dep't of Commerce & Econ. Opportunity, Governor Quinn Signs Legislation to Support Green Jobs (Aug. 4, 2011), <http://web.archive.org/web/20120131062522/http://www.illinoisbiz.biz/dceo/News/pr08042011.htm>.

¹⁴⁴¹ Press Release, Midwest Energy Efficiency Alliance, Illinois' First Home Performance with ENERGY STAR Certificate Awarded to Elmwood Park Homeowner (Mar. 5, 2012), <http://www.mwalliance.org/press-releases/illinois-first-home-performance-energy-star-certificate-awarded-elmwood-park>.

¹⁴⁴² *Id.*

¹⁴⁴³ Press Release, Mich. Governor, Michigan Enters Multistate Agreement Regarding Offshore Wind Energy (Mar. 30, 2012), http://www.michigan.gov/snyder/0,4668,7-277-57577_57657-274875--,00.html.

agencies to disclose and share their current regulatory regimes for offshore wind projects to facilitate coordination.¹⁴⁴⁴

On March 29, 2012, Governor Quinn announced the availability of “the nation’s largest network of fast-charging EV stations.”¹⁴⁴⁵ As part of the Chicago-Area EV Infrastructure Project, 26 stations had been installed out of a total of 73 planned.¹⁴⁴⁶

On Earth Day, April 22, 2012, Governor Quinn announced a \$300,000 grant to Amtrak to improve the energy efficiency of its train yard in Chicago.¹⁴⁴⁷ The upgrades will help Amtrak save \$2 million per year in natural gas costs.¹⁴⁴⁸

In September 2012, the National Governors Association (NGA) announced a policy academy in coordination with four states (Alabama, Arkansas, Illinois, and Iowa) that will focus on energy efficiency in the industrial sector in order to improve productivity and competitiveness.¹⁴⁴⁹ The Policy Academy on Enhancing Industry Through Energy Efficiency and Combined Heat and Power (CHP) will include two workshops, site visits, expert technical assistance, networking and a grant opportunity to support related activities.¹⁴⁵⁰

Illinois was one of four states to receive a *Best Practices Policy Academy* grant from the NGA for CHP.¹⁴⁵¹ The grant will address ways for nine industrial sectors in Illinois to increase efficiency and CHP.¹⁴⁵²

In November 2012, Illinois instituted the Illinois Building Operator Certification Program that provides returning veterans seeking employment with energy-efficiency installation training, among other opportunities.¹⁴⁵³ The Program, led by the Midwest

¹⁴⁴⁴ *Id.*

¹⁴⁴⁵ Press Release, Ill. Gov’t News Network, Governor Pat Quinn Rolls Out Nation’s Largest Electric Vehicle Fast-Charging Network (Mar. 29, 2012), <http://www3.illinois.gov/PressReleases/PressReleasesListShow.cfm?RecNum=10133>.

¹⁴⁴⁶ *Id.*

¹⁴⁴⁷ Press Release, Ill. Gov’t News Network, Governor Quinn Announces Grant to Improve Energy Efficiency at Amtrak Train Yard on Earth Day (Apr. 22, 2012), <http://www3.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=10191>.

¹⁴⁴⁸ *Id.*

¹⁴⁴⁹ Press Release, Nat’l Governors Ass’n, NGA to Work with Four States on Improving Industrial Energy Efficiency (Sept. 4, 2012), http://www.nga.org/cms/home/news-room/news-releases/page_2012/col2-content/nga-to-work-with-four-states-on.html.

¹⁴⁵⁰ *Id.*

¹⁴⁵¹ Press Release, Ill. Gov’t News Network, National Governors Association Selects Illinois for Industrial Energy Efficiency Grant (Sept. 13, 2012), <http://www3.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=10557>.

¹⁴⁵² *Id.*

¹⁴⁵³ Press Release, Midwest Energy Efficiency Alliance, Illinois Building Operator Certification Program Helping Veterans Get Jobs, Save Energy in Springfield, IL (Nov. 9, 2012), <http://www.mwalliance.org/press-releases/illinois-building-operator-certification%C2%AE-program-helping-veterans-get-jobs-save>.

Energy Efficiency Alliance, will result in an estimated average savings of 181,000 kWh and 557 therms per year.¹⁴⁵⁴

2013: Green Building

The United States Green Building Council ranked Illinois fourth in the nation in its January 30, 2013 Green Building Survey.¹⁴⁵⁵ Illinois certified 156 LEED projects in 2012 as part of the state's ongoing commitment to energy efficiency.

INDIANA

2002: Fuels

In 2002, Indiana established the Center for Coal Technology Research to develop methods of coal use and extraction that are not detrimental to the environment.¹⁴⁵⁶ The Center investigates methods to limit environmentally harmful emissions from coal extraction facilities.¹⁴⁵⁷

2004: Market-Based Solutions

In 2004, Indiana's Utility Regulatory Commission established a set of rules requiring utilities to provide net metering to residents and K-12 schools with renewable power systems.¹⁴⁵⁸ Net-metered systems must comply with Indiana's interconnection rules established in 2005, which require Indiana's investor-owned utilities to provide three levels of interconnection to customer-generators.¹⁴⁵⁹

2007: Climate Change Agreements

Indiana signed the Midwestern Greenhouse Gas Reduction Accord (MGGRA) as an observer in 2007.¹⁴⁶⁰ The MGGRA was a "commitment by the governors of six Midwestern states and the premier of one Canadian province to reduce greenhouse gas (GHG) emissions through a regional cap-and-trade program and other complementary policy measures."¹⁴⁶¹

¹⁴⁵⁴ *Id.*

¹⁴⁵⁵ Press Release, Ill. Gov't News Network, Governor Quinn Announces Illinois Ranked Fourth State Nationally in Green Building Survey (Jan. 30, 2013), <http://www3.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=10897>.

¹⁴⁵⁶ IND. CODE ANN. § 4-4-30 (West 2005) (repealed 2007).

¹⁴⁵⁷ *Id.*

¹⁴⁵⁸ 170 IND. ADMIN. CODE 4-4.2 (2006).

¹⁴⁵⁹ *Id.* r. 4-4.3.

¹⁴⁶⁰ *Midwestern Greenhouse Gas Accord 2007*, MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, http://web.archive.org/web/20081114002536/http://www.midwesterngovernors.org/Publications/Greenhouse%20gas%20accord_Layout%201.pdf (Feb. 18, 2009).

¹⁴⁶¹ *Midwestern Greenhouse Gas Reduction Accord*, CTR. FOR ENERGY AND CLIMATE SOLUTIONS, <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mggra> (Oct. 20, 2013).

2009: American Recovery & Reinvestment Act (ARRA), Energy Efficiency, Renewable Energy, and Transportation

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Indiana is eligible for \$68,621,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).¹⁴⁶²

The next week, Governor Daniels announced that Indiana would submit its plan to the federal government to use \$132 million in federal stimulus funding to implement energy conservation measures.¹⁴⁶³ This plan proposes aiding 30,000 low-income homes through the state's Energy Assistance Program. Through this Program, Indiana will expend up to \$5,000 per household on energy audits and the installation of necessary, energy saving equipment.

Governor Daniels declared April 13-18, 2009 "Indiana Wind Energy Week."¹⁴⁶⁴ This declaration was prompted by the groundbreaking of two new wind farms during that week as well as the American Wind Energy Association's announcement that Indiana is the fastest-growing state for wind energy development. The new wind farms will produce 306 megawatts (MW) of wind energy, increasing the state's commercially available wind energy to 836 MW by the end of 2009.

Governor Daniels joined seven other Midwest states in signing a memorandum of understanding (MOU) to coordinate ARRA applications and advocacy for high-speed rail.¹⁴⁶⁵ Indiana also received \$132 million in ARRA funding for energy conservation projects in August 2009.¹⁴⁶⁶ While in China meeting with government officials in September, Daniels discussed his state's current sustainable efforts and his desire to create more jobs in the green collar economy.¹⁴⁶⁷

2010: Climate Change Adaptation and Energy Efficiency

In June 2010, Governor Daniels announced a major land conservation initiative whereby the state will begin to acquire 43,000 acres located in the flood plain of the

¹⁴⁶² U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

¹⁴⁶³ Press Release, Ind. Governor, Governor Outlines State's Stimulus Energy Conservation Plan (Mar. 20, 2009), http://web.archive.org/web/20090417210846/http://www.in.gov/gov/gov_newsroom.htm.

¹⁴⁶⁴ Press Release, Ind. Governor, Governor Declares April 13-18 "Indiana Wind Energy Week" (Apr. 13, 2009), <http://web.archive.org/web/20111108014945/http://www.in.gov/gov/3513.htm>.

¹⁴⁶⁵ Mem. of Understanding, from Governor of State of Ill., Governor of State of Ind., Governor of State of Iowa, Governor of State of Mich., Governor of State of Minn., Governor of State of Mo., Governor of State of Ohio, Governor of State of Wis., and Mayor of City of Chi., to Fed. R.R. Admin. (July 27, 2009), <http://web.archive.org/web/20091002043001/http://www.wisgov.state.wi.us/docview.asp?docid=17199>.

¹⁴⁶⁶ Press Release, State Energy Conservation Stimulus Program Approved (Aug. 27, 2009), http://www.in.gov/portal/news_events/41939.htm.

¹⁴⁶⁷ Press Release, Ind. Governor, Day 2: Governor Talks Jobs, Energy and Health Care in China (Sept. 8, 2009), http://www.in.gov/ActiveCalendar/EventList.aspx?view=EventDetails&eventidn=61924&information_id=124923&type=&syndicate=syndicate.

Wabash River and Sugar Creek in West Central Indiana.¹⁴⁶⁸ Another major land conservation project targets more than 25,600 acres along the Muscatatuck River, which contains the largest, least-fragmented complex of bottomland forest remaining in Indiana including several species of oak, hickory, and sweet gum.¹⁴⁶⁹ Indiana used \$21.5 million from the Lifetime License Trust Fund, a state trust fund dedicated to conservation purposes, and \$10 million from the U.S. Fish & Wildlife Service to begin the acquisitions.¹⁴⁷⁰ The initiatives' key objectives are to: design an effective model for sustainability of natural resources by connecting fragmented parcels of public land; restore and enhance riparian corridors; protect essential habitat for threatened and endangered species; open public access for recreational opportunities; preserve significant rest areas for migratory birds, especially waterfowl; create a regionally significant conservation destination; and provide additional flood relief to current riparian landowners.¹⁴⁷¹

In December 2010 four community projects were selected to receive \$100,000 each as part of Indiana's Community Conservation Challenge. The grants are geared toward energy efficiency projects that have a community-wide impact.¹⁴⁷²

2011: Energy Efficiency

In October 2011, Indiana introduced Energy Action in Schools, a program administered by the National Energy Foundation, to help schools reduce energy usage and cut costs. The program begins with an energy audit of each participating school, after which "Energy Action Patrols" monitor usage and make recommendations for further energy usage reduction.¹⁴⁷³

¹⁴⁶⁸ Press Release, Ind. Governor, Governor Announces Major Land Conservation Initiative (June 10, 2010), http://www.in.gov/ActiveCalendar/EventList.aspx?fromdate=6/10/2010&todate=6/30/2013&display=Month&type=public&eventidn=62005&view=EventDetails&information_id=125085.

¹⁴⁶⁹ Press Release, Ind. Governor, Governor Announces Second Major Land Conservation Project (June 11, 2010), http://www.in.gov/ActiveCalendar/EventList.aspx?fromdate=6/10/2010&todate=6/30/2013&display=Month&type=public&eventidn=62006&view=EventDetails&information_id=125087.

¹⁴⁷⁰ Press Release, Ind. Governor, Governor Announces Major Land Conservation Initiative (June 10, 2010), http://www.in.gov/ActiveCalendar/EventList.aspx?fromdate=6/10/2010&todate=6/30/2013&display=Month&type=public&eventidn=62005&view=EventDetails&information_id=125085; *See also* Press Release, Ind. Governor, Governor Announces Second Major Land Conservation Project (June 11, 2010), http://www.in.gov/ActiveCalendar/EventList.aspx?fromdate=6/10/2010&todate=6/30/2013&display=Month&type=public&eventidn=62006&view=EventDetails&information_id=125087.

¹⁴⁷¹ *Id.*

¹⁴⁷² Press Release, Ind. Office of Energy Dev., Community Conservation Challenge Helps Launch Efficiency Projects, http://www.in.gov/oed/files/Community_Conservation_Challenge_Award_Final.pdf (Oct. 17, 2013).

¹⁴⁷³ Press Release, Ind. Office of Energy Dev., Energy Patrols to Help Indiana Schools Save Money, http://www.in.gov/oed/files/Energy_Action_In_Schools-final_revised.pdf (Oct. 17, 2013).

In April 2011, the state government announced that Indiana cities and counties would also benefit from an energy efficiency program.¹⁴⁷⁴ The DOE's Energy Efficiency and Conservation Block Grant Program (EECGB) will provide funding for energy audits and developing energy plans for cities below 35,000 and counties below 200,000 in population. After the energy plans are completed, the Program will also assist with setting up community meetings in order to raise awareness about increasing energy efficiency in the communities.¹⁴⁷⁵

IOWA

1990: Renewable Energy

In 1990 the Iowa Energy Center was created.¹⁴⁷⁶ The Center provides grants for research on renewable energy and energy efficiency by colleges, non-profit groups, and other institutions.¹⁴⁷⁷ The Energy Center also administers the Alternate Energy Revolving Loan Program, providing loans to people and businesses seeking to construct renewable energy generators in Iowa.¹⁴⁷⁸ The Program offers half of each loan at no interest for twenty years.¹⁴⁷⁹

1996: Climate Change Agreements

The University of Iowa completed a climate change action plan for the state in December 1996.¹⁴⁸⁰ The plan is built on a variety of energy efficiency programs and renewable energy initiatives.

2004: Renewable Energy and Fuels

Since 2004, Iowa has required its electric utilities to provide their customers with annual reports on the percentage mix of fuel used in electric generation.¹⁴⁸¹ Each utility must also estimate the amount of sulfur dioxide, nitrogen oxides, and carbon-dioxide emissions that its generation facilities produce.¹⁴⁸² Also since 2004, Iowa has required its utilities to provide their customers with the option of contributing money to support the development of renewable power sources.¹⁴⁸³

¹⁴⁷⁴ Press Release, Ind. Office of Energy Dev., Indiana Communities to be Offered Energy Efficiency Plans, http://www.in.gov/oed/files/CEP_Program-final.pdf (Oct. 17, 2013).

¹⁴⁷⁵ *Id.*

¹⁴⁷⁶ IOWA CODE ANN. § 266.39C (West 2011).

¹⁴⁷⁷ *Id.* § 266.39C.

¹⁴⁷⁸ *Id.* § 476.46.

¹⁴⁷⁹ *Id.*

¹⁴⁸⁰ IOWA DEP'T OF NATURAL RES., IOWA GREENHOUSE GAS ACTION PLAN (Dec. 1996), <http://web.archive.org/web/20090113235638/http://atmos.cgrer.uiowa.edu/research/reports/iggap/FinalReport.pdf>.

¹⁴⁸¹ IOWA ADMIN. CODE r. 199-15.17(5) (2005).

¹⁴⁸² *Id.*

¹⁴⁸³ IOWA CODE ANN. § 476.47 (West 2001).

2005: Renewable Energy

In April 2005, Governor Vilsack introduced Executive Order (EO) 41, mandating that Iowa's agencies rely on renewable energy for at least 10% of their power.¹⁴⁸⁴ The EO also requires that the following be achieved by 2010: (1) state agencies must reduce their energy use by 15% from the level it was in 2000; (2) all state-owned automobiles other than heavy trucks and law-enforcement vehicles must be either hybrid-electric or use alternative fuels; and (3) any bulk diesel fuel purchased by the state must be 20% renewable.¹⁴⁸⁵

Iowa provides several tax incentives to promote renewable power sources. In June 2005, the state began offering energy providers production tax credits of 1.5¢ for every kilowatt-hour of renewable power sold to their customers.¹⁴⁸⁶ Energy providers may apply the credit toward the personal income tax, sales tax, use tax, business tax, or financial institutions tax.¹⁴⁸⁷ Iowa also exempts energy generated by wind power from the replacement generation tax.¹⁴⁸⁸ Under the same law, operators of hydropower generators that produce at least 100 megawatt-hours of energy pay a reduced replacement generation tax of \$0.000001847 instead of the usual \$0.0006 for every kilowatt-hour.¹⁴⁸⁹

2006: Fuels

In 2006 Iowa enacted a series of laws related to energy. The first law provides a 25¢ per gallon tax break for using 85% ethanol fuel (E-85).¹⁴⁹⁰ House File (HF) 2759 requires 25% of the petroleum used in the formulation of gasoline be replaced by biofuel by 2020.¹⁴⁹¹ Senate File (SF) 2398 has a sales tax exemption for the purchase of solar power equipment.¹⁴⁹² SF 2399 implemented a renewable energy tax credit.¹⁴⁹³

2007: Greenhouse Gas Reduction and Climate Change Agreements

In April 2007, Governor Culver created the Iowa Climate Change Advisory Council by signing SF 485 into law.¹⁴⁹⁴ This Council will identify the best strategies for reducing greenhouse gas (GHG) emissions.¹⁴⁹⁵ In addition, the law enables GHG emissions data to be collected by licensing electric power generating facilities and reporting by GHG producers.¹⁴⁹⁶

¹⁴⁸⁴ Iowa Exec. Order No. 41 (2005).

¹⁴⁸⁵ *Id.*

¹⁴⁸⁶ IOWA CODE ANN. § 476C (West 2011).

¹⁴⁸⁷ *Id.*

¹⁴⁸⁸ *Id.* § 437A.6.

¹⁴⁸⁹ *Id.*

¹⁴⁹⁰ H. File 2754C, 81st Gen. Assemb., Reg. Sess. (Iowa 2006).

¹⁴⁹¹ H. File 2759, 81st Gen. Assemb., Reg. Sess. (Iowa 2006).

¹⁴⁹² S. File 2398, 81st Gen. Assemb., Reg. Sess. (Iowa 2006).

¹⁴⁹³ S. File 2399, 81st Gen. Assemb., Reg. Sess. (Iowa 2006).

¹⁴⁹⁴ S. File 485, 82nd Gen. Assemb., Reg. Sess. (Iowa 2007).

¹⁴⁹⁵ *Id.*

¹⁴⁹⁶ *Id.*

On November 15, 2007, Governor Culver joined the governors of Illinois, Kansas, Michigan, Minnesota, and Wisconsin, as well as the Premier of the Canadian Province of Manitoba, in signing and establishing the Midwestern Greenhouse Gas Reduction Accord (MGGRA) to reduce GHG emissions and achieve energy security.¹⁴⁹⁷ Signed at the Midwestern Governors Association Energy Security and Climate Change Summit held in Milwaukee, Wisconsin, the Accord will establish GHG emission targets, including a 60 to 80% reduction in emissions, create a market-based, multi-sector cap-and-trade system, and create a tracking and crediting system.¹⁴⁹⁸ The MGGRA's final model rule was released in April 2010; however, although the MGGRA has not been formally suspended, participating states are no longer formally pursuing it.¹⁴⁹⁹

Also at the Summit, Iowa, Illinois, Kansas, Michigan, Minnesota, Wisconsin, Nebraska, and North Dakota, adopted an Energy Security and Climate Stewardship Platform.¹⁵⁰⁰ The Platform's goals for the Midwest include promoting energy efficiency, advances in biobased products, electricity production from renewables, advanced coal, and carbon capture and storage.¹⁵⁰¹ Platform members also signed cooperative regional initiatives that will work to create a Carbon Management Infrastructure Partnership, a bioproduct procurement program, electricity transmission adequacy for new wind energy, renewable fuels corridors, advanced bioenergy permitting, and low-carbon energy transmission infrastructure.¹⁵⁰²

2008: Energy Efficiency, Renewable Energy, and Greenhouse Gas Reduction

On February 21, 2008, Governor Culver signed EO 6, establishing a new "green government" initiative.¹⁵⁰³ The initiative set goals to improve energy efficiency in the areas of buildings, materials, and biofuels, and establishes separate task forces to address these issues.¹⁵⁰⁴ The EO called for each executive branch agency to appoint a coordinator to support the effort.¹⁵⁰⁵

In May 2008, Governor Culver signed SF 2405 into law. It encourages banks to

¹⁴⁹⁷ *Midwestern Greenhouse Gas Accord 2007*, MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, http://web.archive.org/web/20081114002536/http://www.midwesterngovernors.org/Publications/Greenhouse%20gas%20accord_Layout%201.pdf (Feb. 18, 2009).

¹⁴⁹⁸ *Id.*

¹⁴⁹⁹ FINAL MODEL RULE FOR THE MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD (2010), http://michigancondemnationblog.com/storage/Final_Model_Rule1.pdf; *Midwest Greenhouse Gas Reduction Accord*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mgggra> (Oct. 11, 2013).

¹⁵⁰⁰ MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, ENERGY SECURITY AND CLIMATE STEWARDSHIP PLATFORM FOR THE MIDWEST (2007), <http://www.midwesterngovernors.org/resolutions/Platform.pdf>.

¹⁵⁰¹ *Id.*

¹⁵⁰² *Id.*

¹⁵⁰³ Iowa Exec. Order No. 06 (2008).

¹⁵⁰⁴ *Id.*

¹⁵⁰⁵ *Id.*

invest in wind energy by expanding the Wind Production Tax Credit to 2012.¹⁵⁰⁶ It encourages consumers to use wind energy by allowing both individuals and businesses to take advantage of the credit.¹⁵⁰⁷

Also in May 2008, Governor Culver signed legislation requiring utilities to set energy efficiency goals.¹⁵⁰⁸ SF 2386 establishes a two-year Commission on Energy Efficiency Standards and Practices within the Department of Public Safety, which is tasked with developing energy standards for construction projects and creating an energy efficiency rating program. It requires the Iowa Utilities Board to report energy efficiencies for gas and electric utilities to the General Assembly.¹⁵⁰⁹ The law also requires electric utilities to establish energy efficiency goals, report on progress, and review the most cost-effective means for renewable energy generation by 2025.¹⁵¹⁰

In May 2008, Governor Culver signed legislation that changed parts of the Iowa Renewable Fuels Infrastructure Program to expand renewable fuel infrastructure and access to renewable fuels.¹⁵¹¹ This included increasing funding for biodiesel terminals and encouraging state and local government fleets to use biodiesel when commercially available.¹⁵¹²

On November 14, 2008, Iowa was one of seven states chosen by the National Governors Association (NGA) Center for Best Practices to participate in its Policy Academy aimed at the development of planning and implementation strategies for increased energy efficiency in Iowa's public and private buildings.¹⁵¹³

On December 23, 2008, the Iowa Climate Change Advisory Commission (ICCAC) issued its final report.¹⁵¹⁴ The ICCAC proposed two GHG reduction scenarios and 56 policy options chosen from a study of 300.¹⁵¹⁵ The GHG reduction scenarios are: 50% cutback from 2005 emissions by 2050, with interim goals of 1% by 2012 and 11% by 2020; and 90% cutback from 2005 emissions by 2050, with interim goals of 3% by

¹⁵⁰⁶ S. File 2405, 82nd Gen. Assemb., Reg. Sess. (Iowa 2008); *see* IOWA CODE ANN. § 476B (West 2011).

¹⁵⁰⁷ *Id.*

¹⁵⁰⁸ S. File 2386, 82nd Gen. Assemb., Reg. Sess. (Iowa 2008).

¹⁵⁰⁹ *Id.*

¹⁵¹⁰ Press Release, Office of the Governor, Governor Culver Signs Energy Efficiency Legislation (May 6, 2008), http://web.archive.org/web/20080518005626/http://www.governor.iowa.gov/news/2008/05/6_4.php.

¹⁵¹² H. File 2689, 82nd Gen. Assemb., Reg. Sess. (Iowa 2008).

¹⁵¹³ Press Release, Office of the Governor, Governor Culver Announces Iowa to Participate in NGA Initiative to Improve Energy Efficiency and Renewable Energy in Buildings (Nov. 14, 2008), http://web.archive.org/web/20090418093524/http://www.governor.iowa.gov/news/2008/11/14_1.php.

¹⁵¹⁴ FINAL REPORT, IOWA CLIMATE CHANGE ADVISORY COMM'N (2008), <http://web.archive.org/web/20120505090922/http://www.pewclimate.org/docUploads/Iowa%20ClimateActionPlan%20Dec2008.pdf>.

¹⁵¹⁵ *Id.*

2012 and 22% by 2020.¹⁵¹⁶ The ICCAC projected that attainment of the more aggressive 90% cutback goal is possible if all 56 policy options recommended are adopted.¹⁵¹⁷

2009: Climate Change Agreements, Renewable Energy, Cap-and-Trade, Green Building, Green Jobs, American Recovery & Reinvestment Act (ARRA), and Fuels

In January 2009, the advisory group to the Midwestern Greenhouse Gas Reduction Accord (MGGRA) released preliminary trade design recommendations.¹⁵¹⁸ The group recommended that carbon dioxide, nitrous oxide, hydro-fluorocarbon, perfluorocarbon, and sulfur hexafluoride emissions be reduced 15 to 25% below 2005 levels by 2020 and 60 to 80% below 2005 levels by 2050. It also recommended that the following sources be subject to these reductions: power plants, industrial facilities, industrial combustion sources, industrial process sources, and transportation fuels.¹⁵¹⁹ It further recommended that an offset component be incorporated in the program and that allowance value be used only for climate-related purposes by participating states.¹⁵²⁰ However, the group refused to comment on whether allowances should be auctioned or allocated, maintaining that this decision must be made by each state.¹⁵²¹

The American Wind Energy Association report released in late January 2009 ranked Iowa as second in the nation in wind energy capacity.¹⁵²² At that time, with an installed capacity of 2,700 megawatts (MW), Iowa surpassed California's wind energy production and generated enough wind energy to power 825,000 homes.¹⁵²³ In April 2010, Governor Culver announced that the American Wind Energy Association's report for 2009 shows that Iowa led the nation in percentage of wind energy generation in 2009.¹⁵²⁴ In 2009 the state generated 14% of its electricity using wind energy.¹⁵²⁵

¹⁵¹⁶ *Id.*

¹⁵¹⁷ *Id.*

¹⁵¹⁸ *January 14-15, 2009 Meeting Materials*, MIDWEST GREENHOUSE GAS REDUCTION ACCORD, http://web.archive.org/web/20090301032506/http://midwesternaccord.org/Meeting%20material%20pages/GHG-meeting-8_109.html (Oct. 18, 2013).

¹⁵¹⁹ *Midwest Greenhouse Gas Reduction Accord Releases Recommendations*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2009/midwestern-greenhouse-gas-reduction-accord-releases-recommendations> (Oct. 25, 2013).

¹⁵²⁰ *Id.* at 3.

¹⁵²¹ *Id.*

¹⁵²² Press Release, Office of the Governor, Governor Culver Announces Iowa Ranked #2 in Installed Wind Capacity, Surpassing California (Jan. 29, 2009), http://web.archive.org/web/20090410001719/http://www.governor.iowa.gov/news/2009/01/29_2.php.

¹⁵²³ *Id.*

¹⁵²⁴ Press Release, Office of Governor. Chet Culver, Iowa Leads the Nation in Percentage of Energy Used Generated by Wind (Apr. 9, 2010), http://web.archive.org/web/20100530092819/http://www.governor.iowa.gov/index.php/press_releases/single/474/, http://www.governor.iowa.gov/index.php/press_releases/single/474/.

¹⁵²⁵ *Id.*

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Iowa was eligible for \$40,546,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).¹⁵²⁶

On April 23, 2009, Governor Culver signed two bills promoting wind energy production.¹⁵²⁷ SF 456 employs unused tax credits to support small wind energy projects.¹⁵²⁸ HF 817 creates economic incentives for wind component manufacturers.¹⁵²⁹

In May 2009, Governor Culver continued to promote the state's growing wind energy industry.¹⁵³⁰ At the American Wind Energy Association 2009 WINDPOWER conference held in Chicago, Culver led a round table discussion with the governors of Ohio, Wisconsin, and Michigan on the future of the Governor's Wind Energy Coalition.¹⁵³¹ Culver spoke of the passage of recent legislation that promotes the expansion of the Iowa's wind energy and the creation of "more than 2300 green-collar jobs" related to wind energy.¹⁵³² In a speech at the conference, he pushed for national "Renewable Energy Standard" (RES) legislation that will facilitate "markets for Midwestern wind energy projects and . . . ensure the long-term growth of the wind industry nationwide."¹⁵³³ Culver continued to promote both the wind industry and push for a federal RES while meeting with Senate Majority Leader Harry Reid in Washington, D.C. in early June 2009.¹⁵³⁴

Governor Culver also signed an agreement to support federal climate change legislation in May with a coalition of governors.¹⁵³⁵ The agreement contained two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.¹⁵³⁶

¹⁵²⁶ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

¹⁵²⁷ Press Release, Office of the Governor, Governor Culver to Sign Two Bills Promoting Wind Energy Tomorrow (Apr. 22, 2009), http://web.archive.org/web/20090429205725/http://www.governor.iowa.gov/news/2009/04/22_2.php.

¹⁵²⁸ S. File 456, 83rd Gen. Assemb., 1st Sess. (Iowa 2009).

¹⁵²⁹ H. File 817, 83rd Gen. Assemb., 1st Sess. (Iowa 2009).

¹⁵³⁰ Press Release, Office of the Governor, Governor Culver Promotes Iowa's Booming Wind Industry at World's Largest Wind Industry Event (May 4, 2009), http://web.archive.org/web/20090507005101/http://www.governor.iowa.gov/news/2009/05/4_3.php.

¹⁵³¹ *Id.*

¹⁵³² *Id.*

¹⁵³³ Press Release, Office of the Governor, Governor Culver Calls on Congress, Administration to Increase Wind Energy Use and Production (May 5, 2009), http://web.archive.org/web/20090506235006/http://www.governor.iowa.gov/news/2009/05/5_2.php.

¹⁵³⁴ Press Release, Office of the Governor, Governor Culver Travels to Discuss Jobs, Economy, Alternative Energy (June 1, 2009), http://web.archive.org/web/20090922133633/http://www.governor.iowa.gov/news/2009/06/1_1.php.

¹⁵³⁵ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20100116190854/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

¹⁵³⁶ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION (May 21, 2009), <http://web.archive.org/web/20090817025755/https://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

Governor Culver ended May 2009 by signing state wind energy related legislation, including a bill appropriating \$1 million to create a “community energy efficiency grant program,” and another bill creating “small wind innovation zones, allowing small wind energy producers access to state wind production tax credits.”¹⁵³⁷

On June 22, 2009, the federal government recognized Iowa’s burgeoning renewable industry and presented the state with \$16 million in ARRA funds for further expansion of its renewable energy initiatives.¹⁵³⁸ The funds from ARRA’s State Energy Program will be used to “help finance energy improvements for public facilities; provide low-interest loans for the commercial and agricultural sectors, as well as non-profit agencies; support technology demonstrations and innovative projects; and fund training programs to quickly expand energy efficiency and renewable energy efforts.”¹⁵³⁹

In June 2009, the MGGRA advisory group released its final recommendations for a regional cap-and-trade program to the participating governors.¹⁵⁴⁰ The committee advised that a federal program is preferable to a regional one, but MGGRA should continue developing a program until federal legislation passes. The advisory group recommended targets of 18 to 20% below 2005 emissions levels by 2020 and 80% below by 2050.¹⁵⁴¹ On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the Western Climate Initiative (WCI), and the MGGRA met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade legislation.¹⁵⁴²

According to The Pew Charitable Trust’s June 2009 Clean Energy Economy Fact Sheet for Iowa, Iowa’s clean energy jobs economy grew by 7,702 jobs and 729 businesses between 1998 and 2007.¹⁵⁴³ Between 2006 and 2009, Iowa attracted over \$149 million in capital investment in clean energy.¹⁵⁴⁴

¹⁵³⁷ Press Release, Office of the Governor, Governor Culver Takes Action to Promote Clean Energy, Protect Iowa’s Children (May 23, 2009), http://web.archive.org/web/20090923033101/http://www.governor.iowa.gov/news/2009/05/23_1.php. See also H. File 810, 83rd Gen. Assemb., 1st Sess. (Iowa 2009) (wind innovation zones); S. File 452, 83rd Gen. Assemb., 1st Sess. (Iowa 2009) (community energy efficiency grants).

¹⁵³⁸ Press Release, Office of the Governor, Governor Culver: Iowa Leads the Way in Wind Energy, Biofuel Production and Jobs (June 22, 2009), http://web.archive.org/web/20090922133359/http://www.governor.iowa.gov/news/2009/06/22_1.php.

¹⁵³⁹ *Id.*

¹⁵⁴⁰ *Midwestern Greenhouse Gas Reduction Accord Releases Recommendations*, <http://www.c2es.org/us-states-regions/news/2009/midwestern-greenhouse-gas-reduction-accord-releases-recommendations> (Oct. 18, 2013).

¹⁵⁴¹ *Id.*

¹⁵⁴² Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

¹⁵⁴³ *Clean Energy Economy*, THE PEW CHARITABLE TRUSTS, (May 8, 2009), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

¹⁵⁴⁴ *Id.*

Iowa's renewable energy strides have been recognized by other states. In July 2009, Governor Culver was invited to Alaska to give the keynote address at renewable energy fair sponsored by the Renewable Energy Alaska Project (REAP).¹⁵⁴⁵ Later that week, Culver returned to Iowa and toured two renewable energy projects, a solar project at Iowa State University and Crane Creek Wind Farm.¹⁵⁴⁶

On August 20, 2009, Governor Culver participated in a groundbreaking ceremony for a green building that will house the Iowa Utilities Board and the Office of the Consumer Advocate.¹⁵⁴⁷ The new building "will use 63% less energy than a typical office."¹⁵⁴⁸ This building is the first state building in Iowa to receive the LEED Platinum designation.¹⁵⁴⁹ That same day, Culver demonstrated Iowa's commitment to green job creation with the issuance of EO 16, creating the Iowa Green Jobs Task Force.¹⁵⁵⁰

On August 27, 2009, Governor Culver announced that Iowa's Office of Energy Independence has received grant applications totaling \$65 million for energy projects under federal ARRA funding.¹⁵⁵¹ Proposals were received from private, public and non-profit sectors and would "bring in more than \$236 million in matching funds and support for additional 'green jobs' in Iowa."¹⁵⁵²

In October 2009, the Midwestern Governor's Association, in which Iowa participates, issued the report, Midwestern Energy Infrastructure Accord, which includes "agreements by Midwestern governors to expand transmission capacity, adopt smart grid technologies, build new pipelines for biofuels and for the capture and storage of carbon

¹⁵⁴⁵ Press Release, Office of the Governor, Governor Invited to Alaska to Deliver Address on Iowa's Renewable Energy and Green Job Success (July 30, 2009),

http://web.archive.org/web/20100102083946/http://www.governor.iowa.gov/news/2009/07/30_2.php. See also Press Release, Office of the Governor, Governor Culver Talks With Alaska Governor, Legislative Leaders About Renewable Energy (Aug. 1, 2009),

http://web.archive.org/web/20100108135409/http://www.governor.iowa.gov/news/2009/08/1_1.php.

¹⁵⁴⁶ Press Release, Office of the Governor, Governor Culver to Visit Renewable Energy Initiatives Today (Aug. 5, 2009),

http://web.archive.org/web/20100101063835/http://www.governor.iowa.gov/news/2009/08/5_1.php.

¹⁵⁴⁷ Press Release, Office of the Governor, Governor Culver Breaks Ground for New 'Green' State Building in Des Moines; Commemorates Grant Wood and American College Testing in Iowa City (Aug. 19, 2009),

http://web.archive.org/web/20100101064014/http://www.governor.iowa.gov/news/2009/08/19_1.php.

¹⁵⁴⁸ *Id.*

¹⁵⁴⁹ Press Release, Iowa Utilities Bd., Iowa Utilities Board-Office of Consumer Advocate Building Receives LEED Platinum Rating (Dec. 21, 2012),

http://www.state.ia.us/government/com/util/docs/news_releases/2012/1221_IUB-

[OCA_Building_Receives_LEED_Certification.pdf](http://www.state.ia.us/government/com/util/docs/news_releases/2012/1221_IUB-OCA_Building_Receives_LEED_Certification.pdf); Press Release, Office of the Governor, Governor Culver Takes Steps to Create New Green-Collar Jobs in Iowa (Aug. 20, 2009),

http://web.archive.org/web/20100101064216/http://www.governor.iowa.gov/news/2009/08/20_1.php,

¹⁵⁵⁰ *Id.*; See also Iowa Exec. Order No. 16, (2009),

http://web.archive.org/web/20101229184113/http://www.governor.iowa.gov/files/Executive_Order_No16.pdf.

¹⁵⁵¹ Press Release, Office of the Governor, State Energy Program Supports Iowa's Energy Leadership (Aug. 27, 2009),

http://web.archive.org/web/20101103074754/http://www.governor.iowa.gov/news/2009/08/27_1.php.

¹⁵⁵² *Id.*

dioxide, and deploy a refueling system for biofuels and other low-carbon transportation fuels.”¹⁵⁵³ The report set renewable energy goals for the nine participating states at 10% by 2015 and 30% by 2030.¹⁵⁵⁴ The Accord focuses on developing smart grid, carbon capture and sequestration, and biofuels in the Midwest.

In November 2009, Iowa received \$1.1 million in ARRA funding to study the green jobs market.¹⁵⁵⁵ The funds will be used to investigate the labor and supply needed for creating a green economy.¹⁵⁵⁶

In December 2009, Governor Culver praised the EPA on its announcement that it will likely approve an E15 waiver permitting the use of higher ethanol blends in fuel for automobiles.¹⁵⁵⁷

In 2009, the Iowa General Assembly established the Iowa Power Fund Community Grants Program (PFCG), which is funded by 4% of the Iowa Power Fund’s annual appropriation.¹⁵⁵⁸ Under the PFCG, cities, counties and non-profit organizations receive funding to develop local programs to save energy.¹⁵⁵⁹ Since the Program’s inception, the Iowa Power Fund has distributed more than \$50 million in grants to 39 projects, and an additional \$700,000 has been made available in PFCG funding through May 2011.¹⁵⁶⁰

2010: Energy Efficiency and Market-Based Solutions

In March 2010, Governor Culver applauded an energy plan submitted by the Iowa Department of Administrative Services (DAS) that will install energy efficiency equipment throughout the state capital complex and save the government over \$300,000 in energy costs.¹⁵⁶¹

¹⁵⁵³ Press Release, Midwestern Governors’ Ass’n, MGA Jobs and Energy Forum Wraps Up; Releases Jobs Platform and Energy Infrastructure Accord (Oct. 9, 2009), <http://www.midwesterngovernors.org/Release/forum.pdf>.

¹⁵⁵⁴ *Id.*; MIDWESTERN GOVERNORS’ ASS’N, MIDWESTERN ENERGY INFRASTRUCTURE ACCORD, <http://web.archive.org/web/20130616061733/http://www.midwesterngovernors.org/Publications/InfrastructureAccord.pdf>.

¹⁵⁵⁵ Press Release, Office of Gov. Chet Culver, Governor Culver Announces \$1.1 Million for Green Economy Initiatives (Nov. 18, 2009), http://www.governor.iowa.gov/index.php/press_releases/single/191/.

¹⁵⁵⁶ *Id.*

¹⁵⁵⁷ Press Release, Office of Gov. Chet Culver, Governor Culver Praises EPA Move Toward E15 Waiver (Dec. 4, 2009), http://www.governor.iowa.gov/index.php/press_releases/single/211/.

¹⁵⁵⁸ *Community Grants through Iowa Power Fund*, IOWA OFFICE OF ENERGY INDEPENDENCE, http://web.archive.org/web/20100310223052/http://www.state.ia.us/government/governor/energy/Power_Fund/CommunityGrants.html (Oct. 17, 2013).

¹⁵⁵⁹ *Id.*

¹⁵⁶⁰ *Iowa Power Fund*, IOWA OFFICE OF ENERGY INDEPENDENCE, http://web.archive.org/web/20120811210220/http://www.state.ia.us/government/governor/energy/Power_Fund/about_IPF.html (Oct. 17, 2013).

¹⁵⁶¹ Press Release, Office of Governor, Governor Culver Applauds Energy Savings Plan (Mar. 29, 2010), http://web.archive.org/web/20101103055626/http://www.governor.iowa.gov/index.php/press_releases/single/450/.

In May 2010, the Iowa Office of Energy Independence made additional ARRA funds available through the Energy Efficiency and Conservation Block Grants (EECBG).¹⁵⁶² Any city or county within Iowa that has not received direct funding from the federal government through EECBG may apply for a grant to create and implement strategies relating to reducing fossil fuel use and overall energy use, increasing energy efficiency, and creating green jobs.¹⁵⁶³

Iowa's Office of Energy Independence released its *2011 Energy Independence Plan* in December 2010. The Plan outlines eighteen recommendations for energy efficiency, renewable energy, and biofuels to help the state reduce its energy consumption.¹⁵⁶⁴

2011: Fuels, Green Technology, Renewable Energy, and Energy Efficiency

In January 2011, the Iowa Power Fund Board (IPFB) and DuPont Danisco Cellulosic Ethanol (DDCE) companies agreed to start contract negotiations for a cellulosic ethanol plant to be constructed in Iowa.¹⁵⁶⁵ The plant, which will be one of the first in the nation, is expected to be capable of producing 25 million gallons of cellulosic ethanol per year, using corn stover.¹⁵⁶⁶ The project will cost a total of \$235 million, with \$9 million coming from the IPFB and the remaining \$226 million from DDCE.¹⁵⁶⁷ It is expected to be completed by March 2014.¹⁵⁶⁸

In June 2011, the Iowa Power Fund Board (IPBC) awarded over \$4 million to three companies and the University of Northern Iowa for solar and ethanol research and development, and biofuel research using prairie species and farm waste.¹⁵⁶⁹ In July, the

¹⁵⁶² Press Release, Iowa's Office of Economic Recovery, Request for Proposals Announcement for Funding Opportunity Energy Efficiency and Conservation Block Grants (May 5, 2010), <http://web.archive.org/web/20101215171929/http://www.iowa.gov/recovery/staticpages/index.php?page=20100507145120625>.

¹⁵⁶³ *Id.*

¹⁵⁶⁴ Press Release, Iowa Office of Energy Independence, Office of Energy Independence Releases Annual Energy Independence Plan for 2011 (Dec. 14, 2010), <http://web.archive.org/web/20120624033105/http://www.energy.iowa.gov/files/EIPOEINewsWire121410.pdf>; IOWA OFFICE OF ENERGY INDEPENDENCE, 2011 ENERGY PLAN (2011), <http://web.archive.org/web/20120624015946/http://www.energy.iowa.gov/files/2011EnergyIndpPlanLowResFINAL121410.pdf> (the actual Plan).

¹⁵⁶⁵ Press Release, Iowa Office of Energy Independence, Power Fund Board Approves Terms for Iowa Cellulosic Ethanol Project by DuPont-Danisco (Jan. 12, 2011), <http://www.energy.iowa.gov/files/PowerFundDuPontDaniscoNewsWireDT011211.pdf>

¹⁵⁶⁶ *Id.*

¹⁵⁶⁷ *Id.*

¹⁵⁶⁸ \$9 Million Awarded to DuPont Danisco to Build Cellulosic Ethanol Facility and Create Iowa Jobs, OSKALOOSA NEWS (Feb. 9, 2011), <http://oskynews.org/?p=14579>.

¹⁵⁶⁹ Michael Gallagher, *Iowa Power Fund Approves \$4.1 Million Investment for Renewable Energy*, IOWA ENVTL. FOCUS (June 13, 2011), <http://iowaenvironmentalfocus.org/2011/06/13/iowa-power-fund-approves-4-1-million-investment-for-renewable-energy/>.

IPBC awarded \$2.2 million to Clipper Windpower to develop a prototype turbine designed for sites with low wind speeds.¹⁵⁷⁰

In November 2011, Governor Branstad co-authored a letter with Rhode Island Governor Chafee to Senate Majority Leader Reid, Senate Minority Leader McConnell, Speaker of the House Boehner, and House Minority Leader Pelosi advocating extension of the wind energy production tax credit.¹⁵⁷¹

In September 2012, the NGA announced it will coordinate with four states, Alabama, Arkansas, Illinois, and Iowa, in a policy academy that will focus on energy efficiency in the industrial sector in order to improve productivity and competitiveness.¹⁵⁷² The Policy Academy on Enhancing Industry Through Energy Efficiency and Combined Heat and Power will include two workshops, site visits, expert technical assistance, networking and a grant opportunity to support related activities.¹⁵⁷³

2013: Renewable Energy and Greenhouse Gas Reduction

On May 8, 2013 MidAmerican Energy Company announced its plans to “add up to 1,050 megawatts of wind generation, consisting of up to 656 new wind turbines, in Iowa by year-end 2015.”¹⁵⁷⁴ The proposed wind expansion will help reduce future rates to Iowans by as much as \$10 million per year and it will reduce MidAmerican’s carbon footprint by 10.3%.

On December 19, 2013 the Iowa Department of Natural Resources commented on their legislatively mandated *2012 Iowa Greenhouse Gas Inventory Report*, which stated that the State’s GHG emissions decreased 3.27% from 2011 levels, but still remained 8.30% above 2005 levels.¹⁵⁷⁵ The report additionally found that “the percentage of electricity generated in Iowa from coal decreased from 78 percent in 2005 to 63 percent in 2012. The percentage generated from wind increased from 4 percent to 25 percent in the same period.”¹⁵⁷⁶

KANSAS

¹⁵⁷⁰ *Over \$2.2 Million Approved to Advance Wind Turbine Technology*, SIGOURNEY NEWS-REVIEW (July 1, 2011), <http://sigourneynewsreview.com/over-million-approved-to-advance-wind-turbine-technology-p8341-131.htm>.

¹⁵⁷¹ Press Release, Office of the Governor, Gov. Branstad to Attend POLITICO’s Energy Forum; Releases Letter Advocating for Wind Energy (Nov. 16, 2011), <https://governor.iowa.gov/2011/11/6454/>.

¹⁵⁷² Press Release, Nat’l Governors Ass’n, NGA to Work with Four States on Improving Industrial Energy Efficiency (Sept. 4, 2012), http://www.nga.org/cms/home/news-room/news-releases/page_2012/col2-content/nga-to-work-with-four-states-on.html.

¹⁵⁷³ *Id.*

¹⁵⁷⁴ Press Release, Office of the Governor, MidAmerican Energy Announces \$1.9 Billion Investment in Additional Wind Generation Capacity (May 8, 2013), <https://governor.iowa.gov/2013/05/midamerican-energy-announces-1-9-billion-investment-in-additional-wind-generation-capacity/>.

¹⁵⁷⁵ *2012 Greenhouse Gas Emissions Inventory Posted on DNR Website*, IOWA DEP’T OF NATURAL RES. (Dec. 19, 2013), <http://www.iowadnr.gov/home/ctl/detail/mid/2822/itemid/1752>.

¹⁵⁷⁶ *Id.*

1999: Renewable Energy

Kansas offers three major incentives designed to promote renewable energy. First, since January 1, 1999, Kansas has provided property tax exemptions for qualifying renewable energy equipment regularly and predominantly used as electric generators.¹⁵⁷⁷ Second, since July 1, 2003, the Interconnection Standards Law has permitted renewable energy sites producing power measured at 25 kilowatts (residential) or 100 kilowatts (commercial) to link with the utility grid.¹⁵⁷⁸

2000: Energy Efficiency

The Kansas Energy Office offers a Facility Conservation Improvement Program, which began in 2000, where state agencies can partner with energy companies to implement energy-saving strategies.¹⁵⁷⁹ Interested parties enter into a contract for private funding for a project, and that private company guarantees that energy savings will meet or exceed the costs of the project, which normally takes between ten to fifteen years. If the cost of the improvement is not recovered by this time, the participating energy company would be responsible for the remainder.¹⁵⁸⁰

2007: Greenhouse Gas Reduction, Climate Change Agreements, and Renewable Energy

There was serious and heated debate in 2007 and 2008 regarding coal-fired power plants in Kansas. Under H.B. 2412, which was introduced into the House in February 2007, the legislature attempted to expand a coal generating station in western Kansas by adding two new coal-fired units.¹⁵⁸¹ However, Governor Sebelius vetoed this Bill for the third time in May 2008.¹⁵⁸² In October 2007, the Secretary of the Kansas Department of Health and Environment had denied a permit to Sunflower Electric Power Corporation to build the new 700 megawatt (MW) coal-fired power plants, concluding that they would create too much carbon dioxide.

In March 2007, Governor Sebelius signed House Bill (H.B.) 2419, which grants tax breaks for five years for new property used for carbon dioxide capture and sequestration, electricity-generating units that sequester carbon emissions, machinery that captures carbon and converts it into new products, carbon dioxide injection wells, and equipment that recovers carbon dioxide from sequestration.¹⁵⁸³ The Bill also permits

¹⁵⁷⁷ KAN. STAT. ANN. § 79-201(11) (2009).

¹⁵⁷⁸ *Id.* § 66-1,184.

¹⁵⁷⁹ KANSAS ENERGY OFFICE, <http://www.kcc.state.ks.us/energy/fcip/> (last updated Mar. 28, 2010).

¹⁵⁸⁰ *Id.*

¹⁵⁸¹ H.B. 2412, 2007 Leg., Reg. Sess. (Kan. 2007).

¹⁵⁸² *Press Release, Sebelius Vetoes Coal Bills Once Again*, PROJECT VOTE SMART (May 16, 2008), <http://votesmart.org/public-statement/344318/#.UmKufxbtN6U> (original press release not found).<http://www.governor.ks.gov/news/NewsRelease/2008/nr-08-0516c.htm>.

¹⁵⁸³ H.B. 2419, 2007 Leg., Reg. Sess. (Kan. 2007).

qualified property to depreciate over ten years for income tax purposes.¹⁵⁸⁴

In April 2007, Governor Sebelius signed H.B. 2038, which created tax credits and exemptions for new renewable energy production equipment purchased between 2007 and 2011 and used for at least ten years.¹⁵⁸⁵ These credits and exemptions included: a tax credit for purchases of biofuel blending and storage equipment; a tax deduction for depreciation of the eligible equipment; a tax credit for facilities that generate electricity from renewables for industrial, commercial, and agricultural uses; a tax exemption for facilities that recover waste-heat; a tax credit for new cellulosic alcohol production facilities that produce at least 500,000 gallons per year; and a tax exemption for new nuclear power facilities located within three miles of existing facilities.¹⁵⁸⁶ In addition, the Bill repealed tax credits for new oil refineries, pipelines, and coal gasification plants beginning in 2010.¹⁵⁸⁷

In May 2007, Kansas and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”¹⁵⁸⁸

On November 15, 2007, Governor Sebelius joined the governors of Illinois, Iowa, Michigan, Minnesota, and Wisconsin as well as the Premier of the Canadian Province of Manitoba in signing and establishing the Midwestern Regional Greenhouse Gas Reduction Accord (MGGRA) in order to reduce greenhouse gas (GHG) emissions and achieve energy security.¹⁵⁸⁹ Signed at the Midwestern Governors Association Energy Security and Climate Change Summit held in Milwaukee, Wisconsin, the Accord established GHG emission targets, including a 60 to 80% reduction in emissions, created a market-based, multi-sector cap-and-trade system, and created a tracking and crediting system.¹⁵⁹⁰ The MGGRA’s final model rule was released in April 2010; however, although the MGGRA has not been formally suspended, participating states are no longer formally pursuing it.¹⁵⁹¹

¹⁵⁸⁴ *Id.*

¹⁵⁸⁵ H.B. 2038, 2007 Leg., Reg. Sess. (Kan. 2007).

¹⁵⁸⁶ *Id.*

¹⁵⁸⁷ *Id.*

¹⁵⁸⁸ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20080309011530/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

¹⁵⁸⁹ *Midwestern Greenhouse Gas Accord 2007*, MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, http://web.archive.org/web/20081114002536/http://www.midwesterngovernors.org/Publications/Greenhouse%20gas%20accord_Layou%201.pdf (Feb. 18, 2009).

¹⁵⁹⁰ *Id.*

¹⁵⁹¹ FINAL MODEL RULE FOR THE MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD (2010), http://michigancondemnationblog.com/storage/Final_Model_Rule1.pdf; *Midwest Greenhouse Gas Reduction Accord*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mgggra> (Oct. 11, 2013).

Also at the Summit, Kansas, Illinois, Iowa, Michigan, Minnesota, Wisconsin, Nebraska, and North Dakota adopted an Energy Security and Climate Stewardship Platform.¹⁵⁹² The platform's goals for the Midwest region include promoting energy efficiency, advances in biobased products, electricity production from renewables, and advances in coal and carbon capture and storage.¹⁵⁹³ Platform members also signed cooperative regional initiatives that will create a Carbon Management Infrastructure Partnership, a bioproduct procurement program, electricity transmission adequacy for new wind energy, renewable fuels corridors, advanced bioenergy permitting, and low-carbon energy transmission infrastructure.¹⁵⁹⁴

2008: Renewable Energy and Greenhouse Gas Reduction

On January 7, 2008, Governor Sebelius signed Executive Order (EO) 08-01, establishing the Governor's Wind Working Group.¹⁵⁹⁵ The Group educates stakeholders with current information on wind energy markets, technologies, economics, policies, prospects and issues.¹⁵⁹⁶ In addition, on March 21, 2008, Sebelius signed EO 08-03, which established the Kansas Energy and Environmental Policy Advisory Group.¹⁵⁹⁷ The 25-member Advisory Group recommends steps that the state can take to reduce GHG emissions, as well as proposes a timetable for implementation of the recommendations.¹⁵⁹⁸

In a letter to state lawmakers dated January 31, 2008, Governor Sebelius detailed the rejection of a compromise plan between her administration and energy companies, Sunflower Electric and Midwest Energy.¹⁵⁹⁹ In response to Sunflower's permit applications for two 700 MW coal-fired power plants, the state had offered a compromise plan permitting a smaller plant, and requiring, among other things, carbon sequestration technology, 20% wind power, net metering and 100 MW energy efficiency.¹⁶⁰⁰

Governor Sebelius also addressed identical energy bills, Senate Bill (S.B.) 515¹⁶⁰¹ and H.B. 2711,¹⁶⁰² proposed in the state Senate and House of Representatives.¹⁶⁰³

¹⁵⁹² MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, ENERGY SECURITY AND CLIMATE STEWARDSHIP PLATFORM FOR THE MIDWEST (2007),

<http://www.midwesterngovernors.org/resolutions/Platform.pdf>.

¹⁵⁹³ *Id.*

¹⁵⁹⁴ *Id.*

¹⁵⁹⁵ Kan. Exec. Order No. 01 (2008).

¹⁵⁹⁶ *Id.*

¹⁵⁹⁷ Kan. Exec. Order No. 03 (2008).

¹⁵⁹⁸ *Kansas Governor Forms Climate Change Advisory Group, Initiates Climate Action Plan*, CTR. FOR ENERGY AND CLIMATE SOLUTIONS, <http://www.pewclimate.org/node/5806> (Oct. 19, 2013).

¹⁵⁹⁹ *Press Release, Kan. Office of the Governor, Letter to Legislative Leaders, Re: Proposed Energy Bills Governor weighs in on energy bills proposed in Legislature*, PROJECT VOTE SMART (Jan. 31, 2008) <http://votesmart.org/public-statement/317348/#.UmK0SBbtN6U> (original press release not found).<http://www.governor.ks.gov/news/NewsRelease/2008/nr-08-0131a.htm>.

¹⁶⁰⁰ *Id.*

¹⁶⁰¹ S.B. 515, 82nd Leg., Reg. Sess. (Kan. 2008).

¹⁶⁰² H.B. 2711, 82nd Leg., Reg. Sess. (Kan. 2008).

¹⁶⁰³ *Letter to Legislative Leaders, Re: Proposed Energy Bills*, PROJECT VOTE SMART (Jan. 31, 2008) <http://votesmart.org/public-statement/317348/#.UmK0SBbtN6U> (original press release not found).Press

Sebelius encouraged the portions of the Bill that would support her 2007 directive to increase state vehicle fuel economy, purchase equipment meeting start energy efficiency standards, and promote net metering.¹⁶⁰⁴ She expressed her disapproval of bills that would result in a lack of a permitting for coal power plants, a carbon emissions offset act, prohibitions against state action in the face of federal inaction, as well as portions that restrict the Secretary of the Department of Environment from requiring standards more stringent than federal requirements for coal power plants.¹⁶⁰⁵

In July 2008, Kansas and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.¹⁶⁰⁶ The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards are designed to help develop greater energy efficiency, conservation, and clean energy resources.¹⁶⁰⁷

On November 20, 2008, Governor Sebelius and four other governors co-hosted the first Governor's Global Climate Summit.¹⁶⁰⁸ Sebelius shared Kansas's advancements in wind energy and ethanol production at the event, which included leaders from North America, the European Union, the United Nations, the United Kingdom, India, Indonesia, and Brazil.¹⁶⁰⁹

On December 31, 2008, Governor Sebelius signed EO 08-13 dissolving the Kansas Energy Council (KEC).¹⁶¹⁰ She noted the individual energy focus groups, such as the Kansas Electric Transmission Authority and Kansas Wind Working Group, will be able to build and expand on the foundation established by KEC to work toward a "clean energy future."¹⁶¹¹

2009: Climate Change Agreements, American Recovery & Reinvestment Act (ARRA), Green Jobs, and Renewable Energy

Release, Kan. Office of the Governor, Governor weighs in on energy bills proposed in Legislature (Jan. 31, 2008) <http://www.governor.ks.gov/news/NewsRelease/2008/nr-08-0131a.htm>.

¹⁶⁰⁴ *Id.*

¹⁶⁰⁵ *Id.*

¹⁶⁰⁶ Press Release, Office of the Governor, Kansas Receives \$50,000 Grant to Pursue Clean Energy Research (June 30, 2008),

<http://web.archive.org/web/20080930191109/http://www.governor.ks.gov/news/NewsRelease/2008/nr-08-0630a.htm>.

¹⁶⁰⁷ *Id.*

¹⁶⁰⁸ Governors Sebelius and Schwarzenegger Host Climate Summit, PROJECT VOTE SMART (Nov. 20, 2008), <https://votesmart.org/public-statement/398399/> (original press release not found).

¹⁶⁰⁹ *Id.*

¹⁶¹⁰ Kan. Exec. Order No. 08-13 (2008), <http://www.kslib.info/Documents/executive/EO%2008-13.pdf>; *Kansas Energy Council Dissolved as New Groups Focus on Specific Issues*, PROJECT VOTE SMART (Dec. 31, 2008), <https://votesmart.org/public-statement/412074/> (original press release not found).

¹⁶¹¹ *Id.*

In January 2009, the advisory group to the MGGRA released preliminary trade design recommendations.¹⁶¹² The group recommended that carbon dioxide, nitrous oxide, hydro-fluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions be reduced 15 to 25% below 2005 levels by 2020 and 60 to 80% below 2005 levels by 2050. It also recommended that the following sources be subject to these reductions: power plants, industrial facilities, industrial combustion sources, industrial process sources, and transportation fuels.¹⁶¹³ It recommended that an offset component be incorporated in the program and that allowance value be used only for climate-related purposes by participating states.¹⁶¹⁴ However, the group refused to comment on whether allowances should be auctioned or allocated, maintaining that this decision must be made by each state.¹⁶¹⁵

In January 2009, Governor Sebelius and eleven other governors signed a letter to President Obama, urging him to form a strong state-federal partnership in administering and initiating a national climate change program.¹⁶¹⁶ This letter was predicated upon the President's letter to the Governors' Global Climate Summit in which he offered the governors a partnership with the White House in addressing climate change issues. The letter writers believe that their states have played a leading role in confronting these issues and stated, "It is crucial that we build on our states' momentum."¹⁶¹⁷ The letter also contains suggestions for how a national climate change program should be implemented. One of these suggestions is for the national government to recognize the private investments that have been made in current cap-and-trade programs and to preserve the clean energy plans that are funded by the proceeds from these programs.¹⁶¹⁸

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Kansas is eligible for \$38,284,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).¹⁶¹⁹

On April 6, 2009, Governor Sebelius signed S.B. 108 modifying the Kansas Economic Revitalization and Reinvestment Act.¹⁶²⁰ The modification provided

¹⁶¹² *January 14-15, 2009 Meeting Materials*, MIDWEST GREENHOUSE GAS REDUCTION ACCORD, http://web.archive.org/web/20090301032506/http://midwesternaccord.org/Meeting%20material%20pages/GHG-meeting-8_109.html (Oct. 19, 2013).

¹⁶¹³ *Midwest Greenhouse Gas Reduction Accord Releases Recommendations*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2009/midwestern-greenhouse-gas-reduction-accord-releases-recommendations> (Oct. 25, 2013).

¹⁶¹⁴ *Id.* at 3.

¹⁶¹⁵ *Id.*

¹⁶¹⁶ Letter from Arnold Schwarzenegger, Governor of Cal., M. Jodi Rell, Governor of Conn., Charlie Crist, Governor of Fla., Kathleen Sebelius, Governor of Kan., Martin O'Malley, Governor of Md., Deval Patrick, Governor of Mass., John S. Corzine, Governor of N.J., Bill Richardson, Governor of N.M., David Paterson, Governor of N.Y., Theodore R. Kulongoski, Governor of Or., Christine O. Gregoire, Governor of Wash., Jim Doyle, Governor of Wis., to Barack Obama, President of the United States of America (Jan. 29, 2009), <http://web.archive.org/web/20090214185812/http://www.wisgov.state.wi.us/docview.asp?docid=15821>.

¹⁶¹⁷ *Id.* at 1.

¹⁶¹⁸ *Id.* at 2.

¹⁶¹⁹ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

incentives for wind and solar energy projects with a minimum of \$30 million invested in Kansas.¹⁶²¹

In May 2009, Governor Parkinson signed an agreement with the other governors that comprise the Governor's Energy and Climate Coalition to support federal climate change legislation.¹⁶²² The agreement contains two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.¹⁶²³

According to The Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for Kansas, the state's clean energy economy grew by 8,017 jobs and 591 businesses from 1998 to 2007.¹⁶²⁴ Between 2006 and 2009, Kansas attracted over \$13 million in capital investment in clean energy.¹⁶²⁵

In June 2009, the MGGRA advisory group, in which Kansas participates, released its final recommendations for a regional cap-and-trade program to the participating governors.¹⁶²⁶ The committee advised that a federal program is preferable to a regional one but that MGGRA should continue developing a program until federal legislation passes. The advisory group recommended targets of 18 to 20% below 2005 emissions levels by 2020 and 80% below by 2050.¹⁶²⁷ On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the Western Climate Initiative (WCI), and MGGRA met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.¹⁶²⁸

In October 2009, Governor Parkinson sent a letter to the board of directors of Southwest Power Pool (SPP) urging that they prioritize reinstating the V-Plan

¹⁶²⁰ *Sebelius Signs Legislation to Bring Renewable Energy Jobs to Kansas*, PROJECT VOTE SMART (Apr. 6, 2009), <http://votesmart.org/public-statement/416244/> (original press release not found); *see also* S.B. 108, 83rd Leg., Reg. Sess. (Kan. 2009).

¹⁶²¹ *Id.*

¹⁶²² Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20090817025744/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

¹⁶²³ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION (May 21, 2009), <http://web.archive.org/web/20090817025755/https://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

¹⁶²⁴ *Clean Energy Economy*, THE PEW CHARITABLE TRUSTS, (May 8, 2009), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

¹⁶²⁵ *Id.*

¹⁶²⁶ *Midwest Greenhouse Gas Reduction Accord Releases Recommendations*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2009/midwestern-greenhouse-gas-reduction-accord-releases-recommendations> (Oct. 25, 2013).

¹⁶²⁷ *Id.*

¹⁶²⁸ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

transmission venture.¹⁶²⁹ The V-Plan is a 200-mile transmission linkage between the eastern and western portions of the state that would enable increased utilization of the state's wind energy potential.¹⁶³⁰ Subsequently, on October 27, 2009, SPP's board issued a statement that it had decided to reinstate the V-Plan project.¹⁶³¹

That same month, the Midwestern Governors Association, in which Kansas participates, issued the Midwestern Energy Infrastructure Accord, which includes "agreements by Midwestern governors to expand transmission capacity, adopt smart grid technologies, build new pipelines for biofuels and for the capture and storage of carbon dioxide, and deploy a refueling system for biofuels and other low-carbon transportation fuels."¹⁶³² The report set renewable energy goals at 10% by 2015 and 30% by 2030.¹⁶³³

2010: Renewable Energy and Energy Efficiency

In April 2010, the Southwest Power Pool board filed approved tariff language with the Federal Energy Regulatory Commission (FERC), bringing Kansas one step closer to building a transmission project to expand the regional transmission electric grid that will harness wind energy and serve as a critical connection in future transmission of renewable energy throughout the Midwest.¹⁶³⁴

The Kansas Geological Survey is a partner of the Southwest Partnership on Carbon Sequestration (SPCS) with eight other Southwest states.¹⁶³⁵ The SPCS is comprised of numerous state agencies, private companies, non-profit organizations and universities, and is charged with evaluating the possibilities for carbon sequestration in the Southwest.¹⁶³⁶ The project is organized under the DOE's Regional Carbon Sequestration Partnerships and is currently in its "deployment" phase, during which carbon sequestration technologies that have been identified as viable options will be tested on a large scale in the Southwest states including Kansas.¹⁶³⁷

¹⁶²⁹ *Governor Urges Southwest Power Pool to Make Transmission Project in Kansas a Priority*, PROJECT VOTE SMART (Oct. 22, 2009), <http://votesmart.org/public-statement/462636/> (original press release not found).

¹⁶³⁰ *Id.*

¹⁶³¹ Dan Voorhis, *Board: Wind Power Line Deserves More Study*, THE WICHITA EAGLE, (Oct. 28, 2009), <http://www.kansas.com/2009/10/28/1030140/board-wind-power-line-deserves.html>.

¹⁶³² Press Release, Midwestern Governors' Ass'n, MGA Jobs and Energy Forum Wraps Up; Releases Jobs Platform and Energy Infrastructure Accord (Oct. 9, 2009), <http://www.midwesterngovernors.org/Release/forum.pdf>.

¹⁶³³ *Id.*

¹⁶³⁴ Press Release Sw. Power Pool, SPP Proposes New Cost Sharing Method for Expanding the Regional Electric Transmission Grid (April 19, 2010), http://www.spp.org/publications/SPP_Proposes_New_Cost_Sharing_Method_for_Transmission.pdf.

¹⁶³⁵ *About SWP*, SOUTHWEST CARBON PARTNERSHIP, <http://web.archive.org/web/20090530040851/http://www.southwestcarbonpartnership.org/AboutSWP.aspx> (Oct. 19, 2013).

¹⁶³⁶ *Id.*

¹⁶³⁷ *Id.*

In August 2010, Kansas launched an Energy Manager Grant Program with \$1.7 million of ARRA funds.¹⁶³⁸ Through the Program, ten coalitions of local governments hired “energy managers” for two-year terms. The managers are responsible for developing short and long-term plans for the local governments to reduce their energy use and increase their energy efficiency.¹⁶³⁹

Governor Parkinson signed EO 10-13 in October 2010,¹⁶⁴⁰ creating the Kansas Interagency Working Group for Wind Energy, which will facilitate interagency communication and coordination in order to expand wind energy facilities in Kansas.¹⁶⁴¹

2011: Energy Efficiency and Renewable Energy

Kansas introduced a statewide competition in January 2011, the *Take Charge! Challenge*, which awarded \$100,000 to the four cities that engineer the greatest energy savings between January and September 2011.¹⁶⁴² One city from each of four competition zones will be selected as a winner. The cities will be judged on energy audits and completed projects, conversion to energy-efficient light bulbs, and community outreach and education.¹⁶⁴³

Governor Brownback showcased his commitment to investment in wind energy infrastructure when he announced a road map for wind energy development in Kansas that promoted wind energy development while protecting the “Tallgrass Heartland” in May 2011.¹⁶⁴⁴ He reiterated his support at the Heartland Transmission Conference in August 2011.¹⁶⁴⁵

On February 15, 2012, Governor Brownback highlighted the growing role of wind energy in Kansas’s economy. He cited a study by the American Wind Energy Association, which found that in 2012 Kansas lead the nation in the number of wind turbines under construction.¹⁶⁴⁶

¹⁶³⁸ *Energy Division*, KANSAS ENERGY OFFICE, <http://www.kcc.state.ks.us/energy/arra/energymgr.htm> (Oct. 19, 2013).

¹⁶³⁹ *Id.*

¹⁶⁴⁰ Kan. Exec. Order No. 10-13 (2010).

¹⁶⁴¹ Scott Rothschild, *Governor Signs Executive Order Creating a Group to Foster Wind Energy in Kansas*, LAWRENCE JOURNAL WORLD (Oct. 27, 2010), <http://www2.ljworld.com/news/2010/oct/27/governor-signs-executive-order-creating-group-fost/>.

¹⁶⁴² Tim Carpenter, *Brownback Twists Bulb on Energy Challenge*, TOPEKA CAPITAL-JOURNAL (Jan. 18, 2011), <http://cjonline.com/legislature/2011-01-18/brownback-twists-bulb-energy-challenge#.TiTB6M3iX8U>.

¹⁶⁴³ *Id.*

¹⁶⁴⁴ Press Release, Kansas Office of the Governor, Governor Announces Road Map for Wind Energy Policy (May 6, 2011), <http://governor.ks.gov/media-room/media-releases/2011/05/06/05-06-11-governor-announces-road-map-for-wind-energy-policy>.

¹⁶⁴⁵ Press Release, Kansas Office of the Governor, Governor Brownback Encourages Investment in Wind Infrastructure (Aug. 16, 2011), <http://governor.ks.gov/media-room/media-releases/2011/08/16/governor-brownback-encourages-investment-in-wind-energy-infrastructure>.

¹⁶⁴⁶ Press Release, Kansas Office of the Governor, Governor Brownback Recognizes Impact of Wind Energy Industry on Kansas Economy (Feb. 15, 2012), <http://governor.ks.gov/media-room/media-releases/2012/02/15/governor-brownback-recognizes-impact-of-wind-energy-industry-on-kansas-economy>.

2013: Energy Efficiency

On November 6, 2013 the American Council for an Energy-Efficient Economy (ACEEE) released their 2013 State Energy Efficiency Scorecard where Kansas was listed as one of the five most improved states as it improved its score to 39th, up from 43rd in 2012 and 48th in 2011.¹⁶⁴⁷

KENTUCKY

1998: Climate Change Agreements

In 1998, Kentucky completed a climate change action plan with funds provided by the U.S. EPA.¹⁶⁴⁸ In the same year, Kentucky passed a statute forbidding the state cabinet from promulgating emission-reduction regulations established by the Kyoto Protocol without legislative or federal authority.¹⁶⁴⁹

2004: Market-Based Solutions

In 2004, Kentucky enacted a statute requiring all of the state's rural electric cooperatives and investor-owned utilities to provide net metering to customers with solar power generators producing at most 15 kilowatts of energy.¹⁶⁵⁰

2007: Green Technology

The Kentucky General Assembly passed House Bill (H.B.) 1 in a 2007 special session.¹⁶⁵¹ The Bill authorized funding for research by the Kentucky Geological Survey in the areas of carbon dioxide enhanced oil and gas recovery as well as permanent geologic storage of carbon dioxide.¹⁶⁵² The Bill also created the Kentucky Consortium for Carbon Storage, which seeks to encourage the Geological Survey to partner with industry and share research costs.¹⁶⁵³

2008: Renewable Energy and Transportation

On March 12, 2008, Governor Beshear announced the launch of Kentucky New Energy Ventures, a state program that administers \$5 million in public funds for

¹⁶⁴⁷ Press Release, Kansas Corp. Comm'n, Kansas Improves Energy Efficiency Ranking (Nov. 6, 2013), <http://www.kcc.state.ks.us/pi/press/13-11.htm>.

¹⁶⁴⁸ Hugh T. Spencer, *Climate Change Mitigation Strategies for Kentucky* (June 30, 1998), http://www.epa.gov/statelocalclimate/documents/pdf/ky_2_fin.pdf.

¹⁶⁴⁹ KY. REV. STAT. ANN. § 224.20-125 (West 1998).

¹⁶⁵⁰ *Id.* §§ 278.465-.468.

¹⁶⁵¹ H.B. 1, 2007 Leg., Spec. Sess. (Ky. 2007).

¹⁶⁵² *Id.*

¹⁶⁵³ *Id.*

investment in renewable and alternative energy companies.¹⁶⁵⁴ The program, created under H.B. 1 in 2007, is designed to grow Kentucky-based alternative fuel and renewable energy companies; stimulate private investment; expand the alternative fuel and renewable energy knowledge base, talent force and industry; develop a resource network to build the technical and business capacity of entrepreneurs; and build statewide awareness of the economic development opportunities offered by Kentucky's alternative fuel and renewable energy industries.¹⁶⁵⁵

In support of these industries, Governor Beshear released an energy plan on November 20, 2008, entitled *Intelligent Energy Choices for Kentucky's Future*.¹⁶⁵⁶ The plan contains seven strategies for achieving energy independence: "(1) Improve the Energy Efficiency of Kentucky's Homes, Buildings, Industries, and Transportation Fleet; (2) Increase Kentucky's Use of Renewable Energy; (3) Sustainably Grow Kentucky's Generation of Biofuels; (4) Develop a Coal-to-Liquids (CTL) Industry in Kentucky to Replace Petroleum-Based Liquids; (5) Implement a Major and Comprehensive Effort to Increase Gas Supplies, Including Coal-to-Gas (CTG) in Kentucky; (6) Initiate Aggressive Carbon Capture/Sequestration (CCS) Projects for Coal-Generated Electricity in Kentucky; and (7) Examine the Use of Nuclear Power for Electricity Generation in Kentucky."¹⁶⁵⁷ The first goal's strategy is to offset 18% of the state's projected 2025 energy demand;¹⁶⁵⁸ the second goal's strategy is to triple the state's renewable energy generation by 2025;¹⁶⁵⁹ the third goal's strategy is to derive 12% of the state's motor fuels demand from biofuels by 2025;¹⁶⁶⁰ the fourth goal's strategy is for the CTL industry to generate four billion gallons of fuel by 2025;¹⁶⁶¹ the fifth goal's strategy is to meet the state's entire natural gas demand with synthetic natural gas that is derived from CTG processing by 2025;¹⁶⁶² the sixth goal's strategy is that 50% of the state's coal-based energy applications will practice carbon management by 2025;¹⁶⁶³ and the seventh goal's strategy for the state to decide whether nuclear power will play an important role in the state's energy portfolio by 2025.¹⁶⁶⁴

¹⁶⁵⁴ Press Release, Governor of Kentucky, Kentucky Launches New Fund to Invest in Companies Developing Renewable and Alternative Energy Technologies (Mar. 12, 2008), <http://web.archive.org/web/20090408203227/http://www.governor.ky.gov/pressrelease.htm?PostingGUID={9463C35F-CA73-4CEA-A279-B95902DABDD2}>.

¹⁶⁵⁵ *Id.*

¹⁶⁵⁶ Press Release, Governor of Kentucky, Governor Beshear Releases First-ever Comprehensive Energy Plan (Nov. 20, 2008), <http://web.archive.org/web/20111202093031/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B3CCA56DD-7541-4A32-AD02-E1D6BF07CC53%7D>.

¹⁶⁵⁷ ENERGY AND ENV'T CABINET, INTELLIGENT ENERGY CHOICES FOR KENTUCKY'S FUTURE (2008), <http://web.archive.org/web/20100617175736/http://eec.ky.gov/NR/rdonlyres/3BB23D1C-F42C-4E3D-808D-CF7588926BD3/0/FinalEnergyStrategy.pdf>.

¹⁶⁵⁸ *Id.* at vi.

¹⁶⁵⁹ *Id.* at vii.

¹⁶⁶⁰ *Id.*

¹⁶⁶¹ *Id.* at viii.

¹⁶⁶² *Id.* at ix.

¹⁶⁶³ *Id.* at x.

¹⁶⁶⁴ *Id.* at xi.

Also in November 2008, Kentucky joined The Climate Registry.¹⁶⁶⁵ Two days later, the Transportation Secretary signed an Administrative Order (AO) authorizing alternative electric vehicles to be authorized and titled in the state for the first time.¹⁶⁶⁶

Eastern Kentucky University and General Atomics announced a partnership in which they would explore the viability of a cellulose-derived biodiesel industry in Kentucky.¹⁶⁶⁷ Governor Beshear also entered into a memorandum of agreement with the University of Louisville to operate Kentucky's Center for Renewable Energy Research and Environmental Stewardship.¹⁶⁶⁸

2009: Energy Efficiency, American Recovery & Reinvestment Act (ARRA), Transportation, Renewable Energy, and Transportation

In February 2009, Governor Beshear announced two energy efficiency initiatives for greening public buildings.¹⁶⁶⁹ The first initiative required new public facilities or renovated facilities built with at least 50% state funds to be LEED certified. The second initiative required state-owned facilities to "set back" their lighting, heating ventilation, and air conditioning systems on nights and weekends to reduce energy consumption. Later that month, Beshear launched the Kentucky Clean Energy Corp's pilot program to perform energy efficiency rehabilitation for 100 low and moderate-income homes.¹⁶⁷⁰

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Kentucky is eligible for \$52,533,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).¹⁶⁷¹

¹⁶⁶⁵ Press Release, Governor of Kentucky, Kentucky Joins the Climate Registry (Nov. 10, 2008), <http://web.archive.org/web/20111202085152/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BC994AB23-9D6C-4718-8256-FBFC2DAE4D8%7D>.

¹⁶⁶⁶ Press Release, Governor, of Kentucky, Transportation Secretary Signs Order to Permit Registration, Titling of Alternative Electric Vehicles (Nov. 12, 2008), <http://web.archive.org/web/20111202073352/http://www.governor.ky.gov/pressrelease.htm?PostingGUID={F252E1C1-4C00-4336-BA16-92F1359E68C0}>.

¹⁶⁶⁷ Press Release, Governor, of Kentucky, EKU-General Atomics Partnership to Boost Sustainable Biofuel Production in Kentucky (Dec. 1, 2008), <http://web.archive.org/web/20111202085120/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B2073F06A-DF81-49D4-BC2E-BC23FF1361FF%7D>.

¹⁶⁶⁸ Press Release, Governor of Kentucky, Beshear Taps UofL to Take the Lead on Renewable Energy Research (Jan. 26, 2009), <http://web.archive.org/web/20111202084952/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B3818E394-9AF4-4CAC-BACE-1A5F8DA22B37%7D>.

¹⁶⁶⁹ Press Release, Governor of Kentucky, Beshear Administration Leads the Nation in Public Building Energy Efficiency Standards (Feb. 18 2009), <http://web.archive.org/web/20111202084856/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BD415AE6F-856A-4D6B-ABE3-F4BE5B89E8CF%7D>.

¹⁶⁷⁰ Press Release, Governor of Kentucky, Governor Beshear, First Lady Launch Pilot Program of Kentucky's Clean Energy Corps (Feb. 26 2009), <http://web.archive.org/web/20111202084841/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BEB66428-8377-4610-B275-4FAC53F1B38A%7D>.

¹⁶⁷¹ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

In March 2009, Western Kentucky University adopted a comprehensive energy policy.¹⁶⁷² The Green River Intra-County Transit System also received \$4 million of ARRA funding.¹⁶⁷³ Additionally, the cities of Bowling Green, Elizabethtown, and Fort Knox received stimulus funding to replace buses, equipment, and transit facilities.¹⁶⁷⁴ Finally, Kentucky also received \$1.73 million in stimulus funding for a clean school bus program.¹⁶⁷⁵

At the end of March, the U.S. EPA sent two letters to the Army Corp of Engineers, halting between 150 and 200 coal mining permit applications in Virginia, West Virginia, Kentucky, and Tennessee in order to investigate the mining operations' impact on water quality.¹⁶⁷⁶

In April 2009, Governor Beshear announced a partnership between Kentucky, the University of Louisville, the University of Kentucky, and Argonne National Laboratory to establish the Battery Manufacturing Research and Development Center.¹⁶⁷⁷ The state also received \$52 million in ARRA funding for energy efficiency and renewable energy projects.¹⁶⁷⁸ Kentucky also welcomed a new energy project when General Electric announced that it would be building a new line of hybrid electric water heaters in

¹⁶⁷² Press Release, Governor of Kentucky, Governor Beshear, President Randsell Announce WKU Energy Policy (Mar. 18, 2009), <http://web.archive.org/web/20111202084758/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B4AC69046-EFA3-42E9-956E-ABD30756D28A%7D>.

¹⁶⁷³ Press Release, Governor of Kentucky, Governor Beshear Announces \$4 Million Award of Federal Stimulus Funding to Owensboro-area Public Transit System (Mar. 19, 2009), <http://web.archive.org/web/20111202084756/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B9039659B-E34D-4222-BD62-3ADC25EFA0F8%7D>.

¹⁶⁷⁴ Press Release, Governor of Kentucky, Gov. Beshear Presents Stimulus Funding for Local Transit Improvements (Apr. 9, 2009), <http://web.archive.org/web/20111202084700/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BD356E771-E324-4F90-B218-4D4637C12DFB%7D>; Press Release, Governor of Kentucky, Gov. Beshear Presents Stimulus Funding for Elizabethtown, Fort Knox Area Transit System (Apr. 9, 2009), <http://web.archive.org/web/20111202084704/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BC5B55BA7-940B-4B63-B2B1-1857A8506AAB%7D>.

¹⁶⁷⁵ Press Release, Governor Beshear Announces Federal Stimulus Funding for Clean School Bus Emissions (Apr. 17, 2009), <http://governor.ky.gov/pressrelease.htm?PostingGUID={EC0672BE-33E0-4876-9D05-87D98C67F54A}>.

¹⁶⁷⁶ Press Release, EPA, EPA Act to Reduce Harmful Impacts from Coal Mining (Mar. 24, 2009), <http://web.archive.org/web/20120402000000/http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceac8525735900400c27/bd03fe27c0c12718852575830062f672!OpenDocument>.

¹⁶⁷⁷ Press Release, Governor of Kentucky, Kentucky, Argonne Partner to Help Build Domestic Battery Industry (Apr. 8, 2009), <http://web.archive.org/web/20111202093012/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B193DFAA6-36E4-44EF-B03E-7E22FA8612A5%7D>.

¹⁶⁷⁸ Press Release, Governor of Kentucky, Governor Beshear Announces \$52 Million in Federal Stimulus Funds for Kentucky Energy Programs (May 21, 2009), <http://web.archive.org/web/20111202084516/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BBA81BA31-2951-40B6-BE61-803C67A077DD%7D>.

Louisville.¹⁶⁷⁹ Further, various school districts received stimulus money to retrofit their buses¹⁶⁸⁰ and to purchase a total of 200 hybrid electric buses.¹⁶⁸¹

In September 2009, Governor Beshear issued an Executive Order (EO) forming a task force to guide and facilitate the sustainable development of the biomass and biofuels industry in the state.¹⁶⁸² Beshear also announced the establishment of the *Green Bank of Kentucky*, a multi-million dollar financing program to provide the state government with low-interest rate loans for energy efficiency projects.¹⁶⁸³ On a day commemorating public service, Beshear focused on educating and mobilizing communities behind clean energy and energy efficiency efforts.¹⁶⁸⁴

Also in September, the DOE released more than \$10 million in Energy Efficiency and Conservation Block Grants (EECBG) for Kentucky.¹⁶⁸⁵ Another \$2 million will go towards two agriculture-energy programs: one to help state farms increase energy efficiency and renewable energy production; and the other to complement tobacco settlement funds to advance renewable energy production on farms as part of the Multi-County Collaborative Agricultural Energy Initiatives Program.¹⁶⁸⁶

¹⁶⁷⁹ Press Release, Governor of Kentucky, General Electric to Building Hybrid Electric Water Heater in Kentucky (June 1, 2009), <http://web.archive.org/web/20111202084456/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B0733C097-6F2A-485E-B743-3748D9A41FC4%7D>.

¹⁶⁸⁰ Press Release, Governor of Kentucky, 23 School Districts to Receive \$1495,918 for Clean School Bus Efforts (Aug. 12, 2009), <http://web.archive.org/web/20111202084234/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BACF80B7A-5A53-4DCD-A558-6B83237E6CEF%7D>.

¹⁶⁸¹ Press Release, Governor of Kentucky, Kentucky School Districts to Receive Federal Funds to Purchase New Hybrid Electric Buses (Sept. 2, 2009), <http://web.archive.org/web/20111202084141/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B5D76E377-F14B-47C0-9C7E-1A79D0B17F03%7D>.

¹⁶⁸² Press Release, Governor of Kentucky, Gov. Beshear Forms Executive Task Force on Biomass and Biofuels Development in Kentucky (Sept. 2, 2009), <http://web.archive.org/web/20111202084145/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B4CE1B584-95BC-41C0-906C-DA9AE13AF6E1%7D>.

¹⁶⁸³ Press Release, Governor of Kentucky, 'Green Bank' to Finance Energy-Efficient Improvements to Public Buildings (Sept. 2, 2009), <http://web.archive.org/web/20111202084143/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B8681DE6D-95BF-4430-B00E-A27587AD18E5%7D>.

¹⁶⁸⁴ Press Release, Governor of Kentucky, Gov. Beshear and Nappy Roots Participate in Green the Block Day (Sept. 11, 2009), <http://web.archive.org/web/20111202084106/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BF8A0830E-819C-4714-9A10-01099E13C808%7D>.

¹⁶⁸⁵ Press Release, Governor of Kentucky, U.S. Department of Energy Announces More Than \$10 Million in Energy Efficiency Grants for Kentucky (Sept. 15, 2009), <http://web.archive.org/web/20111202084059/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BD92DD6F1-C49F-4A3E-A6E7-3B441D2F61BA%7D>.

¹⁶⁸⁶ Press Release, Governor of Kentucky, Gov. Beshear Announces Energy, Agriculture Partnership (Sept. 16, 2009), <http://web.archive.org/web/20111202084050/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B31BEEE40-1D6E-48DA-AD46-1EC1E60D37E8%7D>.

The Kentucky Education and Workforce Development Cabinet received more than \$1.2 million from ARRA through the State Labor Market Information (LMI) Improvement grant program. The LMI grants were used to identify green jobs opportunities and necessary training for Kentuckians.¹⁶⁸⁷ The grants were also used to invest in state and consortium models designed to collect, analyze, and publicize labor market information, and improve the labor exchange infrastructure for careers within energy efficiency and renewable energy fields.¹⁶⁸⁸

In December 2009, state funding of up to \$3.5 million for the recently formed Kentucky-Argonne Battery Manufacturing Research and Development Center in Lexington was approved, by the Kentucky Economic Development Finance Authority from the Cabinet for Economic Development's High-Tech Pools, with the potential to be matched with up to \$3.5 million in federal funds.¹⁶⁸⁹

2010: Energy Efficiency, Green Jobs, and Renewable Energy

In January 2010, Governor Beshear announced that Kentucky families who need help paying for heat during winter's coldest months were eligible for assistance from the Low Income Home Energy Assistance Program (LIHEAP), funded by the U.S. Department for Health and Human Services (HHS).¹⁶⁹⁰ Kentucky had access to \$66.6 million in available LIHEAP funding. The previous year, Kentucky spent approximately \$61 million in LIHEAP funding and served nearly 300,000 families.¹⁶⁹¹

Also in January, Kentucky was awarded a \$4,740,457 State Energy Sector Partnership and Training grant by the U.S. Department of Labor through the ARRA.¹⁶⁹² The program was designed to focus on jobs in energy-efficient building, construction and retrofit, energy efficiency assessment, and renewable energy. The program gave dislocated workers, unemployed individuals, out-of-school youth and veterans the opportunity to earn degrees and industry-recognized certification in green job industries

¹⁶⁸⁷ Press Release, Governor of Kentucky, Kentucky Receives Stimulus Dollars to Identify Green Jobs, Provide Career Path Assistance (Nov. 18, 2010), <http://web.archive.org/web/20111202083819/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BECFE0EF7-6EE3-411E-8FD5-178123916C68%7D>.

¹⁶⁸⁸ *Id.*

¹⁶⁸⁹ Press Release, Governor of Kentucky, Governor Beshear Announces Funding for Federal Battery Laboratory (Dec. 10, 2009), <http://web.archive.org/web/20111202083749/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BDCE5ACA2-AD4D-4C99-8CDC-5D6866049E27%7D>.

¹⁶⁹⁰ Press Release, Governor of Kentucky, Governor Beshear Announces Energy Assistance for Colder Months (Jan. 7, 2010), <http://web.archive.org/web/20111202083639/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B18675317-D903-4084-B4F8-06CD4E8C349E%7D>.

¹⁶⁹¹ *Id.*

¹⁶⁹² Press Release, Governor of Kentucky, Kentucky Receives \$4.74 Million Green Jobs Grant (Jan. 22, 2010), <http://web.archive.org/web/20111202083551/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B6F381E41-1461-4093-875A-F45E62B4ED60%7D>.

including energy assessment, smart grid technology, chemical engineering, plumbing and pipefitting.¹⁶⁹³

In March 2010, the Kentucky New Energy Ventures Fund (KNEV), a state program providing public funds to promising, early-stage Kentucky companies developing and commercializing alternative fuels and renewable energy technologies, granted funds to two Kentucky companies.¹⁶⁹⁴ Wellhead Energy Systems received \$500,000 to develop generator systems that can be placed near natural gas wells to produce electricity for rural communities. Southeast Biofuels received \$30,000 to develop a portable system that can produce ethanol by using sorghum as a feedstock.¹⁶⁹⁵ From its inception until March 2010, KNEV has made 25 awards for a total of \$2.85 million. The majority of the companies receiving KNEV awards were located in rural Kentucky communities and focused on developing alternative and renewable energy technologies based on clean coal, solar, wind or biofuel.¹⁶⁹⁶

Kentucky's Local Government Economic Development (LGED) program gave a \$400,000 multi-county grant to the Pine Mountain Regional Industrial Development Authority (Bell, Harlan, Knox, Letcher, and Whitley Counties) to develop an integrated energy plan focused on resources located in and around Bell County.¹⁶⁹⁷ The plan called for investigating electric power generation using indigenous fuels, the exploration of greenhouse gas (GHG) containment and beneficial re-use options, and the potential manufacture of "green" crude oil and transportation fuels such as algae.¹⁶⁹⁸

ARRA awarded \$4 million to the Kentucky State Energy Appliance Rebate Program for rebates on sixteen ENERGY STAR® qualified appliances, including washers, dishwashers, refrigerators, freezers, room air conditioners, water heaters, central air conditioners, air source heat pumps, geothermal heat pumps, gas furnaces, and gas boilers.¹⁶⁹⁹ The Program was designed to help achieve the goals of Kentucky's 7-Point Energy Strategy and to meet 18% of Kentucky's energy needs from efficiency improvements by 2025.¹⁷⁰⁰

¹⁶⁹³ *Id.*

¹⁶⁹⁴ Press Release, Governor of Kentucky, Governor Beshear Announces Two Start-Up Energy Firms to Receive Funding from Kentucky New Energy Ventures Fund (Mar. 1, 2010), <http://web.archive.org/web/20111202083411/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B66D70296-0741-4732-BE15-DD00B2E60688%7D>.

¹⁶⁹⁵ *Id.*

¹⁶⁹⁶ *Id.*

¹⁶⁹⁷ Press Release, Governor of Kentucky, Gov. Beshear Announces Funds for the Development of an Energy Plan in Bell County (Mar. 10, 2010), <http://web.archive.org/web/20100324204621/http://www.governor.ky.gov/pressrelease.htm?PostingGUID={15E74CA6-561F-455F-809D-FF9AB3519F1A}>.

¹⁶⁹⁸ *Id.*

¹⁶⁹⁹ Press Release, Governor of Kentucky, Gov. Beshear Kicks off Kentucky's Energy Efficient Appliance Rebate Program (Apr. 22, 2010), <http://web.archive.org/web/20111202072958/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BAF290D89-F43A-4C1A-AC7A-6C0388BC90D3%7D>.

¹⁷⁰⁰ *Id.*

Governor Beshear announced in July 2010 that \$4 million in federal funding was for summer cooling assistance through the LIHEAP.¹⁷⁰¹ The emergency funding was provided to assist low-income families and the elderly burdened by increased energy costs because of the extreme heat experienced that summer.¹⁷⁰²

Also in July, ARRA funded nineteen EECBG totaling \$1,172,265 to communities across Kentucky in support of energy efficiency programs.¹⁷⁰³ Improvements included retrofitting light fixtures to decrease energy costs, installing programmable thermostats to better regulate temperature and energy use, replacing doors and windows to enhance insulation, and purchasing bins for recycled materials.¹⁷⁰⁴

In August 2010, ARRA funded On-Farm Energy Efficiency and Production Incentives grants totaling \$481,690 to 52 producers thanks to a partnership between the Governor's Office of Agricultural Policy and Kentucky's Department for Energy Development & Independence.¹⁷⁰⁵ Recipients may receive a 25% reimbursement of the actual cost of a federally qualified energy saving project and up to \$10,000 for projects. Qualifying projects included: energy audits, energy efficient farm building components, on-farm energy upgrades, on-farm energy efficiency training, and biomass energy production activities.¹⁷⁰⁶

In October 2010, Governor Beshear announced the launch of KY Home Performance, a comprehensive energy efficiency program that will help homeowners save money and energy. KY Home Performance is a partnership between the Kentucky Housing Corporation (KHC), the Kentucky Department for Energy Development and Independence (DEDI), and the Kentucky Finance and Administration Cabinet.¹⁷⁰⁷ A \$4 million State Energy Program Grant provided by ARRA plus an additional \$2.1 million from KHC funded the program. The original goal was to have at least 1,200 homes statewide receive home-energy upgrades through the program by March 2012, including

¹⁷⁰¹ Press Release, Governor of Kentucky, Governor Beshear Makes \$4 Million in Emergency Cooling Program Funds Available Friday (July 09, 2010), <http://web.archive.org/web/20111202082733/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B7295AF9A-8644-4B97-9B66-8C492AEE9136%7D>.

¹⁷⁰² *Id.*

¹⁷⁰³ Press Release, Governor of Kentucky, Gov. Beshear Announces More Than \$1.1 Million in Local Energy Efficiency Improvements (July 29, 2010), <http://web.archive.org/web/20111202082608/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BACE8427F-F5B1-4977-9B2D-CD72C9C8981B%7D>.

¹⁷⁰⁴ *Id.*

¹⁷⁰⁵ Press Release, Governor of Kentucky, Gov. Beshear Announces On-Farm Energy Awards (Aug. 05, 2010), <http://web.archive.org/web/20111202082530/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BF76E3F5B-6625-49DA-8259-49A35A182B0F%7D>.

¹⁷⁰⁶ *Id.*

¹⁷⁰⁷ Press Release, Governor of Kentucky, Gov. Beshear Announces New Program to Create Jobs and Make Homes More Energy Efficient (Oct. 21, 2010), <http://web.archive.org/web/20111202082028/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7B6FDB7FBD-7651-48FE-87B3-3C25F1418C68%7D>.

a comprehensive, home-energy evaluation by a certified professional who would write a report identifying opportunities in the home to save energy and money.¹⁷⁰⁸ The homeowners would also be provided with an evaluation of their home's energy performance and \$150 toward the cost of a whole-house energy evaluation. The program offered a rebate of up to \$2,000 or financing for qualified homeowners up to \$20,000 for qualified improvements at a 6.99% interest rate for a maximum 10-year term.¹⁷⁰⁹

In November 2010, the Green Bank of Kentucky program, which was established in 2009, was nationally recognized for its innovative use of ARRA funding to finance energy-efficient improvements in state buildings, where the savings are guaranteed and used to repay the loan.¹⁷¹⁰ The program's mission is to promote energy efficiency and reduce operating costs in state buildings through competition for low-interest loans; to protect the environment; to promote economic development; and to create new green collar jobs.¹⁷¹¹ From its inception until November 2010, the program has loaned over \$3.4 million for energy efficiency projects in state facilities. The Green Bank emerged from Governor Beshear's comprehensive energy plan establishing the goal of reducing projected statewide energy demand by 25% by 2025 through strategies including energy-efficiency measures.¹⁷¹²

2011: Energy Efficiency

In March 2011, Governor Beshear announced that a \$375,000 grant would be awarded to several Kentucky cities to support local energy efficiency measures. The EECBG was used to perform audits of public facilities and finance the resulting energy efficiency recommendations.¹⁷¹³

Governor Beshear announced an award of \$773,447 in stimulus funds for on-farm energy efficiency, upgrades, and production in July 2011.¹⁷¹⁴

2012: Energy Efficiency

¹⁷⁰⁸ *Id.* As of August 2013 1,006 homes had received home-energy upgrades through the program. *August 2013 - KY Home Performance Program Phase I Results*, KY HOME PERFORMANCE, <http://www.kyhomeperformance.org/news.aspx> (Oct. 26, 2013).

¹⁷⁰⁹ *Id.*

¹⁷¹⁰ Press release, Governor of Kentucky, Green Bank of Kentucky Recognized Nationally as Leader in State ARRA Funded Energy Projects (Nov. 10, 2010),

<http://web.archive.org/web/20111202072809/http://www.governor.ky.gov/pressrelease.htm?PostingGUID=%7BAF43A8F9-DE70-4A62-BB0C-771EF038077D%7D>.

¹⁷¹¹ *Id.*

¹⁷¹² *Id.*

¹⁷¹³ Press Release, Governor of Kentucky, Governor Beshear Announces Energy Efficiency Grant for Knott County Recipients (Mar. 2, 2011), <http://web.archive.org/web/20111202081429/http://www.governor.ky.gov/pressrelease.htm?PostingGUID={F253C1EA-E4EC-4602-BE9A-AA2E7639667D}>.

¹⁷¹⁴ Press Release, Governor Steve Beshear's Comm'n Office, Gov. Beshear Announces Final On-Farm Energy Awards Totaling \$773,000 (July 27, 2011), <http://migration.kentucky.gov/Newsroom/governor/20110727onFarmEnergy.htm>.

On May 24, 2012, Governor Beshear announced \$700,000 in reimbursement awards to 81 farms and 36 counties for energy saving investments.¹⁷¹⁵ Qualifying expenditures included energy audits, energy efficient farm building components, on-farm energy upgrades, and on-farm energy efficiency training.

2013: Renewable Energy

On October 10, 2013 the Kentucky Public Service Commission (PSC) announced that it approved a 20-year contract allowing Kentucky Power Co. to purchase electricity generated by a biomass-fueled plant near Hazard that will burn various wood wastes and low-quality timber.¹⁷¹⁶ The PSC estimated that constructing the plant “will employ 230 people for two years and that the plant will employ 30 people and create an additional 225 jobs for loggers and truckers.”¹⁷¹⁷

LOUISIANA

1993: Renewable Energy

Since 1993 Louisiana has offered a tax exemption for solar power equipment used for buildings and swimming pools.¹⁷¹⁸ In addition, Louisiana’s Department of Natural Resources offers the Home Energy Loan Program (HELP), which provides homeowners low-interest rate loans for the purchase and installation of alternative energy sources.¹⁷¹⁹

2006: Fuels

Louisiana enacted legislation in 2006 requiring ethanol derived from Louisiana-produced feedstock to account for 2% of the total gasoline sold in the state and that 2% of the total diesel sold in the state be biodiesel once specified ethanol and biodiesel production thresholds have been reached in the state.¹⁷²⁰

The Louisiana Department of Natural Resources offered a state income tax credit worth 20% of the cost of converting a vehicle to operate on an alternative fuel and 20%

¹⁷¹⁵ Press Release, Governor Steve Beshear’s Comm’n Office, Energizing Kentucky Agriculture (May 25, 2012), <http://migration.kentucky.gov/Newsroom/governor/20120524onfarmenergygrants.htm>.

¹⁷¹⁶ Press Release, Pub. Serv. Comm’n, PSC Approves Kentucky Power Purchase of Biomass Energy - ecoPower Plant in Hazard will Produce Electricity from Wood (Oct. 10, 2013), <http://migration.kentucky.gov/Newsroom/psc/pscpr10-10-2013.htm>.

¹⁷¹⁷ *Id.*

¹⁷¹⁸ LA. REV. STAT. ANN. § 47:1706 (2005).

¹⁷¹⁹ Louisiana Department of Natural Resources, *HELP - Home Energy Loan Program*, LA. DEP’T OF NATURAL RES., <http://web.archive.org/web/20100527094308/http://dnr.louisiana.gov/sec/execdiv/techasmt/programs/residential/help/index.htm> <http://www.dnr.state.la.us/sec/execdiv/techasmt/programs/residential/help/index.htm> (last updated Nov. 22, 2009). See LA. REV. STAT. ANN. § 36:351 (2010) (empowering the Department of Natural Resources).

¹⁷²⁰ 2006 La. Acts 313.

of the incremental cost of purchasing an Original Equipment Manufacturer alternative fuel vehicle.¹⁷²¹

2009: American Recovery & Reinvestment Act (ARRA), Green Jobs, and Renewable Energy

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Louisiana is eligible for \$71,694,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).¹⁷²²

According to The Pew Charitable Trusts' June 2009 Clean Energy Economy Fact Sheet for Louisiana, Louisiana's clean energy economy grew by 10,641 jobs and 995 businesses from 1998 to 2007.¹⁷²³

On July 24, 2009, Governor Jindal celebrated the opening of Chesapeake Energy Corporation's new Haynesville Shale Corporate Office in Shreveport.¹⁷²⁴ He noted that Louisiana was making progress in increasing production of clean and affordable energy.¹⁷²⁵ Jindal touted legislation he had recently signed that increased the income tax credit from 20 to 50% for the purchase of "clean burning motors."¹⁷²⁶

In late 2009, Governor Jindal sent a letter to EPA Administrator Jackson discouraging the adoption of EPA's proposed rule regulating greenhouse gases.¹⁷²⁷

2010: Transportation/Fuels and Renewable Energy

Louisiana Act 118¹⁷²⁸ was signed into law in June 2010. It created an Alternative Fuel Vehicle Revolving Loan Fund to assist local governments in purchasing qualified alternative fuel vehicles.¹⁷²⁹

¹⁷²¹ LA. REV. STAT. ANN. §§ 47:38, 47:287.757 (2005) (repealed 2009).

¹⁷²² U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

¹⁷²³ *Clean Energy Economy*, THE PEW CHARITABLE TRUSTS, (May 8, 2009), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

¹⁷²⁴ Press Release, Office of the Governor, Governor Jindal Celebrates Opening of Chesapeake Energy Corporation's New Haynesville Shale Corporate Office (July 24, 2009), <http://www.gov.state.la.us/index.cfm?md=newsroom&tmp=detail&catID=2&articleID=1457&navID=12>.

¹⁷²⁵ *Id.*

¹⁷²⁶ *Id.* (citing H.B. 110, 35th Leg., Reg. Sess. (La. 2009)).

¹⁷²⁷ Press Release, Office of the Governor, Governor Jindal Letter to EPA Says Proposed Rule Changes will Have Profound Negative Economic Impact (Dec. 28, 2009), <http://www.gov.state.la.us/index.cfm?md=newsroom&tmp=detail&catID=2&articleID=1830&navID=12>.

¹⁷²⁸ 2010 La. Acts 118.

¹⁷²⁹ Billy Williamson, *Energy Legislation – 2010 Regular Legislative Session*, DEP'T OF NATURAL RES. (Nov. 2010), http://dnr.louisiana.gov/assets/TAD/newsletters/2010/2010-11_topic_1.pdf.

In June 2010, Louisiana Act 274¹⁷³⁰ was signed into law, giving property owners the right to install solar energy devices and preventing local rules and regulations from prohibiting such installations except in historic districts or on landmarks.¹⁷³¹

Louisiana Act 930¹⁷³² was signed into law on July 2, 2010, allowing the State Mineral and Energy Board to lease land for alternative energy production with the exception that leased land cannot be used to grow biomass fuels. House Bill (H.B.) 841 is mirrored in Senate Bill (S.B.) 183, which also permits the Mineral and Energy Board to lease land for such purposes.¹⁷³³

In November 2010, the Louisiana Public Service Commission (PSC) adopted an implementation plan for its Renewable Energy Pilot Program, and requests for bids began in April 2011.¹⁷³⁴ The Program called for companies to propose and conduct feasibility studies for renewable energy projects that could be operational by December 2013. In addition, the Program sought project proposals for a total of 350 megawatts (MW) of renewable energy resources capable of being on-line between January 1, 2011 and December 31, 2014.¹⁷³⁵

2012: Fuels

On December 13, 2012, Governor Jindal announced that Drax Biomass plans to build a wood pellet production facility in the state.¹⁷³⁶ Louisiana offered a \$1.7 million economic incentive package to convince the company to build in the state.¹⁷³⁷

2013: Green Jobs and Renewable Energy

On June 21, 2013 Governor Jindal signed H.B. 705 into law amending the tax credit structure for solar and wind energy systems.¹⁷³⁸ The bill removed the tax credit for wind energy systems and deleted the applicability of the tax credits for apartments, but the legislation retained the solar energy system tax credit and expanded the credit to include both solar electric and solar thermal systems.¹⁷³⁹

¹⁷³⁰ 2010 La. Acts 274.

¹⁷³¹ *Id.*

¹⁷³² 2010 La. Acts 930.

¹⁷³³ *Id.*

¹⁷³⁴ *Louisiana Renewable Energy Pilot Program*, EPA, <http://www.epa.gov/chp/policies/policies/louisianarenewableenergypilotprogram.html> (Oct. 20, 2013).

¹⁷³⁵ *Id.*

¹⁷³⁶ Press Release, Office of the Governor, Governor Jindal and Drax Biomass Announce Energy Project to Result in More Than 200 New Direct and Indirect Jobs (Dec. 13, 2012), <http://www.gov.state.la.us/index.cfm?md=newsroom&tmp=detail&catID=2&articleID=3763&navID=12>.

¹⁷³⁷ *Id.*

¹⁷³⁸ H.B. 705, 39th Leg., Reg. Sess. (La. 2013),

<http://www.legis.la.gov/Legis/ViewDocument.aspx?d=857956&n=HB705%20Act>.

¹⁷³⁹ *Id.*

On August 23, 2013 Governor Jindal and Cool Planet Energy Systems announced the company would build 3 bio-refineries in Louisiana.¹⁷⁴⁰ Each bio-refinery will be capable of producing 10 million gallons of high-octane, low-vapor pressure gas. In building these refineries Cool Planet will create 72 new direct jobs and 422 new indirect jobs.

MAINE

1999: Renewable Portfolio Standards

In September 1999, Maine's Public Utilities Commission adopted rules for the state's Renewable Resource Portfolio Requirement, requiring electricity providers to supply at least 30% of their total retail sales in Maine using electricity generated by eligible renewable resources.¹⁷⁴¹ The Public Utilities Commission also administers Efficiency Maine, an effort designed to promote efficient energy use in Maine via multiple programs.¹⁷⁴²

2003: Greenhouse Gas Reduction and Climate Change Adaptation

On June 26, 2003, Maine established the Lead-by-Example Initiative, which was a state planning incentive structure designed to reduce greenhouse gas (GHG) emissions.¹⁷⁴³ The Initiative required the development of a plan to reduce GHG emissions by state-owned buildings and state-funded programs to below the 1990 level by 2010.¹⁷⁴⁴ It set 2006 as the deadline for Maine to establish carbon emission reduction deals with at least fifty businesses and nonprofit groups.¹⁷⁴⁵

Lead-by-Example also mandated that Maine create an inventory of GHG emissions across the state.¹⁷⁴⁶ The registry was designed to facilitate the following statewide GHG emission reduction goals: (1) the 1990 GHG level by 2010; (2) 10% below the 1990 level by 2020; and, in the long term, (3) a reduction "sufficient to eliminate any dangerous threat to the climate."¹⁷⁴⁷ In order to meet these targets, the law mandated that Maine's Department of Environmental Protection (DEP) develop a long-term climate action plan to reduce Maine's GHG emissions.¹⁷⁴⁸ The DEP completed this plan in 2004.¹⁷⁴⁹

¹⁷⁴⁰ Press Release, Office of the Governor, Governor Jindal and Cool Planet Energy Systems Announce \$168 Million Investment in Louisiana Bio-Refineries (Aug. 23, 2013), <http://gov.louisiana.gov/index.cfm?md=newsroom&tmp=detail&catID=2&articleID=4206&navID=12>.

¹⁷⁴¹ ME. REV. STAT. tit. 35-A, § 3210 (1999).

¹⁷⁴² EFFICIENCY MAINE PROGRAM, <http://www.energymaine.com/> (Oct. 31, 2013).

¹⁷⁴³ ME. REV. STAT. ANN. tit. 38, § 575 (2006).

¹⁷⁴⁴ *Id.*

¹⁷⁴⁵ *Id.*

¹⁷⁴⁶ *Id.*

¹⁷⁴⁷ *Id.* § 576.

¹⁷⁴⁸ *Id.* § 577.

¹⁷⁴⁹ ME. GREENHOUSE GAS INITIATIVE, A CLIMATE ACTION PLAN FOR MAINE 2004 (2004), <http://maineghg.raabassociates.org/Articles/MaineClimateActionPlan2004Volume%201.pdf>.

2005: Renewable Energy, Greenhouse Gas Reduction, and Transportation/Fuels

In June 2005, Governor John Baldacci signed a bill into law that created the Solar Rebate Program. This Program provided rebates to residences and businesses that install qualifying solar thermal and photovoltaic (PV) systems.¹⁷⁵⁰ Each year, \$500,000 is available for rebates, which consist of \$3 per watt for the first 2,000 watts of installed capacity, followed by \$1 per watt for the next 1,000 watts.¹⁷⁵¹ Rebates up to 25% of the cost of solar thermal systems for water or space heating are also available.¹⁷⁵²

On December 1, 2005, also in furtherance of Lead-by-Example's goals, Maine adopted California's rigorous GHG emissions standards for motor vehicles.¹⁷⁵³

Maine has also agreed, under the auspices of the New England Governors and Eastern Canadian Premiers, to a voluntary short-term goal of reducing regional GHG emissions to 1990 levels by 2010 and by 10% below 1990 levels by 2020.¹⁷⁵⁴ Maine is a participant in the Regional Greenhouse Gas Initiative (RGGI), where beginning in 2015 the carbon dioxide cap on emissions will decrease by 2.5% per year, for a total reduction of 10% by 2018.¹⁷⁵⁵

2007: Greenhouse Gas Reduction, Cap-&-Trade, and Market-Based Solutions

In May 2007 Maine and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”¹⁷⁵⁶

Additionally, on October 29, 2007, Maine joined a coalition with nine other states, New Zealand, Norway, nine European Union countries, the European Commission, and two Canadian provinces to form the International Carbon Action Partnership (ICAP) in order to combat global warming.¹⁷⁵⁷ ICAP provides a forum for

¹⁷⁵⁰ Leg. Doc. 1586, 122nd Leg., 1st Spec. Sess. (Me. 2005).

¹⁷⁵¹ *Id.*

¹⁷⁵² *Id.*

¹⁷⁵³ Ch. 127: New Motor Vehicle Emission Standards, ME. DEP'T OF ENVTL. PROT., http://web.archive.org/web/20060201000000*/http://www.maine.gov/dep/air/regulations/docs/chap127%20Pavley%20FINAL%20adopted%20rule.doc (Mar. 23, 2006). See CODE ME. R. § 1812-E (2006); CAL. CODE REGS. tit. 13, §§ 1956.8(g),(h), 1960.1, 1961(a), 1962(a) (2006).

¹⁷⁵⁴ See THE COMMITTEE ON THE ENVIRONMENT AND THE NORTHEAST INTERNATIONAL COMMITTEE ON ENERGY OF THE CONFERENCE OF NEW ENGLAND GOVERNORS AND EASTERN CANADIAN PREMIERS, CLIMATE CHANGE ACTION PLAN 2001 (2001), <http://web.archive.org/web/20030903015117/http://www.negc.org/documents/NEG-ECP%20CCAP.PDF>.

¹⁷⁵⁵ REGIONAL GREENHOUSE GAS INITIATIVE, <http://www.rggi.org/home> (Oct. 7, 2008).

¹⁷⁵⁶ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20070815201029/http://www.theclimateresistry.org/The_Climate_Registry_Press_Release.pdf.

¹⁷⁵⁷ Press Release, Int'l Carbon Action P'ship, Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007), <http://web.archive.org/web/20071101023558/http://www.icapcarbonaction.com/pr20071029.htm>.

governments to share information regarding cap-and-trade systems and works to ensure that market programs are compatible.¹⁷⁵⁸ In addition, ICAP promotes low-carbon products and services, innovations, and cost effective reductions.¹⁷⁵⁹

In June 2007, Governor Baldacci signed a Resolve entitled, *To Ensure the Success of Regional Climate Change Efforts*, that called for the creation of a study group to assess the effects of RGGI upon electric rates and recommend ways to reduce the costs of RGGI implementation.¹⁷⁶⁰ The group's recommendations culminated in a report that was sent to the Joint Standing Committee on Utilities and Energy on December 14, 2007.¹⁷⁶¹

Maine implements RGGI through five laws and regulations.¹⁷⁶² The first is *An Act To Establish the Regional Greenhouse Gas Initiative Act of 2007*, Public Law, Chapter 317.¹⁷⁶³ The law authorized a cap-and-trade program under which the state may auction carbon dioxide allowances and set the state's cap at 5,948,902 tons of carbon dioxide until 2015 after which the cap will decrease 10% over four years until 2018.¹⁷⁶⁴ The RGGI proceeds will be invested in energy efficiency products or will be credited to consumers' electricity bills.¹⁷⁶⁵ In 2008, Public Law, Chapter 608 was passed, amending the Act.¹⁷⁶⁶ It redefined a "carbon dioxide budget unit" from an "electrical generating unit" to a "fossil fuel fired unit."¹⁷⁶⁷ Additionally, Chapter 608 created a voluntary renewable energy market set-aside allowing regulated sources to purchase renewable energy credits as an offset of carbon dioxide emissions.¹⁷⁶⁸

On December 6, 2007, the Bureau of Air Quality adopted Chapter 156, the *CO₂ Budget Trading Program*, based on the 2007 Act mentioned above.¹⁷⁶⁹ This regulation established the Maine component of the CO₂ Budget Trading Program, which is designed to stabilize and then reduce anthropogenic emissions of carbon dioxide in an

¹⁷⁵⁸ *Id.*

¹⁷⁵⁹ *Id.*

¹⁷⁶⁰ Leg. Doc. 1381, 123rd Leg., 1st Reg. Sess. (Me. 2007).

¹⁷⁶¹ See Letter from Richard Davies, Pub. Advocate, to Senator Philip L. Bartlett, Senate Chair Representative Lawrence Bliss, House Chair Joint Standing Committee on Utilities and Energy (Dec. 14, 2007), <http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCwQFjAA&url=http%3A%2F%2Fwww.maine.gov%2Fmeopa%2Fabout%2Freports%2FLD-1381-report-final.doc&ei=y6RyUvXdDoWFyOG4mIG4Bw&usq=AFQjCNHPPQvNaHc2bm-PTLLQw9Vpa5cOcA&sig2=c9roVG4ayylY5cBRyrnPeg&bvm=bv.55819444.d.aWc>.

¹⁷⁶² *Regional Greenhouse Gas Initiative*, DEP'T OF ENVTL. PROT. STATE OF ME., <http://web.archive.org/web/20080604161243/http://www.maine.gov/dep/air/greenhouse/rggi.htm> (Oct. 27, 2013).

¹⁷⁶³ Leg. Doc. 1851, 123rd Leg., 1st Reg. Sess. (Me. 2007).

¹⁷⁶⁴ *Id.*

¹⁷⁶⁵ *Id.*

¹⁷⁶⁶ Leg. Doc. 1945, 123rd Leg., 1st Spec. Sess. (Me. 2008).

¹⁷⁶⁷ *Id.*

¹⁷⁶⁸ *Id.*

¹⁷⁶⁹ *Recently Adopted Rules*, DEP'T OF ENVTL. PROT. STATE OF ME. BUREAU OF AIR QUALITY, <http://web.archive.org/web/20080604161552/http://www.maine.gov/dep/air/regulations/recentlyadopted.htm> (Oct. 27, 2013).

economically efficient manner.¹⁷⁷⁰ Chapter 156 was amended in July of 2008.¹⁷⁷¹ These amendments incorporate the legislative amendments of Public Law, Chapter 608 and add the auction provisions for the State of Maine.

2008: Renewable Energy, Market-Based Solutions, and Transportation/Fuels

In July 2008, Maine and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.¹⁷⁷² The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards were designed to help develop greater energy efficiency, conservation, and clean energy resources.¹⁷⁷³

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.¹⁷⁷⁴ Each of these allowances sold at a clearing price of \$3.07, raising a total of \$38,575,783.¹⁷⁷⁵ These proceeds will be used to fund renewable energy and energy efficiency technologies and programs in the states that offered allowances.¹⁷⁷⁶

In support of the state's RGGI-regulated facilities, Governor Baldacci participated in a ribbon-cutting ceremony on December 8, 2008 for Maine Energy Systems, a company that generates electricity from wood pellets.¹⁷⁷⁷ At the ceremony, he stressed the need to enhance Maine's renewable energy economy.¹⁷⁷⁸

The second RGGI auction took place on December 17, 2008 and each of the ten states participated.¹⁷⁷⁹ All of the available 31,505,898 allowances were sold 3.5 times lower than the demand of 108,709,000 allowances.¹⁷⁸⁰ The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.¹⁷⁸¹

On December 31, 2008, RGGI participants and Pennsylvania (a RGGI observer) signed a letter of intent to reduce carbon emissions from the transportation sector.¹⁷⁸²

¹⁷⁷⁰ *Id.*

¹⁷⁷¹ ME. REV. STAT. tit. 38, § 585-A (1999).

¹⁷⁷² Press Release, Nat'l Governors Ass'n, NGA Awards Clean Energy Grants to 12 States (June 29, 2008), <http://web.archive.org/web/20100602211017/http://www.nga.org/portal/site/nga/menuitem.6c9a8a9ebc6ae07eee28aca9501010a0/?vgnnextoid=feecd9b353ada110VgnVCM1000001a01010aRCRD>.

¹⁷⁷³ *Id.*

¹⁷⁷⁴ News Release, RGGI Inc., RGGI States' First CO₂ Auction Off to a Strong Start (Sept. 29, 2008), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

¹⁷⁷⁵ *Id.* at 1.

¹⁷⁷⁶ *Id.*

¹⁷⁷⁷ Press Release, State of Me. Office of Governor, Governor Celebrates Alternative Energy (Dec. 8, 2008), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=64829&v=Article-2006>.

¹⁷⁷⁸ *Id.*

¹⁷⁷⁹ Auction 2, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/116 (Oct. 27, 2013).

¹⁷⁸⁰ *Id.*

¹⁷⁸¹ *Id.*

¹⁷⁸² Letter from Gina McCarthy, Comm'r Conn. Dep't of Env'tl. Prot., John A. Hughes, Sec'y Del. Dep't of Natural Res. and Env'tl. Control, David P. Littell, Comm'r Me. Dep't of Env'tl. Prot., Shari T. Wilson, Sec'y Md. Dep't of the Env't, Laurie Burt, Comm'r Mass. Dep't of Env'tl. Prot., Philip Guidice, Comm'r Mass.

Specifically, the letter stated their intent to incorporate a Low Carbon Fuel Standard (LCFS) into RGGI, which requires reductions in the average lifecycle GHG per unit of useful energy in motor vehicles.¹⁷⁸³

2009: Renewable Energy, Green Building, Transportation/Fuels, Climate Change Adaptation, Climate Change Agreements, Energy Efficiency, Green Jobs, Market-Based Solutions, and the American Recovery & Reinvestment Act

In further support of reducing GHG emissions in the state, Governor Baldacci announced a wind energy rebate on January 13, 2009.¹⁷⁸⁴ The rebate provided \$2,000 for residential units, \$4,000 for businesses and an additional \$2,000 if the proposed project met the highest standards for siting and height.¹⁷⁸⁵ Projects that qualified for this additional money were sited in areas with average annual wind speeds of 9.5 to 12.8 mph at 60 feet.¹⁷⁸⁶ Nine days after the announcement of this wind energy rebate program, Stetson Wind Project, the largest wind project in Maine, connected to the grid.¹⁷⁸⁷ This project has the capacity to power 23,500 homes.¹⁷⁸⁸

On January 14, 2009, Governor Baldacci announced that Maine would be the first state to use U.S. Department of Energy (DOE)-provided funds for a weatherization program.¹⁷⁸⁹ This program funded the weatherization of low-income homes to reduce the homes' energy needs by 20 to 30%. Baldacci stated, "One of the best ways we have to . . . make a smaller 'carbon footprint' is to make our homes more energy efficient."¹⁷⁹⁰ Twelve days later, he showed his support for President Obama's directive to the EPA to

Dep't of Energy Res., Pete Grannis, Comm'r N.Y. Dep't Env'tl. Conservation, Bob Callendar, Vice President for Programs N.Y. State Research and Dev. Auth., Thomas S. Burack, Comm'r N.H. Dep't of Env'tl. Serv., Mark N. Mauriello, Acting Comm'r N.J. Dep't of Env'tl. Prot., John Hanger, Acting Sec'y Pa. Dep't of Env'tl. Prot., W. Michael Sullivan, Dir. R.I. Dep't of Env'tl. Mgmt., Laura Q. Pelosi, Comm'r Vt. Dep't of Env'tl. Conservation (Dec. 31, 2008),

http://web.archive.org/web/20110811022823/http://www.mass.gov/Eoea/docs/pr_lcfs_attach.pdf.

¹⁷⁸³ *Id.*

¹⁷⁸⁴ Press Release, State of Me. Office of Governor, Governor Announces Wind Energy Rebate (Jan. 13, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=66415&v=Article-2006>.

¹⁷⁸⁵ *Solar Program*, EFFICIENCY ME.,

http://web.archive.org/web/20071031051951/http://www efficiencymaine.com/renewable_programs_solar.htm, (Oct. 27, 2013).

¹⁷⁸⁶ *See generally* Maine Public Utilities Commission, Efficiency Maine, Wind Energy Rebate Program, Application & Reservation, (Mar. 1, 2009).

¹⁷⁸⁷ Press Release, State of Me. Office of Governor, Governor Celebrates the Startup of Largest Commercial Wind Project in New England (Jan. 22, 2009),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=67293&v=Article-2006>.

¹⁷⁸⁸ *Id.*

¹⁷⁸⁹ Press Release, State of Me. Office of Governor, Maine to Begin Expanded Federal Weatherization Program (Jan. 14, 2009),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=66476&v=Article-2006>.

¹⁷⁹⁰ *Id.*

review California's request for a national vehicle emission standard waiver.¹⁷⁹¹ Maine was one of thirteen states seeking to adopt California's stricter standards.¹⁷⁹²

In an effort to make more informed climate change policy decisions, Governor Baldacci received a report compiled by the University of Maine entitled, *Maine's Climate Future: An Initial Assessment*, on February 25, 2009.¹⁷⁹³ The report identified ecological, economical, and ethical aspects affected by climate change in the state and recommended that state policymakers create a climate change adaptation plan to assess and minimize negative impacts associated with climate change.¹⁷⁹⁴ This recommendation coincided with the bill proposed by Senator Simpson to create a stakeholder group to evaluate and recommend the options available for Mainers to adapt to the likely climate change effects.¹⁷⁹⁵ Section two of the bill requires the DEP to "build upon" the University of Maine's report.¹⁷⁹⁶

On February 26, 2009, Governor Baldacci announced the opening of a 300-ton wood pellet storage facility located at the Heutz Oil Facility in Lewiston.¹⁷⁹⁷

Governor Baldacci announced on February 27, 2009 that weatherization courses would be offered through interactive television at 14 universities.¹⁷⁹⁸ These courses were intended to train individuals in becoming weatherization technicians, which the Director of Maine Housing stated there was a growing demand for.

On March 12, 2009, the DOE announced that Maine is eligible for \$27,305,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).¹⁷⁹⁹

In another effort to encourage Maine's energy efficient economy, Governor Baldacci and New Brunswick's Premier announced the creation of Northeast Energy

¹⁷⁹¹ Press Release, State of Me. Office of Governor, Governor's Statement on President Obama's Auto Emissions Announcement (Jan. 26, 2009),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=67356&v=Article-2006>.

¹⁷⁹² *Id.*

¹⁷⁹³ Press Release, State of Me. Office of Governor, Governor Receives Climate Change Report from University of Maine Scientists (Feb. 25, 2009),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=68555&v=Article-2006>.

¹⁷⁹⁴ G.L. Jacobson et al., *Maine's Climate Future: An Initial Assessment*, THE UNIV. OF ME. (Feb. 2009), http://web.archive.org/web/20130102153803/http://climatechange.umaine.edu/files/Maines_Climate_Future.pdf.

¹⁷⁹⁵ Leg. Doc. 460, 124th Leg., Reg. Sess. (Me. 2008).

¹⁷⁹⁶ *Id.*

¹⁷⁹⁷ Press Release, State of Me. Office of Governor, Governor Baldacci Celebrates Grand Opening of 300 Ton Wood Pellet Depot (Feb. 26, 2009),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=68623&v=Article-2006>.

¹⁷⁹⁸ Press Release, State of Me. Office of Governor, Governor Announces Weatherization Courses Now Offered Statewide Through Interactive Television (Feb. 27, 2009),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=68670&v=Article-2006>.

¹⁷⁹⁹ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

Corridor in March 2009.¹⁸⁰⁰ Feasibility studies for future energy projects would be conducted in the corridor. During the first phase, 1,200 to 1,500 megawatt (MW) electrical transmission capability would be studied.¹⁸⁰¹ This increased capability could enhance wind development in Maine and New Brunswick.

The third RGGI auction was held on March 18, 2009.¹⁸⁰² The auction sold 31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse of future market prices for RGGI allowances.¹⁸⁰³

In May 2009, in order to protect his state's wind technology, Governor Baldacci and other governors wrote a letter to the U.S. Congress communicating their opposition to proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.¹⁸⁰⁴ He also signed Legislative Document (LD) 562 and LD 67 to protect Maine's state parks.¹⁸⁰⁵ In an effort to spur interest in employment in the alternative energy sector, Baldacci handed out awards to the winners of the Maine High School Wind Blade Challenge in which eighteen high schools competed by researching, designing, and producing wind blades.¹⁸⁰⁶ Baldacci also received an award from DownEast magazine for his work in preserving the Sears Island coastline later that month.¹⁸⁰⁷

Also in May, Governor Baldacci signed an agreement with a coalition of governors to support federal climate change legislation.¹⁸⁰⁸ The agreement contained two

¹⁸⁰⁰ Press Release, State of Me. Office of Governor, Maine and New Brunswick Support International Energy Corridor (Mar. 25, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=70015&v=Article-2006>.

¹⁸⁰¹ *Id.*

¹⁸⁰² Press Release, RGGI Inc., States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

¹⁸⁰³ *Id.*

¹⁸⁰⁴ Letter from Deval Patrick, Governor of Mass., Jack Markell, Governor of Del., Martin O'Malley, Governor of Md., Jon S. Corzine, Governor of N.J., Donald L. Carcieri, Governor of R.I., John Baldacci, Governor of Me., John H. Lynch, Governor of N.H., David A. Paterson, Governor of N.Y., James H. Douglas, Governor of Vt., Timothy M. Kaine, Governor of Va. to Harry Reid, Majority Leader, U.S. Senate, Mitch McConnell, Minority Leader, U.S. Senate, Nancy Pelosi, Speaker, U.S. House of Representatives, John Boehner, Minority Leader, U.S. House of Representatives (May 4, 2009), http://web.archive.org/web/20090507010001/http://www.gov.ri.gov/documents/East_Coast_Govs_Transmission_Ltr.pdf.

¹⁸⁰⁵ Press Release, State of Me. Office of Governor, Governor Baldacci Ceremonially Signs State Park Bills (May 13, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=72473&v=Article-2006>.

¹⁸⁰⁶ Press Release, State of Me. Office of Governor, Governor Baldacci Kicks Off Wind Blade Challenge (May 15 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=73259&v=Article-2006>.

¹⁸⁰⁷ Press Release, State of Me. Office of Governor, Governor Baldacci Receives Down East Environmental Award (May 22, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=73722&v=Article-2006>.

¹⁸⁰⁸ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009),

principles: support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.¹⁸⁰⁹ He also signed LD 389, legislation to promote biofuel projects¹⁸¹⁰ as well as legislation that encourages the development of ocean energy technology.¹⁸¹¹ Baldacci further promoted this technology by proposing a National Deep Water Wind Research Center to be operated by the University of Maine to DOE Secretary Chu.¹⁸¹² Eleven days later, Baldacci opened the 2009 Energy Ocean Conference in Rockland.¹⁸¹³

The fourth RGGI auction was held on June 17, 2009 where prices fell to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.¹⁸¹⁴

On June 23, 2009, representatives from RGGI, the Western Climate Initiative (WCI), and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.¹⁸¹⁵ Governor Baldacci then signed a bill containing a six-year pilot program to evaluate various incentives for individual and community renewable energy projects.¹⁸¹⁶ He showed further support for reducing emissions by applauding the EPA's decision to grant the California waiver for automobile fuel efficiency standards.¹⁸¹⁷ Baldacci then joined other New England governors in pursuing the development of high-speed rail in the region.¹⁸¹⁸ In another effort to promote sustainable development, the

<http://web.archive.org/web/20090816230453/http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

¹⁸⁰⁹ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION, (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

¹⁸¹⁰ Press Release, State of Me. Office of Governor, Governor Ceremoniously Signs Bill to Support Sustainable Biofuel Projects (June 2, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=74091&v=Article-2006>.

¹⁸¹¹ Press Release, State of Me. Office of Governor, Governor Signs Ocean Energy Legislation (June 4, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=74271&v=Article-2006>.

¹⁸¹² Press Release, State of Me. Office of Governor, Governor, Congressional Delegation Meet with U.S. Energy Secretary Steven Chu (June 5, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=74338&v=Article-2006>.

¹⁸¹³ Press Release, State of Me. Office of Governor, Governor Baldacci Opens 2009 EnergyOcean Conference (June 16, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=74850&v=Article-2006>.

¹⁸¹⁴ Regional Greenhouse Gas Initiative, *Auction Results*, REGIONAL GREENHOUSE GAS INITIATIVE, <http://web.archive.org/web/20080918235920/http://www.rggi.org/co2-auctions/results> (Oct. 27, 2013), <http://www.rggi.org/co2-auctions/results>.

¹⁸¹⁵ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

¹⁸¹⁶ Press Release, State of Me. Office of Governor, Governor Ceremoniously Signs Renewable Energy Expansion (June 24, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=75287&v=Article-2006>.

¹⁸¹⁷ Press Release, State of Me. Office of Governor, Governor's Statement on EPA Auto Emissions Decision (June 30, 2009), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=75564&v=Article-2006>.

¹⁸¹⁸ Press Release, State of Me. Office of Governor, New England Governors Pursuing Joint Regional Vision for High Speed Rail (July 13, 2009), <http://web.archive.org/web/20090718125837/http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=76081&v=Article-2006>.

University of Maine and the University of Southern Maine announced that they would use a \$20 million grant from the Experimental Program to Stimulate Competitive Research to perform various projects aimed at improving the science and practice of sustainable development.¹⁸¹⁹

Also in July 2009, Governor Baldacci made appointments to the Commission to Study Energy Infrastructure, which was charged with examining the effects of potential transmission systems on state-owned property.¹⁸²⁰

The fifth RGGI action was held on September 9, 2009.¹⁸²¹ The auction sold 28,408,945 allowances of the 2009 vintage at a clearing price of \$2.19 per allowance and 2,172,540 allowances of the 2012 vintage at a clearing price of \$1.87 per allowance.¹⁸²² The sixth RGGI auction was held on December 2, 2009. The auction sold 28,591,698 allowances of the 2009 vintage at a clearing price of \$2.05 per allowance and 1,599,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.¹⁸²³ Sixty-five percent of RGGI auction proceeds will be distributed to the SEU and up to 15% of proceeds will be given to low-income consumers through programs administered through the Department of Health and Social Services. Up to 10% of the auction proceeds will be used for GHG reduction projects and the remaining 10% may be used to administer RGGI and climate change programs in DNREC.¹⁸²⁴

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.¹⁸²⁵ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.¹⁸²⁶ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities."¹⁸²⁷ North America 2050 is open to all U.S. States, Canadian

¹⁸¹⁹ Press Release, State of Me. Office of Governor, Governor Applauds UMaine Announcement of \$20 Grant for Sustainability Initiative (July 15, 2009),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=76274&v=Article-2006>.

¹⁸²⁰ Press Release, State of Me. Office of Governor, Members Named to Energy Infrastructure Commission (July 27, 2009),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=77029&v=Article-2006>.

¹⁸²¹ Auction 5, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/113 (Oct. 14, 2013).

¹⁸²² *Id.*

¹⁸²³ Auction 6, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/112 (Nov. 14, 2103).

¹⁸²⁴ *Id.*

¹⁸²⁵ See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

¹⁸²⁶ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

¹⁸²⁷ NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.¹⁸²⁸

The seventh RGGI auction was held on March 10, 2010.¹⁸²⁹ The auction sold 40,612,408 allowances of the 2010 vintage at a clearing price of \$2.07 per allowance and 2,091,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.¹⁸³⁰

2010: Fuels, Climate Change Memorandum of Understanding, Energy Efficiency, Market-Based Solutions, and Renewable Energy

In March 2010, LD 1631, *An Act to Provide Leadership Regarding the Responsible Recycling of Consumer Products*, was signed into law. It provides incentives to recycle and reuse more consumer products.¹⁸³¹ The law established a process to expand product stewardship for a number of items, including certain electronics and mercury auto switches and thermostats, through Maine DEP rulemaking. Product stewardship involves the collection of certain products at the end of their intended use by their manufacturers.¹⁸³²

Maine passed LD 1662, *An Act to Improve Maine's Air Quality and Reduce Regional Haze at Acadia National Park and Other Federally Designated Class I Areas*, in April 2010.¹⁸³³ This legislation called for incremental reductions in the sulfur content of all fuel oils sold within Maine beginning in 2016 and continuing through 2018.¹⁸³⁴ The law's goal is to reduce Maine's sulfur emissions by 60% from 2010 levels by 2018.¹⁸³⁵

Also in April 2010, Maine received a \$30 million federal grant from ARRA to fund energy efficiency upgrades in Maine.¹⁸³⁶ The grant will establish a revolving loan fund called the Maine Home Performance Fund to make buildings more energy efficient and subsidize retrofits for the first three years of the program. The fund will be accessible to residents in towns that have adopted Property Assessed Clean Energy (PACE) programs that meet guidelines established by Maine. The funding presents the

¹⁸²⁸ See *id.*

¹⁸²⁹ Auction 7, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/111 (Oct. 14, 2013).

¹⁸³⁰ *Id.*

¹⁸³¹ ME. REV. STAT. tit. 38, § 1771 (2013).

¹⁸³² Press Release, State of Me. Office of Governor, Governor Ceremonially Signs Legislation to Encourage Recycling and Reuse of Consumer Products (Mar. 25, 2010), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=94261&v=Article-2006>.

¹⁸³³ ME. REV. STAT. tit. 38, § 583-B (2010).

¹⁸³⁴ Press Release, State of Me. Office of Governor, Governor Signs Legislation to Improve Air Quality in Maine (Apr. 5, 2010),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=95227&v=Article-2006>.

¹⁸³⁵ *Id.*

¹⁸³⁶ Press Release, State of Me. Office of Governor, Maine Wins \$30 Million Energy Efficiency Grant (Apr. 21, 2010),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=95952&v=Article-2006>.

opportunity to accurately measure energy savings and document reduced carbon emissions.¹⁸³⁷

Through the Weatherization Assistance Program, Maine has weatherized 1,582 low-income homes under ARRA as of April 30, 2010.¹⁸³⁸ The Program partners Maine Housing with local nonprofits and community agencies to conduct energy audits and identify cost-effective improvements, saving families an average of \$437 on their energy bills every year. With the plan to weatherize a total of more than 4,400 homes, the state has, as of May 2010, now weatherized more than 2,680 homes.¹⁸³⁹ Cost-effective energy improvements in homes include installing items such as insulation and weather-stripping, sealing windows and doors, caulking cracks in the building, and replacing inefficient heating and cooling systems.¹⁸⁴⁰

In May 2010, Governor Baldacci signed five pieces of critical legislation into law. LD 1786, *An Act Regarding Energy Infrastructure Development*, sought to ensure a reliable energy infrastructure and process for the state's use.¹⁸⁴¹ Designated corridors can only be used if likely to reduce electric rates and cannot adversely impact renewable energy generation. Also, revenues from the use of state assets are used to improve energy efficiency and renewable energy.¹⁸⁴² LD 1535, *An Act to Create a Smart Grid Policy in the State*, ensures that all ratepayers benefit from smart grid technology that saves energy, increases reliability, reduces costs, and provides consumers with more options.¹⁸⁴³ LD 1717, *An Act to Increase the Affordability of Clean Energy for Homeowners and Businesses*, helps Maine property owners make affordable energy efficiency upgrades to their homes and businesses.¹⁸⁴⁴ Maine towns and cities can establish a PACE program to assist property owners with the up-front costs of weatherization and efficiency upgrades.¹⁸⁴⁵ LD 1504, *An Act to Provide Predictable Benefits to Maine Communities That Host Wind Energy Developments*, clarified that as part of a permit application, expedited wind energy development projects must demonstrate a community benefits package, valued at no less than \$4,000 per year per wind turbine, in addition to property tax benefits.¹⁸⁴⁶ LD 1810, *An Act to Implement the Recommendations of the Governor's Ocean Energy Task Force*, advances development of renewable ocean energy resource as quickly as possible and established a goal of five

¹⁸³⁷ *Id.*

¹⁸³⁸ Press Release, State of Me. Office of Governor, Federal Department of Energy Recognizes Maine's Leadership to Weatherize Homes (May 27, 2010), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=98084&v=Article-2006>.

¹⁸³⁹ *Id.*

¹⁸⁴⁰ *Id.*

¹⁸⁴¹ Leg. Doc. 1786, 124th Leg., 2nd Reg. Sess. (Me. 2010).

¹⁸⁴² Press Release, State of Me. Office of Governor, Governor Celebrates Landmark Energy Legislation (May 11, 2010),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=97084&v=Article-2006>.

¹⁸⁴³ Leg. Doc. 1535, 124th Leg., 2nd Reg. Sess. (Me. 2010).

¹⁸⁴⁴ Leg. Doc. 1717, 124th Leg., 2nd Reg. Sess. (Me. 2010).

¹⁸⁴⁵ Press Release, State of Me. Office of Governor, Governor Celebrates Landmark Energy Legislation (May 11, 2010),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=97084&v=Article-2006>.

¹⁸⁴⁶ Leg. Doc. 1504, 124th Leg., 2nd Reg. Sess. (Me. 2010).

gigawatts of energy generation from facilities located in coastal waters by 2030.¹⁸⁴⁷ A competitive process will be conducted for long-term contracting from one or more deep-water offshore wind energy pilot projects up to 25 MWs or tidal demonstration projects up to 5 MWs. The law enacts a clear permitting system for projects in Maine waters and clarifies leasing of submerged lands for ocean energy projects.¹⁸⁴⁸

The eighth RGGI auction was held on June 9, 2010.¹⁸⁴⁹ The auction sold 40,685,585 allowances of the 2010 vintage at a clearing price of \$1.88 per allowance and 2,137,993 allowances of the 2012 vintage at a clearing price of \$ 1.86 per allowance.¹⁸⁵⁰

Governor Baldacci signed a memorandum of understanding (MOU) with Nova Scotia Premier Dexter on July 12, 2010 to work cooperatively on renewable ocean electricity generation.¹⁸⁵¹ The MOU was established to share information on renewable electricity with a focus on ocean tidal energy and offshore wind energy. It also sought to explore opportunities to bring together tidal energy academics, researchers, policy makers, and private sector developers from the two jurisdictions.¹⁸⁵²

The ninth RGGI auction was held on September 8, 2010.¹⁸⁵³ The auction sold 34,407,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,312,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.¹⁸⁵⁴

In August 2010, Governor Baldacci recognized Ocean Renewable Power Company's (ORPC) successful generation of energy through the use of tidal currents in Cobscook Bay. The company partnered with the University of Maine and the U.S. Coast Guard and received financial support from the Maine Technology Institute and the DOE.¹⁸⁵⁵ ORPC advanced its underwater power systems in anticipation of grid-connection in 2011.¹⁸⁵⁶ In September 2010, the DOE awarded ORPC \$10 million to fund

¹⁸⁴⁷ Leg. Doc. 1810, 124th Leg., 2nd Reg. Sess. (Me. 2010).

¹⁸⁴⁸ Press Release, State of Me. Office of Governor, Governor Celebrates Landmark Energy Legislation (*May 11, 2010*),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=97084&v=Article-2006>.

¹⁸⁴⁹ Auction 8, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/110 (Oct. 14, 2013).

¹⁸⁵⁰ *Id.*

¹⁸⁵¹ Press Release, State of Me. Office of Governor, Governor Signs Memorandum of Understanding on Ocean Energy Development with Premier of Nova Scotia (*July 12, 2010*),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=110128&v=Article-2006>.

¹⁸⁵² *Id.*

¹⁸⁵³ Auction 9, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/109 (Oct. 14, 2013).

¹⁸⁵⁴ *Id.*

¹⁸⁵⁵ Press Release, State of Me. Office of Governor, Governor Recognizes Tidal Power Generation Operation in Eastport (*Aug. 24, 2010*),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=124076&v=Article-2006>.

¹⁸⁵⁶ *Id.*

a key part of their commercial-scale tidal energy development project in Cobscook Bay.¹⁸⁵⁷

The tenth RGGI auction was held on December 10, 2010.¹⁸⁵⁸ The auction sold 24,755,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,172,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.¹⁸⁵⁹

2011: Market-Based Solutions and Fuels

The eleventh RGGI auction was held on March 9, 2011.¹⁸⁶⁰ The auction sold 41,995,813 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance and 2,144,710 allowances of the 2012 vintage at a clearing price of \$1.89 per allowance.¹⁸⁶¹ Maine announced in June 2011 that the state had earned \$769,092 in the twelfth RGGI auction.¹⁸⁶² The state planned on reinvesting the money in large-scale commercial and industrial energy efficiency projects.¹⁸⁶³

In August 2011, Maine became the first state in the country to permit five models of pellet burners to be sold in the state.¹⁸⁶⁴ These standalone systems burn biomass pellets that reduce the carbon footprint of an average home by 16% compared to fossil-fuel burning heating systems.¹⁸⁶⁵

The thirteenth RGGI auction was held on September 7, 2011 and the auction sold 7,487,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.¹⁸⁶⁶ The fourteenth RGGI auction was held on December 7, 2011 and the auction sold 27,293,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.¹⁸⁶⁷

2012: Market-Based Solutions

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of

¹⁸⁵⁷ Press Release, State of Me. Office of Governor, Governor Congratulates Ocean Renewable Power Company (Sept. 9, 2010),

<http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=129100&v=Article-2006>.

¹⁸⁵⁸ Auction 10, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/174 (Oct. 14, 2013).

¹⁸⁵⁹ *Id.*

¹⁸⁶⁰ Auction 11, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/108 (Oct. 14, 2013).

¹⁸⁶¹ *Id.*

¹⁸⁶² Press Release, Me. Dep't of Env'tl. Prot., RGGI Auction Yields \$769k for Investment in Energy Efficiency, Job Creation (June 10, 2011), <http://www.maine.gov/dep/news/news.html?id=261669>.

¹⁸⁶³ *Id.*

¹⁸⁶⁴ Press Release, Me. Dep't of Env'tl. Prot., Maine DEP Innovative Certification Allows Bethel Energy Business to Expand (Aug. 24, 2011), <http://www.maine.gov/dep/news/news.html?id=288402>.

¹⁸⁶⁵ *Id.*

¹⁸⁶⁶ Auction 13, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/201 (Oct. 14, 2013).

¹⁸⁶⁷ Auction 14, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/204 (Oct. 14, 2013).

\$1.93.¹⁸⁶⁸ The auction generated \$41.6 million in proceeds, which RGGI participating states invested in consumer-oriented energy efficiency initiatives.¹⁸⁶⁹ On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.¹⁸⁷⁰ The auction of 20.9 million allowances generated \$40.4 million in funds, and represented 57% of the allowances offered for sale by all nine participating states.¹⁸⁷¹ On September 7, 2012, RGGI announced the results of its seventeenth quarterly auction for carbon dioxide allowances.¹⁸⁷² The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, which represented 65% of the allowances offered for sale by all nine states.¹⁸⁷³

On November 19, 2012, RGGI reported that related state investments avoided 12 million tons of carbon dioxide emissions from 2009 to 2011.¹⁸⁷⁴ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement, and climate change adaptation programs.¹⁸⁷⁵

2013: Market-Based Solutions, Renewable Energy, Energy Efficiency, Climate Change Adaptation, Green Jobs, and Renewable Portfolio Standard

On February 7, 2013, RGGI announced significant program improvements implemented in the Updated Model Rule after a two-year comprehensive program review.¹⁸⁷⁶ Improvements included: a reduction of the 2014 regional cap by 45% from 165 million to 91 million tons with the cap further declining by 2.5% each year from 2015 to 2020; additional adjustments to the cap from 2014 to 2020 in order to account for privately banked allowances which will be deemed “old” allowances starting in 2014; the creation of a cost containment reserve of allowances which may be accessed only when the price of allowances in a given year exceeds a predetermined level; updates to the offsets program, including a protocol for forestry offsets; the decision not to reoffer unsold allowances from 2012 and 2013; the requirement that regulated entities obtain allowances for at least 50% of their emissions in each of the first two years of the three year compliance period; and the development of tools to track electricity imported into

¹⁸⁶⁸ Press Release, RGGI Inc., RGGI Auction Sells 21.5 Million CO₂ Allowances (Mar. 16, 2012), http://web.archive.org/web/20120415054456/http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

¹⁸⁶⁹ *Id.*

¹⁸⁷⁰ Press Release, RGGI Inc., RGGI Auction Sells 20.9 Million CO₂ Allowances (June 8, 2012), http://web.archive.org/web/20120717084904/http://www.rggi.org/docs/PR060812_Auction16.pdf.

¹⁸⁷¹ *Id.*

¹⁸⁷² Press Release, RGGI Inc., RGGI Auction Sells 24.5 Million CO₂ Allowances (Sept. 7, 2012), http://web.archive.org/web/20121116150342/http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

¹⁸⁷³ *Id.*

¹⁸⁷⁴ Press Release, RGGI Inc., RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings (Nov. 19, 2012), <http://web.archive.org/web/20130204041411/http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

¹⁸⁷⁵ *Id.*

¹⁸⁷⁶ Press Release, RGGI Inc., RGGI States Propose Lowering Regional CO₂ Emissions Cap 45%, Implementing a More Flexible Cost-Control Mechanism (Feb. 7, 2013), http://web.archive.org/web/20130511185049/http://www.rggi.org/docs/PressReleases/PR130207_ModelRule.pdf.

participating states from non-participating states in order to address those emissions.¹⁸⁷⁷ Each RGGI state will implement these measures in their respective statutory regimes.¹⁸⁷⁸

On March 13, 2013, RGGI announced the results of its nineteenth quarterly auction in which 37,835,405 allowances were sold at a clearing price of \$2.80 per allowance.¹⁸⁷⁹

On April 16, 2013, an independent market monitor of RGGI confirmed that there continues to be no material concerns regarding the auction process or in the competitiveness of the secondary market for RGGI allowances.¹⁸⁸⁰ During 2012, the average auction clearing price was \$1.93 for carbon dioxide allowances.¹⁸⁸¹ On June 5, 2013, RGGI announced the results of its twentieth quarterly auction in which 38,782,076 allowances were sold at a clearing price of \$3.21 per allowance.¹⁸⁸²

On June 7, 2013 the EPA announced that it was awarding \$3.8 million to Maine to assess, clean up and create revolving funds in the state for their Brownfield program.¹⁸⁸³ Maine was the third highest recipient nationwide of Brownfield grant funds for the year and “since 2002, Maine has received close to \$50 million dollars in funding for the Brownfields program and created 750 jobs and assessed or cleaned up 1500 acres across the state.”¹⁸⁸⁴

On June 21, 2013 Governor LePage signed LD 385 entitled, *An Act To Improve Wind Energy Development Permitting*, which amended the existing permitting process for grid-scale wind energy developments by establishing a process where the public can request a public hearing and interveners can request an adjudicatory hearing on a permit application.¹⁸⁸⁵ Moreover, this law established a rebuttable presumption that wind development has a significant adverse effect on natural resources if it is located in a specified acreage of Bicknell’s Thrush habitat and the law requires that permit applications contain best practical mitigation options.¹⁸⁸⁶

¹⁸⁷⁷ *Id.*

¹⁸⁷⁸ *Id.*

¹⁸⁷⁹ Auction 19, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auctions-1-21?id=222 (Feb. 9, 2014).

¹⁸⁸⁰ Press Release, RGGI Inc., 2012 Annual Market Monitor Report: In Fifth Year, RGGI CO₂ Allowance Market Remains Competitive (Apr. 16, 2013), http://web.archive.org/web/20130924092740/http://www.rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

¹⁸⁸¹ *Id.*

¹⁸⁸² Auction 20, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auctions-1-21?id=229 (Feb. 9, 2014).

¹⁸⁸³ Press Release, Me. Dep’t of Env’tl. Prot., Maine DEP Commissioner Patricia Aho to Celebrate Success of Maine’s Brownfields Program (June 7, 2013) <http://www.maine.gov/dep/news/news.html?id=540248>.

¹⁸⁸⁴ *Id.*

¹⁸⁸⁵ Leg. Doc. 385, 126th Leg., Reg. Sess. (Me. 2013), http://www.mainelegislature.org/legis/bills/bills_126th/chapters/PUBLIC325.asp.

¹⁸⁸⁶ *Id.*

Governor LePage vetoed LD 825, which aimed to reduce the impacts of climate change on Maine's communities and their economy, on June 24, 2013.¹⁸⁸⁷ This bill, which passed through the House and Senate with strong support, would have restarted a climate adaptation planning process that was halted two years ago by the LePage administration.¹⁸⁸⁸

Maine's Energy Bill, LD 1559 became law on June 27, 2013 after the Senate voted to unanimously and the House voted by a 121-11 margin to overrule LePage's veto.¹⁸⁸⁹ The bill "focuses on reducing energy costs to Maine residents, increasing energy efficiency, improving electric system reliability, and protecting the environment."¹⁸⁹⁰ LePage stated that he vetoed the Bill because he wanted it to "support an offshore wind project proposed by the University of Maine rather than one developed by a Norwegian energy company. In addition, the Governor wanted a version that would alter the state's Renewable Portfolio Standard (RPS) to allow non-wind projects larger than 100 megawatts in capacity to qualify."¹⁸⁹¹

On June 28, 2013 Governor LePage signed LD 1472, *An Act to Provide for Economic Development with Offshore Wind Power*.¹⁸⁹² This bill "adds offshore wind energy developments and associated manufacturing as an eligible project to receive financial assistance from the Finance Authority of Maine."¹⁸⁹³

On September 4, 2013, RGGI announced the results of its twenty-first quarterly auction in which 38,409,043 allowances were sold at a clearing price of \$2.67 per allowance.¹⁸⁹⁴ On December 2, 2013, the RGGI states submitted a comment to the EPA for "consideration as EPA develops guidelines for state programs to reduce carbon dioxide (CO₂) emissions from power plants under Clean Air Act section 111(d)."¹⁸⁹⁵ In the comment the RGGI states encouraged the EPA to view the RGGI program success as a benchmark for national action and recommended, "EPA's new rules encourage states to develop market-based GHG emission reduction programs designed to work for their region(s)."¹⁸⁹⁶ On December 4, 2013, RGGI announced the results of its twenty-second

¹⁸⁸⁷ Leg. Doc. 825, 126th Leg., Reg. Sess. (Me. 2013),

<http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=HP0576&item=1&snum=126>.

¹⁸⁸⁸ *Id.*

¹⁸⁸⁹ *Maine Overrides Governor Veto and Passes Omnibus Energy Bill*, CTR. FOR ENERGY AND CLIMATE SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2013/maine-overrides-governor-veto-passes-omnibus-energy-bill> (Jan. 31, 2014).

¹⁸⁹⁰ *Id.*

¹⁸⁹¹ *Id.* See also Leg. Doc. 1559, 126th Leg., Reg. Sess. (Me. 2013),

<http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=HP1128&item=1&snum=126>.

¹⁸⁹² Press Release, State of Me. Office of Governor, Governor Signs Offshore Wind Power Bill (June 28, 2013), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=549049&v=article2011>.

¹⁸⁹³ Leg. Doc. 1472, 126th Leg., 1st Reg. Sess. (Me. 2013),

<http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=HP1053&item=1&snum=126>.

¹⁸⁹⁴ *Auction 21*, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/auctions-1-21?id=233 (Feb. 9, 2014).

¹⁸⁹⁵ Press Release, Regional Greenhouse Gas Initiative, RGGI States Recommend that EPA Support Flexible Market-Based Carbon Pollution Programs (Dec. 2, 2013),

http://www.rggi.org/docs/PressReleases/PR120213_EPAComments_Final.pdf.

¹⁸⁹⁶ *Id.*

quarterly auction in which 38,329,378 allowances were sold at a clearing price of \$3.00 per allowance.¹⁸⁹⁷

On December 5, 2013 six New England governors signed a statement entitled, “New England Governors’ Commitment to Regional Cooperation on Energy Infrastructure,” committing their states to develop an energy agenda “designed to bring more affordable, cleaner, and reliable power to homes and businesses across the northeast.”¹⁸⁹⁸ Through the statement the Governors will work with the ISO-New England and the New England States Committee on Electricity (NESCOE) to advance a regional energy infrastructure initiative that will diversify their energy supply portfolio.¹⁸⁹⁹ Over the next couple of months the state’s energy and environmental agencies in cooperation with the NESCOE will work to develop a multi-state strategy that will meet their common needs and goals.

2014: Renewable Energy and Market-Based Solutions

In furtherance of the New England governor’s energy infrastructure commitment, on January 21, 2014 the NESCOE sent a letter to the ISO-New England to assist the states as they are requesting proposals for transmission infrastructure to “deliver at least 1,200 MW and as much as 3,600 MW of electricity from clean energy sources into the grid, as well as to develop a funding mechanism to support investment in additional pipelines to bring natural gas from the Pennsylvania region into the New England.”¹⁹⁰⁰

MARYLAND

2000: Fuels and Renewable Energy

Since 2000, Maryland has required electricity providers to disclose fuel mix and emissions data to their customers.¹⁹⁰¹ Maryland’s utilities must also provide net metering to customers with solar, wind, or biomass power generators.¹⁹⁰²

¹⁸⁹⁷ Auction 22, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auction-22 (Feb. 9, 2014).

¹⁸⁹⁸ Press Release, State of Me. Office of Governor, New England Governors Sign Historic Energy Statement Committing to Regional Cooperation on Infrastructure (Dec. 5, 2013), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=609923&v=article2011>.

¹⁸⁹⁹ MAINE.GOV, NEW ENGLAND GOVERNORS’ COMMITMENT TO REGIONAL COOPERATION ON ENERGY INFRASTRUCTURE ISSUES, <http://www.maine.gov/tools/whatsnew/attach.php?id=609923&an=1> (Feb. 2, 2014).

¹⁹⁰⁰ Press Release, State of Me. Office of Governor, New England Governors Ask for Infrastructure to Deliver More Electricity, More Natural Gas (Jan. 23, 2014), <http://www.maine.gov/tools/whatsnew/index.php?topic=Gov+News&id=612952&v=article2011>. Letter from Ann G. Berwick, President NESCOE, Chair, Mass. Dep’t of Pub. Util., Katie S. Dykes, Deputy Comm’r of Energy, Conn. Dep’t of Energy and Envtl. Prot., Thomas L. Welch, Chairman Pub. Util. Comm’n, State of Me., Robert R. Scott, Comm’r Pub. Util. Comm’n, State of N.H., Margaret Curran, Chairperson Pub. Util. Comm’n, State of R.I., Christopher Recchia, Comm’r Dep’t of Pub. Serv., State of Vt., to Gordon van Welie, President and CEO of ISO New England, Inc. (Jan. 21, 2014), <http://www.maine.gov/tools/whatsnew/attach.php?id=612952&an=1>.

¹⁹⁰¹ MD. CODE ANN., PUB. UTIL. COS. § 7-505 (2011).

¹⁹⁰² *Id.* § 7-306.

2001: Market-Based Solutions

Since 2001, Maryland has offered the following income tax credits for owners of buildings that are green or use photovoltaic, wind, or fuel cells for power: 6 to 8% of the cost to construct or rehabilitate green buildings; 20 to 25% of the cost of photovoltaic power generators; 25% of the cost of wind turbines; and 30% of the cost of fuel cells.¹⁹⁰³ Maryland also provides a sales tax exemption for all wood or “refuse-derived” fuel used to heat residential properties.¹⁹⁰⁴

2004: Climate Change Adaptation, Renewable Portfolio Standard, and Energy Efficiency

The Maryland Energy Administration completed a climate change action plan for the state in March 2004.¹⁹⁰⁵

Maryland’s Renewable Energy Portfolio Standard and Credit Trading Act, enacted in 2004, requires that utilities utilize renewable power sources for a portion of the energy sold to their customers.¹⁹⁰⁶ Maryland also has efficiency standards for nine appliances.¹⁹⁰⁷

2005: Market-Based Solutions

As a further incentive for the state’s citizens and businesses to adopt alternative power generators, the Maryland Energy Administration has offered grants for solar-powered heating equipment since 2005.¹⁹⁰⁸

2007: Renewable Portfolio Standard, Market-Based Solutions, Climate Change Adaptation, Transportation/Fuels, and Green Building

In April 2007, Governor O’Malley signed Senate Bill (SB) 595, which expanded the state’s renewable portfolio standard (RPS), requiring that solar energy comprise 2% of the state’s electricity supply and that other renewable sources comprise 7.5% of the supply by 2022.¹⁹⁰⁹ The Bill also called for the expansion of the state’s net metering program, making customer-owned, grid-connected power systems that generate up to two megawatts (MWs) eligible for net metering and requiring utilities to provide net metering

¹⁹⁰³ MD. CODE ANN., TAX-GEN. § 10-722 (2006).

¹⁹⁰⁴ *Id.* § 11-207.

¹⁹⁰⁵ MD. ENERGY ADMIN., GHG EMISSIONS REDUCTIONS IN MARYLAND, VOLUME II (2004), http://www.epa.gov/statelocalclimate/documents/pdf/GHG_Volume_II_Final.pdf.

¹⁹⁰⁶ *Id.* § 7-703.

¹⁹⁰⁷ *Energy Efficiency Standards Act*, MD. ENERGY ADMIN., <http://web.archive.org/web/20071214175354/http://www.energy.state.md.us/eesa/database/index.html> (Nov. 1, 2013).

¹⁹⁰⁸ MD. CODE ANN., STATE GOV’T § 9-2007 (2006).

¹⁹⁰⁹ S.B. 595, 423rd Gen. Assemb., Reg. Sess. (Md. 2007).

for up to 1,500 MWs.¹⁹¹⁰

Also in April 2007, Governor O'Malley signed the Regional Greenhouse Gas Initiative (RGGI) agreement.¹⁹¹¹ As the (then) tenth member of RGGI, Maryland agreed to reduce carbon dioxide emissions from the state's electrical generators by 10% from current levels by 2018.¹⁹¹² Additionally, O'Malley signed an Executive Order (EO) establishing the Climate Change Commission to assess the state's climate change impacts and to work with stakeholders to develop a greenhouse gas (GHG) reduction strategy as well as a strategy to decrease the state's vulnerability to climate change.¹⁹¹³

Governor O'Malley also signed SB 103, the *Maryland Clean Cars Act*, in April 2007. This Act adopted California's GHG emissions standards for cars, which required that GHG emissions from cars be reduced 22% by 2012 and 30% by 2016.¹⁹¹⁴ Maryland's standards "became effective in Maryland for model year 2011 vehicles."¹⁹¹⁵ In addition, the Act created the Clean Car and Energy Policy Task Force and charged it with studying the vehicle emission standards of neighboring states; California and the EPA's regulatory actions related to vehicle emission standards; and emerging energy technologies.¹⁹¹⁶ Additionally, it tasked the task force with reviewing energy policies, considering strategies for alternative vehicle fuels and efficiency measures, and recommending legislation.¹⁹¹⁷

At the same time, Governor O'Malley signed SB 332, establishing the Maryland Green Building Council and charging it with making recommendations regarding the most cost-effective green building technologies for state construction projects.¹⁹¹⁸

In May 2007, Maryland and thirty other states founded The Climate Registry to "measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors." This was viewed as a "critical first step in developing robust programs to reduce greenhouse gas emissions."¹⁹¹⁹

¹⁹¹⁰ *Id.*

¹⁹¹¹ Press Release, Office of the Governor, Governor Martin O'Malley Signs Greenhouse Gas Agreement, Climate Change Executive Order (Apr. 20, 2007), <http://www.gov.state.md.us/pressreleases/070420.html>.

¹⁹¹² REGIONAL GREENHOUSE GAS INITIATIVE, <http://www.rggi.org/home> (Nov. 2, 2013). Governor Christie pulled New Jersey out of RGGI on May 26, 2011, and thus there are currently only nine RGGI member states. See Christopher Baxter, *Gov. Christie Announces N.J. Pulling out of Regional Environmental Initiative*, THE STAR LEDGER (May 26, 2011), http://www.nj.com/politics/index.ssf/2011/05/gov_christie_to_announce_nj_pu.html.

¹⁹¹³ Md. Exec. Order 01.01.2007.07 (2007).

¹⁹¹⁴ S.B. 103, 423rd Gen. Assemb., Reg. Sess. (Md. 2007).

¹⁹¹⁵ *Maryland Clean Cars Program*, MD. DEP'T OF THE ENV'T.

<http://www.mde.maryland.gov/programs/air/mobilesources/cleancars/pages/index.aspx> (Nov. 2, 2013).

¹⁹¹⁶ *Id.*

¹⁹¹⁷ *Id.*

¹⁹¹⁸ S.B. 332, 423rd Gen. Assemb., Reg. Sess. (Md. 2007).

¹⁹¹⁹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20071012182817/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

On October 29, 2007, Maryland joined a coalition with nine other states, New Zealand, Norway, nine European Union countries, the European Commission, and two Canadian provinces to form the International Carbon Action Partnership (ICAP) in order to combat global warming.¹⁹²⁰ ICAP provides a forum for governments to share information regarding cap-and-trade systems and works to ensure that market programs are compatible.¹⁹²¹ In addition, ICAP promotes low-carbon products and services, innovations, and cost effective reductions.¹⁹²²

2008: Energy Efficiency, Climate Change Adaptation, Green Technology, Market-Based Solutions, Renewable Energy, and Transportation/Fuels

In April 2008, the Maryland General Assembly adopted all five energy bills in Governor O'Malley's legislative energy package. The *EmPOWER Maryland Energy Efficiency Act* of 2008,¹⁹²³ when fully implemented, is estimated to save Marylanders \$5.7 billion and avoid at least three new power plants.¹⁹²⁴ It included a target 15% reduction in per capita electricity consumption and peak demand by the end of 2015.¹⁹²⁵ As of 2012 the Act had help Maryland lower its annual per capita peak demand by 10.8% and its annual per capita consumption by 9.4%.¹⁹²⁶ SB 268 created a Strategic Energy Investment Fund to provide short-term rate relief and long-term investments in energy efficiency, renewable energy, and climate change programs.¹⁹²⁷ The Fund is financed through the sale of carbon allowances to power plants as part of RGGL.¹⁹²⁸ Another piece of legislation, SB 209, called for doubling the amount of renewable power purchased by Maryland's utilities and required that 20% of electricity come from renewable resources by 2022.¹⁹²⁹ House Bill (HB) 377 increased the maximum grant from Maryland's solar energy grant program to \$10,000 for solar panels and \$3,000 for solar hot water systems.¹⁹³⁰ Finally, SB 208 required that all new state buildings and schools be energy efficient.¹⁹³¹

In June 2008, Governor O'Malley announced that Wavebob Ltd. would establish its North American headquarters in Annapolis.¹⁹³² The company develops ocean wave

¹⁹²⁰ Press Release, Int'l Carbon Action P'ship, Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007),

<http://web.archive.org/web/20071101023558/http://www.icapcarbonaction.com/pr20071029.htm>.

¹⁹²¹ *Id.*

¹⁹²² *Id.*

¹⁹²³ H.B. 374, 425th Gen. Assemb., Reg. Sess. (Md. 2008).

¹⁹²⁴ Press Release, Office of Governor, Maryland Energy Administration Applauds Adoption of Governor's Energy Package (Apr. 8, 2008), <http://www.governor.maryland.gov/pressreleases/080408b.asp>.

¹⁹²⁵ *Id.*

¹⁹²⁶ *Goals*, GOVERNOR O'MALLEY'S STATESTAT, <https://data.maryland.gov/goals/energy-efficiency> (last updated Oct. 23, 2013).

¹⁹²⁷ S.B. 268, 425th Gen. Assemb., Reg. Sess. (Md. 2008).

¹⁹²⁸ *Id.*

¹⁹²⁹ S.B. 209, 425th Gen. Assemb., Reg. Sess. (Md. 2008).

¹⁹³⁰ H.B. 377, 425th Gen. Assemb., Reg. Sess. (Md. 2008).

¹⁹³¹ S.B. 208, 425th Gen. Assemb., Reg. Sess. (Md. 2008).

¹⁹³² Press Release, Office of Governor, Wavebob Ltd. Selects Annapolis for North American Headquarters (May 20, 2008), <http://www.governor.maryland.gov/pressreleases/080520c.asp>.

power technology.

In July 2008, Maryland and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.¹⁹³³ The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards were designed to help develop greater energy efficiency, conservation, and clean energy resources.¹⁹³⁴

Soon after Governor O'Malley announced the NGA grant, he announced his directive to the Maryland Transit Administration (MTA) to only purchase hybrid buses in the future.¹⁹³⁵ Under this directive, it is expected that the MTA will have over 500 hybrid-electric powered buses by 2014.

The Maryland Climate Change Commission released its Climate Change Action Plan in August 2008.¹⁹³⁶ The Plan set a goal of reducing GHG emissions by 10% below 2006 levels by 2012 and then 90% below 2006 levels by 2050. It proposed to achieve these levels through 42 different measures. The Commission projected that if these measures are implemented, there will be a 50% reduction in GHG emissions by 2020, providing the state with a net economic benefit of \$2 billion.¹⁹³⁷

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.¹⁹³⁸ Each of these allowances sold at a clearing price of \$3.07, raising a total of \$38,575,783.¹⁹³⁹ These proceeds would be used to fund renewable energy and energy efficiency technologies and programs in the states that offered allowances.¹⁹⁴⁰ The second auction took place on December 17, 2008 and each of the ten states participated.¹⁹⁴¹ All of the available 31,505,898 allowances were sold, 3.5 times lower than the demand of 108,709,000 allowances.¹⁹⁴² The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.¹⁹⁴³

In December 2008, Governor O'Malley announced the state's proposal to acquire 9,242 acres of forest, farm, and shore land through Program Open Space and Land

¹⁹³³ Press Release, Office of Governor, Maryland Energy Administration Awarded NGA Clean Energy Grant (June 30, 2008), <http://www.governor.maryland.gov/pressreleases/080630.asp>.

¹⁹³⁴ *Id.*

¹⁹³⁵ Press Release, Office of Governor, Governor O'Malley Announces Commitment to Convert MTA Bus Fleet to Hybrids by 2014 (July 15, 2008), <http://www.governor.maryland.gov/pressreleases/080715.asp>.

¹⁹³⁶ *Climate Change*, Md. Dep't of the Env't, <http://web.archive.org/web/20080906013912/http://www.mde.state.md.us/Air/climatechange/index.asp>.

¹⁹³⁷ *Id.*

¹⁹³⁸ Press Release, RGGI Inc., RGGI States' First CO₂ Auction Off to a Strong Start (Sept. 29, 2008), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

¹⁹³⁹ *Id.* at 1.

¹⁹⁴⁰ *Id.*

¹⁹⁴¹ *Auction 2*, RGGI Inc., http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/116 (Nov. 2, 2013).

¹⁹⁴² *Id.*

¹⁹⁴³ *Id.*

Legacy grants for preservation purposes.¹⁹⁴⁴ He also announced the launch of Greenprint, an interactive mapping tool to aid local governments, conservation organizations, and local citizens in making sustainable land use decisions.

On December 31, 2008, RGGI participants and Pennsylvania (an observer) signed a letter of intent to reduce carbon emissions from the transportation sector.¹⁹⁴⁵ Specifically, the letter expressed the states' intent to analyze and develop a Low Carbon Fuel Standard (LCFS), which requires reductions in the average lifecycle GHG per unit of useful energy in motor vehicles, for the Northeast/Mid-Atlantic region.¹⁹⁴⁶

2009: Greenhouse Gas Reduction, Green Building, Climate Change Agreements, Transportation/Fuels, Market-Based Solutions, Energy Efficiency, Green Jobs, Renewable Energy, and American Recovery & Reinvestment Act

In early 2009, Governor O'Malley introduced his *Smart, Green, and Growing* legislative agenda.¹⁹⁴⁷ He introduced six bills that aimed to protect the integrity of comprehensive plans by overturning the *Terrapin Run* case; modernize Maryland's Planning Visions; and develop Smart Growth Markers for local and state decision-makers. Additionally, the Task Force on the Future of Growth and Development in Maryland presented its report including 52 recommendations for furthering smart growth in the state.¹⁹⁴⁸ O'Malley also introduced a bill mandating that Maryland reduce GHG emissions 25% from 2006 levels by 2020 on January 23, 2009.¹⁹⁴⁹ Later that January, he also publicized his support for President Obama's directive to the EPA to reconsider the California GHG waiver.¹⁹⁵⁰

¹⁹⁴⁴ Press Release, Office of Governor, Governor O'Malley Launches Greenprint, and Proposes Historic Land Conservation Acreage (Dec. 3, 2008), <http://www.governor.maryland.gov/pressreleases/081203.asp>.

¹⁹⁴⁵ Letter from Gina McCarthy, Comm'r Conn. Dep't of Env'tl. Prot., John A. Hughes, Sec'y Del. Dep't of Natural Res. and Env'tl. Control, David P. Littell, Comm'r Me. Dep't of Env'tl. Prot., Shari T. Wilson, Sec'y Md. Dep't of the Env't, Laurie Burt, Comm'r Mass. Dep't of Env'tl. Prot., Philip Guidice, Comm'r Mass. Dep't of Energy Res., Pete Grannis, Comm'r N.Y. Dep't Env'tl. Conservation, Bob Callendar, Vice President for Programs N.Y. State Research and Dev. Auth., Thomas S. Burack, Comm'r N.H. Dep't of Env'tl. Serv., Mark N. Mauriello, Acting Comm'r N.J. Dep't of Env'tl. Prot., John Hanger, Acting Sec'y Pa. Dep't of Env'tl. Prot., W. Michael Sullivan, Dir. R.I. Dep't of Env'tl. Mgmt., Laura Q. Pelosi, Comm'r Vt. Dep't of Env'tl. Conservation (Dec. 31, 2008), http://web.archive.org/web/20110811022823/http://www.mass.gov/Eoeea/docs/pr_lcfs_attach.pdf.

¹⁹⁴⁶ *Id.* at 1.

¹⁹⁴⁷ Press Release, Office of Governor, Governor O'Malley Introduces 2009 Smart, Green and Growing Legislative Initiatives (Jan. 12, 2009), <http://www.governor.maryland.gov/pressreleases/090112.asp>.

¹⁹⁴⁸ A Report of the Task Force on the Future for Growth and Dev. in Md., Dep't of Planning Md., *Where Do We Grow From Here?* (Dec. 1, 2008), <http://planning.maryland.gov/PDF/Yourpart/773/773TaskForceReport.pdf>.

¹⁹⁴⁹ S.B. 278, 426th Gen Assemb., Reg. Sess. (Md. 2009), <http://mlis.state.md.us/2009RS/billfile/sb0278.htm>. See Press Release, Office of Governor, Governor Martin O'Malley Introduces Legislation to Reduce Global Warming Pollution (Jan. 23, 2009), <http://www.governor.maryland.gov/pressreleases/090123.asp>.

¹⁹⁵⁰ Press Release, Office of Governor, Statement from Governor O'Malley on Obama Administration Statement on Auto Emission Standard (Jan. 26, 2009), <http://www.governor.maryland.gov/pressreleases/090126b.asp>.

Governor O'Malley and eleven other governors signed a letter to President Obama, urging him to form a strong state/federal leader partnership in initiating a national climate change program on January 29, 2009.¹⁹⁵¹ This letter was predicated upon the President's letter to the Governors' Global Climate Summit in which he offered the governors a partnership with the White House in addressing climate change issues. The letter writers believed that their states have played a leading role in confronting these issues and stated, "It is crucial that we build on our states' momentum."¹⁹⁵² The letter also contained suggestions for how a national climate change program should be implemented. One of these suggestions was for the national government to recognize the private investments that have been made in current cap-and-trade programs and to preserve clean energy plans funded by the proceeds from these programs.¹⁹⁵³

The next month, Governor O'Malley unveiled the MTA's thirty new diesel electric buses.¹⁹⁵⁴ He also announced that Maryland will purchase one hundred hybrid buses for rural transit systems with American Recovery and Reinvestment Act (ARRA) money.¹⁹⁵⁵

In March 2009, Governor O'Malley introduced legislation requiring Maryland to re-regulate its electricity market.¹⁹⁵⁶ Later that month, he introduced the state's first Clean Energy Center.¹⁹⁵⁷ Located at the University of Maryland, the Center analyzes and disseminates information on the commercialization of clean technologies, business incubation, and training a green work force.

On March 12, 2009, the Department of Energy (DOE) announced that Maryland is eligible for \$51,772,000 under the State Energy Program of the ARRA.¹⁹⁵⁸

The third RGGI auction was held on March 18, 2009.¹⁹⁵⁹ The auction sold

¹⁹⁵¹ Letter from Arnold Schwarzenegger, Governor of Cal., M. Jodi Rell, Governor of Conn., Charlie Crist, Governor of Fla., Kathleen Sebelius, Governor of Kan., Martin O'Malley, Governor of Md., Deval Patrick, Governor of Mass., John S. Corzine, Governor of N.J., Bill Richardson, Governor of N.M., David Paterson, Governor of N.Y., Theodore R. Kulongoski, Governor of Or., Christine O. Gregoire, Governor of Wash., Jim Doyle, Governor of Wis., to Barack Obama, President of the United States of America (Jan. 29, 2009),

<http://web.archive.org/web/20090214185812/http://www.wisgov.state.wi.us/docview.asp?docid=15821>.

¹⁹⁵² *Id.* at 1.

¹⁹⁵³ *Id.* at 2.

¹⁹⁵⁴ Press Release, Office of Governor, Governor O'Malley Unveils MTA Electric Hybrid Bus at 2009 Auto Show (Feb. 13, 2009), <http://www.governor.maryland.gov/pressreleases/090213.asp>.

¹⁹⁵⁵ Press Release, Office of Governor, Governor O'Malley Announces First Wave of Transportation Projects to Support Economic Recovery (Feb. 18, 2009), <http://www.governor.maryland.gov/pressreleases/090218.asp>.

¹⁹⁵⁶ Press Release, Office of Governor, Governor Martin O'Malley Introduces Legislation for 'Rational Regulation' of Energy in Maryland (Mar. 2, 2009), <http://www.governor.maryland.gov/pressreleases/090302.asp>.

¹⁹⁵⁷ Press Release, Office of Governor, Governor O'Malley, County Executive Leggett Announce Region's First Clean Energy Center (Mar. 31, 2009), <http://www.governor.maryland.gov/pressreleases/090331.asp>.

¹⁹⁵⁸ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

¹⁹⁵⁹ Press Release, RGGI Inc., States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse of future market prices for RGGI allowances.¹⁹⁶⁰

In early April 2009, Maryland's House and Senate both passed the *Greenhouse Gas Reduction Act*.¹⁹⁶¹ The Act requires the Department of the Environment to update and publish an inventory of the state's GHG emissions in 2006 in order to create the baseline for the mandated emissions cuts. This mandatory GHG emissions reduction was set at 25% below 2006 levels by 2020.¹⁹⁶² In order to reach these reductions, the Department of the Environment submitted a proposed plan toward reaching this goal by December 31, 2011.¹⁹⁶³

Around this time the state legislature also passed Governor O'Malley's Budget Reconciliation and Financial Act of 2009.¹⁹⁶⁴ The Act reallocates the proceeds from the RGGI auctions so that more money goes towards electricity ratepayers and less goes towards energy efficiency and conservation programs. Specifically, spending on ratepayer protections would increase from 17% of auction proceeds to 50%, and spending on energy efficiency and conservation programs would decrease from 46% of auction proceeds to 17.5%.¹⁹⁶⁵ This amended allocation would remain in place until June 30, 2011.

Governor O'Malley then signed the *Smart, Green and Growing* legislation into law, committing Maryland to reduce its GHG emissions 25% below 2006 levels by 2020.¹⁹⁶⁶ He also vocalized his support of the Obama administration's decision to adopt the California automotive fuel efficiency standards nationally.¹⁹⁶⁷ Maryland then received \$61 million in ARRA funding for its Weatherization Assistance Program.¹⁹⁶⁸

In order to protect their states' wind technology, Governor O'Malley and other Northeast and Mid-Atlantic governors wrote a letter to the U.S. Congress expressing their opposition to proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.¹⁹⁶⁹ O'Malley also signed a May 2009 agreement

¹⁹⁶⁰ *Id.*

¹⁹⁶¹ S.B. 278, 426th Gen Assemb., Reg. Sess. (Md. 2009).

¹⁹⁶² *Id.*

¹⁹⁶³ Maryland's Plan to Reduce Greenhouse Gas Emissions, Dep't of the Env't. (Dec. 31, 2011), <http://www.mde.state.md.us/programs/Air/ClimateChange/Documents/2011%20Draft%20Plan/2011GGRADRAFTPlan.pdf>.

¹⁹⁶⁴ H.B. 101, 426th Gen Assemb., Reg. Sess. (Md. 2009).

¹⁹⁶⁵ *Id.* at 52-53.

¹⁹⁶⁶ Press Release, Office of Governor, Governor O'Malley Signs "Smart, Green and Growing" Legislation to Protect Maryland's Environment and Promote Sustainable Growth (May 7, 2009), <http://www.governor.maryland.gov/pressreleases/090507.asp>.

¹⁹⁶⁷ Press Release, Office of Governor, Statement from Governor Martin O'Malley Following President Obama's Announcement of National Auto Emissions Standards (May 19, 2009), <http://www.governor.maryland.gov/pressreleases/090519b.asp>.

¹⁹⁶⁸ Press Release, Office of Governor, Governor O'Malley Announces Expansion of Home Weatherization Program (June 18, 2009), <http://www.governor.maryland.gov/pressreleases/090618.asp>.

¹⁹⁶⁹ Letter from Deval Patrick, Governor of Mass., Jack Markell, Governor of Del., Martin O'Malley, Governor of Md., Jon S. Corzine, Governor of N.J., Donald L. Carcieri, Governor of R.I., John Baldacci,

with a coalition of governors to support federal climate change legislation.¹⁹⁷⁰ The agreement contained two principles: the support of comprehensive federal legislation and the promotion of a federal-state partnership in implementing this legislation.¹⁹⁷¹

The fourth RGGI auction was held on June 17, 2009 where prices fell to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.¹⁹⁷² On June 23, 2009, representatives from RGGI, the Western Climate Initiative (WCI), and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.¹⁹⁷³

In August 2009, Maryland received \$51 million through the ARRA for its State Energy Program.¹⁹⁷⁴ The next month, Governor O'Malley highlighted the Maryland Green Registry, a self-certification program designed to promote the greening efforts of various types of organizations.¹⁹⁷⁵ In October 2009, the Obama Administration also invested \$304.8 million in smart grid technology grants in the state.¹⁹⁷⁶

The fifth RGGI action was held on September 9, 2009.¹⁹⁷⁷ The auction sold 28,408,945 allowances of the 2009 vintage at a clearing price of \$2.19 per allowance and 2,172,540 allowances of the 2012 vintage at a clearing price of \$1.87 per allowance.¹⁹⁷⁸

Governor Martin O'Malley, Governor Kaine of Virginia and Governor Markell of Delaware agreed on a tri-state memorandum of understanding (MOU) for the deployment

Governor of Me., John H. Lynch, Governor of N.H., David A. Paterson, Governor of N.Y., James H. Douglas, Governor of Vt., Timothy M. Kaine, Governor of Va. to Harry Reid, Majority Leader, U.S. Senate, Mitch McConnell, Minority Leader, U.S. Senate, Nancy Pelosi, Speaker, U.S. House of Representatives, John Boehner, Minority Leader, U.S. House of Representatives (May 4, 2009), http://web.archive.org/web/20090507010001/http://www.gov.ri.gov/documents/East_Coast_Govs_Transmission_Ltr.pdf.

¹⁹⁷⁰ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20090816230453/http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

¹⁹⁷¹ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION, (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

¹⁹⁷² *Auction 4*, Regional Greenhouse Gas Initiative, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/114 (Nov. 2, 2013).

¹⁹⁷³ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

¹⁹⁷⁴ Press Release, Office of Governor, Governor O'Malley Announces Over \$50 Million in Federal Energy Investments for Maryland (Aug. 14, 2009), <http://www.governor.maryland.gov/pressreleases/090814.asp>.

¹⁹⁷⁵ Press Release, Office of Governor, Governor O'Malley Highlights Maryland Businesses Committed to Sustainability (Sept. 30, 2009), <http://www.governor.maryland.gov/pressreleases/090930.asp>.

¹⁹⁷⁶ Press Release, Office of Governor, Statement from Governor O'Malley in Support of President Obama's Smart Grid Technology Grants (Oct. 27, 2009), <http://www.governor.maryland.gov/pressreleases/091027b.asp>.

¹⁹⁷⁷ *Auction 5*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/113 (Oct. 14, 2013).

¹⁹⁷⁸ *Id.*

of offshore wind energy in the Mid-Atlantic coastal region in November 2009.¹⁹⁷⁹ Immediate tasks under the MOU included identifying common transmission strategies for offshore wind energy deployment in the region, discussing ways to encourage sustainable market demand for this renewable resource, and working collaboratively to pursue federal energy policies. The partners will examine ways to coordinate regional supply chain facilities to secure supply, deployment, and operations and maintenance functions.¹⁹⁸⁰

American Community Properties Trust (ACPT) announced in at the end of November 2009 that St. Charles, Maryland would be its flagship 9,100 acre planned community, the most comprehensive smart green community development project in the United States at the time.¹⁹⁸¹ The project included 4,000 undeveloped acres in the planned community intended for 11,000 new homes and over five million square feet of commercial, schools, and community centers to be a smart green and growing community. Additionally, the project would retrofit more than 12,000 existing homes and four million square feet of existing commercial space in St. Charles.¹⁹⁸²

At that time, ACPT was also building the largest combination of clean energy infrastructure in the United States, including a 640 MW natural gas powered power plant, a 75-acre solar farm generating 10 MWs, geothermal well fields for heating and cooling buildings, and a biomass gasification technology plant potentially incorporating methane from the Charles County landfill to produce additional renewable electricity.¹⁹⁸³ ACPT will develop its next green neighborhood, a 625 mixed-unit community called Homefield, according to Leadership in Energy and Environmental Design (LEED) standards for neighborhood design, and all homes, townhomes and apartments in the neighborhood will be built to LEED specifications as well.¹⁹⁸⁴

On December 8, 2009, Governor O'Malley, in partnership with the University of Maryland, announced the results of the Generating Clean Horizons initiative to spur large-scale, commercial renewable energy projects that will provide electricity to Maryland.¹⁹⁸⁵ The Board of Regents and the Department of General Services for Maryland's University System had recently approved the award of four renewable energy projects to produce over 20% of the institution and state agencies annual electric needs, furthering Maryland's commitment to reducing its carbon footprint 25% by 2020.¹⁹⁸⁶ The awards were made to US WindForce for a 55 MW onshore wind energy project,

¹⁹⁷⁹ Press Release, Office of Governor, Mid-Atlantic Governors Commit to Offshore Wind Partnership (Nov. 10, 2010), <http://www.governor.maryland.gov/pressreleases/091110.asp>.

¹⁹⁸⁰ *Id.*

¹⁹⁸¹ Press Release, Office of Governor, St. Charles, Maryland to Become International Model Green City (Nov. 30, 2009), <http://www.governor.maryland.gov/pressreleases/091130.asp>.

¹⁹⁸² *Id.*

¹⁹⁸³ *Id.*

¹⁹⁸⁴ *Id.*

¹⁹⁸⁵ Press Release, Office of Governor, Governor Martin O'Malley Announces Clean Energy Projects to Spur Economic Growth, Promote Sustainability (Dec. 8, 2009), <http://www.governor.maryland.gov/pressreleases/091208.asp>.

¹⁹⁸⁶ *Id.*

Constellation for a 13 MW solar project in Central Maryland, and BlueWater Wind for up to 55 MW of wind energy as an extension to the proposed Delaware offshore wind project. A separate award under a small business provision was made to Synergics for 10 MW as part of its Roth Rock development in Western Maryland.¹⁹⁸⁷

The sixth RGGI auction was held on December 2, 2009. The auction sold 28,591,698 allowances of the 2009 vintage at a clearing price of \$2.05 per allowance and 1,599,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.¹⁹⁸⁸

Also in December 2009, a federal district court in Maryland issued a significant decision in *Animal Welfare Inst. v. Beech Ridge Energy LLC*, 675 F. Supp. 2d 540 (D. Md. 2009), enjoining the construction and operation of a wind energy project in West Virginia based upon the conclusion that the project would take endangered Indiana bats in violation of Section 9 of the Endangered Species Act.¹⁹⁸⁹

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.¹⁹⁹⁰ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.¹⁹⁹¹ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities."¹⁹⁹² North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.¹⁹⁹³

2010: Climate Change Agreements, Energy Efficiency, Green Building, Green Jobs, Market-Based Solutions, Renewable Energy, and Transportation/Fuels

In January 2010, Governor O'Malley released his 2010 Energy Agenda, which focused on increasing renewable energy production and tax credits for Maryland's families and workforce. Proposed legislation included: incentivizing the purchase of plug-in electric vehicles by creating a tax credit, acceleration of the solar RPS,

¹⁹⁸⁷ *Id.*

¹⁹⁸⁸ Auction 6, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/112 (Nov. 14, 2103).

¹⁹⁸⁹ *Animal Welfare Inst. v. Beech Ridge Energy LLC*, 675 F. Supp. 2d 540 (D. Md. 2009).

¹⁹⁹⁰ See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

¹⁹⁹¹ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

¹⁹⁹² NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

¹⁹⁹³ See *id.*

advancement of offshore wind energy, and reauthorization of the Renewable Energy Production Tax Credit.¹⁹⁹⁴

The seventh RGGI auction was held on March 10, 2010.¹⁹⁹⁵ The auction sold 40,612,408 allowances of the 2010 vintage at a clearing price of \$2.07 per allowance and 2,091,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.¹⁹⁹⁶

In April 2010 Governor O'Malley announced an award of \$20 million through the DOE's Energy Efficiency and Conservation Block Grant (EECBG) Program to support the Maryland Department of Housing and Community Development's (DHCD) *Investment in Main Street: Energy Efficiency for Economic Growth* plan.¹⁹⁹⁷ This plan was a holistic, community-based approach to target individual households, multifamily rental properties, and commercial properties for energy-efficiency retrofits. In the first three years the plan was projected to benefit around 2,000 homeowners providing energy efficiency retrofits for their homes. Additionally, twenty buildings comprising approximately 2,000 affordable rental units would benefit from energy efficiency retrofits, and a projected 900 historic commercial properties would benefit from energy audits and low-interest retrofit financing in concert with DHCD's Neighborhood Business Works program. Moreover, a Statewide Energy Efficiency Purchasing Cooperative would be established to maximize purchasing power for retrofits, and to provide funding for affordable housing, energy retrofits, and energy efficiency.¹⁹⁹⁸

The eighth RGGI auction was held on June 9, 2010.¹⁹⁹⁹ The auction sold 40,685,585 allowances of the 2010 vintage at a clearing price of \$1.88 per allowance and 2,137,993 allowances of the 2012 vintage at a clearing price of \$ 1.86 per allowance.²⁰⁰⁰

In June 2010, Governor O'Malley announced Maryland's formal partnership in the newly formed Atlantic Offshore Wind Consortium (AOWC), which is comprised of states along the Atlantic coastline and the U.S. Department of the Interior (DOI).²⁰⁰¹ The AOWC seeks to coordinate issues surrounding the development of offshore wind along the Atlantic outer continental shelf. Maryland's partners included Maine, New

¹⁹⁹⁴ Press Release, Office of Governor, Governor Martin O'Malley Releases Clean Energy Agenda to Promote Jobs, Sustainability (Jan. 15, 2010), <http://www.governor.maryland.gov/pressreleases/100115b.asp>.

¹⁹⁹⁵ Auction 7, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/111 (Oct. 14, 2013).

¹⁹⁹⁶ *Id.*

¹⁹⁹⁷ Press Release, Office of Governor, Maryland to Receive \$20 Million as Part of U.S. Department of Energy's Retrofit Ramp-Up Initiative (Apr. 21, 2010), <http://www.governor.maryland.gov/pressreleases/100421.asp>.

¹⁹⁹⁸ *Id.*

¹⁹⁹⁹ Auction 8, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/110 (Oct. 14, 2013).

²⁰⁰⁰ *Id.*

²⁰⁰¹ Press Release, Office of Governor, Governor Martin O'Malley Announces Offshore Wind Energy Partnership (June 8, 2010), <http://www.governor.maryland.gov/pressreleases/100608.asp>.

Hampshire, Massachusetts, Rhode Island, New York, New Jersey, Delaware, Virginia, North Carolina, South Carolina, Georgia, and Florida.²⁰⁰²

That same month, Baltimore City Community College in Baltimore, Maryland, was selected to receive \$1 million in funding under the ARRA to expand Maryland's weatherization training programs for local workers in energy efficiency retrofitting and weatherization services.²⁰⁰³

The Transportation and Climate Initiative (TCI) was launched in June 2010 and is facilitated by the Georgetown Climate Center.²⁰⁰⁴ TCI is a regional collaboration between twelve Northeast and Mid-Atlantic states that aims to reduce GHG emissions from the transportation sector and develop the clean energy economy. A nearly \$1 million Electric Vehicle Readiness Grant from the DOE was awarded to New York State Energy Research and Development Authority (NYSERDA) on behalf of the TCI in September 2010 to fund efforts to deploy electric vehicles throughout the Northeast.²⁰⁰⁵

In July 2010, Maryland's first Green Economy Forum convened and outlined an aggressive plan to create and retain green jobs, support clean and renewable energy, protect Maryland's communities, and preserve the State's natural resources.²⁰⁰⁶ The *Green Jobs & Industry Task Force* had assembled in March 2010 to develop recommendations to capitalize on the emerging green economy. The Task Force report focused on six key recommendations: promoting energy and resource efficiency efforts; developing and fostering clean, local energy production and industrial capacity; capitalizing upon economic opportunities to restore and protect Maryland's natural resources; promoting sustainable development practices that create jobs, generate prosperity, and make Maryland more self-reliant; increasing access to capital for green businesses and projects; and strengthening coordination and communication across state agencies, partners, and stakeholders to provide strategic vision for advancing a green economy.²⁰⁰⁷

Governor O'Malley signed EO 01.01.2010.16, the *Long-Term Electricity Report for the State*, on July 23, 2010.²⁰⁰⁸ This Order required the Department of Natural Resources (DNR) to develop a long-term electricity report by December 1, 2011 to be

²⁰⁰² *Id.*

²⁰⁰³ Press Release, Office of Governor, Maryland Selected to Receive \$1 Million in Recovery Funding for Weatherization Training Center (June 4, 2010), <http://www.governor.maryland.gov/pressreleases/100604b.asp>.

²⁰⁰⁴ *Georgetown Climate Center, Transportation and Climate Initiative*, GEORGETOWN CLIMATE CTR. (Mar. 9, 2012) <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative>

²⁰⁰⁵ *Georgetown Climate Center, Northeast States Form Regional Electric Vehicle Network*, GEORGETOWN CLIMATE CTR. (Oct. 19, 2011) <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

²⁰⁰⁶ Press Release, Office of Governor, Governor O'Malley Outlines Plan to Grow Green Jobs at Maryland's First Green Economy Forum (July 14, 2010), <http://www.governor.maryland.gov/pressreleases/100714.asp>.

²⁰⁰⁷ *Id.*

²⁰⁰⁸ Md. Exec. Order No. 01.01.2010.16 (2010).

updated every five years.²⁰⁰⁹ This was the first such report in twenty years that evaluated Maryland's long-term electricity needs and included a comprehensive review of alternatives to meet those needs.²⁰¹⁰ The EO was developed by DNR in cooperation with Maryland's Public Service Commission (PSC), the Maryland Department of the Environment, and the Maryland Energy Administration (MEA). The Report, which was prepared by DNR's Power Plant Assessment Program, assesses future electric energy use requirements and peak electric demand requirements, and identifies sources and alternative resources to meet any gaps in these requirements through the end of calendar year 2030.²⁰¹¹

The ninth RGGI auction was held on September 8, 2010.²⁰¹² The auction sold 34,407,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,312,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.²⁰¹³

In November 2010, Governor O'Malley and the MEA joined the federal Bureau of Ocean Energy Management, Regulation and Enforcement in announcing a significant step forward in bringing offshore wind power generation to Maryland's coast.²⁰¹⁴ The federal government, which controls the Outer Continental Shelf, accepted the planning recommendations of the Maryland Offshore Wind Task Force for an offshore wind farm and issued both a Request for Interest (RFI) and a map of an offshore wind leasing area in federal waters adjacent to Maryland's Atlantic Coast.²⁰¹⁵ This made Maryland only the second state in the nation to reach this point in the process.

Launched in November 2010, the Maryland Green Travel Program is a voluntary program that helps businesses find more environmentally sustainable ways of operating, provides tips and resources to reduce waste, conserve energy and water, and better manage the environment.²⁰¹⁶ In turn, participants in the Program share successful strategies for greening their business, and the results they have achieved. As part of this Program, Maryland also launched a section of visitmaryland.com to promote businesses that incorporate sustainability into their business practices.

²⁰⁰⁹ MD. POWER PLANT RESEARCH PROGRAM, LONG-TERM ELECTRICITY REPORT FOR MD. (2011), http://esm.versar.com/pprp/pprac/Longterm_Electricity_Report/Final/LTER%20Final%20Report.pdf.

²⁰¹⁰ Press Release, Office of Governor, Governor O'Malley Signs Executive Order Calling for Long-Term Electricity Report (July 23, 2010), <http://www.governor.maryland.gov/pressreleases/100723.asp>.

²⁰¹¹ *Id.*

²⁰¹² Auction 9, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/109 (Oct. 14, 2013).

²⁰¹³ *Id.*

²⁰¹⁴ Press Release, Office of Governor, Governor Martin O'Malley Announces Major Steps Forward in Offshore Wind Efforts (Nov. 8, 2010), <http://www.governor.maryland.gov/pressreleases/101108.asp>.

²⁰¹⁵ *Id.*

²⁰¹⁶ Press Release, Office of Governor, Governor Martin O'Malley Addresses Statewide Travel and Tourism Summit; Launches 'Green' Travel Program (Nov. 5, 2010), <http://www.governor.maryland.gov/pressreleases/091105b.asp>.

The tenth RGGI auction was held on December 10, 2010.²⁰¹⁷ The auction sold 24,755,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,172,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.²⁰¹⁸

2011: Market-Based Solutions, Energy Efficiency, Renewable Energy, and Transportation/Fuels

The eleventh RGGI auction was held on March 9, 2011.²⁰¹⁹ The auction sold 41,995,813 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance and 2,144,710 allowances of the 2012 vintage at a clearing price of \$1.89 per allowance.²⁰²⁰ The twelfth RGGI auction was held on June 8, 2011.²⁰²¹ The auction sold 12,537,000 allowances of the 2011 vintage at a clearing price of \$1.89 and 943,000 allowances of the 2012 vintage at a clearing price of \$1.89 per allowance.²⁰²²

In August 2011, the Maryland Energy Administration made an additional \$850,000 available for energy efficiency upgrades, reducing the cost of these upgrades for residents by up to 50%.²⁰²³ Later that month, using \$2.1 million in proceeds from a RGGI auction, Governor O'Malley announced the start of the EmPOWER Clean Energy Communities Low-to-Moderate Income Grant Program.²⁰²⁴

That same month, in response to Governor O'Malley's call for 20% of energy to be generated from renewable sources by 2022 and with the help of federal funds dispersed by the Maryland Energy Association, Advanced Technology and Research Corp. developed and installed a sun-tracking electric vehicle charger.²⁰²⁵

The thirteenth RGGI auction was held on September 7, 2011 and the auction sold 7,487,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.²⁰²⁶

²⁰¹⁷ *Auction 10*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/174 (Oct. 14, 2013).

²⁰¹⁸ *Id.*

²⁰¹⁹ *Auction 11*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/108 (Oct. 14, 2013).

²⁰²⁰ *Id.*

²⁰²¹ *Auction 12*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/187 (Oct. 14, 2013).

²⁰²² *Id.*

²⁰²³ Press Release, Office of Lt. Governor, Lt. Governor Anthony Brown Announces Additional Funds Available to Provide Marylanders up to 50% off Home Energy Upgrades (Aug. 4, 2011), <http://www.governor.maryland.gov/ltgovernor/pressreleases/110804.asp>.

²⁰²⁴ Press Release, Md. Energy Admin., Governor O'Malley "Empowers Clean Energy Communities" With Over \$2M for Low Income Energy Efficiency Improvements (Aug. 18, 2011), <http://www.energy.state.md.us/documents/2011-08-18-PressRelease-2MtoEmPowerCleanEnergyCommunities.pdf>.

²⁰²⁵ Press Release, ATR, ATR Solartech Installs First Sun-Tracking Electric Vehicle Charger (Aug. 8, 2011), <http://www.energy.state.md.us/documents/2011-08-08ATRSolarCarChargerDebut.pdf>.

²⁰²⁶ *Auction 13*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/201 (Oct. 14, 2013).

In October 2011, as part of a continuing effort to obtain more energy from renewable resources, Maryland sought proposals for the purchase of electricity generated from animal waste.²⁰²⁷

Maryland was one of nine states to join the Northeast Electric Vehicle Network, which is part of the TCI, in October 2011. The network helps the states to increase economic growth and reduce their GHG emissions by focusing on building infrastructure for clean vehicles and fuels as well as attracting public and private investment to support the infrastructure development. Participating states include Connecticut, Delaware, Washington, D.C., Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.²⁰²⁸

The fourteenth RGGI auction was held on December 7, 2011 and the auction sold 27,293,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.²⁰²⁹

On December 22, 2011, EmPOWER Maryland entered its second phase.²⁰³⁰ As part of this phase, the Maryland PSC ordered utilities to expand their energy efficiency and demand response programs.

2012: Renewable Energy, Market-Based Solutions, Energy Efficiency, Greenhouse Gas Reduction, and Climate Change Adaptation

In February 2012, the MEA announced the availability of \$2 million in new grant money for public universities to fund research that will further the state's role as a leader in offshore wind.²⁰³¹ Individual grants range from \$250,000 to \$1,000,000 and are awarded on a competitive basis.²⁰³²

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of \$1.93.²⁰³³ The auction generated \$41.6 million in proceeds, which the RGGI states will

²⁰²⁷ Press Release, Office of Governor, State of Maryland Seeks Proposals for Renewable Energy Generated from Animal Waste (Oct. 13, 2011), <http://www.governor.maryland.gov/blog/?p=2279>.

²⁰²⁸ *Northeast States Form Regional Electric Vehicle Network*, GEORGETOWN CLIMATE CTR. (Oct. 19, 2011) <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

²⁰²⁹ *Auction 14*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/204 (Oct. 14, 2013).

²⁰³⁰ *Maryland Expands Energy Efficiency and Demand Response Programs*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2012/maryland-expands-energy-efficiency-and-demand-response-programs> (Apr. 29, 2013).

²⁰³¹ Press Release, Md. Energy Admin., Maryland Energy Administration and the Maryland Higher Education Commission Announce Research Grants to Support Maryland's Offshore Wind Development (Feb. 4, 2012), <http://web.archive.org/web/20130305150933/http://energy.maryland.gov/documents/MEAandMHECAnnounceResearchGrantstoSupportOffshoreWindDevelopment.pdf>.

²⁰³² *Id.*

²⁰³³ Press Release, RGGI Inc., RGGI Auction Sells 21.5 Million CO₂ Allowances (Mar. 16, 2012), http://web.archive.org/web/20120415054456/http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

invest in consumer-oriented energy efficiency initiatives.²⁰³⁴ On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.²⁰³⁵ The auction of the 20.9 million allowances generated \$40.4 million in funds and represented 57% of the allowances offered for sale by all nine participating states.²⁰³⁶ On September 7, 2012, RGGI announced the results of its seventeenth quarterly auction.²⁰³⁷ The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, which represented 65% of the allowances offered for sale by all nine states.²⁰³⁸

Maryland launched a new grant program for clean burning wood stoves in September 2012.²⁰³⁹ The grant makes \$50,000 available to Maryland homeowners who purchase and install log or pellet wood stoves.

On November 2, 2012, Maryland awarded \$1.1 million in clean energy innovation grants including projects related to biomass boilers, community wind project assessments, advanced solar thermal water heating systems, advanced energy storage in micro-grid configurations, and solar storage systems that can charge electric vehicles.²⁰⁴⁰

On November 19, 2012, RGGI reported that RGGI-related state investments avoided 12 million tons of carbon dioxide emissions from 2009 to 2011.²⁰⁴¹ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement, and climate change adaptation programs.²⁰⁴²

In December 2012, the MEA announced over \$3 million in grants for energy upgrades for 4,000 households in low to moderate-income residential communities.²⁰⁴³

²⁰³⁴ *Id.*

²⁰³⁵ Press Release, RGGI Inc., RGGI Auction Sells 20.9 Million CO₂ Allowances (June 8, 2012), http://web.archive.org/web/20120717084904/http://www.rggi.org/docs/PR060812_Auction16.pdf.

²⁰³⁶ *Id.*

²⁰³⁷ Press Release, RGGI Inc., RGGI Auction Sells 24.5 Million CO₂ Allowances (Sept. 7, 2012), http://web.archive.org/web/20121116150342/http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

²⁰³⁸ *Id.*

²⁰³⁹ Press Release, Md. Energy Admin., Maryland Energy Administration Opens Innovative Wood Stove Grant Pilot Program (Sept. 6, 2012), <http://web.archive.org/web/20130103154404/http://energy.maryland.gov/documents/MarylandEnergyAdministrationOpensInnovativeWoodStoveGrantPilotProgram.pdf>.

²⁰⁴⁰ Press Release, Md. Energy Admin., Maryland Recognizes “Game Changing” Clean Energy Innovation with Over \$1 Million in Grants (Nov. 2, 2012), <http://web.archive.org/web/20130103154400/http://energy.maryland.gov/documents/MarylandRecognizesGameChangingCleanEnergyInnovationWithOverOneMillioninGrants.pdf>.

²⁰⁴¹ Press Release, RGGI Inc., RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings (Nov. 19, 2012), <http://web.archive.org/web/20130204041411/http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

²⁰⁴² *Id.*

²⁰⁴³ Press Release, Md. Energy Admin., Maryland Energy Administration Announces Over \$3 Million in Residential Energy Upgrades for Low and Moderate Income Marylanders (Dec. 13, 2012),

The grants are awarded to local governments and non-profits that identify qualifying households.²⁰⁴⁴ Also in December, Governor O'Malley signed an EO to help the state prepare for the effects of climate change by requiring all new and reconstructed state structures and infrastructure improvements to be constructed to avoid or minimize flood damage.²⁰⁴⁵

2013: Market-Based Solutions, Renewable Energy, Transportation/Fuels, Greenhouse Gas Reduction, and Climate Change MOUs

In January 2013, Maryland entered into a power purchase agreement with Green Planet Power Solutions.²⁰⁴⁶ The state will purchase a minimum of 10 MW of electricity from the facility, which produces energy from agricultural waste.

On February 6, 2013, MEA announced the Maryland Smart Energy Communities Program.²⁰⁴⁷ The Program “targets climate change through efficiency improvements, renewable energy innovation, and petroleum reduction for Maryland’s local governments.”²⁰⁴⁸ It distributes grants and encourages local governments to adopt the same set of policies as the state.²⁰⁴⁹

On February 7, 2013, RGGI announced significant program improvements implemented in the Updated Model Rule after a two-year comprehensive program review.²⁰⁵⁰ Improvements include a reduction of the 2014 regional cap by 45% from 165 million to 91 million tons, and further declining by 2.5% each year from 2015 to 2020; additional adjustments to the cap from 2014 to 2020 in order to account for privately banked allowances which will be deemed “old” allowances starting in 2014; the creation of a cost containment reserve of allowances which may be accessed only when the price of allowances in a given year exceeds a predetermined level; updates to the offsets program including a protocol for forestry offsets; the decision not to reoffer unsold allowances from 2012 and 2013; the requirement that regulated entities obtain allowances for at least 50% of their emissions in each of the first two years of the three year

<http://web.archive.org/web/20130305150936/http://energy.maryland.gov/documents/MarylandEnergyAdministrationAnnouncesOver3MillioninResidentialEnergyUpgradesforLowandModerate.pdf>.

²⁰⁴⁴ *Id.*

²⁰⁴⁵ Press Release, Office of Governor, Governor O'Malley Signs Executive Order Helping State Prepare for Climate Change and Extreme Weather (Dec. 28, 2012),

<http://www.governor.maryland.gov/blog/?p=7921>.

²⁰⁴⁶ Press Release, Office of the Governor, Governor Martin O'Malley Announces Agreement to Purchase Homegrown Clean Energy Generation on the Eastern Shore (Jan. 25, 2013),

<http://www.governor.maryland.gov/blog/?p=8056>.

²⁰⁴⁷ Press Release, Md. Energy Admin., Maryland Energy Administration Announces the Maryland Smart Energy Communities Program (Feb. 6, 2013),

<http://web.archive.org/web/20130305150930/http://energy.maryland.gov/documents/MarylandEnergyAdministrationAnnouncesTheMarylandSmartEnergyCommunitiesProgram262013.pdf>.

²⁰⁴⁸ *Id.*

²⁰⁴⁹ *Id.*

²⁰⁵⁰ Press Release, RGGI Inc., RGGI States Propose Lowering Regional CO₂ Emissions Cap 45%, Implementing a More Flexible Cost-Control Mechanism (Feb. 7, 2013),

http://web.archive.org/web/20130511185049/http://www.rggi.org/docs/PressReleases/PR130207_ModelRule.pdf.

compliance period; and developing tools to track electricity imported into participating states from non-participating states in order to address those emissions.²⁰⁵¹ Each RGGI state will implement these measures in their respective statutory regimes.²⁰⁵²

On February 8, 2013 H.B. 1274, the *Maryland Hydraulic Fracturing Moratorium and Right to Know Act of 2013*, was introduced.²⁰⁵³ This Bill would have established a legislative moratorium on fracking, provided an 18-month period to conduct and review studies of the process, and require the adoption of regulations based on the recommendations from the studies.²⁰⁵⁴ However, the bill died in the Senate by one vote, and because of this, the House Bill was withdrawn from consideration.²⁰⁵⁵

On March 13, 2013, RGGI announced the results of its nineteenth quarterly auction in which 37,835,405 allowances were sold at a clearing price of \$2.80 per allowance.²⁰⁵⁶

On April 9, 2013 Governor O'Malley signed the *Maryland Offshore Wind Energy Act of 2013*.²⁰⁵⁷ This Bill earmarked "\$1.7 billion for development of a wind farm in federal waters off Maryland's coast, with the funding coming from up to a \$1.50 monthly surcharge on consumers' electricity bills."²⁰⁵⁸ But, to protect consumers from excessive rate increases resulting from the higher costs of wind energy production, the bill created a "window of maximum rate impacts for both residential and nonresidential electric customers."²⁰⁵⁹ The Bill also required "that, within Maryland's renewable energy portfolio standard program, a certain percentage of electricity be supplied by offshore wind starting in 2017."²⁰⁶⁰ Estimates show offshore wind production will create 850 construction jobs and 160 supply and operation and maintenance jobs in Maryland.

Also on April 9th Governor O'Malley signed SB 600, which is a vehicle law on electric vehicles.²⁰⁶¹ This Bill defined "plug-in electric drive vehicle" in such a way as to allow these vehicles to use the high occupancy vehicle lanes regardless of the number of passengers in the vehicle and the bill became effective on June 1, 2013.

²⁰⁵¹ *Id.*

²⁰⁵² *Id.*

²⁰⁵³ H.B. 1274, 430th Gen Assemb., Reg. Sess. (Md. 2013),

<http://mgaleg.maryland.gov/2013RS/bills/hb/hb1274f.pdf>.

²⁰⁵⁴ *The Best Defense in 2013: A Review of the Maryland Legislative Session*, CLEAR WATER ACTION, <http://cleanwater.org/feature/best-defense-2013> (Feb. 5, 2014).

²⁰⁵⁵ *Id.*

²⁰⁵⁶ *Auction 19*, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/auctions-1-21?id=222 (Feb. 9, 2014).

²⁰⁵⁷ H.B. 226, 430th Gen Assemb., Reg. Sess. (Md. 2013),

http://mgaleg.maryland.gov/2013RS/Chapters_noln/CH_3_hb0226e.pdf.

²⁰⁵⁸ *The Best Defense in 2013: A Review of the Maryland Legislative Session*, CLEAR WATER ACTION, <http://cleanwater.org/feature/best-defense-2013> (Feb. 5, 2014).

²⁰⁵⁹ *Id.*

²⁰⁶⁰ *Id.*

²⁰⁶¹ S.B. 600, 430th Gen Assemb., Reg. Sess. (Md. 2013),

http://mgaleg.maryland.gov/2013RS/Chapters_noln/CH_64_sb0600t.pdf.

On April 16, 2013, an independent market monitor of RGGI confirmed that there continues to be no material concerns regarding the auction process or in the competitiveness of the secondary market for RGGI allowances.²⁰⁶² During 2012, the average auction clearing price was \$1.93 for carbon dioxide allowances.²⁰⁶³

On May 2, 2013 Governor O'Malley approved S.B. 245, an act concerning the *Design Development Documents for Solar Technology in School Buildings*.²⁰⁶⁴ This Bill required the Board of Public Works to adopt regulations requiring design development documents for the construction or major renovation of school buildings to include information relating to the use of solar technology. Moreover, this Bill required the Interagency Committee on School construction to submit a report on the use of solar technologies in specified public school construction and major renovation projects to the Governor and General Assembly.²⁰⁶⁵

Also on May 2, Governor O'Malley signed S.B. 787 which appointed a Thermal Renewable Energy Task Force to investigate options for including thermal energy from woody biomass systems in Maryland's RPS.²⁰⁶⁶

On June 5, 2013, RGGI announced the results of its twentieth quarterly auction in which 38,782,076 allowances were sold at a clearing price of \$3.21 per allowance.²⁰⁶⁷

On July 25, 2013 Governor O'Malley hosted scientists, business leaders, environmental advocates, and community activists at a climate change summit celebrating the release of Maryland's GHG Reduction Act Plan and discussed how Marylanders can take action to help the State reach its goal of reducing GHG emissions 25% by 2020.²⁰⁶⁸ The majority of the Plan's "programs are already in place and will be strengthened with new technologies and forward-thinking policies over the next seven years. These enhancements will result in a 55 million metric ton reduction in GHG emissions and approximately \$1.6 billion in economic benefits. The Plan will support more than 37,000 jobs and positively impact public health."²⁰⁶⁹ The key programs that

²⁰⁶² Press Release, RGGI Inc., 2012 Annual Market Monitor Report: In Fifth Year, RGGI CO₂ Allowance Market Remains Competitive (Apr. 16, 2013), http://www.rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

²⁰⁶³ *Id.*

²⁰⁶⁴ S.B. 245, 430th Gen Assemb., Reg. Sess. (Md. 2013), http://mgaleg.maryland.gov/2013RS/Chapters_noln/CH_216_sb0245t.pdf.

²⁰⁶⁵ *Id.*

²⁰⁶⁶ S.B. 787, 430th Gen Assemb., Reg. Sess. (Md. 2013), http://mgaleg.maryland.gov/2013RS/Chapters_noln/CH_322_sb0797t.pdf.

²⁰⁶⁷ Auction 20, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auctions-1-21?id=229 (Feb. 9, 2014).

²⁰⁶⁸ Press Release, Office of the Governor, Governor Martin O'Malley Hosts Maryland Climate Change Summit, Releases Final Greenhouse Gas Reduction Act Plan (July 25, 2013), <http://www.governor.maryland.gov/blog/?p=8977>.

²⁰⁶⁹ *Id.*

will be strengthened by the Plan are: Maryland's RPS, EmPOWER Maryland, Zero Waste, Maryland Clean Cars Program, and RGGI.²⁰⁷⁰

On September 4, 2013, RGGI announced the results of its twenty-first quarterly auction in which 38,409,043 allowances were sold at a clearing price of \$2.67 per allowance.²⁰⁷¹

Governor O'Malley joined with the FERC Chairman, Standard Solar, Konterra, and Solar Grid Storage on October 15, 2013 to dedicate Maryland's first commercial solar microgrid at a mixed-use development.²⁰⁷² The 402 kilowatt solar micro grid system, which is located at the Konterra headquarters in Laurel, is a grid-interactive energy storage system co-located with a new 1,368 panel photovoltaic canopy array.²⁰⁷³ "The benefits of the system include generation of 20 percent of the annual building power for the Konterra headquarters as well as two electric vehicle charging stations, and LED parking lot lighting. The power is equivalent to the electrical usage of about 57 American homes for one year, or removing 90 passenger vehicles from the roads per year."²⁰⁷⁴

On October 24, 2013 Governor O'Malley signed a MOU with seven other states "to put 3.3 million zero-emission vehicles on the roads in their states within a dozen years."²⁰⁷⁵ In signing the MOU, the governors agreed, among other things, to "harmonize building codes to make it easier to construct new electric car charging stations, led by example by including zero emission vehicles in their public fleet, evaluate and establish, where appropriate, financial and other incentives to promote zero emission vehicle...and develop common standards for roadway signs and charging networks."²⁰⁷⁶

On December 2, 2013, the RGGI states submitted a comment to the EPA for "consideration as EPA develops guidelines for state programs to reduce carbon dioxide

²⁰⁷⁰ MD. DEP'T OF THE ENV'T, MARYLAND'S GREENHOUSE GAS REDUCTION PLAN (Oct. 2013), http://climatechange.maryland.gov/site/assets/files/1392/mde_ggrp_report.pdf.

²⁰⁷¹ *Auction 21*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auctions-1-21?id=233 (Feb. 9, 2014).

²⁰⁷² Press Release, Office of the Governor, Governor O'Malley Celebrates the Completion of the State's First Commercial Solar Microgrid at a Mixed Use Development (Oct. 15, 2013), <http://www.governor.maryland.gov/blog/?p=9336>.

²⁰⁷³ *Id.*

²⁰⁷⁴ *Id.*

²⁰⁷⁵ Press Release, Office of the Governor, Governors Announce Bold Initiative to Put 3.3 M Zero-Emission Vehicles on the Road by 2025 (Oct. 24, 2013), <http://www.governor.maryland.gov/blog/?p=9366>. See also Memorandum of Understanding between Edmund G. Brown Jr., Governor of the State of Cal., Dannel P. Malloy, Governor of the State of Conn., Martin O'Malley, Governor of the State of Md., Deval L. Patrick, Governor of the State of Mass., Andrew M. Cuomo, Governor of the State of N.Y., John Kitzhaber, Governor of the State of Or., Lincoln D. Chafee, Governor of the State of R.I., Peter Shumlin, Governor of the State of Vt. (Oct. 24, 2013), <http://www.governor.maryland.gov/documents/zevprogrammou.pdf>.

²⁰⁷⁶ Press Release, Office of the Governor, Governors Announce Bold Initiative to Put 3.3 M Zero-Emission Vehicles on the Road by 2025 (Oct. 24, 2013), <http://www.governor.maryland.gov/blog/?p=9366>.

(CO₂) emissions from power plants under Clean Air Act section 111(d).”²⁰⁷⁷ In the comment the RGGI states encouraged the EPA to view the RGGI program success as a benchmark for national action and recommended, “EPA’s new rules encourage states to develop market-based GHG emission reduction programs designed to work for their region(s).”²⁰⁷⁸

On December 4, 2013, RGGI announced the results of its twenty-second quarterly auction in which 38,329,378 allowances were sold at a clearing price of \$3.00 per allowance.²⁰⁷⁹

MASSACHUSETTS

2001: Greenhouse Gas Reduction

In August 2001, under the auspices of the New England Governors and Eastern Canadian Premiers, Massachusetts agreed to a voluntary short-term goal of reducing regional greenhouse gas (GHG) emissions to 1990 levels by 2010 and to 10% below 1990 levels by 2020.²⁰⁸⁰ Massachusetts furthered this agreement with their publication of their Climate Change Action Plan Agreement in 2004.²⁰⁸¹

2002: Renewable Portfolio Standard and Climate Change Agreements

In April 2002, Massachusetts finalized regulations for its renewable portfolio standard (RPS), which requires all retail electricity providers in the state to utilize new renewable energy sources for at least 1% of their power supply in 2003 and 4% by 2009.²⁰⁸²

Founded in 2002, the Energy Bucks initiative was formed via a partnership between National Grid, NSTAR Electric & Gas, Unitil, Western Massachusetts Electric Company, Bay State Gas, and the Cape Light Compact in collaboration with the Massachusetts Association for Community Action (MASSCAP) and the Low-Income Energy Affordability Network (LEAN). It focuses on building awareness about the fuel assistance, discount rates, and energy efficiency services available to working families.²⁰⁸³

²⁰⁷⁷ Press Release, Regional Greenhouse Gas Initiative, RGGI States Recommend that EPA Support Flexible Market-Based Carbon Pollution Programs (Dec. 2, 2013), http://www.rggi.org/docs/PressReleases/PR120213_EPAComments_Final.pdf.

²⁰⁷⁸ *Id.*

²⁰⁷⁹ Auction 22, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/auction-22 (Feb. 9, 2014).

²⁰⁸⁰ See NEW ENGLAND GOVERNORS/EASTERN CANADIAN PREMIERS, CLIMATE CHANGE ACTION PLAN 2001 (2001), <http://web.archive.org/web/20030903015117/http://www.negc.org/documents/NEG-ECP%20CCAP.PDF>.

²⁰⁸¹ See *infra* p. 29.

²⁰⁸² MASS. GEN. LAWS ch. 25A, § 11F (2006); 225 MASS. CODE REGS. 14.00 (2006).

²⁰⁸³ Press Release, Mass.gov, With Winter Approaching, Governor Patrick Highlights Cost-Saving Energy Programs (Dec. 10, 2009),

2003: Greenhouse Gas Reduction

In 2003 Massachusetts had previously developed a GHG inventory detailing emissions for the 1990 base year.²⁰⁸⁴

2004: Climate Change Adaptation and Greenhouse Gas Reduction

In 2004, the state released the Massachusetts Climate Protection Plan as a first step to implementing the 2001 New England Governors/Eastern Canadian Premiers, Climate Change Action Plan agreement.²⁰⁸⁵ The Plan contained a comprehensive set of short-term actions that can be undertaken to reduce pollution, protect the climate, and cut energy demand in the state.²⁰⁸⁶

Massachusetts also adopted significant climate change legislation. In 2004, the Massachusetts Department of Environmental Protection (DEP) finalized a regulation that capped carbon dioxide emissions from six fossil fuel power plants at approximately 10% below 1997-1999 levels by 2006-2008.²⁰⁸⁷ In October 2006, Massachusetts promulgated new rules that put into place a GHG emissions credit trading system to help power plants comply with the regulation.²⁰⁸⁸ The state also adopted California's GHG emission standards for motor vehicles.²⁰⁸⁹ California's standards require that tailpipe GHG emissions from new vehicles be reduced by 22% by the 2012 model year and 30% by the 2016 model year.²⁰⁹⁰

2006: Greenhouse Gas Reduction

In 2006, Massachusetts collaborated with Northeast States for Coordinated Air Use Management (NESCAUM) to develop a voluntary GHG emission registry.²⁰⁹¹

2007: Market-Based Solutions, Climate Change Agreements, and Greenhouse Gas Reduction

The state has also been an active participant in the Regional Greenhouse Gas

http://web.archive.org/web/20100106001611/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=121009_energy_cost_savings&csid=Agov3.

²⁰⁸⁴ *Massachusetts Greenhouse Gas Emissions and Sinks Inventory: Summary*, U.S. ENVTL. PROT. AGENCY, [http://web.archive.org/web/20080101201517/http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/JSIN5DQSY8/\\$file/MASummary.PDF](http://web.archive.org/web/20080101201517/http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/JSIN5DQSY8/$file/MASummary.PDF) (Nov. 9, 2013).

²⁰⁸⁵ THE COMMONWEALTH OF MASS. EXEC. DEP'T, MASS. CLIMATE PROT. PLAN (Spring 2004), <http://web.archive.org/web/20060801154344/http://www.mass.gov/Eocd/docs/pdfs/maclimateprotectionplan.pdf>.

²⁰⁸⁶ *Id.* at 5.

²⁰⁸⁷ 310 MASS. CODE REGS. 7.29 (2006).

²⁰⁸⁸ *Id.*; 310 MASS. CODE REGS. 7.00 Appendix B (2006).

²⁰⁸⁹ *Id.* 310 MASS. CODE REGS. 7.40 (2006).

²⁰⁹⁰ CAL. CODE REGS. tit. 13, § 1961.1 (2005).

²⁰⁹¹ *Climate and Energy*, NESCAUM, <http://www.nescaum.org/focus-areas/climate-and-energy> (Nov. 7, 2013).

Initiative (RGGI).²⁰⁹² While Governor Romney declined to participate in RGGI, Governor Patrick signed the RGGI agreement on January 18, 2007.²⁰⁹³ As a member of RGGI, Massachusetts agreed to cap emissions at current levels between 2009 and 2015 and to reduce current levels by 10% by 2019. In an effort to comply with RGGI, the Massachusetts Division of Energy Resources, together with the Massachusetts DEP issued draft regulations on August 10, 2007 establishing a carbon dioxide emissions cap-and-trade system and creating rules for carbon dioxide allowance auctions.²⁰⁹⁴

In May 2007, Massachusetts and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” The states viewed this as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”²⁰⁹⁵ Additionally, on October 29, 2007, Massachusetts joined a coalition with nine other states, New Zealand, Norway, nine European Union countries, the European Commission, and two Canadian provinces to form the International Carbon Action Partnership (ICAP) in order to combat global warming.²⁰⁹⁶ ICAP provides a forum for governments to share information regarding cap-and-trade systems and will work to ensure that market programs are compatible.²⁰⁹⁷ In addition, ICAP promotes low-carbon products and services, innovations, and cost effective reductions.²⁰⁹⁸

In October 2007, the state’s Executive Office of Energy and Environmental Affairs issued its Greenhouse Gas Emissions Policy and Protocol, which applied to certain projects being reviewed by the Massachusetts Environmental Policy Act (MEPA) Office.²⁰⁹⁹ This policy called for the quantification of a project’s GHG emissions; identification of measures to avoid, minimize, and mitigate a project’s emissions; and the quantification of emission and energy savings for a project’s proposed mitigation.²¹⁰⁰ It also required that privately funded buildings driving 3,000 vehicles or more per day report and mitigate GHG emissions.²¹⁰¹

²⁰⁹² REGIONAL GREENHOUSE GAS INITIATIVE, <http://www.rggi.org/> (Oct. 7, 2008).

²⁰⁹³ *Regional Greenhouse Gas Initiative (RGGI)*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/regional-climate-initiatives/rggi> (Nov. 9, 2013).

²⁰⁹⁴ *Notice of Public Hearing*, THE COMMONWEALTH OF MASS. DEP’T OF ENVTL. PROT. DIV. OF ENERGY RES., http://web.archive.org/web/20080724134316/http://www.mass.gov/doer/rggi/rggi-pub_hearing_notice_070807.pdf (Nov. 7, 2013).

²⁰⁹⁵ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20080309011530/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

²⁰⁹⁶ Press Release, Int’l Carbon Action P’ship, Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007), <http://www.icapcarbonaction.com/pr20071029.htm>.

²⁰⁹⁷ *Id.*

²⁰⁹⁸ *Id.*

²⁰⁹⁹ EXEC. OFFICE OF ENERGY AND ENVTL. AFFAIRS, REVISED MEPA GREENHOUSE GAS EMISSIONS POLICY AND PROTOCOL (2010), <http://web.archive.org/web/20130317052842/http://www.mass.gov/eea/docs/mepa/ghg-policy-final.pdf>.

²¹⁰⁰ *Id.*

²¹⁰¹ *Id.*

2008: Green Building, Renewable Energy, Renewable Portfolio Standards, Greenhouse Gas Reduction, Climate Change Memorandum of Understanding, Green Jobs, Market-Based Solutions, and Transportation/Fuels

On March 12, 2008, Governor Patrick announced the formation of a task force of industry professionals to advise the state on raising “green building” standards in order to lead public and private construction toward a goal of Zero Net Energy buildings by 2030.²¹⁰² The task force extended the challenge to Massachusetts’ design and construction professionals with the goal of making Zero Net Energy buildings the construction industry standard in the state and boosting jobs in the state’s burgeoning clean energy and green building sectors.²¹⁰³

In May 2008 Massachusetts passed the Oceans Act which requires the creation of a comprehensive Ocean Management Plan that contains standards to guide future development and ensure a system of stewardship for Massachusetts’s ocean waters.²¹⁰⁴ The Ocean Management Plan, published in December of 2009, provides potential locations for off-shore wind turbines.²¹⁰⁵

Governor Patrick signed the *Green Communities Act* on July 2, 2008.²¹⁰⁶ This comprehensive plan provided numerous strategies to increase alternative energy use and energy efficient measures in the state. It mandated that the RPS increase by 1% per year after 2009, that fossil fuel use in buildings be cut to 10% below 2007 levels by 2020, and that half of state government vehicles be comprised of hybrid or alternative use vehicles by 2018. It also required that 25% of the state’s electricity load be met by demand side resources and that 10% of the state’s total energy consumption be reduced by 10% by 2017. Finally, the Act authorized the auction of all allowances under RGGI.²¹⁰⁷

Governor Patrick also signed the *Clean Energy Biofuels Act* in July 2008.²¹⁰⁸ This Act granted gas tax exemptions for certain cellulosic biofuels that reduced lifecycle GHG emission by 50% when compared to fossil fuels. Additionally, the Act required these biofuels comprise at least 2% of diesel fuel and home heating oil sold in the state by 2010 with an increase to 5% by 2013.²¹⁰⁹

On July 31, 2008, Massachusetts bolstered the emissions reductions mandated in the Massachusetts Climate Protection Plan by passing the Global Warming Solutions

²¹⁰² Press Release, Mass.gov, Governor Patrick Calls on Industry to Meet Goal of Zero Net Energy Buildings (Mar. 12, 2008), <http://archives.lib.state.ma.us/bitstream/handle/2452/124973/ocn795183245-2008-03-12.PDF?sequence=1>.

²¹⁰³ *Id.*

²¹⁰⁴ MASS. GEN. LAWS ch. 114, § 2 (2008), <https://malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter114>.

²¹⁰⁵ ENERGY AND ENVTL. AFFAIRS, MASS. OCEANS MGMT. PLAN (2009), <http://www.env.state.ma.us/eea/mop/final-v1/v1-complete.pdf>.

²¹⁰⁶ S. 2768, 2008 Leg., 185th Sess. (Mass. 2008).

²¹⁰⁷ *Id.*

²¹⁰⁸ 2008 Mass. Acts 4951, <http://www.mass.gov/legis/laws/seslaw08/sl080206.htm>.

²¹⁰⁹ *Id.*

Act.²¹¹⁰ The Act's ultimate goal is to reduce GHG emissions to 80% below 1990 levels by 2050. It also required the Secretary of Energy and Environmental Affairs to set interim goals for reductions at 10 to 25% below 1990 levels by 2020 and to establish reduction targets for the years 2030 and 2040.²¹¹¹

In August 2008, Massachusetts passed the *Green Jobs Act*, allocating over \$50 million to the creation of jobs and revenue in the state's clean energy industry.²¹¹²

In September 2008, the U.S. Department of Energy (DOE) awarded Massachusetts a \$500,000 grant to implement an energy-efficient model state code for building construction and renovation.²¹¹³

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.²¹¹⁴ Each of these allowances sold at a clearing price of \$3.07, raising a total of \$38,575,783.²¹¹⁵ These proceeds were used to fund renewable energy and energy efficient technologies and programs in the states that offered allowances.²¹¹⁶ The second auction took place on December 17, 2008 and each of the ten states participated.²¹¹⁷ All of the available 31,505,898 allowances were sold, 3.5 times lower than the demand of 108,709,000 allowances.²¹¹⁸ The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.²¹¹⁹

Further expanding Massachusetts' clean energy economy, Governor Patrick announced on November 19, 2008 that Lilliputian, a clean technology company located in Wilmington, was expanding its factory, creating one hundred new jobs.²¹²⁰ The factory manufactured mobile device power systems with ten times the battery life of traditional batteries using Silicon Power CellTM technology.²¹²¹ The next day, Patrick

²¹¹⁰ 2008 Mass. Acts 2540, <http://www.mass.gov/legis/laws/seslaw08/sl080298.htm>.

²¹¹¹ *Id.*

²¹¹² 2008 Mass. Acts 5019, <http://www.mass.gov/legis/laws/seslaw08/sl080307.htm>.

²¹¹³ Press Release, U.S. Dep't of Energy, DOE Announces \$6.6 Million in Competitive Grant Selections for Innovative State Efficiency, Renewable Initiative (Sept. 8, 2008), <http://web.archive.org/web/20080916023724/http://energy.gov/6515.htm>.

²¹¹⁴ News Release, RGGI Inc., RGGI States' First CO₂ Auction Off to a Strong Start (Sept. 29, 2008), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

²¹¹⁵ *Id.* at 1.

²¹¹⁶ *Id.*

²¹¹⁷ *Auction 2 State Proceeds and Analysis*, RGGI Inc., http://www.rggi.org/docs/Auction_2_State_Proceeds_and_Allowances.pdf (Nov. 8, 2013).

²¹¹⁸ *Auction 2, Regional Greenhouse Gas Initiative*, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/116 (Nov. 8, 2013).

²¹¹⁹ *Id.*

²¹²⁰ Press Release, Mass.gov, Governor Patrick Announces Expansion of Portable Power Firm (Nov. 19, 2008), http://web.archive.org/web/20090114194159/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=081119_Portable_Power_Firm&csid=Agov3.

²¹²¹ *Id.*

announced two new green building objectives.²¹²² Specifically, he announced that new malls and “big box” retail stores should be partially powered by solar energy by 2010. He also announced a new local building code option that, if adopted, would require 30% higher energy efficiency than what was currently required by the state building code.²¹²³

Rounding out this week of ambitious clean energy policy announcements, Governor Patrick challenged Massachusetts businesses to reduce their GHG emissions by 10% by 2011.²¹²⁴ A number of businesses accepted this challenge. Patrick also planned to target municipalities via the Green Communities Act incentive and technological assistance programs.²¹²⁵ Later, he planned to challenge the residential sector via a formal agreement between various state organizations to reduced GHG emissions. The challenge aimed to increase the competitiveness of green energy technologies in the state.²¹²⁶

To most effectively use the money from the federal stimulus package, Governor Patrick asked Lieutenant Governor Murray and his cabinet formed Project Delivery Task Forces in December 2008.²¹²⁷ One task force was devoted to promoting clean energy and energy efficiency. That same week, Massachusetts received \$14.8 million from the December 17, 2008 RGGI auction.²¹²⁸ Patrick announced that \$5 million of that money would be used to create energy efficiency jobs, which would cut costs for utility company customers.²¹²⁹

On December 31, 2008, RGGI participants and Pennsylvania (an observer) signed a letter of intent to reduce carbon emissions from the transportation sector.²¹³⁰

²¹²² Press Release, Mass.gov, Governor Patrick Set Green Building Goals (Nov. 20, 2008), http://web.archive.org/web/20090206225501/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=081120_green_building_goals&csid=Agov3.

²¹²³ *Id.*

²¹²⁴ Press Release, Mass.gov, Governor Patrick Issues Clean Energy Challenge to Business (Nov. 21, 2008), <http://www.mass.gov/governor/pressoffice/pressreleases/2008/clean-energy-challenge.html>.

²¹²⁵ *Id.*

²¹²⁶ *Id.*

²¹²⁷ Press Release, Mass.gov, Governor Patrick Unveils Mobilization Plan to Prepare for Federal Economic Stimulus Funds (Dec. 17, 2008), http://web.archive.org/web/20090206225524/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=081217_economic_stimulus&csid=Agov3.

²¹²⁸ Press Release, Mass.gov, Greenhouse Gas Auction Yields \$14.8 Million for Energy Efficiency Jobs, Investments (Dec. 19, 2008), http://web.archive.org/web/20090114194225/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=081219_rggi&csid=Agov3.

²¹²⁹ *Id.*

²¹³⁰ Letter from Gina McCarthy, Comm’r Conn. Dep’t of Env’tl. Prot., John A. Hughes, Sec’y Del. Dep’t of Natural Res. and Env’tl. Control, David P. Littell, Comm’r Me. Dep’t of Env’tl. Prot., Shari T. Wilson, Sec’y Md. Dep’t of the Env’t, Laurie Burt, Comm’r Mass. Dep’t of Env’tl. Prot., Philip Guidice, Comm’r Mass. Dep’t of Energy Res., Pete Grannis, Comm’r N.Y. Dep’t Env’tl. Conservation, Bob Callendar, Vice President for Programs N.Y. State Research and Dev. Auth., Thomas S. Burack, Comm’r N.H. Dep’t of Env’tl. Serv., Mark N. Mauriello, Acting Comm’r N.J. Dep’t of Env’tl. Prot., John Hanger, Acting Sec’y Pa. Dep’t of Env’tl. Prot., W. Michael Sullivan, Dir. R.I. Dep’t of Env’tl. Mgmt., Laura Q. Pelosi, Comm’r Vt. Dep’t of Env’tl. Conservation (Dec. 31, 2008), http://web.archive.org/web/20110811022823/http://www.mass.gov/Eoeea/docs/pr_lcfs_attach.pdf.

Specifically, the letter expressed their intent to analyze and develop a Low Carbon Fuel Standard (LCFS), which requires reductions in the average lifecycle GHG per unit of useful energy in motor vehicles for the Northeast/Mid-Atlantic region.²¹³¹

The Department of Energy Resources (DOER) released regulations to implement the RPS in the Green Communities Act on December 31, 2008.²¹³² Specifically, the DOER issued three regulations. The first regulation provides an RPS for Retail Electricity Suppliers and for Owners and Operators of RPS Class I Renewable Generation Units, requiring that at least 4% of their annual electricity sales come from renewable sources in 2009, increasing this percentage to 15% by 2020, and increasing 1% annually thereafter.²¹³³ The second regulation applies to Retail Electricity Suppliers and the Owners or Operators of RPS Class II Generation Units and requires that at least 3.5% of annual electricity sales comes from renewable sources with RPS Class II Renewable Generation Attributes.²¹³⁴ The third regulation applies to Retail Electricity Suppliers and Owners or Operators of Alternative Portfolio Standard (APS) Alternative Generation Units, which use gasification, combined heat and power, a flywheel storage unit, paper-derived fuel, or efficient steam technology.²¹³⁵ The Act required suppliers to derive at least 0.75% of their annual electricity sales from these technologies for the year 2009, increasing to an APS of 5% in 2020, and then increasing the APS by 0.25% annually thereafter.²¹³⁶

2009: Renewable Energy, Cap-&-Trade, Climate Change Agreements, Energy Efficiency, Green Technology, Market-Based Solutions, American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

On January 13, 2009, Governor Patrick set a goal of powering 800,000 homes with wind power by 2020.²¹³⁷ This was prompted by an increasing interest in wind turbines throughout local communities and by the potential for capturing wind energy off of Massachusetts' coast. Patrick directed Ian Bowles of Energy and Environmental Affairs to meet this goal by applying the incentives and mandates created by the clean

²¹³¹ *Id.* at 1.

²¹³² *Emergency Regulations for RPS Class I, RPS Class II, and APS*, ENERGY AND ENVTL. AFFAIRS, http://web.archive.org/web/20090114212331/http://www.mass.gov/?pageID=eoeaterminal&L=5&L0=Home&L1=Energy%2c+Utilities+%26+Clean+Technologies&L2=Renewable+Energy&L3=Renewable+Portfolio+Standard&L4=Green+Communities+Act&sid=Eoeea&b=terminalcontent&f=doer_rps_emergency-regs&csid=Eoeea (Nov. 8, 2013).

²¹³³ 225 Mass. Code Regs. 14.00 (2008), <http://web.archive.org/web/20090207175142/http://www.mass.gov/Eoea/docs/doer/rps/rps-1-225-cmr-14.pdf>.

²¹³⁴ 225 Mass. Code Regs. 15.00 (2008), <http://web.archive.org/web/20100110195233/http://www.mass.gov/Eoea/docs/doer/rps/rps-2-225-cmr-15.pdf>.

²¹³⁵ 225 Mass. Code Regs. 16.00 (2008), <http://web.archive.org/web/20100118012201/http://www.mass.gov/Eoea/docs/doer/rps/aps-225-cmr-16.pdf>.

²¹³⁶ *Id.* at 11.

²¹³⁷ Press Release, Mass.gov, Governor Patrick Sets New Goals for Wind Power (Jan. 13, 2009), http://web.archive.org/web/20100206172308/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=090113_Goals_Wind_Power&csid=Agov3.

energy legislation from the previous year.²¹³⁸ Specifically, the Green Communities Act required utility companies to enter into long-term contracts with renewable energy generators.

On January 29, 2009, Governor Patrick and eleven other governors signed a letter to President Obama urging him to form a strong state-federal partnership in initiating a national climate change program.²¹³⁹ This letter was predicated upon the President's letter to the Governors' Global Climate Summit in which he offered the governors a partnership with the White House in addressing climate change issues. The letter writers believed that their states played a leading role in confronting these issues and stated, "It is crucial that we build on our states' momentum."²¹⁴⁰ The letter also contained suggestions for how a national climate change program should be implemented. One of these suggestions was for the national government to recognize the private investments that had been made in cap-and-trade programs and to preserve the clean energy plans funded by the proceeds from these programs.²¹⁴¹

A study for the potential of renewable energy development of state-owned lands was published on February 20, 2009.²¹⁴² Ultimately, the study found that planned and potential renewable energy in Massachusetts could generate "over 95 MW comprised of wind, PV, hydro, and biomass projects that could generate more than 180,000 MWh per year, or the equivalent electricity used by 16,000 households in a year."²¹⁴³

On March 12, 2009, the DOE announced that Massachusetts was eligible for \$54,911,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).²¹⁴⁴

The third RGGI auction was held on March 18, 2009.²¹⁴⁵ The auction sold 31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse of future market prices for RGGI allowances.²¹⁴⁶

²¹³⁸ *Id.*

²¹³⁹ Letter from Arnold Schwarzenegger, Governor of Cal., M. Jodi Rell, Governor of Conn., Charlie Crist, Governor of Fla., Kathleen Sebelius, Governor of Kan., Martin O'Malley, Governor of Md., Deval Patrick, Governor of Mass., John S. Corzine, Governor of N.J., Bill Richardson, Governor of N.M., David Paterson, Governor of N.Y., Theodore R. Kulongoski, Governor of Or., Christine O. Gregoire, Governor of Wash., Jim Doyle, Governor of Wis., to Barack Obama, President of the United States of America (Jan. 29, 2009), <http://web.archive.org/web/20090214185812/http://www.wisgov.state.wi.us/docview.asp?docid=15821>.

²¹⁴⁰ *Id.* at 1.

²¹⁴¹ *Id.* at 2.

²¹⁴² MASS. EXEC. OFFICE OF ENERGY AND ENVTL. AFFAIRS MASS. CLEAN ENERGY CTR., COMMONWEALTH OF MASS. RENEWABLE ENERGY AND ENERGY EFFICIENCY POTENTIAL AT STATE-OWNED FACILITIES AND LANDS (2009), <http://www.mass.gov/eea/docs/eea/press/publications/022409-renew-potential-study.pdf>.

²¹⁴³ *Id.*

²¹⁴⁴ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

²¹⁴⁵ Press Release, RGGI Inc., States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

²¹⁴⁶ *Id.*

In another effort to bolster the clean energy economy, Governor Patrick announced that Massachusetts' communities would receive a total of \$42 million in energy grants.²¹⁴⁷ Forty-two communities would receive grants from the ARRA fund, with individual grants ranging from \$149,000 to \$6.5 million. Patrick stated that these grants would bolster local economies through job-creation and energy savings.²¹⁴⁸ That same week he announced his support for the federal cap-and-trade Waxman-Markey Bill.²¹⁴⁹

On Earth Day 2009, Governor Patrick announced the launch of the Green Communities Program.²¹⁵⁰ The Program is an effort to provide information and technical assistance to local communities in order to most efficiently use ARRA funds for energy investments. It was part of Patrick's Massachusetts Recovery Plan.²¹⁵¹

In May 2009, seeking to protect their state's wind technology, Governor Patrick and other governors wrote a letter to the U.S. Congress communicating their opposition to proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.²¹⁵² Wind technology in Massachusetts was being developed at the Wind Technology Testing Center, which received \$25 million in ARRA funding.²¹⁵³ Patrick then announced California's auto emission fuel standard with President Obama and Governor Schwarzenegger of California and Governor Granholm of Michigan.²¹⁵⁴ Patrick also signed an agreement with other governors to support

²¹⁴⁷ Press Release, Mass.gov, Communities Will Receive \$42M in Energy Grants (Mar. 26 2009), http://web.archive.org/web/20100107073803/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=090326_energy_grants&csid=Agov3.

²¹⁴⁸ *Id.*

²¹⁴⁹ Press Release, Mass.gov, Governor Patrick's Statement on National Climate Change Bill (Mar. 31, 2009), http://web.archive.org/web/20100107100216/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=090331_national_climate_change_bill&csid=Agov3.

²¹⁵⁰ Press Release, Mass.gov, Governor Patrick Joins Legislative Leaders to Celebrate Launch of Green Communities Program (Apr. 22, 2009), http://web.archive.org/web/20100102094021/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=090422green_communities&csid=Agov3.

²¹⁵¹ *Id.*

²¹⁵² Letter from Deval Patrick, Governor of Mass., Jack Markell, Governor of Del., Martin O'Malley, Governor of Md., Jon S. Corzine, Governor of N.J., Donald L. Carcieri, Governor of R.I., John Baldacci, Governor of Me., John H. Lynch, Governor of N.H., David A. Paterson, Governor of N.Y., James H. Douglas, Governor of Vt., Timothy M. Kaine, Governor of Va. to Harry Reid, Majority Leader, U.S. Senate, Mitch McConnell, Minority Leader, U.S. Senate, Nancy Pelosi, Speaker, U.S. House of Representatives, John Boehner, Minority Leader, U.S. House of Representatives (May 4, 2009), http://web.archive.org/web/20090507010001/http://www.gov.ri.gov/documents/East_Coast_Govs_Transmission_Ltr.pdf.

²¹⁵³ *Daily Update 05/12: Governor Announces Award, Hundreds of New Jobs at Wind Technology Testing Center*, MASS.GOV (May 12, 2009), http://web.archive.org/web/20090514183713/http://www.mass.gov/?pageID=gov3modulechunk&L=1&L0=Home&sid=Agov3&b=terminalcontent&f=dailyupdate_dailyupdate051209&csid=Agov3.

²¹⁵⁴ *Daily Update 05/19: Governor in Washington, DC to Announce Fuels Standards and Atlanta, GA for BIO*, MASS.GOV (May 19, 2009), http://web.archive.org/web/20100107094819/http://www.mass.gov/?pageID=gov3modulechunk&L=1&L0=Home&sid=Agov3&b=terminalcontent&f=dailyupdate_dailyupdate051909&csid=Agov3.

federal climate change legislation.²¹⁵⁵ The agreement contained two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.²¹⁵⁶

To increase Massachusetts' clean technology industry, Governor Patrick announced the renovation of an "old" building to create a manufacturing facility for state-of-the-art automobile batteries in June 2009.²¹⁵⁷ He also met with Vice President Biden, Transportation Secretary LaHood, and others to discuss bringing high-speed rail to the state.²¹⁵⁸

The fourth RGGI auction was held on June 17, 2009 where prices fell at the fourth auction to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.²¹⁵⁹

On June 23, 2009, representatives from RGGI, the Western Climate Initiative (WCI), and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking these regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.²¹⁶⁰

In order to meet the Global Warming Solutions Act's goal of reducing emissions 25% below 1990 levels by 2020, the Massachusetts Department of Environmental Protection determined the 1990 baseline to be 94 million metric tons.²¹⁶¹ In an effort to achieve this goal, Governor Patrick asked the DOE for \$100 million in ARRA funds to go towards clean and energy efficient technologies in August 2009.²¹⁶² To encourage smart growth communities, Patrick released the South Coast Rail Economic

²¹⁵⁵ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20100116190854/http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

²¹⁵⁶ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION, (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

²¹⁵⁷ *Daily Update 6/2: Commitment to Clean Energy Reform*, MASS.GOV (June 2, 2009), http://web.archive.org/web/20100107093420/http://www.mass.gov/?pageID=gov3modulechunk&L=1&L0=Home&sid=Agov3&b=terminalcontent&f=dailyupdate_dailyupdate060209&csid=Agov3.

²¹⁵⁸ *Daily Update 6/4: Commitment to High Speed Rail*, MASS.GOV (June 4, 2009), http://web.archive.org/web/20100102092608/http://www.mass.gov/?pageID=gov3modulechunk&L=1&L0=Home&sid=Agov3&b=terminalcontent&f=dailyupdate_dailyupdate060409&csid=Agov3.

²¹⁵⁹ *Auction 4*, Regional Greenhouse Gas Initiative, Auction Results, http://www.rggi.org/market/co2_auctions/results/auctions-1-20?id=114 (Nov. 8, 2013), <http://www.rggi.org/co2-auctions/results>.

²¹⁶⁰ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

²¹⁶¹ COMMONWEALTH OF MASS., EXEC. OFFICE OF ENERGY & ENVTL. AFFAIRS, DEP'T OF ENVTL. PROT., STATEWIDE GREENHOUSE GAS EMISSIONS LEVELS: 1990 BASELINE AND 2020 BUSINESS AS USUAL PROJECTIONS (2009), http://web.archive.org/web/20100103011553/http://www.mass.gov/dep/air/climate/1990_2020_final.pdf.

²¹⁶² *Daily Update 8/4: Vision for Regional Rail*, MASS.GOV (Aug. 4, 2009), http://web.archive.org/web/20100102092517/http://www.mass.gov/?pageID=gov3modulechunk&L=1&L0=Home&sid=Agov3&b=terminalcontent&f=dailyupdate_dailyupdate080409&csid=Agov3.

Development and Land Use Corridor Plan.²¹⁶³ That same month, he also showed his support for alternative energy by attending the installation of two large wind turbines at the Massachusetts Water Resource Authority's Deer Island wastewater treatment facility.²¹⁶⁴ He also visited A123 Systems in Watertown, which produced lithium ion batteries with the potential to bring energy produced from renewable sources to vehicles and buildings.²¹⁶⁵

The fifth RGGI action was held on September 9, 2009.²¹⁶⁶ The auction sold 28,408,945 allowances of the 2009 vintage at a clearing price of \$2.19 per allowance and 2,172,540 allowances of the 2012 vintage at a clearing price of \$1.87 per allowance.²¹⁶⁷ The sixth RGGI auction was held on December 2, 2009. The auction sold 28,591,698 allowances of the 2009 vintage at a clearing price of \$2.05 per allowance and 1,599,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.²¹⁶⁸

Governor Patrick announced in December 2009 that National Grid and Cape Wind had agreed to enter into negotiations for a long-term contract under which the utility would purchase the electricity generated by Cape Wind, which is a critical requirement for financing the proposed wind farm in Nantucket Sound.²¹⁶⁹ On December 3, 2009 National Grid filed a memorandum of understanding (MOU) with Cape Wind with the state Department of Public Utilities (DPU) laying out the rationale for such a contract, as well as the methods and timelines.²¹⁷⁰ After DPU approval, National Grid and Cape Wind engaged in negotiations to enter into a mutually agreeable long-term contract and submitted any final pact to DPU for review and approval.²¹⁷¹

By late 2009, Massachusetts had received \$122 million in weatherization funds through ARRA. Over the next three years, the funds were used to improve energy

²¹⁶³ *Daily Update 8/5: Commitment to South Coast Rail*, MASS.GOV (Aug. 5, 2009), http://web.archive.org/web/20100102093052/http://www.mass.gov/?pageID=gov3modulechunk&L=1&L0=Home&sid=Agov3&b=terminalcontent&f=dailyupdate_dailyupdate080509&csid=Agov3.

²¹⁶⁴ *Daily Update 8/12: Commitment to Clean Energy*, MASS.GOV (Aug. 12, 2009), http://web.archive.org/web/20100102092942/http://www.mass.gov/?pageID=gov3modulechunk&L=1&L0=Home&sid=Agov3&b=terminalcontent&f=dailyupdate_dailyupdate081209&csid=Agov3.

²¹⁶⁵ *Daily Update 10/2: Clean Energy Leader*, MASS.GOV (Oct. 2, 2009), http://web.archive.org/web/20100102093447/http://www.mass.gov/?pageID=gov3modulechunk&L=1&L0=Home&sid=Agov3&b=terminalcontent&f=dailyupdate_dailyupdate100209&csid=Agov3.

²¹⁶⁶ *Auction 5*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/113 (Oct. 14, 2013).

²¹⁶⁷ *Id.*

²¹⁶⁸ *Auction 6*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/112 (Nov. 14, 2103).

²¹⁶⁹ Press Release, Mass.gov, Governor Patrick Announces that Utility Will Negotiate to Buy Electricity Generated by Cape Wind (Dec. 2, 2009), http://web.archive.org/web/20100102045853/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=120109_electricity_capewind&csid=Agov3.

²¹⁷⁰ Memorandum of Understanding between National Grid, Mass. Dep't of Energy Res., and Cape Wind, LLC (Dec., 3, 2009), <http://www.env.state.ma.us/dpu/docs/electric/09-138/12709ngpet.pdf>.

²¹⁷¹ Press Release, Mass.gov, Governor Patrick Announces that Utility Will Negotiate to Buy Electricity Generated by Cape Wind (Dec. 2, 2009), <http://www.mass.gov/governor/pressoffice/pressreleases/2009/utility-will-negotiate-to-buy-electricity.html>.

efficiency in nearly 17,000 low-income homes.²¹⁷² The Department of Housing and Community Development (DHCD) allocated approximately \$17 million of these funds to weatherization agencies, averaging \$4,500 per home weatherized, which includes air sealing, attic and sidewall insulation, repairs, and window replacements.²¹⁷³

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.²¹⁷⁴ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.²¹⁷⁵ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities."²¹⁷⁶ North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.²¹⁷⁷

2010: Green Jobs, Greenhouse Gas Reduction, Climate Change Adaptation, Climate Change Agreements, Energy Efficiency, Green Technology, Market-Based Solutions, and Renewable Energy

In January 2010, as part of the Massachusetts Recovery Plan, the state set aside nearly \$6 million in federal recovery funds for investment in green job training and support services for unemployed and underemployed workers throughout the Commonwealth.²¹⁷⁸ Governor Patrick expected that the grant from the U.S. Department of Labor, funded by ARRA, would help to train an estimated 1,400 unemployed, underemployed, and incumbent workers in energy efficient building; construction and retrofit; renewable electric power; biofuels; energy efficiency assessment; sustainable manufacturing; environmental protection; and green construction.²¹⁷⁹

Also in January 2010, Governor Patrick revealed a series of cost-cutting energy management solutions to be included in his budget recommendation, including an innovative bulk energy purchasing system designed to consolidate fiscal management,

²¹⁷² Press Release, Mass.gov, With Winter Approaching, Governor Patrick Highlights Cost-Saving Energy Programs (Dec. 10, 2009), http://web.archive.org/web/20100102045837/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=121009_energy_cost_savings&csid=Agov3.

²¹⁷³ *Id.*

²¹⁷⁴ See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

²¹⁷⁵ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

²¹⁷⁶ NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

²¹⁷⁷ See *id.*

²¹⁷⁸ Press Release, Mass.gov, Patrick-Murray Administration Announces \$6 Million Award from U.S. Department of Labor to Invest in Green Jobs (Jan. 21, 2010), http://web.archive.org/web/20100206045023/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=012110_Green_jobs&csid=Agov3.

²¹⁷⁹ *Id.*

reduce waste, and cut the energy bills of state agencies, quasi-public authorities, state colleges and universities, and municipalities.²¹⁸⁰ In the first year alone, he expected the initiative to reduce executive branch energy spending by 5%, or approximately \$6 million. Patrick proposed creating Commonwealth Energy Solutions (CES), a comprehensive energy procurement and management system open to all public entities, including cities and towns to manage energy related functions.²¹⁸¹ The administration also planned to use \$67 million of ARRA funding for energy efficiency improvements and renewable energy installations in drinking water and wastewater treatment facilities. In addition, ARRA funds would be used to deploy an advanced energy management system for state agencies, which will allow real-time monitoring of energy use and trends.²¹⁸²

Under the federal Low Income Home Energy Assistance Program (LIHEAP) emergency fund release, the state was able to serve an estimated 200,000 low-income eligible families and increase their maximum benefit levels of \$1,240 for those who heat their homes with deliverable fuel such as oil, kerosene, propane, wood, and coal. By February 2010, utility households could receive a maximum of \$1,055, increased from \$985.²¹⁸³

In February 2010, contracts to install 4.1 megawatts (MW) of solar energy at twelve public water and wastewater treatment facilities were approved, enabling facilities to save about \$650,000 per year by cutting conventional energy use by approximately 4.5 million kilowatt hours annually, roughly equal to the energy needed to power 600 households per year.²¹⁸⁴ Worth approximately \$20 million in ARRA funding, the projects are expected to be completed between June 2010 and July 2011. This program furthers Governor Patrick's Administration's Massachusetts Solar Stimulus plan, by using ARRA funding to expand solar power capacity by up to 13 MW.²¹⁸⁵ Additionally, Patrick announced that the administration planned to install solar photovoltaics at a variety of public facilities including colleges, housing projects, and transportation facilities. He predicted that Massachusetts would see a nearly 20-fold increase in solar installations, bringing the state to approximately 63 MW by the end of 2010.²¹⁸⁶

²¹⁸⁰ Press Release, Mass.gov, Governor Patrick Calls for Innovative, Cost-Saving Energy Management Program for Government Agencies (Jan. 25, 2010), http://web.archive.org/web/20100203015242/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=012510_energymanagement&csid=Agov3.

²¹⁸¹ *Id.*

²¹⁸² *Id.*

²¹⁸³ Press Release, Mass.gov, Governor Patrick Announces Higher Benefit Levels for Low-Income Fuel Assistance (Feb. 1, 2010), http://web.archive.org/web/20100202205036/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=020110_LIHEAP&csid=Agov3.

²¹⁸⁴ Press Release, Mass.gov, Patrick-Murray Administration Announces Award of Largest-Ever State Contract for the Installation of Solar Power (Feb. 5, 2010), http://web.archive.org/web/20100206044905/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=020510_solar&csid=Agov3.

²¹⁸⁵ *Id.*

²¹⁸⁶ *Id.*

Governor Patrick announced an award of over \$13 million in federal stimulus funds to help 111 communities across Massachusetts invest in clean energy and energy efficiency in February 2010. He said that 97 cities and towns would receive nearly \$12.2 million in Energy Efficiency and Conservation Block Grants (EECBG) from the DOE, while 35 communities – including some of the 97 receiving grants – would share \$825,000 in technical consulting services to provide local officials with the expertise necessary to undertake a variety of energy projects.²¹⁸⁷ Capped at \$150,000 each, the grants would help municipalities pay for projects at municipal buildings and schools, including solar photovoltaic and solar thermal installations; thermal efficiency measures in oil or propane-heated buildings, such as new high efficiency boilers and furnaces or improved efficiency in existing ones, replacement or improvement of heat delivery systems, and increased insulation or window replacement; and reduction of the total cost of efficiency measures identified by energy performance contractors.²¹⁸⁸

DOER also announced that it would use a portion of EECBG funding to make clean energy technical assistance services available to all 351 Massachusetts cities and towns, regardless of population size, including a MassEnergyInsight energy information reporting system.²¹⁸⁹ This provided comprehensive community-by-community energy usage and cost information, allowing municipalities to benchmark energy consumption and identify priority targets for efficiency investments and to inventory, track, and report municipal emissions reductions.²¹⁹⁰

The seventh RGGI auction was held on March 10, 2010.²¹⁹¹ The auction sold 40,612,408 allowances of the 2010 vintage at a clearing price of \$2.07 per allowance and 2,091,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.²¹⁹²

In April 2010, under the Massachusetts Energy Solutions initiative, North Shore Community College (NSCC) started a comprehensive energy efficiency project using state-backed general obligation bonds to finance projects that pay off the debt.²¹⁹³ This would be the first zero net energy facility in the state's building portfolio. It included a full lighting retrofit, an energy management system, new chillers, variable frequency drive motors, water conservation measures, insulation, new rooftop heating/cooling units, and conversion of heating from electric to natural gas.²¹⁹⁴ Worth \$3.6 million, the

²¹⁸⁷ Press Release, Mass.gov, Governor Patrick Announces Over \$13 Million in Federal Stimulus Assistance for Local Energy Projects (Feb. 17, 2010),

http://web.archive.org/web/20110210224903/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=021710_EEA_block&csid=Agov3.

²¹⁸⁸ *Id.*

²¹⁸⁹ *Id.*

²¹⁹⁰ *Id.*

²¹⁹¹ Auction 7, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/111 (Oct. 14, 2013).

²¹⁹² *Id.*

²¹⁹³ Press Release, Mass.gov, Patrick-Murray Administration Announces Low-Cost Financing to Expand Clean Energy, Save Costs at State Facilities (Feb. 25, 2010),

http://web.archive.org/web/20100304094859/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=100225_clean_energy_investment_program&csid=Agov3.

²¹⁹⁴ *Id.*

college expected this upgrade to cut its energy use by up to 32% and reduce annual energy costs by nearly \$400,000.²¹⁹⁵

The Administration also announced that, in addition to the NSCC project, several other projects would be ready to begin in the coming months, including the installation of two 1.65 MW wind turbines each at the Department of Correction's Gardner facility and at Mt. Wachusett Community College; and comprehensive energy efficiency projects at Massasoit Community College, University of Massachusetts Dartmouth, seventeen Trial Court buildings located in Bristol, Plymouth, and Suffolk Counties, and the headquarters and training academy of the Massachusetts State Police.²¹⁹⁶ Additionally, between 1985 and 2010, Massachusetts invested \$213 million in 56 energy and water efficiency projects at state facilities, producing annual energy savings of approximately \$26 million.²¹⁹⁷

FloDesign Wind Turbine Corp. announced in April 2010 that it intended to assemble its first "shrouded" wind turbines in Massachusetts.²¹⁹⁸ To help facilitate this expansion, the Massachusetts Clean Energy Center (MassCEC) approved a \$3 million financing package from ARRA, including a five-year \$700,000 forgivable loan, a \$600,000 convertible grant, and \$1.7 million from MassCEC's Renewable Energy Trust to defray a portion of the cost of installation at state or local public entities and non-profit organizations.²¹⁹⁹ The unique design, namely rotors half the size of a traditional turbine and lower tower height, allows installation at locations like airports that can be problematic for conventional wind turbines.²²⁰⁰

Also in April 2010, A123 Systems, a developer and manufacturer of advanced lithium ion batteries and battery systems for transportation, electric grid, and consumer markets, announced it planned to locate its growing grid power storage division in Massachusetts.²²⁰¹ To help facilitate this expansion, MassCEC approved a \$5 million forgivable loan, funded through ARRA.²²⁰² Trailer-sized battery units would be manufactured and used throughout the state to store power for the electric grid, creating a more stable and efficient system and helping to integrate renewable sources of power, like wind and solar.²²⁰³

²¹⁹⁵ *Id.*

²¹⁹⁶ *Id.*

²¹⁹⁷ *Id.*

²¹⁹⁸ Press Release, Mass.gov, Patrick-Murray Administration Announces Expansion of Innovative Wind Turbine Company (Apr. 8, 2010), http://web.archive.org/web/20100410043028/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=040810_flodesign&csid=Agov3.

²¹⁹⁹ *Id.*

²²⁰⁰ *Id.*

²²⁰¹ Press Release, Mass.gov, On Earth Day, Governor Patrick Announces Expansion of Clean Tech Company, Celebrates Report Finding Massachusetts Clean Energy Leader (Apr. 22, 2010), http://web.archive.org/web/20100605044559/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=042210_earth_day&csid=Agov3.

²²⁰² *Id.*

²²⁰³ *Id.*

In April 2010, Governor Patrick awarded \$4.49 million in federal weatherization recovery funds to seven local housing authorities throughout the state.²²⁰⁴ Weatherization improvements include air sealing and weather stripping; repairs or replacement of expired heating systems; attic, wall, and floor insulation; and storm or replacement windows.²²⁰⁵

Governor Patrick designated 35 cities and towns as the state's first official "Green Communities" in March 2010, a status that makes them eligible for \$8.1 million in grants for local renewable power and energy efficiency projects.²²⁰⁶ DOER later accepted additional applications for Green Community designations and grants later in 2010.²²⁰⁷ As the main program of Green Communities Act of 2008, the DOER's Green Communities Grant Program uses funding from auctions of carbon emissions permits under RGGI to reward communities. In order to be designated as a Green Community, five clean energy benchmarks must be met: 1) adopting local zoning bylaw or ordinance that allows "as-of-right-siting" of renewable energy projects; 2) adopting an expedited permitting process related to the as-of-right facilities; 3) establishing a municipal energy use baseline and a program designed to reduce use by 20% within five years; 4) purchasing only fuel-efficient vehicles for municipal use, whenever such vehicles are commercially available and practicable; and 5) requiring all new residential construction over 3,000 square feet and all new commercial and industrial real estate construction to reduce lifecycle energy costs.²²⁰⁸ In addition to grant eligibility, each Green Community designated in March 2010 would receive a Big Belly solar waste compactor, to be delivered in time for the summer parks and beaches season. Big Belly compactors can hold several times more trash and litter than similarly sized regular trash receptacles, thereby reducing the number of garbage truck trips required to empty them.²²⁰⁹

The Transportation and Climate Initiative (TCI) was launched in June 2010. It is a regional collaboration between twelve Northeast and Mid-Atlantic states, including Massachusetts, which aims to reduce GHG emissions from the transportation sector and develop the clean energy economy. The TCI is facilitated by the Georgetown Climate Center. A nearly \$1 million Electric Vehicle Readiness Grant from the DOE was

²²⁰⁴ Press Release, Mass.gov, Governor Patrick Awards \$4.49 Million in Recovery Funds for Public Housing Energy Upgrades (Apr. 26, 2010), http://web.archive.org/web/20100605044544/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=042610_everett&csid=Agov3.

²²⁰⁵ *Id.*

²²⁰⁶ The cities included: Acton, Arlington, Athol, Andover, Becket, Belchertown, Cambridge, Chelmsford, Easthampton, Greenfield, Hamilton, Hanover, Holyoke, Hopkinton, Kingston, Lancaster, Lenox, Lexington, Lincoln, Lowell, Mashpee, Medford, Melrose, Montague, Natick, Newton, Northampton, Palmer, Pittsfield, Salem, Springfield, Sudbury, Tyngsboro, Wenham, and Worcester. Press Release, Mass.gov, Patrick-Murray Administration Designates Commonwealth's First Official "Green Communities" (May 25, 2010),

http://web.archive.org/web/20100605044501/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=052510_wpi&csid=Agov3.

²²⁰⁷ *Id.*

²²⁰⁸ *Id.*

²²⁰⁹ *Id.*

awarded to the New York State Energy Research and Development Authority (NYSERDA) on behalf of the TCI in September 2010 and would be used to fund the Network's efforts to deploy electric vehicles throughout the Northeast.

The eighth RGGI auction was held on June 9, 2010.²²¹⁰ The auction sold 40,685,585 allowances of the 2010 vintage at a clearing price of \$1.88 per allowance and 2,137,993 allowances of the 2012 vintage at a clearing price of \$ 1.86 per allowance.²²¹¹

As part of the Massachusetts Recovery Plan, Governor Patrick announced in August 2010 that global wind blade manufacturer TPI Composites, Inc. (TPI) would open a Wind Blade Innovation Center in Fall River.²²¹² Massachusetts awarded TPI with a \$250,000 grant. By the end of 2010, the state expected to have installed or contracted over 60 MW of solar power.²²¹³ Moreover, in August, \$1.5 million in federal weatherization recovery funds was awarded to another thirteen public housing authorities.²²¹⁴

The ninth RGGI auction was held on September 8, 2010.²²¹⁵ The auction sold 34,407,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,312,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.²²¹⁶

In September 2010, \$980,959 in federal weatherization recovery funds was awarded to ten public housing authorities.²²¹⁷ In October 2010, fifteen public housing authorities were awarded \$2,513,973.²²¹⁸

In October 2010, Massachusetts announced that a multi-purpose marine commerce terminal would be built in the port of New Bedford to support the delivery,

²²¹⁰ Auction 8, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/110 (Oct. 14, 2013).

²²¹¹ *Id.*

²²¹² Press Release, Mass.gov, Governor Patrick Announces Wind Turbine Blade Manufacturer to Locate Facility in Fall River (Aug. 25, 2010), http://web.archive.org/web/20110210220111/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=100825_TPI&csid=Agov3.

²²¹³ *Id.*

²²¹⁴ Press Release, Mass.gov, Governor Patrick Awards \$1.7 Million in Recovery Funds to Replace Public Housing Heating Systems (Aug. 23, 2010), http://web.archive.org/web/20110210220214/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=100823_arra_public_housing&csid=Agov3.

²²¹⁵ Auction 9, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/109 (Oct. 14, 2013).

²²¹⁶ *Id.*

²²¹⁷ Press Release, Mass.gov, Governor Patrick Announces \$980,959 in Federal Recovery Funds for Public Housing Heating System Replacement Work (Sept. 30, 2010), http://web.archive.org/web/20110210214525/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=100930_Weatherization_grant&csid=Agov3.

²²¹⁸ Press Release, Mass.gov, Governor Patrick Targets \$2,513,973 in Recovery Funds to Support Public Housing Heating System Replacement Work (Oct. 28, 2010), http://web.archive.org/web/20110106191626/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=101028_weatherization&csid=Agov3.

assembly, and installation of offshore wind turbines.²²¹⁹ Cape Wind Associates planned to use the New Bedford Marine Commerce Terminal for its first-in-the-nation offshore wind farm in Nantucket Sound. The Terminal will consist of a 1,200 linear foot bulkhead with deep water access and roughly 21 acres of surface space, which will accommodate the docking of vessels that deliver wind turbine parts as well as barges to transport components from port to the installation area, in addition to lay down space.²²²⁰ Construction for the Terminal is supposed to start in 2013 and be completed by 2014.²²²¹

In November 2010, the DPU approved an offshore wind power purchase agreement between National Grid and Cape Wind Associates. The 15-year agreement was approved under the Green Communities Act, which facilitates the development of renewable energy generation.²²²²

The tenth RGGI auction was held on December 10, 2010.²²²³ The auction sold 24,755,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,172,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.²²²⁴

In December 2010, the federal Bureau of Ocean Energy Management, Regulation and Enforcement initiated a leasing process for offshore wind farms in federal waters off the coast of Massachusetts.²²²⁵ Massachusetts expected the leasing to lead to the production of 4,000 MWs of energy, which is enough to power 1.7 million households. In addition, Governor Patrick announced that the MassCEC would partner with Massachusetts research institutions and wind energy centers to apply for and receive granting for DOE funding for offshore wind farms in order to help achieve the DOE's goal of reducing offshore wind energy costs by 40% by 2020 and 60% by 2030.²²²⁶

Ian Bowles, Massachusetts Secretary of Energy and Environmental Affairs, announced in December 2010 that Massachusetts set a goal of reducing its GHG

²²¹⁹ Press Release, Mass.gov, New Bedford Port Terminal to Host Offshore Wind Assembly and Construction (Oct. 20, 2010), http://web.archive.org/web/20110106192218/http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=101020_new_bedford_wind&csid=Agov3.

²²²⁰ *Id.*

²²²¹ *The Marine Commerce Terminal*, PORT OF NEW BEDFORD, <http://www.portofnewbedford.org/shipping/operating-areas-marine-terminals/new-bedford-marine-commerce-terminal.php> (Nov. 12, 2013).

²²²² Press Release, Energy and Env'tl. Affairs, Department of Public Utilities Approves Contract for Offshore Wind Power (Nov. 22, 2010), http://web.archive.org/web/20110212101325/http://www.mass.gov/?pageID=eoeapressrelease&L=1&L0=Home&sid=Eoea&b=pressrelease&f=101122_pr_cape_wind&csid=Eoea.

²²²³ *Auction 10*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/174 (Oct. 14, 2013).

²²²⁴ *Id.*

²²²⁵ Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Announces Start of Federal Leasing Process for Development of Offshore Wind Energy in Federal Waters off the Massachusetts Coast (Dec. 28, 2011), http://web.archive.org/web/20110106141915/http://www.mass.gov/?pageID=eoeapressrelease&L=1&L0=Home&sid=Eoea&b=pressrelease&f=101228_pr_offshore_wind&csid=Eoea.

²²²⁶ *Id.*

emissions by 25% below 1990 levels by 2020.²²²⁷ Secretary Bowles also announced the release of the Clean Energy and Climate Plan to help Massachusetts meet this goal. In 2010, the Commonwealth was already two-thirds of the way to reducing its GHG emissions to the desired target. The Plan laid out a framework to accelerate that progress.²²²⁸

2011: Renewable Energy, Energy Efficiency, Market-Based Solutions, Climate Change Agreements, Greenhouse Gas Reduction, and Transportation/Fuels

In February and March 2011, the Patrick Administration celebrated the numerous stimulus-funded clean energy projects that the Commonwealth has completed throughout the state, including: 98 projects in Boston and Northeastern Massachusetts;²²²⁹ 45 projects in Central Massachusetts;²²³⁰ 70 projects in the Western part of the Commonwealth;²²³¹ and 78 projects in Southeast Massachusetts.²²³²

The Massachusetts Department of Energy Resources (DER) launched a federally funded pilot project in March 2011 to measure the energy efficiency of homes in Western Massachusetts.²²³³ The \$2.6 million, 3-year grant will allow the DER to use thermal imaging and analysis to measure the energy efficiency of homes in Western Massachusetts communities. The grant is part of a \$28.5 million investment awarded by the DOE's State Energy Program to help twelve states and territories increase the energy efficiency of homes and businesses.²²³⁴

²²²⁷ Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Announces Clean Energy and Climate Plan to Reduce Greenhouse Gas Emissions 25 Percent by 2020 (Dec. 29, 2010), http://web.archive.org/web/20110204032504/http://www.mass.gov/?pageID=eoeapressrelease&L=1&L0=Home&sid=Eoea&b=pressrelease&f=101229_pr_climate_plan&csid=Eoea.

²²²⁸ *Id.*

²²²⁹ Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Celebrates 98 Stimulus-Funded Clean Energy Projects in Greater Boston and Northeastern Massachusetts (Mar. 7, 2011), <http://web.archive.org/web/20110407233145/http://www.mass.gov/?pageID=eoeapressrelease&L=1&L0=Home&sid=Eoea&b=pressrelease&f=110307-PR-98-Clean-Energy-Proj&csid=Eoea>.

²²³⁰ Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Celebrates Over 45 Stimulus-Funded Clean Energy Projects in Central Massachusetts (Feb. 28, 2011), <http://web.archive.org/web/20110304195915/http://www.mass.gov/?pageID=eoeapressrelease&L=1&L0=Home&sid=Eoea&b=pressrelease&f=110228-PR-45-Clean-Energy-Proj&csid=Eoea>.

²²³¹ Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Celebrates Over 70 Stimulus-Funded Clean Energy Projects in Western Massachusetts (Feb. 24, 2011), <http://web.archive.org/web/20110304080816/http://www.mass.gov/?pageID=eoeapressrelease&L=1&L0=Home&sid=Eoea&b=pressrelease&f=110224-PR-70-Clean-Energy-Proj&csid=Eoea>.

²²³² Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Celebrates 78 Stimulus-Funded Clean Energy Projects in Central Massachusetts (Mar. 28, 2011), <http://web.archive.org/web/20110407071053/http://www.mass.gov/?pageID=eoeapressrelease&L=1&L0=Home&sid=Eoea&b=pressrelease&f=110324-PR-SE-Mass-Clean-Energy-Proj&csid=Eoea>.

²²³³ Press Release, Energy and Env'tl. Affairs, Department of Energy Resources Launches Project to Measure Efficiency of Homes in Greater Springfield Area (Mar. 17, 2011), <http://web.archive.org/web/20110407080815/http://www.mass.gov/?pageID=eoeapressrelease&L=1&L0=Home&sid=Eoea&b=pressrelease&f=110317-pr-project&csid=Eoea>.

²²³⁴ *Id.*

In March 2011, the Patrick Administration awarded \$3.6 million in grants to the Commonwealth's newest eighteen "Green Communities." Thirty-five cities and towns had already received the designation of "Green Communities," making them eligible for the grants, which run through the DER and fund energy efficiency and renewable energy projects.²²³⁵

The eleventh RGGI auction was held on March 9, 2011.²²³⁶ The auction sold 41,995,813 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance and 2,144,710 allowances of the 2012 vintage at a clearing price of \$ 1.89 per allowance.²²³⁷

In an effort by both municipal and non-profit power entities, the first utility scale onshore wind farm in the state opened in May 2011.²²³⁸ This project, named the Berkshire Wind Farm, added 15MW capacity, nearly doubling the state's total wind power capacity.²²³⁹

The twelfth RGGI auction was held on June 8, 2011.²²⁴⁰ The auction sold 12,537,000 allowances of the 2011 vintage at a clearing price of \$1.89 and 943,000 allowances of the 2012 vintage at a clearing price of \$1.89 per allowance.²²⁴¹

In July 2011, the Massachusetts Energy Efficiency Advisory Council announced that the energy efficiency plans developed under the Green Communities Act of 2008 had led to a savings that year equivalent to the annual electricity usage of 85,000 households, natural gas usage of 14,000 homes, and the GHG emissions from over 74,000 cars.²²⁴² Later that same month, the Patrick Administration launched an energy efficient appliance rebate program allowing residents to obtain up to a \$50 or \$150 rebate when they upgraded to an energy efficient air conditioner or refrigerator, respectively.²²⁴³ Due in

²²³⁵ Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Awards \$3.6 Million to 18 New "Green Communities" (Mar. 21, 2011), <http://web.archive.org/web/20110407080741/http://www.mass.gov/?pageID=eoeapressrelease&L=1&L0=Home&sid=Eoea&b=pressrelease&f=110321-PR-18-Green-Communities&csid=Eoea>.

²²³⁶ Auction 11, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/108 (Oct. 14, 2013).

²²³⁷ *Id.*

²²³⁸ Press Release, Mass.gov, Governor Patrick Joins Berkshire Wind Officials to Cut Ribbon on State's First Utility-Scale Onshore Wind Farm (May 5, 2011), <http://web.archive.org/web/20111120015231/http://www.mass.gov/governor/pressoffice/pressreleases/2011/governor-attends-ribbon-cutting-at-berkshire-wind.html>.

²²³⁹ *Id.*

²²⁴⁰ Auction 12, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/187 (Oct. 14, 2013).

²²⁴¹ *Id.*

²²⁴² Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Announces Significant Energy Savings for First Year of Statewide Energy Efficiency Plans (July 7, 2011), <http://web.archive.org/web/20120206194414/http://www.mass.gov/eea/grants-and-tech-assistance/guidance-technical-assistance/agencies-and-divisions/doer/energy-savings-for-1s-yr-energy-efficiency-plans.html>.

²²⁴³ Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Announces Massachusetts Energy Efficient Appliance Rebate Program to Launch July 28 (June 7, 2011), <http://web.archive.org/web/20120101014809/http://www.mass.gov/eea/grants-and-tech->

part to these efforts, the American Council for an Energy-Efficient Economy ranked the state as first in the nation in energy efficiency that year.²²⁴⁴

The thirteenth RGGI auction was held on September 7, 2011 and the auction sold 7,487,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.²²⁴⁵

Massachusetts was one of nine states to join the Northeast Electric Vehicle Network in October 2011. The Network will help the states to increase economic growth and reduce their GHG emissions, and focuses on building infrastructure for clean vehicles and fuels, as well as attracting public and private investment to support infrastructure development. Participating states include Connecticut, Delaware, Washington, D.C., Maryland, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.²²⁴⁶ The Network is part of the TCI launched in June 2010.²²⁴⁷ A nearly \$1 million Electric Vehicle Readiness Grant from the DOE was awarded to NYSERDA on behalf of the TCI in September 2010 to fund the Network's efforts to deploy electric vehicles throughout the Northeast.²²⁴⁸

The fourteenth RGGI auction was held on December 7, 2011 and the auction sold 27,293,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.²²⁴⁹

2012: Energy Efficiency, Market-Based Solutions, Renewable Energy, Green Building, and Greenhouse Gas Reduction

On February 3, 2012, the Energy and Environmental Affairs announced a \$200,000 grant award to four communities for energy efficiency upgrades.²²⁵⁰

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of

assistance/guidance-technical-assistance/agencies-and-divisions/doer/appliance-rebate-program-to-launch-july-28.html.

²²⁴⁴ Press Release, Mass.gov, Massachusetts Ranked First in the Nation for Energy Efficiency (Oct. 20, 2011), <http://web.archive.org/web/20130105230040/http://www.mass.gov/governor/pressoffice/pressreleases/2011/111020-energy-efficiency.html>.

²²⁴⁵ Auction 13, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/201 (Oct. 14, 2013).

²²⁴⁶ *Northeast States Form Regional Electric Vehicle Network*, GEORGETOWN CLIMATE CTR. (Oct. 19, 2011) <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

²²⁴⁷ *Transportation and Climate Initiative*, GEORGETOWN CLIMATE CTR., <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative> (Nov. 8, 2013).

²²⁴⁸ *Northeast States Form Regional Electric Vehicle Network*, GEORGETOWN CLIMATE CTR. (Oct. 19, 2011) <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

²²⁴⁹ Auction 14, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/204 (Oct. 14, 2013).

²²⁵⁰ Press Release, Mass.gov, Patrick-Murray Administration Announces Grants to Fund Four Municipal Power Efficiency Projects in Chicopee, Ipswich, Reading and Westfield (Feb. 3, 2012), <http://www.mass.gov/eea/pr-2012/grants-fund-four-municipal-energy-efficiency-projects.html>.

\$1.93.²²⁵¹ The auction generated \$41.6 million in proceeds, which the RGGI states will invest in consumer-oriented energy efficiency initiatives.²²⁵² On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.²²⁵³ The auction of the 20.9 million allowances generated \$40.4 million in funds, and represents 57% of the allowances offered for sale by all nine participating states.²²⁵⁴

On August 3, 2012, Governor Patrick signed S. 2395 into law, raising the net metering cap, extending contracts with renewable energy companies, and expanding the list of alternative energy technologies for which net metering is available.²²⁵⁵

On September 7, 2012, the RGGI states announced the results of its seventeenth quarterly auction for carbon dioxide allowances.²²⁵⁶ The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, which represents 65% of the allowances offered for sale by all nine states.²²⁵⁷

In October, the American Council for an Energy-Efficient Economy ranked Massachusetts as the number one state for energy efficiency policies and programs for the second year in a row.²²⁵⁸ As a result of these energy efficiency efforts, the state announced a savings the previous year of 1.5 million tons of GHG emissions.²²⁵⁹

Also in October, three community colleges received \$713,814 for clean energy projects as the first ever awards in the Leading by Example Program.²²⁶⁰ An additional \$325,000 was awarded in 27 grants to farmers to implement renewable energy systems and improve efficiency as part of the Agricultural Energy Grant Program.²²⁶¹

²²⁵¹ Press Release, RGGI Inc., RGGI Auction Sells 21.5 Million CO₂ Allowances (Mar. 16, 2012), http://web.archive.org/web/20120415054456/http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

²²⁵² *Id.*

²²⁵³ Press Release, RGGI Inc., RGGI Auction Sells 20.9 Million CO₂ Allowances (June 8, 2012), http://web.archive.org/web/20120717084904/http://www.rggi.org/docs/PR060812_Auction16.pdf.

²²⁵⁴ *Id.*

²²⁵⁵ S. 2395, 2012 Leg., 187th Sess. (Mass. 2012); Press Release, Mass.gov, Governor Patrick Signs Energy Bill (Aug. 3, 2012), <http://www.mass.gov/governor/pressoffice/pressreleases/2012/2012803-governor-patrick-signs-energy-bill.html>.

²²⁵⁶ Press Release, RGGI Inc., RGGI Auction Sells 24.5 Million CO₂ Allowances (Sept. 7, 2012), http://web.archive.org/web/20121116150342/http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

²²⁵⁷ *Id.*

²²⁵⁸ Press Release, Mass.gov, Patrick-Murray Administration Announces Number One Ranking in Energy Efficiency (Oct. 3, 2012), <http://www.mass.gov/eea/pr-2012/121003-ma-number-one.html>.

²²⁵⁹ Press Release, Mass.gov, Patrick-Murray Administration Announces Continued Energy Savings in Second Year of Statewide Energy Efficiency Plans (Oct. 17, 2012), <http://www.mass.gov/eea/pr-2012/121017-energy-plans.html>.

²²⁶⁰ Press Release, Mass.gov, Patrick-Murray Administration Announces Clean Energy Grants for Three Community Colleges (Oct. 9, 2012), <http://www.mass.gov/eea/pr-2012/clean-energy-grants-for-three-community-colleges.html>.

²²⁶¹ Press Release, Mass.gov, Patrick-Murray Administration Announces 27 Grants for Energy Projects at Massachusetts Farms (Oct. 23, 2012), <http://www.mass.gov/eea/pr-2012/121023-farm-grants.html>.

As part of the capital expenditures plan for the state for 2013, Governor Patrick announced \$267 million would be dedicated to energy and environment projects and programs.²²⁶²

On November 19, 2012, RGGI reported that member state investments avoided 12 million tons of carbon dioxide emissions between 2009 and 2011.²²⁶³ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement, and climate change adaptation programs.²²⁶⁴

On December 19, 2012, Massachusetts broke ground on the future field headquarters for the state's Division of Fisheries and Wildlife.²²⁶⁵ The building is expected to be completed in May 2014 and will be the first net-zero energy building constructed by the state, with all energy needs met by geothermal and solar power.²²⁶⁶

2013: Renewable Energy, Energy Efficiency, Transportation/Fuels, Green Jobs, Climate Change Memorandum of Understanding, and Market-Based Solutions

On January 17, 2013, Massachusetts announced that \$1.5 million would go towards a first-in-the-nation program to add renewable energy and increase energy efficiency and security on the state's military bases.²²⁶⁷

On February 1, 2013, the Massachusetts Energy and Environmental Affairs announced the final approval of three-year plans that will commit the state's utilities to further improve efficiency, representing a 55% increase compared to the energy savings in the previous three-year plans (2010-2012).²²⁶⁸ The new plans are predicted to save 25.6 million tons in GHGs over the full three years.²²⁶⁹

²²⁶² Press Release, Mass.gov, Governor Patrick Announces \$267 Million Investment in Energy and Environment as Part of 2013 Capital Plan (Oct. 10, 2012), <http://www.mass.gov/eea/pr-2012/121010-capital-investment.html>.

²²⁶³ Press Release, RGGI Inc., RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings (Nov. 19, 2012), <http://web.archive.org/web/20130204041411/http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

²²⁶⁴ *Id.*

²²⁶⁵ Press Release, Mass.gov, Governor Patrick Breaks Ground on Commonwealth's First Zero Net Energy Office Building (Dec. 19, 2012), <http://www.mass.gov/governor/pressoffice/pressreleases/2012/20121219-zero-net-energy-building.html>.

²²⁶⁶ *Division of Fisheries & Wildlife - Field Headquarters Building, Westborough, MA*, MASS.GOV, <http://www.mass.gov/anf/property-mgmt-and-construction/design-and-construction-of-public-bldgs/current-and-completed-projects/environmental-projects/division-of-fisheries-and-wildlife-field-headquarters-b.html> (Nov. 14, 2013).

²²⁶⁷ Press Release, Mass.gov, Patrick-Murray Administration Announces Comprehensive, Nation-Leading Energy Audits for Massachusetts Military Bases (Jan. 17, 2013), <http://www.mass.gov/governor/pressoffice/pressreleases/2013/0117-military-base-energy-audits.html>.

²²⁶⁸ Press Release, Energy and Env'tl. Affairs, Patrick-Murray Administration Announces Final Approval of New, Nation-Leading Energy Efficiency Plans (Feb. 1, 2013), <http://www.mass.gov/eea/pr-2013/new-energy-plans.html>.

²²⁶⁹ *Id.*

On February 7, 2013, RGGI announced significant program improvements implemented in the Updated Model Rule after a two-year comprehensive program review.²²⁷⁰ Improvements include a reduction of the 2014 regional cap by 45% from 165 million to 91 million tons, and a cap further declining by 2.5% each year from 2015 to 2020; additional adjustments to the cap from 2014 to 2020 in order to account for privately banked allowances, which will be deemed “old” allowances starting in 2014; the creation of a cost containment reserve of allowances which may be accessed only when the price of allowances in a given year exceeds a predetermined level; updates to the offsets program, including a protocol for forestry offsets; the decision not to reoffer unsold allowances from 2012 and 2013; the requirement that regulated entities obtain allowances for at least 50% of their emissions in each of the first two years of the three year compliance period; and developing tools to track electricity imported into participating states from non-participating states in order to address those emissions.²²⁷¹ Each RGGI state will implement these measures in their respective statutory regimes.²²⁷²

On April 16, 2013, an independent market monitor of RGGI confirmed that there continue to be no material concerns regarding the auction process or in the competitiveness of the secondary market for RGGI allowances.²²⁷³ During 2012, the average auction clearing price was \$1.93 for carbon dioxide allowances.²²⁷⁴

In celebration of Earth Day 2013, the Patrick-Murray Administration launched the Massachusetts Electric Vehicle Incentive Program (Mass EVIP) Phase II, “which will provide funding to municipalities across the Commonwealth to help purchase electric or plug-in hybrid passenger vehicles. The Program will also provide funding to communities for the installation of dual electric charging stations.”²²⁷⁵

On May 1, 2013 Governor Patrick celebrated reaching the Patrick-Murray Administration’s goal of reaching 250 MWs of solar energy installed four years ahead of

²²⁷⁰ Press Release, RGGI Inc., RGGI States Propose Lowering Regional CO₂ Emissions Cap 45%, Implementing a More Flexible Cost-Control Mechanism (Feb. 7, 2013), http://web.archive.org/web/20130511185049/http://www.rggi.org/docs/PressReleases/PR130207_ModelRule.pdf.

²²⁷¹ *Id.*

²²⁷² *Id.*

²²⁷³ Press Release, RGGI Inc., 2012 Annual Market Monitor Report: In Fifth Year, RGGI CO₂ Allowance Market Remains Competitive (Apr. 16, 2013), http://web.archive.org/web/20130924092740/http://www.rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

²²⁷⁴ *Id.*

²²⁷⁵ Press Release, Mass.gov, Patrick-Murray Administration Celebrates Earth Day 2013 with Launch of Massachusetts Electric Vehicle Incentive Program for Municipalities (Apr. 22, 2013), <http://www.mass.gov/eea/agencies/massdep/news/releases/launch-of-states-electric-vehicle-incentive-program.html>. See also *Massachusetts Electric Vehicle Incentive Program (MassEVIP): Phase II*, MASS.GOV ENERGY AND ENVTL. Affairs, <http://www.mass.gov/eea/agencies/massdep/air/grants/massevip.html> (Feb. 9, 2014).

schedule.²²⁷⁶ Because the state had reached their goal early, the Administration announced a new goal of 1,600 MWs of solar energy by 2020.

Governor Patrick attended the New England Governors and Eastern Canadian Premiers' Annual Conference (NEG-ECP) in Quebec, Canada on September 8-9, 2013.²²⁷⁷ Patrick approved six resolutions that were signed at this conference "that will put Massachusetts on a path to increased access to affordable, cleaner and reliable energy sources and energy-efficient modes of transportation, more efficient disaster planning and increased infrastructure safety."²²⁷⁸

On September 17, 2013 Governor Patrick commented on the *Massachusetts Clean Energy Industry Report* and reported that clean energy jobs in the state grew by 11.8% between June 2012 and June 2013.²²⁷⁹ The Report found, "over the past two years, clean energy jobs have grown by 24.4 percent with 5,557 clean energy companies now employing 79,994 workers across the Commonwealth."²²⁸⁰

On October 24, 2013 Governor Patrick signed a MOU with seven other states "to put 3.3 million zero-emission vehicles on the roads in their states within a dozen years."²²⁸¹ In signing the MOU, the governors agreed, among other things, to "harmonize building codes to make it easier to construct new electric car charging stations, lead by example by including zero emission vehicles in their public fleet, evaluate and establish, where appropriate, financial and other incentives to promote zero

²²⁷⁶ Press Release, Mass.gov, Patrick-Murray Administration Reaches 2017 Solar Energy Target, Sets New Goal (May 1, 2013), <http://www.mass.gov/governor/pressoffice/pressreleases/2013/0501-solar-power-goal-reached.html>.

²²⁷⁷ Press Release, Mass.gov, Governor Patrick Joins Regional Partners to Increase Access to Affordable, Clean Energy (Sept. 9, 2013), <http://www.mass.gov/governor/pressoffice/pressreleases/2013/0909-governor-patrick-clean-energy.html>.

²²⁷⁸ *Id.* Resolutions 37-1 through 37-6 were the six resolutions that were passed at this conference. See 37th Conference of New England Governors and Eastern Canadian Premiers, La Malbaie, Quebec, September 9, 2013, THE COUNCIL OF ATLANTIC PREMIERS, <http://www.cap-cpma.ca/default.asp?mn=1.98.3.26.212> (Feb. 9, 2014).

²²⁷⁹ Press Release, Mass.gov, Governor Patrick Announces 11.8 Percent Clean Energy Job Growth (Sept. 17, 2013), <http://www.mass.gov/governor/pressoffice/pressreleases/2013/0917-governor-patrick-clean-energy-job-growth.html>. See also MASS. CLEAN ENERGY CTR., MASSACHUSETTS CLEAN ENERGY INDUSTRY REPORT, http://images.masscec.com/uploads/attachments/2013/09/MassCEC_2013_IndustryRpt.pdf (Feb. 9, 2014).

²²⁸⁰ Press Release, Mass.gov, Governor Patrick Announces 11.8 Percent Clean Energy Job Growth (Sept. 17, 2013), <http://www.mass.gov/governor/pressoffice/pressreleases/2013/0917-governor-patrick-clean-energy-job-growth.html>.

²²⁸¹ Press Release, Mass.gov, Governors Announce Bold Initiative to Put 3.3 M Zero-Emission Vehicles on the Road by 2025 (Oct. 24, 2013), <http://www.mass.gov/eea/agencies/massdep/news/releases/governors-initiative-to-put-3-3-m-zevs-on-road-by-2025.html>. See also Memorandum of Understanding between Edmund G. Brown Jr., Governor of the State of Cal., Dannel P. Malloy, Governor of the State of Conn., Martin O'Malley, Governor of the State of Md., Deval L. Patrick, Governor of the State of Mass., Andrew M. Cuomo, Governor of the State of N.Y., John Kitzhaber, Governor of the State of Or., Lincoln D. Chafee, Governor of the State of R.I., Peter Shumlin, Governor of the State of Vt. (Oct. 24, 2013), <http://www.governor.maryland.gov/documents/zevprogrammou.pdf>.

emission vehicle...and develop common standards for roadway signs and charging networks.”²²⁸²

On November 6, 2013 Governor Patrick announced, “for the third year in a row, the American Council for an Energy-Efficient Economy (ACEEE) has ranked Massachusetts as the number one state for energy efficiency policies and programs.”²²⁸³

To further Massachusetts’s alternative fuel investment and infrastructure, Governor Patrick announced on December 12, 2013 the awarding of “\$550,000 in grants for 20 communities, \$15.5 million in new funding for cleaner vehicles, electric school buses and electric vehicle infrastructure.”²²⁸⁴

MICHIGAN

2000: Renewable Energy

The Customer Choice and Electric Reliability Act of 2000 requires the state’s electric utilities to inform their customers and Michigan’s Public Service Commission (PSC) biannually of the following: (1) the contents of their fuel mixes; (2) the average number of pounds per megawatt-hour of carbon dioxide, sulfur dioxide, and nitrogen oxide emissions from their facilities; and (3) the amount of high-level nuclear waste produced by their electric generators.²²⁸⁵

In an effort to promote renewable energy use, the Customer Choice and Electric Reliability Act established the Michigan Renewables Energy Program (MREP), which is implemented by the Michigan PSC.²²⁸⁶ The Program is charged with educating the public about renewable energy, encouraging the development of renewable energy facilities, recommending new renewable energy policies, and annually reporting the amount of renewable energy generated and used in Michigan.²²⁸⁷

2003: Renewable Energy

²²⁸² Press Release, Mass.gov, Governors Announce Bold Initiative to Put 3.3 M Zero-Emission Vehicles on the Road by 2025 (Oct. 24, 2013), <http://www.mass.gov/eea/agencies/massdep/news/releases/governors-initiative-to-put-3-3-m-zevs-on-road-by-2025.html>.

²²⁸³ Press Release, Mass.gov, Governor Patrick Announces Number One Ranking in Energy Efficiency (Nov. 6, 2013), <http://www.mass.gov/governor/pressoffice/pressreleases/2013/1107-governor-patrick-announces-number-one-ranking-in-energy-.html>. See also *State Energy Efficiency Policy Database*, ACEEE (Aug. 13, 2013), <http://aceee.org/sector/state-policy/massachusetts>.

²²⁸⁴ Press Release, Mass.gov, Patrick Administration Announces Grants, Key Investments in Alternative Fuel Vehicles and Infrastructure (Dec. 12, 2013), <http://www.mass.gov/eea/agencies/massdep/news/releases/grants-in-alternative-fuel-vehicles-announced-.html>.

²²⁸⁵ MICH. COMP. LAWS § 460.10r (2000), [http://www.legislature.mi.gov/\(S\(mvomlt453km25vypjh43jy55\)\)/mileg.aspx?page=GetObject&objectname=mcl-460-10r](http://www.legislature.mi.gov/(S(mvomlt453km25vypjh43jy55))/mileg.aspx?page=GetObject&objectname=mcl-460-10r).

²²⁸⁶ *Id.* § 460.10r.

²²⁸⁷ *Id.*

Established in 2003, Michigan's Next Energy Program promotes the research, production, and sale of alternative power generators.²²⁸⁸ Next Energy offered participating businesses tax credits for qualified business activities.²²⁸⁹ Companies in the alternative energy industry also received tax credits for their qualified payrolls.²²⁹⁰ In addition, participating businesses are exempt from paying personal property taxes on alternative energy technologies.²²⁹¹ The Next Energy Program was set to expire in 2023.²²⁹²

2005: Market-Based Solutions

In March 2005, the Michigan PSC approved the implementation of a voluntary statewide net metering program for a minimum of five years. This program allowed customers producing electricity through renewable resources to receive power credits for excess power that they supplied to the system.

2007: Climate Change Agreements, Energy Efficiency, Renewable Energy, and Greenhouse Gas Reduction

In May 2007, Michigan and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”²²⁹³

On November 14, 2007, Governor Granholm issued Executive Directive 2007-22, which extended earlier Executive Directives reducing state energy consumption and managing state operations in a more sustainable manner.²²⁹⁴ Under the Directive, Michigan would, whenever feasible, increase use of alternative fuels in its vehicle fleet; develop a materials management plan to ensure environmentally sound purchasing; use, reuse, and recycle materials by state departments; and ensure that new state owned or leased buildings meet Leadership in Energy & Environmental Design (LEED) standards.²²⁹⁵ The state also aimed to reduce its electrical energy purchases by 20% by 2015 from the 2002 base year.²²⁹⁶

Also on November 14, 2007, Governor Granholm issued Executive Order (EO) 2007-42, establishing the Michigan Climate Action Council (MCAC).²²⁹⁷ MCAC was

²²⁸⁸ MICH. COMP. LAWS ANN. § 207.821 – .827 (2002).

²²⁸⁹ *Id.* § 208.39e (repealed 2007).

²²⁹⁰ *Id.*

²²⁹¹ *Id.* § 211.9i.

²²⁹² *Id.* § 208.39e (repealed 2007).

²²⁹³ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20080309011530/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

²²⁹⁴ Mich. Directive No. 2007-22 (2007).

²²⁹⁵ *Id.*

²²⁹⁶ *Id.*

²²⁹⁷ Mich. Exec. Order No. 42 (2007).

comprised of members representing academia, industry, utilities, state and local government, and environmental interest groups.²²⁹⁸ MCAC acted in an advisory capacity to produce an inventory and forecast of greenhouse gas (GHG) sources; consider potential state and multi-state actions to mitigate and adapt to climate change; develop a comprehensive climate action plan for businesses, government, and the general public; and advise state and local governments on measures to address climate change.²²⁹⁹

On November 15, 2007, Governor Granholm joined the governors of Illinois, Iowa, Kansas, Minnesota, and Wisconsin, as well as the Premier of the Canadian Province of Manitoba in signing and establishing the Midwestern Greenhouse Gas Reduction Accord (MGGRA) in order to reduce GHG emissions and achieve energy security.²³⁰⁰ Signed at the Midwestern Governors Association Energy Security and Climate Change Summit held in Milwaukee, Wisconsin, the Accord aimed to establish GHG emission targets, including a 60 to 80% reduction in emissions, created a market-based, multi-sector cap-and-trade system, and created a tracking and crediting system.²³⁰¹ The MGGRA's final model rule was released in April 2010; however, although the MGGRA has not been formally suspended, participating states are no longer formally pursuing it.²³⁰²

Also at the Summit, Michigan, Illinois, Iowa, Kansas, Minnesota, Wisconsin, Nebraska, and North Dakota adopted an Energy Security and Climate Stewardship Platform.²³⁰³ The Platform's goals for the Midwest include promoting energy efficiency, advances in biobased products, electricity production from renewables, and advances in coal and carbon capture and storage.²³⁰⁴ Platform members also signed cooperative regional initiatives in an attempt to work towards creating a Carbon Management Infrastructure Partnership, a bioproduct procurement program, electricity transmission adequacy for new wind energy, renewable fuels corridors, advanced bioenergy permitting, and low-carbon energy transmission infrastructure.²³⁰⁵

2008: Renewable Energy, Renewable Portfolio Standard, and Green Technology

²²⁹⁸ *Id.*

²²⁹⁹ *Michigan Climate Action Council*, MICH. CLIMATE ACTION COUNCIL DEP'T OF ENVTL. QUALITY, <http://web.archive.org/web/20110915010907/http://www.miclimatchange.us/> (Nov. 15, 2013).

²³⁰⁰ MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, MIDWESTERN GREENHOUSE GAS ACCORD (2007),

<http://web.archive.org/web/20100102191242/http://www.wisgov.state.wi.us/docview.asp?docid=12497>.

²³⁰¹ *Id.*

²³⁰² FINAL MODEL RULE FOR THE MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD (2010), http://michigancondemnationblog.com/storage/Final_Model_Rule1.pdf; *Midwest Greenhouse Gas Reduction Accord*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mgggra> (Oct. 11, 2013).

²³⁰³ MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, ENERGY SECURITY AND CLIMATE STEWARDSHIP PLATFORM FOR THE MIDWEST (2007),

<http://www.midwesterngovernors.org/resolutions/Platform.pdf>.

²³⁰⁴ *Id.*

²³⁰⁵ *Id.*

In July 2008, Michigan and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.²³⁰⁶ The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards were designed to help develop greater energy efficiency, conservation, and clean energy resources.²³⁰⁷

During Governor Granholm's September 2008 investment mission to Japan, she announced that the companies she met with were interested in investing in alternative energy projects located in Michigan.²³⁰⁸

A bill establishing a renewable portfolio standard (RPS) and an energy efficiency program for Michigan was passed by the legislature on September 18, 2008.²³⁰⁹ The RPS for electricity providers was set at 4% per year for the years 2012–2014, increasing to 10% by 2015.²³¹⁰ The energy efficiency program required electric utilities to decrease energy use by 0.3% between 2008 and 2009, decrease by 0.5% in 2010, decrease by 0.75% in 2011, and decrease by 1% in 2012 and every year thereafter.²³¹¹ Governor Granholm signed the bill on October 6, 2008.²³¹²

Governor Granholm met with executives from Millennium Energy Industries, a solar solutions company, on November 19, 2008 to spur their investment in Michigan.²³¹³ Furthering Granholm's goal to increase alternative energy investment in the state, the Michigan Strategic Fund announced on November 25, 2009 that it had approved three alternative energy partnerships in the state.²³¹⁴ These partnerships, located in Ann Arbor, East Lansing/Webberville, and Alpena were designated as Centers of Energy Excellence

²³⁰⁶ Press Release, Nat'l Governors Ass'n, NGA Awards Clean Energy Grants to 12 States (June 29, 2008), <http://web.archive.org/web/20110110214522/http://www.nga.org/portal/site/nga/menuitem.6c9a8a9ebc6ae07eee28aca9501010a0/?vgnnextoid=feecd9b353ada110VgnVCM1000001a01010aRCRD>.

²³⁰⁷ *Id.*

²³⁰⁸ Press Release, Office of the Governor, Governor Meets with 11 Companies in Japan, Targets Key Alternative Energy Projects (Sept. 17, 2008), http://web.archive.org/web/20100303183355/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-200196--,00.html.

²³⁰⁹ S.B. 0213, 94th Leg., Reg. Sess. (Mich. 2008).

²³¹⁰ *Id.*

²³¹¹ *Id.*

²³¹² Press Release, Office of the Governor, Renewable Energy Package Will Create Jobs, Ensure Clean Affordable Energy for Michigan (Oct. 6, 2008), <http://web.archive.org/web/20081017083222/http://www.michigan.gov/gov/0,1607,7-168-23442-201273--,00.html>.

²³¹³ Press Release, Office of the Governor, Granholm Meets with His Majesty King Abdullah II, Executives From Millennium Energy to Promote Investment in Michigan (Nov. 19, 2008), http://web.archive.org/web/20100831055523/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-203662--,00.html.

²³¹⁴ Press Release, Office of the Governor, Granholm, Epolito Announce New Centers of Energy Excellence (Nov. 25, 2008), http://web.archive.org/web/20100831055425/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-204124--,00.html.

(COEE). COEE's were part of the governor's program to bring businesses, universities, and the government together to research and develop alternative energy technologies.²³¹⁵

Alternative energy technology production would be expanded under the eleven bills incorporating recommendations from the Renewable Fuels Commission that were signed into law on December 23, 2008.²³¹⁶ Public Act 329 required the Commission to create at least five (but not more than 15) more Renaissance Zones (tax exempt areas to encourage economic development), for cellulosic biofuels production.²³¹⁷ Public Acts 314, 332, and 334 provided tax incentives to use machinery that could harvest grain and biomass.²³¹⁸ Public Act 313 required the director of the Michigan Department of Agriculture to develop purity and quality standards for biodiesel.²³¹⁹ On January 14, Governor Granholm signed legislation providing tax credits for the development and manufacture of advanced batteries.²³²⁰

2009: Transportation/Fuels, Greenhouse Gas Reduction, Cap-&-Trade, Climate Change Agreements & Memorandum, Energy Efficiency, Green Jobs, Green Technology, Market-Based Solutions, Renewable Energy, and American Recovery & Reinvestment Act (ARRA)

On January 14, 2009, Governor Granholm announced that she had signed legislation to spur the development of a rapid transit system.²³²¹ House Bill (H.B.) 6542

²³¹⁵ *Id.*

²³¹⁶ Press Release, Office of the Governor, Granholm Signs Bills Expanding Renewable Fuels Production and Use in Michigan (Dec. 23, 2008), http://web.archive.org/web/20100831060043/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-205718--,00.html.

²³¹⁷ H.B. 5746, 94th Leg., Reg. Sess. (Mich. 2008), <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0329.pdf>; Press Release, U.S. Dep't of Energy, Energy Efficiency & Renewable Energy, Michigan Expands Development and Production of Renewable Fuels and Advanced Batteries (Jan. 15, 2009), http://apps1.eere.energy.gov/states/news_detail.cfm/news_id=12192.

²³¹⁸ H.B. 5877, 94th Leg., Reg. Sess. (Mich. 2008), <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0314.pdf>; H.B. 1121, 94th Leg., Reg. Sess. (Mich. 2008), <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0332.pdf>; H.B. 5874, 94th , Reg. Sess. (Mich. 2008), <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0334.pdf>; Press Release, U.S. Dep't of Energy, Energy Efficiency & Renewable Energy, Michigan Expands Development and Production of Renewable Fuels and Advanced Batteries (Jan. 15, 2009), http://apps1.eere.energy.gov/states/news_detail.cfm/news_id=12192.

²³¹⁹ H.B. 5748, 94th Leg., Reg. Sess. (Mich. 2008), <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0313.pdf>; Press Release, U.S. Dep't of Energy, Energy Efficiency & Renewable Energy, Michigan Expands Development and Production of Renewable Fuels and Advanced Batteries (Jan. 15, 2009), http://apps1.eere.energy.gov/states/news_detail.cfm/news_id=12192.

²³²⁰ Press Release, Office of the Governor, Granholm Signs Legislation Positioning Michigan to Become Advanced Battery Capital of the World (Jan. 14, 2009), http://web.archive.org/web/20100203023229/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-206810--,00.html.

²³²¹ Press Release, Office of the Governor, Governor Granholm Signs Rapid Transit Legislation (Jan. 14, 2009), http://web.archive.org/web/20100831031227/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-206829--,00.html.

provided authority to create nonprofit street railway companies.²³²² H.B. 1589 authorized municipalities in which a street railway system is located to create a transit operations finance zone for the system.²³²³ Senate Bill (S.B.) 1590 authorized the distribution of a portion of the comprehensive transportation fund to nonprofit street railway companies.²³²⁴ H.B. 1592 declared as a public purpose the preservation of abandoned railroad right of ways for future rail use.²³²⁵

In a statement showing Governor Granholm's support for reducing emissions from the transportation sector, she vocalized support for President Obama's mandate to the EPA to review whether to issue the California waiver for vehicle emissions under the Clean Air Act.²³²⁶

In January 2009, the Advisory Group to the MGGRA released its draft final recommendations.²³²⁷ The Group recommended that carbon dioxide, nitrous oxide, hydro-fluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions be reduced 15 to 25% below 2005 levels by 2020 and 60 to 80% below 2005 levels by 2050. It also recommended that power plants, industrial facilities, industrial combustion sources, industrial process sources, and transportation fuels be subject to these reductions.²³²⁸ It recommended that an offset component be incorporated in the program and that allowance value be used only for climate-related purposes by participating states.²³²⁹ The recommendations also included exemptions for biofuels, authorization of offset projects, and free allocation of allowances. However, the Group refused to comment on whether allowances should be auctioned or allocated, maintaining that this decision must be made by each state.²³³⁰ The governors of the member states were required to approve these recommendations before they could be implemented, which they did.²³³¹

²³²² H.B. 6542, 94th Leg., Reg. Sess. (Mich. 2008), <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0481.pdf>.

²³²³ H.B. 1589, 94th Leg., Reg. Sess. (Mich. 2008), <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0486.pdf>.

²³²⁴ H.B. 1590, 94th Leg., Reg. Sess. (Mich. 2008), <http://www.legislature.mi.gov/documents/2007-2008/billintroduced/Senate/pdf/2008-SIB-1590.pdf>.

²³²⁵ H.B. 1592, 94th Leg., Reg. Sess. (Mich. 2008), <http://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0488.pdf>.

²³²⁶ Press Release, Office of the Governor, Governor Granholm Statement on President Obama's Announcement on Emission Standards, Environment (Jan. 26, 2009), http://web.archive.org/web/20100203023749/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-207527--,00.html.

²³²⁷ *GHG Reduction Accord Meeting Materials*, MIDWEST GREENHOUSE GAS REDUCTION ACCORD, http://web.archive.org/web/20090506002613/http://midwesternaccord.org/Meeting%20material%20pages/GHG-meeting-8_109.html (Nov. 15, 2013).

²³²⁸ *Background on Midwestern Greenhouse Gas Reduction Accord: Draft Final Recommendations of the Advisory Group*, GREENHOUSE GAS REDUCTION ADVISORY GROUP, at 2, http://web.archive.org/web/20100713112321/http://www.ef.org/documents/Accord_Draft_Final.pdf (Nov. 15, 2013).

²³²⁹ *Id.* at 3.

²³³⁰ *Id.*

²³³¹ Midwestern Greenhouse Gas Reduction Accord, *News*, MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD, <http://web.archive.org/web/20101219122701/http://www.midwesternaccord.org/news.html> (Nov. 15, 2013), <http://www.midwesternaccord.org/news.html>.

In her February 2009 State of the State Address, Governor Granholm recognized that the Advisory Group's recommendations would aid Michigan in reaching its GHG goals by reducing electricity generated from fossil fuels in the state by 45% by 2020.²³³² In order to achieve this goal, she declared that the state would take the \$2 billion that it currently spends on importing oil and natural gas and use this money to promote Michigan-generated renewable sources instead. She also encouraged the state legislature to pass a law allowing residential and business units with solar and wind systems to sell excess energy produced by these systems to utility companies.²³³³ Further, she also requested that the PSC decouple utility company revenue from quantity of electricity consumed, instead of creating a pricing system that encourages utility companies to invest in renewable energy and energy efficiency programs.²³³⁴

In February 2009, in order to produce more renewable energy, Governor Granholm issued EO 2009-1, creating the Great Lakes Wind Council.²³³⁵ The Council provides a forum for recommendations on the best places to site wind development in the Great Lakes. Additionally, the Council was tasked with developing criteria to be used in the review of wind project applications.²³³⁶ The Council was comprised of leaders from industry and academia. Granholm issued Executive Directive 2009-2 on February 3, 2009, requiring the Department of Environmental Quality to consider alternatives before issuing permits for the construction of coal-fired power plants.²³³⁷

Governor Granholm signed a memorandum of understanding (MOU) with Denmark's Minister of Climate and Energy on March 5, 2009.²³³⁸ The MOU created working groups between Michigan and Denmark to further development in alternative energy.

The MCAC released its final plan on March 10, 2009.²³³⁹ MCAC identified the following as the key elements and recommendations of the final plan: that the state reduce its GHG emissions 20% below 2005 levels by 2020 and 80% below 2005 levels by 2050; that the state should prioritize the 54 policy recommendations found in the plan; that these recommendations are estimated to generate a net cumulative savings of \$10 billion between 2009 and 2025; that periodic review of the state's progress with respect

²³³² Jennifer M. Granholm, Governor, Mich., State of the State Address, at 6 (Feb. 3, 2009), http://www.michigan.gov/documents/gov/SOS2009_265915_7.pdf.

²³³³ *Id.*

²³³⁴ *Id.*

²³³⁵ Press Release, Office of the Governor, Governor Granholm Signs Executive Order Creating Great Lakes Wind Council (Feb. 6, 2009), http://web.archive.org/web/20100209205421/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-208364--,00.html.

²³³⁶ *Id.*

²³³⁷ Mich. Exec. Directive No. 2009-2 (2009).

²³³⁸ Press Release, Office of the Governor, Governor Granholm Signs Memorandum of Understanding with Denmark (Mar. 5, 2009), http://web.archive.org/web/20100831033158/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-210217--,00.html.

²³³⁹ MICH. DEP'T. OF ENVTL. QUALITY, MICH. CLIMATE ACTION COUNCIL CLIMATE ACTION PLAN (2009), <http://www.pewclimate.org/docUploads/MI%20ClimatePlan%20March2008.pdf>.

to climate change policies be performed and that the final plan be amended when necessary; that further analysis of the state's adaptation needs be addressed; and that the state position itself as a leader in the national and regional dialogue concerning climate change policies.²³⁴⁰ The recommendations were geared towards energy supply policy, market-based policies, transportation and land-use policy, residential, commercial and industrial policy, agriculture, forestry and waste management policy, and cross-cutting issues policy.²³⁴¹

On March 12, 2009, the Department of Energy (DOE) announced that Michigan was eligible for \$82,035,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).²³⁴²

On March 19, 2009, Governor Granholm publicly supported President Obama's plan to put \$2.4 billion from ARRA towards funding hybrid vehicles and advanced battery technologies.²³⁴³ With the most aggressive battery incentives in the country, Michigan hoped to play an important role in this development.

Governor Granholm signed H.B. 4515 on April 6, 2009.²³⁴⁴ This Bill increased tax incentives for companies that develop and manufacture advanced batteries. The Bill made tax credits available for the manufacture of plug-in traction battery packs, for the engineering of vehicles that support advanced batteries, and for the construction of integrative cell manufacturing facilities.²³⁴⁵ These credits would take effect in 2010 for battery manufacturers and 2012 for vehicle engineers and those constructing cell manufacturing facilities. These credits put Michigan in a prime position to receive ARRA funding for advanced battery development.²³⁴⁶

After signing H.B. 4515, Governor Granholm announced that she believed that her state would become the advanced-battery capital of the world.²³⁴⁷ Michigan's

²³⁴⁰ *Id.* at ExS-2 – 3.

²³⁴¹ *Id.* at 1-4.

²³⁴² U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

²³⁴³ Press Release, Office of the Governor, Governor's Statement on President Obama's Announcement of Support for Hybrid Vehicles and Advanced Battery Technologies (Mar. 19, 2009), http://web.archive.org/web/20100831032751/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-211087--,00.html.

²³⁴⁴ Press Release, Office of the Governor, Granholm Signs Legislation Positioning Michigan as a Leader in Advanced Battery Development and Manufacturing (Apr. 6, 2009), http://web.archive.org/web/20100831034229/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-212181--,00.html.

²³⁴⁵ H.B. 4515, 95th Leg., Reg. Sess. (Mich. 2009).

²³⁴⁶ Press Release, Office of the Governor, Granholm Signs Legislation Positioning Michigan as a Leader in Advanced Battery Development and Manufacturing (Apr. 6, 2009), http://web.archive.org/web/20100831034229/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-212181--,00.html.

²³⁴⁷ Press Release, Office of the Governor, Granholm Says State is Best Positioned to Become Advanced-Battery Capital of the World (Apr. 10, 2009), http://web.archive.org/web/20100831034012/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-212589--,00.html.

invigorated advanced-battery industry was expected to create 6,600 new jobs for Michiganders.²³⁴⁸ Granholm also commended the state's wind-technology manufacturing, announcing a partnership between a Nevada-based company and a Michigan-based company to produce a new wind technology, Windspire – a 30-foot tall vertical wind-power appliance without propellers that can provide 25% of the average home's electricity needs.²³⁴⁹ The manufacturing took place in an underused, retrofitted auto plant.²³⁵⁰ Granholm also advertised Michigan to the wind industry at the American Wind Energy Association conference in Chicago in May 2009.²³⁵¹

During that same month, Ford chose to manufacture its first battery-powered vehicle as well as other fuel-efficient cars in Michigan.²³⁵² Other businesses also converted to energy efficiency, resulting in a 30% increase in the renewable energy sector in the state at that time.²³⁵³ On May 11, 2009, Governor Granholm announced her plans to increase this sector through the Green Jobs Initiative, a \$6 million investment of ARRA money to increase the number of green industries and businesses in the state.²³⁵⁴ According to Granholm, the three key areas in Michigan's alternative energy economy were wind manufacturing, solar manufacturing, and advanced batteries.²³⁵⁵

Governor Granholm also signed legislation that authorized a tax credit for LG-Chem Compact Power Inc., a manufacturer of lithium-ion batteries.²³⁵⁶ She then joined

²³⁴⁸ Press Release, Office of the Governor, Granholm: Projects Creating Over 6,600 New Jobs are a Result of State's Efforts to Make Michigan Advanced Battery Capital of the World (Apr. 14, 2009), http://web.archive.org/web/20100831033744/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-212736--,00.html.

²³⁴⁹ Press Release, Office of the Governor, Granholm Says Windspire Manufacturing Facility is Creating Jobs as Part of Comprehensive Plan to Grow State's Renewable Energy Sector (Apr. 20, 2009), http://web.archive.org/web/20100831033633/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-213255--,00.html.

²³⁵⁰ *Id.*

²³⁵¹ Press Release, Office of the Governor, Governor Granholm Pitches Michigan at Global Wind Energy Conference (May 5, 2009), http://web.archive.org/web/20100831035031/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-214274--,00.html.

²³⁵² Press Release, Office of the Governor, Granholm: Ford Chooses Michigan to Manufacture its First Battery Electric Vehicle, New Fuel-Efficient Cars (May 6, 2009), http://web.archive.org/web/20100831035004/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-214359--,00.html.

²³⁵³ Press Release, Office of the Governor, Granholm Says Renewable Energy Economy Taking Root in Michigan (May 8, 2009), http://web.archive.org/web/20100831034949/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-214523--,00.html.

²³⁵⁴ Press Release, Office of the Governor, Granholm Says Renewable Energy Sector Will Help Grow Michigan Economy, Create Jobs (May 11, 2009), http://web.archive.org/web/20100831034921/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-214565--,00.html.

²³⁵⁵ Press Release, Office of the Governor, Granholm Says Michigan Will Lead Way to Energy Independence (May 28, 2009), http://web.archive.org/web/20100831034425/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-215593--,00.html.

²³⁵⁶ Press Release, Office of the Governor, Granholm Signs Legislation Authorizing Tax Credit to Support Advanced Battery Project (May 12, 2009),

eleven other governors in encouraging the U.S. Congress to pass legislation encouraging car owners to recycle older vehicles and replace them with fuel-efficient vehicles.²³⁵⁷ Michigan's Lieutenant Governor announced that the state would apply for \$13 million for rural transit projects in ARRA funding.²³⁵⁸

At the end of May, Governor Granholm also signed an agreement to support federal climate change legislation with a coalition of other governors.²³⁵⁹ The agreement contained two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.²³⁶⁰

In June 2009, Governor Granholm signed an agreement with twelve federally recognized Indian tribes located in the state to declare their commitment to combating global warming by decreasing GHG emissions.²³⁶¹ General Electric then announced that it had chosen Michigan as the site for its new advanced technology and training center, where it would develop its next generation of renewable energy technologies and products.²³⁶²

On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the Western Climate Initiative (WCI), and MGGRA met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.²³⁶³ Governor Granholm also joined seven other Midwest states in signing a

http://web.archive.org/web/20100831034915/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-214686--,00.html.

²³⁵⁷ Press Release, Office of the Governor, Granholm, 11 Other Governors Ask Congress to Enact Legislation to Stimulate Sales of New Fuel-Efficient Vehicles (May 18, 2009), http://web.archive.org/web/20100831034813/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-215007--,00.html.

²³⁵⁸ Press Release, Office of the Governor, More Than \$13 Million in Recovery Act Funding Anticipated for Rural Transit Agencies and Rural Intercity Bus Service (May 28, 2009), http://web.archive.org/web/20100831034453/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-215562--,00.html.

²³⁵⁹ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20090817025744/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

²³⁶⁰ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION (May 21, 2009), <http://web.archive.org/web/20090817025755/https://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

²³⁶¹ Press Release, Office of the Governor, Granholm, Indian Tribes Agree to Work Together to Combat Global Warming (June 11, 2009), http://web.archive.org/web/20100831035456/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-216453--,00.html.

²³⁶² Press Release, Office of the Governor, Granholm Lauds GE's Decision to Locate New Advanced Training and Technology Center in Michigan (June 26, 2009), http://web.archive.org/web/20100831035305/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-217356--,00.html.

²³⁶³ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

MOU to coordinate ARRA applications and advocacy for high-speed rail.²³⁶⁴ While in Europe, she announced that the German company Fortu PowerCell announced that it would locate a battery pack manufacturing facility in Michigan.²³⁶⁵

In July 2009, Governor Granholm issued an Executive Directive requiring the state to cut emissions 20% below 2005 levels by 2020 and 80% below 2005 levels by 2050.²³⁶⁶ She also required the Department of Environmental Quality to report to the governor and the legislature on the state's progress towards reaching this goal on an annual basis. Granholm also described nine actions that the Climate Action Council must take in creating the state's Climate Action Plan. The objective behind these actions was to address the adverse impacts of climate change on Michigan's economy. These actions included a macro-economic analysis of the Council's recommendations, including a recommendation for the Department of Energy, Labor, and Economic Growth (DELEG) to accelerate its plans to update building codes by including energy efficiency measures, and a recommendation that the Department of Transportation create programs to address traffic congestion.

Twelve Michigan projects were awarded \$1.35 billion in advanced battery grants from ARRA in August 2009.²³⁶⁷ GM, which received some of this money, then announced that it would invest \$43 million in producing lithium-ion battery packs for the Chevrolet Volt in Brownstown Township.²³⁶⁸ Kettering University also received \$500,000 of this federal money.²³⁶⁹ The Eaton Corporation received \$45.4 million of this money.²³⁷⁰ Michigan then applied to the federal government for \$800 million in order to

²³⁶⁴ Memorandum of Understanding between Pat Quinn, Governor, State of Ill., Mitch Daniels, Governor, State of Ind., Chet Culver, Governor, State of Iowa, Jennifer Granholm, Governor, State of Mich., Jay Nixon, Governor, State of Miss., Tim Pawlenty, Governor, State of Minn., Ted Strickland, Governor, State of Ohio, Jim Doyle, Governor, State of Wisc., Richard M. Daley, Mayor, City of Chi. (July 27, 2009), <http://web.archive.org/web/20091002043001/http://www.wisgov.state.wi.us/docview.asp?docid=17199>.

²³⁶⁵ Press Release, Office of the Governor, Battery Manufacturer Plans West Michigan Investment After Meeting with Governor Granholm in Germany (July 9, 2009), http://web.archive.org/web/20100210052841/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-217904--,00.html.

²³⁶⁶ Exec. Directive No. 2009-4 (2009), <http://www.michigan.gov/granholm/0,4587,7-168-36898-219081--,00.html>.

²³⁶⁷ Press Release, Office of the Governor, Granholm, Cherry Hail 12 Michigan Projects Awarded Federal Advance Battery Projects (Aug. 5, 2009), http://web.archive.org/web/20100831041206/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-219523--,00.html.

²³⁶⁸ Press Release, Office of the Governor, Lt. Governor Cherry Hails GM Advanced Battery Facility in Brownstown Twp. (Aug. 13, 2009), http://web.archive.org/web/20100831041142/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-219936--,00.html.

²³⁶⁹ Press Release, Office of the Governor, Granholm Visits Kettering University in Flint, Celebrates University's Advanced Battery Grant From Department of Energy (Aug. 19, 2009), http://web.archive.org/web/20100831041036/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-220354--,00.html.

²³⁷⁰ Press Release, Office of the Governor, Granholm Visits Eaton Corporation, Hails Galesburg Company's Work in Next Generation Batteries and Electric Vehicles (Aug. 27, 2009), http://web.archive.org/web/20100831040727/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-220892--,00.html.

develop a high-speed rail line between Pontiac, Detroit, and Chicago.²³⁷¹

In September 2009, the MGGRA governors decided to halt pursuit of a regional cap-and-trade program. Instead, the Midwestern Governors' Association released the Midwestern Energy Infrastructure Accord.²³⁷² The Accord focused on developing smart grid, carbon capture and sequestration, and biofuels in the Midwest. Also during this month, Governor Granholm announced that the former Ford Wixom Assembly plant would be transformed into a renewable energy park.²³⁷³ Companies located in this park received major economic incentives, including a photovoltaic tax credit valued at over \$25 million over two years and an advanced battery tax credit valued at \$100 million over four years.²³⁷⁴ In October, a new solar manufacturing facility owned by Suniva, Inc. opened in Saginaw County.²³⁷⁵

Also in October, in an effort to streamline the state government, Governor Granholm issued an EO abolishing the Department of Natural Resources and the Department of Environmental Quality and created the Department of Natural Resources and Environment in their place.²³⁷⁶

Governor Granholm announced that five small manufacturing firms in Michigan had been awarded \$15.5 million in ARRA funds to help them diversify into advanced manufacturing of renewable-energy systems and components.²³⁷⁷ The companies were chosen from nearly eighty that submitted applications requesting close to \$198 million to the DELEG. Astraeus Wind Energy, Inc. received \$7 million to manufacture large scale,

²³⁷¹ Press Release, Office of the Governor, Granholm Administration, Federal Leaders Working to Bring High-Speed Rail to Michigan (Aug. 24, 2009), http://web.archive.org/web/20100831040826/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-220465--,00.html.

²³⁷² MIDWESTERN GOVERNORS ASS'N, MIDWESTERN ENERGY INFRASTRUCTURE ACCORD (2009), <http://web.archive.org/web/20121017063837/http://www.midwesterngovernors.org/Publications/InfrastructureAccord.pdf>.

²³⁷³ Press Release, Office of the Governor, Granholm Hails Plans to Transform Former Wixom Assembly Plant into Renewable Energy Park, Creating Thousands of Green Jobs in Michigan (Sept. 10, 2009), http://web.archive.org/web/20100831041822/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-221573--,00.html.

²³⁷⁴ Press Release, Office of the Governor, Governor Granholm Announces Key Incentives to Move Wixom Project Forward (Oct. 6, 2009), http://web.archive.org/web/20100831042717/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-223667--,00.html.

²³⁷⁵ Press Release, Office of the Governor, Granholm Hails New Solar Manufacturing Facility, 500 New Jobs in Saginaw County (Oct. 6, 2009), http://web.archive.org/web/20100831042730/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-223664--,00.html.

²³⁷⁶ Press Release, Office of the Governor, Governor Granholm Issues Executive Order Creating New Department of Natural Resources and Environment (Oct. 8, 2009), http://web.archive.org/web/20100831042558/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-223864--,00.html.

²³⁷⁷ Press Release, Office of the Governor, Granholm Announces Clean Energy Advanced Manufacturing Awards that will Create, Retain 713 Jobs (Dec. 9, 2009), http://web.archive.org/web/20100831044055/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-227643--,00.html.

advanced-composite wind turbine blades and hub-related components; Energetx Composites, LLC received \$3.5 million to manufacture large scale, advanced-composite wind turbine blades; Loc Performance Products, Inc. received \$1.5 million to manufacture planetary gears and gearboxes for utility scale wind turbines; LUMA Resources, LLC received \$.5 million to manufacture products for the residential photovoltaic solar market; Merrill Technologies Group received \$3 million to manufacture large-scale, advanced-composite wind turbine blades and system components.²³⁷⁸

As of December 2009, Michigan had committed more than \$1 billion to help alternative- energy and advanced-battery companies, including \$700 million in advanced-energy battery credits, \$43 million in the innovative Centers of Energy Excellence program, and \$370 million in tax incentives to attract and grow renewable-energy companies.²³⁷⁹ In addition, ARRA funding had been awarded to a number of Michigan companies, including twelve projects which shared more than \$1.35 billion to support advanced-battery and electric-vehicle manufacturing and development; two projects focused on carbon capture and sequestration; three awards to expand smart-grid technology in Michigan; an alternative fuels vehicle pilot project; research in geothermal technologies; two grants to expand research of alternative fuels; and an \$18 million award to Alpena-based American Process, Inc. to accelerate production of the next generation of biofuels.²³⁸⁰

Also in December 2009, GM announced that it would invest \$336 million in its Detroit Hamtramck Assembly plant to begin producing the Chevrolet Volt, its new electric vehicle, in 2010.²³⁸¹ The Volt was designed to go up to 40 miles on electricity without using gasoline or producing tailpipe emissions. When the Volt's lithium-ion battery was depleted of energy, a small gasoline engine and generator operated to extend the total driving range to about 300 miles. At that time, GM had invested \$700 million in eight facilities in Michigan that are involved in Volt production.

Michigan's Weatherization Assistance Program (WAP) helps to reduce energy costs and improve energy efficiency in the homes of low-income families throughout the state. WAP works to permanently reduce energy costs for low-income families through the installation of household energy-efficiency measures. By late 2009, weatherization practices had reduced heating bills by 25% and overall energy expenditures by \$350 to \$400 per year on average.²³⁸² Also by that time, 273,620 Michigan homes had been

²³⁷⁸ *Id.*

²³⁷⁹ *Id.*

²³⁸⁰ *Id.*

²³⁸¹ Press Release, Office of the Governor, Governor Granholm Says Michigan's Green Economy Continues to Grow, Add Jobs (Dec. 11, 2010), http://web.archive.org/web/20100831044020/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-227818--,00.html.

²³⁸² Press Release, Office of the Governor, Governor Granholm Highlights Benefits of Home Weatherization Program for Michigan (Dec. 16, 2009), http://web.archive.org/web/20100831043835/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-228031--,00.html.

weatherized. An estimated \$243 million in ARRA funding would finance weatherization projects in more than 30,000 homes by 2012.²³⁸³

2010: Renewable Energy, Climate Change Memorandum of Understanding, Energy Efficiency, Green Jobs, Green Technology, and Transportation/Fuels

In early January 2010, President Obama announced that twelve Michigan companies would receive Advanced Energy Manufacturing Tax Credits totaling approximately \$242 million through ARRA.²³⁸⁴ The companies were Dow Chemical, Dow Corning, Energetx Composites, Great Lakes Industry, Guardian Industries, Hemlock Semiconductor, Ilumisys, Inc., Merrill Technologies Group, Rogers Foam Automotive, Stirling Energy Systems, United Solar Ovonic, and VenTower Industries. The companies were involved in various forms of clean energy manufacturing, such as making components for solar panels, wind turbines, and advanced batteries.²³⁸⁵ Michigan companies received more than 10% of the total tax credits awarded nationally at that time.²³⁸⁶

On January 11, 2010, Governor Granholm announced that Ford planned to invest an additional \$450 million in electrification initiatives in Michigan, including moving future battery pack assembly for hybrid vehicles from Mexico to Michigan.²³⁸⁷ The \$450 million brought Ford's total investment for electrification and new vehicle production in Michigan to approximately \$1 billion. The second phase of the project would include assembling the next-generation hybrid electric vehicle and plug-in hybrid with lithium-ion batteries at the Michigan assembly facility, producing the hybrid drive transmission for the company's global products, and manufacturing battery packs and engineering for Ford's hybrid vehicles.²³⁸⁸ The Phase II incremental job retention credits were approved, valued at \$110 million and battery pack tax credits valued at \$78 million, for a total incentive package valued at \$188 million, to help attract Ford's investment over competing countries, China, Europe, and Mexico.²³⁸⁹

Also in January 2010, the DOE announced that five Michigan companies would receive more than \$56.6 million in ARRA funding to develop and demonstrate new technologies to boost automotive fuel efficiency. The goal is to develop engine technologies and to improve the fuel economy of passenger vehicles by 25 to 40% by

²³⁸³ *Id.*

²³⁸⁴ Press Release, Office of the Governor, Governor Granholm Statement on Recovery Act-Funded Advanced Energy Tax Credits for Michigan Companies (Jan. 8, 2010), http://web.archive.org/web/20100830184600/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-229419--,00.html.

²³⁸⁵ *Id.*

²³⁸⁶ *Id.*

²³⁸⁷ Press Release, Office of the Governor, Granholm: Ford to Invest \$450 Million in Vehicle Electrification Initiatives in Michigan, Including Moving Battery Pack Assembly from Mexico (Jan. 11, 2010), http://web.archive.org/web/20100830184518/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-229491--,00.html.

²³⁸⁸ *Id.*

²³⁸⁹ *Id.*

2015.²³⁹⁰ Chrysler Group LLC, received \$14,458,572 to develop a flexible combustion system for their minivan platform based on a downsized, turbocharged engine that uses direct gasoline injection, recirculation of exhaust gases, and flexible intake air control to reduce emissions. Delphi Automotive Systems LLC received \$7,480,572 to develop a novel low-temperature combustion system, coupled with technologies such as continuously variable valve control and engine downsampling, to improve fuel economy by at least 25%. Ford Motor Company received \$15,000,000 to achieve a 25% fuel economy improvement with a gasoline engine in a 2010 mid to large-size sedan using technologies including engine downsizing, turbo-charging, direct injection, and a novel exhaust after-treatment system. General Motors Co. received \$7,705,862 to develop an engine that uses lean combustion and active heat management, as well as a novel emissions control system, to improve the fuel economy of a 2010 Malibu demonstration vehicle by 25%. Robert Bosch received \$11,953,786 to develop a high compression, turbo-charged engine based on homogenous charge compression ignition technology, which is a combustion technology that allows for lower emissions.²³⁹¹

Also in early 2010, Governor Granholm announced that Michigan received a \$5,819,999 federal grant to train more than 1,000 Michigan citizens and place them into jobs. DELEG in partnership with the State of Michigan Council for Labor and Economic Growth (CLEG) was awarded a State Energy Sector Partnership (SESP) and Training grant by the U.S. Department of Labor through ARRA. Regional Project Teams were organized around three industry sectors: Advanced Energy Storage, Solar Energy, and Energy Efficient Construction.²³⁹²

The U.S. Department of Transportation (DOT) awarded Michigan \$40 million in ARRA funded high-speed rail grants. The DOT awarded a total of \$244 million in high-speed rail grants to states comprising the Pontiac-Detroit-Chicago corridor. Michigan's portion would fund construction of a new building and platform at the Dearborn Amtrak Station, construction of a new platform and passenger service facilities at the Troy Amtrak Station, and renovation of the building and passenger service facilities at the Battle Creek Amtrak Station.²³⁹³

In February 2010, the DOE gave the Flint Center of Energy Excellence a \$951,500 grant to advance the production of biogas and biomethane. The project was a collaborative effort between Swedish Biogas International, the city of Flint, Kettering

²³⁹⁰ Press Release, Office of the Governor, Governor's Statement on U.S. Department of Energy Grants to Five Michigan Companies (Jan. 11, 2010), http://web.archive.org/web/20100830184445/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-229483--,00.html.

²³⁹¹ *Id.*

²³⁹² Press Release, Office of the Governor, Granholm Announces Nearly \$6 Million for Green Jobs Training (Jan. 15, 2010), http://web.archive.org/web/20100830184200/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-230048--,00.html.

²³⁹³ Press Release, Office of the Governor, Governor Granholm Statement on \$40 Million High-Speed Rail Grant Michigan Received from U.S. Department of Transportation (Jan. 28, 2010), http://web.archive.org/web/20100830184049/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-230788--,00.html.

University, and the Michigan Economic Development Corporation on a waste-to-energy/biomethane center at the city of Flint's wastewater treatment facility.²³⁹⁴ The grant's purpose was to fund applied research and development activities conducted by Kettering University to improve the availability and quality of biogas at the wastewater treatment facility and to explore opportunities for using biogas in transportation and power generation applications in Michigan.²³⁹⁵

Dow Chemical Company clean-energy expansions costing more than \$1 billion in wind, solar, advanced-battery manufacturing, and other projects were also announced in February 2010.²³⁹⁶ The company planned to invest \$952 million in future projects and leveraged an additional \$161 million from the DOE. The Michigan Strategic Fund (MSF) board approved a Centers of Energy Excellence designation and \$5 million grant for Dow to establish operations focused on cost-effective carbon-fiber materials for application in the wind-energy and transportation sectors.²³⁹⁷ The Oak Ridge National Laboratory (ORNL), a global leader in the development of new materials and processes for the manufacture of carbon fibers, planned to collaborate with Dow. With ORNL's participation, the DOE promised to provide a \$5 million match, and Dow agreed to contribute up to \$10 million of in-kind resources.²³⁹⁸

That same month, the Michigan Economic Growth Authority (MEGA) board approved, subject to finalizing local, state, and federal funding, a new job-creation state tax credit valued at \$61.3 million over fifteen years for Dow projects, which included a full-scale production facility in Midland for the company's DOW™ POWERHOUSE™ Solar Shingle.²³⁹⁹ The MEGA board also approved an advanced-battery tax credit valued at \$42 million to support Dow Kokam's advanced-battery manufacturing operations. The advanced-battery credit would support phase II of the project involving the manufacture of lithium ion packs. The company invested \$342 million in this phase of the project.²⁴⁰⁰

In March 2010, Ventower Industries invested \$22 million in a new 115,000 square foot wind tower manufacturing plant that would yield about 250 wind turbines a year starting in 2011.²⁴⁰¹ Ventower used a federal advanced energy manufacturing tax

²³⁹⁴ Press Release, Office of the Governor, Granholm Applauds U.S. Department of Energy Award to Flint Center of Energy Excellence (Feb. 18, 2010), http://web.archive.org/web/20100830184858/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-231900--,00.html.

²³⁹⁵ *Id.*

²³⁹⁶ Press Release, Office of the Governor, Granholm Hails Dow Plans for Billion Dollar Clean-Energy Expansions in Michigan (Feb. 25, 2010), http://web.archive.org/web/20100830184717/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-232298--,00.html.

²³⁹⁷ *Id.*

²³⁹⁸ *Id.*

²³⁹⁹ *Id.*

²⁴⁰⁰ *Id.*

²⁴⁰¹ Press Release, Office of the Governor, Governor Granholm Celebrates Groundbreaking for Ventower Wind Tower Manufacturing Plant in Monroe (Mar. 30, 2010), http://web.archive.org/web/20100830185323/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-234455--,00.html.

credit worth \$2.5 million funded by ARRA to help purchase equipment needed for tower manufacturing. The Michigan Economic Development Corporation (MEDC) supported a state employment credit worth up to \$3.7 million over ten years and a brownfield redevelopment credit worth up to \$5.8 million for the plant.²⁴⁰² Ventower planned to provide high-quality wind towers to its customers by using readily accessible water, rail, and truck modes of transportation in the Great Lakes region.

In April 2010, Governor Granholm announced that Michigan would receive a \$30 million ARRA grant to increase energy efficiency retrofits on Michigan homes, businesses, and public buildings for the Michigan Retrofit Ramp-Up Initiative (MRRI).²⁴⁰³ Program goals included identifying ways to increase demand for energy efficient buildings and technologies; building a skilled energy-efficiency workforce to meet the demand for these technologies; and assisting lenders in making investments in energy efficient retrofits for Michigan's residential, commercial, industrial, and public buildings.²⁴⁰⁴

Governor Granholm also announced in April 2010 that her administration would make an additional \$20 million available to small Michigan manufacturers looking to diversify, retool, and create jobs in clean energy. Michigan companies would compete for \$15 million in grants and \$5 million in loans through the Clean Energy Advanced Manufacturing (CEAM) initiative funded by ARRA.²⁴⁰⁵

In April 2010, the Michigan Strategic Fund Board approved \$3.5 million in funding for Energetx Composites, which will collaborate with ORNL and the Dow Chemical Company to manufacture wind turbine blades with advanced materials.²⁴⁰⁶ The project will receive \$3.5 million in matching funds from the DOE. CENER, the national renewable energy center located in the Navarra region, will work with Energetx to test wind turbine blades at a laboratory in Sanguesa, Spain.²⁴⁰⁷

In May 2010, Michigan formed a partnership by signing a MOU with the government of Navarra, Spain, to work collaboratively with leading industry experts, including the Michigan-based wind turbine manufacturer Energetx Composites, to develop green technology.²⁴⁰⁸ The MOU included joint activities – such as policy

²⁴⁰² *Id.*

²⁴⁰³ Press Release, Office of the Governor, Governor Granholm's Statement on Michigan's \$30 Million Recovery Act Grant to Ramp up Energy Efficiency in Michigan (Apr. 21, 2010), http://web.archive.org/web/20100831024127/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-235784--,00.html.

²⁴⁰⁴ *Id.*

²⁴⁰⁵ Press Release, Office of the Governor, Governor Granholm Announces \$20 Million for Clean-Energy Manufacturing Projects (Apr. 21, 2010), http://web.archive.org/web/20100830190552/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-235751--,00.html.

²⁴⁰⁶ *Id.*

²⁴⁰⁷ *Id.*

²⁴⁰⁸ Press Release, Office of the Governor, Governor Granholm Announces Renewable Energy Partnership with Government of Navarra, Spain (May 26, 2010),

sharing, technology transfer, value-chain mapping and trade missions – in the targeted sectors of wind technology, biomass, solar energy, smart-grid technology, and bio-climactic research.²⁴⁰⁹

In June 2010, Governor Granholm announced that Michigan achieved a 22% reduction in energy use at state facilities during the Fiscal Year (FY) 2010 compared to FY 2002, which decreased the state's utility costs by \$30 million.²⁴¹⁰ She also noted that the state government reduced its carbon footprint by the equivalent of 136,000 metric tons of carbon dioxide in 2009. This equates to the removal of 25,000 automobiles from the roads for one year, or powering and heating over 12,500 households. The Department of Technology, Management and Budget projects that cut energy usage included: turning lights and computers off when not in use; reducing lighting, heating, and cooling hours; replacing high-energy CRT computer monitors with energy-efficient LCD monitors in many offices; using more environmentally-friendly cleaning products and paints; performing steam trap audits and repairs to help prevent the loss of energy; eliminating space and leases through building consolidations; installing software that integrates building heating, ventilation, and air conditioning systems, lighting control, elevator monitoring, energy management, and metering to a common control platform; promoting environmentally-sound purchasing, use, reuse, and recycling of materials among state vendors; installing occupancy sensors in most facilities to turn off lights when no one is present; retrofitting and replacing fluorescent lighting to more energy efficient T8 (20% more efficient) and T5 (30% more efficient) lamps where applicable; upgrading elevators to be smart elevators, which go to sleep when not in use and operate using minimal energy; replacing multiple air handling systems with fewer, larger, more efficient systems to reduce horsepower requirements for electric motors; installing LED lighting technology in various buildings; and utilizing solar voltaic technology as an electric power source.²⁴¹¹

In late June 2010, nine small Michigan manufacturers shared \$20 million in clean energy advanced manufacturing grants and loans from ARRA in the field of clean energy to further reduce the state's reliance on fossil fuels.²⁴¹²

In July 2010, Governor Granholm again highlighted Michigan's long-term advanced automotive battery strategy including two incentive programs. The first was the Centers of Energy Excellence Program, which granted money to for-profit businesses in conjunction with at least one institution of higher learning and a national lab to

http://web.archive.org/web/20100831024553/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-237630--,00.html.

²⁴⁰⁹ *Id.*

²⁴¹⁰ Press Release, Dep't of Licensing and Regulatory Affairs, Governor Granholm Says State Government Energy Savings Almost \$90 Million Since 2002 (June 16, 2010), <http://michigan.gov/lara/0,4601,7-154-10401-238811--,00.html>.

²⁴¹¹ *Id.*

²⁴¹² Press Release, Michigan.gov, Governor Granholm Says Grants Boost Clean Energy Advanced Manufacturing in Michigan (June 25, 2010), <http://www.michigan.gov/energy/0,1607,7-230-54278-239401--,00.html>.

develop, accelerate and sustain new energy sectors of the Michigan economy.²⁴¹³ The second was the Advanced Battery Credits Program, which gave tax credits for advanced battery research and development and engineering, pack manufacturing, and cell manufacturing.²⁴¹⁴

In September 2010, Ford Transit Connect Electric Van completed production of the first vans at Azure Dynamics' Oak Park facility.²⁴¹⁵ The Ford Transit Connect is powered by Azure's Force Drive electric powertrain, which uses an advanced lithium-ion battery. The Ford Transit Connect can achieve a range of up to 80 miles on a single charge and has a top speed of 75 miles per hour. The battery is rechargeable using either a 240-volt or standard 120-volt outlet.²⁴¹⁶

On December 7, 2010, Governor Granholm announced a power-purchase agreement for wind energy, which would also include the first large-scale production of wind turbines fully produced in Michigan. The agreement was aimed to help Michigan meet its goal of obtaining 10% of its energy from renewable sources by 2015.²⁴¹⁷

2011: Renewable Energy and Energy Efficiency

The DELEG Bureau of Energy Systems offered low-interest loans of up to \$15,000 to farmers in order to help them implement energy efficiency and renewable energy projects recommended by the Michigan Farm Energy Audit Program. Loan applications were accepted from February through April 2011. Selected participants were required to first conduct a Farm Energy Audit, after which the owners were able to choose from a range of recommendations to implement.²⁴¹⁸

In addition to the farm grants, DELEG also offered up to \$2 million in low-interest loans to small businesses with 500 employees or less, in order to help them diversify into high-growth clean energy sectors, including sectors such as smart grid

²⁴¹³ Press Release, Office of the Governor, Governor Granholm to National Advanced Battery Conference: Michigan Poised to Become Advanced Battery Capital of the World (July 27, 2010), http://web.archive.org/web/20100831025909/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-241275--,00.html.

²⁴¹⁴ *Id.*

²⁴¹⁵ Press Release, Office of the Governor, Governor Granholm Hails Collaborative Effort to Produce Ford's New Transit Connect Electric Van (Sept. 22, 2010), http://web.archive.org/web/20101011175540/http://www.michigan.gov/gov/0,1607,7-168-23442_21974-243895--,00.html.

²⁴¹⁶ *Id.*

²⁴¹⁷ Press Release, Dep't of Licensing and Regulatory Affairs, Governor Announces First Large-Scale Michigan Wind Turbine Manufacturing (Dec. 7, 2010), <http://www.michigan.gov/lara/0,4601,7-154--248100--,00.html>.

²⁴¹⁸ Press Release, Michigan.gov, DELEG Offers Low-Interest Loans to Family Farms to Implement Farm Energy Audit Recommendations (Feb. 15, 2011), <http://www.michigan.gov/energy/0,1607,7-230-54278-251594--,00.html>.

systems and water heating and pumping systems. The applications were also accepted from February through April 2011.²⁴¹⁹

In February 2011, DELEG announced that energy efficiency improvements would be undertaken at three Michigan correctional facilities, which would save the state \$1.7 million per year over the next ten years.²⁴²⁰

2012: Renewable Energy

In March 2012, Michigan signed a MOU with several other Great Lakes States and federal agencies regarding offshore wind energy.²⁴²¹ The MOU required regulatory agencies to disclose and share their current regulatory regimes for offshore wind projects to facilitate coordination.²⁴²² Governor Snyder highlighted the agreement as supporting the work of researchers at Michigan's universities.²⁴²³

Governor Snyder described his vision for the state's energy policy in a speech at the W. K. Kellogg Biological Station.²⁴²⁴ He highlighted the need for reliability, affordability, and environmental protection.

2013: Renewable Energy

On July 1, 2013 Governor Snyder signed SB 284, which is designed to create a fund for low-income energy assistance in the state, into law.²⁴²⁵ This Bill created the Low Income Energy Assistance Fund (LIEAF) and authorized the "Public Service Commission to raise up to \$50 million for low income energy assistance in Michigan."²⁴²⁶ An additional \$10 million from federal funds for heating assistance was placed into LIEAF to ensure the program could reach Michiganders statewide. LIEAF replaces the Vulnerable Household Warmth Fund, which expired in 2012.

MINNESOTA

1992: Renewable Energy

²⁴¹⁹ Press Release, Michigan.gov, DELEG Accepting Applications for Low-Interest Loans up to \$2 Million for Small Businesses to Invest in Advanced Manufacturing of Energy Systems (Feb. 15, 2011), <http://www.michigan.gov/energy/0,1607,7-230-54278-251595--,00.html>.

²⁴²⁰ Press Release, Michigan.gov, DELEG Announces Energy Efficiency Improvements at Three Correctional Facilities to Save State \$1.7 Million a Year (Feb. 15, 2011), <http://www.michigan.gov/energy/0,1607,7-230-54278-251540--,00.html>.

²⁴²¹ Press Release, Michigan.gov, Michigan Enters Multistate Agreement Regarding Offshore Wind Energy (Mar. 30, 2012), http://www.michigan.gov/snyder/0,4668,7-277-57577_57657-274875--,00.html.

²⁴²² *Id.*

²⁴²³ *Id.*

²⁴²⁴ Press Release, Michigan.gov, Snyder Says Adaptability Key to State's Energy, Environmental Future (Nov. 28, 2012), http://web.archive.org/web/20121221195525/http://www.michigan.gov/snyder/0,4668,7-277-57577_57657-290510--,00.html.

²⁴²⁵ Press Release, Michigan.gov, Snyder Signs Low Income Energy Assistance Legislation (July 1, 2013), <http://www.michigan.gov/snyder/0,4668,7-277--307261--RSS,00.html>.

²⁴²⁶ S.B. 284, 97th Leg., Reg. Sess. (Mich. 2013).

For over a decade, Minnesota has offered tax exemptions designed to promote alternative power sources. For example, in 1992, Minnesota began offering a property tax exemption for value increases attributed to the addition of a solar-electric generator.²⁴²⁷

1994: Renewable Energy and Market-Based Solutions

The Value-Added Stock Loan Participation Program has, since 1994, offered Minnesota's low-interest loans to buy wind or anaerobic-digestion power generators.²⁴²⁸ Minnesota's Rural Finance Authority offers a low 4% interest rate for 45% of each loan provided by participating Minnesotan financial institutions.²⁴²⁹

1998: Renewable Energy

Since 1998, wind power generators have also been exempt from Minnesota's sales tax.²⁴³⁰

2001: Renewable Energy

In 2001, Minnesota passed legislation requiring the state's electric utilities provide their customers an option to buy power created by renewable energy generators.²⁴³¹ The law also provided a non-binding deadline of 2015 for utilities to obtain 10% of their power from renewable energy generators.²⁴³² It required that, by 2005, 1% of energy produced by utilities should be from a renewable power source; for each subsequent year until 2015, the law mandates utilities to increase their reliance on renewable energy by 1%.²⁴³³

2002: Renewable Energy and Market-Based Solutions

By order of Minnesota's Public Utilities Commission in 2002, all utilities regulated in Minnesota must biannually disclose data on fuel mix and emissions to their customers.²⁴³⁴ The data must be available to customers by phone, internet, and brochure with: (1) a pie chart of the fuel sources; (2) a bar chart of air pollutant emissions; and (3) a chart comparing the costs of different power generation systems.²⁴³⁵

²⁴²⁷ MINN. STAT. ANN. § 272.02 (West 2006).

²⁴²⁸ *Id.* § 41B.046.

²⁴²⁹ *Id.*

²⁴³⁰ *Id.* § 297A.68.

²⁴³¹ *Id.* § 216B.169.

²⁴³² *Id.*

²⁴³³ *Id.* § 216B.1691.

²⁴³⁴ *Investigation into Disclosure of Environmental Information to Utility Customers*, Minn. Pub. Util. Comm'n § E,G-999/CI-00-1343 (June 6, 2002). See MINN. STAT. ANN. § 216A, B (West 2006) (empowering the Public Utility Commission).

²⁴³⁵ *Id.*

Since 2002 wind-energy systems have been subject only to a production tax varying by locality, but not Minnesota's property tax.²⁴³⁶

2003: Climate Change Adaptation

The Minnesota Pollution Control Agency developed a climate change action plan for the state in February 2003.²⁴³⁷

2004: Renewable Energy

Since 2004, Minnesota's Department of Commerce has offered all Minnesotans rebates of \$2,000 per kilowatt (KW) for the up-front costs of grid-connected solar-electric generators.²⁴³⁸ The rebates were available until 2008 or when the funds for the program expired.²⁴³⁹ As for wind power, until 2017, Minnesota will pay energy providers 1.5¢ for every kilowatt-hour of energy produced, from a minimum of two megawatts (MW) to a maximum of 200 MWs.²⁴⁴⁰

2005: Market-Based Solutions

Since August 2005, solar energy systems in Minnesota have been exempt from the sales tax.²⁴⁴¹

2006: Renewable Energy and Transportation/Fuels

In 2006, Minnesota required that any plans for the construction or large renovation of any state-owned buildings must incorporate alternative energy power sources.²⁴⁴² The state also adopted a mandate requiring that all diesel fuel contain two percent biodiesel.²⁴⁴³

²⁴³⁶ *Id.* § 272.028.

²⁴³⁷ MINN. POLLUTION CONTROL AGENCY, MINN. CLIMATE CHANGE ACTION PLAN: A FRAMEWORK FOR CLIMATE CHANGE ACTION (2003), <http://web.archive.org/web/20060114004616/http://www.pca.state.mn.us/publications/reports/mnclimate-action-plan.pdf>.

²⁴³⁸ Mike Taylor & Niels Wolter, *A Tale of Two States: Small Solar Rebates—Steady Success*, MINN. DEP'T OF COMMERCE (Feb. & Mar. 2006), http://web.archive.org/web/20060607101728/http://www.state.mn.us/mn/externalDocs/Commerce/Small_solar_rebate_success_013006125450_midwestsolarrebates.pdf. See MINN. STAT. ANN. § 216B.241 (West 2006) (empowering the Department of Commerce).

²⁴³⁹ *Id.*

²⁴⁴⁰ MINN. STAT. ANN. § 216C.41 (West 2006).

²⁴⁴¹ *Id.* § 297A.67.

²⁴⁴² MINN. STAT. ANN. § 16B.32 (West 2006).

²⁴⁴³ *Id.* §§ 239.77, 239.771.

In December 2006, Governor Pawlenty introduced his Next Generation Energy Initiative, a collection of climate change policies to expand the state's renewable energy requirements, increase energy conservation, and decrease carbon emissions.²⁴⁴⁴

2007: Renewable Energy, Climate Change Agreements, and Greenhouse Gas Reduction

Subsequently in February 2007, Governor Pawlenty signed a bill requiring 25% of the state's power to come from renewable energy sources by 2025.²⁴⁴⁵ The state's largest energy supplier, Xcel Energy, must generate 30% of its power from renewables by 2020.²⁴⁴⁶

In April 2007, Governor Pawlenty established the Minnesota Climate Change Advisory Group (MCCAG), a component of his Energy Initiative.²⁴⁴⁷ Composed of representatives from business, utility, environmental, academic, and religious organizations, as well as private citizens, farmers, local government, and tribal leaders, the MCCAG was tasked with constructing a plan to decrease Minnesota's greenhouse gas (GHG) emissions.²⁴⁴⁸

In May 2007, Governor Pawlenty signed into law the Next Generation Energy Act of 2007 to "increase energy efficiency, expand community based energy development, and establish a statewide goal to reduce greenhouse gas emissions."²⁴⁴⁹ In particular, the Act set a goal of 1,000 commercial Energy Star Buildings in Minnesota by 2010 and provided adequate funding to achieve the goal, established statewide GHG reduction goals of 15% by 2015, 30% by 2025, and 80% by 2050, and endorsed the Governor's MCCAG as the entity to develop a comprehensive GHG emission reduction plan to meet those goals.²⁴⁵⁰

Also in May 2007, Minnesota and thirty other states founded The Climate Registry to "measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors." It was viewed as a "critical first step in developing robust programs to reduce greenhouse gas

²⁴⁴⁴ Press Release, Minn. Office of the Governor, Governor Pawlenty Introduces Next Generation Energy Initiative (Dec. 12, 2006), <http://web.archive.org/web/20071109113927/http://www.governor.state.mn.us/mediacenter/pressreleases/2006/december/PROD007863.html>.

²⁴⁴⁵ S. File 4, 85th Leg., Reg. Sess. (Minn. 2007).

²⁴⁴⁶ *Id.*

²⁴⁴⁷ Press Release, Minn. Office of the Governor, Governor Pawlenty Announces Climate Change Advisory Group (Apr. 20, 2007), <http://www.leg.state.mn.us/docs/2010/other/101582/www.governor.state.mn.us/mediacenter/pressreleases/2007/PROD008090.html>.

²⁴⁴⁸ *Id.*

²⁴⁴⁹ Press Release, Minn. Office of the Governor, Pawlenty Signs Next Generation Energy Act (May 25, 2007), <http://web.archive.org/web/20080107025500/http://www.governor.state.mn.us/mediacenter/pressreleases/PROD008146.html>; see S. File 145, 85th Leg., Reg. Sess. (Minn. 2007).

²⁴⁵⁰ S. File 145, 85th Leg., Reg. Sess. (Minn. 2007).

emissions.”²⁴⁵¹

On November 15, 2007, Governor Pawlenty joined the governors of Illinois, Iowa, Kansas, Michigan, and Wisconsin, as well as the Premier of the Canadian Province of Manitoba in signing and establishing the Midwestern Regional Greenhouse Gas Reduction Accord (MGGRA) in order to reduce GHG emissions and achieve energy security.²⁴⁵² Signed at the Midwestern Governors Association Energy Security and Climate Change Summit held in Milwaukee, Wisconsin, MGGRA aimed to establish GHG emission targets, including a 60 to 80% reduction in emissions, create a market-based, multi-sector cap-and-trade system, and create a tracking and crediting system.²⁴⁵³ The MGGRA’s final model rule was released in April 2010; however, although the MGGRA has not been formally suspended, participating states are no longer formally pursuing it.²⁴⁵⁴

Also at the Summit, Minnesota, Illinois, Iowa, Kansas, Michigan, Wisconsin, Nebraska, and North Dakota adopted an Energy Security and Climate Stewardship Platform.²⁴⁵⁵ The Platform’s goals for the Midwest include promoting: energy efficiency, advances in biobased products, electricity production from renewables, and advanced coal and carbon capture and storage.²⁴⁵⁶ Platform members also signed cooperative regional initiatives to create a Carbon Management Infrastructure Partnership, a bioproduct procurement program, electricity transmission adequacy for new wind energy, renewable fuels corridors, advanced bioenergy permitting, and low-carbon energy transmission infrastructure.²⁴⁵⁷

2008: Renewable Energy

On January 17, 2008, Governor Pawlenty signed an Executive Order (EO) creating the Minnesota Office of Energy Security within the Minnesota Department of Commerce.²⁴⁵⁸ The Office of Energy Security aims to give the public better access to energy information and technical assistance, and the director is tasked with coordinating energy and climate issues throughout the administration.²⁴⁵⁹ On the same day, Pawlenty

²⁴⁵¹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20080309011530/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

²⁴⁵² MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, MIDWESTERN GREENHOUSE GAS ACCORD (2007), <http://web.archive.org/web/20100701064654/http://www.wisgov.state.wi.us/docview.asp?docid=12497>.

²⁴⁵³ *Id.*

²⁴⁵⁴ *Id.*

²⁴⁵⁵ MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, ENERGY SECURITY AND CLIMATE STEWARDSHIP PLATFORM FOR THE MIDWEST (2007), <http://web.archive.org/web/20130312081343/http://www.midwesterngovernors.org/resolutions/Platform.pdf>.

²⁴⁵⁶ *Id.*

²⁴⁵⁷ *Id.*

²⁴⁵⁸ Minn. Exec. Order No. 03 (2008).

²⁴⁵⁹ *Id.*

created the Clean Energy Technology Collaborative (CETC) by an EO.²⁴⁶⁰ This group of fifteen appointed members was tasked with developing a Clean Energy Technology Roadmap to guide research and development and set goals.²⁴⁶¹ Among those goals are the “25 x 25” renewable energy standard that requires 25% of the state’s energy to come from renewable sources by 2025.²⁴⁶² CETC members include scientists from industry and academia.²⁴⁶³

On November 6, 2008, Governor Pawlenty announced Michigan’s Next Generation Energy Board would issue close to \$3 million in grant funding to a total of eight projects, including proposals involving “cellulosic ethanol production, an anaerobic digester technology for hog manure, and using turfgrass to produce electricity.”²⁴⁶⁴

2009: Greenhouse Gas Reduction, American Recovery & Reinvestment Act, Green Jobs, Cap-&-Trade, Renewable Energy, and Climate Change Agreements

In January 2009, the Advisory Group to the MGGRA released preliminary trade design recommendations.²⁴⁶⁵ The group recommended that carbon dioxide, nitrous oxide, hydro-fluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions be reduced 15 to 25% below 2005 levels by 2020 and 60 to 80% below 2005 levels by 2050. It also recommended that the following sources be subject to these reductions: power plants, industrial facilities, industrial combustion sources, industrial process sources, and transportation fuels.²⁴⁶⁶ It further recommended that an offset component be incorporated in the program and that allowance value be used only for climate-related purposes by participating states.²⁴⁶⁷ However, the Group refused to comment on whether allowances should be auctioned or allocated, maintaining that this decision must be made by each state.²⁴⁶⁸

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Minnesota was eligible for \$54,172,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).²⁴⁶⁹

²⁴⁶⁰ Minn. Exec. Order No. 04 (2008).

²⁴⁶¹ *Id.*

²⁴⁶² *Id.*

²⁴⁶³ *Id.*

²⁴⁶⁴ Press Release, Minn. Officer of the Governor, Governor Pawlenty Announces Next Generation Energy Grants to Accelerate Biofuel Development (Nov. 6, 2008), <http://www.leg.state.mn.us/docs/2010/other/101582/www.governor.state.mn.us/mediacenter/pressreleases/2008/PROD009185.html>.

²⁴⁶⁵ *GHG Reduction Accord Meeting Materials*, MIDWEST GREENHOUSE GAS REDUCTION ACCORD, http://web.archive.org/web/20090506002613/http://midwesternaccord.org/Meeting%20material%20pages/GHG-meeting-8_109.html (Nov. 21, 2013).

²⁴⁶⁶ *Background on Midwestern Greenhouse Gas Reduction Accord: Draft Final Recommendations of the Advisory Group*, GREENHOUSE GAS REDUCTION ADVISORY GROUP, at 2, http://web.archive.org/web/20100713112321/http://www.ef.org/documents/Accord_Draft_Final.pdf (Nov. 15, 2013).

²⁴⁶⁷ *Id.* at 3.

²⁴⁶⁸ *Id.*

²⁴⁶⁹ U.S. DEP’T OF ENERGY, NAT’L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

According to the Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for Minnesota, Minnesota's clean energy economy grew by 19,994 jobs and 1,206 businesses from 1998 to 2007.²⁴⁷⁰ Between 2006 and 2009, Minnesota attracted nearly \$50 million in capital investment in clean energy.²⁴⁷¹

In June 2009, the MGGRA's Advisory Group released its final recommendations for a regional cap-and-trade program to the participating governors.²⁴⁷² The committee advised that a federal program was preferable to a regional one but that MGGRA should continue developing a program until federal legislation passed. The Advisory Group recommended targets of 18 to 20% below 2005 emissions levels by 2020 and 80% below by 2050.²⁴⁷³ On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the Western Climate Initiative (WCI), and MGGRA met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.²⁴⁷⁴

In October 2009, the Midwestern Governors Association, in which Minnesota participates, issued the Midwestern Energy Infrastructure Accord, which included agreements by Midwestern governors to expand transmission capacity, adopt smart grid technologies, build new pipelines for biofuels and for the capture and storage of carbon dioxide, and deploy a refueling system for biofuels and other low-carbon transportation fuels.²⁴⁷⁵ The report set renewable energy goals at 10% by 2015 and 30% by 2030.²⁴⁷⁶

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.²⁴⁷⁷ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.²⁴⁷⁸ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create

²⁴⁷⁰ *Clean Energy Economy*, THE PEW CHARITABLE TRUSTS, (May 8, 2009), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

²⁴⁷¹ *Id.*

²⁴⁷² *Background on Midwestern Greenhouse Gas Reduction Accord: Draft Final Recommendations of the Advisory Group*, GREENHOUSE GAS REDUCTION ADVISORY GROUP, http://web.archive.org/web/20100713112321/http://www.ef.org/documents/Accord_Draft_Final.pdf (Nov. 15, 2013).

²⁴⁷³ *Id.*

²⁴⁷⁴ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

²⁴⁷⁵ *See generally*, Press Release, Midwestern Governors' Ass'n, MGA Jobs and Energy Forum Wraps Up; Releases Jobs Platform and Energy Infrastructure Accord (Oct. 9, 2009).

²⁴⁷⁶ *Id.*

²⁴⁷⁷ *See* NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

²⁴⁷⁸ *See Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

economic opportunities.”²⁴⁷⁹ North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.²⁴⁸⁰

2010: Energy Efficiency and Renewable Energy

In August 2010, the Minnesota Department of Commerce’s Office of Energy Security received an additional \$6 million through ARRA in order to continue its weatherization program.²⁴⁸¹ The funds would be distributed to seven weatherization companies, in a continued effort to make buildings more energy efficient through measures such as installing solar heating systems.²⁴⁸²

Minnesota had a record number of solar electric installations in 2010, with a 55% increase in installations from the beginning of the year in large part due to rebates and incentives provided through ARRA grants.²⁴⁸³

2011: Energy Efficiency and Greenhouse Gas Reduction

On April 8, 2011, Governor Dayton signed three executive orders, EO 11-12, EO 11-13, and EO 11-14, which collectively created a comprehensive energy conservation and sustainability action plan for state government.²⁴⁸⁴ EO 11-12²⁴⁸⁵ set a goal of reducing Minnesota’s energy consumption by 20% and directed state agencies to implement energy and cost-saving improvements to state facilities.²⁴⁸⁶ EO 11-13²⁴⁸⁷ directed state agencies to implement practices and policies that reduce the environmental impact of their operations and save money.²⁴⁸⁸ EO 11-14²⁴⁸⁹ renamed the Office of

²⁴⁷⁹ NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

²⁴⁸⁰ *See id.*

²⁴⁸¹ Press Release, Minn. Dep’t of Commerce, Seven Minnesota Weatherization Programs Receive Additional Funds (Aug. 24, 2010), <http://mn.gov/commerce/media/newsdetail.jsp?id=206-31059>.

²⁴⁸² *Id.*

²⁴⁸³ Press Release, Minn. Dep’t of Commerce, Solar Electric Systems Achieve Record Numbers in Minnesota, (Nov. 4, 2010), <http://mn.gov/commerce/media/newsdetail.jsp?id=206-31057>.

²⁴⁸⁴ Press Release, Office of Governor, Dayton Signs Executive Orders that Create Comprehensive Energy Savings Plan for State Government (Apr. 8, 2011), <http://mn.gov/governor/newsroom/pressreleasedetail.jsp?id=102-10423>.

²⁴⁸⁵ Minn. Exec. Order No. 11-12 (2011).

²⁴⁸⁶ Press Release, Office of Governor, Dayton Signs Executive Orders that Create Comprehensive Energy Savings Plan for State Government (Apr. 8, 2011), <http://mn.gov/governor/newsroom/pressreleasedetail.jsp?id=102-10423>.

²⁴⁸⁷ Minn. Exec. Order No. 11-13 (2011).

²⁴⁸⁸ Press Release, Office of Governor, Dayton Signs Executive Orders that Create Comprehensive Energy Savings Plan for State Government (Apr. 8, 2011), <http://mn.gov/governor/newsroom/pressreleasedetail.jsp?id=102-10423>.

²⁴⁸⁹ Minn. Exec. Order 11-14 (2011).

Energy Security the Department of Energy Resources, thus reflecting its broader scope.²⁴⁹⁰

In June 2011, the Minnesota Department of Commerce Division of Energy Resources released a report showing that in 2008-2009, conservation investments by electric and natural gas utilities resulted in energy savings that translated into 1.3 million tons of annual avoided carbon dioxide emissions.²⁴⁹¹ These emissions were equivalent to the emissions of about 260,000 automobiles over the course of a year.²⁴⁹²

Minnesota's ARRA-funded Weatherization Assistance Program exceeded its goal of weatherizing 16,858 homes by March 2012, announcing in August 2011 that 17,153 homes had been weatherized to date with funds remaining for another 2,000-2,500 homes.²⁴⁹³

2012: Climate Change Memorandum of Understanding, Green Jobs, Energy Efficiency, and Renewable Energy

In March 2012, Minnesota signed a memorandum of understanding (MOU) with several other Great Lakes States and federal agencies regarding offshore wind energy.²⁴⁹⁴ The MOU requires regulatory agencies to disclose and share their current regulatory regimes for offshore wind projects to facilitate coordination.²⁴⁹⁵

As part of efforts to strengthen rural economies and improve energy efficiency, Minnesota trained thirteen farm energy auditors between November 2011 and March 2012.²⁴⁹⁶

On August 3, 2012, Minnesota announced the launch of a new effort to identify ways to streamline the permitting process for solar energy installations.²⁴⁹⁷ The initiative will be led by a partnership known as the Minnesota Solar Challenge.

2013: Renewable Energy and Renewable Portfolio Standard

²⁴⁹⁰ Press Release, Office of Governor, Dayton Signs Executive Orders that Create Comprehensive Energy Savings Plan for State Government (Apr. 8, 2011), <http://mn.gov/governor/newsroom/pressreleasedetail.jsp?id=102-10423>.

²⁴⁹¹ Press Release, Minn. Dep't of Commerce, Utility, Energy Conservation Net Big Savings in 2008-2009 (June 21, 2011), <http://mn.gov/commerce/energy/media/newsdetail.jsp?id=207-30989>.

²⁴⁹² *Id.*

²⁴⁹³ Press Release, Minn. Dep't of Commerce, Minnesota Weatherization Assistance Program Weatherizes More Than 17,000 Homes (Aug. 24, 2011), <http://mn.gov/commerce/energy/media/newsdetail.jsp?id=207-30988>.

²⁴⁹⁴ Press Release, Minn. Dep't of Commerce, Minnesota Joins Regional Effort to Capture Wind Power in Great Lakes (Mar. 30, 2012), <http://mn.gov/commerce/energy/media/newsdetail.jsp?id=207-38036>.

²⁴⁹⁵ *Id.*

²⁴⁹⁶ Press Release, Minn. Dep't of Commerce, Energy Auditor Training Primes Minnesota Farms for Energy Efficiency (May 2, 2012), <http://mn.gov/commerce/energy/media/newsdetail.jsp?id=207-40710>.

²⁴⁹⁷ Press Release, Minn. Dep't of Commerce, Minnesota Exploring Ways to Cut Red Tape for Solar Installations, Streamline Permitting Process (Aug. 3, 2012), <http://mn.gov/commerce/energy/media/newsdetail.jsp?id=207-45645>.

In January 2013 the Minnesota Department of Commerce, Energy Resources Division announced that new solar electric installations tripled in capacity in Minnesota in 2012 as compared to 2011.²⁴⁹⁸ In 2012 “299 solar electric, or solar photovoltaic (PV), systems with a capacity of 4,844 kilowatts (kW) were installed in businesses, residences and nonprofit organizations. The 299 systems...greatly exceed the 164 installations and 1,771 kW in 2011.”²⁴⁹⁹

On May 23, 2013 Governor Dayton signed H.F. 729 entitled, *Made in Minnesota Solar Energy Production Incentive*, into law.²⁵⁰⁰ Beginning in January 2014 the Department of Commerce will administer a productive incentive requiring that “systems must be less than 40 kW-DC and be certified as ‘Made in Minnesota...The incentive rate must be set by the Commissioner of Commerce, and will be recalculated annually for new contracts.”²⁵⁰¹ Additionally, each contract is for a ten-year term and the Renewable Energy Credits (RECs) are transferred to the utility.

On May 24, 2013 Governor Dayton passed the omnibus energy bill, which requires all utilities in the state to procure 1.5% of their electricity from solar generation by 2020 and increased Minnesota’s Renewable Portfolio Standard (RPS) to 26.5% by 2025.²⁵⁰²

2014: Renewable Energy

On January 30, 2014 the Minnesota Department of Commerce announced that the state will receive an additional \$15,814,434 in federal Low-Income Home Energy Assistance Program (LIHEAP) funds for their Energy Assistance Program. The LIHEAP program helps “low-income homeowners and renters pay heating bills through grant money paid directly to utility companies and heating fuel vendors on behalf of customers.”²⁵⁰³

On February 3, 2014 Minnesota announced that due to their Made in Minnesota Solar Incentive Program, the cost to install a solar energy system will be much more

²⁴⁹⁸ Press Release, Minn. Dep’t of Commerce, Minnesota Solar Electric Installations Achieve Strong Growth (Jan. 15, 2013), <http://mn.gov/commerce/energy/media/newsdetail.jsp?id=207-52969>.

²⁴⁹⁹ *Id.*

²⁵⁰⁰ H.F. 729, 88th Leg., Reg. Sess. (Minn. 2013);

<https://www.revisor.mn.gov/laws/?doctype=Chapter&year=2013&type=0&id=85>.

²⁵⁰¹ *Made in Minnesota Solar Energy Production Incentive*, DATABASE OF STATE INITIATIVES FOR RENEWABLES & EFFICIENCY (Dec. 13, 2013), http://dsireusa.org/incentives/incentive.cfm?Incentive_Code=MN175F&re=0&ee=0.

²⁵⁰² H. File 956, 88th Leg., Reg. Sess. (Minn. 2013);

https://www.revisor.mn.gov/bills/text.php?session=ls88&number=HF956&session_number=0&session_year=2013&version=list.

²⁵⁰³ Press Release, Minn. Dep’t of Commerce, Commerce Commissioner Announces \$15,814,434 in Additional LIHEAP Funds to Help Minnesota Consumers Stay Warm this Winter (Jan. 30, 2014), <http://mn.gov/commerce/energy/media/newsdetail.jsp?id=207-113339>.

affordable.²⁵⁰⁴ The Program allows “customers of investor-owned utilities (Xcel Energy, Alliant Energy, Minnesota Power, and Otter Tail Power) who install solar modules or collectors certified as manufactured in Minnesota are eligible for the program.”²⁵⁰⁵ Applications for Solar Electric Production Incentives and Solar Thermal Rebates will be accepted each year for 10 years from January 1 to February 28.

MISSISSIPPI

2006: Renewable Energy

Mississippi offers low-interest loans for renewable energy and energy efficiency projects through its Energy Development Fund.²⁵⁰⁶ Eligible renewable energy technologies include solar, cogeneration projects, energy recovering systems, and wind power generators.²⁵⁰⁷ All projects must demonstrate that they will reduce a facility’s energy costs.²⁵⁰⁸ The interest rate is 2% below the prime rate, with a maximum loan term of ten years and loans are awarded in amounts not to exceed \$500,000 per business.²⁵⁰⁹ This program is supported by a revolving loan fund of \$7 million, established through federal oil overcharge funds.²⁵¹⁰

Mississippi’s Commissioner of Agriculture and Commerce is authorized to make cash payments to producers of ethanol and bio-diesel in the amount of 1.5¢ for each kilowatt-hour of electricity generated using biomass in a cogeneration facility at an ethanol plant located in the state.²⁵¹¹

2009: American Recovery & Reinvestment Act (ARRA), Cap-&-Trade, and Market-Based Solutions

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Mississippi was eligible for \$40,418,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).²⁵¹² In response to this funding, Governor Barbour sought proposals for project ideas for increasing energy efficiency and conservation.²⁵¹³ The Mississippi Development Authority would then administer the chosen projects.

²⁵⁰⁴ Press Release, Minn. Dep’t of Commerce, New Incentive Program Gives Solar a Big Boost in Minnesota, (Feb. 3, 2014), <http://mn.gov/commerce/energy/media/newsdetail.jsp?id=207-113716>.

²⁵⁰⁵ *Id.*

²⁵⁰⁶ MISS. CODE ANN. § 57-39-39 (2006).

²⁵⁰⁷ *Id.*

²⁵⁰⁸ *Id.*

²⁵⁰⁹ *Mississippi Energy Investment Program*, MISS. DEV. AUTH., <http://web.archive.org/web/20060929055551/http://www.mississippi.org/content.aspx?url=/page/2913&> (Nov. 22, 2013).

²⁵¹⁰ *Id.*

²⁵¹¹ MISS. CODE ANN. § 69-51-5 (2006).

²⁵¹² U.S. DEP’T OF ENERGY, NAT’L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

²⁵¹³ Press Release, Miss. Dev. Auth., Governor Barbour Seeks Best Practice Energy Ideas (Apr. 17, 2009), <http://www.mississippi.org/press-room/governor-barbour-seeks-best-practice-energy-ideas.html>.

In June 2009, Governor Barbour publicly announced his criticisms of the Obama's Administration's support of a federal cap-and-trade program, stating that cap-and-trade would result in unacceptable costs for families and businesses.²⁵¹⁴ He then testified before Congress, voicing these concerns.²⁵¹⁵

As part of the ARRA-funded state energy plan, SmartSynch, a smart-grid infrastructure company, received a \$3.75 million grant in August 2009.²⁵¹⁶

2010: Green Technology

In April 2010, Twin Creeks Technologies, a solar technology company specializing in crystalline silicon photovoltaic technology, announced the location of a solar panel manufacturing facility in Senatobia, Mississippi.²⁵¹⁷ The state provided loan assistance totaling \$50 million through the Mississippi Major Economic Impact Authority and, along with the City of Senatobia, promised to provide \$4 million for infrastructure improvements at the site.²⁵¹⁸

On December 15, 2010, Governor Barbour commended Soladigm for receiving the GE "Ecomagination Challenge" award, which provided the company with funding to build energy-efficient dynamic insulated glass that changes from tinted to clear on demand. Soladigm's insulated glass reduces energy consumption, and the company announced that it would build its first large-scale manufacturing facility in Mississippi.²⁵¹⁹

2011: Green Jobs

Governor Barbour announced in January 2011 that Stion, a solar-panel manufacturing company, would construct its \$500 million manufacturing facility in Mississippi and would thus create 1,000 new jobs by 2017.²⁵²⁰

2013: Renewable Energy

²⁵¹⁴ *Governor Barbour Calls for Abundant, Affordable Energy*, PROJECT VOTE SMART (June 8, 2009), <http://votesmart.org/public-statement/429477/> (original press release not found).

²⁵¹⁵ Haley Barber, Governor of Miss., Statement Before the Comm. on Env't. and Pub. Works (July 7, 2009), <http://www.yallpolitics.com/images/GovernorBarbour'sSenatetestimony7.7.09.pdf>.

²⁵¹⁶ Press Release, Miss. Dev. Auth., Smartsynch Awarded State Energy Program Grant (Aug. 20, 2009), <http://www.mississippi.org/press-room/smartsynch-awarded-state-energy-program-grant.html>.

²⁵¹⁷ Press Release, Miss. Dev. Auth., Renewable Solar Technology Company to Locate Manufacturing Facility in Senatobia, Miss. (Apr. 2, 2010), <http://mississippi.org/press-room/renewable-solar-technology-company-to-locate-manufacturing-facility-in-senatobia-miss.html>.

²⁵¹⁸ *Id.*

²⁵¹⁹ Press Release, Miss. Dev. Auth., Soladigm Selected by GE to Receive Funding Through *GE Ecomagination Challenge* (Dec. 15, 2010), <http://www.mississippi.org/index.php?id=916>.

²⁵²⁰ Press Release, Miss. Dev. Auth., Stion Announces Location of Solar Panel Manufacturing Operations in Hattiesburg, Miss. (Jan. 4, 2011), <http://www.mississippi.org/index.php?id=920>.

On July 27, 2013 Green Circle Bio Energy announced that the company would locate an energy wood pellet manufacturing facility in George County Industrial Park.²⁵²¹ This project represented “a company investment of \$115 million and create[d] 126 jobs with the potential of up to 141.”²⁵²²

MISSOURI

1989: Renewable Energy and Energy Efficiency

Since 1989, the Energy Center of the Missouri Department of Natural Resources (DNR) has offered loans for renewable energy and energy efficiency projects for public and government-owned buildings.²⁵²³

1997: Market-Based Solutions

Since 1997, Missouri has offered income tax credits of \$5 per ton for those who process wood for fuel.²⁵²⁴

2003: Market-Based Solutions

Since 2003, Missouri has required utilities to offer net metering for photovoltaic, wind, fuel cell, and biomass generators up to 100 kilowatts.²⁵²⁵

2007: Climate Change Agreements

In May 2007, Missouri and thirty other states founded The Climate Registry, to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”²⁵²⁶

2008: Fuels; Climate Change Adaptation; and Renewable Energy

On January 1, 2008, Missouri became the third state, after Minnesota and Hawai’i, to mandate that ethanol be mixed with gasoline.²⁵²⁷ Under the Missouri Renewable Fuel Standard Act, all gasoline offered for sale in the state must contain 10%

²⁵²¹ Press Release, Governor of Miss., Green Circle Bio Energy Locating Wood Pellet Manufacturing Operations in George County, Miss. (July 27, 2013), <http://www.governorbryant.com/green-circle-bio-energy-locating-wood-pellet-manufacturing-operations-in-george-county-miss/>.

²⁵²² *Id.*

²⁵²³ MO. ANN. STAT. §§ 640.651-.686 (West 2006).

²⁵²⁴ *Id.* §§ 135.300-.311.

²⁵²⁵ *Id.* § 386.890.

²⁵²⁶ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20080208012845/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

²⁵²⁷ MO. REV. STAT. § 414.255 (2007).

ethanol.²⁵²⁸ Missouri also developed a climate change action plan, which discussed action options to reduce greenhouse gas (GHG) emissions from electric generation, residential and commercial buildings, transportation, agriculture, and solid waste management.²⁵²⁹

On November 4, 2008, a majority of the state's voters supported the *Missouri Clean Energy Initiative*, containing the state's renewable portfolio standard (RPS).²⁵³⁰ The initiative proposed an amendment to Chapter 393 of the Revised Statutes of the State of Missouri.²⁵³¹ The amendment required the Public Service Commission (PSC) to promulgate a rule requiring that the following percentages of electric utility sales be generated from renewable resources: at least 2% for the years 2011 through 2013; 5% for the years 2014 through 2017; 10% for the years 2018 through 2020; and 15% annually starting in 2021. Further, the amendment mandated that at least 2% of each RPS requirement be derived from solar energy.²⁵³² Beginning December 31, 2009, each regulated entity would be required to send a biannual report to the commission in order to explain its plans for and progress toward achieving the RPS.²⁵³³

2009: Energy Efficiency, American Recovery & Reinvestment Act (ARRA), Green Building, Green Jobs, Renewable Energy, and Climate Change Agreements

On April 23, 2009, during an appearance at the Missouri Energy Summit, Governor Nixon signed Executive Order (EO) 09-18, which directed all state agencies to reduce buildings energy consumption by 2% per year through 2019.²⁵³⁴ Additionally, Nixon directed the Division of Facilities Management, Design and Construction to adopt clear standards for energy efficiency and consumption in state buildings.²⁵³⁵

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Missouri was eligible for \$57,393,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).²⁵³⁶ Governor Nixon joined seven other Midwest states in signing a memorandum of understanding (MOU) to coordinate ARRA applications and advocacy for high-speed rail.²⁵³⁷

²⁵²⁸ *Id.*

²⁵²⁹ MO. DEP'T OF NAT. RES., MO. ACTION OPTIONS FOR REDUCING GREENHOUSE GAS EMISSIONS (2002), <http://www.c2es.org/docUploads/MO%20ActionOptions%202002.pdf>.

²⁵³⁰ *Election Night Reporting, Ballot Issues*, MO. SEC'Y OF STATE, <http://www.sos.mo.gov/enrweb/ballotissuereults.asp?eid=256> (Jan. 30, 2009).

²⁵³¹ *Approved for Circulation in Missouri*, MO. SEC'Y OF STATE, <http://www.sos.mo.gov/elections/2008petitions/2008-032.asp> (Nov. 23, 2013).

²⁵³² *Id.*

²⁵³³ *Id.*

²⁵³⁴ *Gov. Nixon Directs State Agencies to Reduce Building Energy Use by Two Percent Annually for the Next 10 Years*, PROJECT VOTE SMART, (Apr. 23, 2009), <http://votesmart.org/public-statement/419750/> (original press release not found).

²⁵³⁵ *Id.*

²⁵³⁶ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

²⁵³⁷ Memorandum of Understanding between Pat Quinn, Governor of State of Ill., Mitch Daniels, Governor of State of Ind., Chet Culver, Governor of State of Iowa, Jennifer Granholm, Governor of State of Mich., Jay Nixon, Governor of State of Mo., Tim Pawlenty, Governor of State of Minn., Ted Strickland, Governor of State of Ohio, Jim Doyle, Governor State of Wis., and Richard M. Daley, Mayor City of Chi. (July 27,

According to The Pew Charitable Trusts' June 2009 Clean Energy Economy Fact Sheet for Missouri, Missouri's clean energy economy grew by 11,714 jobs and 1,062 businesses from 1998 to 2007.²⁵³⁸ Between 2006 and 2009, Missouri attracted nearly \$25 million in capital investment in clean energy.²⁵³⁹

On September 2, 2009, Governor Nixon applauded the U.S. Department of Agriculture's selection of Show Me Energy Cooperative as a recipient of federal matching payments under the Biomass Crop Assistance Program (BCAP).²⁵⁴⁰ Show Me's biomass conversion facility would be the first in the nation to make federal matching payments to its suppliers in an effort to incentivize biomass energy conversion.²⁵⁴¹

In October 2009, the Midwestern Governors Association, in which Missouri participates, issued the Midwestern Energy Infrastructure Accord, which included "agreements by Midwestern governors to expand transmission capacity, adopt smart grid technologies, build new pipelines for biofuels and for the capture and storage of carbon dioxide, and deploy a refueling system for biofuels and other low-carbon transportation fuels."²⁵⁴² The report set renewable energy goals at 10% by 2015 and 30% by 2030.²⁵⁴³

On October 19, 2009, Governor Nixon celebrated the opening of a new waste heat and renewable energy utilization project.²⁵⁴⁴ The project captures gases generated naturally at a landfill, which are then used to create energy for Columbia, Missouri utilities.²⁵⁴⁵ Additionally, the waste heat that is generated is used to provide steam and hot water to two state correctional facilities.²⁵⁴⁶

2009),

<http://web.archive.org/web/20091002043001/http://www.wisgov.state.wi.us/docview.asp?docid=17199>.

²⁵³⁸ *Clean Energy Economy*, THE PEW CHARITABLE TRUSTS, (May 8, 2009),

http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

²⁵³⁹ *Id.*

²⁵⁴⁰ Press Release, Office of Mo. Governor, Gov. Nixon Praises Selection of Missouri Company as First Biomass Conversion Facility in the Nation to Qualify Under Federal Funding Program (Sept. 2, 2009),

http://governor.mo.gov/newsroom/2009/First_In_the_Nation.

²⁵⁴¹ *Id.*

²⁵⁴² *See generally*, Press Release, Midwestern Governors' Ass'n, MGA Jobs and Energy Forum Wraps Up; Releases Jobs Platform and Energy Infrastructure Accord (Oct. 9, 2009),

<http://www.midwesterngovernors.org/Release/forum.pdf>.

²⁵⁴³ *Id.*

²⁵⁴⁴ Press Release, Office of Mo. Governor, Gov. Nixon Helps Dedicate Renewable Energy Project Using Landfill Gas, Waste Heat to Help Meet Energy Demands of Columbia Utility, Two State Correctional Facilities (Oct. 19, 2009), http://governor.mo.gov/newsroom/2009/Renewable_Energy_Project.

²⁵⁴⁵ *Id.*

²⁵⁴⁶ *Id.*

In November 2009, Governor Nixon announced a plan to increase home ownership and energy efficiency.²⁵⁴⁷ The proposal would pay the new homeowners' property taxes and give an additional \$500 to those that purchase energy efficient household items, such as ENERGY STAR® appliances.²⁵⁴⁸

2010: Renewable Energy, Green Jobs, and Energy Efficiency

On a March 2010 visit to State Fair Community College, Governor Nixon announced that the college would receive a grant of over \$700,000 to develop an alternative energy training program.²⁵⁴⁹ Nixon also promoted energy efficiency in March with a grant of \$175,000 to Taney County to retrofit buildings with energy efficient lighting;²⁵⁵⁰ a \$437,000 grant to the city of Fulton for the purchase of generator equipment that will convert methane into electricity to power the city's buildings;²⁵⁵¹ and a \$1 million grant to the city of Independence for efficiency upgrades at its waste water treatment facility.²⁵⁵²

Following the receipt of ARRA funds, the Missouri DNR initiated the Energize Missouri program, which distributes more than \$204 million for energy efficiency and renewable energy projects.²⁵⁵³ The program provides grants for a wide range of energy-saving projects throughout the state, including appliance rebates, renewable energy grants, and energy efficiency in homes, communities, agriculture, and industries.²⁵⁵⁴

In April 2010, the Energize Missouri Renewable Energy Biogas Grants awarded nearly \$2 million to businesses, non-profit organizations, local governments, and individuals and the biogas projects are expected to collectively produce more than 30 million kilowatt hours of electricity per year.²⁵⁵⁵

The Midwest Energy Efficiency Alliance (MEEA), of which several Missouri state agencies are members, released a report in June 2010, stating that Missouri could save \$3.4 billion if the state's PSC would adopt energy-efficiency targets similar to those

²⁵⁴⁷ Press Release, Office of Mo. Governor, Gov. Nixon, Treasurer Zweifel Unveil Plan to Increase Home Ownership and Energy Efficiency by Paying Missourians' Property Taxes for a Year (Nov. 24, 2009), http://governor.mo.gov/newsroom/2009/Proposal_to_Increase_Home_Ownership.

²⁵⁴⁸ *Id.*

²⁵⁴⁹ Press Release, Office of Mo. Governor, Gov. Nixon Announces \$718,500 Grant to Develop Alternative Energy Training at State Fair Community College (Mar. 18, 2010), http://governor.mo.gov/newsroom/2010/Alternative_Energy_Training.

²⁵⁵⁰ Press Release, Office of Mo. Governor, Gov. Nixon Announces Grant to Taney County to Enhance Energy Efficiency, Save Taxpayer Dollars (Mar. 22, 2010), http://governor.mo.gov/newsroom/2010/Taney_County_Energy_Efficiency.

²⁵⁵¹ *Id.*

²⁵⁵² *Id.*

²⁵⁵³ *Energize Missouri*, MO. DEP'T OF NAT. RES., <http://www.dnr.mo.gov/transform/energizemissouri.htm> (Nov. 23, 2013).

²⁵⁵⁴ *Id.*

²⁵⁵⁵ *Energize Missouri Renewable Energy*, MO. DEP'T OF NAT. RES., <http://www.dnr.mo.gov/transform/energizemissourirenewablebiogas.htm> (Nov. 23, 2013).

adopted by other states, such as Ohio, Indiana, and Illinois.²⁵⁵⁶ MEEA was selected by the DOE to assist communities that received ARRA funding in implementing their energy efficiency projects.²⁵⁵⁷

Additionally, in August 2010, the Missouri DNR selected more than 1,600 farmers to receive funding under the Energize Missouri Agriculture Cost-Share program.²⁵⁵⁸ The program would distribute a total of \$6.1 million to the selected farmers, allowing them to offset 75% of the cost of installing energy-saving equipment and systems.²⁵⁵⁹

Similarly, Energize Missouri Industry awarded more than \$3 million to energy efficiency companies, expecting to save up to 75 million kilowatt hours of energy through projects funded.²⁵⁶⁰ Energize Missouri Industry also offered an additional \$11 million for its Industrial Energy Efficiency Program, through which qualified businesses could receive funding to implement energy saving measures.²⁵⁶¹

In December 2010, Governor Nixon announced that wind turbine technology manufacturer Nordic Windpower U.S.A. would relocate to Missouri, creating more than 200 jobs. Missouri provided a \$5.6 million incentive package, and the company planned to invest an additional \$16 million.²⁵⁶²

2011: Energy Efficiency, Transportation/Fuels, and Market-Based Solutions

In January 2011, Governor Nixon announced the launch of a new \$5 million grant program, the Missouri Agricultural Energy Savings Team – a Revolutionary Opportunity (MAESTRO), to provide farmers with low-interest loans and rebates to perform farm audits and implement best practices for energy efficiency on their farms.²⁵⁶³

²⁵⁵⁶ Press Release, Midwest Energy Efficiency Alliance, New Opportunity for Missouri to Save \$3.4 Billion Through Increased Efficiency (June 8, 2010), <http://www.mwalliance.org/press-releases/new-opportunity-missouri-save-43-billion-through-increased-efficiency>.

²⁵⁵⁷ Press Release, Midwest Energy Efficiency Alliance, Midwest Energy Efficiency Alliance Selected by U.S. Department of Energy to Provide Expertise on Stimulus Grant Projects (July 6, 2010), <http://www.mwalliance.org/press-releases/midwest-energy-efficiency-alliance-selected-us-department-energy-provide-expertise>.

²⁵⁵⁸ *NASEO News*, NAT'L ASS'N OF STATE ENERGY OFFICIALS, (Aug. 20, 2010) <http://web.archive.org/web/20101101114316/http://naseo.org/news/newsletter/2010-08-20.htm>.

²⁵⁵⁹ *Energize Missouri Agriculture*, MO. DEP'T OF NAT. RES., <http://www.dnr.mo.gov/transform/energizemissouriagriculture.htm#cost> (Nov. 23, 2013).

²⁵⁶⁰ *Energize Missouri Industry*, MO. DEP'T OF NAT. RES., <http://www.dnr.mo.gov/transform/energizemissouriindustry.htm> (Nov. 23, 2013).

²⁵⁶¹ *Id.*

²⁵⁶² Press Release, Office of Mo. Governor, Wind Energy Company Plans to Relocate to KC, Create 200 Jobs, Governor Nixon Announces (Dec. 21, 2011), http://governor.mo.gov/newsroom/2010/200_new_jobs.

²⁵⁶³ Press Release, Office of Mo. Governor, Gov. Nixon Announces New Program to Help Missouri Small Farmers with Home, Farm Energy Costs (Jan. 21, 2011), http://governor.mo.gov/newsroom/2011/Gov_Nixon_announces_program_to_help_Missouri_small_farmers_with_energy_costs.

In May 2011, Governor Nixon signed into law House Bill (H.B.) 354, exempting plug-in electric vehicles from emissions inspections and the requirements of the Air Quality Attainment Act.²⁵⁶⁴

Governor Nixon broke ground in October 2011 on the Missouri Center for Waste to Energy, which will convert methane gas generated from landfills into electricity.²⁵⁶⁵

The Missouri DNR partnered with local retailers in Joplin, Missouri to offer a \$500 rebate to purchase ENERGY STAR® appliances beginning in November 2011. The offer was available exclusively to residents eligible for disaster assistance from the Federal Emergency Management Agency following the disastrous May 2011 tornado that hit the area.²⁵⁶⁶

2012: Fuels

On July 5, 2012 Governor Nixon signed H.B. 1462, Qualified Biodiesel Producer Incentive Fund, into law.²⁵⁶⁷ This Bill changed the eligibility for producers receiving payments for the Missouri Qualified Producer Incentive Fund and removed the 24-month limitation and allowed a producer's eligibility to continue until payment in full amount occurs.

2013: Energy Efficiency and Renewable Energy

On March 8, 2013 the Missouri Department of Natural Resources announced that it was making "\$5 million in low-interest loans available to schools, governments and not-for-profit hospitals to complete energy-efficiency and renewable energy projects."²⁵⁶⁸ These loans were administered by the Department of Natural Resource's Division of Energy and are part of the Energy Revolving Loan Fund.

²⁵⁶⁴ Press Release, Office of Mo. Governor, Gov. Nixon Signs Bills on Colon Cancer Awareness, Electric Vehicles, Recognition of Mental Health Disorders, Child Abuse Prevention Month, and Promoting Reading (May 5, 2011), http://governor.mo.gov/newsroom/2011/Gov_Nixon_signs_five_bills_into_law. See also H.B. 354, 96th General Assemb., First Reg. Sess. (Mo. 2011), <http://www.house.mo.gov/billtracking/bills111/billpdf/truly/HB0354T.PDF>.

²⁵⁶⁵ Press Release, Office of Mo. Governor, Gov. Nixon Helps Break Ground on Center for Waste to Energy in Sedalia (Oct. 11, 2011), http://governor.mo.gov/newsroom/2011/Gov_Nixon_helps_break_ground_on_Missouri_Center_for_Waste_to_Energy_in_Sedalia.

²⁵⁶⁶ Press Release, Mo. Dep't of Nat. Res., Joplin Residents Affected by the May Tornado are Eligible to Receive \$500 in Rebated to Purchase ENERGY STAR Appliances (Nov. 10, 2011), <http://www.dnr.mo.gov/newsrel/data-2011.asp?param=375>.

²⁵⁶⁷ H.B. 1462, 96th General Assemb., Second Reg. Sess. (Mo. 2012), <http://house.mo.gov/billtracking/bills121/billtxt/truly/HB1462T.htm>.

²⁵⁶⁸ Press Release, Mo. Dep't of Nat. Res., *Loans Available for Energy Improvements* (Mar. 8, 2013), <http://dnr.mo.gov/newsrel/data-2013.asp?param=019>.

On Earth Day 2013 Governor Nixon announced that in accordance with EO 09-18, which Nixon issued in 2009, Missouri state agencies had reduced their energy usage by more than 21%.²⁵⁶⁹

On July 3, 2013 Governor Nixon signed H.B. 142, which modified the solar rebate requirement for electric utilities capping solar rebates at 1% of the average retail rate increase ignoring a utility's own investment in solar related projects.²⁵⁷⁰ Solar rebates were set at \$2 per watt for systems that are operational on or before June 20, 2014, and this rate decreases annually until the rebates are phased out after June 30, 2020.

MONTANA

2005: Greenhouse Gas Reduction

In December of 2005, Governor Schweitzer directed the State Department of Environmental Quality (DEQ) to create a Climate Change Advisory Committee to recommend strategies to reduce and sequester greenhouse gas (GHG) emissions and to promote economic growth through energy efficiency and renewable energy investments. The group was also charged with developing a Climate Action Plan.²⁵⁷¹ In November 2007, the Committee issued its final report, evaluating GHG reduction opportunities available at the state level.²⁵⁷²

2007: Climate Change Agreements, Market-Based Solutions, Renewable Energy, and Energy Efficiency

In May 2007, Governor Schweitzer signed House Bill (H.B.) 25, a law limiting pre-approval of coal-fueled electric generating units built after January 1, 2007 to those that capture and sequester 50% of their carbon emissions.²⁵⁷³ In November 2007, Schweitzer announced an initiative to reduce state agency energy consumption 20% by 2010, directed state agencies to apply a Montana corporate average fuel economy (CAFE) standard, and requested that state vehicle fleets achieve an average of 30 mpg or better.²⁵⁷⁴

²⁵⁶⁹ Press Release, Office of Mo. Governor, *State Agencies Have Reduced Energy Use by More Than 21 Percent Since 2008, Gov. Nixon Announces* (Apr. 22, 2013), <http://governor.mo.gov/news/archive/state-agencies-have-reduced-energy-use-more-21-percent-2008-gov-nixon-announces>.

²⁵⁷⁰ H.B. 142, 97th General Assemb., First Reg. Sess. (Mo. 2013), <http://www.house.mo.gov/billtracking/bills131/billpdf/truly/HB0142T.PDF>.

²⁵⁷¹ Press Release, State of Mont. Dep't of Env'tl. Quality, First Climate Change Advisory Committee Meeting Scheduled (July 6, 2006), <http://svc.mt.gov/deq/press/pressDetail.asp?id=326>.

²⁵⁷² MONT. CLIMATE CHANGE ADVISORY COMM., MONT. CLIMATE CHANGE ACTION PLAN (2007), <http://web.archive.org/web/20120615050315/http://www.mtclimatechange.us/ewebeditpro/items/O127F14041.pdf>.

²⁵⁷³ H.B. 25, 60th Leg., Reg. Sess. (Mont. 2007).

²⁵⁷⁴ Press Release, Mt.gov, Governor Announces New 20X10 Initiative – State to Lead By Example, Accepts Climate Change Report and Joins Western Climate Initiative (Nov. 19, 2007), <http://web.archive.org/web/20080603011101/http://governor.mt.gov/news/pr.asp?ID=513>.

Also in May, Montana and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”²⁵⁷⁵

In November 2007, Governor Schweitzer signed H.B. 3, Montana’s “Clean and Green” Energy Bill, creating property tax incentives for renewable and alternative energy development, manufacturing, and production facilities.²⁵⁷⁶ H.B. 3 reduced taxes by 50% for eligible facilities, which included biodiesel, biogas, biomass, biomass gasification, ethanol, geothermal, and renewable energy production facilities.²⁵⁷⁷

In November 2007, Montana joined the Western Climate Initiative (WCI), a multi-state effort to reduce GHG emissions.²⁵⁷⁸ Established in February 2007 by the governors of Arizona, California, New Mexico, Oregon, and Washington and later joined by Utah, and four Canadian provinces, WCI set a goal to reduce regional GHG emissions to 15% below 2005 levels by 2020.²⁵⁷⁹ WCI announced draft essential requirements for the reporting of GHG emissions in July 2008.²⁵⁸⁰ It also released its *Design Recommendations for the WCI Regional Cap-and-Trade Program* on September 23, 2008.²⁵⁸¹

2008: Climate Change Adaptation, Cap-&Trade, Market-Based Solutions, Renewable Energy; and Transportation/Fuels

WCI’s September 2008 *Design Recommendations* recommended that carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions should all fall under a cap-and-trade scheme.²⁵⁸² Regulated sources would include electricity generation; combustion at industrial and commercial facilities; industrial process; fuel combustion from industrial, residential and commercial sources that are below the threshold for direct regulation; and transportation combustion of gasoline/diesel (excluding biofuels).²⁵⁸³ WCI would require each of these sources to emit at least 25,000 metric tons of carbon dioxide equivalent annually in order to participate in trade.²⁵⁸⁴ The first compliance period was set to begin in 2012 and would include half of the economy-wide regulated emissions from WCI’s member jurisdiction

²⁵⁷⁵ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2013), http://web.archive.org/web/20080309011530/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

²⁵⁷⁶ H.B. 3, 60th Leg., 1st Spec. Sess. (Mont. 2007).

²⁵⁷⁷ *Id.*

²⁵⁷⁸ *Id.*

²⁵⁷⁹ *Five Western Governors Announce Regional Greenhouse Gas Reduction Agreement*, PROJECT VOTE SMART (Feb. 26, 2007), <http://votesmart.org/public-statement/243791/> (original press release not found).

²⁵⁸⁰ *Id.*

²⁵⁸¹ *Design Recommendations*, W. CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/the-wci-cap-and-trade-program/design-recommendations> (Nov. 24, 2013).

²⁵⁸² *Id.* at 8.

²⁵⁸³ *Id.* at 8-9.

²⁵⁸⁴ *Id.* at 10.

for the electricity generation, industrial combustion and industrial process sectors.²⁵⁸⁵ The second compliance period was set to begin in 2015, adding the other regulated sectors and includes 90% of the economy-wide regulated emissions.²⁵⁸⁶

Montana's Electric Utilities Restructuring Act established graduated renewable energy standards to take effect in 2008.²⁵⁸⁷ It required providers of electric energy to procure 5% of retail sales from renewables for 2008 through 2009; 10% for 2010 through 2014; and 15% for 2015 and successive compliance years.²⁵⁸⁸ Requirements could be met through the purchase of energy credits or electricity output from community renewable energy projects of at least 50-megawatt (MW) capacity (75 MW, beginning 2015).²⁵⁸⁹ The Act also subjected providers who failed to meet the target for any compliance year to fines of \$10 for each MW hour of renewable energy credits they fail to procure.²⁵⁹⁰ It exempted cooperative utilities from renewable standards, although cooperatives with more than 5,000 customers were asked to implement renewable source guidelines.²⁵⁹¹

The Electric Utilities Restructuring Act also authorized the creation of pilot programs providing customer choice to small customers.²⁵⁹² It also mandated net metering systems for distribution services providers.²⁵⁹³ Customer-generators pay the same monthly fee as similarly situated customers of the utility in the same rate class.²⁵⁹⁴ Moreover, at the end of each 12-month billing cycle, any remaining kilowatt-hour credits revert to the utility company without compensation to the customer-generator.²⁵⁹⁵ The Act required Montana's major, deregulated energy providers to market "green energy" – biomass, wind, solar, or geothermal – to interested consumers.²⁵⁹⁶ A separate provision empowered Montana's Public Service Commission (PSC) to set the prices by which energy distributors would purchase from small, alternative energy producers and co-generation facilities.²⁵⁹⁷ An older provision allowed utilities to gain up to 2% additions in the permitted rate of return on common equity in exchange for qualifying conservation purchases or investments.²⁵⁹⁸

Montana provides a host of tax and other financial incentives meant to stimulate the market in renewables. Tax incentives include: property tax exemptions for renewable generating facilities (structured differently for small²⁵⁹⁹ and large²⁶⁰⁰ providers);

²⁵⁸⁵ *Id.* at 24.

²⁵⁸⁶ *Id.*

²⁵⁸⁷ MONT. CODE ANN. §§ 69-3-2001–2009 (2005).

²⁵⁸⁸ *Id.* § 69-3-2004.

²⁵⁸⁹ *Id.*

²⁵⁹⁰ *Id.* § 69-3-2004(10).

²⁵⁹¹ *Id.* § 69-3-2008.

²⁵⁹² *Id.* § 69-8-101–104.

²⁵⁹³ *Id.* § 69-8-601–605.

²⁵⁹⁴ *Id.* § 69-8-602(2)(b).

²⁵⁹⁵ *Id.* § 69-8-603(4).

²⁵⁹⁶ *Id.* § 69-8-210(6).

²⁵⁹⁷ *Id.* §§ 69-3-601–604.

²⁵⁹⁸ *Id.* §§ 69-3-701–713.

²⁵⁹⁹ *Id.* § 15-6-225.

corporate tax exemptions for new or expanded providers of energy from renewables;²⁶⁰¹ personal income tax credits for individuals installing residential geothermal systems²⁶⁰² or non-fossil forms of energy generation;²⁶⁰³ tax credits for individual or corporate income generated by net metering on alternative energy sources;²⁶⁰⁴ exemptions from the wholesale energy transaction tax for energy generated by wind on state or reservation lands;²⁶⁰⁵ and tax credits for certified Montana venture capital companies that invest in renewables.²⁶⁰⁶

Loans provide the other major financial incentive. These include loans to micro-businesses (including alternative energy producers),²⁶⁰⁷ to ranches and farms that introduce alternative energy production systems,²⁶⁰⁸ and to building owners who install alternative energy systems for their own use and/or net metering.²⁶⁰⁹

Montana has also enacted a number of provisions meant to spur ethanol use. State government entities, including state post-secondary educational institutions, are required to take “all reasonable steps” to ensure that they are using ethanol-blended fuel, if available, for any mechanically suitable vehicles under their ownership/operation.²⁶¹⁰ Ethanol production facilities receive special tax exemptions,²⁶¹¹ as do facilities producing ethanol from Montana agricultural products.²⁶¹² And fuel blends containing 10% or more alcohol are taxed at 85% of the rate for gasoline.²⁶¹³

In July 2008, the National Governors Association (NGA) awarded Montana and eleven other states grants to help advance clean energy projects.²⁶¹⁴ The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards were designed to help develop greater energy efficiency, conservation, and clean energy resources.²⁶¹⁵

2009: Cap-&-Trade, Green Jobs, American Recovery & Reinvestment Act (ARRA), Climate Change Agreements, Energy Efficiency, and Renewable Energy

²⁶⁰⁰ *Id.* § 15-24-1401.

²⁶⁰¹ *Id.* § 15-31-124.

²⁶⁰² *Id.* § 15-32-115.

²⁶⁰³ *Id.* § 15-32-201.

²⁶⁰⁴ *Id.* § 15-32-401.

²⁶⁰⁵ *Id.* § 15-72-104.

²⁶⁰⁶ *Id.* § 90-8-101.

²⁶⁰⁷ *Id.* § 17-6-401.

²⁶⁰⁸ *Id.* § 80-12-201.

²⁶⁰⁹ *Id.* § 75-25-101.

²⁶¹⁰ *Id.* § 2-17-414.

²⁶¹¹ *Id.* § 15-6-201(1).

²⁶¹² *Id.* § 15-70-522.

²⁶¹³ *Id.* § 15-70-204(3).

²⁶¹⁴ Press Release, Nat’l Governors Ass’n, NGA Awards Clean Energy Grants to 12 States (June 29, 2008), <http://web.archive.org/web/20110110214522/http://www.nga.org/portal/site/nga/menuitem.6c9a8a9ebc6ae07eee28aca9501010a0/?vgnnextoid=feecd9b353ada110VgnVCM1000001a01010aRCRD>.

²⁶¹⁵ *Id.*

Relating to its cap-and-trade program, the WCI released the third draft of the *Background Document and Progress Report for Essential Requirements of Mandatory Reporting for the Western Climate Initiative* on January 6, 2009 for public comment.²⁶¹⁶ It set the reporting threshold at 10,000 metric tons of carbon dioxide in a year, well below the 25,000 metric ton threshold for participation in the cap-and-trade program.²⁶¹⁷ It also recommended that stationary combustion sources be subject to the reporting requirement as well as the sources listed in Table 1 of the document. These listed sources must report combustion and non-combustion emissions.²⁶¹⁸ Due to strong stakeholder support, the Report also recommended that reporting begin in 2011 for facilities that began operation before 2010 in preparation for commencement of a cap-and-trade program in 2012.²⁶¹⁹

In March 2009, Montana's Department of Commerce awarded a Workforce Initiative in Regional Economic Development (WIRED) grant of over \$990,000 to Montana State University Northern to fund the expansion of training programs at the school's Bio-Energy Innovation and Testing Center.²⁶²⁰

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Montana was eligible for \$25,855,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).²⁶²¹

On May 11, 2009, during a meeting of Western Governors Association bioenergy workshop, Governor Schweitzer announced the results of a University of Montana biomass study.²⁶²² The study, funded by the Montana Department of Natural Resources and Conservation (DNRC), found that at a rate of 2-3 million tons of biomass use annually, Montana is only using a fraction of its available biomass, which is used for "manufacturing pellets, particle board, fiberboard, linerboard and for generating heat and electricity."²⁶²³ The study estimated that Montana has 850 million tons of dry biomass, with 40 million tons of that "physically accessible and suitable for utilization."²⁶²⁴ DNRC Director Mary Sexton stated that the "report reinforces that there is adequate supply to support both fiber and energy needs . . . and additional supply for future renewable energy or biofuels production. Much of it is within the wildland urban

²⁶¹⁶ *Background Document and Progress Report for Essential Requirements of Mandatory Reporting for the Western Climate Initiative, Third Draft*, W. CLIMATE INITIATIVE (Jan. 6, 2009), http://www.westernclimateinitiative.org/dmddocuments/mandatory_reporting_3rd_draft_010609.74.pdf.

²⁶¹⁷ *Id.* at 10.

²⁶¹⁸ *Id.* at 11.

²⁶¹⁹ *Id.* at 16.

²⁶²⁰ Press Release, Mt.gov, MSU-Northern Receives Nearly \$1 Million WIRED Grant for Bio-Energy Innovation & Testing Center (Mar. 13, 2009), <http://web.archive.org/web/20090317040329/http://governor.mt.gov/news/pr.asp?ID=654>.

²⁶²¹ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 44 (Apr. 24, 2009), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

²⁶²² Press Release, Mt.gov, Governor Schweitzer: Montana has Great Opportunities in Biomass (May 11, 2009), <http://web.archive.org/web/20111230164428/http://governor.mt.gov/news/pr.asp?ID=677>.

²⁶²³ *Id.*

²⁶²⁴ *Id.*

interface, where fuel reduction is needed to help protect Montana communities from wildfire.”²⁶²⁵

On May 22, 2009, Governor Schweitzer acknowledged that Montana was one of 53 DOE grant recipients selected to receive \$100,000 for wind energy projects.²⁶²⁶ Discussing the grant award, he reaffirmed Montana’s commitment to the production of renewable energy, stating that “[Montana] intends to continue leading the way for this clean, green resource to help meet the goal of 20% wind energy by 2030.”²⁶²⁷

Governor Schweitzer also signed an agreement to support federal climate change legislation in May 2009.²⁶²⁸ The agreement contained two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.²⁶²⁹

According to The Pew Charitable Trusts’ June 2009 Clean Energy Economy Fact Sheet for Montana, Montana’s clean energy economy grew by 2,155 jobs and 408 businesses between 1998 and 2007.²⁶³⁰

On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the WCI, and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.²⁶³¹

In July 2009, the WCI issued an Offsets Whitepaper for comments to its stakeholders.²⁶³² The paper was the initial phase in development of the definition of an offset and one of its major focuses was additionality.²⁶³³ WCI’s Cap Setting and Allowance Distribution Committee released its *Draft Statement of Principles on Competitiveness* and the *Review of Proposed Options for Addressing Industrial*

²⁶²⁵ *Id.*

²⁶²⁶ Press Release, Mt.gov, Department of Energy Selects Montana for Wind Energy Program (May 22, 2009),

<http://web.archive.org/web/20111230164424/http://governor.mt.gov/news/pr.asp?ID=683>.

²⁶²⁷ *Id.*

²⁶²⁸ Press Release, Georgetown Climate Ctr., Governors’ Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009),

<http://web.archive.org/web/20090817025744/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

²⁶²⁹ *Statement of Principles*, GOVERNORS’ ENERGY AND CLIMATE COALITION (May 21, 2009),

<http://web.archive.org/web/20090817025755/https://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

²⁶³⁰ *Clean Energy Economy*, THE PEW CHARITABLE TRUSTS, (May 8, 2009),

http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

²⁶³¹ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

²⁶³² *Western Climate Initiative Invites Comments Regarding Offset Definition and Eligibility Criteria*, PERKINS COLE, <http://www.perkinscoie.com/western-climate-initiative-invites-comments-regarding-offset-definition-and-eligibility-criteria-08-11-2009/>.

²⁶³³ *Id.*

Competitiveness Impacts in August 2009.²⁶³⁴ The purpose of the draft was to “guide the process by which WCI will evaluate competitiveness effects of a regional cap-and-trade program,” and it also reviewed how other cap-and-trade programs address this issue.²⁶³⁵

In August 2009, Governor Schweitzer announced that the Montana Veterans Nursing Home in Columbia Falls would be the first recipient of federal ARRA energy efficiency funds.²⁶³⁶ The funding would cover over 30% of the \$1.3 million project that includes the installation of “modern digital controls, new high-efficiency boilers, heat recovery system, variable air volume equipment, and groundwater cooling system,” as well as the removal of outdated heating and air conditioning fan coil units.²⁶³⁷

During a September 2009 trip to Germany and Spain, Governor Schweitzer secured \$800 million in investment backing for wind energy development.²⁶³⁸ Spain’s Grupo NaturEner project was projected to bring that company’s “production capacity in Montana to more than 500 MW’s of clean energy.”²⁶³⁹

In late October 2009, Governor Schweitzer dedicated the second phase of Glacier Wind Farm, the state’s largest wind project.²⁶⁴⁰ The addition of phase two’s 103.5 MW brought Glacier Wind Farm’s total capacity to 210 MW.²⁶⁴¹

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America 2050.²⁶⁴² As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.²⁶⁴³ North America 2050’s mission is to “facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities.”²⁶⁴⁴ North America 2050 is open to all U.S. States, Canadian

²⁶³⁴ *Draft Statement of Principles on Competitiveness and Review of Options*, W. CLIMATE ADVOCATES INITIATIVE (Aug. 2009), http://www.resource-solutions.org/pub_pdfs/WeCAN%20Competitiveness%20Comments%20to%20WCI%2009.pdf.

²⁶³⁵ *Id.*

²⁶³⁶ Press Release, Mt.gov, Columbia Falls Veterans Home First to Benefit from State Building Energy Conservation Program Stimulus Funding (Aug. 13, 2009), <http://web.archive.org/web/20100113041251/http://governor.mt.gov/news/pr.asp?ID=708>.

²⁶³⁷ *Id.*

²⁶³⁸ Press Release, Mt.gov, Governor and Chief Business Development Officer Bring Home Good News from Wind Companies – NaturEner Cements Deal for \$800 Million Investment (Sept. 14, 2009), <http://web.archive.org/web/20111230164353/http://governor.mt.gov/news/pr.asp?ID=716>.

²⁶³⁹ *Id.*

²⁶⁴⁰ Press Release, Mt.gov, Governor Dedicates Phase 2 of State’s Largest Wind Project - Glacier Wind Farm (Oct. 21, 2009), <http://web.archive.org/web/20111230164339/http://governor.mt.gov/news/pr.asp?ID=731>.

²⁶⁴¹ *Id.*

²⁶⁴² See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

²⁶⁴³ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

²⁶⁴⁴ NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.²⁶⁴⁵

2010: Climate Change MOUs and Transportation/Fuels

In February 2010, Montana formed a new partnership with the Province of British Columbia, agreeing to “sustain environmental values in the Flathead River Basin” and to work together on climate change action and the development of low carbon, renewable energy.²⁶⁴⁶ The memorandum of understanding (MOU) committed Montana and British Columbia to working together with the federal government, Native American tribes, and local governments to protect the environment and combat climate change.²⁶⁴⁷

In order to reduce the number of vehicles that the state owned, Governor Schweitzer announced in June 2010 the sale of 225 state vehicles. As he noted, the state had already reduced travel by 35%, created a car pool program for state employees, and set a 32-mpg corporate average fuel economy (CAFÉ) standard. The reduction in fleet size likewise reduced the state’s GHG emissions. The auctioned cars also reduced aggregate emissions from the auto industry by decreasing demand for new cars and the associated lifecycle emissions from manufacturing.²⁶⁴⁸

2011: Renewable Energy and Climate Change Agreements

By March 2011, Montana produced over 386 MWs of wind energy, up from just 1 MW in 2004. The state hosted seminars to help manufacturers of windmill parts and components establish factories.²⁶⁴⁹

On April 8, 2011 Governor Schweitzer signed H.B. 594, requiring state contracts and highway construction to include recycled content. The Bill aimed to reduce the state’s consumption of virgin natural resources.²⁶⁵⁰

In November 2011, the Montana DNRC made Biomass Fuel Purchase Grants available in order to promote the purchase of woody biomass generated from forest management and habitat restoration projects in the state.²⁶⁵¹ The grant project would provide several benefits, including the increased usage of otherwise low-value woody biomass, as well as improved forest conditions. Eligible applicants included public

²⁶⁴⁵ *See id.*

²⁶⁴⁶ Press Release, Mt.gov, B.C. and Montana Partner on Environment and Clean Energy (Feb. 18, 2010), <http://web.archive.org/web/20111230164302/http://governor.mt.gov/news/pr.asp?ID=775>.

²⁶⁴⁷ *Id.*

²⁶⁴⁸ Press Release, Mt.gov, Governor Announces \$4 Million in Savings from State Vehicle Reduction (June 24, 2010), <http://web.archive.org/web/20111230164157/http://governor.mt.gov/news/pr.asp?ID=819>.

²⁶⁴⁹ Press Release, Mt.gov, Governor Says Wind Energy Continues to Grow in MT (Mar. 2 2011), <http://web.archive.org/web/20120622163428/http://governor.mt.gov/news/pr.asp?ID=885>.

²⁶⁵⁰ Press Release, Mt.gov, Governor Issues 2 Vetoes—Signs Bills Today (Apr. 8, 2001) <http://web.archive.org/web/20120622163420/http://governor.mt.gov/news/pr.asp?ID=898>.

²⁶⁵¹ MONT. DEP’T OF NAT. RES. AND CONSERVATION, BIOMASS FUEL PURCHASE GRANTS FOR FIRST-YEAR ENERGY PROJECTS (2011), <http://dnrc.mt.gov/Forestry/Assistance/Biomass/Documents/2012FuelPurchaseGrant.pdf>.

schools and institutions, non-profit organizations, and tribal facilities. Applications were accepted on a rolling basis and decisions were made in two cycles on December 2, 2011, and May 4, 2012.²⁶⁵²

In November 2011, Montana left WCI in order to join North America 2050, an organization which promotes carbon dioxide capture and sequestration techniques, offset projects for emissions trading programs and focuses on sustainable biomass in order to achieve meaningful emissions reductions.²⁶⁵³

2012: Renewable Energy

In addition to the Biomass Fuel Purchase Grants, the Montana DNRC made Woody Biomass Energy Preliminary Feasibility Assessment Grants available, through which public and non-profit facilities could receive financial support for the purpose of hiring a qualified firm to conduct a preliminary feasibility assessment of integrating a woody biomass energy system. The grants were also accepted on a rolling admission, with the first deadline on February 7, 2012, and the second deadline on June 7, 2012.²⁶⁵⁴

Finally, as a complement to Montana's woody biomass energy grants, the state offered a carbon offsets program to facilities that installed woody biomass energy systems. The open application period ended on May 1, 2012.²⁶⁵⁵

Montana also offers an Alternative Energy Revolving Loan Program through the DEQ.²⁶⁵⁶ Homeowners, small businesses, non-profits, and government entities are eligible to receive financing, partly funded by ARRA, to install alternative energy systems. Applications are accepted on a rolling basis. Additional information on other Montana renewable energy grants is available at <http://deq.mt.gov/Energy/CombinedHeatPower/default.mcp>.²⁶⁵⁷

In November 2012, the Montana DNRC announced the Wood Product and Biomass Utilization Grant program, which would award eligible recipients up to

²⁶⁵² *Id.*

²⁶⁵³ Geoffrey Craig, *Six States Leave Western Climate Initiative to Join New Group That Promotes Carbon Sequestration*, ELECTRIC UTILITY WEEK, (Nov. 28, 2011), <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/ElectricPower/6695863>; NORTH AMERICA 2050, na2050.org (Feb. 23, 2013).

²⁶⁵⁴ MONT. DEP'T OF NAT. RES. AND CONSERVATION, WOODY BIOMASS ENERGY PRELIMINARY FEASIBILITY ASSESSMENT GRANTS (2011), <http://dnrc.mt.gov/Forestry/Assistance/Biomass/Documents/2012PreFeasibility.pdf>.

²⁶⁵⁵ See generally *Fuels for School Carbon Offset Program*, DNRC FORESTRY DIV., <http://dnrc.mt.gov/forestry/Assistance/Biomass/offset.asp> (Nov. 26, 2013).

²⁶⁵⁶ *Alternative Energy Loan Program*, MONT. DEP'T OF ENVTL. QUALITY, <http://deq.mt.gov/energy/renewable/altenergyloan.mcp> (Nov. 25, 2013).

²⁶⁵⁷ *Id.*

\$30,000.²⁶⁵⁸ The program was designed to award innovative development and utilization of biomass in Montana, and to reduce air emissions from open slash-pile burning.

Also in November 2012, the Montana DEQ updated its Montana Energy Assurance Plan to reflect recent changes to possible emergency triggers and necessary responses to such energy emergencies.²⁶⁵⁹ Among the events identified as likely to cause an energy emergency are those weather events that are exacerbated by climate change, such as wildfires, extreme temperatures, prolonged droughts, and large-scale hurricanes such as Katrina.²⁶⁶⁰

2013: Market-Based Solutions

In February 2013, the Montana DEQ published a report summarizing all current state and federal tax incentives and low-interest loans available to Montana residents and business owners.²⁶⁶¹ The incentives identified relate to coal, oil, natural gas, renewable energy, and energy conservation.²⁶⁶²

2014: Market-Based Solutions

In February 2014 the Department of Environmental Quality announced that Montana's Alternative Energy Revolving Loan Program would set a 3.25% interest rate for the remainder of 2014.²⁶⁶³ Loans through this program can be made up to a maximum of \$40,000 and may be repaid in up to 10 years, depending on the loan amount.

NEBRASKA

1990: Energy Efficiency

Nebraska offers Dollar and Energy Savings Loans – low interest loans first introduced in 1990 – for energy efficiency improvements on residential and commercial properties.²⁶⁶⁴ To receive the loan, the borrower must first obtain approval from a financial institution, which in turn must obtain approval from Nebraska's State Energy

²⁶⁵⁸ MONT. DEP'T OF NAT. RES. AND CONSERVATION, WOOD PRODUCT AND BIOMASS UTILIZATION GRANT (Nov. 7, 2012), <http://dnrc.mt.gov/Forestry/Assistance/Biomass/Documents/201211WoodProdBiomassRFP.pdf>.

²⁶⁵⁹ MONT. DEP'T OF ENVTL. QUALITY, MONTANA ENERGY ASSURANCE PLAN: 2012 UPDATE, 6 (Nov. 2012), <http://deq.mt.gov/Energy/pdf/MTENERGYASSURANCEPLAN-final.pdf>.

²⁶⁶⁰ *Id.* at 16-17.

²⁶⁶¹ MONT. DEP'T OF ENVTL. QUALITY, ENERGY & POLLUTION PREVENTION BUREAU, ENERGY INCENTIVES IN MONTANA AND AT THE FEDERAL LEVEL (Feb. 1, 2013), deq.mt.gov/Energy/pdf/MTEnergyIncentives.pdf.

²⁶⁶² *Id.* at 2.

²⁶⁶³ Press Release, DEQ Sets Alternative Energy Loan Interest Rate at 3.25 Percent for 2014, MONT. DEP'T OF ENVTL. QUALITY (Feb. 14, 2014), <http://svc.mt.gov/deq/press/pressDetail.asp?id=1387>.

²⁶⁶⁴ Official Nebraska Government Website, Dollar and Energy Savings Loans, <http://www.neo.state.ne.us/loan/index.html> (Aug. 30, 2006). The loans were authorized by NEB. REV. STAT. §§ 66-1001-1011 (2012).

Office.²⁶⁶⁵ If it is approved, the State Energy Office buys, without interest, half the loan, leaving the borrower to pay interest that is only half the market rate.²⁶⁶⁶

2000: Greenhouse Gas Reduction

On April 10, 2000, Nebraska enacted L.B. 957, creating the first-of-its-kind Carbon Sequestration Advisory Committee (CSAC) to explore sequestering carbon through new agricultural policy.²⁶⁶⁷ Members of the CSAC, funded by the Nebraska Environmental Trust Fund, among other sources, included government officials and representatives from the state's agriculture and energy sectors.²⁶⁶⁸

2007: Climate Change Agreements/MOUs

At the Midwestern Governors Association Energy Security and Climate Change Summit held in Milwaukee, Wisconsin, in November 2007, Nebraska, Illinois, Iowa, Kansas, Michigan, Minnesota, Wisconsin, and North Dakota adopted an Energy Security and Climate Stewardship Platform.²⁶⁶⁹ The platform's goals for the Midwest region include: promoting energy efficiency; advances in biobased products; electricity production from renewables; and advanced coal and carbon capture and storage.²⁶⁷⁰ Platform members also signed cooperative regional initiatives to create a Carbon Management Infrastructure Partnership, a bioproduct procurement program, electricity transmission adequacy for new wind energy, renewable fuels corridors, advanced bioenergy permitting, and Low-carbon energy transmission infrastructure.²⁶⁷¹

2008: Renewable Energy

In September 2008, Nebraska won a \$303,065 grant from the U.S. Department of Energy to implement an energy-efficient model state code for building construction and renovation.²⁶⁷²

2009: American Recovery & Reinvestment Act (ARRA) and Green Jobs

On March 12, 2009, the U.S. Department of Energy announced that Nebraska was eligible for \$30,910,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).²⁶⁷³

²⁶⁶⁵ Official Nebraska Government Website, Dollar and Energy Savings Loans, <http://www.neo.state.ne.us/loan/index.html> (Aug. 30, 2006).

²⁶⁶⁶ *Id.*

²⁶⁶⁷ NEB. REV. STAT. §§ 2-5301 -5306 (2012).

²⁶⁶⁸ *Id.*

²⁶⁶⁹ Midwestern Energy Security & Climate Stewardship Summit, Energy Security and Climate Stewardship Platform for the Midwest, <http://www.midwesterngovernors.org/resolutions/Platform.pdf>.

²⁶⁷⁰ *Id.*

²⁶⁷¹ *Id.*

²⁶⁷² Press Release, DOE Announces \$6.6 Million in Competitive Grant Selections For Innovative State Efficiency (Sept. 8, 2008), Renewable Initiative, <http://www.energy.gov/6515.htm>.

²⁶⁷³ U.S. Dep't of Energy, Nat'l Energy Tech. Lab., State Energy Program Formula Grants, at 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

According to the Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for Nebraska, Nebraska's clean energy economy grew by 5,292 jobs and 368 businesses from 1998 to 2007.²⁶⁷⁴

On August 7, 2009, Governor Dave Heineman approved a \$100,000 grant to the International Brotherhood of Electrical Workers (IBEW) to provide wind tower rescue training.²⁶⁷⁵ He stated, "[t]his project will position our state to have a skilled workforce ready to support to this growing area of clean energy production and economic development in Nebraska."²⁶⁷⁶ The funding would support construction of a training tower in Omaha to simulate the working conditions of wind tower.²⁶⁷⁷

2010: Political Action and Renewable Energy

In March 2010, Governor Heineman joined a group of twenty other governors in signing a letter to Congress urging them to stop the U.S. EPA's proposed regulation of greenhouse gases.²⁶⁷⁸ The letter expressed their concerns that elected state and federal representatives – not a single federal agency – would best develop these policies.²⁶⁷⁹

Governor Heineman signed L.B. 1048 – a bill designed to promote wind energy development – into law on April 12, 2010.²⁶⁸⁰ The legislation "preserves the benefits Nebraskans receive as a result of the state's unique public power system by allowing the Nebraska Power Review Board to approve wind energy operations designed to export energy."²⁶⁸¹

2011: Green Building, Energy Efficiency, and Green Technology

In November 2011, the Nebraska Energy Office was awarded a \$276,417 grant by the Pacific Northwest Laboratory for the U.S. Department of Energy.²⁶⁸² The grant would fund energy audits for one hundred new homes to determine if they comply with

²⁶⁷⁴ Pew Charitable Trust, Clean Energy Economy Nebraska Fact Sheet, *available at* http://www.pewcenteronthestates.org/uploadedFiles/wwwpewcenteronthestatesorg/Fact_Sheets/Clean_Economy_Factsheet_Nebraska.pdf.

²⁶⁷⁵ Press Release, Office of Gov. Dave Heineman, Gov. Heineman Approves Grant for Wind Tower Training Project (Aug. 7, 2009), http://www.governor.nebraska.gov/news/2009/2009_08/07_wind_tower_training.html.

²⁶⁷⁶ *Id.*

²⁶⁷⁷ *Id.*

²⁶⁷⁸ Press Release, Official Neb. Government Website, Gov. Heineman Calls on Congress to Stop EPA Regulation of Greenhouse Gases (Mar. 11, 2010), http://www.governor.nebraska.gov/news/2010/03/11_greenhouse_gases.html.

²⁶⁷⁹ *Id.*

²⁶⁸⁰ Press Release, Official Neb. Government Website, Gov. Heineman Signs Bill Promoting Wind Energy (Apr. 12, 2010), http://www.governor.nebraska.gov/news/2010/04/12_wind_energy.html.

²⁶⁸¹ *Id.*

²⁶⁸² Press Release, Nebraska Energy Office Awarded \$276,417 Grant for Building Energy Code Information, Training and Compliance (Nov. 29, 2010), <http://www.neo.ne.gov/news/PR/grantforbuilding.pdf>

existing codes. In addition, the Energy Office planned to evaluate the knowledge of existing energy codes among key groups, as well as what the economic value might be of updating Nebraska's energy codes. In the long term, the grant aimed to help homeowners save money and to reduce the need for new power plants.²⁶⁸³

On March 9, 2011, the Nebraska Energy Office announced that it would grant a \$2.2 million loan, in partnership with First National Bank of Omaha, to the Metropolitan Utilities District for the construction of two new natural gas fueling stations.²⁶⁸⁴ The loan came from the Dollar and Energy Saving and Loans program, which was launched in 1990 to assist Nebraskans in making energy efficiency improvements to their homes, businesses and schools.²⁶⁸⁵

In April 2011, Nebraska schools were offered free energy use assessments by the Nebraska Energy Office as part of the first phase of the Nebraska Public School Energy Efficiency Project. The program was funded through ARRA.²⁶⁸⁶

In September 2011, the U.S. Department of Energy awarded the Nebraska Energy Office \$186,195 to establish a partnership with the University of Nebraska-Lincoln Extension in order to develop several pilot projects and accelerate the use of energy efficiency and emerging technologies for homes, businesses, farms and ranches.²⁶⁸⁷ Pilot projects included developing an energy efficiency ranking system for irrigation systems similar to the ENERGY STAR® system.²⁶⁸⁸

Six Nebraska community colleges began offering courses in renewable energy technologies in November 2011.²⁶⁸⁹ The colleges received a total of \$1.9 million in grants from the Nebraska Energy Office, through ARRA, to develop the course work and purchase training equipment for classes in wind, solar, hydropower, geothermal and biofuels energy technology. The occupational training programs aimed to teach students to install, maintain and operate the renewable energy systems.²⁶⁹⁰

2012: Climate Change Adaptation, Renewable Energy, and Energy Efficiency

²⁶⁸³ *Id.*

²⁶⁸⁴ Press Release, MUD To Build Two Natural Gas Stations (Mar. 9, 2011), <http://www.neo.ne.gov/news/PR/NEO%20PR%20%20MUD.pdf>.

²⁶⁸⁵ *Id.*

²⁶⁸⁶ Press Release, Nebraska Schools to Get Free Energy Use Assessments (Aug. 22, 2011), <http://www.neo.ne.gov/news/PR/NEO%20PR%20%20SchoolAudit%20%208%2022%202011.pdf>.

²⁶⁸⁷ Press Release, Energy Office Gets \$186,200 Grant for UNL Extension Partnership (Sept. 19, 2011), <http://www.neo.ne.gov/news/PR/NEOPR-SEPGrantUNL2011.pdf>.

²⁶⁸⁸ Press Release, Energy Office Gets \$186,200 Grant for UNL Extension Partnership (Sept. 19, 2011), <http://www.neo.ne.gov/news/PR/NEOPR-SEPGrantUNL2011.pdf>.

²⁶⁸⁹ Press Release, Nebraska Community Colleges Launch Renewable Energy Courses (Nov. 10, 2011), <http://www.neo.ne.gov/news/PR/communitycollege11-10-11.pdf>.

²⁶⁹⁰ *Id.*

In March 2012, Nebraska was awarded \$413,000 in WaterSMART Basin Study Program funds from the U.S. Bureau of Reclamation for the Republican River basin.²⁶⁹¹ The intention of the study was to identify mitigation and adaptation techniques in response to the effects of climate change on river basins.²⁶⁹²

Governor Heineman declared March 19-23, 2012 to be Nebraska Severe Weather Awareness Week.²⁶⁹³ He emphasized that readiness could mitigate the impacts of severe weather events such as flooding, thunderstorms, tornados, droughts, lightning and wildfires, all of which are more severe during the spring and summer months.²⁶⁹⁴

Also in March 2012, the Nebraska Legislature enacted L.B. 828, amending Neb. Rev. Stat. § 66-901 et seq., which governed the use of wind and solar energy devices.²⁶⁹⁵ The amendment clarified that wind and solar energy agreements run with the land and are not leases or easements, and that such agreements cannot cause any energy interest to become severed from the surface estate. It also added a new requirement for decommissioning planning.²⁶⁹⁶

By April 2012, Nebraska Department of Environmental Quality's Supplemental Environmental Program (SEP) had provided grant funds to many Nebraska public schools participating in the Nebraska Wind for Schools project.²⁶⁹⁷ The SEP program provided an alternative to paying fines for environmental noncompliance.²⁶⁹⁸ As of February 2013, twenty-four Nebraska schools were participating in the Wind for Schools project.²⁶⁹⁹

In October 2012, the reEnergize collaborative program between Omaha and Lincoln, Nebraska announced that additional U.S. Department of Energy funds were still available, including new incentives for residents, business-owners, and public facilities.²⁷⁰⁰ The new incentives included rebates on gas bills for consumers who install more efficient furnaces and water heaters.²⁷⁰¹ Many of the changes to the program were

²⁶⁹¹ *Republican River basin gets federal funds for water study*, LINCOLN JOURNAL STAR, Mar. 21, 2012, http://journalstar.com/news/state-and-regional/nebraska/republican-river-basin-gets-federal-funds-for-water-study/article_e8dea6f9-b752-5f8a-a46c-636a91475245.html.

²⁶⁹² LINCOLN JOURNAL STAR, *supra* note 2113.

²⁶⁹³ Press Release, Governor Dave Heineman, Gov. Heineman Encourages Nebraskans to be Prepared for Severe Weather (Mar. 14, 2012), http://www.governor.nebraska.gov/news/2012/03/14_weather.html.

²⁶⁹⁴ *Id.*; see NEBRASKA EMERGENCY MANAGEMENT AGENCY, <http://www.nema.ne.gov/index.shtml> (Feb. 24, 2013).

²⁶⁹⁵ 2012 Neb. Laws L.B. 828, <http://www.nebraskalegislature.gov/FloorDocs/102/PDF/Slip/LB828.pdf>.

²⁶⁹⁶ *Id.*

²⁶⁹⁷ U. S. Dep't of Energy, *Nebraska Utilizes a Supplemental Environmental Program to Fund Wind for Schools Turbines: A Wind Powering America Success Story*, WIND POWERING AMERICA (Apr. 11, 2012), http://www.windpoweringamerica.gov/filter_detail.asp?itemid=3522.

²⁶⁹⁸ *Id.*

²⁶⁹⁹ U.S. Dep't of Energy, *Nebraska Wind Activities*, WIND POWERING AMERICA (Feb. 24, 2013), http://www.windpoweringamerica.gov/astate_template.asp?stateab=ne.

²⁷⁰⁰ Press Release, City of Lincoln Mayor's Office, "reEnergize" Program Offers New Incentives (Oct. 25, 2012), <http://www.lincoln.ne.gov/city/mayor/media/2012/102512a.htm>.

²⁷⁰¹ *Id.*

put in place to streamline participation hurdles and to increase the number of homes, businesses and facilities participating in the program.²⁷⁰²

NEVADA

Nevada has taken an energy and market-based approach to carbon emissions. Nevada has not created any explicit action to regulate carbon for the purpose of mitigating climate change. However, the state has created a robust set of rules and regulations aimed at propagating renewable energy, energy efficiency and alternative fuel vehicles.

1979-2011: Renewable Energy Incentives

Residential, commercial, and industrial property owners are eligible for a permanent, 100% tax exemption for value added to buildings through the installation of a renewable energy system (solar, wind, geothermal, solid waste, or hydroelectric).²⁷⁰³ The state also offers tax abatements to commercial owners of real or personal property used to generate energy from renewable sources – 50% over ten years.²⁷⁰⁴

In 1979, Nevada passed a solar-access law that prohibits local zoning provisions that would “unreasonably restrict” the implementation of solar or wind energy systems.²⁷⁰⁵ Legislation also makes void any covenants or deed restrictions that would impair solar or wind power efforts.²⁷⁰⁶ Conversely, certain provisions make it easier for private parties to enter voluntarily legally binding solar-easement contracts.²⁷⁰⁷ The state ensures common interest communities may not “unreasonably, restrict, prohibit or withhold approval” of wind energy systems when the owner obtains the consent of adjacent property owners.²⁷⁰⁸ These legal protections for solar-access were current through the end of the 2013 77th Regular Session and the 27th Special Session of the Nevada Legislature.

Nevada requires solar system installer licensing. The mandatory licensing went into effect in 2007.²⁷⁰⁹ Licensing requires application, examination and a fee to the Division of the State Contractors Board. Owners installing on their own property are not required to obtain a license.

²⁷⁰²See Matt Wynn, Changes slated for troubled energy efficiency program, Omaha World-Herald, Sept. 15, 2012, <http://www.omaha.com/article/20120915/NEWS/709159916>.

²⁷⁰³*Id.* § 361.079.

²⁷⁰⁴*Id.* § 361.0687.

²⁷⁰⁵*Id.* § 278.0208.

²⁷⁰⁶*Id.* § 111.239.

²⁷⁰⁷*Id.* §§ 111.370-380.

²⁷⁰⁸*Id.* §§ 116.2111. The specifics of the law ensure that written consent from the owners of all properties within 300 feet of the system ensures the locality may not interfere with approval of the wind system.

²⁷⁰⁹DSIRE, *supra* note 2729. Nevada Incentives/Policies for Renewables & Efficiency, Solar Contractor Licensing, http://dsireusa.org/incentives/incentive.cfm?Incentive_Code=Nv05R&re=1&ee=1 (Mar. 18, 2014). See also <http://www.nscb.state.nv.us>.

On April 10, 2007, Governor Jim Gibbons created Nevada's Climate Change Advisory Committee.²⁷¹⁰ In July 2008, the committee presented its final report outlining key recommendations.²⁷¹¹ These recommendations included developing a state climate action plan, creating siting restrictions for electric utilities, and amending the current state RPS.²⁷¹²

Beginning in May of 2009, Nevada implemented Property-Assessed Clean Energy financing for special districts. This program allows local governments to create special financing districts where property owners may borrow money to pay for energy improvements. The amount borrowed is then repaid via a special assessment on the property over a period of years.²⁷¹³

In July of 2009, Nevada implemented a Renewable Energy Sales and Use Tax Abatement, reducing the sales and use taxes of renewable energy systems to 2.25%.²⁷¹⁴ Abatement is only available for systems with generating capacity of at least 10 MW.

On November 6, 2009, Governor Gibbons announced his plan to sponsor an initiative to overhaul the state's landfills.²⁷¹⁵ He said, "We can conserve natural resources, create clean energy and create jobs by looking at landfills not as places where we bury our trash, but as places where recycling and energy recovery begin."²⁷¹⁶ He also supported a mandate requiring waste recovery for the creation of renewable energy.²⁷¹⁷

In August 2010, Nevada issued its first renewable energy tax abatement in the sum of \$10.4 million.²⁷¹⁸ It also planned future abatement awards as it attempted to increase its renewable energy portfolio. The state received an additional \$7 million in stimulus funding to expand Nevada Housing Division's successful Weatherization Assistance Program.²⁷¹⁹

In January 2011, the National Association of State Energy Officials ranked Nevada as the number one U.S. state for the percentage of Energy Efficiency and Conservation Block Grants (EECBG) expenditures.²⁷²⁰ The data, released by the U.S.

²⁷¹⁰ Executive Order, April 10 (Nev. 2007).

²⁷¹¹ NEVADA CLIMATE CHANGE ADVISORY COMMITTEE, Final Report, <http://gov.state.nv.us/Climate/FinalReport/ClimateChangeReport.pdf>.

²⁷¹² *Id.*

²⁷¹³ 2009 NEV. REV. STAT. § 271.0.10 et seq.; *see also* DSIRE, Local Option- Special Improvement Districts, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=Nv23F&re=0&ee=0.

²⁷¹⁴ NEV. REV. STAT. 701A.360, et seq.

²⁷¹⁵ Press Release, State of Nev. Gov. Jim Gibbons, Governor Gibbons: "We need to stop wasting Nevada." (Nov. 6, 2009), http://gov.state.nv.us/PressReleases/2009/PDF/PR_2009-11-06_Landfill.pdf.

²⁷¹⁶ *Id.*

²⁷¹⁷ *Id.*

²⁷¹⁸ Press Release, Office of the Governor, State Issues First Renewable Energy Tax Abatement (Aug. 10, 2010), http://gov.state.nv.us/PressReleases/2010/2010-08-10_RenewableEnergyTaxAbatement.htm.

²⁷¹⁹ Press Release, Office of the Governor, State Receives Additional ARRA Funds for Weatherization (Aug. 24, 2010), http://gov.state.nv.us/PressReleases/2010/2010-08-24_WeatherizationProgram.htm.

²⁷²⁰ Press Release, Nevada Tops in the Nation for Expending Energy Stimulus Funds (Jan. 6, 2011), http://energy.state.nv.us/documents/news/2011/PR_2011-01-06_EECBG.pdf.

Department of Energy, showed that Nevada has spent 91% of its EECBG funds for various energy efficiency projects, such as installing energy-efficient LED lighting, street signs and traffic signs in a number of counties.²⁷²¹

1990: Climate Change

Nevada does not have any law containing the phrase “climate change.” However, Nevada has a Weather Modification Research Law, which it passed in 1961. The Weather Modification Law was amended in 1990, to limit liability for any weather modification and control activities.

1997-2014: Renewable Portfolio Standard (RPS)

In 1997, Nevada established its first renewable portfolio standard (RPS).²⁷²² The state increased the minimum requirements in 2001, to include a 3% increase of the RPS every year.²⁷²³ In 2009, Nevada revised the solar requirement with the RPS to meet 6% of the portfolio requirement.²⁷²⁴ In 2014, the state required its two major investor-owned utilities to supply 18% of retail sales through renewables.²⁷²⁵ This target will periodically increase, stabilizing at 25% in 2025.²⁷²⁶ Solar energy must comprise at least 5% of a utility’s Renewable Portfolio.²⁷²⁷

The state amended its RPS in 2005, to allow 25% of the total portfolio standard to be met by energy efficiency.²⁷²⁸ Eligible efficiency measures must be 1) implemented after January 1, 2005; (2) sited or implemented at a retail customer’s location; and (3) partially or fully subsidized by the electric utility.²⁷²⁹ In 2013, Nevada established a schedule for energy efficiency compliance through SB 252.²⁷³⁰ The schedule established a standard of no more than 25% of the total RPS requirement could be met through energy efficiency in 201 to 2014, reduced to 20% for 2015 to 2019, then further reduced to 10% for 2020 to 2024. Finally, energy efficiency eligibility will be phased out in 2025.²⁷³¹

In 2003, the Public Utilities Commission of Nevada (PUCN) established an energy credit system to allow providers to meet their energy portfolio requirements.²⁷³²

²⁷²¹ *Id.*

²⁷²² NEV. REV. STAT. 704.7801 (1997).

²⁷²³ NEV. REV. STAT. 704.8831 (2002).

²⁷²⁴ NEV. REV. STAT. § 704.78213 (2009) (eff. July 1, 2009).

²⁷²⁵ NEV. REV. STAT. §§ 704.7801-.7828 (2005). Six percent (6%) is the standard for 2005-2006. *Id.* § 704.7821.

²⁷²⁶ *Id.* § 704.7821.

²⁷²⁷ *Id.*

²⁷²⁸ 2005 NEV. REV. STAT. § 704.78213 (2013).

²⁷²⁹ DSIRE, U.S. DEPT. OF ENERGY, Database of State Incentives for Renewables & Efficiency, [hereinafter “DSIRE”] http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=Nv01R&ee=0.

²⁷³⁰ 2013 NEV. REV. STAT. § 701B.200 (eff. Jan. 1, 2014).

²⁷³¹ *Id.*

²⁷³² DSIRE, *supra* note 2729, Portfolio Energy Credits, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=Nv09F&ee=1.

The credit system began with a two-tier system, where one portfolio energy credit (PEC) represents one kilowatt-hour, while one kilowatt-hour is 2.4 PECs.²⁷³³ In 2013, Nevada repealed the credit multiplier system for systems installed after December 31, 2015.²⁷³⁴ Customer-sited solar distributed generation is eligible for an additional 0.05 PEC multiplier.²⁷³⁵ Electricity saved during peak periods as a result of efficiency measures has a credit multiplier of 2.0 PECs.

Nevada Assembly Bill 388 (2013) clarified that PECs do not include electricity generated by a system that is not delivered to the grid. These amendments apply to systems placed in service after January 1, 2016, with grandfathering for projects coming into service after this date, but had contracts in place prior to December 31, 2012.²⁷³⁶

2001: Utility Requirements

In 2001, Nevada required its utilities to send their customers regular reports disclosing their average emissions and average mix of fuel sources.²⁷³⁷ Utilities must also offer net metering and accept up to 1% of their cumulative peak capacity from net-metered sources.²⁷³⁸

In 2003, the Public Utilities Commission adopted interconnection standards for customers with on-site generation of up to 20 megawatts.²⁷³⁹

SB 123 (2013) requires Nevada Energy to retire 800 megawatts of coal-fired electric generating plants before 2020. To compensate for this decrease in generating capacity, the interconnection standards also updated the state's net-metering policy. The net-metering standards require systems to meet Institute of Electrical Electronic Engineers (IEEE), the National Electrical Code (NEC), and Underwriters Laboratories (UL) standards.²⁷⁴⁰

One of the utilities, Nevada Energy, offers discount electricity rates to residential customers for charging electric or hybrid-electric vehicles during off-peak hours.²⁷⁴¹

2001-2012: Gubernatorial Executive Actions

In 2001, Governor Brian Sandoval signed Assembly Bill 127, requiring the State Senate and Assembly to publish documents electronically. The bill was introduced as a

²⁷³³ *Id.*

²⁷³⁴ § 701B.200, *supra* note 2730.

²⁷³⁵ *Id.*

²⁷³⁶ *Id.*

²⁷³⁷ *Id.* § 704.763.

²⁷³⁸ *Id.*

²⁷³⁹ DSIRE, *supra* note 2729, Nevada Incentives/Policies for Renewables & Efficiency, Interconnection Standards, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=Nv09R&re=0&ee=0 (Mar. 19, 2014).

²⁷⁴⁰ NEV. REV. STAT. § 704.774 (1997).

²⁷⁴¹ NV Energy, *NV Energy's Electric Vehicle Rate*, <https://www.nvenergy.com/home/saveenergy/electricVehicle.cfm> (Mar. 18, 2014).

way to save paper and cut costs. Sandoval signed the bill noting the environmental benefits it would provide.²⁷⁴²

The Nevada State Office of Energy announced on June 27, 2011, that the NSOE's Revolving Loan Program had provided funds for the construction of two hydropower plants in the state, with a third project under construction. Both plants use existing water delivery infrastructure, thereby reducing water consumption.²⁷⁴³

On September 29, 2011, the NSOE announced the launch of the second phase of its Revolving Loan Program for financing renewable energy manufacturing projects. In the initial phase of the program, the NSOE provided \$11 million in low-cost loans to help develop a number of renewable energy projects, including photovoltaic (PV) systems, wind turbines, anaerobic digesters, and hydropower plants. In the second phase of the program, applicants are eligible to receive from \$100,000 to \$1,000,000.²⁷⁴⁴ As of March 2014, the loan program is still accepting applications and issuing loans.

On November 22, 2011, Governor Sandoval issued Executive Order 2011-18 to provide further direction to the previously established New Energy Industry Task Force.²⁷⁴⁵ In emphasizing the importance of renewable energy sources to Nevada, the order charged the task force with promoting, coordinating and facilitating the permitting, construction and electrical interconnection of these resources into the grid.²⁷⁴⁶ A Technical Advisory Committee would also be formed to assist the task force.²⁷⁴⁷

Nevada Assembly Bill 178, which was adopted by the legislature in June of 2007, became effective on January 1, 2012.²⁷⁴⁸ The bill requires that general-purpose lights sold in Nevada produce at least 25 lumens per watt (lm/W) of electricity consumed.²⁷⁴⁹ General-purpose lights include "lamps, bulbs, tubes or other devices that provide functional illumination for indoor and outdoor use."²⁷⁵⁰ For the period after January 1, 2016, the Director of the State Office of Energy must adopt regulations for general purpose lights sold in the state that exceed 25 lumens of electricity.²⁷⁵¹

2007-2012: Green Building and Energy Efficiency

²⁷⁴² Press Release, Office of the Governor, Governor Signs Bills (Mar. 17, 2011) <http://nv.gov/RSSFeed.aspx?fid=4294967546> (RSS feed).

²⁷⁴³ Press Release, Revolving Loan Funded Hydro Projects Help to Power Nevada (June 27, 2011), http://energy.nv.gov/documents/news/2011/PR_2011-06-27_RevolvingLoanFundedHydroProjects.pdf.

²⁷⁴⁴ Press Release, NSOE Launches Second Phase of Popular Revolving Loan Program (Sept. 29, 2011), http://energy.nv.gov/documents/renewable/PR-2011-09-29_RevolvingLoanPhase1.pdf.

²⁷⁴⁵ Exec. Order No. 2011-18 (2011), <http://gov.nv.gov/news/item/4294972898/>.

²⁷⁴⁶ *Id.*

²⁷⁴⁷ *Id.*

²⁷⁴⁸ NEV. REV. STAT. § 701.260 (2011), <http://www.leg.state.nv.us/NRS/NRS-701.html#NRS701Sec260>.

²⁷⁴⁹ *Id.* at § 701.260(1). The efficacy of a typical incandescent light bulb ranges between 12 lm/W and 18 lm/W. The efficacy of a typical compact fluorescent bulb is between 45 lm/W and 60 lm/W.

²⁷⁵⁰ *Id.* at § 701.260(4).

²⁷⁵¹ *Id.* at § 701.260(3)(a).

In addition to these energy sector measures, the state put incentives and mandates in place to stimulate green building markets. Municipalities are required to permit straw and other renewable sources for building construction, as well as code-compliant solar or wind energy systems for powering buildings.²⁷⁵² Any state agency or unit that is planning to construct or renovate a public building larger than 20,000 square feet is required, first, to obtain an analysis of the building's life cycle costs.²⁷⁵³ The analysis should include maintenance as well as construction costs, factoring in potential water and energy conservation measures, as well as potential renewable sources for energy supply.²⁷⁵⁴

In 2007, Nevada implemented property tax abatement for new non-residential and multifamily residential green buildings and existing buildings or structures, which are renovated for use by a manufacturer to meet certain green building standards.²⁷⁵⁵ Tax abatement is available for new buildings that earn at least 3 points under the LEED Energy Conservation. Earning additional credits or higher certification increases the abatement percentage and duration.²⁷⁵⁶

Nevada enacted Assembly Bill 178 in 2007 to establish energy efficiency standards for general-purpose lights sold in the state. The bill will be in effect from January 2012 through the end of 2015. The legislation then directs the Office of Energy to establish a new minimum in 2016.²⁷⁵⁷

In 2009, Nevada implemented the EnergyFit rebate program for home energy retrofit projects.²⁷⁵⁸ Through EnergyFit, homeowners may be eligible for up to \$1,000 in matching funds if their home achieves a 20% savings from total baseline energy consumption. This program was also funded through the ARRA, and the DOE Better Buildings Program.

The 2009 Nevada Building Code includes a statewide energy code for commercial and residential buildings. The State Office of Energy is required to adopt the most recent IECC every three years.²⁷⁵⁹

In addition to residential and commercial building energy code, Nevada enacted a comprehensive energy standard for public buildings, requiring a 20% reduction in grid-

²⁷⁵² NEV. REV. STAT. § 278.580 (eff. June 14, 2007).

²⁷⁵³ NEV. REV. STAT. § 338.190 (eff. July 1, 2007).

²⁷⁵⁴ *Id.*

²⁷⁵⁵ *Id.* § 701A.100-110 (eff. July 1, 2012).

²⁷⁵⁶ *Id.* See DSIRE, *supra*,

http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NV10F&re=0&ee=0 (Mar. 18, 2014).

²⁷⁵⁷ NEV. REV. STAT. § 701.260 (2007).

²⁷⁵⁸ DSIRE, *supra*. Nevada Incentives/Policies for Renewables & Efficiency, EnergyFit Nevada (2009), http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NV38F&re=0&ee=0. (Mar. 18, 2014).

See EnergyFit Nevada, <http://www.energyfitnevada.org/>.

²⁷⁵⁹ ONLINE CODE ENVIRONMENT & ADVOCACY NETWORK, Nevada Current Codes, <http://bcap-ocean.org/state-country/Nevada> (Mar. 18, 2014).

based energy purchases by 2015, and buildings greater than 20,000 square feet must comply with ASHRAE 90.1-2007 and Energy Star.²⁷⁶⁰

In June 2011, the Nevada State Office of Energy (NSOE) launched the Home Energy Fitness Campaign, an energy efficiency rebate program funded through the U.S. Department of Energy Better Buildings program.²⁷⁶¹ The \$5 million program aims to increase energy efficiency by a minimum of 20% in at least 5% of all single-family Nevada residences by 2021. As part of the program, HomeFree Nevada will assist homeowners in contacting energy assessment professionals and contractors in order to make recommended home energy efficiency upgrades.²⁷⁶² Once the upgrades have been made, homeowners will receive a second assessment to ensure that energy efficiency upgrades of 20% or more have been achieved, and will receive a 20% rebate on their initial investment, up to \$1,000. The program hopes to target 50,000 Nevada residences by 2021.²⁷⁶³

2009-2012: State/Federal Interaction and American Recovery & Reinvestment Act (ARRA)

In a letter to President Obama dated February 4, 2009, Governor Gibbons requested that changes to the Internal Revenue Code be incorporated into the economic stimulus package.²⁷⁶⁴ The plan would facilitate funding for the construction of electric transmission lines.²⁷⁶⁵ Gibbons highlighted Nevada's ideal position to harness renewable energy given its "solar, wind, and geothermal energy production potential."²⁷⁶⁶

Nevada Assembly Bill 552 (2009) established a fund for renewable energy, energy efficiency and energy conservation loans.²⁷⁶⁷ The bill specified that all interest and repayment on loans must be added back into the fund and redistributed as additional loans (a "revolving" loan program). The initial phase of the program provided ~\$8 million to renewable energy systems, energy conservation projects, expansion of energy efficiency projects, and manufacturing components for renewable energy systems.²⁷⁶⁸

Through the American Reinvestment and Recovery Act (ARRA) funding and the Energy Efficiency and Community Block Grant (EECBG), the Nevada State Office of Energy provided grants to cities and counties statewide for the installment of light

²⁷⁶⁰ NEV. REV. STAT. § 701.215 et seq.

²⁷⁶¹ Press Release, The Nevada State Office of Energy Launches Statewide Home Energy Fitness Campaign (June 14, 2011), http://energy.nv.gov/documents/news/2011/2011-06-14_HomeEnergyFitnessCampaignPR.pdf.

²⁷⁶² *Id.*

²⁷⁶³ *Id.*

²⁷⁶⁴ Press Release, State of Nev., Governor Takes Next Step in Renewable Energy Plans (Feb. 5, 2009), http://gov.state.nv.us/PressReleases/2009/PDF/PR-2009-02-05_LetterToPresident.pdf.

²⁷⁶⁵ *Id.*

²⁷⁶⁶ *Id.*

²⁷⁶⁷ AB 552 (2009).

²⁷⁶⁸ DSIRE, Nevada Incentives/Policies for Renewables & Efficiency, Revolving Loan Program (2009), http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=Nv39F&re=0&ee=0.

emitting diode (LED) lights in traffic signals and street lights. Nevada cities and counties are expected to save over a total of \$300,000 in annual energy costs.²⁷⁶⁹

By September 2011, 58 Nevada schools had installed photovoltaic systems through a \$9.5 million program, which was funded by ARRA and utility rebates and administered by the Nevada State Office of Energy.²⁷⁷⁰

Governor Sandoval announced in September 2011 that the U.S. Department of Energy awarded Nevada a competitive grant to help commercial buildings develop energy efficiency retrofits. The federal grant of \$750,000 was matched by a \$256,000 grant from NV Energy.²⁷⁷¹

In December 2011, the Nevada State Office of Energy and partners were awarded part of the Sunshot Initiative grant in the amount of \$765,000 from the U.S. Department of Energy in order to fund the first year of the Nevada Rooftop Solar Initiative (NRSI).²⁷⁷² NRSI aims to cover 5% of Nevada's residential and commercial rooftops with solar installations by 2020.²⁷⁷³ The first phase of the program will focus on zoning and permitting standardizations to facilitate reaching the 2020 goal.²⁷⁷⁴ After the first year of implementation, Nevada will be eligible to apply for the second phase of the Sunshot Initiative grant, which will focus on marketing, training and financing solar installations.²⁷⁷⁵

In December 2011, the U.S. Department of Energy awarded the Nevada State Office of Energy a research grant to help improve Nevada's regulatory and policy environment for the retrofitting of commercial establishments in a way that will help boost participation numbers within the state.²⁷⁷⁶ In February 2012, a sub-grant was awarded to the Business Environmental Program at the University of Nevada, Reno to perform portions of the necessary research.²⁷⁷⁷

²⁷⁶⁹ Press Release, Energy Office "Lights Up" Nevada Street Lights and Traffic Signals (Aug. 25, 2011), http://energy.nv.gov/documents/news/2011/2011-08-25_TrafficSignalsStreetLights.pdf.

²⁷⁷⁰ Press Release, 58 Nevada Schools Receive New Solar PV Systems (September 9, 2011), http://energy.nv.gov/documents/news/2011/PR_2011-09-09_NVSchoolsReceiveNewSolarPVSystems.pdf.

²⁷⁷¹ Press Release, Sandoval Announces Approval of DOE Award to Help Energy Retrofits (Sept. 15, 2011), <http://gov.nv.gov/news/item/4294972071/>.

²⁷⁷² Press Release, Nevada State Office of Energy, State Energy Office Receives Grant to Accelerate Solar Energy in Nevada (Dec. 2, 2011), http://energy.state.nv.us/documents/news/2011/PR_2011-12-02_SEO_ReceivedGrant_Solar.pdf.

²⁷⁷³ *Id.*

²⁷⁷⁴ *Id.*

²⁷⁷⁵ *Id.*

²⁷⁷⁶ Commercial Retrofit Grant, NEVADA STATE OFFICE OF ENERGY (Mar. 2, 2013), http://energy.nv.gov/Programs/Commercial_Retrofit_Grant/.

²⁷⁷⁷ Commercial Retrofit Grant, NEVADA STATE OFFICE OF ENERGY (Mar. 2, 2013), http://energy.nv.gov/Programs/Commercial_Retrofit_Grant/.

Nevada was awarded \$1 million in ARRA funding to help implement the 2009 International Energy Conservation Code (IECC).²⁷⁷⁸ The implementing regulation, which adopts the IECC as the minimum state energy code standard, went into effect on July 1, 2012.²⁷⁷⁹ The Nevada State Office of Energy must adopt the latest IECC every third year.²⁷⁸⁰ The Office of Energy provided municipalities across the state with trainings on implementing the IECC.²⁷⁸¹

On June 27, 2012, the U.S. Department of Energy announced that Nevada, in collaboration with the Nevada State Public Works Division, the Rocky Mountain Institute and the Washington State Department of Enterprise Services, won \$715,000 in grants for improving public facility retrofitting projects.²⁷⁸² The funds will allow accelerated use of Energy Savings Performance Contracts to help implement best energy efficiency practices within the Public Works Division.²⁷⁸³ On July 9, 2012, the Nevada State Office of Energy announced that it would use the grant money to help the state meet its goal of achieving a 20% reduction in energy use in state-owned buildings by 2015, particularly within the Office of Energy itself.²⁷⁸⁴ The program will follow the best practices identified by the U.S. Department of Energy.²⁷⁸⁵ Celtic Energy and the Rocky Mountain Institute will provide state staff with training on retrofitting.²⁷⁸⁶

2009-2012: Transportation/Fuels

In 2009, Nevada implemented a law allowing Hybrid Electric (HEV) taxicabs to operate 24 months beyond the existing limits for conventional taxicabs.²⁷⁸⁷ In 2012, Nevada extended further benefits to HEVs, by setting standards for local authorities to exempt alternative fuel vehicles (AFV) from parking fees.²⁷⁸⁸ In addition to exemption

²⁷⁷⁸ NEV. ADMIN. CODE Ch. 701 (2012); *Building Energy Codes*, NEVADA STATE OFFICE OF ENERGY (Mar. 2, 2013), http://energy.nv.gov/Programs/Building_Energy_Codes/.

²⁷⁷⁹ *Building Energy Codes*, NEVADA STATE OFFICE OF ENERGY (Mar. 2, 2013), http://energy.nv.gov/Programs/Building_Energy_Codes/.

²⁷⁸⁰ *Building Energy Codes*, NEVADA STATE OFFICE OF ENERGY (Mar. 2, 2013), http://energy.nv.gov/Programs/Building_Energy_Codes/.

²⁷⁸¹ See, e.g., Press Release, Nevada State Office of Energy, State Office of Energy offers free training in Las Vegas for energy code compliance (July 3, 2012), http://energy.state.nv.us/documents/news/2012/PR_2012-07-03-EnergyCodesVegas.pdf.

²⁷⁸² Press Release, U.S. Dep't of Energy, Energy Department Announces Building Energy Efficiency Investments in Twenty-Two States (June 27, 2012), <http://energy.gov/articles/energy-department-announces-building-energy-efficiency-investments-twenty-two-states>.

²⁷⁸³ Press Release, U.S. Dep't of Energy, Energy Department Announces Building Energy Efficiency Investments in Twenty-Two States (June 27, 2012), <http://energy.gov/articles/energy-department-announces-building-energy-efficiency-investments-twenty-two-states>.

²⁷⁸⁴ Press Release, Nevada State Office of Energy, State Energy Office receives grant to improve energy efficiency in state buildings (July 9, 2012), http://energy.state.nv.us/documents/news/2012/PR_2012-007-09_EnergyEfficiency_StateBuildings.pdf.

²⁷⁸⁵ *Id.*

²⁷⁸⁶ *Id.*

²⁷⁸⁷ NEV. REV. STAT. § 706.8834 (2009).

²⁷⁸⁸ NEV. REV. STAT. § 484A.468 (2012).

from parking fees, Nevada also exempts AFV and HEV from the state's emissions testing requirements.²⁷⁸⁹

Nevada requires all biofuel meets registration requirements and Federal standards.²⁷⁹⁰ The state also requires biofuel producers meet federal requirements, as well as obtain a special license from the Nevada Department of Motor Vehicles.²⁷⁹¹ Nevada sets penalties assessed for violation of air pollution control laws aside for deposits in the county school system.²⁷⁹² Funds acquired through this channel are limited to education programs on topics "relating to air quality and projects to improve air quality."²⁷⁹³

Nevada Revised Statute § 486A.200 enables the Nevada Department of Conservation and Natural Resources may develop a program to incentivize alternative fuel use.²⁷⁹⁴ Nevada applies a reduced tax rate to biofuels, and liquefied petroleum gas.²⁷⁹⁵ The state also directs agencies and other public divisions to purchase AVFs in obtaining new vehicles.²⁷⁹⁶ The statute requires covered fleets to purchase 90% AFVs for new vehicles obtained.²⁷⁹⁷

Nevada Revised Statute § 484A.463 grants the Nevada Department of Transportation the ability to create a program allowing certain clean emissions to use High Occupancy Vehicle highway lanes. Nevada implemented a prohibition on idling diesel trucks and buses for more than 15 minutes.²⁷⁹⁸ The state has other limits to vehicles, such as a prohibition on low-speed vehicles operating on major roadways.²⁷⁹⁹ The statute also requires a fee to register low-speed vehicles.²⁸⁰⁰

NEW HAMPSHIRE

1998: Energy Efficiency

In 1998, New Hampshire established a law requiring utilities to offer net metering to customers with alternative energy power sources.²⁸⁰¹ This section was a part of the Limited Electrical Energy Producers Act and became effective in 2010. Section 362, which refers specifically to net metering, has been subsequently amended and adopted into PUC 902.12.

²⁷⁸⁹ NEV. REV. STAT. § 445B. 770-445B.825 (2007).

²⁷⁹⁰ 42 CFR § 7345 & NEV. REV. STAT. § 590.070 (effective 2014).

²⁷⁹¹ 40 CFR § 79, & NEV. REV. STAT. § 366 (2010).

²⁷⁹² NEV. REV. STAT. § 445B.500 (2013).

²⁷⁹³ U.S. DEPT. OF ENERGY, Alternative Fuels Data Center, Funds for School District Alternative Fuel Use, <http://www.afdc.energy.gov/laws/law/NV/6251> (Mar. 16, 2014).

²⁷⁹⁴ NEV. REV. STAT. § 486A.200 (2009).

²⁷⁹⁵ NEV. REV. STAT. 366.190, 366.197 (2014).

²⁷⁹⁶ U.S. DEPT. OF ENERGY, Alternative Fuels Data Center, Alternative Fuel Vehicle (AFV) Acquisition Requirement, <http://www.afdc.energy.gov/laws/law/NV/5266>.

²⁷⁹⁷ NEV. REV. STAT. § 486.01-486A. 180 (2009).

²⁷⁹⁸ NEV. REV. STAT. § 445B.576 (2001).

²⁷⁹⁹ NEV. REV. STAT. § 482.480 (eff. June 10, 2013 to Sep. 30, 2015).

²⁸⁰⁰ NEV. REV. STAT. § 484B.637 (2001).

²⁸⁰¹ N.H. Rev. Stat § 362-A:9.

1999: Greenhouse Gas Reduction

In 1999, New Hampshire enacted legislation establishing the existence of the Eastern Climate Registry (“ECR”).²⁸⁰² The ECR was developed to help encourage the voluntary reduction of greenhouse gases (GHGs) and to help protect the state’s economy under a future federal regulatory scheme relating to GHG emissions. The legislation requires New Hampshire to encourage sources to register their inventory of GHG emissions and work with other states to expand upon the ECR and develop a multistate registry for GHG emissions.

In July 1999, Governor Shaheen signed into law the New Hampshire Greenhouse Gas Reduction Registry.²⁸⁰³ The purpose of the database was to quantify GHG emission reduction actions for safekeeping against some future federal requirements. Businesses, however, were reluctant to make voluntary GHG reductions out of fear that it would be harder to comply with percentage reductions required by future federal regulation.²⁸⁰⁴ To encourage and protect businesses and avoid this possible “catch-22” the NH Registry “was developed to ensure to the greatest extent possible appropriate recognition of voluntary actions taken by New Hampshire businesses, industries, and individuals to reduce GHG emissions.”²⁸⁰⁵

2001: Greenhouse Gas Reduction

In 2001, the state proposed The Multiple Pollutant Reduction Program (MPRP), which set annual upper limits or caps on emissions of sulfur dioxide, carbon dioxide, and oxides of nitrogen by existing fossil fuel burning steam electric power plants.²⁸⁰⁶ Under this program regulated power plants could bank and trade emission reduction to achieve compliance with the caps.²⁸⁰⁷ Compliance, however, was not required of plants that installed qualifying repowering technology or an eligible replacement unit. The MPRP was approved in May 2002 and become effective in July of 2002.²⁸⁰⁸

New Hampshire participated in the development and adoption of The New England Governors and Eastern Canadian Premiers (NEG-ECP) Climate Change Action Plan 2001.²⁸⁰⁹ The plan was adopted on August 28, 2001 and called for a reduction in GHG emissions to 1990 levels by 2010, at least 10% below 1990 levels by 2020, and 75-85% reduction of 2001 levels as a long term goal. The NEG-ECP is still currently

²⁸⁰² *Id.* § 125-L:2.

²⁸⁰³ N.H. Dep’t of Envtl. Services, Climate Change Program, NH Greenhouse Gas Registry, <http://des.nh.gov/organization/divisions/air/tsb/tps/climate/ghgr.htm>.

²⁸⁰⁴ *Id.*

²⁸⁰⁵ *Id.*

²⁸⁰⁶ N.H. Rev. Stat. § 125-O.

²⁸⁰⁷ *Id.* at § 125-O:1.

²⁸⁰⁸ *Id.*

²⁸⁰⁹ NEW ENGLAND GOVERNORS’/ EASTERN CANADIAN PREMIERS, CLIMATE CHANGE ACTION PLAN 2001, (Aug. 2001), <http://negc.org/uploads/file/Reports/ClimateChangeAP%5B1%5D.pdf>

implementing the regional plan and continues to vigorously address the challenges raised by a changing climate.²⁸¹⁰

In 2001, New Hampshire agreed, under the auspices of the New England Governors and Eastern Canadian Premiers, to a voluntary short-term goal of reducing regional GHG emissions to 1990 levels by 2010 and by 10% below 1990 levels by 2020.²⁸¹¹ New Hampshire would later become a participant in the Regional Greenhouse Gas Initiative (RGGI), thereby committing to capping carbon dioxide emissions from its power sector and reducing them by 10% by 2018.²⁸¹²

2007: Renewable Energy and Greenhouse Gas Reduction

In May 2007, Governor John Lynch signed into law the Renewable Energy Act, H.B. 873, which created a renewable energy portfolio requiring renewable sources to comprise 25% of New Hampshire's electricity by 2025.²⁸¹³

On June 25, 2007, Governor Lynch signed H.B. 768, An Act Relative to Voluntary Registration with the Eastern Climate Registry.²⁸¹⁴ This act mandated that the New Hampshire Department of Environmental Services (DES) encourage the source community to participate in the Eastern Climate Registry, work with other states to broaden the Eastern Climate Registry, and report annually to the general court regarding New Hampshire's role in the Eastern Climate Registry, which would become part of The Climate Registry.²⁸¹⁵

In November 2007, Governor Lynch issued Executive Order 2007-3, which established a Climate Change Policy Task Force and charged it with developing a Climate Change Action Plan for the state.²⁸¹⁶ The Executive Order directed the task force to submit the action plan to the Governor by September 1, 2008. Due to the extensive detail and comprehensive nature of the recommendations in the CAP, the final plan was not released until March 25, 2009. For a complete copy of the plan, click [here](#).

In May 2007, New Hampshire and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” They viewed this as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”²⁸¹⁷

²⁸¹⁰ The New England Governors' Conference, Climate Change, NEG/ECP Climate Change Program 2012, <http://negc.org/main/?do=page&id=39>.

²⁸¹³ H.B. 873, 160th Gen. Ct. Reg. Sess. (N.H. 2007).

²⁸¹⁴ H.B. 768, 160th Gen. Ct., Reg. Sess. (N.H. 2007).

²⁸¹⁵ *Id.*

²⁸¹⁶ N.H. Exec. Order No. 03 (2007).

²⁸¹⁷ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions, http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

2008: Greenhouse Gas Reduction

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.²⁸¹⁸ Each of these allowances sold at a clearing price of \$3.07, raising a total of \$38,575,783.²⁸¹⁹ These proceeds would be used to fund renewable energy and energy efficiency technologies and programs in the states that offered allowances.²⁸²⁰ The second auction took place on December 17, 2008 and each of the ten states participated.²⁸²¹ All of the available 31,505,898 allowances were sold, 3.5 times lower than the demand of 108,709,000 allowances.²⁸²² The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.²⁸²³

On December 31, 2008, RGGI participants and Pennsylvania (an observer) signed a letter of intent to reduce carbon emissions from the transportation sector.²⁸²⁴ Specifically, these states expressed their intent to incorporate a Low Carbon Fuel Standard (LCFS) into the RGGI agreement, which would require reductions in the average lifecycle GHG per unit of useful energy in motor vehicles.²⁸²⁵

2009: Green Jobs, American Recovery & Reinvestment Act (ARRA), Greenhouse Gas Reduction, and Cap-&-Trade

In Governor Lynch's 2009 Inaugural Address, he announced his Green Jobs Initiative.²⁸²⁶ The initiative included expanding the homes weatherization program, upgrading the efficiency of government buildings, encouraging green jobs training programs, and creating a low-interest revolving loan fund to assist business in becoming more energy efficient and in implementing renewable energy technologies. Lynch also applauded New Hampshire's first wind plant, which had recently opened in Lempster.²⁸²⁷

On March 12, 2009, the U.S. Department of Energy announced that New Hampshire was eligible for \$25,827,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).²⁸²⁸ In addition, \$9,593,500 would be allocated directly local municipalities and counties through the Energy Efficiency and

²⁸¹⁸ News Release, RGGI States' First CO₂ Auction Off to a Strong Start (Sept. 29, 2008), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

²⁸¹⁹ *Id.* at 1.

²⁸²⁰ *Id.*

²⁸²¹ Regional Greenhouse Gas Initiative, CO₂ Auctions, Auction Results, Auction Reports, http://rggi.org/co2-auctions/results/auction_1_reports.

²⁸²² News Release, Post-Settlement Auction Report Shows Robust Market for RGGI Carbon Dioxide Emissions Allowances, http://rggi.org/co2-auctions/results/auction_1_reports.

²⁸²³ *Id.*

²⁸²⁴ Northeast/Mid-Atlantic States Low Carbon Fuel Standard Program http://www.mass.gov/Eoeea/docs/pr_lcfs_attach.pdf.

²⁸²⁵ *Id.* at 1.

²⁸²⁶ John Lynch, Governor of N.H., 2009 Inaugural Address, <http://www.governor.nh.gov/speeches/documents/010809inaugural.htm>.

²⁸²⁷ *Id.*

²⁸²⁸ U.S. Dep't of Energy, Nat'l Energy Tech. Lab., State Energy Program Formula Grants, at 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

Conservation Block Grant Program (EECBG) and \$23,218,594 to Federal Low-Income Weatherization Program.²⁸²⁹ The NH Office of Energy and planning as well as small municipalities would receive this money through various program over the next several years.²⁸³⁰ For a flow chart of the depicting this allocation of ARRA money, click [here](#).

RGGI held a third auction on March 18, 2009.²⁸³¹ The auction sold 31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse at future market prices for RGGI allowances.²⁸³² Prices fell at the fourth auction to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.²⁸³³

Governor Lynch submitted a green jobs proposal to the New Hampshire Public Utilities Commission (PUC), in response to the PUC's request for proposals for how the RGGI funds should be utilized.²⁸³⁴ Lynch suggested that 20% of the RGGI funds go towards weatherizing homes and also urged the PUC to approve several applications that supported his Green Jobs Initiative, including green worker training and energy efficiency programs.²⁸³⁵

New Hampshire's Climate Change Policy Task Force (Task Force) released its Climate Action Plan on March 25, 2009.²⁸³⁶ The Task Force recommended the ultimate goal of reducing GHG emissions 80% below 1990 levels by 2050 with an interim goal of 20% below 1990 levels by 2025.²⁸³⁷ The Task Force also issued 67 recommended actions which fall under ten strategies: (1) maximize energy efficiency in buildings; (2) increase renewable and low CO₂ – emitting resources in a long-term sustainable manner; (3) support regional and national actions to reduce GHG emissions; (4) reduce vehicle emissions through state actions; (5) encourage appropriate land use patterns that reduce vehicle miles traveled; (6) reduce vehicle-miles traveled through an integrated multi-modal transportation system; (7) protect natural resources to maintain the amount of carbon fixed and sequestered; (8) lead by example in government operations; (9) plan for

²⁸²⁹ NEW HAMPSHIRE OFFICE OF ENERGY AND PLANNING, American Recovery and Reinvestment Act, <http://www.nh.gov/oep/energy/programs/sep/arra.htm>

²⁸³⁰ NEW HAMPSHIRE OFFICE OF ENERGY AND PLANNING, American Recovery and Reinvestment Act, <http://www.nh.gov/oep/energy/programs/sep/documents/flow-chart.pdf>

²⁸³¹ Press Release, States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

²⁸³² *Id.*

²⁸³³ Regional Greenhouse Gas Initiative, Auction Results, <http://www.rggi.org/co2-auctions/results>.

²⁸³⁴ Press Release, Governor Lynch Submits Green Jobs Proposal to the Public Utilities Commission (Mar. 24, 2009), <http://www.governor.nh.gov/news/2009/032409.html>.

²⁸³⁵ *Id.*

²⁸³⁶ N.H. Dep't of Env'tl. Services, Climate Change Policy Task Force, http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/index.htm.

²⁸³⁷ N.H. Dep't of Env'tl. Services, NH Climate Action Plan, Overview of New Hampshire's Climate Action Plan, 5, http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/documents/nhcap_overview.pdf.

how to address existing and potential climate change impacts; and (10) develop an integrated education, outreach and workforce training program.²⁸³⁸

On April 1, 2009, Governor Lynch announced the details of the \$23,218,594 in ARRA funds that would go towards the expansion of Federal Low-Income Weatherization Program.²⁸³⁹ To protect their states' wind technology, Lynch and other governors wrote a letter to Congress expressing their opposition to proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.²⁸⁴⁰ The next month, Lynch also signed an agreement with a coalition of state governors to support federal climate change legislation.²⁸⁴¹ The agreement contained two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.²⁸⁴²

On June 23, 2009, representatives from RGGI, WCI, and MGGRA met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.²⁸⁴³ New Hampshire then announced its own goal of acquiring 25% of its electricity from renewable sources by 2025.²⁸⁴⁴ Governor Lynch then joined other New England governors in pursuing the development of high-speed rail in the region.²⁸⁴⁵ Lynch and his Executive Council also encouraged green jobs by approving \$5.3 million in funding for nine projects including loans for performing energy retrofits, funding for energy audits, and scholarships for those seeking to become energy efficiency auditors.²⁸⁴⁶ More projects received \$9 million in funding as part of the Green Jobs Initiative a month later.²⁸⁴⁷

2010: American Reinvestment & Recovery Act (ARRA) and Green Technology

²⁸³⁸ *Id.*

²⁸³⁹ Press Release, Governor Lynch Announces First Stimulus Projects Approved; Transportation Projects Will Help Create and Retain Several Hundred Jobs (Apr. 1, 2009), <http://www.governor.nh.gov/news/2009/040109.html>.

²⁸⁴⁰ Letter from Donald L. Carcieri, Governor (R.I.), Deval Patrick, Governor (Mass.), Jack Markell, Governor (Del.), John Baldacci, Governor (Me.), Martin O'Malley, Governor (Md.), John H. Lynch, Governor (N.H.), Jon S. Corzine, Governor (N.J.), David A. Paterson, Governor (N.Y.), James H. Douglas, Governor (Vt.), and Timothy M. Kaine, Governor (Va.) to Harry Reid, Majority Leader (U.S. Senate), Mitch McConnell, Minority Leader (U.S. Senate), Nancy Pelosi, Leader (U.S. House of Representatives), and John Boehner, Minority Leader (U.S. House of Representatives) (May 4, 2009), http://www.gov.ri.gov/documents/East_Coast_Govs_Transmission_Ltr.pdf.

²⁸⁴¹ Press Release, Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

²⁸⁴² Governors' Energy and Climate Coalition, Statement of Principles, <http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

²⁸⁴³ Van Ness Feldman, Weekly Climate Change Policy Update – June 29, 2009, <http://www.vnf.com/news-policyupdates-373.html>.

²⁸⁴⁴ Press Release, Gov. Lynch Announces that State Government Will Now Get 25 Percent of Its Energy from Renewable Energy (July 2, 2009), <http://www.governor.nh.gov/news/2009/070209.html>.

²⁸⁴⁵ Press Release, Governor Lynch Joins New England Governors in Pursuing Joint Regional Vision for High-Speed Rail (July 13, 2009), <http://www.governor.nh.gov/news/2009/071309governors.html>.

²⁸⁴⁶ Press Release, Green Jobs Initiatives Move Forward (July 15, 2009), <http://www.governor.nh.gov/news/2009/071509.html>.

²⁸⁴⁷ Press Release, Green Jobs Initiative Continues to Progress (Aug. 19, 2009), <http://www.governor.nh.gov/news/2009/081909green.html>.

Also in January 2010, Governor Lynch approved an agreement to use \$750,000 in federal ARRA funds to create the Green Launching Pad.²⁸⁴⁸ The partnership between the state and the University of New Hampshire aimed to help New Hampshire companies bring clean energy products to market. Companies would be able to apply to UNH to participate in the Green Launching Pad and those chosen would be connected to the business, science and engineering faculty to develop finance and marketing plans.²⁸⁴⁹ In November 2010, Governor Lynch approved an additional \$750,000 in federal energy stimulus funds for the state's Green Launching Pad project.²⁸⁵⁰

In April 2010, New Hampshire began two new rebate programs funded by the American Reinvestment and Recovery Act (ARRA) for residents who purchase clean, energy efficient heating systems.²⁸⁵¹ The program offers rebates for ENERGY STAR® heating systems, including furnaces, boilers and hot water heaters, ranging from \$100 to \$1,000. The Public Utilities Commission began administering an additional rebate program for residential solar hot water systems, funded both by the ARRA and the State's Renewable Energy Fund.²⁸⁵² The program includes rebates up to \$750 per heating system for those replacing existing hot water heaters.

2011: Greenhouse Gas Reduction, Transportation/ Fuels, Green Technology, and Energy Efficiency

On February 10, 2011, Governor Lynch released a statement opposing H.B. 519-FN, which would withdraw the state from RGGI. State legislators, in an effort to address the state economy, introduced the bill to reclaim the New Hampshire's independence in electricity production. Lynch, as well as the Department of Environmental Services, opposed the bill, claiming that the state was better off economically under RGGI because of the research funding it received via the agreement.²⁸⁵³

In April 2011, Governor Lynch issued Executive Order 2011-1, requiring a 25% reduction in fossil fuel use by the state government. The EO also called on state agencies to increase the fuel efficiency of the state's fleet vehicles, use fuel-efficient vehicles when possible, invest in state facilities to reduce costs and energy usage, and use the most cost-effective and energy-efficient designs when renovating or constructing new state buildings. The EO superseded a previous one signed by Lynch in 2005, which called for

²⁸⁴⁸ Press Release, Governor and Council Approve Funding for Green Launching Pad (Jan. 27, 2010), <http://www.governor.nh.gov/news/2010/012710.htm>.

²⁸⁴⁹ *Id.*

²⁸⁵⁰ Press Release, Office of the Governor. Governor and Council Approve New Round of Funding for Green Launching Pad (Nov. 17, 2010), <http://www.governor.nh.gov/media/news/2010/111710-green-launching-pad.htm>.

²⁸⁵¹ Press Release, Governor Lynch Highlights Earth Day in Keene, Announces New Rebate Programs for Energy Efficient Heating Systems (Apr. 22, 2010), <http://www.governor.nh.gov/media/news/2010/042210-keene.htm>.

²⁸⁵² *Id.*

²⁸⁵³ Press Release, Office of the governor. Governor Lynch Opposes RGGI Repeal (Feb. 10, 2011), <http://www.governor.nh.gov/media/news/2011/021011-rggi.htm>.

a 10% reduction in fossil fuel use and resulted in a 16% reduction of energy use per square foot in state-owned buildings and \$3 million in savings.²⁸⁵⁴

On April 18, 2011, Governor Lynch announced that six new businesses had been selected to participate in the second round of the state's Green Launching Pad program, through which they would receive support from the University of New Hampshire (UNH) in developing clean energy products for the market.²⁸⁵⁵

On July 6, 2011, Governor Lynch vetoed S.B. 154, which would have repealed New Hampshire's participation in RGGI, noting that an independent assessment of RGGI conducted by the University of New Hampshire found that the program had resulted in a net benefit of \$16 million in allowance revenue to the state through the end of 2010.²⁸⁵⁶ Lynch also noted that if New Hampshire were to withdraw from RGGI, the state would nevertheless continue to pay for part of the program, because New Hampshire is part of a regional electricity system. As such, it would effectively subsidize energy-savings efforts in other states without receiving any benefits.²⁸⁵⁷

New Hampshire was one of nine states to join the Northeast Electric Vehicle Network in October 2011.²⁸⁵⁸ The network focuses on building infrastructure for clean vehicles and fuels, as well as attracting public and private investment to support the infrastructure development. Participating states include Connecticut, Delaware, Washington, D.C., Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.²⁸⁵⁹ The network is part of the Transportation and Climate Initiative (TCI), a regional collaboration between twelve Northeast and Mid-Atlantic states that seeks to reduce GHG emissions from the transportation sector and develop the clean energy economy.²⁸⁶⁰ The TCI was launched in June 2010 and is facilitated by the Georgetown Climate Center.²⁸⁶¹ A nearly \$1 million Electric Vehicle Readiness Grant from the U.S. Department of Energy was awarded to New York State Energy Research and Development Authority (NYSERDA) on behalf of the TCI in September 2010, and will be used to fund the network's efforts to deploy electric vehicles throughout the Northeast.²⁸⁶²

²⁸⁵⁴ *Id.*

²⁸⁵⁵ Press Release, Governor Lynch, U.S. Energy Secretary Chu, UNH President Huddleston Announce Companies Chosen for Green Launching Pad (Apr. 18, 2011), <http://www.governor.nh.gov/media/news/2011/042811-green-launching-pad.htm>.

²⁸⁵⁶ Press Release, Governor Lynch's Veto Message Regarding S.B. 154 (July 6, 2011), <http://www.governor.nh.gov/media/news/2011/070611-sb154.htm>.

²⁸⁵⁷ *Id.*

²⁸⁵⁸ Press Release, Northeast States Form Regional Electric Vehicle Network (Oct. 17, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

²⁸⁵⁹ *Id.*

²⁸⁶⁰ Georgetown Climate Center, Transportation and Climate Initiative <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative> (Feb. 25, 2011).

²⁸⁶¹ *Id.*

²⁸⁶² Press Release, Northeast States Form Regional Electric Vehicle Network (Oct. 17, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

2012: Energy Efficiency, Greenhouse Gas Reduction, American Reinvestment & Recovery Act (ARRA), Renewable Energy, and Climate Change Adaptation

In March 2012, New Hampshire enacted S.B. 258 (2011) to amend RSA 362-A:1-a, II-b and authorize customer-generator group net-metering for electricity production.²⁸⁶³ The bill was to take effect July 1, 2012, but the legislature transferred the same amendments to S.B. 98 to hold another public hearing on March 6, 2013. The amended language of S.B. 98 took effect July 1, 2013.²⁸⁶⁴

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of \$1.93.²⁸⁶⁵ The auction generated \$41.6 million in proceeds, which the RGGI participating states will invest in consumer-oriented energy efficiency initiatives.²⁸⁶⁶

In April 2012, the town of Seabrook, New Hampshire was awarded a rebate of \$25,674 from the New Hampshire Public Utilities Commission due to solar power use at the town's wastewater treatment facility.²⁸⁶⁷ In 2009, Seabrook had been awarded \$5 million in loans funded through ARRA's Drinking Water State Revolving Fund program to put toward the construction of solar panels atop the wastewater treatment facility.²⁸⁶⁸

In May 2012, the New Hampshire legislature struck a deal regarding previous attempts to remove New Hampshire from RGGI, which did not survive a veto by Governor Lynch.²⁸⁶⁹ While not allowing outright repeal, the bill allows New Hampshire to remove itself from RGGI if two or more states exit the program or if one state with 10% of the energy load in New England exits the program.²⁸⁷⁰ The bill became effective January 1, 2013.²⁸⁷¹ The bill also allows emissions auctions proceeds to be allocated as additional funding for electricity distributors to create or maintain core energy efficiency programs.²⁸⁷²

²⁸⁶³ S.B. 258, 2011 Gen. Ct., 162nd Sess., 2d Year (N.H. 2012),

<http://www.gencourt.state.nh.us/legislation/2012/SB0258.pdf>.

²⁸⁶⁴ S.B. 98, 2013 Gen. Ct., 163rd Sess., 1st Year (N.H. 2013),

http://www.gencourt.state.nh.us/legislation/2013/SB0098_i.html.

²⁸⁶⁵ Press Release, RGGI, RGGI Auction Sells 21.5 Million CO2 Allowances (Mar. 16, 2012),

http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

²⁸⁶⁶ *Id.*

²⁸⁶⁷ Nancy Rineman, *Solar Power Lands Town \$25K rebate*, SEACOASTONLINE (Apr. 27, 2012),

<http://www.seacoastonline.com/articles/20120427-NEWS-204270369>.

²⁸⁶⁸ *Id.*

²⁸⁶⁹ *Negotiators Reach RGGI Deal*, CONCORD MONITOR (May 26, 2012),

<http://www.concordmonitor.com/article/332107/negotiators-reach-rggi-deal>.

²⁸⁷⁰ *Id.*; H.B. 1490, 2011 Gen. Ct., 162nd Sess., 2d Year (N.H. 2012),

<http://www.gencourt.state.nh.us/legislation/2012/HB1490.html>.

²⁸⁷¹ H.B. 1490, 2011 Gen. Ct., 162nd Sess., 2d Year (N.H. 2012),

<http://www.gencourt.state.nh.us/legislation/2012/HB1490.html>.

²⁸⁷² *Id.* at 125-O:23 (III).

On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.²⁸⁷³ The auction of the 20.9 million allowances generated \$40.4 million in funds, and represented 57% of the allowances offered for sale by all nine participating states.²⁸⁷⁴

Effective June 19, 2012, S.B. 218 was enacted to amend the state's electric Renewable Portfolio Standard.²⁸⁷⁵ The bill includes "useful thermal energy" as an energy source in addition to electricity. This bill amended the previous definition of Class IV sources, Existing Small Hydroelectric sources, to include facilities with one MW or less that are in compliance with Federal Electric Regulatory Commission fish passage restoration requirements, and are connected with an electrical distribution network in New Hampshire, among other changes.²⁸⁷⁶ The amendments effectively waive the requirement for a hydroelectric facility to install upstream and downstream diadromous fish passages.²⁸⁷⁷

Also in June 2012, the New Hampshire Energy and Climate Collaborative released a benchmark report on the 2009 New Hampshire Climate Action Plan.²⁸⁷⁸ The results indicated that 67% of indicators showed positive trends toward achieving climate goals, 25% of indicators showed no change, and 8% showed negative trends.²⁸⁷⁹ The positive trends were gains in emissions per unit of economic activity, clean economy jobs, renewable power and land preservation.²⁸⁸⁰ The areas of no change were household energy expenditures, energy consumption and GHG emissions from transportation.²⁸⁸¹ The negative trends were in the areas of energy expenditures and per capita energy expenditures for transportation.²⁸⁸² The report highlighted that the national recession and the increased global demand for energy were the challenges that contributed to some of the negative or no-change trends.

In July 2012, a RGGI loan was awarded to Warwick Mills, a New Ipswich textile and materials engineering company, to install a biomass plant to replace an oil-fired steam system.²⁸⁸³ The \$550,000 loan was matched by a Community Block Grant and

²⁸⁷³ Press Release, RGGI, RGGI Auction Sells 20.9 Million CO2 Allowances (June 8, 2012), http://www.rggi.org/docs/PR060812_Auction16.pdf.

²⁸⁷⁴ *Id.*

²⁸⁷⁵ N.H. REV. STAT. ANN. Ch. 362-F (2013).

²⁸⁷⁶ *Id.* at §§ 362-F:2 (XV-a), 362-F:4 (IV) (a).

²⁸⁷⁷ N.H. Pub. Utils. Comm'n, Order Waiving Commission Rule on Class IV Eligibility for Certain Hydroelectric Generating Facilities, Order No. 25,394 (July 19, 2012), <http://www.puc.nh.gov/Regulatory/Orders/2012orders/25394e.pdf>.

²⁸⁷⁸ NEW HAMPSHIRE ENERGY & CLIMATE COLLABORATIVE, NEW HAMPSHIRE'S ENERGY, ENVIRONMENTAL, AND ECONOMIC DEVELOPMENT BENCHMARK REPORT (2012), http://nhcollaborative.org/media/2012_NH_EEE_BenchmarkReport_Full.pdf.

²⁸⁷⁹ *Id.* at 2.

²⁸⁸⁰ *Id.* at 6-7.

²⁸⁸¹ *Id.*

²⁸⁸² *Id.* at 2.

²⁸⁸³ PUB. UTIL. COMM'N, RSA 125-O:21 RGGI ANNUAL REPORT REQUIRED OF THE DEPARTMENT OF ENVIRONMENTAL SERVICES (DES) AND THE PUBLIC UTILITIES COMMISSION (PUC) 15 (Nov. 1, 2012), <http://puc.nh.gov/Sustainable%20Energy/GHGERF/RGGI%20Annual%20Reports/2012%20RGGI%20Annual%20Report%20to%20NH%20Legislature%20110112.pdf>.

company funds.²⁸⁸⁴ The Public Utilities Commission estimated that the new biomass system would save Warwick Mills \$177,000 a year in heating expenses and allow it to hire additional employees in coming years.²⁸⁸⁵

On September 7, 2012, RGGI announced the results of its seventeenth quarterly auction for carbon dioxide allowances.²⁸⁸⁶ The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, which represented 65% of the allowances offered for sale by all nine states.²⁸⁸⁷

On October 3, 2012 the University of New Hampshire was awarded a National Science Foundation grant to study the effects of climate change on road and bridge infrastructure and possible adaptations.²⁸⁸⁸ The \$750,000 award will enable the creation of the Infrastructure and Climate Network (ICNet) to research sustainable transportation networks primarily in the Northeast.²⁸⁸⁹ ICNet will incorporate the research of both climate science and engineering.²⁸⁹⁰

On October 19, 2012, the National Oceanic and Atmospheric Administration announced that the University of New Hampshire had been awarded \$683,472 to formulate a climate change adaptation plan for the Great Bay Estuary and \$589,838 to create natural landscaping on the coast to prevent flooding and pollution caused by rising sea levels.²⁸⁹¹ The funds were made available by NOAA's National Estuarine Research Reserve System (NERRS) Science Collaborative, administered through the Coastal Zone Management Act in collaboration with coastal states and territories.²⁸⁹² The community of Exeter, part of the Great Bay watershed, is one municipality taking advantage of the funds to create a climate change adaptation plan.²⁸⁹³ Other communities such as Portsmouth, Hampton and Seabrook are interested in the process and have participated in climate change planning discussions.²⁸⁹⁴

²⁸⁸⁴ *Id.*

²⁸⁸⁵ *Id.*

²⁸⁸⁶ Press Release, RGGI, RGGI Auction Sells 24.5 Million CO2 Allowances (Sept. 7, 2012), http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

²⁸⁸⁷ *Id.*

²⁸⁸⁸ Press Release, University of New Hampshire, NSF Grant Will Create Network to Prepare Roads, Bridges for Changing Climate (Oct. 3, 2012), <http://www.unh.edu/news/releases/2012/oct/bp03nsfgrant.cfm>.

²⁸⁸⁹ *Id.*

²⁸⁹⁰ *Id.*

²⁸⁹¹ Press Release, National Oceanic and Atmospheric Administration, NOAA announces \$4.9 million for collaborative research projects to help coastal communities manage effects of climate change (Oct. 19, 2012), http://www.noaaneews.noaa.gov/stories2012/20121019_climatechangegrant.html.

²⁸⁹² *Id.*

²⁸⁹³ Aaron Sanborn, *Exeter developing climate change action plan*, SEACOASTONLINE (Feb. 10, 2013, 2:00 AM), <http://www.seacoastonline.com/articles/20130210-NEWS-302100336>.

²⁸⁹⁴ *Id.*

On November 19, 2012, RGGI reported that related state investments avoided 12 million tons of carbon dioxide emissions from 2009 to 2011.²⁸⁹⁵ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement and climate change adaptation programs.²⁸⁹⁶

By the end of 2012, New Hampshire's Renewable Energy Fund had awarded a total of \$747,750 in grants to Cartographic Associates, Inc., the Claremont Fire Department, Colby Solar LLC, Northeast BioEnergy Systems LLC, Sullivan County, the University of New Hampshire and Walker Wellington LLC for energy retrofitting projects.²⁸⁹⁷ The projects included installation of high-efficiency wood pellet or wood chip boilers, solar electric panels, a solar hot air system and an outfall pipe turbine generator, all to be placed in public facilities.²⁸⁹⁸

2013: Greenhouse Gas Reduction

On February 7, 2013, RGGI announced significant program improvements implemented in the Updated Model Rule after a two-year comprehensive program review.²⁸⁹⁹ Improvements include a reduction of the 2014 regional cap by 45% from 165 million to 91 million tons, and a cap further declining by 2.5% each year from 2015 to 2020; additional adjustments to the cap from 2014 to 2020 to account for privately banked allowances which will be deemed "old" allowances starting in 2014; the creation of a cost containment reserve of allowances which may be accessed only when the price of allowances in a given year exceeds a predetermined level; updates to the offsets program, including a protocol for forestry offsets; the decision not to reoffer unsold allowances from 2012 and 2013; the requirement that regulated entities obtain allowances for at least 50% of their emissions in each of the first two years of the three year compliance period; and developing tools to track electricity imported into participating states from non-participating states to address those emissions.²⁹⁰⁰ Each RGGI state will implement these measures in their respective statutory regimes.²⁹⁰¹

On April 16, 2013, an independent market monitor of RGGI confirmed that there continue to be no material concerns regarding the auction process or in the

²⁸⁹⁵ Press Release, RGGI, Inc., RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings (Nov. 19, 2012), <http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

²⁸⁹⁶ *Id.*

²⁸⁹⁷ Bob Sanders, *Renewable energy fund reaps a windfall for '13*, 34 N.H. BUS. REV., Dec. 14, 2012, <http://www.nhbr.com/news/986982-395/renewable-energy-fund-reaps-a-windfall-for.html>.

²⁸⁹⁸ Sanders, *supra*.

²⁸⁹⁹ Press Release, RGGI, Inc., RGGI States Propose Lowering Regional CO2 Emissions Cap 45%, Implementing a More Flexible Cost-Control Mechanism (Feb. 7, 2013), http://www.rggi.org/docs/PressReleases/PR130207_ModelRule.pdf.

²⁹⁰⁰ *Id.*

²⁹⁰¹ *Id.*

competitiveness of the secondary market for RGGI allowances.²⁹⁰² During 2012, the average auction-clearing price was \$1.93 for carbon dioxide allowances.²⁹⁰³

On June 5th, 2013 RGGI held its twentieth auction of carbon dioxide allowances. At the auction, 38,782,076 CO2 allowances were sold, at a clearing price of \$3.21. The auction generated \$124.4 million for reinvestment by the RGGI states. This money will be allocated to a variety of consumer benefit initiatives, including energy efficiency, renewable energy, direct bill assistance, greenhouse gas abatement, and climate change adaptation programs. Bids for the CO2 allowances ranged from \$1.98 to \$5.55 per allowance.²⁹⁰⁴

On July 15, 2013, Governor Maggie Hassan signed into law HB 306. The bill aims at ensuring that the state continues to “maximize the benefits of the program for the people and businesses of New Hampshire.”²⁹⁰⁵ The bill seeks to achieve this goal by reducing the carbon dioxide emissions cap from 165 million tons down to 91 million tons, which represent the 2012 levels.²⁹⁰⁶

On July 24, 2013, NH SB 191 became effective in its entirety.²⁹⁰⁷ SB 191 mandates that the Office of Energy & Planning, in coordination with the Energy Advisory Council, to develop an energy strategy for New Hampshire.²⁹⁰⁸ The bill will be effective until September of 2014.²⁹⁰⁹ The bill stems directly from the recently released report by the Energy Efficiency and Sustainable Energy (ESEE) Board.²⁹¹⁰ The final report released by the ESEE, “called for a comprehensive energy policy for the state that highlights the critical role of energy efficiency and local renewable resources in the state’s future.”²⁹¹¹ The bill requires that the Office of Energy and Planning review the strategy and consider any necessary updates in consultation with the senate energy and

²⁹⁰² Press Release, RGGI, Inc., 2012 Annual Market Monitor Report: In Fifth Year, RGGI CO2 Allowance Market Remains Competitive (Apr. 16, 2013), http://www.rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

²⁹⁰³ *Id.*

²⁹⁰⁴ RGGI, Auction 20, http://www.rggi.org/docs/Auctions/20/PR060713_Auction20.pdf (July 2013).

²⁹⁰⁵ Press Release, Office of the Governor of New Hampshire, Governor Hassan Statement on Signing HB 306 and HB 630 (July 16, 2013), <http://www.governor.nh.gov/media/news/2013/pr-2013-07-16-hb-306-hb-630.htm>.

²⁹⁰⁶ New England Clean Energy Council, NEC Urges Support for NH HB 306, RGGI Emissions Cap Reduction (Apr. 19, 2013), <http://www.cleanenergycouncil.org/blog/2013/04/19/support-for-nh-hb-306-rggi-cap-reduction/>.

²⁹⁰⁷ S.B. 191, 2013 Gen. Ct., 164nd Sess., 2d Year (N.H. 2013).

²⁹⁰⁸ *Id.*

²⁹⁰⁹ *Id.*

²⁹¹⁰ *Id.*

²⁹¹¹ Town of Durham New Hampshire, Energy Committee Home, Pending Legislation of Interest to the Energy Committee, http://www.ci.durham.nh.us/boc_energy/pending-legislation-interest-energy-committee.

natural resources committee and the house science, technology and energy committee, after opportunity for public comment, at least every 3 years starting in 2017.²⁹¹²

On July 24, 2013, SB 123 became effective.²⁹¹³ This bill allocates proceeds from the RGGI program to municipalities and local governments for use in energy efficiency projects.²⁹¹⁴ In addition, the bill permits return of unused allowance sale proceeds to business and municipal customers who fund the system benefits charge.²⁹¹⁵

On September 4, 2013, RGGI held its 21st auction of carbon dioxide allowances. At the auction, 38,409,043 CO₂ allowances were sold, at a clearing price of \$2.67. The auction generated \$102.5 million for reinvestment by the RGGI states. This money will be allocated to consumer benefit initiatives, including energy efficiency, renewable energy, direct bill assistance, and greenhouse gas abatement programs. Bids for the CO₂ allowances ranged from \$1.98 to \$12.85 per allowance. As of the time of the 21st auction the cumulative proceeds from all RGGI CO₂ allowance auctions currently total \$1.4 billion dollars.²⁹¹⁶

On September 9, 2013, the New England Governors' and Eastern Canadian Premiers ("NEG-ECP") reached a new agreement to work cooperatively to support increased use of alternative fuel vehicles and networks within the region.²⁹¹⁷ The resolutions directs that both groups "work with organizations to compile an inventory of regional initiatives regarding electric and natural gas-powered vehicles, propose actions aimed at facilitating the interoperability of electric vehicle charging and alternative fueling stations, and identify corridors where alternative fuel infrastructure could be established."²⁹¹⁸ NEG-ECP and its partners also passed a related transportation resolutions to work collaborative "towards achieving a regional five percent market share among vehicle fleets for alternative fuel vehicles by 2020 and to facilitate the availability of refueling stations to support those vehicles."²⁹¹⁹ Both of these resolutions were a part of a series of resolutions adopted by the NEG-ECP in which they "pledge to work together on clean energy approaches such as hydropower, mitigating climate change, and transportation proposals."²⁹²⁰

²⁹¹² S.B. 191, 2013 Gen. Ct., 164th Sess., 2d Year (N.H. 2013).

²⁹¹³ S.B. 123, 2013 Gen. Ct., 164th Sess., 2d Year (N.H. 2013).

²⁹¹⁴ *Id.*

²⁹¹⁵ *Id.*

²⁹¹⁶ http://www.rggi.org/docs/Auctions/21/PR090613_Auction21.pdf.

²⁹¹⁷ Press Release, Georgetown Climate Center, New England Governors and Canadian Premiers Pledge to Cooperate on Alternative Fuel Vehicle Efforts (Sept. 12, 2013), <http://www.georgetownclimate.org/new-england-governors-and-canadian-premiers-pledge-to-cooperate-on-alternative-fuel-vehicle-efforts>.

²⁹¹⁸ *Id.*

²⁹¹⁹ *Id.*

²⁹²⁰ *Id.*

On December 2, 2013, RGGI announced that the nine RGGI states, have submitted comments to the United States Environmental Protection Agency (EPA) for consideration as EPA develops guidelines for state programs to reduce carbon dioxide (CO₂) emissions from power plants under Clean Air Act section 111(d).²⁹²¹ The RGGI states encourage EPA to view the RGGI success story as a benchmark for national action. Since 2005, the RGGI states have cut their carbon dioxide emissions by approximately 40 percent.²⁹²² The RGGI states are also recommending that EPA's new rules "empower states to develop market-based GHG emission reduction programs designed to work for their region(s)." ²⁹²³

On December 4, 2013, RGGI held its 22nd auction of carbon dioxide allowances. At the auction, 38, 329, 378 carbon dioxide allowances were sold at a clearing price of \$3.00.²⁹²⁴ The action generated \$ 114.9 million for reinvestment by the RGGI states.²⁹²⁵ This money will be allocated to consumer benefit initiatives, including energy efficiency, renewable energy, direct bill assistance, and GHG abatement programs.²⁹²⁶ Bids for the carbon dioxide allowances ranged from \$1.98 to \$12.00 per allowance. At the time of the 22nd auction the cumulative proceeds from all RGGI carbon dioxide allowances auctions totaled \$1.5 billion.²⁹²⁷

On December 16, 2013, state environment and energy leaders from 15 states, including NH, submitted a letter to the EPA urging them to allow states to use their broad clean energy and climate approaches to meet upcoming carbon pollution reduction requirements.²⁹²⁸ The states also encouraged the EPA to develop "equitable and measureable standards that will hold states accountable for their progress."²⁹²⁹ The states use their own success stories, which total more than 20% in carbon dioxide reductions to demonstrate the type of reductions that are possible.²⁹³⁰ Specifically the letter urges the EPA to set federal standards based on what can be achieved by taking a "comprehensive approach to improving the power system as a whole rather than by regulating carbon pollution at each individual power plant."²⁹³¹

²⁹²¹ Press Release, RGGI, Inc., RGGI States Recommend that EPA Support Flexible Market-Based Carbon Pollutions Programs (Dec. 2, 2013), http://www.rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

²⁹²² *Id.*

²⁹²³ *Id.*

²⁹²⁴ Press Release, RGGI, Inc., 2013 CO₂ Allowances Sold at \$3.00 at 22nd RGGI Auctions (Dec. 6, 2013), http://www.rggi.org/docs/Auctions/22/PR120613_Auction22.pdf.

²⁹²⁵ *Id.*

²⁹²⁶ *Id.*

²⁹²⁷ *Id.*

²⁹²⁸ Press Release, Georgetown Climate Center, States Provide EPA with Road Map for Cutting Carbon Pollution (Dec. 16, 2013), <http://www.georgetownclimate.org/states-provide-epa-with-a-road-map-for-cutting-carbon-pollution>.

²⁹²⁹ *Id.*

²⁹³⁰ *Id.*

²⁹³¹ *Id.*

2014: Greenhouse Gas Reduction

On January 13, 2014, RGGI announced that the 2014 RGGI cap is 91 million tons. This represents a 45 percent reduction to the RGGI CO₂ cap.²⁹³² This amount will be reduced by 2.5 percent each year from 2015 to 2020.²⁹³³ RGGI estimates that by 2020 the power plant carbon dioxide levels will be half of the 2005 levels.²⁹³⁴

On March 5, 2014, RGGI held its 23rd auction for carbon dioxide allowances.²⁹³⁵ At the auction 23,491,350 carbon dioxide allowances were sold at a clearing price of \$4.00.²⁹³⁶ Allowances sold include the 18,491,350 allowances offered for sale by the nine states and all of the 5,000,000 cost containment reserve (CCR) allowances for allocation year 2014.²⁹³⁷ Bids for the carbon dioxide allowances ranged from \$2.00 to \$11.85 per allowance.²⁹³⁸ The CCR is a fixed additional supply of allowances that are only available for sale if carbon dioxide allowance prices exceed certain price levels (\$4 in 2014, \$6 in 2015, \$8 in 2016, and \$10 in 2017, rising by 2.5 percent, to account for inflation, each year thereafter).²⁹³⁹ To date there are no more CCR allowances available for sale in 2014.²⁹⁴⁰

NEW JERSEY

1997: Greenhouse Gas Reduction

On June 16, 1997, New Jersey Department of Environmental Protection (NJDEP) Commissioner Robert C. Shinn Jr. formed the New Jersey Global Change Workgroup to assist in the development of a greenhouse gas (GHG) action plan for the state.²⁹⁴¹ The next year, Shinn issued Administrative Order 1998-09, which established a goal of achieving a 3½ % reduction in New Jersey's GHG emissions below 1990 levels by 2005.²⁹⁴² Following this order, the NJDEP developed a GHG Action Plan, which enumerated strategies for meeting this goal.²⁹⁴³ In addition, the Plan identified the major sources of GHGs by sector and estimated the 1990 GHG emissions.²⁹⁴⁴

²⁹³² Press Release, RGGI, Inc., RGGI States Make Major Cuts to Greenhouse Gas Emissions from Power Plants (Jan. 13, 2014), http://www.rggi.org/docs/PressReleases/PR011314_AuctionNotice23.pdf.

²⁹³³ *Id.*

²⁹³⁴ *Id.*

²⁹³⁵ Press Release, RGGI, Inc., CO₂ Allowances Sold at \$4.00 at 23rd RGGI Auction (Mar. 7, 2014), http://www.rggi.org/docs/Auctions/23/PR030714_Auction23.pdf.

²⁹³⁶ *Id.*

²⁹³⁷ *Id.*

²⁹³⁸ *Id.*

²⁹³⁹ *Id.*

²⁹⁴⁰ *Id.*

²⁹⁴¹ N.J. DEP'T OF ENVTL. PROT., N.J. SUSTAINABILITY GREENHOUSE GAS ACTION PLAN E3 (1999), <http://infohouse.p2ric.org/ref/14/13318.pdf>.

²⁹⁴² *Id.* at A9-A11.

²⁹⁴³ *Id.* at E3.

²⁹⁴⁴ *Id.* at E4-E5.

1998: Climate Change Adaptation

Recognizing the importance of international climate efforts, on June 15, 1998, the NJDEP signed a letter of intent with the Netherlands Environmental Ministry that outlined a number of areas where the NJDEP and the Ministry planned to work together to address issues related to climate change.²⁹⁴⁵

2005: Climate Change Agreements, Greenhouse Gas Reduction, and Energy Efficiency

In October 2005, Governor Cody furthered state efforts to address climate change by classifying carbon dioxide as an air contaminant under New Jersey's air pollution control rules.²⁹⁴⁶ This action was intended to facilitate New Jersey's engagement in the Regional Greenhouse Gas Initiative (RGGI), which was established in 2005.²⁹⁴⁷ New Jersey later became a RGGI participant, thereby capping the carbon dioxide emissions from its power sector and reducing these emissions by 10% by 2018.²⁹⁴⁸

In 2005 New Jersey implemented appliance efficiency standards for eight products.²⁹⁴⁹

2006: Transportation/Fuels and Renewable Portfolio Standards

On January 17, 2006, the NJDEP amended its regulations to incorporate California's Low Emission Vehicle (LEV) program.²⁹⁵⁰

Also in 2006, New Jersey's Board of Public Utilities (BPU) adopted a renewable portfolio standard (RPS) that required utilities to increase the percentage of electricity produced from renewable sources to increase from 4% in 2008 to 20% in 2020 with at least 2% of the 20% derived from solar photovoltaic sources. The RPS allowed trading of Renewable Energy Certificates for compliance purposes.²⁹⁵¹

2007: Greenhouse Gas Reduction, Climate Change Agreements, and Energy Efficiency

²⁹⁴⁵ *Id.* at E3.

²⁹⁴⁶ Press Release, N.J. Office of the Governor, Codey Takes Crucial Step to Combat Global Warming (Oct. 18, 2005), http://web.archive.org/web/20070415040433/http://www.nj.gov/cgi-bin/governor/njnewslines/view_article.pl?id=2779; *see also* 37 N.J. Reg. 4415(a) (Nov. 21, 2005).

²⁹⁴⁷ Press Release, N.J. Office of the Governor, Codey Takes Crucial Step to Combat Global Warming (Oct. 18, 2005), http://web.archive.org/web/20070415040433/http://www.nj.gov/cgi-bin/governor/njnewslines/view_article.pl?id=2779.

²⁹⁴⁸ REGIONAL GREENHOUSE GAS INITIATIVE, <http://www.rggi.org/home> (Oct. 7, 2008).

²⁹⁴⁹ A. 516, 211th Leg., 2nd Ann. Sess. (N.J. 2005).

²⁹⁵⁰ 38 N.J. Reg. 497(b) (Jan. 17, 2006); *see also* CAL. CODE REGS. tit. 13, § 1961.1 (2005) (setting forth California's greenhouse gas exhaust emission standards and test procedures).

²⁹⁵¹ N.J. ADMIN. CODE tit. 14, § 8-2 (2006).

In February 2007, Governor Corzine signed Executive Order (EO) 54 that set new GHG emissions reduction goals.²⁹⁵² The Order required that emissions be reduced to 1990 levels by 2020 (a 20% reduction) and to 80% below 2006 levels by 2050.²⁹⁵³

In May 2007, New Jersey and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”²⁹⁵⁴ Additionally, on October 29, 2007, New Jersey joined a coalition with nine other states, New Zealand, Norway, nine European Union countries, the European Commission, and two Canadian provinces to form the International Carbon Action Partnership (ICAP) in order to combat global warming.²⁹⁵⁵ ICAP provides a forum for governments to share information regarding cap-and-trade systems and will work to ensure that market programs are compatible.²⁹⁵⁶ In addition, ICAP promotes low-carbon products and services, innovations, and cost effective reductions.²⁹⁵⁷

Governor Corzine signed Assembly Number (A.) 3301 into law in July 2007, establishing the Global Warming Response Act, which codified EO 54 by mandating that New Jersey GHG emissions be reduced to 1990 levels by 2020 and 80% below 2006 levels by 2050.²⁹⁵⁸ The Act required numerous state agencies and stakeholders to work together to determine and recommend cost-effective methods for meeting these goals.²⁹⁵⁹ In addition, it tasked the NJDEP with creating a GHG emission inventory and monitoring system and making reports to the governor and legislature in order to track GHG emission reduction progress.²⁹⁶⁰ It further required reduction of state facility and vehicle energy consumption.²⁹⁶¹

A. 3301 also required the NJDEP to evaluate GHG emissions in the state and to come up with policy recommendations for mitigating these emissions by the end of 2008.²⁹⁶² The NJDEP drafted a report entitled *New Jersey Greenhouse Gas Inventory and Reference Case Projections 1990-2020*.²⁹⁶³ The Report provided an assessment of

²⁹⁵² N.J. Exec. Order No. 54 (2007), <http://www.state.nj.us/infobank/circular/eojsc54.htm>.

²⁹⁵³ *Id.*

²⁹⁵⁴ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20070815201029/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

²⁹⁵⁵ Press Release, Int’l Carbon Action P’ship, Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007), <http://web.archive.org/web/20071101023558/http://www.icapcarbonaction.com/pr20071029.htm>.

²⁹⁵⁶ *Id.*

²⁹⁵⁷ *Id.*

²⁹⁵⁸ A. 3301, 212th Leg., 2nd Ann. Sess. (N.J. 2007).

²⁹⁵⁹ *Id.*

²⁹⁶⁰ *Id.*

²⁹⁶¹ *Id.*

²⁹⁶² *Id.* at C.26:2C-41(5).

²⁹⁶³ N.J. DEP’T OF ENVTL. PROT., DRAFT N.J. GREENHOUSE GAS INVENTORY AND REFERENCE CASE PROJECTIONS 1990-2020 (2008), <http://www.nj.gov/globalwarming/pdf/20080219inventory.pdf>.

historical and projected GHG emission levels in relation to the nuances of New Jersey's economy. It found that GHG emissions rose by 13% in the State between 1990 and 2005.²⁹⁶⁴ The NJDEP also drafted the *New Jersey Energy Master Plan*, which provided a policy road map to guide the state in reducing GHG emissions.²⁹⁶⁵ Plan recommendations included increasing the state's RPS to 22.5% between 2021 and 2025, developing 1500 megawatts (MW) of cogeneration capacity by 2020, and creating a "Green Collar" jobs program to give New Jersey workers the skills necessary to perform the jobs created by the recommendations of the plan.²⁹⁶⁶

In August 2007, Governor Corzine signed A. 3983, mandating that state agencies use only compact fluorescent light bulbs in state-owned buildings by August 2010 and directing the New Jersey BPU to initiate a public education campaign with regard to the benefits of compact fluorescent light bulbs.²⁹⁶⁷ Additionally, Corzine signed Senate Number S. 341 mandating that the state buy only products marked with the federal ENERGY STAR label unless such a purchase would be inconsistent with the public interest or too expensive.²⁹⁶⁸

2008: Renewable Energy, Market-Based Solutions, Climate Change Adaptation, and Transportation/Fuels

In August 2008, Governor Corzine signed A. 1599 into law.²⁹⁶⁹ This Bill amended municipal land use law allowing local planning authorities to include green buildings and environmental sustainability planning into their municipal master plans. One month later, he signed A. 844, enabling certain local public entities to enter into contracts of up to fifteen years for energy conservation or for the provision of renewable energy production at their buildings.²⁹⁷⁰

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.²⁹⁷¹ Each of these allowances sold at a clearing price of \$3.07, raising a total of \$38,575,783.²⁹⁷² These proceeds would be used to fund renewable energy and energy efficiency technologies and programs in the states that offered allowances.²⁹⁷³

Governor Corzine released an updated version of the Energy Master Plan on October 22, 2008.²⁹⁷⁴ The updated plan analyzed what the energy state of affairs will be

²⁹⁶⁴ *Id.* at 17.

²⁹⁶⁵ N.J. DEP'T OF ENVTL. PROT., DRAFT N.J. ENERGY MASTER PLAN (2008), <http://nj.gov/emp/home/docs/pdf/draftemp.pdf>.

²⁹⁶⁶ *Id.* at 12-13.

²⁹⁶⁷ A. 3983, 212th Leg., 2nd Ann. Sess. (N.J. 2007).

²⁹⁶⁸ S. 341, 212th Leg., 2nd Ann. Sess. (N.J. 2007).

²⁹⁶⁹ A. 1559, 2008 Leg., 213th Sess. (N.J. 2008).

²⁹⁷⁰ A. 844, 2008 Leg., 213th Sess. (N.J. 2008).

²⁹⁷¹ Press Release, RGGI Inc., RGGI States' First CO₂ Auction off to a Strong Start (Sept. 29, 2008), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

²⁹⁷² *Id.* at 1.

²⁹⁷³ *Id.*

²⁹⁷⁴ Press Release, N.J. Office of the Governor, Governor Corzine Introduces New Energy Master Plan (Oct. 22, 2008),

in 2020 based on a “business as usual” model and compared this with the results from an “alternative scenario” model.²⁹⁷⁵

On November 10, 2008, Governor Corzine announced the final environmental impact statement approval for the Mass Transit Tunnel project.²⁹⁷⁶ This project, a partnership between the state and the Port Authority of New York and New Jersey, was expected to double train capacity by building rail tunnels under the Hudson River, expanding Penn Station, and making track and signal improvements along the Northeast Corridor. Proponents estimated that the project would remove more than 22,000 vehicles from the New Jersey Turnpike and other highways. On January 16, 2009, Corzine announced that construction on the Mass Transit Tunnel would begin within the year.²⁹⁷⁷

The second RGGI auction took place on December 17, 2008 and each of the ten states participated.²⁹⁷⁸ All of the available 31,505,898 allowances were sold, 3.5 times lower than the demand of 108,709,000 allowances.²⁹⁷⁹ The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.²⁹⁸⁰

As required by the Global Warming Response Act, the State Department of Environmental Protection released a draft climate action plan for public comment in December 2008.²⁹⁸¹ The report showed that New Jersey could reach its goal of reducing GHG emissions to 1990 levels by 2020 through the state’s Energy Master Plan, the LEV program, and RGGI.²⁹⁸² The report further contained a plan to accelerate its progress toward its goal of reducing GHG emissions to 80% below 2006 levels by 2050, which focused on four areas: land use and transportation; terrestrial carbon sequestration; energy efficiency and renewable energy; and new technologies market.²⁹⁸³ Proposed actions in the land use and transportation area included reducing vehicle miles traveled (VMT) growth to less than 1% per year, making all VMT “green” over the following

<http://web.archive.org/web/20090402135139/http://nj.gov/governor/news/news/2008/approved/20081022a.html>.

²⁹⁷⁵ STATE OF N.J. ENERGY MASTER PLAN, N.J. ENERGY MASTER PLAN (2008),

http://www.nj.gov/emp/docs/pdf/081022_emp.pdf.

²⁹⁷⁶ Press Release, N.J. Office of the Governor, Governor Corzine Announces Progress for Mass Transit Tunnel Project (Nov. 10, 2008),

<http://web.archive.org/web/20090802211133/http://nj.gov/governor/news/news/2008/approved/20081110a.html>.

²⁹⁷⁷ Press Release, N.J. Office of the Governor, Momentum Builds for Mass Transit Tunnel (Jan. 16, 2009), <http://web.archive.org/web/20090511151903/http://www.nj.gov/governor/news/news/2009/approved/20090116b.html>.

²⁹⁷⁸ Auction 2, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/116 (Jan. 12, 2014).

²⁹⁷⁹ Press Release, RGGI Inc., Post-Settlement Auction Report Shows Robust Market for RGGI Carbon Dioxide Emissions Allowances (Jan. 6, 2009),

<http://www.rggi.org/docs/Auction%202%20Post%20Settlement%20Auction%20Report.pdf>.

²⁹⁸⁰ *Id.*

²⁹⁸¹ *Stakeholder Input to Draft Global Warming Response Act Recommendation Report*, STATE OF N.J., GLOBAL WARMING, <http://www.nj.gov/globalwarming/home/stakeholder.html> (Jan. 12, 2014).

²⁹⁸² N.J. DEP’T OF ENVTL. PROT., DRAFT GLOBAL WARMING RESPONSE ACT RECOMMENDATION REPORT (2008), http://www.nj.gov/globalwarming/home/documents/pdf/final_report20081215.pdf.

²⁹⁸³ *Id.* at 8.

fifteen years, and ensuring that 90% of development in the state occurred in places already served by the public infrastructure.²⁹⁸⁴ In the terrestrial carbon area, it focused on increasing the annual rate of carbon dioxide sequestration to 8 million metric tons. In the energy efficiency and renewable energy area, the plan's goals were to continuously increase electricity generation from renewable sources until all electricity sources in the state became carbon neutral and to ensure that all building constructed after 2030 have a net zero energy consumption. Finally, all of the plan's goals will naturally enhance the green technologies market.²⁹⁸⁵

On December 31, 2008, RGGI participants and Pennsylvania (an observer) signed a letter of intent to reduce carbon emissions from the transportation sector.²⁹⁸⁶ Specifically, these states expressed intent to incorporate a Low Carbon Fuel Standard (LCFS) into the RGGI agreement, which would require reductions in the average lifecycle GHG per unit of useful energy in motor vehicles.²⁹⁸⁷

2009: Energy Efficiency, Climate Change Adaptation, American Recover & Reinvestment Act, Market-Based Solutions, Climate Change Agreements, Green Building, Green Jobs, Green Technology, Renewable Energy, and Transportation/Fuels

Governor Corzine signed A. 1537 on January 21, 2009.²⁹⁸⁸ This Bill authorized public agencies to contract with energy service companies in order to implement energy saving measures in their buildings.²⁹⁸⁹

Governor Corzine and eleven other governors signed a letter to President Obama, urging him to form a strong state/federal leader partnership in initiating a national climate change program on January 29, 2009.²⁹⁹⁰ This letter was predicated upon the President's

²⁹⁸⁴ *Id.* at 7.

²⁹⁸⁵ *Id.*

²⁹⁸⁶ Letter from Gina McCarthy, Comm'r Conn. Dep't of Env'tl. Prot., John A. Hughes, Sec'y Del. Dep't of Natural Res. and Env'tl. Control, David P. Littell, Comm'r Me. Dep't of Env'tl. Prot., Shari T. Wilson, Sec'y Md. Dep't of the Env't, Laurie Burt, Comm'r Mass. Dep't of Env'tl. Prot., Philip Guidice, Comm'r Mass. Dep't of Energy Res., Pete Grannis, Comm'r N.Y. Dep't Env'tl. Conservation, Bob Callendar, Vice President for Programs N.Y. State Research and Dev. Auth., Thomas S. Burack, Comm'r N.H. Dep't of Env'tl. Serv., Mark N. Mauriello, Acting Comm'r N.J. Dep't of Env'tl. Prot., John Hanger, Acting Sec'y Pa. Dep't of Env'tl. Prot., W. Michael Sullivan, Dir. R.I. Dep't of Env'tl. Mgmt., Laura Q. Pelosi, Comm'r Vt. Dep't of Env'tl. Conservation (Dec. 31, 2008), http://web.archive.org/web/20110811022823/http://www.mass.gov/Eoeea/docs/pr_lcfs_attach.pdf.

²⁹⁸⁷ *Id.* at 1.

²⁹⁸⁸ Press Release, N.J. Office of the Governor, Governor Signs Legislation Implementing Energy Savings Improvement Programs (Jan. 21, 2009), <http://web.archive.org/web/20090511153302/http://www.nj.gov/governor/news/news/2009/approved/20090121a.html>.

²⁹⁸⁹ A. 1185, 2009 Leg., Reg. Sess. (N.J. 2009).

²⁹⁹⁰ Letter from Arnold Schwarzenegger, Governor of Cal., M. Jodi Rell, Governor of Conn., Charlie Crist, Governor of Fla., Kathleen Sebelius, Governor of Kan., Martin O'Malley, Governor of Md., Deval Patrick, Governor of Mass., John S. Corzine, Governor of N.J., Bill Richardson, Governor of N.M., David Paterson, Governor of N.Y., Theodore R. Kulongoski, Governor of Or., Christine O. Gregoire, Governor of Wash.,

letter to the Governors' Global Climate Summit in which he offered the governors a partnership with the White House in addressing climate change issues. The letter writers believed that their states played a leading role in confronting these issues and stated, "It is crucial that we build on our states' momentum."²⁹⁹¹ The letter also contained suggestions for how a national climate change program should be implemented. One of these suggestions was for the national government to recognize the private investments made in current cap-and-trade programs and to preserve the clean energy plans funded by the proceeds from these programs.²⁹⁹²

On March 12, 2009, the U.S. Department of Energy (DOE) announced that New Jersey was eligible for \$73,643,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).²⁹⁹³

The third RGGI auction was held on March 18, 2009.²⁹⁹⁴ The auction sold 31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse at future market prices for RGGI allowances.²⁹⁹⁵ Prices fell at the fourth auction to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.²⁹⁹⁶

Governor Corzine signed three bills to further the aims of the Energy Master Plan on March 31, 2009.²⁹⁹⁷ The first bill, A. 1558, required developers to offer to install solar energy systems in certain new home construction and required the BPU to create technical standards for the type of solar system to be installed.²⁹⁹⁸ The second bill, A. 2250, permitted certain wind and solar technologies to be located in industrial zones.²⁹⁹⁹ The third bill, A. 2507, authorized the BPU to provide grants for combined heat and power, energy efficiency projects and projects promoting renewable and energy efficiency from the Retail Margin Fund.³⁰⁰⁰ The primary grant will be \$450/kilowatt of capacity installed to encourage combined heat and power facilities.

Jim Doyle, Governor of Wis., to Barack Obama, President of the United States of America (Jan. 29, 2009), <http://web.archive.org/web/20090214185812/http://www.wisgov.state.wi.us/docview.asp?docid=15821>.

²⁹⁹¹ *Id.* at 1.

²⁹⁹² *Id.* at 2.

²⁹⁹³ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 45 (Apr. 24, 2009),

http://web.archive.org/web/20130421082705/http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

²⁹⁹⁴ Press Release, RGGI Inc., States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

²⁹⁹⁵ *Id.*

²⁹⁹⁶ Auction 4, REGIONAL GREENHOUSE GAS INITIATIVE,

http://www.rrgi.org/market/co2_auctions/results/Auctions-1-16/114 (Jan. 12, 2014).

²⁹⁹⁷ Press Release, N.J. Office of the Governor, Governor Corzine Signs Bills to Help Achieve Goals of the Energy Master Plan (Mar. 31, 2009), <http://web.archive.org/web/20090715172758/http://www.nj.gov/governor/news/news/2009/approved/20090331c.html>.

²⁹⁹⁸ A. 1558, 2009 Leg., 2009 Leg., 214th Sess. (N.J. 2009).

²⁹⁹⁹ A. 2250, 2009 Leg., 214th Sess. (N.J. 2009).

³⁰⁰⁰ A. 2507, 2009 Leg., 214th Sess. (N.J. 2009).

On April 6, 2009, Governor Corzine toured the Jersey-Atlantic Wind Farm with U.S. Department of the Interior Secretary Ken Salazar, who was in New Jersey attending a conference concerning energy development on the outer continental shelf.³⁰⁰¹ This wind farm contained five turbines and powered approximately 2,500 homes. Two weeks later, Corzine visited the Lighting Science Group's headquarters, which was moved to New Jersey earlier that year.³⁰⁰² The company was a global leader in LED research and designed and manufactured LED lamps and luminaries. Since its move to New Jersey in 2009, the company created 23 jobs and expected to create at least that many in the near future.

On April 16, 2009, the BPU approved infrastructure projects to be undertaken by seven utility companies.³⁰⁰³ These projects would replace and repair gas pipes and mains, distribution system improvements, and transformer and street light replacement with energy efficient equipment.

BASF opened up a new state-of-the-art fuel cell production facility in New Jersey in May 2009.³⁰⁰⁴ That month, the state also received \$73.6 million in ARRA funding for energy projects, including \$15 million for grants and loans for alternative energy and energy efficiency applications; \$20,643,000 for state-sponsored energy efficiency projects; \$7 million for the state's residential solar financing program; \$8 million for residential energy efficiency through the low-interest loan program; \$17 million for the clean energy program; and \$6 million for the New Jersey Office of Energy Savings.³⁰⁰⁵ Later that month, the New York Giants and New York Jets entered an agreement with the EPA to implement green building practices in the construction of the New Meadowlands Stadium.³⁰⁰⁶

In order to protect their state's wind technology, Governor Corzine and other

³⁰⁰¹ Press Release, N.J. Office of the Governor, Governor Corzine and Interior Secretary Salazar Tour Wind Farm (Apr. 6, 2009), <http://web.archive.org/web/20090725123246/http://www.nj.gov/governor/news/news/2009/approved/20090406d.html>.

³⁰⁰² Press Release, N.J. Office of the Governor, Governor Corzine Praises Lighting Science's Efforts to Stimulate the Green Economy of the Garden State (Apr. 21, 2009), <http://web.archive.org/web/20090511153659/http://www.nj.gov/governor/news/news/2009/approved/20090421a.html>.

³⁰⁰³ Press Release, State of N.J., Division of Rate Counsel, Public Advocate Negotiates Balanced Utility Infrastructure Projects (Apr. 16, 2009), http://www.state.nj.us/rpa/news/2008/090416_public_advocate_negotiates_balanced_utility_infrastructure_projects.html.

³⁰⁰⁴ Press Release, N.J. Office of the Governor, Governor Corzine Announces Cuts Ribbon for New BASF Fuel Cell Production Facility (May 6, 2009), <http://web.archive.org/web/20090830034354/http://www.state.nj.us/governor/news/news/2009/approved/20090506a.html>.

³⁰⁰⁵ Press Release, N.J. Office of the Governor, Governor Corzine Announces \$73.6 Million in U.S. Department of Energy Stimulus Funding (May 14, 2009), <http://web.archive.org/web/20091030203228/http://www.state.nj.us/governor/news/news/2009/approved/20090514c.html>.

³⁰⁰⁶ *Governor Corzine Lauds Jets-Giants-EPA Go Green Agreement*, PROJECT VOTE SMART (June 1, 2009), <http://votesmart.org/public-statement/427700/> (original press release not found).

governors wrote a letter to Congress communicating their opposition to proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.³⁰⁰⁷ New Jersey also released leases for three offshore wind developers.³⁰⁰⁸ The state also applied for \$14.4 through the Energy Efficiency and Conservation Block Grant Program³⁰⁰⁹ and in October New Jersey received this funding.³⁰¹⁰

Governor Corzine signed an agreement with a coalition of governors to support federal climate change legislation in May 2009.³⁰¹¹ The agreement contained two principles: the support of comprehensive federal legislation and the promotion of a federal-state partnership in implementing this legislation.³⁰¹²

On June 23, 2009, representatives from RGGI, the Western Climate Initiative (WCI), and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.³⁰¹³

Also in June 2009, Greenopia ranked Governor Corzine as the ninth greenest governor in the nation.³⁰¹⁴ Later that month, the EPA gave New Jersey authority to adopt

³⁰⁰⁷ Letter from Donald L. Carcieri, Governor of R.I., Deval Patrick, Governor of Mass., Jack Markell, Governor of Del., John Baldacci, Governor of Me., Martin O'Malley, Governor of Md., John H. Lynch, Governor of N.H., Jon S. Corzine, Governor of N.J., David A. Paterson, Governor of N.Y., James H. Douglas, Governor of Vt., Timothy M. Kaine, Governor of Va. to Harry Reid, Majority Leader, U.S. Senate, Mitch McConnell, Minority Leader, U.S. Senate, Nancy Pelosi, Speaker, U.S. House of Representatives, John Boehner, Minority Leader, U.S. House of Representatives (May 4, 2009), http://web.archive.org/web/20090507010001/http://www.gov.ri.gov/documents/East_Coast_Govs_Transmission_Ltr.pdf,

³⁰⁰⁸ Press Release, N.J. Office of the Governor, Governor Corzine Lauds Release of Windpower Leases (June 23, 2009), <http://web.archive.org/web/20090627041402/http://www.state.nj.us/governor/news/news/2009/approved/20090623a.html>.

³⁰⁰⁹ *New Jersey Submits Energy Efficiency and Conservation Plan for \$14.4 Million in Federal Stimulus Funding*, POLITICKERNJ (June 24, 2009), <http://www.politickernj.com/governors-press-office/30870/new-jersey-submits-energy-efficiency-and-conservation-plan-144-million-> (original press release not found).

³⁰¹⁰ Press Release, U.S. Dep't of Energy, Energy Efficiency & Renewable Energy, Obama Administration Delivers Nearly \$72 Million for Energy Efficiency and Conservation Projects in 7 States and Territories Governor Corzine Announces Release of \$14.4 Million in American Recovery and Reinvestment Act Funds (Oct. 14, 2009), http://www1.eere.energy.gov/buildings/m/news_detail.html?news_id=15524. <http://www.state.nj.us/governor/news/news/2009/approved/20091004.html>.

³⁰¹¹ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20090817025744/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

³⁰¹² *Statement of Principles*, Governors' Energy and Climate Coalition, (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

³⁰¹³ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

³⁰¹⁴ *Governor Corzine Ranks in Top Ten "Green Governors,"* CAPE MAY CNTY. HERALD (June 26, 2009), <http://www.capemaycountyherald.com/article/51736-governor%2Bcorzine%2Bbranks%2Btop%2Bten%2Bquotgreen%2Bgovernorsquot>.

California's stricter GHG emissions standards for motor vehicles.³⁰¹⁵

In July 2009, Princeton Power Systems, an advanced power conversion technologies developer, opened new headquarters in New Jersey.³⁰¹⁶ On that same day, Governor Corzine announced the availability of \$20 million in stimulus funding from ARRA for energy efficiency and renewable energy projects.³⁰¹⁷ The U.S. DOE also provided \$8.33 million from ARRA for the state's energy efficient appliance rebate program.³⁰¹⁸ Later that month, Corzine testified before the Senate Committee on Environment and Public Works, stating that the United States is on the verge of a "green revolution."³⁰¹⁹ The next month, he announced that statewide solar installations then totaled over 4,000, an example of how New Jersey was considered second in the nation in solar advancement.³⁰²⁰

Governor Corzine applauded the implementation of green technologies in the new Princeton Hospital in August 2009.³⁰²¹ New Jersey also applied for ARRA funding for a high-speed rail line.³⁰²² The state received \$29.3 million in ARRA funding for its State Energy Plan.³⁰²³ In late August, Corzine also visited Petra Solar, which had been awarded a contract from PSE&G to produce 200,000 Sun Wave units (pole-mounted, grid-connected photovoltaic systems) so that the utility can mount these units on its utility

³⁰¹⁵ *New Jersey Gets Green Light to Move Forward with Greenhouse Gas Vehicle Program*, THE ALTERNATIVE PRESS (Aug. 24, 2010), <http://thealternativepress.com/articles/new-jersey-gets-green-light-to-move-forward-with>.

³⁰¹⁶ Press Release, N.J. Office of the Governor, Governor Corzine Lauds Expansion of Homegrown Clean Energy Company (July 7, 2009), <http://web.archive.org/web/20090712043459/http://www.state.nj.us/governor/news/news/2009/approved/20090707.html>.

³⁰¹⁷ *Governor Corzine Announces Grant Program for Innovative Energy Efficiency and Renewable Energy Projects at State Facilities*, PROJECT VOTE SMART (July 7, 2009), <http://votesmart.org/public-statement/438762/> (original press release not found).

³⁰¹⁸ Press Release, State of N.J., Recovery & Reinvestment Plan, Governor Corzine Hails \$8.33 Million in U.S. Department of Energy Funding (July 15, 2009), <http://www.state.nj.us/recovery/recovery/news/approved/20090715.html>.

³⁰¹⁹ *Governor Corzine Discusses "Green Revolution"*, POLITICKERNJ (July 21, 2009), <http://www.politickernj.com/governors-press-office/31573/governor-corzine-discusses-green-revolution> (original press release not found).

³⁰²⁰ *Governor Corzine Announces 4,000th Solar Installation Milestone – NJ is Second in the Nation for Solar, Renewable Energy Advancement*, POLITICKERNJ (Aug. 11, 2009), <http://www.politickernj.com/governors-press-office/32203/governor-corzine-announces-4000th-solar-installation-milestone-nj-second> (original press release not found).

³⁰²¹ *Governor Corzine Lauds "Green Construction" at Princeton Hospital*, POLITICKERNJ (Aug. 24, 2009), <http://www.politickernj.com/governors-press-office/32536/governor-corzine-lauds-green-construction-princeton-hospital> (original press release not found).

³⁰²² *New Jersey Applies for High-Speed Rail Funding*, POLITICKERNJ (Aug. 25, 2009), <http://www.politickernj.com/governors-press-office/32564/new-jersey-applies-high-speed-rail-funding> (original press release not found).

³⁰²³ *Governor Corzine Announces U.S. Department of Energy Release of \$29.3 Million in ARRA Funds*, POLITICKERNJ (Aug. 25, 2009), <http://www.politickernj.com/governors-press-office/32578/governor-corzine-announces-us-department-energy-release-293-million-arr> (original press release not found).

poles as a distributed generation measure.³⁰²⁴

On August 31, 2009, the attorney generals of New Jersey, Arizona, Connecticut, Delaware, and California sent U.S. Senate leaders a letter urging them to pass climate change legislation stronger than the Waxman-Markey Bill.³⁰²⁵ The attorney generals' suggestions to the senators included that the Bill include measures that give state enforcement authority, require public disclosure of all offset project documentation, and provide standing for citizen suits.

2010: Renewable Energy and Climate Change Memorandum of Understanding

In April 2010, Governor Chris Christie outlined an energy policy for New Jersey that emphasized in-state production of renewable and traditional energy sources.³⁰²⁶ He proposed to do this in three main ways: 1) by making renewable energy a key to New Jersey's economic growth; 2) by applying "Made in NJ" to energy needs; 3) and by marketing New Jersey for renewable energy production.³⁰²⁷ At the time, New Jersey only produced just over 50% of the energy they used. "Home grown" sources must include wind and solar and particularly offshore wind, Christie noted. Some other examples include installing energy-efficient light bulbs, windows, insulation, and appliances.³⁰²⁸

In April 2010 S. 921³⁰²⁹ was signed into law, exempting solar panels from restrictions that had classified them as "impervious surface" under municipal land use law and waterfront and coastal development laws.³⁰³⁰ Under this law, only the base or foundation of the solar panel that is affixed to the land, rather than the entire solar panel, would be considered as "impervious cover," and thus will not result in restriction of development due to environmental purposes.³⁰³¹

Governor Christie signed a memorandum of understanding (MOU) in June 2010 with the federal government and the governors of Maine, New Hampshire, Massachusetts, Rhode Island, New York, Delaware, Maryland, Virginia, and North

³⁰²⁴ Press Release, Petra Solar, Governor Corzine Tours Petra Solar (Aug. 28, 2009), <http://www.petrasolar.com/news-and-events/press-releases/128-governor-corzine-tours-petra-solar>.

³⁰²⁵ Letter from Edmund G. Brown Jr., Att'y Gen. Cal., Terry Goddard, Att'y Gen. Ariz., Richard Blumenthal, Att'y Gen. Conn., Richard Gebelien, Att'y Gen. Del., Anne Milgram, Att'y Gen. N.J., to Harry Reid, U.S. Senate Majority Leader, Mitch McConnell, U.S. Senate Minority Leader, Barbara Boxer, Chair, Comm. on Env't and Public Works, U.S. Senate, James Inhofe, Ranking Member, Comm. on Env't and Public Works, U.S. Senate (Aug. 31, 2009), http://ag.ca.gov/globalwarming/pdf/letter_to_Senate_re_Climate_Legislation.pdf.

³⁰²⁶ Press Release, State of N.J., Energy as Industry Governor Christie Outlines a New Approach to Make Renewable Energy a Key to New Jersey's Economic Recovery & Growth (Apr. 20, 2010), <http://www.state.nj.us/governor/news/news/552010/approved/20100420a.html>.

³⁰²⁷ *Id.*

³⁰²⁸ *Id.*

³⁰²⁹ 2010 N.J. Sess. Law Serv. 4 (West).

³⁰³⁰ Press Release, N.J. Office of the Governor, Governor Chris Christie Today Signed Significant Solar Power Legislation Into Law (Apr. 22, 2010), <http://www.state.nj.us/governor/news/news/552010/approved/20100422c.html>.

³⁰³¹ *Id.*

Carolina to promote the development of offshore wind power.³⁰³² The MOU, which established an Atlantic Offshore Wind Energy Consortium, would help to facilitate federal-state cooperation for commercial wind development on the Outer Continental Shelf off of the Atlantic coast.³⁰³³

In August 2010, Governor Christie signed the Offshore Wind Economic Development Act or S. 2036.³⁰³⁴ The Bill directed the New Jersey BPU to develop an offshore renewable energy certificate (OREC) program that calls for a percentage of electricity sold in the state to be from offshore wind energy, and will support at least 1,100 MWs of generation from qualified offshore wind projects.³⁰³⁵ Through the legislation, the New Jersey Economic Development Authority planned to provide financial assistance to qualified offshore wind projects and associated equipment manufacturers and assembling facilities.³⁰³⁶

2011: Renewable Energy, Greenhouse Gas Reduction, Transportation/Fuels, and Climate Change Agreements

On April 19, 2011 New Jersey issued a formal Call for Nominations through the U.S. Department of Interior's Office of Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE). This was a formal request for firms interested in acquiring leases from BOEMRE for the development of offshore wind energy farms.³⁰³⁷

According to the *Statewide Greenhouse Gas Emission Inventory for 2008*, released in May 2011, New Jersey reduced its GHG emissions by 8% below 2007 levels in 2008, bringing the state under its 2020 emissions target. The *Inventory* is a biennial report required by New Jersey's Global Warming Response Act.³⁰³⁸

Governor Christie released a draft of the *New Jersey 2011 Energy Master Plan* on June 7, 2011, which proposed five overarching goals to help reduce the cost of energy for all consumers while promoting renewable energy.³⁰³⁹ The five goals included: 1) promoting a diverse portfolio of renewable energy generated in the state; 2) creating a

³⁰³² Press Release, N.J. Office of the Governor, Governor Christie Endorses East Coast Offshore Wind Agreement (June 8, 2010), <http://www.state.nj.us/governor/news/news/552010/approved/20100608b.html>.

³⁰³³ *Id.*

³⁰³⁴ 2010 N.J. Sess. Law Serv. 57 (West).

³⁰³⁵ Press Release, N.J. Office of the Governor, Governor Christie Signs Offshore Wind Economic Development Act to Spur Economic Growth, Encourage Energy as Industry (Aug. 19, 2010), <http://www.state.nj.us/governor/news/news/552010/approved/20100819a.html>.

³⁰³⁶ *Id.*

³⁰³⁷ Press Release, State of N.J. Dep't of Env'tl. Prot., Christie Administration Marks Milestone in Wind Farm Development by Seeking Firms Interested in Offshore Leases (Apr. 19, 2011), http://www.nj.gov/dep/newsrel/2011/11_0053.htm.

³⁰³⁸ Press Release, State of N.J. Dep't of Env'tl. Prot., Report Shows Greenhouse Gas Emissions Decline 8 Percent in New Jersey (May 26, 2011), http://www.nj.gov/dep/newsrel/2011/11_0069.htm.

³⁰³⁹ Press Release, N.J. Office of the Governor, Governor Christie Outlines Greener and More Affordable Vision of Future Energy in New Jersey (June 7, 2011), <http://www.nj.gov/governor/news/news/552011/approved/20110607a.html>.

realistic path for achieving a renewable energy portfolio standard of 22.5% by 2021; 3) rewarding energy efficiency, energy conservation, and cost-effective renewable resources; 4) capitalizing on emerging technologies for transportation and power production; 5) and encouraging economic development and job growth.³⁰⁴⁰

On July 25, 2011, the NJDEP announced that the state had surpassed the milestone of 10,000 solar installations, placing New Jersey as the state with the second most solar installations in the nation after California. New Jersey's installed solar capacity is 380 MW, generated by 10,086 solar energy array projects. This progress was due in large part to the state's Solar Renewable Energy Certificate Registration Program.³⁰⁴¹

In September 2011, Governor Christie announced that New Jersey would withdraw from RGGI, citing the fact that not all of the available allowances had been sold at recent RGGI auctions, which led the state to conclude that RGGI was and would not be effective at reducing GHG emissions. New Jersey's withdrawal became effective on December 31, 2011.³⁰⁴²

The NJDEP announced on October 5, 2011, that it has launched a new permit program that would enable a wide range of facilities, including office buildings, schools, and small- to moderate-sized manufacturers, to more quickly install combined heat and power (CHP), or cogeneration technology.³⁰⁴³

New Jersey was one of nine states to join the Northeast Electric Vehicle Network in October 2011.³⁰⁴⁴ The Network aims to help the states increase economic growth and reduce their GHG emissions, and focuses on building infrastructure for clean vehicles and fuels, as well as attracting public and private investment to support the infrastructure development. Participating states include Connecticut, Delaware, Washington, D.C., Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont.³⁰⁴⁵ The Network is part of the Transportation and Climate Initiative (TCI), a regional collaboration between twelve Northeast and Mid-Atlantic states that aims to reduce GHG emissions from the transportation sector and develop the clean energy

³⁰⁴⁰ *Id.*

³⁰⁴¹ Press Release, State of N.J. Dep't of Env'tl. Prot., Christie Administration Advances Commitment to Renewable Energy Development; New Jersey Surpasses Milestone of 10,000 Solar Installations (July 25, 2011), http://www.nj.gov/dep/newsrel/2011/11_0088.htm.

³⁰⁴² Press Release, State of N.J. Dep't of Env'tl. Prot., Weak RGGI Auction Results Confirm Regional Program Not the Path Forward for Combating Climate Change (Sept. 14, 2011), http://www.nj.gov/dep/newsrel/2011/11_0115.htm.

³⁰⁴³ Press Release, State of N.J. Dep't of Env'tl. Prot., As Part of Commitment to Common Sense Regulations, DEP Launches New Permit to Spur use of Energy-Efficient Technology (Oct. 5, 2011), http://www.nj.gov/dep/newsrel/2011/11_0124.htm.

³⁰⁴⁴ Press Release, Georgetown Climate Ctr., Northeast States Form Regional Electric Vehicle Network (Oct. 17, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

³⁰⁴⁵ *Id.*

economy.³⁰⁴⁶ The TCI was launched in June 2010 and is facilitated by the Georgetown Climate Center.³⁰⁴⁷ A nearly \$1 million Electric Vehicle Readiness Grant from the DOE was awarded to New York State Energy Research and Development Authority (NYSERDA) on behalf of the TCI in September 2010, and will be used to fund the network's efforts to deploy electric vehicles throughout the Northeast.³⁰⁴⁸

On December 6, 2011, Governor Christie announced New Jersey's final 2011 Energy Master Plan.³⁰⁴⁹ The Plan put New Jersey on a course to balance the use of renewables with natural gas, encouraged increases in the role of solar energy in the state's RPS, and sought to reduce the Solar Alternative Compliance Payment.³⁰⁵⁰

2012: Energy Efficiency, Renewable Energy, Green Jobs, and Climate Change Agreements

In January 2012, the New Jersey legislature enacted S. 1406, which established the New Jersey Property Assessment Clean Energy (NJ PACE) Municipal Financing Program.³⁰⁵¹ The Program allows municipalities to provide loan assistance to property owners who wish to install energy efficiency improvements.³⁰⁵² The funds will be created from a special energy efficiency assessment, which the municipality may adopt.³⁰⁵³ Property owners may choose to repay their loans with the renewable energy credits earned.³⁰⁵⁴ The Bill took effect in May 2012.³⁰⁵⁵

After its launch in March 2012, New Jersey joined North America 2050, an organization that promotes carbon dioxide capture and sequestration techniques, offset projects for emissions trading programs and a focus on sustainable biomass in order to achieve meaningful emissions reductions.³⁰⁵⁶ North America 2050 is comprised of state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA.³⁰⁵⁷ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario,

³⁰⁴⁶ GEORGETOWN CLIMATE CTR., TRANSPORTATION AND CLIMATE INITIATIVE, <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative> (Feb. 25, 2011).

³⁰⁴⁷ *Id.*

³⁰⁴⁸ Press Release, Georgetown Climate Ctr., Northeast States Form Regional Electric Vehicle Network (Oct. 19, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

³⁰⁴⁹ Press Release, N.J. Office of the Governor, Final State Energy Master Plan Charts Course to Lower Energy Costs and Protect the Environment with Focus on Clean Energy Resources (Dec. 6, 2011), <http://nj.gov/governor/news/news/552011/approved/20111206b.html>.

³⁰⁵⁰ *Id.*

³⁰⁵¹ N.J. STAT. ANN. §§ 40:56(1.4) – (13.2), 40:37A(55) (2012).

³⁰⁵² *Id.*

³⁰⁵³ *Id.*

³⁰⁵⁴ *Id.*

³⁰⁵⁵ *Id.*

³⁰⁵⁶ NORTH AMERICA 2050, na2050.org (Mar. 8, 2013).

³⁰⁵⁷ *Id.*

and Quebec.³⁰⁵⁸ North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.³⁰⁵⁹

In April 2012, the NJDEP's Garden State Green Hotel Project began matching EPA Pollution Prevention (P2) Grant Program funds in order to educate and train New Jersey hoteliers in green practices, which have been shown to be attractive to tourists.³⁰⁶⁰ The participating hotels would also receive energy reviews at no cost.³⁰⁶¹

In June 2012, the DOE announced that New Jersey would be receiving funds for energy efficiency projects, including energy efficiency retrofitting in public facilities.³⁰⁶² In collaboration with Sustainable New Jersey and the Center for Building Knowledge at the New Jersey Institute of Technology, New Jersey received \$715,000 in awards to fund energy upgrades in over 550 municipalities.³⁰⁶³

On July 23, 2012 New Jersey enacted S-1925.³⁰⁶⁴ The Bill created a declining cost ceiling schedule on the price of solar renewable energy certificates, which aims to make the market more predictable and reasonable for suppliers and ratepayers.³⁰⁶⁵ The law also provided the New Jersey BPU with oversight on solar projects that are not net-metered but whose operators still wish to receive solar renewable energy certificates.³⁰⁶⁶ Before 2016, only installations over 80 MWs will require BPU approval, except for projects built on landfills and brownfields remediation sites.³⁰⁶⁷

On July 31, 2012, New Jersey announced that it is first in the nation for solar installations, installing 1,786 solar projects in the first quarter alone and housing the nation's largest solar array, producing over 9 MWs of electricity with one million square feet of panels at the Gloucester Marine Terminal.³⁰⁶⁸ In addition, the New Jersey Meadowlands Commission completed transformation of a closed landfill into a solar farm that will generate up to 3 MWs of electricity.³⁰⁶⁹

³⁰⁵⁸ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

³⁰⁵⁹ See *id.*

³⁰⁶⁰ Press Release, State of N.J. Dep't of Env'tl. Prot., New Project Touts Green Practices and Potential Cost Savings for New Jersey Hotels (Apr. 18, 2012), http://www.nj.gov/dep/newsrel/2012/12_0046.htm.

³⁰⁶¹ *Id.*

³⁰⁶² Press Release, U.S. Dep't of Energy, Energy Department Announces Building Energy Efficiency Investments in Twenty-Two States (June 27, 2012, 6:55 PM), <http://energy.gov/articles/energy-department-announces-building-energy-efficiency-investments-twenty-two-states>.

³⁰⁶³ *Id.*

³⁰⁶⁴ *Smith & Sweeney Bill to Stabilize New Jersey Solar Market Becomes Law*, POLITICKERNJ (May 31, 2012), <http://www.politickernj.com/57331/smith-sweeney-bill-stabilize-new-jersey-solar-market-approved-senate> (original press release not found); S. 1925, 217th Leg., 2nd Ann. Sess. (N.J. 2012), http://www.njleg.state.nj.us/2012/Bills/AL12/24_.PDF.

³⁰⁶⁵ *Id.*

³⁰⁶⁶ *Id.*

³⁰⁶⁷ *Id.*

³⁰⁶⁸ Press Release, N.J. Office of the Governor, Energizing New Jersey: Chris Christie's Commitment to Renewable Energy is Paying Dividends for New Jersey's Environment (July 31, 2012), <http://nj.gov/governor/news/news/552012/approved/20120731b.html>.

³⁰⁶⁹ *Id.*

2013: Energy Efficiency

In January 2013, Governor Christie announced that the New Jersey Economic Development Authority and the New Jersey BPU initiated the second phase of their Large Scale CHP/Fuel Cell Program.³⁰⁷⁰ The grant program will assist CHP and fuel cell projects with a capacity of one MW or greater that serve commercial, industrial, and governmental operations.³⁰⁷¹ The project, which is a part of Christie's Energy Master Plan, is designed to enhance energy efficiency within the state and reduce demand from the electric grid.³⁰⁷²

On March 13, 2013, the BPU announced New Jersey's Clean Energy Program would be receiving the 2013 ENERGY STAR Partner of the Year - Sustained Excellence Award for its continued leadership in protecting the environment through superior energy efficiency programming.³⁰⁷³ The EPA granted BPU with this award for "its long-term commitment to energy efficiency, specifically for the accomplishments of its residential energy efficiency retrofit program, Home Performance with ENERGY STAR (HPwES). The HPwES program helps homeowners save up to 30% on their energy bills by incentivizing energy efficient upgrades installed in their homes by Building Performance Institute accredited contractors."³⁰⁷⁴

On March 19, 2013 the BPU announced that New Jersey's solar industry had surpassed 1 gigawatt of installed solar energy. "As of the end of February 2013, a total of 1,008.4 MW of solar capacity has been installed statewide through 20,340 of solar projects."³⁰⁷⁵

On October 9, 2013 Governor Christie announced "\$25 million in allocations of federal Hazard Mitigation Grant Program (HMGP) funds to 146 municipalities, counties and other government units to pursue creative and cost-effective alternatives to enhance statewide energy resilience."³⁰⁷⁶ HMGP is part of the Christie Administration's efforts to rebuild stronger after Superstorm Sandy and is targeted at critical facilities throughout the state. Grants range up to \$734,880 and can be used to support a variety of alternative

³⁰⁷⁰ Press Release, N.J. Econ. Dev. Auth., Christie Administration Launches New CHP/Fuel Cell Program to Improve Grid Reliability, Increase Energy Efficiency and Reduce Energy Costs (Jan. 16, 2013), http://www.njeda.com/web/Aspx_pg/Templates/Press_Rls.aspx?topid=721&Doc_Id=1921&ParentDocID=163.

³⁰⁷¹ *Id.*

³⁰⁷² *Id.*

³⁰⁷³ Press Release, N.J. Bd. of Pub. Util., Christie Administration Receives 2013 ENERGY STAR® Sustained Excellence Award (Mar. 13, 2013), <http://www.nj.gov/bpu/pdf/announcements/2013/20130313.pdf>.

³⁰⁷⁴ *Id.*

³⁰⁷⁵ Press Release, N.J. Bd. of Pub. Util., Christie Administration Announces Significant Renewable Energy Milestone (Mar. 19, 2013), <http://www.state.nj.us/bpu/pdf/announcements/2013/20130319.pdf>.

³⁰⁷⁶ Press Release, N.J. Office of the Governor, Christie Administration Allocates \$25 Million for Energy Projects in 146 New Jersey Municipalities, Counties and Other Government Units (Oct. 9, 2013), <http://www.state.nj.us/governor/news/news/552013/approved/20131009a.html>.

energy solutions including microgrids, solar power with battery backup, and natural gas-powered emergency generators.³⁰⁷⁷

NEW MEXICO

1978: Renewable Energy

In 1978, New Mexico enacted the Solar Energy Rights Act.³⁰⁷⁸ The Act makes the right to use solar energy a property right and uses a prior appropriation approach to establish priority. The right is for the beneficial use of the unobstructed line of sight from a solar collector to the sun.

1990: Greenhouse Gas Reduction

New Mexico has a long history of programs and legislation designed to mitigate global climate change. An early example is New Mexico's Forest Re-Leaf Program.³⁰⁷⁹ Established in 1990, Forest Re-Leaf offered grants for tree planting and related educational programs.³⁰⁸⁰ As of 2006, grants had funded the planting of over 17,000 trees in over 60 communities, resulting in an annual sequestration of 139 metric tons of aboveground carbon dioxide.³⁰⁸¹

2002: Renewable Energy

More recently, New Mexico enacted in 2002 (and amended in 2003 by House Bill (H.B.) 146) the Renewable Energy Production Tax Credit.³⁰⁸² The law offers a one-cent per kilowatt-hour corporate income tax credit for businesses that produce electricity via solar, wind, or biomass power.³⁰⁸³ The credit applies to the first 400,000 megawatt-hours of electricity that a business produces each year for ten years.³⁰⁸⁴

2004: Renewable Energy and Transportation/Fuels

Enacted by H.B. 251 of 2004 and effective beginning July 1, 2004, New Mexico's Clean Energy Grants Program offers funds to develop renewable energy and alternative transportation fuels.³⁰⁸⁵ Grant applicants – including tribes, municipalities, and state agencies – must reduce energy consumption by 5% or increase use of alternative fuels by

³⁰⁷⁷ *Id.*

³⁰⁷⁸ N.M. STAT. ANN. §§ 47-3-1 — 47-3-5 (2005).

³⁰⁷⁹ N.M. STAT. ANN. § 68-2-29 (2005).

³⁰⁸⁰ *Id.*

³⁰⁸¹ *New Mexico Re-Leaf Program*, N.M. STATE FORESTRY, <http://www.emnrd.state.nm.us/SFD/ReLeaf/ReLeaf.html> (Jan. 18, 2014).

³⁰⁸² N.M. STAT. ANN. § 7-2A-19 (LexisNexis 2005).

³⁰⁸³ *Id.*

³⁰⁸⁴ *Id.*

³⁰⁸⁵ *Id.* § 71-7-6.

15%.³⁰⁸⁶ In addition, schools may receive grants for programs that advance the market demands for clean energy and clean energy technologies.³⁰⁸⁷

2005: Renewable Energy, Climate Change Agreements, and Greenhouse Gas Reduction

The Energy Efficiency and Renewable Energy Bonding Act, enacted on April 5, 2005, provided \$20 million worth of tax-exempt bonds to fund renewable energy improvements to buildings owned by New Mexico and its school districts.³⁰⁸⁸ The Act also required that the state develop an energy efficiency plan by 2010 for maximum utility of renewable energy generators in public buildings.³⁰⁸⁹ During the same legislative session, New Mexico enacted The Efficient Use of Energy Act, which mandated that utilities research methods to lower emissions associated with electricity consumption.³⁰⁹⁰

In June 2005, Governor Bill Richardson signed executive order (EO) 2005-033 creating the New Mexico Climate Change Advisory Group.³⁰⁹¹ With members having either industrial or environmental experience, the Advisory Group was tasked with evaluating methods to reduce emissions of greenhouse gases (GHGs) to 2000 levels by 2012, 10% below those levels by 2020, and 75% below 2000 levels by 2050.³⁰⁹²

2006: Climate Change Agreement, Renewable Energy, and Transportation/Fuels

The Renewable Energy Act established rules requiring that public utilities generate 5% of their energy from solar, wind, water, biomass, or geothermal power by 2006.³⁰⁹³ Subsequently, it required that utilities increase their use of alternative energy supplies by at least 1% each year and to 10% by 2011.³⁰⁹⁴ In March 2007, Governor Richardson signed Senate Bill (S.B.) 418, which further required that utilities generate at least 15% of their power supply from renewable resources by 2015 and 20% by 2020. The Renewable Energy Act also set a reasonable cost threshold – a public utility need not add renewable energy sources if the cost of such sources reaches the statutory level.³⁰⁹⁵

³⁰⁸⁶ *Id.*

³⁰⁸⁷ *Id.*

³⁰⁸⁸ N.M. STAT. ANN. §§ 6-21D-1 — -10 (LexisNexis 2006).

³⁰⁸⁹ *Id.*

³⁰⁹⁰ *Id.* §§ 62-17-1 – -11.

³⁰⁹¹ N.M. Exec. Order No. 2005-033 (2005).

³⁰⁹² Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Announces Historic Effort to Combat Climate Change (June 9, 2005), http://web.archive.org/web/20051101064023/http://www.governor.state.nm.us/press/2005/june/060905_3.pdf.

³⁰⁹³ N.M. STAT. ANN. § 62-16-4 (2005).

³⁰⁹⁴ *Id.*

³⁰⁹⁵ *Id.*

Enacted on February 15, 2006 and set to expire on December 31, 2015, S.B. 269 offers New Mexico's residents 30% personal income tax credits for the purchase and installation of photovoltaic and solar thermal systems.³⁰⁹⁶

Also in February 2006, New Mexico and Arizona joined the Southwest Climate Change Initiative in which the states' advisory groups would collaborate on research to mitigate global warming.³⁰⁹⁷

In December 2006, Governor Richardson signed EO 2006-069 creating a Climate Change Action Implementation Team charged with overseeing the implementation of certain Advisory Group recommendations.³⁰⁹⁸ The Order carried out the following recommendations: the formation of a GHG registry and market-based emission reduction program; the development of technology involving carbon capture and storage; and the creation of renewable fuels, green buildings, and energy efficient appliances.

On December 28, 2006, Governor Richardson issued EO 2006-69 establishing goals and timetables for steps the state can take to reduce GHG emissions, including adopting California's vehicle emissions standards.³⁰⁹⁹ The New Mexico Environment Department submitted a proposal to the Environmental Improvement Board (EIB) to implement a state clean car standard consistent with California's.

In December 2006, New Mexico's Utility Commission signed onto the Western Public Utility Commissions' Joint Action Framework on Climate Change, an inter-state agreement with the public utility commissions of California, Oregon, and Washington.³¹⁰⁰ Under the agreement, the utility commissions will work together to recommend ways to identify, develop, and implement greater energy efficiency, demand response capability, low-carbon technologies, and GHG emissions standards.³¹⁰¹

2007: Climate Change Agreements, Greenhouse Gas Reduction, Renewable Energy, Renewable Portfolio Standards, and Energy Efficiency

In February 2007, Governor Richardson established the Western Climate Initiative (WCI) with the governors of Arizona, California, Oregon, and Washington in

³⁰⁹⁶ S.B. 269, 47th Leg., 2006 Reg. Sess. (N.M. 2006), <http://www.nmlegis.gov/Sessions/06%20Regular/final/SB0269.pdf>.

³⁰⁹⁷ Press Release, State of N.M. Office of the Governor, Governors Napolitano and Richardson Launch Southwest Climate Change Initiative (Feb. 28, 2006),

<http://web.archive.org/web/20060821133317/http://www.governor.state.nm.us/press.php?id=179>.

³⁰⁹⁸ Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Signs Climate Change Executive Order (Dec. 7, 2009), <http://www.nmenv.state.nm.us/OOTS/documents/PR-GovExecCCOrder-12-7-09.pdf>.

³⁰⁹⁹ N.M. Exec. Order No. 2006-069 (2006).

³¹⁰⁰ JOINT ACTION FRAMEWORK ON CLIMATE CHANGE, W. PUB. UTIL. COMM'N (2006), <ftp://ftp.cpuc.ca.gov/PUC/energy/electric/energy+efficiency/ee+general+info/west+coast+comm+joint+commitments+on+climate+change+final.pdf>.

³¹⁰¹ *Id.*

order to reduce GHG emissions and tackle climate change.³¹⁰² On August 22, 2007, the WCI set a regional GHG emission reduction goal of 15% below 2005 levels by 2020, or approximately 33% below business-as-usual levels.³¹⁰³ This regional target was compatible with and did not replace the states' individual GHG reduction targets.³¹⁰⁴ Montana, Utah, and four Canadian provinces subsequently joined the WCI.³¹⁰⁵

In March 2007, legislation was passed which established a renewable portfolio standard (RPS) for the state.³¹⁰⁶ The law mandates that by 2020, 20% of an electric utility's power must come from renewable sources. Sources of energy that count toward the standard include solar, wind, hydropower, geothermal, fuel cells that are not fossil fueled, and qualifying biomass resources.³¹⁰⁷

Also in March 2007, Governor Richardson signed H.B. 188, which created the Renewable Energy Transmission Authority, which is charged with supporting New Mexico's clean energy job market, as well as developing and exporting renewable resources technology.³¹⁰⁸

In May 2007, New Mexico and thirty other states founded The Climate Registry to "measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors." This was viewed as a "critical first step in developing robust programs to reduce greenhouse gas emissions."³¹⁰⁹

In August 2007, the New Mexico Public Regulation Commission promulgated a regulation requiring that wind and solar power each comprise 20% of the renewable sources within the state's RPS by 2011.³¹¹⁰ Biomass or geothermal sources should comprise 10% of the renewable sources by the same date, and distributed generation should comprise 1.5%.³¹¹¹ The regulation also excused utilities from meeting the renewable targets if it would raise the cost of electricity by more than 2% or affect system reliability.³¹¹²

Additionally on October 29, 2007, New Mexico joined a coalition with nine other states, New Zealand, Norway, nine European Union countries, the European

³¹⁰² W. CLIMATE INITIATIVE, INC., <http://www.wci-inc.org> (Jan. 19, 2014).

³¹⁰³ *Program Design*, W. CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/designing-the-program> (Jan. 19, 2014).

³¹⁰⁴ *Id.*

³¹⁰⁵ W. CLIMATE INITIATIVE, <http://www.wci-inc.org> (Jan. 19, 2014).

³¹⁰⁶ N.M. STAT. ANN. § 62-16-4 (2007).

³¹⁰⁷ *Id.*

³¹⁰⁸ H.B. 188, 48th Leg., 2007 Reg. Sess. (N.M. 2007), <http://www.nmlegis.gov/Sessions/07%20Regular/final/HB0188.pdf>.

³¹⁰⁹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20070815201029/http://www.theclimateresistry.org/The_Climate_Registry_Press_Release.pdf.

³¹¹⁰ N.M. ADMIN. CODE tit. 17, § 9.572 (2008).

³¹¹¹ *Id.*

³¹¹² *Id.*

Commission, and two Canadian provinces to form the International Carbon Action Partnership (ICAP) in order to combat global warming.³¹¹³ ICAP provides a forum for governments to share information regarding cap-and-trade systems and works to ensure that market programs are compatible.³¹¹⁴ In addition, ICAP promotes low-carbon products and services, innovations, and cost effective reductions.³¹¹⁵

In October 2007, the New Mexico EIB held a public hearing in which it was decided that all Title V major emitters and electrical generating units greater than or equal to 25 megawatts (MWs), petroleum refineries, and cement manufacturing facilities must report GHG emissions.³¹¹⁶ In addition, the rulemaking encouraged companies to register emissions with The Climate Registry.³¹¹⁷ The new regulations took effect on January 1, 2008.

2008: Energy Efficiency

In February 2008, Governor Richardson signed into law H.B. 305,³¹¹⁸ which strengthened the state's existing Efficient Use of Energy Act. The Bill provided financial incentives to electric and gas utilities to reduce user-end energy consumption by providing customers with energy-efficiency resources.³¹¹⁹ It also required electric utilities to achieve energy-efficiency savings of at least 5% of 2005 sales by 2014 and 10% by 2020.³¹²⁰ Energy efficiency programs that New Mexico's energy utilities could fund and implement under H.B. 305 included rebates for energy efficient appliances, compact fluorescent light (CFL) bulb exchanges, and home weatherization assistance.³¹²¹

The WCI announced draft essential requirements for the reporting of GHG emissions in July 2008.³¹²² It also released *Design Recommendations for the WCI Regional Cap-and-Trade Program* on September 23, 2008.³¹²³ The *Design Recommendations* report recommended that carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions should all fall under the cap-and-trade scheme.³¹²⁴ Regulated sources included electricity generation; combustion at industrial and commercial facilities; industrial process; fuel combustion

³¹¹³ Press Release, Int'l Carbon Action P'ship, Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007), https://icapcarbonaction.com/index.php?option=com_attach&task=download&id=36.

³¹¹⁴ *Id.*

³¹¹⁵ *Id.*

³¹¹⁶ N.M. ADMIN. CODE tit. 20 § 20.2.87 (2008).

³¹¹⁷ *Id.*

³¹¹⁸ H.B. 305, 48th Leg., 2008 Reg. Sess. (N.M. 2008).

³¹¹⁹ *Id.*

³¹²⁰ *Id.*

³¹²¹ Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Enacts Energy Efficiency Bill (Feb. 27, 2008), <http://www.emnrd.state.nm.us/ecmd/Press/documents/EEBill.pdf>.

³¹²² *Id.*

³¹²³ *Western Climate Initiative, Design Recommendations for the WCI Regional Cap-and-Trade Program*, W. CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/the-wci-cap-and-trade-program/design-recommendations> (Jan. 19, 2014).

³¹²⁴ *Id.* at 8.

from industrial, residential and commercial sources that are below the threshold for direct regulation; and transportation combustion of gasoline/diesel (excluding biofuels).³¹²⁵ Each of these sources must emit at least 25,000 metric tons of carbon dioxide equivalent annually in order to participate in the trade.³¹²⁶ The first compliance periods began in 2012 and included half of the economy-wide regulated emissions from the WCI's member jurisdiction for the electricity generation, industrial combustion and industrial process sectors.³¹²⁷ The second compliance period is set to begin in 2015, adding the other regulated sectors and includes 90% of the economy-wide regulated emissions.³¹²⁸

2009: Greenhouse Gas Reduction, Green Jobs, Cap-&-Trade, Renewable Energy, American Recovery & Reinvestment Act (ARRA), Climate Change Agreements, and Energy Efficiency

The WCI released the third draft of the *Background Document and Progress Report for Essential Requirements of Mandatory Reporting for the Western Climate Initiative* on January 6, 2009 for public comment.³¹²⁹ It set the reporting threshold at 10,000 metric tons of carbon dioxide equivalent in a year, well below the 25,000 metric ton threshold for participation in the cap-and-trade program.³¹³⁰ It recommended that stationary combustion sources be subject to the reporting requirement as well as the sources listed in Table 1 of the document. These listed sources must report combustion and non-combustion emissions.³¹³¹ Due to strong stakeholder support, it also recommended that reporting begin in 2011 for facilities that began operation before 2010 in preparation for the commencement of the cap-and-trade program in 2012.³¹³²

On January 22, 2009, Governor Richardson announced details of the Green Jobs Cabinet, created by a recent EO.³¹³³ The cabinet, comprised of state executives from several departments, provided its initial recommendations to Richardson in September 2009.³¹³⁴

In February 2009, a bill was introduced in the state legislature that would have

³¹²⁵ *Id.* at 8-9.

³¹²⁶ *Id.* at 10.

³¹²⁷ *Id.* at 24.

³¹²⁸ *Id.*

³¹²⁹ W. CLIMATE INITIATIVE, BACKGROUND DOCUMENT AND PROGRESS REPORT FOR ESSENTIAL REQUIREMENTS OF MANDATORY REPORTING FOR THE WESTERN CLIMATE INITIATIVE, THIRD DRAFT (2009), <http://www.westernclimateinitiative.org/dmdocuments/O104F20744.9.pdf>.

³¹³⁰ *Id.* at 10.

³¹³¹ *Id.* at 11.

³¹³² *Id.* at 16.

³¹³³ Press Release, N.M. Econ. Dev. Dep't, Governor Bill Richardson Releases Details of Green Job's Cabinet (Jan. 22, 2009), <http://www.gonm.biz/uploads/PressRelease/6a122154b5224d64bbcc48b833aa6a48/PR-GreenJobsCabinetDetails-01-22-09.pdf>.

³¹³⁴ GREEN JOBS CABINET, N.M.'S CLEAN ECONOMY: CAPITALIZING ON ASSETS AND OPPORTUNITIES (2009), <http://www.stateinnovation.org/Events/Event-Listing/New-Mexico-Workforce/Backgrounder/5-2-NMGreenJobsCabinetReport.aspx>.

authorized the EIB to implement the WCI regional cap-and-trade program.³¹³⁵ However, the bill did not pass.³¹³⁶

On March 12, 2009, the U.S. Department of Energy (DOE) announced that New Mexico was eligible for \$31,821,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).³¹³⁷

On April 9, 2009, Governor Richardson signed a bill package containing nine senate and house bills aimed at creating funding for green jobs and renewable energy tax credits.³¹³⁸

On May 13, 2009, Governor Richard announced that traffic and pedestrian lights would be retrofitted with LED lights with \$5 million in ARRA funds received by the State Energy Program.³¹³⁹ The LED lights use 80% less electricity than the existing incandescent bulbs.³¹⁴⁰ Later that week, Richardson applauded President Obama's announcement of "new national fuel efficiency and clean car standards."³¹⁴¹ He also commended the DOE on its decision to increase the cap on maximum ARRA grant award funding under the Smart Grid Investment Program from \$20 million to \$200 million for individual smart grid investments, and from \$40 million to \$100 million for demonstration projects.³¹⁴² Although Richardson was encouraged by the decision, he also expressed concern about the grants being conditioned on 50% state matching funds.³¹⁴³

Governor Richardson also signed an agreement with a coalition of governors to support federal climate change legislation in May 2009.³¹⁴⁴ The agreement contains two

³¹³⁵ H.B. 653, 49th Leg., 2009 Sess. (N.M. 2009).

³¹³⁶ *Id.*

³¹³⁷ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 45 (Apr. 24, 2009),

http://web.archive.org/web/20130421082705/http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

³¹³⁸ Press Release, N.M. Energy, Minerals, and Natural Res. Dep't, 2009 Clean Energy Economy-Related Legislation Adopted by the New Mexico State Legislature and Signed by Governor Richardson (Apr. 9, 2009), <http://www.emnrd.state.nm.us/ECMD/LawsRegulationsExecutiveOrders/documents/CE-Bills-2009.pdf>.

³¹³⁹ *Governor Bill Richardson Announces Recovery Act Will Fund Statewide Energy-Saving Project*, PROJECT VOTESMART (May 13, 2009), <http://votesmart.org/public-statement/423397/> (original press release not found).

³¹⁴⁰ *Id.*

³¹⁴¹ Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Praises President Obama's New Clean Car and Fuel Efficiency Standards (May 19, 2009),

<http://www.nmenv.state.nm.us/OOTS/documents/PR-ObamaFuelEfficiencyS-5-19-09.pdf>.

³¹⁴² Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Applauds DOE Decision to Increase Award Caps for "Smart Grid" Competitive Grants (May 18, 2009),

http://www.recovery.state.nm.us/docs/press_releases/2009/051809_02.pdf.

³¹⁴³ *Id.*

³¹⁴⁴ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009),

<http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.³¹⁴⁵

On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), WCI, and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.³¹⁴⁶

According to The Pew Charitable Trusts' June 2009 Clean Energy Economy Fact Sheet for New Mexico, New Mexico's clean energy economy grew by 4,815 jobs and 577 businesses from 1998 to 2007.³¹⁴⁷ Between 2006 and 2009, New Mexico attracted nearly \$148 million in capital investment in clean energy.³¹⁴⁸

In early July 2009, Governor Richardson announced that ten state buildings would begin participation in PNM's PeakSaver program, which would cut these facilities' energy use during peak demand times.³¹⁴⁹ Richardson called for the New Mexico Executive Branch to meet that target of 20% reduction in energy consumption by 2015 as part of his "Lead by Example" initiative.³¹⁵⁰ The PeakSaver program remotely controls participants' consumption on days when demand is expected to exceed transmission capacity that would normally require PNM to "buy electricity on the expensive spot market."³¹⁵¹

In mid-July 2009, Governor Richardson applauded the DOE's \$272,816 federal stimulus grant to New Mexico State University to fund a study of "how wind farms impact the electrical grid during disturbances."³¹⁵²

Also in July 2009, the WCI issued an Offsets Whitepaper for comment to its stakeholders.³¹⁵³ The paper was the initial phase in development of the definition of an offset and a major focus of the paper was additionality.³¹⁵⁴ WCI's Cap Setting and

³¹⁴⁵ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION (May 21, 2009), <http://web.archive.org/web/20100317043815/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

³¹⁴⁶ Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

³¹⁴⁷ *Clean Energy Economy*, THE PEW CHARITABLE TRUSTS, (May 8, 2009), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf.

³¹⁴⁸ *Id.*

³¹⁴⁹ Press Release, ENERNOC, Governor Bill Richardson Announces State to Cut Energy Use During Peak Times (July 8, 2009), <http://www.enernoc.com/press/press-releases/2009/governor-bill-richardson-announces-state-to-cut-energy-use-during-peak-times>.

³¹⁵⁰ *Id.*

³¹⁵¹ *Id.*

³¹⁵² Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Applauds Federal Stimulus Award for Wind Energy Research (July 16, 2009), http://www.recovery.state.nm.us/docs/press_releases/2009/071609_02.pdf.

³¹⁵³ W. CLIMATE INITIATIVE, OFFSET LIMIT WHITE PAPER (2009), http://www.westernclimateinitiative.org/dmdocuments/offset_limit_whitepaper_051909.57.pdf.

³¹⁵⁴ *Id.*

Allowance Distribution Committee released its *Draft Statement of Principles on Competitiveness* and the *Review of Proposed Options for Addressing Industrial Competitiveness Impacts* in August 2009.³¹⁵⁵ The purpose of the draft was to “guide the process by which WCI will evaluate competitiveness effects of a regional cap-and-trade program,” and also reviewed how other cap-and-trade programs address this issue.³¹⁵⁶

On August 31, 2009, Governor Richardson announced New Mexico had applied for \$50 million in federal stimulus funding for the New Mexico Green Grid Initiative’s smart grid demonstration projects.³¹⁵⁷ The state hoped that the proposed demonstrations will “attract venture capital to build out a complete green grid in New Mexico,” and that these smart grid successes would be “replicated throughout the country, especially in rural America.”³¹⁵⁸ That same day, Richardson announced New Mexico had been awarded approximately \$382,000 in ARRA funding for a project aimed at improving the state’s response to emergency disruptions in energy supply.³¹⁵⁹

In early September 2009, Governor Richardson participated in the City of Belén’s unveiling of its plans to become a “carbon neutral city.” Belén planned to create a Solar Testing and Research Center (STAR) and the Belén Energy Park. STAR will serve as a “testing facility to set energy rating standards for solar products and will attract business from national and international companies seeking to have their products tested.”³¹⁶⁰ The Belén Energy Park will provide solar education to students and teachers.³¹⁶¹ Also in September 2009, Richardson announced that the state had received \$10 million to outfit public schools with photovoltaic solar electric systems.³¹⁶²

In October 2009, Governor Richardson announced a major development in New Mexico’s renewable energy plans.³¹⁶³ The state will be home to the Tres Amigas Super Station, which will serve as a hub connecting the nation’s three main power grids.³¹⁶⁴

³¹⁵⁵ W. CLIMATE INITIATIVE, DRAFT STATEMENT OF PRINCIPLES ON COMPETITIVENESS AND REVIEW OF OPTIONS (2009), http://www.westernclimateinitiative.org/dmdocuments/FINAL%20CSAD%20competitiveness%20draft%20SOP%20_3_.130.pdf

³¹⁵⁶ *Id.*

³¹⁵⁷ Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Announces Efforts to Secure Stimulus Funds for New Mexico Green Grid Initiative (Aug. 31, 2009), http://www.recovery.state.nm.us/docs/press_releases/2009/083109_01.pdf.

³¹⁵⁸ *Id.*

³¹⁵⁹ Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Announces \$382,000 in Federal Stimulus Funds for Energy Emergency Plan (Aug. 31, 2009), http://www.recovery.state.nm.us/docs/press_releases/2009/083109_02.pdf.

³¹⁶⁰ Governor Bill Richardson Announces New Solar Project in Belen, PROJECT VOTESMART (Sept. 11, 2009), <http://votesmart.org/public-statement/455608/> (original press release not found).

³¹⁶¹ *Id.*

³¹⁶² Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Announces \$10 Million to Fund Solar Energy at Schools (Sept. 23, 2009), http://www.emnrd.state.nm.us/Main/documents/092309_01.pdf.

³¹⁶³ Governor Bill Richardson Announces Major Energy Project, PROJECT VOTESMART (Oct. 12, 2009), <http://votesmart.org/public-statement/460285/> (original press release not found).

³¹⁶⁴ *Id.*

This connection will facilitate the transmission of renewable energy throughout the country.³¹⁶⁵

On December 22, 2009, Governor Richardson applauded a decision of the Public Regulation Commission (PRC) to allow New Mexico residents to enter into third party power purchase agreements with renewable energy developers.³¹⁶⁶ Richardson commented, “This decision by the PRC is the first step in providing the kind of economic certainty necessary to break the log-jam holding up renewable energy projects that would stimulate job growth and investment in New Mexico.”³¹⁶⁷

2010: Renewable Energy, Energy Efficiency, Green Jobs, and Green Technology

On January 12, 2010, Governor Richardson signed an EO that outlined New Mexico’s goals for building a green economy.³¹⁶⁸ Later that month, he announced that Spanish Renewable Energy Company GA-Solar planned to build one of the world’s largest photovoltaic solar projects in New Mexico carrying a potential of powering 50,000 homes.³¹⁶⁹ In February, Richardson announced further solar development in the state with Chevron’s construction of solar demonstration project in Questa, New Mexico.³¹⁷⁰

In April 2010, Governor Richardson applauded the PRC’s adoption of new energy efficiency rules aimed at encouraging electric utilities facilitation of energy efficiency programs.³¹⁷¹

Also in April 2010, New Mexico launched a \$1.9 million energy efficiency program that provided \$200 rebates for new, qualifying appliance purchases. The estimated lifetime savings from the program is roughly 7.1 million kilowatt-hours of

³¹⁶⁵ *Id.*

³¹⁶⁶ *Governor Bill Richardson Responds to PRC’s Decision on Renewable Energy Case*, PROJECT VOTESMART (Dec. 22, 2009), <http://votesmart.org/public-statement/477688/> (original press release not found).

³¹⁶⁷ *Id.*

³¹⁶⁸ Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Sets Bold Agenda for Future of New Mexico’s Green Economy (Jan. 12, 2010), <http://www.brendanmiller.com/NMgreen/NMGreenformywebsite/www.edd.state.nm.us/greenEconomy/overview/20100113EO.PDF>.

³¹⁶⁹ Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Announces GA Solar to Build One of World’s Largest Photovoltaic Solar Projects in New Mexico (Jan. 27, 2010), http://nmpartnership.com/uploads/navigation/01272010_Governor_Bill_Richardson_Announces_GA_Solar/01.27.2010%20Governor%20Bill%20Richardson%20Announces%20GA%20Solar.pdf.

³¹⁷⁰ *Governor Bill Richardson Announces Chevron Corporation to Build Major Solar Energy Plant in Questa*, PROJECT VOTESMART (Feb. 23, 2010), <http://votesmart.org/public-statement/485694/> (original press release not found).

³¹⁷¹ *Governor Bill Richardson Applauds the PRC for Establishing New Energy Efficiency Rules*, PROJECT VOTESMART (Apr. 8, 2010), <https://votesmart.org/public-statement/497808/> (original press release not found).

energy, over 226 million gallons of water, and nearly 14.2 million pounds of carbon dioxide.³¹⁷²

ARRA funds totaling \$4.5 million were made available beginning in June 2010 for the installation of solar photovoltaic electric system in fifteen school districts. The investment was intended to create local jobs, lower district utility bills, and be a price-competitive-source within 25 years.³¹⁷³

Governor Richardson announced the completion of a traffic light retrofit project funded by ARRA. The state replaced traffic lights in 33 communities with LED signals, which use approximately 80% less energy. Energy savings from the project were estimated at 4 million kilowatt-hours per year – enough to power more than 500 average homes for a year. The \$5 million project came in under budget.³¹⁷⁴

New Mexico accepted bids from nineteen Japanese companies to work on Japan-U.S. collaborative demonstration projects in Albuquerque and Los Alamos. The purpose of this project was to demonstrate emerging energy technology, focusing on commercial and residential microgrid demonstrations, smart-house demonstrations, and collective research.³¹⁷⁵

In June 2010, Governor Richardson announced two new solar energy research and design facilities expected to create 30 to 40 renewable energy jobs and support future implementation of green energy in the state.³¹⁷⁶

In July 2010, Governor Richardson created a task force to work with the state's Renewable Energy Transmission Authority (RETA) to develop a blueprint for the future of renewable energy transmission in the state.³¹⁷⁷

In October 2010, the American Council for an Energy-Efficient Economy identified New Mexico as one of the four most-improved states for energy efficiency.³¹⁷⁸

³¹⁷² Dan Boyd, *State Appliance Rebates to go Fast*, ALBUQUERQUE JOURNAL (Apr. 20, 2010), <http://www.abqjournal.com/news/state/202350512637newsstate04-20-10.htm>.

³¹⁷³ Press Release, Energy Conservation and Mgmt. Div., Competitive Grants Awards for Photovoltaic Energy Systems for Schools: \$4.5 Million Statewide (June 9, 2010), <http://www.emnrd.state.nm.us/ECMD/ECMD-ARRA-SolarSchools.html>.

³¹⁷⁴ *Overview of Energy Projects Funded by Recovery Act*, N.M. OFFICE OF RECOVERY AND REINVESTMENT, http://www.recovery.state.nm.us/projects_energy.shtml (Jan. 23, 2011).

³¹⁷⁵ *19 Japanese Companies will Participate in Smart Grid Projects in N.M.*, ALBUQUERQUE JOURNAL (June 16, 2010), <http://www.abqjournal.com/13359/abqnewsseeker/19-japanese-companies-will-participate-in-smart-grid-proj.html>.

³¹⁷⁶ Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Announces Establishment of New Solar Technology and R & D Facilities at Mesa Del Sol (June 16, 2010), http://nmpartnership.com/uploads/navigation/Fraunhofer_Announcement/6.16.2010%20-%20Fraunhofer%20Announcement.pdf.

³¹⁷⁷ *Governor Richardson Announces Formation of Task Force to Map Statewide Clean Energy Transmission System*, PROJECT VOTESMART (July 8, 2010), <http://votesmart.org/public-statement/530333/> (original press release not found).

2011: Cap-&-Trade, Transportation/Fuels, and Climate Change Agreements

In January 2011, Governor Susana Martinez announced the termination of all members currently appointed to New Mexico's EIB – the entity responsible for imposing state cap-and-trade regulations.³¹⁷⁹ The EIB moved forward with the cap-and-trade regulatory program after state lawmakers rejected the proposal during the legislative process. “New Mexico has recently suffered from an anti-business environment exacerbated by policies which discourage economic development and result in businesses setting up shop across state lines,” stated Martinez.³¹⁸⁰ “Unfortunately, the majority of EIB members have made it clear that they are more interested in advancing political ideology than implementing commonsense policies that balance economic growth with responsible stewardship in New Mexico.”³¹⁸¹

On April 5, 2011, Governor Martinez signed S.B. 179 and H.B. 523, which created a Locomotive Fuel Tax Gross Receipts Deduction.³¹⁸² The fuel tax exemption intended to improve economic incentives for rail carriers and increase rail usage. The state expected to create 3,000 jobs.³¹⁸³

In November 2011, New Mexico and several other states left the WCI.³¹⁸⁴ New Mexico subsequently joined North America 2050, an organization which promotes carbon dioxide capture and sequestration techniques, offset projects for emissions trading programs and a focus on sustainable biomass in order to achieve meaningful emissions reductions.³¹⁸⁵

2012: Renewable Energy and Energy Efficiency

In March 2012, Governor Martinez signed H.B. 201, designed to facilitate the permitting process for geothermal energy companies and thus increase the supply of renewable energy in New Mexico.³¹⁸⁶

³¹⁷⁸ Press Release, State of N.M. Office of the Governor, Governor Bill Richardson Announces New Mexico Recognized as One of Four Most-Improved States for Energy Efficiency (Oct. 13, 2010), <http://www.emnrd.state.nm.us/main/documents/PR-GovACEEE-10-13-10.pdf>.

³¹⁷⁹ Press Release, State of N.M. Office of the Governor, Governor Martinez Terminates Environmental Improvement Board Members (Jan. 4, 2011), http://www.governor.state.nm.us/uploads/PressReleases/010411_02.pdf.

³¹⁸⁰ *Id.*

³¹⁸¹ *Id.*

³¹⁸² S.B. 179, 50th Leg., 2011 Sess. (N.M. 2011), <http://www.nmlegis.gov/Sessions/11%20Regular/bills/senate/SB0179CTS.pdf>; H.B. 523, 50th Leg., 2011 Sess. (N.M. 2011), <http://www.nmlegis.gov/Sessions/11%20Regular/bills/house/HB0523TRS.pdf>.

³¹⁸³ Press Release, State of N.M. Office of the Governor, Governor Susana Martinez Signs Key Economic Development Bills in Santa Teresa (Apr. 5, 2011), http://www.governor.state.nm.us/uploads/PressReleases/110405_2.pdf.

³¹⁸⁴ Geoffrey Craig, *Six U.S. States Leave Western Climate Initiative*, ELECTRIC UTILITY WEEK (Nov. 18, 2011), <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/ElectricPower/6695863>.

³¹⁸⁵ NORTH AMERICA 2050, na2050.org (Mar. 9, 2013).

³¹⁸⁶ Press Release, State of N.M. Office of the Governor, Governor Susana Martinez Takes Action on Legislative Items (Mar. 6, 2012),

In June 2012, the DOE announced that New Mexico was a recipient of federal funds to help conduct energy efficiency upgrades in public facilities.³¹⁸⁷ The \$715,000 awarded will help the state leverage \$20 million to finance an energy management program.³¹⁸⁸ The New Mexico Department of General Services will inventory public facilities, complete energy audits, and select buildings eligible for efficiency upgrades.³¹⁸⁹

In November 2012, the Energy, Conservation and Management Division announced the replacement of light fixtures with LED lamps in the division's Wendell Chino Building.³¹⁹⁰ The switch is estimated to represent a 63% cost reduction for lighting. ARRA and the state funded LED lamps.³¹⁹¹

2013: Energy Efficiency

In January 2013, the New Mexico Energy Conservation and Management Division announced energy efficiency retrofits for Union County Courthouse and several public facilities in the town of Clayton.³¹⁹²

On April 1, 2013 Governor Martinez signed SB 14 into law, which extended the tax credits allotted for sustainable buildings.³¹⁹³ The amount of tax credits one can receive depends on what level of LEED building would be built or renovated.

NEW YORK

2003: Greenhouse Gas Reduction

In April 2003, the Center for Clean Air Policy (CCAP), in collaboration with the New York Greenhouse Gas Task Force, released *Recommendations to Governor Pataki*

<http://governor.state.nm.us/uploads/PressRelease/191a415014634aa89604e0b4790e4768/legislativeactionrelease.pdf>.

³¹⁸⁷ Press Release, Dep't of Energy, Energy Department Announces Building Energy Efficiency Investments in Twenty-Two States (June 27, 2012), <http://energy.gov/articles/energy-department-announces-building-energy-efficiency-investments-twenty-two-states>.

³¹⁸⁸ *Id.*

³¹⁸⁹ *Id.*

³¹⁹⁰ Press Release, Energy, Minerals and Natural Res. Dep't, Energy, Conservation and Management Division Announces LED Lights Installed in State Building (Nov. 15, 2012), <http://web.archive.org/web/20130513222723/http://www.emnrd.state.nm.us/ADMIN/documents/PR111512%20LED%20Lights.pdf>.

³¹⁹¹ *Id.*

³¹⁹² Press Release, Energy, Minerals and Natural Res. Dep't, Town of Clayton Gets an Energy Makeover (Jan. 25, 2013), <http://web.archive.org/web/20130513223255/http://www.emnrd.state.nm.us/ADMIN/documents/PR012513%20Town%20of%20Clayton%20Energy%20Efficiency.pdf>.

³¹⁹³ S.B. 14, 51st Leg., 2013 Sess. (N.M. 2013), <http://www.nmlegis.gov/Sessions/13%20Regular/final/SB0014.pdf>.

for Reducing New York State Greenhouse Gas Emissions.³¹⁹⁴ They recommended that New York establish a statewide target to reduce greenhouse gas (GHG) emissions to five percent below 1990 levels by 2010 and ten percent below 1990 levels by 2020.³¹⁹⁵ The New York State Energy Board in the State Energy Plan first adopted this target in June 2002.³¹⁹⁶ In addition, CCAP and the task force advised the state to create an annual statewide GHG emissions inventory.³¹⁹⁷ The New York Energy Research and Development Authority (NYSERDA) had developed GHG inventories detailing emissions levels for 1990 and 2000 prior to the report.³¹⁹⁸

In 2004, the New York Public Service Commission adopted a renewable portfolio standard of 25% by the year 2013, an increase from the 19% use of renewables it had at the time. The Commission Order relied on two approaches to reach the standard. The first was a “central procurement approach” that would allow the state to achieve a 24% renewables rate by requiring investor-owned utilities to collect a surcharge on electric purchases by their customers and then transfer the funds to NYSERDA. NYSERDA, in turn, would provide incentives to renewable energy providers to either (i) sell and deliver renewable energy into the wholesale market or (ii) install renewable energy facilities “behind the meter.” The remaining one percent was expected to come from a voluntary green market for renewable energy.³¹⁹⁹ In 2005, the Public Service Commission added methane digesters to the list of qualified renewable energy facilities.³²⁰⁰

2005: Greenhouse Gas Reduction

New York assumed a leading role in developing the Regional Greenhouse Gas Initiative (RGGI), and as a participant, agreed to cap the carbon dioxide emissions from its power sector and reducing these emissions by 10% by 2018.³²⁰¹ Seeking to reduce its emissions, New York adopted California’s GHG emissions standards for motor vehicles in December 2005.³²⁰²

2006: Energy Efficiency and Renewable Energy

³¹⁹⁴ *Recommendations to Governor Pataki for Reducing New York State Greenhouse Activities*, CENTER FOR CLEAN AIR POLICY (Apr. 2003), http://ccap.org/assets/Recommendations-to-Governor-Pataki-for-Reducing-New-York-State-Greenhouse-Gas-Emissions_CCAP_April-2003.pdf.

³¹⁹⁵ *Id.* at ES 4.

³¹⁹⁶ *2002 New York State Energy Plan*, NEW YORK STATE ENERGY BOARD (June 2002), <http://www.nysenergyplan.com/Prior-State-Energy-Plans/2002stateenergyplan.aspx>.

³¹⁹⁷ *Recommendations to Governor Pataki for Reducing New York State Greenhouse Activities*, CENTER FOR CLEAN AIR POLICY ES 10 (Apr. 2003), http://www.ccap.org/pdf/04-2003_NYGREENHOUSE_GAS_Recommendations.pdf.

³¹⁹⁸ *Id.* at 19-22.

³¹⁹⁹ New York Public Service Commission, Case No. 03-E-0188 (Sept. 24, 2004).

³²⁰⁰ New York Public Service Commission, Case No. 03-E-0188 (Nov. 2, 2005).

³²⁰¹ See REGIONAL GREENHOUSE GAS INITIATIVE (Oct. 1, 2013), <http://www.rggi.org/home>; see NYSERDA, REGIONAL GREENHOUSE GAS INITIATIVE (Oct. 1, 2013), <http://www.nyserda.ny.gov/Energy-and-the-Environment/Regional-Greenhouse-Gas-Initiative.aspx>.

³²⁰² See N.Y. COMP. CODE R. & REGS. tit. 6, §§ 218-1.2, 218-2.1(b), 218-8, 218-9, 200.9 (2005); CAL. CODE REGS. tit. 13, § 1961.1 (2005) (setting forth California’s greenhouse gas exhaust emission standards and test procedures).

NYSERDA is home for a wide range of energy efficiency and renewable energy programs, including the New York Energy Smart Program. As of June 2006, NYSERDA was involved in 2700 projects in 40 funded programs. The principal source of NYSERDA funding was derived from an assessment on intrastate energy sales by the state's investor-owned utilities amounting to approximately 70¢ per residential household per year.³²⁰³ In 2006, NYSERDA launched an Alternative-Fuel Vehicle Program to assist various entities to purchase alternative-fuel vehicles that do not emit GHGs.³²⁰⁴ Specifically, alternative-fuel projects included clean-fueled bus and clean-fueled taxi initiatives.³²⁰⁵

New York also offers a variety of tax incentives for energy efficiency or renewable energy including a green building corporate tax credit, a personal tax credit of up to 25% of the cost of solar electric or solar thermal systems with a maximum credit of \$5,000, a personal tax credit of up to 20% for fuel cells with a maximum of \$1,500, and a 100% solar tax exemption.³²⁰⁶ In addition, New York has appliance efficiency standards in place for many commercial and household items such as ceiling fan and light kits; commercial washing machines; commercial refrigerators, freezers, and icemakers; and torchiere lighting fixtures.³²⁰⁷

2007: Climate Change Agreements, Transportation/Fuels; and Green Building

In May 2007, New York and thirty other states founded The Climate Registry³²⁰⁸ to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”³²⁰⁹ Additionally on October 29, 2007, New York joined a coalition with nine other states, New Zealand, Norway, nine European Union countries, the European Commission, and two Canadian provinces to form the International Carbon Action Partnership (ICAP) in order to combat global warming.³²¹⁰ ICAP will provide a forum for governments to share information regarding cap-and-trade systems and will work to ensure that market programs are compatible.³²¹¹ In addition, ICAP will promote low-carbon products and services, innovations, and cost effective reductions.³²¹²

³²⁰³ See NYSERDA (Oct. 1, 2013), <http://www.nyserda.ny.gov>.

³²⁰⁴ See *Alternative-Fuel Vehicle Program*, NYSERDA, (Apr. 13, 2006) <http://www.nyserda.org/programs/transportation/AFV/default.asp>.

³²⁰⁵ *Id.*

³²⁰⁶ See NYSERDA (Oct. 1, 2013), <http://www.nyserda.ny.gov>.

³²⁰⁷ N.Y. ENERGY LAW § 16-102 (McKinney 2006).

³²⁰⁸ THE CLIMATE REGISTRY, <http://www.theclimateregistry.org/> (Oct. 3, 2013).

³²⁰⁹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions, May 8, 2007), http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

³²¹⁰ Press Release, International Carbon Action Partnership, Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007), <http://www.icapcarbonaction.com/pr20071029.htm>.

³²¹¹ *Id.*

³²¹² *Id.*

In August 2007, Governor Spitzer signed S.B. 4833-A, mandating that “global warming index” stickers be placed upon new cars and light trucks (gross weight ≤ 8,500 lbs.) sold in New York beginning with the 2010 model year.³²¹³ These stickers will contain information about the vehicle’s carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions and will compare its emissions to the average projected emissions from all vehicles manufactured in the same model year.³²¹⁴

Also in August 2007, the First Lady Silda Spitzer and the Dormitory Authority of the State of New York (DASNY) announced two initiatives to promote the construction of green homes and state-owned buildings.³²¹⁵ The first initiative will offer a direct incentive to homeowners who build or renovate homes that meet green building criteria.³²¹⁶ DASNY also announced that, beginning in 2008, all new state construction projects and major renovations managed by the Dormitory Authority will meet LEED standards.³²¹⁷ Further, First Lady Spitzer started the “Greening the Mansion” initiative with the goal of promoting energy conservation, the use of renewable energy resources, and sustainable grounds maintenance practices at the Governor’s Mansion.³²¹⁸ First Lady Michelle Paterson has continued this initiative, most notably by installing solar panels at the Governor’s Mansion.³²¹⁹

2008: Market-Based Solutions, Climate Change Adaption, Renewable Energy, Energy Efficiency, and Greenhouse Gas Reduction

In April 2008, Governor Paterson issued the comprehensive Executive Order No. 4.³²²⁰ This order created the Interagency Committee on Sustainability and Green Procurement, which was given the duty of creating green procurement specifications for the commodities and services used by state agencies and public authorities. The order also requires each state agency and authority to develop sustainability and environmental stewardship programs.³²²¹

Also in that month, New York State Comptroller Thomas DiNapoli announced the launch of the Green Strategic Investment Program, which will increase commitments to environmentally focused investment strategies by \$500 million across the New York

³²¹³ S. 4833-A, 230th Leg. (N.Y. 2007).

³²¹⁴ *Id.*

³²¹⁵ Press Release, First Lady Silda Wall Spitzer Announces Green Buildings Initiatives (Aug. 28, 2007), <http://www.dasny.org/dasny/news/2007/20070828FirstLadyt.php>.

³²¹⁶ *Id.*

³²¹⁷ *Id.*

³²¹⁸ New York State, Governor’s Site, Greening of the Mansion, <http://www.governor.ny.gov/mansion/governormansion/greeningthemansion> (Oct. 8, 2013).

³²¹⁹ *Id.*

³²²⁰ N.Y. Exec. Order No. 4, Establishing a State Green Procurement and Agency Sustainability Program (2008).

³²²¹ *Id.*

State Common Retirement Fund's entire portfolio.³²²²

In 2008, stemming from Gov. Spitzer's proposed 2007-2008 state budget, New York created the Office of Climate Change within the New York State Department of Environmental Conservation.³²²³ The Office contains two bureaus: The Climate Science and Technology Bureau and the Climate Programs and Partnerships Bureau. The Climate Science and Technology Bureau synthesizes science, engineering and economic principles to develop programs designed to decrease GHG emissions as well as perform climate impact analyses to assist the state in its response to climate change impacts. The Climate Programs and Partnerships Bureau assists state agencies, local governments, non-governmental organizations, institutions, businesses and individuals as they reduce carbon emissions and adapt to unavoidable impacts of climate change.³²²⁴

Although New York has allowed net metering for residential units producing excess energy from their home PV, wind, biomass, and anaerobic digestion systems since 1997,³²²⁵ net metering was not expanded for nonresidential units until the summer of 2008. Senate Bills 7171, 8415, and 8481 amended New York net metering law, allowing it for nonresidential units producing excess energy from their PV and wind systems.³²²⁶

In June of 2008 the Public Service Commission approved the Energy Efficiency Portfolio Standard (EEPS).³²²⁷ The EEPS will reduce electricity consumption 15% below projected levels by 2015 by encouraging investment in energy efficiency.

In June 2008 Governor Paterson announced state support for an advanced coal power plant in Jamestown, New York.³²²⁸ This plant will introduce a new technology for carbon dioxide capture and sequestration. NYSERDA will provide funding for research and development of the advanced coal plant.³²²⁹

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.³²³⁰ Each of these allowances sold at a clearing price of \$3.07, raising

³²²² Thomas P. DiNapoli, State Comptroller, GREEN STRATEGIC INVESTMENT PLAN FACT SHEET (2008), <http://www.osc.state.ny.us/green/factsheet.pdf>.

³²²³ *Office of Climate Change*, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, <http://www.dec.ny.gov/about/43166.html>.

³²²⁴ *Id.*

³²²⁵ N.Y. [PUB. SERV.] LAW §6-j (2008), <http://www.dsireusa.org/documents/Incentives/NY05R1.htm>.

³²²⁶ S.B. 7171, 2008 Assem. Reg. Sess. (N.Y. 2008); S.B. 8415, 2008 Assem. Reg. Sess. (N.Y. 2008); S.B. 8481, 2008 Assem., Reg. Sess. (N.Y. 2008).

³²²⁷ New York Public Service Commission, Case No. 07-M-0548 (June 23, 2008).

³²²⁸ Press Release, Governor Paterson Announces Support For New Advanced Coal Power Plant in Jamestown – First of its Kind in the World (June 10, 2008), http://www.governor.ny.gov/archive/paterson/press/press_0610081.html.

³²²⁹ *Id.*

³²³⁰ Press Release, RGGI States' First CO2 Auction Off to a Strong Start (Sept. 29, 2008), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

a total of \$38,575,783.³²³¹ These proceeds will be used to fund renewable energy and energy efficiency technologies and programs in the states that offered allowances.³²³²

The second RGGI auction took place on December 17, 2008 and each of the ten states participated.³²³³ All of the available 31,505,898 allowances were sold, 3.5 times lower than the demand of 108,709,000 allowances.³²³⁴ The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.³²³⁵

On December 31, 2008, RGGI participants and Pennsylvania (an observer state) signed a letter of intent to reduce carbon emissions from the transportation sector.³²³⁶ Specifically, these states intend to develop a framework for a Low Carbon Fuel Standard (LCFS), which requires reductions in the average lifecycle GHG per unit of useful energy in motor vehicles, in the Northeast/Mid-Atlantic region.³²³⁷

Governor Paterson praised this auction, which generated \$42 million for his state, as a success.³²³⁸ This money will be used to fund energy efficiency, renewable energy, and other GHG reduction programs. These programs will develop and strengthen New York's green industries, a goal announced by Paterson in his 2009-2010 executive budget address on December 16, 2008.³²³⁹ The budget also directs the Department of Public Service to increase its assessment charged to utilities from .33% to 1%.³²⁴⁰ The purpose

³²³¹ *Id.* at 1.

³²³² *Id.*

³²³³ *Auction Results*, REGIONAL GREENHOUSE GAS INITIATIVE (RGGI), http://rggi.org/co2-auctions/results/auction_1_reports.

³²³⁴ Press Release, Post-Settlement Auction Report Shows Robust Market for RGGI Carbon Dioxide Emissions Allowances, <http://www.rrgi.org/docs/Auction%202%20Post%20Settlement%20Auction%20Report.pdf>.

³²³⁵ *Id.*

³²³⁶ Letter from Gina McCarthy, Comm'r Conn. Dep't of Env'tl. Prot., John A. Hughes, Sec'y Del. Dep't of Natural Res. and Env'tl. Control, David P. Littell, Comm'r Me. Dep't of Env'tl. Prot., Shari T. Wilson, Sec'y Md. Dep't of the Env't, Laurie Burt, Comm'r Mass. Dep't of Env'tl. Prot., Philip Guidice, Comm'r Mass. Dep't of Energy Res., Pete Grannis, Comm'r N.Y. Dep't Env'tl. Conservation, Bob Callendar, Vice President for Programs N.Y. State Research and Dev. Auth., Thomas S. Burack, Comm'r N.H. Dep't of Env'tl. Serv., Mark N. Mauriello, Acting Comm'r N.J. Dep't of Env'tl. Prot., John Hanger, Acting Sec'y Pa. Dep't of Env'tl. Prot., W. Michael Sullivan, Dir. R.I. Dep't of Env'tl. Mgmt., Laura Q. Pelosi, Comm'r Vt. Dep't of Env'tl. Conservation (Dec. 31, 2008), <http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CDYQFjAB&url=http%3A%2F%2Fwww.nescaum.org%2Fdocuments%2Fnortheast-and-mid-atlantic-states-lcfs-letter-of-intent.pdf%2F&ei=LfA1Uu6YCIP94AP7jIDABg&usq=AFQjCNGYaoHSU8d9T2Rb3L5A2jwLTizuUw&sig2=u5J2g96e7dojzM-5JZiSOg&bvm=bv.52164340,d.dmg>.

³²³⁷ *Id.* at 1.

³²³⁸ Press Release, Governor Paterson Hails New York's First Sale of Carbon Dioxide Pollution Allowances as a Success (Dec. 19, 2008), http://www.governor.ny.gov/archive/paterson/press/press_1219081.html.

³²³⁹ Press Release, Governor Paterson's Executive Budget Eliminates Largest Deficit in State History, Reins in Spending (Dec. 16, 2008), <http://www.criminaljustice.ny.gov/opca/2008budget.htm>.

³²⁴⁰ New York State, 2009-2010 EXECUTIVE BUDGET – BRIEFING BOOK (2009), <http://www.budget.ny.gov/pubs/archive/fy0910archive/eBudget0910/fy0910littlebook/BriefingBook.pdf>.

of the increase is to assist the state in its energy and utility commitments and to aid consumers in becoming more energy efficient.³²⁴¹

2009: Greenhouse Gas Reduction, Energy Efficiency, Green Technology, Renewable Energy, Transportation/Fuels, American Recovery & Reinvestment Act (ARRA), Market Based Solutions, and Green Jobs

Governor Paterson announced strong clean energy goals in his state of the state address on January 7, 2009.³²⁴² One of these goals is for the state to obtain 45% of its electricity from renewable sources and from energy efficiency techniques by 2015, a program labeled the “45 by 15” Clean Energy Initiative.³²⁴³ The second energy goal is to create a clearinghouse where all energy efficiency programs for schools, hospitals, and local governments can be found. Additionally, Paterson proposed the creation of a research consortium where hybrid electric battery and storage technologies will be explored. Finally, he proposed the creation of the New York Energy Policy Institute, a single entity in which the energy expertise found at the state’s higher learning institutes can be utilized by policymakers.³²⁴⁴

Governor Paterson announced an increase of \$48 million in weatherization grants on January 26, 2009.³²⁴⁵ These federal funds will be administered by the Division of Housing and Community Renewal and will go to low-income residents as part of the Weatherization Assistance Program. It is estimated that 21,600 homes will be benefited by this program, which puts money towards sealing cracks in homes, replacing inefficient heating and lighting systems, replacing conventional appliances with ENERGY STAR® appliances and other weatherization services.³²⁴⁶ On this same day, Paterson also announced the selection of Francis J. Murray as the president and CEO of NYSERDA.³²⁴⁷ Mr. Murray had previously served as Policy Advisor to the Secretary of Energy during the Clinton Administration and more recently was a Senior Advisor at an environmental consulting firm.³²⁴⁸ Finally on this day, he announced his support for President Obama in his directive that the EPA reconsider granting the California waiver

³²⁴¹ *Id.*

³²⁴² Press Release, Dep’t of Fin. Serv., In First State of the State Address, Governor Paterson Outlines Plan for a Stronger New York: Talk of Confronting Fiscal Crisis Head On and Lays Out Progressive Policy Agenda to Help Working Families in These Difficult Times (Jan. 7, 2009), <http://www.dfs.ny.gov/insurance/press/2009/p0901071.htm>.

³²⁴³ *Id.*

³²⁴⁴ *Id.*

³²⁴⁵ Press Release, Governor Paterson Announces Increase of \$48 Million in Federal Weatherization Grants (Jan. 26, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0126092.html.

³²⁴⁶ *Id.*

³²⁴⁷ Press Release, Governor Paterson Announces Selection of Francis J. Murray to Serve as NYSERDA President and CEO (Jan. 26, 2009), <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aaW1Z1xjlHEY>.

³²⁴⁸ *Id.*

for vehicle air emissions standards.³²⁴⁹ New York would adopt these more stringent standards.³²⁵⁰

Governor Paterson and eleven other governors signed a letter to President Obama, urging him to form a strong state/federal leader partnership in initiating a national climate change program on January 29, 2009.³²⁵¹ This letter was predicated upon the President's letter to the Governors' Global Climate Summit in which he offered the governors a partnership with the White House in addressing climate change issues. The letter writers believe that their states have played a leading role in confronting these issues and stated, "It is crucial that we build on our states' momentum."³²⁵² The letter also contains suggestions for how a national climate change program should be implemented. One of these suggestions is for the national government to recognize the private investments that have been made in current cap-and-trade programs and to preserve the clean energy plans that are funded by the proceeds from these programs.³²⁵³

Pursuing New York's clean energy plan, Governor Paterson announced on February 2, 2009 that the Office of General Services and NYSERDA will test the potential of roof top wind energy technology.³²⁵⁴ This technology is a 1.5-killowatt wind turbine that was installed on top of Albany's 41-story Corning tower. NYSERDA will be compiling real-time data on this turbine's performance.³²⁵⁵ A week later, Paterson announced the reappointments of PSC commissioners Garry A. Brown and Patricia L. Acampora.³²⁵⁶ He stated that Mr. Brown is "known for his promotion of renewable energy initiatives and efficiency standards."³²⁵⁷ Paterson further stated Mr. Brown and Ms. Acampora "will continue to provide the Commission with the kind of experience and leadership that is necessary to help our State achieve its clean environment, energy conservation and renewable energy goals."³²⁵⁸

Governor Paterson announced on February 27, 2009 that BP Solar is planning to

³²⁴⁹ Press Release, Statement from Governor David A. Paterson Regarding President Obama's Call for Stronger Emissions Standards (Jan. 26, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0126094.html.

³²⁵⁰ *Id.*

³²⁵¹ Letter from Arnold Schwarzenegger, Governor, Cal.; M. Jodi Rell, Governor, Conn.; Charlie Crist, Governor, Fla.; Kathleen Sebelius, Governor, Kan.; Martin O'Malley, Governor, Md.; Deval Patrick, Governor, Mass.; John S. Corzine, Governor, N. J.; Bill Richardson, Governor, N. M.; David Paterson, Governor, N. Y.; Theodore R. Kulongoski, Governor, Or.; Christine O. Gregoire, Governor, Wash.; Jim Doyle, Governor, Wis., to Barack Obama, President, U. S. (Jan. 29, 2009), <https://votesmart.org/public-statement/431466/letter-to-barack-obama-president-of-the-united-states-of-america>.

³²⁵² *Id.*

³²⁵³ *Id.*

³²⁵⁴ Press Release, Governor Paterson Announces Joint-Agency Wind Technology Pilot Project, Strengthening New York's Commitment to Clean Energy Initiatives (Feb. 2, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0202092.html.

³²⁵⁵ *Id.*

³²⁵⁶ See Press Release, Governor Paterson Announces Reappointments of Commissioners to the New York State Public Service Commission (Feb. 9, 2009), <http://observer.com/2009/02/paterson-reappoints-to-psc-goodgovernment-group-unhappy/>.

³²⁵⁷ *Id.*

³²⁵⁸ *Id.*

construct the largest solar energy project in the State's history.³²⁵⁹ Slated to take place on Long Island, this project will provide enough energy to power 6,500 homes, thereby preventing the release of 20,000 tons of carbon dioxide annually. The project also will help achieve the governor's goal to obtain 45% of the state's electricity from energy efficiency and renewable sources by 2015. The plan consists of two large-scale photovoltaic projects that will be located on the Brookhaven National Laboratory's property.³²⁶⁰ These projects will put 36.9 MW into the grid.

In another action to prevent the release of carbon dioxide emissions, Governor Paterson announced the State Rail Plan to expand train ridership and increase the rail system's reliability on March 9, 2009.³²⁶¹ Specifically, the Plan's goals include doubling the number of passengers along the State's three largest corridors, provide more frequent services, increasing freight use by 25% and constructing the nation's first "green" short line fleet.³²⁶²

On March 12, 2009, the Department of Energy announced that New York is eligible for \$123,110,000 under the State Energy Program of the ARRA.³²⁶³

The third RGGI auction was held on March 18, 2009.³²⁶⁴ The auction sold 31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse at future market prices for RGGI allowances.³²⁶⁵

The fourth RGGI auction was held on June 17, 2009 where prices fell to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.³²⁶⁶

The fifth RGGI action was held on September 9, 2009.³²⁶⁷ The auction sold 28,408,945 allowances of the 2009 vintage at a clearing price of \$2.19 per allowance and 2,172,540 allowances of the 2012 vintage at a clearing price of \$1.87 per allowance.³²⁶⁸

³²⁵⁹ Press Release, Governor Paterson Announces Plans for the Largest Solar Energy Project in the State's History (Feb. 27, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0227092.html.

³²⁶⁰ *Id.*

³²⁶¹ Press Release, Governor Paterson Announces First Statewide Rail Plan in More than Two Decades (Mar. 9, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0309092.html.

³²⁶² *Id.*

³²⁶³ Synopsis of New York's Comprehensive Application State Energy Program Grant through American Recovery and Reinvestment Act, NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY (Mar. 11, 2009), <https://www.naesco.org/resources/arra/documents/New%20York%20SEP%20summary.pdf>.

³²⁶⁴ Press Release, RGGI, Inc., States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

³²⁶⁵ *Id.*

³²⁶⁶ Auction 4, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/114 (Sept. 21, 2013).

³²⁶⁷ Auction 5, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/113 (Oct. 14, 2013).

³²⁶⁸ *Id.*

The Governor announced that critical investments from the Environmental Protection Fund will remain in his budget agreement despite the current economic recession.³²⁶⁹ Specifically \$222 million will go towards programs including open space and municipal park protection. Programs include state payment of property taxes on land owned for preservation purposes and an increase in hunting and fishing licensing fees, with the revenue going towards the maintenance of pollution prevention programs.

On April 7, Governor Paterson announced that municipalities will be eligible for \$175 million in grants for energy efficiency programs through the ARRA and the Energy Efficiency and Conservation Block Program.³²⁷⁰ In order to receive this funding, municipalities must present their energy efficiency plans to the DOE by June 25, 2009. To ensure that municipalities receive these grants, Paterson directed NYPA, LIPA, and NYSERDA to aid the local governments in developing their plans.³²⁷¹ That same day, he announced that a new solar cell manufacturer, SpectraWatt, will move into the State.³²⁷² SpectraWatt will manufacture crystalline silicon solar cells that use high purity silicon to convert solar energy into electricity at high efficiencies. This project will create 161 new jobs.

Governor Paterson announced clean energy jobs creation initiatives on April 21, 2009.³²⁷³ NYSERDA has selected four clean-energy business “incubators” to each receive \$1.5 million. These “incubators” will provide specialized support to aid early-stage clean energy technology companies.³²⁷⁴ These grants come from NYSERDA’s expanded funding available for energy efficiency programs, totaling \$276.5 million on top of its current commitment to spend \$175 million per year on energy efficiency programs through 2011. These incubators will help clean energy business develop more rapidly, creating more jobs in the State.³²⁷⁵

Clean energy businesses will also begin receiving funding from RGGI auction proceeds according to the “Operating Plan for Investments in New York under the CO₂ Budget Trading Program and the CO₂ Allowance Auction Program” (Operating Plan), which was approved by the NYSERDA board of directors in April 2009.³²⁷⁶ The Operating Plan provides a three-year planning horizon specifying how \$525 million in

³²⁶⁹ Press Release, Governor Paterson Announces Key Environmental Protection Initiatives in Budget Agreement (Mar. 30, 2009), http://www.budget.ny.gov/pubs/press/2009/press_release09_enactedEnvironment.html.

³²⁷⁰ Press Release, Governor Paterson Directs State Power Authorities to Aid Municipalities Eligible for \$175 Million in Economic Recovery Energy Efficiency Grants (Apr. 7, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0407091.html.

³²⁷¹ *Id.*

³²⁷² Press Release, Governor Paterson Announces New Solar Cell Manufacturer to Move to Dutchess County (Apr. 7, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0407094.html.

³²⁷³ Press Release, Governor Paterson Announces Clean Energy Job Creation Initiatives (Apr. 21, 2009), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/CB5B4BE5D9D71DBA852575A00043AD39/\\$File/GovPatersonAnnouncesCleanEnergyJobCreation.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/CB5B4BE5D9D71DBA852575A00043AD39/$File/GovPatersonAnnouncesCleanEnergyJobCreation.pdf?OpenElement).

³²⁷⁴ *Id.*

³²⁷⁵ *Id.*

³²⁷⁶ Regional Greenhouse Gas Initiative (RGGI), Use of Auction Proceeds, http://www.rggi.org/rggi_benefits/program_investments/new_york.

auction proceeds will be invested.³²⁷⁷ Funding will be allocated among programs divided into five sectors: residential, commercial, industrial and municipal; transportation; electric power supply and delivery; sustainable agriculture and bioenergy; and multi-sector (programs that will “build the capacity to develop and implement new climate change mitigation and risk management solutions and realize a clean energy economy in New York.”).³²⁷⁸ Residential, commercial, industrial and municipal will receive the majority of this funding. NYSERDA estimates that the Operating Plan will result in over 10,760,000 MMBtu in energy savings.³²⁷⁹

In order to protect his state’s wind technology, Governor Paterson and other governors wrote a letter to Congress communicating their opposition to proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.³²⁸⁰ To spur the state’s plug-in electric hybrid vehicle industry, NYSERDA created the New York Battery and Energy Storage Technology Consortium (NY-BEST) to develop and manufacture the batteries that will be used in these vehicles.³²⁸¹ LIPA, Stony Brook University, and Farmingdale State College also proposed the creation of Long Island’s first Smart Energy Corridor, an area in which smart grid technologies would be integrated.³²⁸² LIPA and Farmingdale State College proposed to create Long Island’s first “Smart Energy Campus” by developing a Renewable and Sustainable Resource Center at the College.³²⁸³ Renewable energy resources will also be developed under NYPA’s plan to install 100 MW of solar power throughout the state.³²⁸⁴

Governor Paterson also signed an agreement to support federal climate change legislation.³²⁸⁵ The agreement contains two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this

³²⁷⁷ *Operating Plan for Investments in New York under the CO₂ Budget Trading Program and the CO₂ Allowance Auction Program*, NYSERDA, <http://www.bcnys.org/inside/energy/2008/co2-concept-paper1121.pdf>.

³²⁷⁸ *Id.* at ES-6.

³²⁷⁹ *Id.* at ES-9.

³²⁸⁰ Letter from Donald L. Carcieri, Governor (R.I.), Deval Patrick, Governor (Mass.), Jack Markell, Governor (Del.), John Baldacci, Governor (Me.), Martin O’Malley, Governor (Md.), John H. Lynch, Governor (N.H.), Jon S. Corzine, Governor (N.J.), David A. Paterson, Governor (N.Y.), James H. Douglas, Governor (Vt.), and Timothy M. Kaine, Governor (Va.) to Harry Reid, Majority Leader (U.S. Senate), Mitch McConnell, Minority Leader (U.S. Senate), Nancy Pelosi, Leader (U.S. House of Representatives), and John Boehner, Minority Leader (U.S. House of Representatives) (May 4, 2009).

³²⁸¹ *NY Governor Paterson announces battery and energy storage consortium*, WIND POWER LAW BLOG (May 5, 2009), http://www.state.ny.us/governor/press/press_0505094.html.

³²⁸² Press Release, Governor Paterson and Congressman Israel Propose “Smart Energy Corridor” and First “Energy Smart Campus” For Long Island (May 11, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0511091.html.

³²⁸³ *Id.*

³²⁸⁴ Press Release, Governor Paterson Announces Plans for Largest Solar Power Project in State History (May 15, 2009), <http://votesmart.org/public-statement/424923/governor-paterson-announces-plans-for-largest-solar-project-in-state-history>.

³²⁸⁵ Press Release, Governors’ Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://www.mwcog.org/uploads/committee-documents/bl5cV11e20090521151905.pdf>.

legislation.³²⁸⁶ Paterson also announced state grants for five Energy Frontier Research Centers, which will use the funding to research important issues in developing clean and efficient energy technologies.³²⁸⁷ These technologies will also be advanced in a legislative package proposed by Governor Paterson.³²⁸⁸ These five bills propose to update the Energy Conservation Construction Code, expand NYPA's authority to finance energy efficiency services, authorize a siting process for carbon capture and sequestration demonstration projects, and authorize the Office of General Services to make bulk energy purchases.³²⁸⁹

On June 23, 2009, representatives from RGGI, the Western Climate Initiative (WCI), and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.³²⁹⁰ To provide information on state-funded energy efficiency programs, Governor Paterson launched an energy efficiency clearinghouse website.³²⁹¹ In other energy efficiency programs, the Public Service Commission authorized six proposed smart grid projects to apply for up to \$434 million in ARRA funding.³²⁹² The state also applied for ARRA funding for high speed rail projects throughout the state, totaling \$500 million.³²⁹³

Governor Paterson issued an executive order establishing a statewide 2050 emissions target of 80% below 1990 levels.³²⁹⁴ He also created the Climate Action Council in the same order. The Climate Action Council must create a Climate Action Plan by September 30, 2010. This entails inventorying GHG emissions in the state and identifying short-term and long-term actions to reduce emissions. A draft State Energy Plan was also released during that week.³²⁹⁵ The plan contains five strategies for policy objectives over a 10-year planning horizon. The five strategies are as follows: (1)

³²⁸⁶ *Id.*

³²⁸⁷ Press Release, Governor Paterson Announces State Grants for Energy Frontier Research Centers (May 22, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0522091.html.

³²⁸⁸ Press Release, Governor Paterson Announces Legislative Package to Advance Clean Energy Economy, Create New Jobs in New York, and Save Taxpayers Millions of Dollars (June 5, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0605092.html.

³²⁸⁹ *Id.*

³²⁹⁰ *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

³²⁹¹ Press Release, Governor Paterson Announces Launch of Energy Efficiency Clearinghouse Website (July 7, 2009), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/D4AF976B1ADCF6A852575FA0058F1BD/\\$File/GovAnnouncesEnergyEfficiencyWebsite.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/D4AF976B1ADCF6A852575FA0058F1BD/$File/GovAnnouncesEnergyEfficiencyWebsite.pdf?OpenElement).

³²⁹² Press Release, Governor Paterson Announces PSC Approval of Smart Grid Projects (July 24, 2009), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/9973CE9A9FC2C1DC852575FD006C0D63/\\$File/GovernorPatersonApplaudsPSCApprovalOfSmartGridProjects.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/9973CE9A9FC2C1DC852575FD006C0D63/$File/GovernorPatersonApplaudsPSCApprovalOfSmartGridProjects.pdf?OpenElement).

³²⁹³ Press Release, Governor Paterson Announces Filing of Funding Requests for High-Speed Rail Projects in the Capital Regions (Aug. 24, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0824094.html.

³²⁹⁴ Exec. Order 24 (2009), Establishing a Goal to Reduce Greenhouse Gas Emissions Eighty Percent by the Year 2050 and Preparing a Climate Action Plan, <http://www.dec.ny.gov/energy/71394.html>.

³²⁹⁵ New York State, Draft 2009 State Energy Plan, <http://www.e-renewables.com/documents/General/New%20York%20State%20Energy%20Plan%202009.pdf>.

produce deliver and use energy more efficiently; (2) support development of in-state energy supplies; (3) invest in energy and transportation infrastructure; (4) stimulate innovation in the clean energy economy; and (5) engage others in achieving the state's policy objectives.

According to these recommendations, the New York State Smart Grid Consortium was created to encourage the development and deployment of smart grid technologies.³²⁹⁶ Alternative fuel transportation projects will also be deployed in the state, with NYSEERDA receiving \$13.3 million and the Greater Long Island Clean Cities Coalition receiving \$15.9 million in ARRA funding for these projects.³²⁹⁷ Other alternative energy projects will receive funding from NYSEERDA totaling \$95 million to develop large-scale renewable sources.³²⁹⁸ In further encouragement of clean energy, Governor Paterson announced his support for the Kerry Boxer bill.³²⁹⁹

Clean energy will further be promoted with the Governor's announcement of the first round of requests for proposals under NY-BEST, dedicating \$25 million in research funding.³³⁰⁰ That same day, Governor Paterson also announced the creation of the New York Energy Policy Institute, the coordination of work performed at the state's leading energy research centers to provide resources for state policymakers.³³⁰¹ The next day, Paterson requested \$11.6 billion in ARRA funding for a high-speed rail.³³⁰² The state did receive \$10 million in ARRA funding for solar projects.³³⁰³ The Hudson Valley Community College will receive \$3.5 million of this funding to develop a solar photovoltaic training facility and New York City will receive \$932,508 of this funding to develop solar electric generation.³³⁰⁴

The Governor signed the Green Jobs/Green New York bill, which will assist in

³²⁹⁶ Press Release, Governor Paterson Announces Kick-Off of "Smart grid" Consortium to Promote State-of-the-Art, Reliable and Cost-Effective Power Delivery System (Aug. 25, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0825091.html.

³²⁹⁷ Press Release, Governor Paterson Announces \$28 Million in Federal Funds for Alternative Fuel Transportation Projects (Aug. 31, 2009), http://www.governor.ny.gov/archive/paterson/press/press_0831091.html.

³²⁹⁸ Press Release, Governor Paterson Announces Funding for Renewable Energy Projects (Sept. 9, 2009) http://www.governor.ny.gov/archive/paterson/press/press_0909093.html.

³²⁹⁹ Press Release, Statement from Governor A. Paterson in Support of Federal Legislation Addressing Climate Change and Clean Energy (Sept. 30, 2009), <http://votesmart.org/public-statement/457300/statement-from-governor-david-a-paterson-in-support-of-federal-legislation-addressing-climate-change-and-clean-energy>.

³³⁰⁰ Press Release, Governor Paterson Launches \$25 Million Research Commitment for New York's Clean Energy Future (Oct. 5, 2009) http://www.governor.ny.gov/archive/paterson/press/press_1005091.html.

³³⁰¹ Press Release, Governor Paterson Announces Establishment of New York Energy Policy Institute (Oct. 5, 2009), http://www.governor.ny.gov/archive/paterson/press/press_1005092.html.

³³⁰² Press Release, Governor Paterson Announces Funding Requests For High-Speed Rail (Oct. 6, 2009), http://www.governor.ny.gov/archive/paterson/press/press_1006093.html.

³³⁰³ Press Release, Governor Paterson Announces Major Expansion of New York Solar Energy (Oct. 7, 2009), http://www.governor.ny.gov/archive/paterson/press/press_1007093.html.

³³⁰⁴ Press Release, Governor Paterson Announces \$4.4 Million for Solar Energy Projects (Oct 9, 2009), http://www.governor.ny.gov/archive/paterson/press/press_1009092.html.

the training of low-income and unemployed residents for green collar jobs.³³⁰⁵ He later announced that the state will receive \$24 million in ARRA funding for 87 energy efficiency projects.³³⁰⁶

On December 30, 2009, RGGI participants and Pennsylvania signed a letter of intent to reduce carbon emissions from the transportation sector.³³⁰⁷ Specifically, these states intend to incorporate a Low Carbon Fuel Standard (LCFS), which requires reductions in the average lifecycle GHG per unit of useful energy in motor vehicles.³³⁰⁸

Governor Paterson announced in November 2009 that four New York advanced-energy projects will receive more than \$88 million in funding to support smart grid demonstration and energy storage projects through the American Recovery and Reinvestment Act (ARRA) and pledged a 10% match or \$8.8 million from New York's Innovation Economy Matching Grants Program.³³⁰⁹ The funding awards are divided into two topic areas. In the first group, New York received three awards to support fully integrated, regional smart grid demonstrations including: Secure Interoperable Open Smart Grid Demonstration in New York and New Jersey which received \$45,388,291, Long Island Smart Energy Corridor which received \$12,496,047, and Evaluation of Instrumentation and Dynamic Thermal Ratings for Overhead Lines which received \$720,000.³³¹⁰

Consolidated Edison Company of New York, Inc. will develop a scalable, cost-effective smart grid prototype that promotes cyber security, reduces electricity demand and peak energy use, and increases reliability and energy efficiency. The system will include renewable energy generation, grid monitoring, electric vehicle charging stations, transmission automation, and consumer systems that will help expand the use of renewable energy and lead to greater consumer participation in the electricity system.³³¹¹

The Long Island Power Authority will collaborate with two branches of the State University of New York to create a Smart Energy Corridor along Route 110 business corridor, involving 800 customers. The project will focus on the integration of a suite of smart grid technologies, such as smart meters, distribution automation, distributed energy resources, and electric vehicle charging stations. The project will also will include

³³⁰⁵ Press Release, Governor Paterson Sings the Green Jobs/Green New York Bill (Oct. 13, 2009), <http://otda.ny.gov/news/2009/2009-10-13.asp>.

³³⁰⁶ Press Release, Governor Paterson Announces \$24 Million in Stimulus Funding Awarded to State Energy Programs Projects (Oct. 29, 2009), http://www.governor.ny.gov/archive/paterson/press/press_1029092.html.

³³⁰⁷ *Governors of 11 Northeast and Mid-Atlantic States Agree to Work Together Toward Reducing Greenhouse Emissions from Furls*, MASS.GOV (Dec. 30, 2009), <http://www.mass.gov/eea/pr-pre-p2/pr-2009/governors-of-11-northeast-and-mid-atlantic.html>.

³³⁰⁸ *Id.*

³³⁰⁹ Press Release, Governor Paterson Announces \$88 Million in Federal Funding got Four New York Advanced Energy Projects (Nov. 27, 2010), <http://www.nyserda.ny.gov/About/Newsroom/2009-Announcements/2009-11-27-Governor-Paterson-Announces-88-Million-in-Funding-Advanced-Energy-Projects.aspx?p=1>.

³³¹⁰ *Id.*

³³¹¹ *Id.*

identifying the optimal combination of features to encourage consumer participation, and educating the public about the tools and techniques available with the smart grid.³³¹²

The New York Power Authority will demonstrate the effects that Dynamic Thermal Circuit Ratings (DTCR) technology can have on areas of the New York State transmission system where there is abundant wind generation potential. This project could result in a 5 to 15% increase in transmission line capacity to allow for more wind power, deferring millions of dollars in capital expenditures on transmission projects.³³¹³

In the second group, New York received one award for a utility-scale energy storage project that will enhance the reliability and efficiency of the grid, while reducing the need for new electricity plants. In this group, the New York State Electric & Gas Corporation (NYSEG) received an award of \$29,561,142 to demonstrate an advanced 150 MW Compressed Air Energy Storage (CAES) facility that utilizes an underground salt cavern to store compressed air.³³¹⁴

In December 2009, \$60.3 million in ARRA funding for weatherization projects was approved, and the project will work to reduce the energy burden on low-income residents in 9,431 multi-family housing units around the State. Weatherization activities to be performed include: adding insulation and making buildings more weather-tight, updating heating and air conditioning systems, replacing inefficient appliances, and repairing and replacing windows.³³¹⁵

New York State Energy Research and Development Authority (NYSERDA) is providing \$3 million to help eighteen New York businesses commercialize clean energy technologies and increase their access to markets, customers, investors and partners, and build their capacity to serve a new or expanded customer base.³³¹⁶ The awards, which total up to \$200,000 per company and require an equal match from the businesses, will help them create jobs, develop business plans, reach customers in the global marketplace, raise capital and build their business infrastructure.³³¹⁷

State University of New York at Stony Brook, working in partnership with Rensselaer Polytechnic Institute and Syracuse University, has been named to lead the New York Energy Policy Institute (NYEPI), a consortium coordinating the work of New York's leading energy research centers and experts and serve as a resource for the State's

³³¹² *Id.*

³³¹³ *Id.*

³³¹⁴ *Id.*

³³¹⁵ Press Release, Governor Paterson Announces Stimulus Funds Targeted to Cut Energy Costs for Low-Income Residents of Multi-Family Housing (Dec. 8, 2009), http://www.governor.ny.gov/archive/paterson/press/press_1208092.html.

³³¹⁶ Press Release, Governor Paterson Announces \$3 Million to Grow 18 Clean Energy Businesses in New York (Dec. 8, 2009), http://www.governor.ny.gov/archive/paterson/press/press_1208093.html.

³³¹⁷ *Id.*

policymakers.³³¹⁸ NYSERDA, which will oversee the NYEPI's operations, has allocated up to \$200,000 per year for up to three years to be matched by the consortium members to conduct studies, produce policy analysis, and provide guidance on energy issues impacting New York now and in the future.³³¹⁹ The NYEPI will also advance Governor Paterson's '45 by 15' initiative, one of the nation's most aggressive energy efficiency and renewable energy initiatives. By 2015, New York State will receive 45% of its electricity through energy efficiency and clean renewable energy – 15% electricity savings from efficiency measures and 30% met by renewables.³³²⁰

The Energy Plan, approved at the end of 2009, is a comprehensive blueprint for New York to continue to transition to a clean energy economy over a 10-year planning horizon, and is the first State energy plan since 2002.³³²¹ Modeling performed for the Plan indicates that the New York economy would benefit by \$2.60 for every dollar invested in electric efficiency investments, and that achieving the Governor's goal of increasing energy efficiency 15% by 2015 would help reduce electric prices and provide aggregate retail bill savings of as much as \$1.4 billion in 2015.³³²²

NYSERDA will provide a \$6 million grant, from RGGI pollution allowance auctions, to the Long Island Power Authority (LIPA) that will continue to provide homeowners and businesses with rebates and incentives for purchasing solar photovoltaic (PV) systems.³³²³ PV systems generate clean energy and help homeowners and businesses lower their energy bills and cut their carbon footprint. These funds were provided in response to unprecedented demand for solar panels on Long Island. To date, LIPA has rebated approximately 2300 residential, 65 commercial roofs, and 48 systems installed at educational, not-for-profit, and government facilities. In addition, LIPA has approximately 450 pending PV applications and has rebated more than \$54.4 million, totaling 13.5 megawatts (MW) of clean energy.³³²⁴

New York decided to implement a new E-Budget initiative to help save taxpayer dollars and reduce environmental impacts in December 2009.³³²⁵ In 2009-10, the State printed 2,700 sets of Executive Budget documents, each set containing five separate books. This saves an estimated 5.5 million sheets of paper, 660 trees, and \$75,000 per year.³³²⁶

³³¹⁸ Press Release, Governor Paterson Names Stony Brook to Lead New York State Energy Policy Institute (Dec. 14, 2009), <http://www.nyserdera.ny.gov/About/Newsroom/2009-Announcements/2009-12-14-Governor-Paterson-names-stony-brook-to-lead-New-York-state-energy-policy-institute.aspx>.

³³¹⁹ *Id.*

³³²⁰ *Id.*

³³²¹ Press Release, Governor Paterson Accepts Final Plan to Guide New York to a Clean Energy Economy (Dec. 15, 2019), http://www.governor.ny.gov/archive/paterson/press/press_12150903.html.

³³²² *Id.*

³³²³ Press Release, Governor Paterson Announces Funding to Continue Long Island Solar Energy Program (Dec. 17, 2019), http://www.governor.ny.gov/archive/paterson/press/press_12170902.html.

³³²⁴ *Id.*

³³²⁵ Press Release, Governor Paterson Announces E-Budget Initiative to Help Save Taxpayer Dollars and Reduce Environmental Impacts (Dec. 21, 2009), http://www.budget.ny.gov/pubs/press/2009/press_release09_PR122109_Ebudget.html.

³³²⁶ *Id.*

2010: Climate Change Adaption, Renewable Energy, American Recovery & Reinvestment Act (ARRA), Green Technology, and Greenhouse Gas Reduction

In January 2010, NYSERDA, in conjunction with the Public Service Commission (PSC), will provide nearly \$300 million for renewable energy projects under the Renewable Portfolio Standard Program (RPS) furthering New York's goal of meeting 45% of the State's energy needs through energy efficiency and renewable energy by 2015.³³²⁷ Included in these renewable energy developments are \$96 million to five large-scale electric generating projects supporting three wind power projects. Funds have also been allocated for hydroelectric and new initiatives at the Onondaga Renewables biomass plant. This will add more than 142 megawatts of renewable capacity and produce nearly 578,656 megawatt hours per year of clean renewable energy, enough clean energy to supply approximately 85,000 homes.³³²⁸ PSC expanded the RPS goal to increase the proportion of renewable electricity used by New Yorkers from 25 to 30% by 2015 and authorized an approximately \$200 million new Main-Tier solicitation for large-scale electric generating projects to commence as soon as practicable.³³²⁹

New York will develop an extensive Climate Action Plan that will dramatically reduce GHG pollution while also building New York's clean energy economy.³³³⁰ The multi-faceted effort is driven by Executive Order No. 24, and sets a goal of reducing GHG emissions in New York State by 80% below 1990 levels by 2050. Over the course of this year, the CAC will meet with expert advisory panels and focus on the full spectrum of energy use and economic activity including: power supply and delivery; residential, commercial and industrial; agriculture, forestry and waste; transportation and land use; and adaptation, such as responses to potential climate-related threats to various sectors.³³³¹

In January 2010, The New York Power Authority (NYPA) issued a request for proposals (RFP) seeking a public-private partnership for the installation of up to 100 megawatts (MW) of photovoltaic (PV) systems across the State, including roof-mounted and ground-mounted solar arrays, which will reduce GHG emissions by an estimated 45,000 tons per year.³³³² Facilities will be installed primarily at schools, public universities and colleges, State and local government facilities, municipal electric utilities and rural electric cooperatives. The development will include large scale, "Community Solar" projects that will connect to the distribution systems of municipal utilities and rural electric cooperatives, utilizing available space to generate power for electric

³³²⁷ Press Release, Governor Paterson Announces Nearly \$300 Million for Renewable Energy Projects (Jan. 8, 2010), http://www.governor.ny.gov/archive/paterson/press/press_01081001.html.

³³²⁸ *Id.*

³³²⁹ *Id.*

³³³⁰ Press Release, Governor Paterson Details Process for Developing New York State Climate Action Plan (Jan. 21, 2010), http://www.governor.ny.gov/archive/paterson/press/press_01211001.html.

³³³¹ *Id.*

³³³² Press Release, Governor Paterson Announces Historic Solar Energy Project (Jan. 27, 2010), http://www.governor.ny.gov/archive/paterson/press/press_01271001.html.

distribution grids rather than a single host site.³³³³ Renewable energy can then be transmitted to any loads connected to the grid, which provide relief for electric grids nearing their capacity and avoiding expensive facility upgrades.³³³⁴

Starting Friday, February 12, 2010, New York will begin providing \$16.8 million in rebates to consumers who purchase qualified energy efficient appliances through February 21, using ARRA funds.³³³⁵ The program will help consumers save money on energy costs by reducing their energy usage. Rebates for high-efficiency refrigerators, clothes washers, and freezers will range from \$50-\$105 for a single unit and up to \$555 for the purchase of a three-appliance package of high-efficiency refrigerators, clothes washers, and dishwashers, provided on a first-come, first served basis.³³³⁶ The program requires consumers to replace old appliances, and encourages recycling by offering a larger rebate to consumers who recycle their discarded appliances.

GM will invest \$425 million and New York State will contribute \$7 million, plus vital low-cost hydropower through the New York Power Authority, towards retrofitting Tonawanda Powertrain, which will manufacture the next generation of fuel efficient Ecotec engines.³³³⁷

A three-way bill was negotiated with the Legislature to improve net metering, which allows electricity customers with qualified renewable energy systems to sell excess electricity back to their local utility.³³³⁸ This legislation is the result of a “Net Metering Summit” that was convened by Governor Paterson last fall to facilitate an agreement between renewable energy installers and the State’s major utilities.³³³⁹ The bill eliminates the peak load limitation on the size of non-residential solar and wind systems that are eligible to participate in the net metering program. Non-residential solar and wind systems will now be allowed up to 25 kilowatts with the interconnection charges capped at \$350 and \$750 for solar and wind, respectively. For systems above 25 kilowatts, up to the overall cap of 2,000 kilowatts, the customer would be responsible for the actual interconnection charges.³³⁴⁰

ARRA funding, totaling \$40 million, was awarded to New York municipalities, public schools, universities and colleges, hospitals and not-for-profit agencies to support

³³³³ *Id.*

³³³⁴ *Id.*

³³³⁵ Press Release, Governor Paterson Announces “New York’s Great Appliance Swap Out” to Provide \$16.8 Million in Rebates (Feb. 11, 2010), http://www.governor.ny.gov/archive/paterson/press/press_02111001.html.

³³³⁶ *Id.*

³³³⁷ Press Release, Statement from Governor Paterson on GM’s \$425 Million Investment in Future of Tonawanda Powertrain Plant (Feb. 18, 2010), http://www.governor.ny.gov/archive/paterson/press/press_02181001.html.

³³³⁸ Press Release, Governor Paterson Announces Passage of Bill to Help Businesses Produce Their Own Renewable Energy (Feb. 23, 2010), http://www.governor.ny.gov/archive/paterson/press/press_02231001.html.

³³³⁹ *Id.*

³³⁴⁰ *Id.*

118 energy conservation projects.³³⁴¹ The energy efficiency, renewable energy and clean fleet projects will reduce energy and operating costs by \$13.5 million annually and fully return the initial investment in just under seven years. Measures funded include installation of lighting and lighting controls, heating, cooling and controls, building envelope, photovoltaic systems, high efficiency biomass boilers, solar thermal, small wind generators and alternative-fuel refueling stations and vehicles.³³⁴²

In March 2010, 206 energy conservation projects were funded through ARRA, totaling \$24 million. These energy efficiency and renewable energy projects, including reduce energy costs and increase energy efficiency in buildings, transportation systems, waste management practices, and other operations, will help 137 municipalities reducing energy and operating costs by \$3.3 million annually and fully return the initial investment in less than nine years.³³⁴³ Measures funded include installation of lighting, heating, and cooling systems and controls to increase efficiency; building envelope improvements; renewable energy measures including photovoltaic systems, high efficiency biomass boilers, solar thermal systems, and small wind generators; and recycling programs.³³⁴⁴

The seventh RGGI auction was held on March 10, 2010.³³⁴⁵ The auction sold 40,612,408 allowances of the 2010 vintage at a clearing price of \$2.07 per allowance and 2,091,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.³³⁴⁶

The eighth RGGI auction was held on June 9, 2010.³³⁴⁷ The auction sold 40,685,585 allowances of the 2010 vintage at a clearing price of \$1.88 per allowance and 2,137,993 allowances of the 2012 vintage at a clearing price of \$ 1.86 per allowance.³³⁴⁸

The ninth RGGI auction was held on September 8, 2010.³³⁴⁹ The auction sold 34,407,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,312,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.³³⁵⁰

The tenth RGGI auction was held on December 10, 2010.³³⁵¹ The auction sold 24,755,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,172,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.³³⁵²

³³⁴¹ Press Release, Governor Paterson Announces \$40 Million in Stimulus Funding for State Energy Program Projects (Mar. 1, 2010), http://www.governor.ny.gov/archive/paterson/press/press_0301101.html.

³³⁴² *Id.*

³³⁴³ Press Release, Governor Paterson Announces \$24 Million in Stimulus Funding for Clean Energy Projects in Small Municipalities (Mar. 24, 2010), <http://www.governor.ny.gov/archive/paterson/press/032410Stimulus.html>.

³³⁴⁴ *Id.*

³³⁴⁵ Auction 7, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/111 (Oct. 14, 2013).

³³⁴⁶ *Id.*

³³⁴⁷ Auction 8, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/110 (Oct. 14, 2013).

³³⁴⁸ *Id.*

³³⁴⁹ Auction 9, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/109 (Oct. 14, 2013).

³³⁵⁰ *Id.*

New York received \$40 million in American Recovery and Reinvestment Act (ARRA) funding.³³⁵³ The New York State Research and Development Authority (NYSERDA) will administer the funding, for Property Assessed Clean Energy (PACE) loan programs in participating municipalities and the “Green Jobs-Green New York” program, to facilitate installations of energy efficiency measures and renewable energy systems.³³⁵⁴

Governor Patterson signed a memorandum of understanding (MOU) in June 2010 with Maine, New Hampshire, New Jersey, Massachusetts, Rhode Island, New York, Delaware, Maryland, Virginia, and North Carolina to create an Atlantic Offshore Wind Energy Consortium.³³⁵⁵ The Consortium will facilitate the partnership between the Atlantic states and DOI in the development of appropriate offshore wind energy. Additionally, a separate MOU signed by the Long Island Power Authority (LIPA), Consolidated Edison (Con Ed) and the New York Power Authority (NYPA) came shortly before, in which all agreed to engage in pre-development activities and studies of the Long Island – New York City (LI-NYC) Off Shore Wind Project.³³⁵⁶ The project will be sited approximately 13 miles off the Long Island coastline by the Rockaway Peninsula in the Atlantic Ocean and would be designed for 350 MW of generation, with the ability to expand it to 700 MW.³³⁵⁷ This MOU provides for a cost sharing mechanism among the partners of the collaborative to engage in the following: develop a business model and issue a Request For Proposals (RFP) and negotiate a Power Purchase Agreement; evaluate RFP and other technical, economic and environmental aspects of proposed offshore project; file land lease application with United States Department of the Interior’s Minerals Management Service; conduct economic, environmental, geologic, wind, equipment and visualization studies in an effort to assess the proposed off-shore wind project; and engage in a coordinated public outreach & education effort and assess public feasibility.³³⁵⁸

Similarly, NYPA is pursuing development of up to 500 megawatts of wind generating projects in the New York State waters of Lake Erie and/or Lake Ontario.

³³⁵¹ *Auction 10*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/174 (Oct. 14, 2013).

³³⁵² *Id.*

³³⁵³ Press Release, Governor Paterson, Congressman Israel and Mayor Bloomberg Announce Energy Efficiency Retrofit Stimulus Funding (Apr. 21, 2010), http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_name=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2010a%2Fpr171-10.html&cc=unused1978&rc=1194&ndi=1.

³³⁵⁴ *Id.*

¹⁵⁴ Press Release, Governor Paterson, Congressman Israel and Mayor Bloomberg Announce Energy Efficiency Retrofit Stimulus (Apr. 21, 2010), <http://www.governor.ny.gov/archive/paterson/press/042110AARANYSERDA.html>.

³³⁵⁶ *Id.*

³³⁵⁷ *Id.*

³³⁵⁸ *Id.*

NYPA received five proposals from developers on June 1, 2010 and anticipates making award announcements in early 2011.³³⁵⁹

Governor Paterson signed legislation in July 2010 requiring the oil industry to reduce the amount of sulfur in the fuel oil used to heat New York homes and businesses.³³⁶⁰ The bill amends the environmental conservation law and set an upper limit of fifteen parts per million for number two heating fuel oil for use in residential, commercial or industrial heating applications.³³⁶¹ The new measure will begin with the 2012-2013 heating season.

Three bills were signed into law in July 2010, which expand the consumer appliances for which the Department of State has the authority to set energy efficiency standards; allow natural gas utilities to implement on-bill recovery programs for their customers that make energy efficiency investments; and expand the definition of alternate energy production facilities to include kinetic energy storage devices to facilitate their siting and support of utility-scale renewable energy projects.³³⁶² The appliance standards Governor's Program Bill No. 238 S.8070³³⁶³ authorizes the Secretary of State, in consultation with the President of NYSERDA, to establish energy efficiency performance standards for portable light fixtures, bottle-type water dispensers, commercial hot food holding cabinets, portable electric spas and residential pool pumps.³³⁶⁴ The gas on-bill recovery Department of Public Service (DPS) departmental bill S.3712³³⁶⁵ will help encourage consumers to invest in energy efficiency measures by making it easy for consumers to repay loans associated with the installation of such measures. This bill will give gas utility companies the authorization to provide easy loan repayment by allowing their customers to repay the efficiency loan through their utility bill.³³⁶⁶ The energy storage DPS departmental bill S.7145³³⁶⁷ adds kinetic energy storage devices (flywheels and compressed air storage) to the alternate energy production facility definition, thereby exempting those projects of less than 80 megawatts capacity from Public Service Commission jurisdiction.³³⁶⁸

³³⁵⁹ *Id.*

³³⁶⁰ Press Release, Governor Signs Legislation Requiring Oil Industry to Provide Cleaner Heating Fuels (July 20, 2010), <http://www.governor.ny.gov/archive/paterson/press/072010GovernorSignsLegislation.html>.

³³⁶¹ *Id.*

³³⁶² Press Release, Governor Paterson Signs Three Bills to Advance Clean Energy Agenda and Forty-Five Other Bills into Law (July 21, 2010), <http://www.governor.ny.gov/archive/paterson/press/072110PatersonSignsThreeBills.html>.

³³⁶³ 2010 N.Y. Sess. Laws 222 (McKinney).

³³⁶⁴ *Climate Action Planning*, N.Y. DEP'T OF ENVTL. CONSERV., <http://www.dec.ny.gov/energy/80930.html> (Oct. 22, 2013).

³³⁶⁵ 2010 N.Y. Sess. Laws 204 (McKinney).

³³⁶⁶ Press Release, Governor Paterson Signs Three Bills to Advance Clean Energy Agenda and Forty-Five Other Bills into Law (July 21, 2010), <http://www.governor.ny.gov/archive/paterson/press/072110PatersonSignsThreeBills.html>.

³³⁶⁷ 2010 N.Y. Sess. Laws 212 (McKinney).

³³⁶⁸ *Id.*

The New York State Climate Action Plan was released in November 2010, which provides a blueprint for reducing GHG emissions 80% by 2050.³³⁶⁹ The plan details how New York can modernize and transform the State power supply, building codes and agriculture through utilizing clean energy and technology. The Climate Action Plan recommends, among other actions: accelerating the development of zero- or low-carbon sources of power, reducing reliance on petroleum and upgrading the power grid to increase the use of renewable energy; enhancing construction codes, appliance standards and consumer incentives to ensure construction of the most energy efficient, environmentally-beneficial buildings; encouraging transportation efficiency by developing low-carbon fuel standards, promoting greater use of electric-based public transport, creating rebates/incentives to encourage the sale of efficient cars and light trucks and investing in freight and high-speed rail; promoting sustainable policies in agriculture, forestry and waste sectors, including decreasing the amount of waste generated, supporting the use of renewable forms of clean energy on farms and increasing the use of low-carbon biomass fuels; and targeting research and development funds toward helping New York businesses develop low-carbon energy technologies while addressing State energy and infrastructure needs.³³⁷⁰

Governor Andrew M. Cuomo announced \$3.2 million in available grants through the New York State Energy Research and Development Authority (NYSERDA) to help farmers across the state reduce their energy use, save on operating costs, and cut GHG emissions through more efficient use of energy.³³⁷¹ The program will provide financial incentives to support 75% of the cost of electricity and gas efficiency investments. Farms that are eligible for the grants include: orchards, dairies, vineyards, maple producers, egg and poultry farms, grain, specialty crops, and others. Upgrades covered in the grants include: process improvements, lighting upgrades, and high-efficiency fan, pump, and motor systems, and other measures. Small farms could be eligible for free energy audits to assist in identifying energy efficiency projects.³³⁷²

On December 6, 2010, NYSERDA announced the launch of a cash incentive program to increase the building and certification of new green homes in New York State, as well as major green renovations of existing homes.³³⁷³ The Green Residential Building Program offers incentives starting at \$5,125 for single-family homes and \$13,375 for an 11-unit building, and eligible buildings must be certified as Silver or higher through the National Green Building Standard, LEED (Leadership in Environment

³³⁶⁹ Press release, Governor Paterson Releases Climate Action Plan (Nov. 9, 2010), <http://readme.readmedia.com/Governor-Paterson-Releases-Climate-Action-Plan/1770902>.

³³⁷⁰ *Id.*

³³⁷¹ Press Release, Office of the Governor. Governor Cuomo Announces Grant Program to Help Farmers reduce Energy Usage, Control Costs (Jan. 6, 2011), <http://www.governor.ny.gov/press/010611grantprogram>.

³³⁷² *Id.*

³³⁷³ Press Release, NYSERDA Announces Cash Incentive Program to Spur Building and Certification of New Green Homes in New York State, Major Green Renovations to Existing Homes (Dec. 6, 2010), <http://www.nyserda.ny.gov/About/Newsroom/2010-Announcements/2010-12-06-NYSERDA-Spurs-New-Green-Homes-in-NYS.aspx?p=1>.

and Energy Design) for Homes or LEED for New Construction.³³⁷⁴

The Green Jobs-Green NY loan program was launched in December 2010 through the Green Jobs-Green New York Act, and will create green jobs by increasing investments in energy-efficiency improvements in residential homes and small commercial, not-for-profit and multifamily buildings.³³⁷⁵ The program is funded mostly through auctioning carbon emission credits through RGGI, at \$112 million, as well as through a \$18.6 million grant from the U.S. Department of Energy. Both grants will be used to leverage private investment.³³⁷⁶

2011: Renewable Energy, Energy Efficiency, Greenhouse Gas Reduction, Transportation/Fuels, and Climate Change Adaption

In January 2011, NYSERDA announced the availability of approximately \$250 million for the development of a broad range of renewable energy generation projects.³³⁷⁷ The funds are supported by New York's Renewable Portfolio Standard (RPS), which has funded 39 large-scale renewable electricity generators that are collectively expected to provide 4.3 million megawatt-hours of energy per year. As a result of the RPS program, New York's wind capacity in operation is almost 25 times greater than it was prior to the launch of the program, and New York was ranked first in the Northeast and eighth nationally in installed wind capacity in 2010.³³⁷⁸

The Green Grocer Initiative, launched in March 2011, will partner grocers with NYSERDA technical consultants to help grocers, supermarkets, food co-ops and convenience stores increase their energy efficiency and reduce their electricity bills. The technical consultants will assist in finding energy efficiency solutions, such as upgrades or replacements to inefficient refrigeration equipment.³³⁷⁹

The eleventh RGGI auction was held on March 9, 2011.³³⁸⁰ The auction sold 41,995,813 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance and 2,144,710 allowances of the 2012 vintage at a clearing price of \$ 1.89 per allowance.³³⁸¹

³³⁷⁴ *Id.*

³³⁷⁵ Press Release, Governor Paterson Announces Program to Finance Energy Efficiency Work and Create Jobs in Green Economy (Dec. 9, 2010), <http://www.governor.ny.gov/archive/paterson/press/120910EnergyEconomy.html>.

³³⁷⁶ *Id.*

³³⁷⁷ Press Release, New York State Energy Research and Development Authority and Public Service Commission Announce \$250 Million for Renewable Energy Projects (Jan. 24, 2011), <http://www.nyserderda.ny.gov/About/Newsroom/2011-Announcements/2011-01-24-NYSERDA-and-PSC.aspx?p=1>.

³³⁷⁸ *Id.*

³³⁷⁹ Press Release, Grocers Can Go Green and Save Green with Support from NYSEDA (Mar. 8, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-03-08-Grocers-Can-Go-Green-and-Save-Green.aspx>.

³³⁸⁰ Auction 11, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/108 (Oct. 14, 2013).

³³⁸¹ *Id.*

The twelfth RGGI auction was held on June 8, 2011.³³⁸² The auction sold 12,537,000 allowances of the 2011 vintage at a clearing price of \$1.89 and 943,000 allowances of the 2012 vintage at a clearing price of \$1.89 per allowance.³³⁸³

The thirteenth RGGI auction was held on September 7, 2011 and the auction sold 7,487,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.³³⁸⁴

The fourteenth RGGI auction was held on December 7, 2011 and the auction sold 27,293,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.³³⁸⁵

In April 2011, NYSERDA launched New York's first incentive program for solar thermal systems, which heat water through solar power.³³⁸⁶ The \$25 million program will run for five years and will provide incentives of up to \$4,000 per site for residential buildings and up to \$25,000 per site for commercial and non-profit customers. In addition to this program, eligible residential, commercial and non-profit sites can apply for federal and State tax incentives to further reduce the cost of installing the solar thermal systems.³³⁸⁷

Two new NYSERDA programs were launched in April 2011 to fund the development of clean-energy technology.³³⁸⁸ The Environmentally Preferred Power Systems Technologies Program will invest up to \$6 million in developing and commercializing renewable and other environmentally-preferred power technologies throughout the state. Next, the Innovation in the Manufacturing of Clean Energy Technologies Program will grant up to \$2.5 million to companies that use innovative approaches to manufacture clean-energy technologies, such as wind turbines, solar cells and fuel cells. Both programs cover up to 50% of the cost of each project, and applications for both programs were accepted through May 2011.³³⁸⁹

As New York City phases out #6 fuel oil, NYSERDA announced the availability of \$6.5 million in incentives to help multifamily buildings to switch to cleaner fuels. The program is expected to eliminate 200,000 tons of carbon emissions over ten years.³³⁹⁰

³³⁸² *Auction 12*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/187 (Oct. 14, 2013).

³³⁸³ *Id.*

³³⁸⁴ *Auction 13*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/201 (Oct. 14, 2013).

³³⁸⁵ *Auction 14*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/204 (Oct. 14, 2013).

³³⁸⁶ *PON 2159 – Solar Thermal Incentive Program*, NYSERDA (Oct. 22, 2013), <http://www.nyserdera.ny.gov/Funding-Opportunities/Current-Funding-Opportunities/PON-2149-Solar-Thermal-Incentive-Program.aspx>.

³³⁸⁷ *Id.*

³³⁸⁸ Press Release, NYSERDA to Fund Clean Energy Companies (Apr. 7, 2011), <http://www.nyserdera.ny.gov/About/Newsroom/2011-Announcements/2011-04-07-NYSERDA-to-Fund-Clean-Energy-Companies.aspx?p=1>.

³³⁸⁹ *Id.*

³³⁹⁰ Press Release, NYSERDA Announces \$6.5 Million in Incentives to Reduce Carbon Emissions From Buildings (Apr. 11, 2011), <http://www.nyserdera.ny.gov/About/Newsroom/2011-Announcements/2011-04->

On April 12, 2011, the U.S. Environmental Protection Agency awarded NYSERDA with a 2011 ENERGY STAR® Sustained Excellence Award, in recognition of NYSERDA's leadership in energy efficiency and GHG emissions reduction. More than 17,000 organizations participate in the ENERGY STAR® program, and award winners are selected from among these participating organizations.³³⁹¹

NYSERDA launched the FlexTech Benchmarking Pilot program in April 2011 in order to help commercial and multifamily buildings increase their energy efficiency and decrease their costs. Eligible participants will receive up to \$7,000 in energy benchmarking and onsite energy assessments, as well as recommendations on low-cost upgrades. For projects that require more than \$7,000, the applicant will cover the additional costs.³³⁹²

On April 21, 2011, NYSERDA announced that it will invest \$20 million in combined heat and power generation projects designed to improve energy efficiency at nineteen facilities in New York City and upstate New York.³³⁹³ An additional \$68 million will be leveraged in private investment. Combined heat and power (CHP) is a clean-energy technology process also known as "cogeneration." When power is generated by burning a fuel, it is typically wasted by escaping through a chimney or smokestack; CHP, by comparison, reclaims that heat, thus improving a building's energy efficiency. The program will pay between 30 to 50% of a project's cost, or up to \$2 million.³³⁹⁴

New York State's first incentive program for solar thermal systems was launched by NYSERDA on April 5, 2011. Solar thermal systems produce hot water from solar power, and the 5-year, \$25 million program will provide incentives of up to \$4,000 for single- and multi-family residences and up to \$25,000 for commercial and non-profit customers to install the technology. Additional funds are available through federal incentives programs.³³⁹⁵

11-\$6M-in-Incentives-to-Reduce-Building-Carbon-Emissions.aspx.

³³⁹¹ Press Release, EPA Recognizes NYSERDA With 2011 ENERGY STAR Sustained Excellence Award (Apr. 12, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-04-12-EPA-Recognizes-NYSERDA-with-Sustained-Excellence-Award.aspx>.

³³⁹² Press Release, NYSERDA Announces Benchmarking Initiative to Help Commercial and Multifamily Building Owners Reduce Energy Use, Control Costs (Apr. 20, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-04-20-Benchmarking-Initiative-Helps-Buildings-Reduce-Energy.aspx>.

³³⁹³ Press Release, NYSERDA Invests \$20 Million in Combined Heat and Power Projects (Apr. 21, 2011), [http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-04-21-NYSERDA-Invests-\\$20M-in-Combined-Heat-and-Power-Projects.aspx](http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-04-21-NYSERDA-Invests-$20M-in-Combined-Heat-and-Power-Projects.aspx).

³³⁹⁴ *Id.*

³³⁹⁵ Press Release, NYSERDA Launches NYS First Solar Thermal Incentive Program (Apr. 5, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-04-05-NYSERDA-Launches-NYS-First-Solar-Thermal-Incentive-Program.aspx>.

On April 7, 2011, NYSERDA announced the launch of two new clean-energy technology investment programs, designed to encourage the manufacture of clean-power products and help companies use less electricity during the manufacturing process.³³⁹⁶

The New York State Department of Transportation (NYSDOT) and NYSERDA joined forces in April 2011 to provide funding to thirteen organizations and municipalities for research on energy-saving technologies in the transportation sector designed to reduce GHG emissions. The NYSDOT provided \$1 million in funding, while NYSERDA provided \$500,000, with an additional \$1.6 million leveraged in recipient cost-sharing.³³⁹⁷

On April 21, 2011, NYSERDA announced that it would invest \$20 million in combined heat and power (CHP) projects in facilities throughout New York City and upstate New York, with an additional \$68 million in funding leveraged from private investors. CHP technology generates heat or hot water for buildings by reclaiming heat that is produced by burning fuels, such as natural gas, and that would normally be released to the atmosphere. The program will provide 30 to 50% of a project's cost, or up to \$2 million.³³⁹⁸

The New York State Energy Research and Development Authority announced an extension of New York's On-Site Wind Turbine Incentive Program on May 3, 2011, as a result of strong public interest in the program.³³⁹⁹ The extension pushes back the program deadline by six months and provides an additional \$1.4 million in incentives, through which homeowners, farmers, businesses and municipalities can receive financial assistance of up to \$400,000 to install wind turbines on their properties. NYSERDA has provided \$3.6 million in incentives through the program thus far, with additional \$5.2 million in private investment.³⁴⁰⁰

Fourteen constituency-based organizations (CBO) were selected by NYSERDA in May 2011 to receive a total of \$5,148,719 in awards to support grassroots outreach to encourage energy efficiency improvements and participation in green jobs training opportunities. The funds are distributed through the Green Jobs Green NY (GJGNY)

³³⁹⁶ Press Release, NYSERDA to Fund Clean Energy Companies (Apr. 7, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-04-07-NYSERDA-to-Fund-Clean-Energy-Companies.aspx>.

³³⁹⁷ Press Release, NYSDOT, NYSERDA Promote Research to Reduce Transportation-Related Greenhouse Gas Emissions (Apr. 12, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-04-12-NYSDOT-NYSERDA-Promote-Research-on-Transportation-Emissions.aspx>.

³³⁹⁸ Press Release, NYSERDA Invests \$20M in Combined Heat and Power Projects (Apr. 21, 2011), [http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-04-21-NYSERDA-Invests-\\$20M-in-Combined-Heat-and-Power-Projects.aspx](http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-04-21-NYSERDA-Invests-$20M-in-Combined-Heat-and-Power-Projects.aspx).

³³⁹⁹ Press Release, NYSERDA Extends On-Site Wind Turbine Incentive Program Following Strong Interest from Public (May 3, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-05-03-NYSERDA-Extends-On-Site-Wind-Turbine-Incentive-Program.aspx>.

³⁴⁰⁰ *Id.*

program, and the CBO's will outreach to small businesses, non-profit organizations, homeowners, and multi-family building owners.³⁴⁰¹

On June 2, 2011, Governor Cuomo announced that NYSERDA and the Public Service Commission awarded \$191 million through New York's Renewable Portfolio Standards (RPS) to seventeen renewable energy projects throughout New York State. The projects are expected to have a 20-year life and to result in \$500 million in economic benefits to the State, and they will produce one million megawatt hours per year, or enough electricity to power an estimated 145,000 homes.³⁴⁰²

On July 19, 2011, NYSERDA announced that it is making available \$5.6 million in Green Jobs Green NY (GJGNY) funds to provide small businesses and non-profit organizations with access to customized and objective energy audits, as well as an additional \$13 million in low-interest loans to small businesses and not-for-profits for financing qualified energy-efficiency improvements.³⁴⁰³

International Electronic Machines of Troy received \$250,000 from NYSERDA in July 2011 to continue developing equipment that inspects truck wheels and tires using infrared technology, which has the potential to save fuel and reduce GHG emissions.³⁴⁰⁴

NYSERDA announced in August 2011 that it has partnered with Clarkson University, Advanced Micro Devices, Inc., and other businesses, to demonstrate a more energy-efficient model for data centers and renewable energy operations, which normally consume large amounts of electricity.³⁴⁰⁵

On August 3, 2011, NYSERDA announced that it awarded \$20 million to large-scale solar power projects in New York City and the Lower Hudson Valley. The funding is part of a \$150 million, 5-year funding program.³⁴⁰⁶

³⁴⁰¹ Press Release, NYSERDA Awards Contracts to 14 Constituency-Based Organizations to Spur Energy-Efficiency Improvements and Green Jobs Training (May 25, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-05-25-NYSERDA-Spurs-Energy-Efficiency-Green-Jobs.aspx>.

³⁴⁰² Press Release, Governor Cuomo Announces \$191 Million in Project Awards to Increase Renewable Energy in New York State (June 2, 2011), [http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-06-02-Cuomo-Announces-\\$191M-for-Renewable-Energy.aspx](http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-06-02-Cuomo-Announces-$191M-for-Renewable-Energy.aspx).

³⁴⁰³ Press Release, NYSERDA Expands Programs for Small Businesses and Not-for-Profits (July 19, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-07-19-NYSERDA-Expands-Programs-for-Small-Busn-and-NFP.aspx>.

³⁴⁰⁴ Press Release, International Electronic Machines of Troy Receives \$250K from NYSERDA to Work on Infrared Truck Inspection Systems (July 28, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-07-28-IEM-Corp-Infrared-Truck-Inspection-Systems.aspx>.

³⁴⁰⁵ Press Release, NYSERDA Partners with Clarkson AMD Others to Demonstrate Wind-Powered Data Centers (Aug. 1, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-08-01-NYSERDA-Clarkson-AMD-to-Demonstrate-Wind-Powered-Data-Centers.aspx>.

³⁴⁰⁶ Press Release, NYSERDA-PSC Announce \$20 Million 1st Round \$150 Million Program Fund Solar Energy NYC-Westchester (Aug. 3, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-08-03-NYSERDA-PSC-Announce-150-Mil-Program-Solar-NYC-Westchester.aspx>.

In September 2011, NYSERDA announced the launch of a new \$3 million rebate program for the purchase of high-efficiency appliances, including a \$350 rebate for refrigerators and a \$250 for clothes washers. Appliances purchased after September 2, 2011, are eligible for the rebates, which will be awarded on a first-come, first-served basis.³⁴⁰⁷

Enter-G-Rotors received \$725,000 from NYSERDA in September 2011 to field-test equipment that generates electricity from low-temperature heat waste produced during the manufacturing process at two New York factories. The equipment may be able to lower electricity demand and operating costs for industries, as it can generate 40-60 kilowatt hours from heat waste that would otherwise be released to the atmosphere.³⁴⁰⁸

On September 20, 2011, NYSERDA announced that it would award a total of \$150 million to renewable energy projects generating electricity through wind, hydroelectric, biomass, or other clean energy sources, through New York's Renewable Portfolio Standard (RPS) program.³⁴⁰⁹ This is the second request for solicitations under a program that is expected to last several years. Under the RPS program, NYSERDA has thus far awarded funding to 51 large-scale renewable electricity generators that can power up to 760,000 homes per year, and it is estimated that the current projects will provide \$2.1 billion in direct economic benefits to New York over the next twenty years.³⁴¹⁰

NYSERDA awarded \$1 million to Paper Battery Co. in September 2011 for the development of an ultra-thin ultracapacitor device, which is as thin as a piece of paper but can store energy and release it in short bursts. The device has a variety of applications for the clean energy industry, including for hybrid cars and flexible solar panels. Paper Battery Co. and other funding partners will match the grant with \$1.4 million.³⁴¹¹

On October 6, 2011, NYSERDA awarded a total of \$1.8 million to six contractors under the Building Envelope Strategies for Advancing Deep-Energy Retrofits program. The contractors will use the funds to continue developing techniques to make older New York homes more energy-efficient at a reasonable cost.³⁴¹²

³⁴⁰⁷ Press Release, NYSERDA Announces New \$3 Million Residential Appliance Rebate Program to Begin Sep 2, 2011 (Aug. 24, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-08-24-NYSERDA-Announces-New-Residential-Appliance-Rebate-Program.aspx>.

³⁴⁰⁸ Press Release, NYSERDA Awards \$725,000 to Enter-G-Rotors to Demonstrate Low-Temperature Waste-Heat Production (Sept. 6, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-09-06-NYSERDA-Awards-725K-to-EnerG-Rotors.aspx>.

³⁴⁰⁹ Press Release, NYSERDA and Public Service Commission Announce \$150 Million for Renewable Energy Projects (Sept. 20, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-09-20-NYSERDA-and-PSC-150M-for-Renewable-Energy-Projects.aspx>.

³⁴¹⁰ *Id.*

³⁴¹¹ Press Release, NYSERDA Provides \$1 Million to Paper Battery Co. of Troy for Work on Ultra-Thin Ultracapacitor Device (Sept. 26, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-09-26-Paper-Battery-Co-Work-on-Ultra-Thin-Ultracapacitor-Device.aspx>.

³⁴¹² Press Release, NYSERDA Project Goes Deep to Dramatically Cut Energy Use in Older Homes (Oct. 6, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-10-06-NYSERDA-Project-To-Dramatically-Cut-Energy-Use-in-Older-Homes.aspx>.

Four Constituency-Based Organizations (CBO) and coalitions across New York City were selected in October 2011 to receive a total of \$850,000 in grants from NYSERDA to educate the public at the grassroots level about free and reduced-cost home energy assessments for residents, free energy audits for public buildings used by non-profit organizations and small businesses, clean energy training opportunities, and low-cost financing for energy-efficiency improvements.³⁴¹³

On October 13, 2011, NYSERDA awarded \$250,000 to Power Drives, Inc. in order to demonstrate the company's locomotive warming system, which reduces energy use and GHG emissions by keeping train engines warm in cold weather and saving fuel.³⁴¹⁴ While train operators normally keep the train engines running during cold weather to keep the engines from freezing, Power Drives' technology keeps the engines warm and allows them to be shut off. The technology will be made available to six freight railroads throughout the state, and \$161,962 in matching funding will be provided by Power Drives and the participating railroads.³⁴¹⁵

New York was one of nine states to join the Northeast Electric Vehicle Network in October 2011.³⁴¹⁶ The network will help the states to increase economic growth and help the states reduce their GHG emissions, and focuses on building infrastructure for clean vehicles and fuels, as well as attracting public and private investment to support the infrastructure development. Participating states include Connecticut, Delaware, Washington, D.C., Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island and Vermont.³⁴¹⁷ The network is part of the Transportation and Climate Initiative, a regional collaboration between twelve Northeast and Mid-Atlantic states that aims to reduce GHG emissions from the transportation sector and develop the clean energy economy.³⁴¹⁸ The TCI was launched in June 2010 and is facilitated by the Georgetown Climate Center.³⁴¹⁹ A nearly \$1 million Electric Vehicle Readiness Grant from the U.S. Department of Energy was awarded to NYSERDA on behalf of the TCI in September 2010, and will be used to fund the Network's efforts to deploy electric vehicles throughout the Northeast.³⁴²⁰

³⁴¹³ Press Release, NYSERDA Awards Contracts to NYC Constituency-Based Organizations to Spur Energy Efficiency and Clean Energy Jobs Training (Oct. 6, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-10-06-Constituency-Based-Grassroots-Outreach-NYC.aspx>.

³⁴¹⁴ Press Release, PowerDrives, Inc., Receives Funding from NYSERDA to Demonstrate Locomotive Warming System (Oct. 13, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-10-13-Power-Drives-Inc-Receives-Funding-For-Locomotive-Warming-System.aspx>.

³⁴¹⁵ *Id.*

³⁴¹⁶ *Northeast States Form Regional Electric Vehicle Network*, GEORGETOWN CLIMATE CENTER, <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network> (Oct. 17, 2011).

³⁴¹⁷ *Id.*

³⁴¹⁸ *Transportation and Climate Initiative*, GEORGETOWN CLIMATE CENTER, <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative> (Feb. 25, 2011).

³⁴¹⁹ *Id.*

³⁴²⁰ *Northeast States Form Regional Electric Vehicle Network*, GEORGETOWN CLIMATE CENTER, <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network> (Oct. 17, 2011).

The American Council for an Energy Efficient Economy recognized New York's national leadership in energy efficiency policy and program implementation in October 2011, naming the State third in the country in the 2011 State Energy Efficiency Scorecard.³⁴²¹

A \$300,000 NYSERDA grant to New West Technologies will help the company to demonstrate the financial and environmental savings that can be realized by investing in equipment to support electric-powered refrigerator trucks. The program will target retail locations where trailers remain outside for extended periods, and will begin with the installation of equipment in a Hannaford supermarket distribution center. An additional \$171,000 will be provided by NWT and other project partners.³⁴²²

On November 8, 2011, NYSERDA announced the availability of \$57 million in funding through its Renewable Portfolio Standard for the development of anaerobic digester technology, which generates electricity from decaying organic materials.³⁴²³ The technology can be applied on farms, where it has multiple benefits, including reducing odors and producing fertilizer from the remaining organic matter, as well as in some industrial settings. Up to \$1 million will be available per applicant, and NYSERDA will invest the funds at \$11 million per year for five years.³⁴²⁴

NYSERDA awarded \$200,000 to Solid Cell, Inc., a manufacturer of solid-oxide fuel cells and equipment in November 2011, to investigate the manufacturing of a vital fuel cell part. NYSERDA previously awarded Solid Cell, Inc., a \$250,000 grant to set up its development facility, and this new grant will be matched with funds from RocCera and Alfred University.³⁴²⁵

In November 2011, NYSERDA released a report, *Responding to Climate Change in New York State*, prepared by Columbia University, the City University of New York, and Cornell University.³⁴²⁶ The report assesses potential climate change impacts and adaptation measures in eight sectors for the State of New York: water resources, coastal zones, ecosystems, agriculture, energy, transportation, telecommunications, and public

³⁴²¹ Press Release, National Study Ranks New York Among top Three States for Energy Efficiency (Oct. 21, 2011), <http://www.nyserderda.ny.gov/About/Newsroom/2011-Announcements/2011-10-21-National-Study-Ranks-New-York-Among-Top-Three-States-for-Energy-Efficiency.aspx>.

³⁴²² Press Release, NYSERDA Awards \$300,000 to New West Technologies for Electric Trailer Infrastructure; Hannaford Supermarket to Deploy Technology (Oct. 25, 2011), <http://www.nyserderda.ny.gov/About/Newsroom/2011-Announcements/2011-10-25-NYSERDA-Awards-New-West-Technologies-for-Electric-Trailer-Infrastructure.aspx>.

³⁴²³ Press Release, NYSERDA Funding Helps New York Invest in Energy from Organic Waste (Nov. 8, 2011), <http://www.nyserderda.ny.gov/About/Newsroom/2011-Announcements/2011-11-08-NYSERDA-Funding-Helps-New-York-Invest-in-Energy-from-Organic-Waste.aspx>.

³⁴²⁴ *Id.*

³⁴²⁵ Press Release, NYSERDA Awards \$200K to Pursue Manufacturing of Vital Fuel Cell Component (Nov. 22, 2011), <http://www.nyserderda.ny.gov/About/Newsroom/2011-Announcements/2011-11-22-NYSERDA-Awards-200K-to-Solid-Cell-To-Pursue-Manufacturing-of-Vital-Fuel-Cell-Component.aspx>.

³⁴²⁶ RESPONDING TO CLIMATE CHANGE IN NEW YORK STATE SYNTHESIS REPORT AND FULL REPORT, NYSERDA (Nov. 17, 2011), <http://www.nyserderda.ny.gov/About/Newsroom/2011-Announcements/2011-11-17-Responding-to-Climate-Change-in-New-York-State-Synthesis-Report-and-Full-Report.aspx>.

health. In addition, the report analyzes the climate risks, vulnerabilities and adaptation strategies for seven state regions.³⁴²⁷

The City University of New York, on behalf of New York City, won a “SunShot” award from the U.S. Department of Energy in December 2011.³⁴²⁸ The SunShot NY program is designed to streamline the photovoltaic installation approval process, making solar energy more accessible to city residents and businesses.³⁴²⁹ Phase I of the project will create an online multi-agency permit tracking portal.³⁴³⁰ CUNY will create a real time dashboard making energy performance data and trends available to all users.³⁴³¹ Phase II will expand the project to other regions of the state.³⁴³²

Rochester Institute of Technology received \$170, 581 in NYSERDA incentives for the installation of energy efficient upgrades in December 2011.³⁴³³ By installing a high-efficiency HVAC system, high-efficiency lighting and premium-efficiency motors, RIT not only earned LEED Platinum certification but also was able to reduce its energy needs by 360,085 kilowatt hours annually.³⁴³⁴

In December 2011, NYSERDA announced that funding was provided to Syracuse University’s South Side Innovation Center to create a six-month pilot program to train students for energy efficient entrepreneurship, who, in turn, can create jobs in the state that reduce energy use and GHG emissions.³⁴³⁵ An award of \$24,000 from NYSERDA is funding training development and implementation of the program.³⁴³⁶

On December 15, 2011, the New York State Public Service Commission (PSC) approved the Stony Creek Wind Farm, located in Orangeville, which will consist of up to

³⁴²⁷ RESPONDING TO CLIMATE CHANGE IN NEW YORK STATE: TECHNICAL REPORT, NYSERDA iii (2011), <http://www.nyserda.ny.gov/Publications/Research-and-Development/Environmental/EMEP-Publications/~media/Files/Publications/Research/Environmental/EMEP/climaid/11-18-response-to-climate-change-in-nys-introduction.ashx>.

³⁴²⁸ Press Release, NYSERDA, NYC Wins Department of Energy “SunShot” Award to Make Solar Energy Cost Competitive (Dec. 9, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-12-09-NYC-Wins-Department-of-Energy-SunShot-Award-to-Make-Solar-Energy-Cost-Competitive.aspx>.

³⁴²⁹ *Id.*

³⁴³⁰ *Id.*

³⁴³¹ *Id.*

³⁴³² *Id.*

³⁴³³ Press Release, NYSERDA, Rochester Institute of Technology Receives High Performance Energy Efficiency Award from NYSERDA (Dec. 5, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-12-05-RIT-Receives-High-Performance-Energy-Efficiency-Award.aspx>.

³⁴³⁴ *Id.*

³⁴³⁵ Press Release, NYSERDA, Syracuse University’s South Side Innovation Center Receives Support from NYSERDA to Train Aspiring Entrepreneurs for Clean Energy Sector (Dec. 13, 2011), <http://www.nyserda.ny.gov/About/Newsroom/2011-Announcements/2011-12-13-South-Side-Innovation-Center-to-Train-Aspiring-Entrepreneurs.aspx>.

³⁴³⁶ *Id.*

59 wind turbines.³⁴³⁷ Stony Creek Energy LLC was also authorized to start development of the site's substation and interconnection with NYSEG's transmission line.³⁴³⁸

2012: Renewable Energy, Energy Efficiency, Greenhouse Gas Reduction, Transportation/Fuels, American Recovery & Reinvestment Act (ARRA), Climate Change Adaption, Green Technology, and Market Based Solutions

In January 2012, Governor Cuomo announced the launch of the On-Bill Recovery Financing program, which allows homeowners to get a loan to retrofit their homes while allowing payback of the loans directly with the energy savings made on the consumer's monthly utility bills.³⁴³⁹ The program, administered by NYSERDA, covers projects that improve energy efficiency in the home, such as insulation, the air-sealing of energy-efficient furnaces, boilers and water heaters, and the installation of energy-efficient lighting and appliances. On January 5, NYSERDA announced additional funding available for EmPower New York, totaling \$46 million available to eligible residents who wish to reduce their household energy use or improve energy efficiency.³⁴⁴⁰

On January 10, 2012, NYSERDA and the Public Service Commission (PSC) awarded \$30 million to large-scale solar energy projects in Westchester and New York City, funded under the New York Renewable Portfolio Standard.³⁴⁴¹ The funds were awarded to solar installers and developers, and real estate owners and projects are expected to be installed within a wide variety of facilities to wish to generate power for on-site use.³⁴⁴² NYSERDA also announced the awarding of \$1 million to several New York City and Long Island manufacturers that have developed efficient technologies that create and store energy.³⁴⁴³ The goal of supporting these projects is to enhance the green technology economy in New York State.³⁴⁴⁴

³⁴³⁷ *Stony Creek Wind Farm Approved*, NEW YORK STATE PUBLIC SERVICE COMMISSION, (Dec. 15, 2011), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/DD009AF34B61791885257967005CADF0/\\$File/pr11106.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/DD009AF34B61791885257967005CADF0/$File/pr11106.pdf?OpenElement).

³⁴³⁸ *Id.*

³⁴³⁹ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces Low Cost Financing Now Available for Homeowners to Make Energy Efficient Upgrades (Jan. 31, 2012), <http://www.governor.ny.gov/press/1312012energyupgrade>.

³⁴⁴⁰ Press Release, NYSERDA, Program to Help Low-Income New Yorkers Reduce Energy Bills Gets Increased Funding through NYSERDA in 2012 (Jan. 5, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-01-05-Program-to-Help-Low-Income-New-Yorkers-Reduce-Energy-Bills-Gets-Increased-Funding.aspx>.

³⁴⁴¹ Press Release, NYSERDA, PSC Award \$30 Million for NYC/Westchester Solar Projects; Five-Year Program to Grow Renewable Energy Use (Jan. 10, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-01-10-NYSERDA-PSC-Award-30-Million-for-NYC-Westchester-Solar-Projects.aspx>.

³⁴⁴² *Id.*

³⁴⁴³ Press Release, NYSERDA, NYSERDA Funds \$1 Million to Develop Clean Energy Power Systems for NYC and Long Island Manufacturers (Jan. 12, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-01-12-NYSERDA-Funds-1-Mil-Develop-Clean-Energy-Power-Systems-For-NYC-Long-Island-Manufacturers.aspx>.

³⁴⁴⁴ *Id.*

On January 18, 2012, New York Department of Environmental Conservation (DEC) release a proposed rule to limit carbon dioxide emissions from new electric power facilities over 25 MW and at existing facilities that undergo expansions over 25 MW.³⁴⁴⁵ The Power NY Act of 2011 requires a final rule by August 2012.³⁴⁴⁶

In January 2012, both Rensselaer Polytechnic Institute and the Jacob Burns Film Center received High Performance Energy Efficiency Award incentives from NYSERDA; RPI will be able to reduce energy costs by \$223,513 per year at its new East Campus Athletic Village and Jacob Burns Film Center will be able to reduce energy costs at its new Media Arts Lab by \$16,375 per year through the use of energy efficient technology.³⁴⁴⁷

In February 2012, NYSERDA and the New York State Department of Transportation awarded ten New York organizations and universities to fund research on technology that can reduce GHG emissions in transportation.³⁴⁴⁸ The focus of the research is on projects that reduce single passenger vehicle occupancy rates, improving fuel efficiency through innovative means, promoting alternative transportation especially in upstate areas, and identifying new freight delivery strategies in urban areas.³⁴⁴⁹ National Grid and NYSERDA's Energy Efficiency for Health initiative announced an award of \$610,000 to Glen Falls Hospital, which expects to save approximately 2.1 million kilowatt hours of electricity and 189 thousand therms of natural gas through improvements to lighting, cooling, pumping and air distribution.³⁴⁵⁰ On February 21, Buffalo-area companies ENrG, Inc. and TAM Ceramics were awarded a total of \$700,000 by NYSERDA to study energy efficiency improvements in their ceramic products that serve respectively as components of fuel cells and materials that can transfer waste heat into electricity.³⁴⁵¹

³⁴⁴⁵ *New York Proposes Greenhouse Gas Standards for Power Plants*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, (Apr. 29, 2013), <http://www.c2es.org/us-states-regions/news/2012/new-york-proposes-greenhouse-gas-emission-standards-power-plants>.

³⁴⁴⁶ *Id.*

³⁴⁴⁷ Press Release, NYSERDA, Rensselaer Polytechnic Institute Receives High Performance Energy Efficiency Award from NYSERDA (Jan. 19, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-01-19-Rensselaer-Polytechnic-Institute-Receives-High-Performance-Energy-Efficiency-Award.aspx>; Press Release, NYSERDA, Jacob Burns Film Center Receives High Performance Energy Efficiency Award from NYSERDA (Jan. 25, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-01-25-Jacobs-Burns-Film-Center-Receives-High-Performance-Energy-Efficiency-Award.aspx>.

³⁴⁴⁸ Press Release, NYSERDA, 10 Organizations Receive Funding to Explore Technology to Reduce Transportation-Related Greenhouse Gas Emissions (Feb. 2, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-02-02-Funding-to-Explore-Technology-to-Reduce-Transportation-Related-Greenhouse-Gas-Emissions.aspx>.

³⁴⁴⁹ *Id.*

³⁴⁵⁰ Press Release, NYSERDA, National Grid and NYSERDA Initiative Cuts Glens Falls Hospital Energy Costs by More Than \$300,000 (Feb. 17, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-02-17-National-Grid-and-NYSERDA-Initiative-Cuts-Glens-Falls-Hospital-Energy-Costs.aspx>.

³⁴⁵¹ Press Release, NYSERDA, NYSERDA Awards \$700,000 for Clean Energy Power Systems at Two Buffalo-Area High-Tech Companies (Feb. 21, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012->

In March 2012, \$3.5 million worth of funding provided by the Department of Energy State Energy Program through ARRA became available to New York residents seeking to purchase energy efficient appliances.³⁴⁵² The Buy Green, Save Green NYS High-Efficiency Appliance Rebate Program will award consumers \$350 per high-efficiency refrigerator and \$250 per high-efficiency clothes washer. The program will be administered by NYSERDA and will continue until funding lasts.

Also in March 2012, New York signed a memorandum of understanding (MOU) with several other Great Lakes States and federal agencies regarding offshore wind energy.³⁴⁵³ The MOU requires regulatory agencies to disclose and share their current regulatory regimes for offshore wind projects to facilitate coordination.³⁴⁵⁴

On March 13, 2012, NYSERDA announced the expansion of the HVAC Business Partners Program to include technicians providing rooftop air conditioning maintenance because a properly maintained air conditioner will improve efficiency and can save a consumer up to 30% of cooling costs.³⁴⁵⁵ The HVAC Business Partners Program is designed to educate companies in the building trade on ways to deliver an energy efficient service, and participating businesses receive incentives for each unit they service using the tools of the program.³⁴⁵⁶ On March 22, NYSERDA announced that the Family Farm group of insurance companies was able to reduce energy costs by 850,000 kilowatts of electricity and 7,000 therms of natural gas with the help of NYSERDA's FlexTech program and funding.³⁴⁵⁷

On March 15, 2012, the New York State Public Service Commission (PSC) improved financial incentives available to utilities that encourage investment in energy efficiency.³⁴⁵⁸ \$36 million for electric utilities and \$14 million for gas utilities are available over the next four years for achieving energy reduction targets.³⁴⁵⁹ The new

[Announcements/2012-02-21-NYSERDA-Awards-Two-Buffalo-Area-High-Tech-Companies-for-Clean-Energy-Power-Systems.aspx](#).

³⁴⁵² Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces \$3.5 Million Household Appliance Rebate Program (Mar. 12, 2012),

<http://www.governor.ny.gov/press/031211appliancerebateprogram>.

³⁴⁵³ Press Release, Michigan Enters Multistate Agreement Regarding Offshore Wind Energy (Mar. 30, 2012), http://www.michigan.gov/snyder/0,4668,7-277-57577_57657-274875--,00.html.

³⁴⁵⁴ *Id.*

³⁴⁵⁵ Press Release, NYSERDA, NYSERDA Announces Extension of HVAC Business Partners Program for Rooftop Air Conditioning Quality Maintenance (Mar. 13, 2012),

<http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-03-13-NYSERDA-Announces-Extension-of-HVAC-Business-Partner-Program.aspx>.

³⁴⁵⁶ *Id.*

³⁴⁵⁷ Press Release, NYSERDA, Family Farm Work with NYSERDA to Receive ENERGY STAR Rating for Energy Efficiency (Mar. 22, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-03-22-Farm-Family-Work-with-NYSERDA-to-Receive-ENERGY-STAR-Rating.aspx>.

³⁴⁵⁸ Press Release, Public Service Commission, Energy Efficiency Incentives Improved (Mar. 15, 2012), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/44D6B0DEF6DCA30852579C20065FBA0/\\$File/pr12020.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/44D6B0DEF6DCA30852579C20065FBA0/$File/pr12020.pdf?OpenElement).

³⁴⁵⁹ *Id.*

incentives are a part of New York's overall goal of reducing electricity and gas use by 15% by the year 2015.³⁴⁶⁰

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of \$1.93.³⁴⁶¹ The auction generated \$41.6 million in proceeds, which the RGGI participating states will invest in consumer-oriented energy efficiency initiatives.³⁴⁶²

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of \$1.93.³⁴⁶³ The auction generated \$41.6 million in proceeds, which the RGGI participating states will invest in consumer-oriented energy efficiency initiatives.³⁴⁶⁴

On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.³⁴⁶⁵ The auction of the 20.9 million allowances generated \$40.4 million in funds, and represents 57% of the allowances offered for sale by all nine participating states.³⁴⁶⁶ On September 7, 2012, the RGGI states announced the results of its seventeenth quarterly auction for carbon dioxide allowances.³⁴⁶⁷ The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, which represents 65% of the allowances offered for sale by all nine states.³⁴⁶⁸

On November 19, 2012, RGGI reported that RGGI investments avoided 12 million tons of carbon dioxide emissions from 2009 to 2011.³⁴⁶⁹ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement, and climate change adaptation programs.³⁴⁷⁰

During the Earth Week Cabinet Meeting in April 2012, Governor Cuomo announced several green achievements the state has made.³⁴⁷¹ Among the initiatives discussed were a \$450 million commitment to energy efficiency in state facilities, the

³⁴⁶⁰ *Id.*

³⁴⁶¹ Press Release, RGGI, RGGI Auction Sells 21.5 Million CO₂ Allowances (Mar. 16, 2012), http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

³⁴⁶² *Id.*

³⁴⁶³ Press Release, RGGI Inc., RGGI Auction Sells 21.5 Million CO₂ Allowances (Mar. 16, 2012), http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

³⁴⁶⁴ *Id.*

³⁴⁶⁵ Press Release, RGGI Inc., RGGI Auction Sells 20.9 Million CO₂ Allowances (June 8, 2012), http://www.rggi.org/docs/PR060812_Auction16.pdf.

³⁴⁶⁶ *Id.*

³⁴⁶⁷ Press Release, RGGI Inc., RGGI Auction Sells 24.5 Million CO₂ Allowances (Sept. 7, 2012), http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

³⁴⁶⁸ *Id.*

³⁴⁶⁹ Press Release, RGGI, Inc., RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings (Nov. 19, 2012), <http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

³⁴⁷⁰ *Id.*

³⁴⁷¹ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces Clean Energy and Environmental Initiatives During Earth Week Cabinet Meeting (Apr. 26, 2012), <http://www.governor.ny.gov/press/04262012earthweek>.

opening of the East Coast's first solar and wind blade testing center in Cortland and Clarkson University, respectively, the Green Initiative launched for green business innovations and the installation of solar panels at Niagara Falls State Park.³⁴⁷²

In May 2012, NYSERDA provided \$1 million in incentives to Synergy Dairy in Covington, NY to facilitate with the creation of Synergy Biogas LLC, which is New York's first plant specifically designed for the co-digestion of animal and food wastes.³⁴⁷³ The biogas created in the anaerobic digester will generate 1.4 megawatts of renewable electricity.³⁴⁷⁴ The project has also been able to divert 1.14 million gallons of food wastes from local landfills and wastewater treatment plants, reducing the load on municipal facilities.³⁴⁷⁵ On May 2, NYSERDA awarded the City of Schenectady with \$1 million toward the cost of a combined heat and power (CHP) system at the Water Pollution Control Plant.³⁴⁷⁶ The CHP system will use anaerobic digestion to produce methane, and the methane is purified and combusted to create electricity; waste heat will be recaptured from the burning of fuel in order to heat plant buildings and facilitate the waste digestion process.³⁴⁷⁷

On June 6, 2012, Governor Cuomo announced that 325 electric vehicle charging stations have been installed across New York State by municipalities and other entities.³⁴⁷⁸ In 2011, NYSERDA was awarded a Department of Energy grant on behalf of the Transportation and Climate Initiative.³⁴⁷⁹ The aim of the program is to reduce the dependence of fossil fuels, cut GHG emissions, strengthen the infrastructure that is available to electric vehicles, and promote the sale and use of electric vehicles.³⁴⁸⁰

On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.³⁴⁸¹ The auction of the 20.9 million allowances generated \$40.4 million in funds, and represents 57% of the allowances offered for sale by all nine participating states.³⁴⁸²

³⁴⁷² *Id.*

³⁴⁷³ Press Release, NYSERDA, New York's Largest On-Farm Biogas Power Project Generates Renewable Energy for Nearly 1,000 Homes (May 1, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-05-01-NY-Largest-On-Farm-Biogas-Power-Project-Generates-Renewable-Energy-for-Nearly-1000-Homes.aspx>.

³⁴⁷⁴ *Id.*

³⁴⁷⁵ *Id.*

³⁴⁷⁶ Press Release, NYSERDA, Schenectady Wastewater Plant Upgrades Generate Energy Savings, Assisted with Funding from NYSERDA (May 2, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-05-02-Schenectady-Wastewater-Plant-Upgrades-Generate-Energy-Savings.aspx>.

³⁴⁷⁷ *Id.*

³⁴⁷⁸ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces Deployment of 325 Electric Vehicle Charging Stations Across New York State (June 6, 2012), <http://www.governor.ny.gov/press/06062012Charging-Stations>.

³⁴⁷⁹ *Id.*

³⁴⁸⁰ *Id.*

³⁴⁸¹ *RGGI Auction Sells 20.9 Million CO2 Allowances*, RGGI, (June 8, 2012), http://www.rggi.org/docs/PR060812_Auction16.pdf.

³⁴⁸² *Id.*

As a part of the Cleaner, Greener Communities program, in June 2012 NYSERDA awarded regions throughout the state with funds to create regional smart growth plans for sustainability.³⁴⁸³ The regional plans will improve the environment, increase energy efficiencies and create jobs in the region.³⁴⁸⁴ Additional funds will be available through NYSERDA for specific projects that implement the regional plans so long as the projects reduce GHG emissions, create opportunities for energy efficiency savings or renewable energy development while creating jobs and other economic investments.³⁴⁸⁵

In June 2012, the Cuomo administration announced the recipients of Cleaner, Greener Communities awards.³⁴⁸⁶ The Cleaner, Greener Communities program provides competitive grants that reward municipalities that develop comprehensive regional smart growth plans.³⁴⁸⁷ The program aims to create green jobs, enhance energy efficiency and reduce regional pollution.³⁴⁸⁸ Launched in 2011, Cleaner, Greener Communities awarded \$785 million in the first year.³⁴⁸⁹ In this phase of the program, grants between \$800,000 and \$1 million were made to these municipalities: City of Albany, Onondaga County, Monroe County, Town of North Hempstead, Orange County, Otsego County, City of New York, Essex County, Tompkins County, and Allegany County.³⁴⁹⁰

In June 2012, the U.S. Department of Energy announced that New York was the recipient of \$690,000 in federal funds to be directed toward advancing energy efficiency in state buildings and facilities.³⁴⁹¹ As coordinated by NYSERDA, New York Power Authority and the New York State Office of General Services, the project is intended to condense all state-wide energy retrofit projects into a centrally-managed program.³⁴⁹² The effort is estimated to save the state \$100 million in energy costs and avoid more than eight million tons of carbon dioxide emissions.³⁴⁹³

On June 28, 2012, the Department of Environmental Conservation adopted new regulations to limit the emissions of carbon dioxide from new or expanded electric-

³⁴⁸³ See e.g. Press Release, NYSERDA, Capital District Regional Consortium Receives \$1 Million for Cleaner, Greener Communities Regional Sustainability Planning (June 25, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-06-25-Cap-Dist-Regional-Consortium-CGCRSP.aspx>.

³⁴⁸⁴ *Id.*

³⁴⁸⁵ *Id.*

³⁴⁸⁶ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Awards \$10 Million Under His Cleaner, Greener Communities Program (June 25, 2012), <http://www.governor.ny.gov/press/06252012green-programs>.

³⁴⁸⁷ *Id.*

³⁴⁸⁸ *Id.*

³⁴⁸⁹ *Id.*

³⁴⁹⁰ *Id.*

³⁴⁹¹ Energy Department Announces Building Energy Efficiency Investments in Twenty-Two States, DEP'T OF ENERGY, (June 27, 2012), <http://energy.gov/articles/energy-department-announces-building-energy-efficiency-investments-twenty-two-states>.

³⁴⁹² *Id.*

³⁴⁹³ *Id.*

generating facilities, as required by the Power NY Act of 2011.³⁴⁹⁴ The emissions regulations require facilities that have a new or expanded generating capacity of at least 25 megawatts to choose either output- or input-based limitations for the given type of combustion technology, and facilities that burn non-fossil fuels must provide for DEC to set case-specific limits.³⁴⁹⁵ The regulations, which went into effect July 12, also contain significant environmental justice provisions.³⁴⁹⁶

In July 2012, the New York Power Authority, in collaboration with NYSERDA implemented the Energy Efficiency Market Acceleration Program (EE-MAP).³⁴⁹⁷ Governor Cuomo approved \$30 million for the project.³⁴⁹⁸ The program will fund research, market development activities and demonstrations that encourage the leveraging of investments in energy efficiency technologies.³⁴⁹⁹ EE-MAP is designed to improve the market of new and existing energy efficiency projects in New York State, and to emphasize the training of engineers needed for such technology.³⁵⁰⁰

In July 2012, NYSERDA announced the expansion of the Multifamily Energy Performance Portfolio (MEPP) to include a variety of new features.³⁵⁰¹ MEPP now highlights new entry points for owners of existing buildings to take advantage of energy efficiency incentives; three distinct paths are enumerated for new construction developers to assess the best path for their particular project; incentives are now tied to the number of units in a given project, so that owners or developers can accurately predict how many incentives will apply; incentives for existing multifamily housing increased from \$600 per unit to \$1000 depending on type of heat used and whether the housing is affordable housing; and a bonus of \$300 per unit can be awarded to projects that obtain energy savings of 20% or higher.³⁵⁰²

In July 2012, the New York legislature passed a bill allowing municipalities to exempt LEED certified green buildings to a certain extent from real property taxes

³⁴⁹⁴ *DEC Adopts Ground-Breaking Power Sector Regulations to Analyze Possible Environmental Impacts and Limit CO2 Emissions from Power Plants*, N.Y. DEP'T OF ENVTL. CONSERVATION, (June 28, 2012), <http://www.dec.ny.gov/press/83269.html>.

³⁴⁹⁵ *Id.*

³⁴⁹⁶ *Id.*

³⁴⁹⁷ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces Launch of Initiative to Bring New Energy Efficient Technologies into the Marketplace (Sept. 17, 2012), <http://www.governor.ny.gov/press/09172012newenergyefficienttechnologies>.

³⁴⁹⁸ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces \$30 Million to Help Bring New Energy Efficient Technologies Into the Marketplace (July 2, 2012), <http://www.governor.ny.gov/press/070212-cuomo-energy-efficient>.

³⁴⁹⁹ *Id.*

³⁵⁰⁰ *Id.*

³⁵⁰¹ Press Release, NYSERDA, NYSERDA Expands Multifamily Building Incentive Program, Makes it Easier to Get Started on Energy Efficiency Projects (July 23, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-07-23-NYSERDA-Expands-Multifamily-Building-Incentive-Program.aspx>.

³⁵⁰² *Id.*

through local ordinance.³⁵⁰³ Only those improvements commenced on or after January 1, 2013 that exceed \$10,000 may be covered, so long as a copy of the certification is on file at the assessor's office.³⁵⁰⁴

In August 2012, Governor Cuomo announced the availability of \$107 million in funds for the NY-Sun Competitive PV Program.³⁵⁰⁵ NYSERDA sought proposals for projects producing over 50 kilowatts at commercial, industrial or municipal facilities.³⁵⁰⁶ This phase of the project expanded the geographic eligibility from metropolitan New York City to include upstate New York.³⁵⁰⁷ Individual project funds are limited to \$3 million and require private co-funding.³⁵⁰⁸ The launch of the NY-Sun program was intended to quadruple the amount of customer-installed solar power by the end of 2013.³⁵⁰⁹ Sixteen developers were awarded a total of \$30 million to finance large-scale photovoltaic systems in metropolitan New York City.³⁵¹⁰

In August 2012, NYSERDA contracted with Community Power Network of Olmstedville, Essex County and Oil Heat Associates of Long Island to deliver energy efficiency training to oil heat technicians.³⁵¹¹ The training will help the technicians fulfill a participation requirement under NYSERDA's Home Performance with ENERGY STAR® program.³⁵¹² On August 21, NYSERDA announced that, due to NYSERDA incentive funds, Tamarack Lake Electric Boat Company relocated from Canada to Rome, NY in order to produce solar power-assisted pontoon boats.³⁵¹³ The boat is expected to be able to travel 50 miles on a single charge from batteries powered by its rooftop solar array.³⁵¹⁴

³⁵⁰³ N.Y. REAL PROP. TAX § 470 (McKinney 2012), http://assembly.state.ny.us/leg/?default_fld=&bn=S01462&term=2011&Summary=Y&Actions=Y&Memo=Y&Text=Y.

³⁵⁰⁴ *Id.*

³⁵⁰⁵ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces \$107 Million Available Through NY-Sun Initiative for Large Solar Power Installations (Aug. 9, 2012), <http://www.governor.ny.gov/press/080812ny-sun>.

³⁵⁰⁶ *Id.*

³⁵⁰⁷ *Id.*

³⁵⁰⁸ *Id.*

³⁵⁰⁹ *Id.*

³⁵¹⁰ Press Release, Andrew M. Cuomo, Governor Cuomo Announces \$30 Million Awarded Through NY-Sun Initiative to Assist New York Businesses Install Solar Power (Aug. 8, 2012), <http://www.governor.ny.gov/press/08082012-nysun-initiative-30m>.

³⁵¹¹ Press Release, NYSERDA, NYSERDA Announces Workforce Training Contract to Increase Involvement of Oil Heat Industry in "Whole House" Energy Efficiency Assessments (Aug. 1, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-08-01-NYSERDA-Announces-Workforce-Training-Contract.aspx>.

³⁵¹² *Id.*

³⁵¹³ Press Release, NYSERDA, Tamarack Lake Boat Celebrates Opening of Solar-Powered Boat Facility, With Funding Help from NYSERDA (Aug. 21, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-08-21-Tamarack-Lake-Boat-Celebrates-Opening-of-Solar-Powered-Boat-Facility.aspx>.

³⁵¹⁴ *Id.*

In August 2012, the residential solar tax credit was amended to include systems installed under a lease or power purchase agreements of at least ten years in length.³⁵¹⁵ If the system is owned by a third-party, the taxpayer resident utilizing the system may claim a credit in the amount of the lease or agreement payments made in the tax year for up to fifteen years.³⁵¹⁶ The New York legislature also extended the sales tax exemption of the sale and installation of residential solar systems to include those installed on commercial sites that will not be used recreationally.³⁵¹⁷

On September 7, 2012, the RGGI states announced the results of its seventeenth quarterly auction for carbon dioxide allowances.³⁵¹⁸ The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, which represents 65% of the allowances offered for sale by all nine states.³⁵¹⁹

On September 19, 2012, NYSERDA announced the launch of the “Buy Green, Save Green Rebates for New York State Local Governments” program.³⁵²⁰ “Buy Green, Save Green” will make available \$1.1 million in funds for small municipalities to be able to purchase energy-efficient appliances and equipment, with 75¢ rebated for each dollar spent on eligible products.³⁵²¹ U.S. Department of Energy’s Energy Efficiency and Conservation Block Grants and U.S. Department of Energy State Energy Program awards made the funds possible.³⁵²² On September 26, 2012, NYSERDA funded the nearly \$1 million award presented by the Fingerlakes Regional Economic Development Council to Garlock Sealing Technologies to put toward energy efficient process improvements.³⁵²³ GST recognizes that such upgrades will improve their ultimate competitiveness and profitability in the marketplace.³⁵²⁴

In October 2012, NYSERDA awarded \$2 million among eight recipients who participated in the NY Battery and Energy Storage Technology (NY-BEST) Consortium.³⁵²⁵ The company and research center recipients have developed prototypes

³⁵¹⁵ N.Y. TAX § 606 (g-1) (McKinney 2012).

³⁵¹⁶ *Id.*

³⁵¹⁷ N.Y. TAX § 1115(hh) (McKinney 2012).

³⁵¹⁸ *RGGI Auction Sells 24.5 Million CO2 Allowances*, RGGI (Sept. 7, 2012), http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

³⁵¹⁹ *Id.*

³⁵²⁰ Press Release, NYSERDA, NYSERDA Announces \$1.1 Million Equipment Rebate Program to Help Small Municipal Governments Reduce Energy Use (Sept. 19, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-09-19-NYSERDA-Announces-Equipment-Rebate-Program.aspx>.

³⁵²¹ *Id.*

³⁵²² *Id.*

³⁵²³ Press Release, NYSERDA, Fingerlakes Regional Economic Development Council Announces Garlock Sealing Technologies Awarded Nearly \$1 Million for Energy Efficiency Projects (Sept. 26, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-09-26-Finger-Lakes-Regional-EDC-Announces-Garlock-Sealing-Technologies-Award.aspx>.

³⁵²⁴ *Id.*

³⁵²⁵ Press Release, NYSERDA, NYSERDA Awards \$2 Million to Eight NY-BEST Members to Develop Advanced Energy Storage Technologies (Oct. 15, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-10-15-NY-BEST-Members-Awarded-to-Develop-Advanced-Energy-Storage-Technologies.aspx>.

that demonstrate feasible energy storage technology, a key concept while working toward commercialization.³⁵²⁶ The recipients include Custom Electronics Inc. of Oneonta, E2TAC of Albany, GE Energy Storage of Schenectady, Graphene Devices Ltd. of Williamsville and Rochester, Ioxus Inc. of Oneonta, Paper Battery Co. of Troy, Primet Precisions Materials Inc. of Ithaca, and Urban Electric Power Inc. of New York City.³⁵²⁷ NYSERDA also announced that the Pepsi Beverages Company in Latham was able to upgrade its bottling system due in part to a \$286,000 award from NYSERDA.³⁵²⁸ Pepsi installed energy efficient blow molding equipment that will result in the reduction of 2.4 million kilowatt hours per year.³⁵²⁹

On October 18, 2012, PSC tripled the net metering cap for solar energy and other net-metering renewable energy technologies to 36 megawatts for Central Hudson Gas & Electric Corporation customers.³⁵³⁰ The move contemplates additional solar installations made as a part of the NY-Sun Initiative, whose goal was to quadruple customer-sited solar energy in New York State by 2013 and which was consequently incorporated into the Renewable Portfolio Standard.³⁵³¹ Other major utilities are expected to have their net-metering caps reviewed and adjusted if in the public interest.³⁵³² PSC also will allow Con Edison customers who have installed private combined heat and power (CHP) sources on a multi-building or campus-style setting to use that energy output to offset on-site usage.³⁵³³ Previously, CHP offsets were only allowed at single-building sites.³⁵³⁴

Utilizing ARRA funds, NYSERDA was able to award The Berry Farm in Chatham \$50,000 for two systems that will be able to deliver solar-heated water directly to greenhouse plant beds to keep winter vegetable plant roots at the optimal temperature.³⁵³⁵ The farm will be able to reduce its hot water heating costs by sixty

³⁵²⁶ *Id.*

³⁵²⁷ *Id.*

³⁵²⁸ Press Release, NYSERDA, Capital Region Economic Development Council and NYSERDA Announce Pepsi Beverages Company Investment in Latham Bottling Facility Improvements (Oct. 18, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-10-18-Pepsi-Beverages-Company-Investment.aspx>.

³⁵²⁹ *Id.*

³⁵³⁰ *Central Hudson Customers Can Install More Solar*, NEW YORK STATE PUBLIC SERVICE COMMISSION (Oct. 18, 2012), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/5D7F35CD7C1EE02285257A9B006BE5CB/\\$File/pr12077.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/5D7F35CD7C1EE02285257A9B006BE5CB/$File/pr12077.pdf?OpenElement).

³⁵³¹ *Id.*

³⁵³² *Id.*

³⁵³³ *More Flexibility for NYC Combined Heat and Power*, NEW YORK STATE PUBLIC SERVICE COMMISSION (Oct. 18, 2012), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/35102800EEE9A6C185257A9B005B5460/\\$File/pr12078.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/35102800EEE9A6C185257A9B005B5460/$File/pr12078.pdf?OpenElement).

³⁵³⁴ *Id.*

³⁵³⁵ Press Release, NYSERDA, The Berry Farm in Chatham Receives NYSERDA Funding for Solar Hot Water Systems to Heat Plants (Oct. 24, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-10-24-Berry-Farm-in-Chatham-Receives-NYSERDA-Funding-for-Solar-Hot-Water-Systems.aspx>.

percent and will be able to eliminate the emissions of 40 tons of carbon in the atmosphere.³⁵³⁶

On November 19, 2012, RGGI reported that RGGI investments avoided 12 million tons of carbon dioxide emissions from 2009 to 2011.³⁵³⁷ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement and climate change adaptation programs.³⁵³⁸

In December 2012, Governor Cuomo announced that \$250 million is now available as a part of Governor Cuomo's Energy Highway Blueprint.³⁵³⁹ The funds will help upgrade and modernize the state's aging energy infrastructure, specifically, electric generating projects that utilize wind, solar, hydroelectric and biomass, and will help eligible state utilities meet the Renewable Portfolio Standard.³⁵⁴⁰ Additional \$726 million in funds will be available to improve transmission networks to make them impervious to severe weather events such as Hurricane Sandy.³⁵⁴¹ Announced in Governor Cuomo's 2012 State of the State Address, the Energy Highway Blueprint aims to invest in new electric transmission capacity, modernize currents systems, enhance reliability and safety, leverage private investments with renewable energy projects, and study³⁵⁴² offshore wind development potentials.

The ReCharge NY program in September 2012 announced the third round of low-cost power allocations.³⁵⁴³ Private investments spurred surpassed \$2.5 billion and created over 2,000 jobs.³⁵⁴⁴ Nearly thirty megawatts of clean energy contracts were awarded.³⁵⁴⁵ In December 2012, the program announced its fourth round of low-cost power allocations.³⁵⁴⁶ Thirty-four megawatts of clean energy were distributed to state firms that

³⁵³⁶ *Id.*

³⁵³⁷ *RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings*, RGGI (Nov. 19, 2012), <http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

³⁵³⁸ *Id.*

³⁵³⁹ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces \$250 Million for Renewable Energy Projects to Add Reliable Clean Power to New York's Energy Highway (Dec. 24, 2012), <http://www.governor.ny.gov/press/12242012Clean-Power>.

³⁵⁴⁰ *Id.*

³⁵⁴¹ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces \$726 Million Transmission Upgrade Program for Advancing "Energy Highway" Blueprint (Dec. 19, 2012), <http://www.governor.ny.gov/press/12192012cuomo726milupgradeenergyhighway>.

³⁵⁴² Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Receives Plan to Modernize the State's Energy Infrastructure and Spur Billions of Dollars in Private Sector Investment (Oct. 22, 2012), <http://www.governor.ny.gov/press/10222012-modernize-energy-infrastructure>.

³⁵⁴³ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces More Than 2,000 Jobs to be Created Through Third Round of ReCharge NY Power Allocations (Sept. 24, 2012), <http://www.governor.ny.gov/press/09-24-2012-recharge-ny-power-allocations>.

³⁵⁴⁴ *Id.*

³⁵⁴⁵ *Id.*

³⁵⁴⁶ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces Fourth Round of Recharge NY Power Allocations (Dec. 19, 2012), <http://www.governor.ny.gov/press/12192012cuomoannouncesfourthroundrechargepowerallocation>.

have made significant capital investments.³⁵⁴⁷ This quarter, \$681 million in capital investments were made in exchange for low-cost seven-year clean power contracts across New York.³⁵⁴⁸ Second quarter results indicated the creation or retention of 25,000 jobs.³⁵⁴⁹ In the first quarter of the program, 600 megawatts of low-cost power allocations were awarded to 517 employers across the state, which resulted in the creation or retention of thousands of jobs.³⁵⁵⁰

On December 18, 2012, NYSERDA announced the launch of Matt Brewing Company's new biogas-to-power system, which will convert brewery wastewater into electricity through anaerobic digestion.³⁵⁵¹ NYSERDA contributed \$1 million of the \$5 million needed to launch the project.³⁵⁵² Not only will the system produce 400 kilowatts of clean energy, reducing the company's energy needs by up to 40%, but the system also has a combined-heat-and power (CHP) element in that it will recycle the brewery process waste heat to keep the digestion process at the optimum temperature.³⁵⁵³

On December 28, 2012, Governor Cuomo issued Executive Order No. 88 directing state agencies to implement measures to improve energy efficiency in state facilities to achieve a 20% reduction in energy use.³⁵⁵⁴ Affected agencies shall mark progress with benchmarking and those agencies receiving low scores shall be subject to audit.³⁵⁵⁵

2013: Green Technology, Climate Change Adaption, Energy Efficiency, Market Based Solutions, Transportation/Fuels, Renewable Energy, and Green Building

Following the so-called "Yogurt Summit" of August 2012, Governor Cuomo in February 2013 announced the availability of state funds for state dairy farmers.³⁵⁵⁶ NYSERDA will double the amount of funding available from \$1 million to \$2 million per installation of anaerobic digesters that convert biogas to electricity.³⁵⁵⁷ The digesters

³⁵⁴⁷ *Id.*

³⁵⁴⁸ *Id.*

³⁵⁴⁹ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces Second Round of Low-Cost Power Allocations to Western New York Under ReCharge New York (June 28, 2012), <http://www.governor.ny.gov/press/062812ReChargeNY-western>.

³⁵⁵⁰ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces First Round of Power Allocations for ReCharge New York Program (Apr. 25, 2012), <http://www.governor.ny.gov/press/042512ReChargeNY>.

³⁵⁵¹ Press Release, NYSERDA, Matt Brewing Co. Launches \$5 Million Biogas-to-Power Facility with Funding Assistance from NYSERDA and National Grid (Dec. 18, 2012), <http://www.nyserda.ny.gov/About/Newsroom/2012-Announcements/2012-12-18-Matt-Brewing-Company-Launches-5-Million-Biogas-to-Power-Facility.aspx>.

³⁵⁵² *Id.*

³⁵⁵³ *Id.*

³⁵⁵⁴ Directing State Agencies and Authorities to Improve the Energy Efficiency of State Buildings, New York Exec. Order No. 88, (Dec. 28, 2012), <http://www.governor.ny.gov/executiveorder/88>.

³⁵⁵⁵ *Id.*

³⁵⁵⁶ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces Initiatives to Help New York Dairy Farmers Increase Profitability and Reduce Energy Costs (Feb. 1, 2013), <http://www.governor.ny.gov/press/02012013-dairy-farmers-initiative>.

³⁵⁵⁷ *Id.*

turn organic waste produced by cows into methane, which is burned in engines to create electric energy.³⁵⁵⁸ Currently, eighteen projects are in operation while seventeen more are seeking approval.³⁵⁵⁹ Governor Cuomo also announced \$450,000 in funds in the Dairy Acceleration Program available for dairy farmers who are interested in obtaining a financial analysis and planning for energy efficiency.³⁵⁶⁰

New York, partnering with the member states of RGGI, announced an agreement to lower the emissions cap to 91 million ton emissions, with 2.5% reductions each year through 2020.³⁵⁶¹ Referencing the recent storms that the northeastern and mid-Atlantic states have suffered, Governor Cuomo in his 2013 State of the State Address stated that the states can no longer choose to ignore the reality of a changing climate.³⁵⁶² DEC Commissioner Joe Martens stated that the current cap no longer limits emissions at present, thereby necessitating the reduction.³⁵⁶³ Other RGGI program improvements include additional adjustments to the cap from 2014 to 2020 in order to account for privately banked allowances which will be deemed “old” allowances starting in 2014; the creation of a cost containment reserve of allowances which may be accessed only when the price of allowances in a given year exceeds a predetermined level; updates to the offsets program, including a protocol for forestry offsets; the decision not to reoffer unsold allowances from 2012 and 2013; the requirement that regulated entities obtain allowances for at least 50% of their emissions in each of the first two years of the three year compliance period; and developing tools to track electricity imported into participating states from non-participating states in order to address those emissions.³⁵⁶⁴ Each RGGI state will implement these measures in their respective statutory regimes.³⁵⁶⁵

In January 2013, NYSERDA announced awards to state universities under Governor Cuomo’s Build Smart NY initiative.³⁵⁶⁶ SUNY Canton, Binghamton University and SUNY Upstate Medical University received over \$1 million in total

³⁵⁵⁸ *Id.*

³⁵⁵⁹ *Id.*

³⁵⁶⁰ *Id.*

³⁵⁶¹ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces New York State Takes Action to Lower Emissions by Strengthening Regional Greenhouse Gas Initiative (Feb. 8, 2013), <http://www.governor.ny.gov/press/02082013gov-announces-nys-lower-emissions-strengthen-greenhouse-gas>.

³⁵⁶² *Id.*

³⁵⁶³ *Id.*

³⁵⁶⁴ *Id.*

³⁵⁶⁵ *Id.*

³⁵⁶⁶ Press Release, NYSERDA, NYSERDA Announces Energy Efficiency Projects at SUNY Upstate Medical University in Support of Governor Cuomo’s Build Smart NY Initiative (Jan. 28, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-1-28-NYSERDA-Announces-Energy-Efficiency-Projects-at-SUNY-Upstate-Medical-University.aspx>; Press Release, NYSERDA, NYSERDA Announces Energy Efficiency Projects at Binghamton University in Support of Governor Cuomo’s Build Smart NY Initiative (Jan. 29, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-1-29-NYSERDA-Announces-Energy-Efficiency-Projects-at-Binghamton-University.aspx>; Press Release, NYSERDA, NYSERDA Announces Energy Efficiency Projects at SUNY Canton in Support of Governor Cuomo’s Build Smart NY Initiative (Jan. 30, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-1-30-NYSERDA-Announces-Energy-Efficiency-Project-at-SUNY-Canton.aspx>.

incentives to install energy efficiency upgrades on campus.³⁵⁶⁷ The universities will save a combined \$758,000 annually on energy costs and will avoid emitting 4,240 tons of GHG emission each year.³⁵⁶⁸ In addition, D'Youville College, a private Catholic institution in Buffalo, was awarded \$155,000 to support energy efficiency projects including insulation, a water loop heat pump system, energy-efficient lighting and occupancy controls.³⁵⁶⁹ The efforts are expected to save the college approximately \$73,500 a year in energy costs and reduce annual consumption of natural gas by 4,389 Btu and electricity by 403,668 kilowatts.³⁵⁷⁰

On January 3, 2013, NYSERDA announced that a \$15 million award will fund the start of three clean-energy idea incubators at Columbia University, High Tech Rochester Inc., and the Polytechnic Institute of New York University.³⁵⁷¹ These proof-of-concept centers will allow scientists and inventors to bridge the gap between their energy efficiency ideas and business creation.³⁵⁷² After the five-year funding period, the proof-of-concept centers are expected to operate independently.³⁵⁷³

On January 10, 2013, NYSERDA announced that Primet Precision Materials of Ithaca would receive \$650,000 in Innovation in the Manufacturing of Clean Energy Technologies Program funds and New York Battery Energy Storage Technology (NY-BEST) Consortium funds.³⁵⁷⁴ Primet will use the funds to help develop an energy-efficient process to manufacture lithium-ion batteries that are used in many smart-grid applications where energy storage is necessary.³⁵⁷⁵ The end result will be to improve the performance and lower cost to consumer of lithium-ion batteries.³⁵⁷⁶ NYSERDA also awarded Regeneron Pharmaceuticals of Tarrytown incentives to install energy efficiency improvements such as demand control ventilation, occupancy sensors and high efficiency rooftop units to help reduce the facility's energy consumption.³⁵⁷⁷

³⁵⁶⁷ *Id.*

³⁵⁶⁸ *Id.*

³⁵⁶⁹ Press Release, NYSERDA, NYSERDA Support for Energy Efficiency Projects Helps D'Youville College Reduce Annual Costs by \$73,500 (Jan. 31, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-1-31-NYSERDA-Support-for-Energy-Efficiency-Projects-Helps-DYouville-College.aspx>.

³⁵⁷⁰ *Id.*

³⁵⁷¹ Press Release, NYSERDA, NYSERDA Announces New Proof-of-Concept Centers at Columbia University, NYU-Poly and High Tech Rochester to Facilitate Clean-Energy Business Growth (Jan. 3, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-1-3-NYSERDA-Announces-New-Proof-of-Concept-Centers.aspx>.

³⁵⁷² *Id.*

³⁵⁷³ *Id.*

³⁵⁷⁴ Press Release, NYSERDA, NYSERDA Awards \$650,000 to Primet Precision Materials of Ithaca to Further Work on Energy-Efficient Battery Materials Process (Jan. 10, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-1-10-NYSERDA-Awards-650000-to-Primet-Precision-Materials-of-Ithaca.aspx>.

³⁵⁷⁵ *Id.*

³⁵⁷⁶ *Id.*

³⁵⁷⁷ Press Release, NYSERDA, NYSERDA Provides \$765,000 to Regeneron Pharmaceuticals in Westchester for Energy Efficiency Improvements (Jan. 3, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-1-3-NYSERDA-Provides-to-Regeneron-Pharmaceuticals-in-Westchester.aspx>.

In February 2013, Governor Cuomo said that \$20 million in funds were available to support the installation of combined heat and power (CHP) projects.³⁵⁷⁸ Recognizing the need for reliable heat and power following natural disasters such as Hurricane Sandy, such installations will also increase everyday efficiency and competitiveness.³⁵⁷⁹ The value of CHP projects is that power is created at the consumer's site and avoids the loss of energy due to traditional long-distance transmission and distribution.³⁵⁸⁰ However, NYSEDA will only fund CHP systems that are capable of functioning during a grid outage.³⁵⁸¹ Up to \$1.5 million is available per project.³⁵⁸²

On February 13, 2013, the Brooklyn Navy Yard was awarded \$80,200 in funds in recognition of its exemplary energy performance 47% above the New York State energy code.³⁵⁸³ NYSEDA awards High Performance Building Plaques to institutions that build or renovate facilities that perform at least 30% above the energy code.³⁵⁸⁴ Installations made include new energy efficient lighting and a geothermal HVAC system.³⁵⁸⁵

On February 13, 2013, the Public Service Commission approved an increase in available maximum incentives for on-site "behind-the-meter" wind power installations, up from \$400,000 to \$1 million per installation.³⁵⁸⁶ The increase is a response to market conditions, with the goal of spurring program participation.³⁵⁸⁷

On February 14, NYSEDA announced the awarding of \$1.2 million in funds to three Capital Region companies that have demonstrated innovative energy efficiency techniques in manufacturing.³⁵⁸⁸ Recipients included Automated Dynamics of Schenectady, ThermaAura Inc. of Troy, and Ecovative Design of Green Island.³⁵⁸⁹ On

³⁵⁷⁸ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces \$20 Million for Combined Heat and Power Systems to Generate Reliable, On-Site Power (Feb. 14, 2013), <http://www.governor.ny.gov/press/02142013-20million-for-combined-heat-and-power>.

³⁵⁷⁹ *Id.*

³⁵⁸⁰ *Id.*

³⁵⁸¹ *Id.*

³⁵⁸² *Id.*

³⁵⁸³ Press Release, NYSEDA, Brooklyn Navy Yard Receives High Performance Energy Efficiency Award From NYSEDA (Feb. 13, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-2-13-Brooklyn-Navy-Yard-Receives-High-Performance-Energy-Efficiency-Award-from-NYSEDA.aspx>.

³⁵⁸⁴ *Id.*

³⁵⁸⁵ *Id.*

³⁵⁸⁶ *PSC Approves Increase in Renewable Energy Incentives*, NEW YORK STATE PUBLIC SERVICE COMMISSION (Feb. 13, 2013), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/F1CEF1E6FC9BECDB85257B110064A534/\\$File/pr13010.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/F1CEF1E6FC9BECDB85257B110064A534/$File/pr13010.pdf?OpenElement).

³⁵⁸⁷ *Id.*

³⁵⁸⁸ Press Release, NYSEDA, NYSEDA Provides \$1.2 Million to Three Capital Region Companies to Spur Commercialization of Energy-Saving Manufacturing Techniques (Feb. 14, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-2-14-NYSEDA-Provides-Millions-to-Three-Capital-Region-Companies-for-Manufacturing-Techniques.aspx>.

³⁵⁸⁹ *Id.*

February 25, 2013, NYSERDA announced \$1.4 million in funding for energy efficiency upgrades for Erie County Medical Center.³⁵⁹⁰ The funds will be used toward the installation of upgrades at the central cooling plant and efficiency measures installed at a new satellite facility.³⁵⁹¹ The combined projects are expected to cut annual energy costs by \$680,000.³⁵⁹²

In February 2013, NYSERDA announced awards to several universities for installation of energy efficiency projects. SUNY Buffalo redesigned several campus buildings to LEED standards, earning the university more than \$513,000 in energy savings and avoiding 2,600 tons in GHG emissions.³⁵⁹³ State University of New York at Albany participated in Governor Cuomo's Build Smart NY initiative, in coordination with the New York Power Authority, which committed \$4 million to the UAlbany lighting replacement project.³⁵⁹⁴ UAlbany also designed several facilities according to LEED standards to save energy costs and reduce GHG emissions.³⁵⁹⁵

On March 4, 2013, Governor Cuomo announced the awarding of \$6.4 million to help New York farmers achieve energy efficiency while remaining competitive.³⁵⁹⁶ The Agriculture Energy Efficiency Program (AEEP) within NYSERDA administered the awards.³⁵⁹⁷ The awards are available to farmers to offset the cost of projects or equipment that utilize efficient electric and natural energy.³⁵⁹⁸ However, eligibility is limited to those farms that contribute to the Systems Benefit Charge.³⁵⁹⁹ Francis Murray, the President and CEO of NYSERDA recognized that agriculture is the "heart and soul of our state and a time honored way of life for many New Yorkers."³⁶⁰⁰

In March 2013, Governor Cuomo announced the awarding of \$9 million to twelve model school districts that identified and implemented \$9 million in energy efficiency opportunities at their respective schools.³⁶⁰¹ The awards, which will be disbursed over a

³⁵⁹⁰ Press Release, NYSERDA, NYSERDA Announces \$1.4 Million in Energy Efficiency Funding for Erie County Medical Center Corp. (Feb. 25, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-2-25-NYSERDA-Announces-Energy-Efficiency-Funding.aspx>.

³⁵⁹¹ *Id.*

³⁵⁹² *Id.*

³⁵⁹³ Press Release, NYSERDA, Energy Efficiency Projects at University at Buffalo Projected at Save More Than \$513,000 in Energy Costs [sic] (Feb. 22, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-2-22-Energy-Efficiency-Projects-at-University-at-Buffalo.aspx>.

³⁵⁹⁴ Press Release, NYSERDA, Energy Efficiency Projects at UAlbany Support Governor Cuomo's Build Smart NY Initiative (Feb. 11, 2013), <http://www.nyserda.ny.gov/About/Newsroom/2013-Announcements/2013-2-11-Energy-Efficiency-Projects-At-UAlbany-Support-Governor-Cuomo.aspx>.

³⁵⁹⁵ *Id.*

³⁵⁹⁶ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces \$6.4 Million in Funding to Help Farmers Reduce Costs Through Energy Efficiency Projects (Mar. 4, 2013), <http://www.governor.ny.gov/press/03042013-funding-to-help-farmers>.

³⁵⁹⁷ *Id.*

³⁵⁹⁸ *Id.*

³⁵⁹⁹ *Id.*

³⁶⁰⁰ *Id.*

³⁶⁰¹ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Awards Education Grants to Twelve Districts That Found More Than \$9 Million in Energy Efficiency Savings and Can Serve as Models to

period of three years, are a part of the Governor's competitive education grants program.³⁶⁰² The state hopes to use these school districts as models for which other districts may follow in order to contain escalating costs.³⁶⁰³ On March 5, 2013, Governor Cuomo awarded another four districts that found \$21 million in energy efficiency opportunities in their districts.³⁶⁰⁴ In addition, NYSERDA awarded SUNY Potsdam funds totaling \$386,000 as a part of Governor Cuomo's Build Smart NY initiative.³⁶⁰⁵ Two energy efficiency projects within SUNY Potsdam will avoid 692 tons of GHG emissions every year while saving the school \$130,000 in operational costs each year.³⁶⁰⁶

On March 14, 2013, the Public Service Commission eased installation requirements for distributed generation equipment in homes and businesses in order to encourage the use of inverter-based systems that can supply up to 300 kilowatts into commercial electric grids.³⁶⁰⁷ The expedited review process will allow small-scale renewable energy technology, such as micro-hydroelectric systems, to supply direct current output that is converted into the alternating current necessary for an electric utility.³⁶⁰⁸

On April 16, 2013, an independent market monitor of RGGI confirmed that there continues to be no material concerns regarding the auction process or in the competitiveness of the secondary market for RGGI allowances.³⁶⁰⁹ During 2012, the average auction clearing price was \$1.93 for carbon dioxide allowances.³⁶¹⁰

2014: Climate Change Adaptation, Energy Efficiency, and Greenhouse Gas Reduction

On April 22, 2014, Governor Cuomo and the NYS DEC honored the first six communities in New York to attain the Climate Smart Communities (CSC)

Other Districts (Mar. 8, 2013), <http://www.governor.ny.gov/press/03082013Competitive-Education-Grants-Awarded>.

³⁶⁰² *Id.*

³⁶⁰³ *Id.*

³⁶⁰⁴ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Awards Competitive Education Grants to Four Districts That Found More Than \$21 Million in Efficiency Savings and Can Serve as Models to Other Districts (Mar. 5, 2013), <http://www.governor.ny.gov/press/03052013cuomo-awards-competitive-education>.

³⁶⁰⁵ Press Release, NYSERDA, NYSERDA Announces Energy Efficiency Projects at SUNY Potsdam Support Governor Cuomo's 'Build Smart NY' Initiative (Mar. 8, 2013), <http://www.nysenda.ny.gov/About/Newsroom/2013-Announcements/2013-3-8-NYSERDA-Announces-Energy-Efficiency-Projects-at-SUNY-Potsdam.aspx>.

³⁶⁰⁶ *Id.*

³⁶⁰⁷ *Commission Expands Access to Renewable Energy*, NEW YORK STATE PUBLIC SERVICE COMMISSION (Mar. 14, 2013), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/ACF2D8397A84E14185257B2E00593D5B/\\$File/pr13014.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/ArticlesByCategory/ACF2D8397A84E14185257B2E00593D5B/$File/pr13014.pdf?OpenElement).

³⁶⁰⁸ *Id.*

³⁶⁰⁹ *2012 Annual Market Monitor Report: In Fifth Year, RGGI CO2 Allowance Market Remains Competitive*, RGGI (Apr. 16, 2013), http://www.rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

³⁶¹⁰ *Id.*

Certification.³⁶¹¹ This voluntary program awards gold, silver, and bronze level recognition to communities that take a pledge to “to set goals; inventory emissions and develop a climate action plan; decrease energy demands and encourage renewable energy in their operations; support recycling and other climate smart solid waste management practices; promote climate protection through land use tools; develop an adaptation and resiliency plan for climate change; support a green innovation economy; inform and inspire the public; and commit to an evolving process” and track their progress towards achieving the pledge.³⁶¹² Proceeds from RGGI auctions help to fund support to communities that participate in the program.³⁶¹³ Learn more about the CSC certification program at <http://www.dec.ny.gov/energy/96511.html>.

NORTH CAROLINA

2002: Greenhouse Gas Reduction

The 2002 Clean Smokestacks Act (CSA) required North Carolina’s Division of Air Quality (DAQ) to study the potential control of CO₂ emissions from coal-fired utility plants and other stationary sources of air pollution, and issue a series of reports.³⁶¹⁴ The CSA and its mandated reports prompted actions to develop an overall Climate Action Plan (CAP) for the state through a formalized stakeholder process.³⁶¹⁵ The North Carolina CAP process was extended to provide cost-benefit information on a wide range of greenhouse gas (GHG) reduction plans for the state.³⁶¹⁶ However, when Governor McCrory was elected in 2010, he appointed new heads to many of the state agencies, including Department of Environment and Natural Resources (DENR). The communications director, of the agency has been quoted as saying, “climate change was no longer a specific focus at the agency.”³⁶¹⁷ This calls into serious question, the effectiveness of the 2002 CSA.

2005: Climate Change Agreements/MOUs

In September 2005, Governor Mike Easley signed S.B.1134 establishing a Legislative Commission on Global Climate Change.³⁶¹⁸ The Commission was composed of 34 members including 18 legislators and others from academia, environmental organizations, the state power industry, the Manufacturers and Chemical Industry

³⁶¹¹ Press Release, Andrew M. Cuomo, Governor, Governor Cuomo Announces Climate Smart Communities Certification Program (Apr. 22, 2014), <http://www.governor.ny.gov/press/04222014-climate-smart-communities>.

³⁶¹² *Id.*

³⁶¹³ *Id.*

³⁶¹⁴ N.C. GEN. STAT. § 62-133.6 (2005).

³⁶¹⁵ North Carolina Dep’t of Envtl. and Nat’l Resources, Clean Smokestacks Reports on CO₂, NC Climate Action Plan, and other Global Warming Documents, <http://www.ncair.org/news/leg/co2> (Jan. 20, 2006).

³⁶¹⁶ NORTH CAROLINA DEP’T OF ENVTL AND NAT’L RESOURCES, CARBON DIOXIDE (CO₂) EMISSIONS REDUCTION STRATEGIES FOR NORTH CAROLINA: FINAL REPORT (Sept. 1, 2005), http://www.ncair.org/news/leg/co2_final_09022005.pdf.

³⁶¹⁷ Susan Ladd, *N.C. backs off proactive stance on climate*, NEWS & RECORD.COM July, 27, 2013.

³⁶¹⁸ 2005 N.C. Sess. Laws 442.

Council, the North Carolina Farm Bureau, and forestry associations.³⁶¹⁹ The law charged the Commission with preparing a cost-benefit analysis of various state and federal level GHG mitigation strategies; determining “desirable” reduction goals for North Carolina; and researching potential economic gains for the state in emerging carbon markets.³⁶²⁰ It was set to report to the North Carolina General Assembly and the Environmental Review Commission on or before November 1, 2006.³⁶²¹ In July 2008, Governor Easley signed H.B. 2529 into law, giving the Commission an additional year and a half to make its recommendations.³⁶²²

2007: Greenhouse Gas Reduction, Renewable Portfolio Standards, and Energy Efficiency

In May 2007, North Carolina and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.”³⁶²³ This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”³⁶²⁴

In August 2007, Governor Easley signed S.B. 3, creating the state’s Renewable Energy and Energy Efficiency Portfolio Standard.³⁶²⁵ The law requires North Carolina public utilities to generate 12.5% of retail electricity demand from renewables or energy efficiency measures by 2021.³⁶²⁶ The law further requires electric membership corporations and municipalities producing electricity to generate 10% of electricity from renewables by 2018.³⁶²⁷ Eligible renewables include solar energy, wind energy, hydropower, geothermal energy, ocean current or wave energy, biomass resources, and energy efficiency measures.³⁶²⁸

In 2007, the General Assembly created the Swine Farm Methane Capture Pilot Program through S. B. 1465.³⁶²⁹ “Implementation of the program will be coordinated by North Carolina’s soil and water conservation division and the state utilities commission” who will³⁶³⁰ select up to fifty registered swine farms to capture methane gas generated by their waste systems – either by full or partial lagoon covers – and use the gas to generate electricity.³⁶³¹

³⁶¹⁹ *Id.*

³⁶²⁰ *Id.*

³⁶²¹ *Id.*

³⁶²² H.B. 2529, 2008 Gen. Assemb., Reg. Sess. (N.C. 2008).

³⁶²³ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions, http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf

³⁶²⁴ *Id.*

³⁶²⁵ H.B. 3, 2007 Gen. Assemb., 1st Sess. (N.C. 2007).

³⁶²⁶ *Id.*

³⁶²⁷ *Id.*

³⁶²⁸ *Id.*

³⁶²⁹ S.B. 1465, 2007 Gen. Assemb., Reg. Sess. (N.C. 2007).

³⁶³⁰ Kris Bevill, *Biomass Magazine*, Apr. 11, 2008. <http://biomassmagazine.com/articles/1564/n.c.-hog-farms-to-produce-electricity/>

³⁶³¹ *Id.*

2008: Energy Efficiency, Renewable Energy, and Market-Based Solutions

In July 2008, North Carolina and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.³⁶³² The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean Energy States Grant Program. The awards were designed to help develop greater energy efficiency, conservation, and clean energy resources.³⁶³³ In August 2008, Governor Easley signed H.B. 2530 into law, providing a tax credit for those donating funds for renewable energy property acquisition.³⁶³⁴ The law stated that “a taxpayer who donates money to a taxing entity for the purpose of providing funds for the entity to construct, purchase, or lease renewable energy property is allowed a credit under this section if the taxing entity uses the donation for its intended purpose.”³⁶³⁵

In September 2008, North Carolina won a \$499,190 grant from the U.S. Department of Energy to implement an energy-efficient model state code for building construction and renovation.³⁶³⁶

2009: American Recovery & Reinvestment Act (ARRA), Market-Based Solutions, Green Jobs, and Energy Efficiency

On March 12, 2009, the U.S. Department of Energy announced that North Carolina is eligible for \$75,989,000 under the State Energy Program of the ARRA.³⁶³⁷

In May 2009, Governor Perdue announced her green energy reform package, which included plans to: relocate the state energy office and the weatherization program to the Department of Commerce; improve representation for environmental groups in the state Energy Policy Council; establish an energy investment revolving loan fund; expand the Green Business Fund by \$10 million of ARRA funds; use \$7 million in ARRA funding to provide green-collar jobs training through the JobsNOW initiative; and invest federal stimulus money in energy efficiency and renewable energy projects.³⁶³⁸ After she released this plan, the Pew Center released a report listing North Carolina as one of the top twelve states in growing “clean energy economy jobs.”³⁶³⁹ In June, the U.S.

³⁶³² News Release, Nat’l Governors Ass’n, NGA Awards Clean Energy Grants to 12 States, <http://www.govtech.com/technology/National-Governors-Association-Awards.html> (Mar. 14, 2014).

³⁶³³ *Id.*

³⁶³⁴ House Bill 2530, 2008 Gen. Assem., Reg. Sess. (N.C. 2008).

³⁶³⁵ *Id.*

³⁶³⁶ Press Release, DOE Announces \$6.6 Million in Competitive Grant Selections For Innovative State Efficiency, Renewable Initiative (Sept. 8, 2008), <http://energy.gov/articles/doe-announces-66-million-competitive-grant-selections-innovative-state-efficiency>.

³⁶³⁷ U.S. Dep’t of Energy, Nat’l Energy Tech. Lab., State Energy Program Formula Grants, at 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

³⁶³⁸ Press Release, Governor Perdue Announces Reforms to Strengthen Green Economy (May 21, 2009), <http://www.doa.nc.gov/media/releases/showrelease.asp?id=0001-21MAY09>.

³⁶³⁹ Press Release, Pew Center Report Shows N.C. a Leader In Green Economy (June 15, 2009), http://www.nccommerce.com/news/press-releases?udt_4733_param_detail=1247.

Department of Energy approved the state's \$75.9 million energy plan to improve overall energy efficiency and renewable energy consumption.³⁶⁴⁰

In July 2009, Governor Perdue announced the state would be receiving \$8.8 million in federal funding to assist citizens in purchasing energy efficiency products.³⁶⁴¹ In August, she signed H.B. 1481, which enacted her energy reform package into law.³⁶⁴² North Carolina then applied for \$74,950,546 from the Federal Railroad Administration to support six high-speed rail projects.³⁶⁴³ SCR-Tech LLC, a provider of power plant emissions control solutions, announced that it would expand its operations in the state to create 61 clean technology jobs.³⁶⁴⁴ In September, Perdue established an offshore wind advisory council.³⁶⁴⁵

From November 6 to 8, 2009 North Carolina consumers were able to save on selected ENERGY STAR®-rated appliances during the state's second annual tax-free weekend for.³⁶⁴⁶ Consumers did not have to pay state or local sales taxes on home appliances such as washers, freezers, refrigerators, air conditioners, air-source heat pumps, geothermal heat pumps, ceiling fans, dehumidifiers and programmable thermostats.³⁶⁴⁷

2010: American Recovery & Reinvestment Act (ARRA), Energy Efficiency, and Climate Change Agreements/MOUs

As of January 2010, more than \$330,000 in ARRA funds have been awarded to eight North Carolina "Main Street" communities to help with energy efficiency and renewable energy initiatives. The Main Street initiative was aimed at boosting economic development in small towns.³⁶⁴⁸ The North Carolina Energy Office, in partnership with the N.C. Main Street Center, awarded grants to eligible local governments and/or nonprofit downtown revitalization organizations for projects totaling no more than

³⁶⁴⁰ Press Release, Federal Energy Department Oks N.C. Plan to use Recovery Funds to Create Green Jobs, Save Energy (June 25, 2009), http://www.nccommerce.com/news/press-releases?udt_4733_param_detail=1244

³⁶⁴¹ Press Release, Gov. Perdue Announces North Carolina in Line to Receive \$8.8 Million to Help Citizens Buy Energy-Efficient Appliances (July 15, 2009), <http://www.governor.state.nc.us/NewsItems/PressReleaseDetail.aspx?newsItemID=516>.

³⁶⁴² Press Release, Perdue Announces Investments in Green Economy and Strengthens Energy Policy Leadership (Aug. 7, 2009), http://www.nccommerce.com/news/press-releases?udt_4733_param_detail=1237.

³⁶⁴³ Press Release, North Carolina Submits Six High Speed Rail Project Applications (Sept. 1, 2009), http://www.sehsr.org/news/09sept1_nc_arra_rls.pdf

³⁶⁴⁴ Press Release, Mecklenberg County Clean Energy Company to Add 61 Jobs (Sept. 4, 2009), <http://digital.ncdcr.gov/cdm/ref/collection/p16062coll5/id/17556>

³⁶⁴⁵ Press Release, Gov. Perdue Establishes Offshore Energy Advisory Panel (Sept. 21, 2009), <http://digital.ncdcr.gov/cdm/ref/collection/p16062coll5/id/17550>

³⁶⁴⁶ Press Release, Consumers Can Save Extra on Energy Efficient Appliances (Nov. 4, 2010), <http://digital.ncdcr.gov/cdm/ref/collection/p16062coll5/id/17701>

³⁶⁴⁷ *Id.*

³⁶⁴⁸ Press Release, "Main Street" Energy Projects Approved for Recovery Funding (Jan. 5, 2010), <http://cdm16062.contentdm.oclc.org/cdm/ref/collection/p16062coll5/id/17872>

\$250,000.³⁶⁴⁹ Grants were awarded to Main Street communities for energy audits and planning and policy work to support long-term sustainable changes for energy efficiency. Municipalities receiving funds were required to exactly match state grants for implementation of awards.³⁶⁵⁰

Six agencies received \$860,700 in ARRA funding for energy efficiency block grants encouraging energy conservation and economic investment in counties, municipalities, community colleges and public schools.³⁶⁵¹ Projects included lighting retrofit programs, wastewater treatment plant retrofits, energy-saving heating and air conditioning equipment, and an energy management system and controls.³⁶⁵²

Another \$755,148 in ARRA funding for energy efficiency block grants was awarded to Henderson County, the Town of Dallas, Iredell-Statesville schools, Rowan-Salisbury schools, Roanoke Rapids schools and Richmond Community College.³⁶⁵³ Henderson County received \$183,101 to work jointly with Hendersonville to replace inefficient lighting with energy-saving lighting and to put occupancy controls in restrooms. Dallas received \$7,798 to replace inefficient lighting with energy-saving lighting. Iredell-Statesville Schools received \$40,635 to replace current light fixtures with more energy efficient light fixtures. Rowan-Salisbury Schools received \$199,723 to install Direct Digital Control Systems on four school buildings to more easily and accurately control building heating and cooling systems, and replace inefficient lighting with energy-saving lighting. Roanoke Rapids Schools received \$167,195 to retrofit existing lighting fixtures to support energy-saving CFL and LED lighting fixtures. Richmond Community College received \$156,696 to install Direct Digital Control Systems in four buildings to more easily and accurately control building heating and cooling systems.³⁶⁵⁴

Governor Perdue announced in May 2010 that an additional \$4.9 million in federal ARRA funding for energy efficiency block grants had been awarded to 58 projects in 52 local governments to encourage energy conservation and economic investment in counties, municipalities, community colleges and public schools.³⁶⁵⁵ A total of \$7.2 million was then available to local government agencies and \$6.3 million to public schools and community colleges.³⁶⁵⁶

³⁶⁴⁹ *Id.*

³⁶⁵⁰ *Id.*

³⁶⁵¹ Press Release, First Round of Energy Efficiency and Conservation Block Grants Approved for Recovery Funding (Jan. 6, 2010), http://www.nccommerce.com/news/press-releases?udt_4733_param_detail=1226

³⁶⁵² *Id.*

³⁶⁵³ Press Release, Recovery Act Funding to Boost Energy Efficiency, Create Green Jobs in Six Communities Statewide, <http://www2.nccommerce.com/eclipsfiles/21472.pdf> (March 25, 2014Feb. 3).

³⁶⁵⁴ *Id.*

³⁶⁵⁵ Press Release, Recovery Act Funds Aid Energy Efficiency and Promote Green Job Growth (May 18, 2010), <http://digital.ncdcr.gov/cdm/ref/collection/p16062coll5/id/18187>.

³⁶⁵⁶ *Id.*

Eighteen innovative projects, seventeen using solar technology and one using landfill gas, received a total of about \$2.3 million in ARRA funds to implement energy conservation projects.³⁶⁵⁷ The projects generated 31.8 million kWh of electricity annually (enough for 2,610 average homes for a year) or 2.6 billion BTUs annually (enough to provide hot water to 287 average homes for a year).³⁶⁵⁸

In May 2010, the Legislative Commission on Global Climate Change issued its final report pursuant to Section 11 of S.L. 2005-442, as amended by S.L. 2006-73, S.L. 2008-81, and S.L. 2009-306.³⁶⁵⁹

2011: Greenhouse Gas Reduction, American Recovery & Reinvestment Act (ARRA), Renewable Energy, and Energy Efficiency

In January 2011, Governor Perdue issued Executive Order 81, exempting minor facilities from the federal GHG regulations. The state's tailoring rule excluded about 50,000 sources (mainly small businesses) from permitting and avoided an estimated \$1.3 billion per year in administrative costs.³⁶⁶⁰

In February 2011, the state's Energy Office awarded \$8.5 million in ARRA funds to improve energy efficiency in local government and small businesses, to promote conservation and renewables in industrial buildings, and to provide greater efficiency in commercial and large nonprofit facilities.³⁶⁶¹

On July 1, 2011, Governor Perdue established the North Carolina Offshore Wind Energy Task Force via Executive Order (EO) No. 96, set to remain in effect through June 30, 2015.³⁶⁶² The EO charged the task force with studying the economic costs and benefits of developing wind energy off of the North Carolina coast; examining existing laws and regulations to determine what policy framework is needed; making recommendations to encourage the development of offshore wind energy, identifying incentives and benefits to develop such energy; creating guidelines on where to locate wind energy facilities; and studying the benefits of establishing a non-binding statewide goal of developing 5,000 megawatts of offshore wind energy generation by 2030. The deadline for the task force to submit these findings and recommendations was March 31,

³⁶⁵⁷ Recovery Act Funds Support Innovative N.C. Energy Projects (May 27, 2010), <http://www.thrivenc.com/newsandevents/recovery-act-funds-support-innovative-nc-energy-projects>.

³⁶⁵⁸ *Id.*

³⁶⁵⁹ N.C.H.R. Comm. on Global Climate Change (May 2010), <http://www.ncleg.net/documentsites/committees/LCGCC/Commission%20Report%202010/LCGCC%20Final%20Report%205-20-10.pdf> (March 24, 2014).

³⁶⁶⁰ Press Release, Office of the Governor, Gov. Perdue Protects 50,000 Small Business from \$1.3 Billion in Unnecessary Costs, Regulations (Jan. 28, 2011), <http://www.governor.state.nc.us/NewsItems/PressReleaseDetail.aspx?newsItemID=1636>.

³⁶⁶¹ Press Release, Office of the Governor, Gov. Perdue Announces \$8.5 Million for Energy Projects (Feb. 7, 2011), <http://www.governor.state.nc.us/NewsItems/PressReleaseDetail.aspx?newsItemID=1646>.

³⁶⁶² Exec. Order No. 96. (July 1, 2011), <http://www.governor.state.nc.us/NewsItems/UploadedFiles/f48d7deb-5fd1-4fe0-aed0-78d76857434c.pdf>.

2012.³⁶⁶³ They issued their findings and called for public comment in December of 2012.³⁶⁶⁴

In August 2011, the North Carolina Energy Office (NCEO) announced the availability of a Weatherization Assistance Program to help low-income housing complexes increase their energy efficiency. The NCEO planned to use \$9-12 million of ARRA funds to weatherize 4,500 units in low-income housing communities through March 2012.³⁶⁶⁵

2012: Greenhouse Gas Reduction, American Recovery & Reinvestment Act (ARRA), Energy Efficiency, and Climate Change Adaptation

In January 2012, the North Carolina Utility Savings Initiative announced that the state was able to save the taxpayers more than \$82.8 million in utility costs in government and university facilities in 2011.³⁶⁶⁶ In addition, more than 250,000 metric tons of carbon dioxide emissions had been avoided.³⁶⁶⁷

Additional rebates made possible through ARRA became available with the reopening of the North Carolina ENERGY STAR® Appliance Replacement and Rebate Program on February 15, 2012.³⁶⁶⁸ Consumers may now seek rebates for a wider variety of household appliances ranging from central air conditioners to water heaters to freezers if certain ENERGY STAR® criteria are met.³⁶⁶⁹

In June 2012, the North Carolina Energy Office received a U.S. Department of Energy grant to expand its Utility Savings Initiative.³⁶⁷⁰ North Carolina will provide energy efficiency and retrofitting assistance to “shovel ready” projects at school systems and local governments to help reduce their operating costs.³⁶⁷¹ The state will also use a long-term data collection system to track energy savings.³⁶⁷²

³⁶⁶³ *Id.*

³⁶⁶⁴ Press Release, Bureau of Ocean Energy Management, *BOEM Seeks Industry Interest in Renewable Wind Energy Offshore North Carolina* (Dec. 12, 2012), <http://www.boem.gov/BOEM-Newsroom/Press-Releases/2012/Press12122012.aspx>.

³⁶⁶⁵ North Carolina Energy Office, *Weatherization Assistance Program*, August 2011, <http://energync.org/blog/ncsea-news/2011/08/05/qualify-for-ncs-weatherization-multifamily-pilot-program/>.

³⁶⁶⁶ Press Release, North Carolina Office of the Governor, N.C. Utility Savings Initiative Saves Taxpayers \$82.8 Million Last Year (Jan. 27, 2012), http://www.nccommerce.com/news/press-releases?udt_4733_param_detail=8442.

³⁶⁶⁷ *Id.*

³⁶⁶⁸ Press Release, North Carolina Office of the Secretary of Commerce, N.C. Energy Star Appliance Rebate Program Reopens Offering More Consumer Savings (Feb. 15, 2012), http://www.nccommerce.com/news/press-releases?udt_4733_param_detail=8683.

³⁶⁶⁹ *Id.*

³⁶⁷⁰ Press Release, North Carolina Office of the Secretary of Commerce, N.C. Energy Office Wins Grant for Energy Efficiency Improvement Projects (June 27, 2012), http://www.nccommerce.com/news/press-releases?udt_4733_param_detail=14045.

³⁶⁷¹ *Id.*

³⁶⁷² *Id.*

In July 2012, the North Carolina legislature passed a bill prohibiting municipalities from adopting regulations that utilize sea level rise data in coastal planning activities until 2016, designating the North Carolina Coastal Resources Commission as the only body that may create rules or regulations regarding sea level rise and coastal planning.³⁶⁷³ Governor Perdue neither signed nor vetoed the bill, and it became law on August 3, 2012.³⁶⁷⁴

In August 2012, the North Carolina Department of Commerce announced significant energy efficiency improvements thanks to ARRA funds and contributions from the State Energy Program.³⁶⁷⁵ Homes, businesses, government facilities and schools were some of the recipients of the state and federal aid, and were able to implement energy efficient appliance installations and renewable energy sources.³⁶⁷⁶

2013: Renewable Energy

In June 2013, Governor McCrory “June as Solar Energy Month in North Carolina, stressing the role the growing industry is playing in creating jobs and helping make our state and nation energy independent.”³⁶⁷⁷

In May 2013, a House Bill regulating Wind Energy Facility Site and Operation Permits.³⁶⁷⁸ The bill establishes a permitting program for wind energy facilities, transmission facilities and expansion.

NORTH DAKOTA

2005: Renewable Energy and Transportation/Fuels

In April 2005, Governor John Hoeven signed into law a comprehensive package of production incentives, tax cuts, and regulatory bypasses meant to stimulate the production of wind energy, biofuels, and hydrogen power in North Dakota.³⁶⁷⁹ In many cases, these provisions built on prior legislation designed to encourage production of

³⁶⁷³ 2012 N.C. Sess. Laws 202 § 2(a), <http://www.ncleg.net/Sessions/2011/Bills/House/PDF/H819v6.pdf>.

³⁶⁷⁴ *Id.*

³⁶⁷⁵ Press Release, North Carolina Office of the Secretary of Commerce, Recovery Act Grants Produce More Energy-Efficient North Carolina (Aug. 31, 2012), http://www.nccommerce.com/news/press-releases?udt_4733_param_detail=14637.

³⁶⁷⁶ *Id.*

³⁶⁷⁷ Press Release, North Carolina Office of the Governor, June Solar Energy Month in North Carolina (June 4, 2013), <http://www.energync.net/LinkClick.aspx?fileticket=SBCWHMFs3V0%3d&tabid=1653&mid=4596>

³⁶⁷⁸ 2013 N.C. Gen. Stat. § 143-215 (April 15, 2013).

³⁶⁷⁹ See Press Release, State of North Dakota Office of the Governor, Hoeven Signs Broad New Renewable Energy Legislation (Apr. 22, 2005), [votesmart.org at http://votesmart.org/public-statement/91525/hoeven-signs-broad-new-renewable-energy-legislation#.UwVkJrldU2s](http://votesmart.org/public-statement/91525/hoeven-signs-broad-new-renewable-energy-legislation#.UwVkJrldU2s). As part of this package, an Office of Renewable Energy and Energy Efficiency was established “to provide secure, diverse, sustainable, and competitive renewable energy supplies and promote the conservation of energy and the wise use of energy resources in both the public and private sectors.”³⁶⁷⁹ N.D. CENT. CODE § 54-44.5-09 (2005). The office also manages and distributes all production incentive payments authorized under § 4-14.1. *Id.*

alternative energy sources. As a net result, North Dakota boasts a relatively supportive legal framework for these developing markets.

The 2005 legislation created the North Dakota Transmission Authority in order to promote investment in transmission lines, with an eye to enabling wind markets in particular.³⁶⁸⁰ Owners of large wind generator facilities (defined as having at least one generation unit with a nameplate capacity of 100 kW or more as opposed to the 50,000 kW required for a coal-fired electrical generating plant) were exempt from sales and use taxes on building materials, production equipment and other tangible personal property used in construction of facilities before January 1, 2017 (for sales tax) or January 1, 2015 (for use tax).³⁶⁸¹ Materials purchased for building or expanding gas processing facilities are also exempt from use or sales tax.³⁶⁸² Centrally assessed property taxes were reduced by 70% for wind power projects for which construction began before January 2011, but this incentive was repealed in 2007.³⁶⁸³

Prior to 2013, North Dakota's ethanol and biodiesel tax, investment, and production incentives were similarly generous. Before 2013 when the section of the statute was repealed, plants in operation since 1995 that produced ethanol for retail sale were eligible for direct production incentives.³⁶⁸⁴ (Under this plan, facilities with production capacity under \$15 million could receive as much as \$900,000 over the 2005-2007 biennium; those with greater capacity, \$450,000.)³⁶⁸⁵ The state provides additional quarterly ethanol production incentives based on an index of North Dakota corn and ethanol prices.³⁶⁸⁶ (Annual payments under this plan are capped at \$1.6 million, and no facility can receive more than \$10 million in total payments.)³⁶⁸⁷

Biodiesel sellers are eligible for tax credits of up to 10% per year, for up to five years (with a \$250,000 total cap), on the direct costs of adapting or adding equipment to a facility.³⁶⁸⁸ After June 2015, purchases of equipment by retail fuel facilities for the purpose of selling diesel with at least 2% biodiesel are exempt from sales tax.³⁶⁸⁹

North Dakota also exempts from sales tax the sale of hydrogen for use in fuel cells or internal combustion engines and equipment purchased exclusively for the production and/or storage of hydrogen by a hydrogen generation facility.³⁶⁹⁰ Another piece of Governor Hoeven's 2005 legislative package authorized the State Department of Commerce to provide a \$25,000 grant for a wind-to-hydrogen demonstration project in a

³⁶⁸⁰ N.D. CENT. CODE §§ 17-05-01 to -14 (2013).

³⁶⁸¹ *Id.* §§ 57-39.2-04.2, 57-40.2-04.2.

³⁶⁸² *Id.*

³⁶⁸³ *Id.* § 57-02-27.3 (repealed by S.L. 2007, ch. 504, § 5).

³⁶⁸⁴ *Id.* § 17-02-01 (repealed by N.D.S.L. 2013, ch. 177, § 4 (Aug. 2013)).

³⁶⁸⁵ *Id.*

³⁶⁸⁶ *Id.* § 17-02-03.

³⁶⁸⁷ *Id.* § 17-02-04.

³⁶⁸⁸ *Id.* § 57-38-30.6.

³⁶⁸⁹ *Id.* § 57-39.2-04(51).

³⁶⁹⁰ *Id.* § 57-39.2-04(50).

major North Dakotan city.³⁶⁹¹ Also in 2005, a House Concurrent Resolution called on North Dakota Universities and research institutes to participate in a regional hydrogen and energy research and education consortium.³⁶⁹²

A number of other measures provide support for the production and consumption of alternative energy sources. Legislation from 2005 also enabled the creation of a credit trading and tracking system for renewable electricity and recycled energy³⁶⁹³ under the auspices of the Public Service Commission.³⁶⁹⁴ This applies to all public utilities, municipal electric utilities, and electric cooperatives.³⁶⁹⁵ Both individuals and corporations are eligible for income tax credits of 3% per year for five years for the cost of equipment and installation of geothermal, solar, or wind energy devices.³⁶⁹⁶ Solar, wind, and geothermal energy devices are also exempt from local property taxes for five years after installation.³⁶⁹⁷ Finally, the North Dakota Industrial Commission is authorized to use monies from the Oil Extraction Tax Trust Fund to sponsor studies on energy conservation programs and renewable energy sources; cogeneration systems; and waste products utilization.³⁶⁹⁸

2007: Renewable Portfolio Standards, Climate Change Agreements, Renewable Energy, and Transportation/Fuels

The Legislative Assembly enacted a voluntary state objective in January 2007 that ten percent of all electricity sold within the state come from renewable or recycled energy sources by 2015.³⁶⁹⁹ As a result, the Legislature added and amended several sections in Section 49-02 allowing the state to reach its goal.

At the November 2007 Midwestern Governors Association Energy Security and Climate Change Summit held in Milwaukee, Wisconsin, North Dakota, Illinois, Iowa, Kansas, Michigan, Minnesota, Wisconsin, and Nebraska adopted an Energy Security and Climate Stewardship Platform.³⁷⁰⁰ The platform's goals for the Midwest included promoting energy efficiency, advances in bio-based products, electricity production from renewables, and advanced coal and carbon capture and storage.³⁷⁰¹ Platform members also signed cooperative regional initiatives to create a Carbon Management Infrastructure Partnership; a bioproduct procurement program; electricity transmission adequacy for

³⁶⁹¹ S.B. 2018, 59th Leg. Assemb. (N.D. 2005).

³⁶⁹² H.C.R. 3011, 59th Leg. Assemb. (N.D. 2005).

³⁶⁹³ Pursuant to N.D. CENT. CODE §§ 49-02-25 (2005) recycled energy systems are systems “producing electricity from currently unused waste heat resulting from combustion or other processes into electricity and which do not use an additional combustion process.” The term does not include any system whose primary purpose is the generation of electricity.

³⁶⁹⁴ N.D. CENT. CODE § 49-02-24 (2005).

³⁶⁹⁵ *Id.* § 49-02-24.

³⁶⁹⁶ *Id.* § 57-38-01.8.

³⁶⁹⁷ *Id.* § 57-02-08(27).

³⁶⁹⁸ *Id.* § 54-17-32.

³⁶⁹⁹ *Id.* § 49-02-28.

³⁷⁰⁰ Midwestern Energy Security & Climate Stewardship Summit, Energy Security and Climate Stewardship Platform for the Midwest, <http://www.midwesterngovernors.org/resolutions/Platform.pdf>.

³⁷⁰¹ *Id.*

new wind energy; renewable fuels corridors; advanced bioenergy permitting; and low-carbon energy transmission infrastructure.³⁷⁰²

2009: Greenhouse Gas Reduction, American Recovery & Reinvestment Act (ARRA), Renewable Energy, and Green Jobs

In February 2009, the North Dakota Senate, followed by the House in March, approved legislation that would establish a framework for carbon capture and sequestration.³⁷⁰³

In mid-February 2009, the Governor's Biofuels Coalition (GBC), of which North Dakota is a member, sent a letter to President Obama encouraging him to take specific steps to promote the biofuels industry.³⁷⁰⁴ Proposed actions included development of a taskforce charged with "annually and objectively assessing and comparing the lifecycle of biofuels" and creating "a comprehensive biofuel market development program."³⁷⁰⁵

On March 12, 2009, the U.S. Department of Energy announced that North Dakota was eligible for \$24,585,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).³⁷⁰⁶

On March 19, 2009, Governor John Hoeven signed a wind energy bill package extending tax credits for wind energy development.³⁷⁰⁷

According to the Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for North Dakota, North Dakota's clean energy economy grew by 2,112 jobs and 137 businesses from 1998 to 2007.³⁷⁰⁸

On July 21, 2009, Governor Hoeven testified before the U.S. Senate Committee on Environment and Public Works about his opposition to the proposed Waxman-Markey Cap and Trade Bill.³⁷⁰⁹ Hoeven testified that the bill's proposed provisions are premature given that emission reduction technology for coal plants is still in its infancy.³⁷¹⁰ He

³⁷⁰² *Id.*

³⁷⁰³ S.B. 2095, 61st Leg. Assem., Reg. Sess. (N.D. 2009).

³⁷⁰⁴ Press Release, N.D. State Gov't, Governors' Biofuels Coalition Calls On President Obama To Tap Job Growth Potential In Biofuels Industry Group Also Discusses Proactive Initiatives to Strengthen Public Support for Biofuels (Mar. 13, 2009), <http://governor.nd.gov/media/news-releases/2009/02/090223.html>.

³⁷⁰⁵ *Id.*

³⁷⁰⁶ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

³⁷⁰⁷ Press Release, N.D. State Gov't, Hoeven, Legislators Approve Important Wind Energy Legislation (Mar. 19, 2009), <http://www.governor.state.nd.us/media/news-releases/2009/03/090319.html>.

³⁷⁰⁸ Pew Charitable Trust, Clean Energy Economy North Dakota Fact Sheet, *available at* http://www.pewcenteronthestates.org/uploadedFiles/wwwpewcenteronthestatesorg/Fact_Sheets/Clean_Economy_Factsheet_NorthDakota.pdf.

³⁷⁰⁹ Press Release, Official Portal for N.D. State Gov't, Hoeven: Nation Needs Comprehensive Energy Policy, Not Waxman-Markey Cap and Trade Bill (July 21, 2009), <http://www.governor.state.nd.us/media/news-releases/2009/07/090721.html>.

³⁷¹⁰ *Id.*

believed that the legislation would penalize those companies that have already taken action to reduce their emissions and whose efforts will not be recognized for the credit allocations.³⁷¹¹ Hoeven suggested that lawmakers look to the regulatory framework for carbon sequestration that was recently passed in Nebraska as a model for an energy policy that could incentivize environmentally sound energy production.³⁷¹²

The following week, Governor Hoeven met with U.S. Department of Energy (DOE) officials in Washington, D.C. in an effort to gain support for North Dakota energy projects including a \$377 million expansion of Spiritwood Energy Park that entails a “99 megawatt combined heat and power plant, and three major production facilities: a large barley malting facility, which is already in place, as well as a biomass refinery and a biodiesel production facility.”³⁷¹³ Hoeven sought \$35.2 in DOE matching funds for the project.³⁷¹⁴

On August 21, 2009, Governor Hoeven awarded a \$100,000 grant to the City of Bismarck to support preliminary studies and planning for a proposed applied research energy center.³⁷¹⁵ The proposed center “would develop new technologies to solve technical problems with fossil fuels and renewable energy sources and find ways to transfer these technologies to the marketplace.”³⁷¹⁶

On October 23, 2009, Governor Hoeven launched the North Dakota Department of Commerce’s new Biofuels Blender Program.³⁷¹⁷ The program would disburse cost-share grants to fuel retailers for the installation of fuel pumps “capable of dispensing various blends of gasoline and ethanol as well as consumer determined mixes of biodiesel and traditional diesel.”³⁷¹⁸

In December 2009, Governor Hoeven encouraged the U.S. EPA to move forward with its proposed E15 waiver that would permit higher ethanol blends to be used in automobiles.³⁷¹⁹ In his statement, Hoeven also expressed concern that the waiver would only apply to new automobiles.

2010: Renewable Energy and Transportation/Fuels

³⁷¹¹ *Id.*

³⁷¹² *Id.*

³⁷¹³ Press Release, Official Portal of N.D. State Gov’t, Hoeven Meets With Doe Officials in D.C. to Seek Support for N.D. Energy Projects (July 29, 2009), <http://www.governor.state.nd.us/media/news-releases/2009/07/090729a.html>.

³⁷¹⁴ *Id.*

³⁷¹⁵ Press Release, Official Portal of N.D. State Gov’t, Hoeven Announces \$100,000 EDA Grant To Study And Plan Great Plains Applied Energy Research Center (Aug. 21, 2009), <http://www.governor.state.nd.us/media/news-releases/2009/08/090821.html>.

³⁷¹⁶ *Id.*

³⁷¹⁷ Press Release, Official Portal of N.D. State Gov’t, Hoeven Launches \$2 Million Biofuels Blender Pump Program (Oct. 23, 2009), <http://www.governor.state.nd.us/media/news-releases/2009/10/091023.html>.

³⁷¹⁸ *Id.*

³⁷¹⁹ Press Release, Official Portal for N.D. State Gov’t, Hoeven: EPA Needs To Move Forward On An E15 Waiver (Dec. 1, 2009), <http://www.governor.state.nd.us/media/news-releases/2009/12/091201.html>.

In April 2010, the state reached an agreement with ethanol manufacturers to augment production and sales. The North Dakota Ethanol Council would siphon three-hundredths of \$.01 per gallon of ethanol sold and use the proceeds for industry promotion and market development.³⁷²⁰

2011: Renewable Energy, Transportation/Fuels, American Recovery & Reinvestment Act (ARRA), and Energy Efficiency

Governor Jack Dalrymple commended Dakota Spirit AgEnergy for moving forward on a biorefinery. The refinery is expected to produce 65 million gallons of ethanol from corn each year, thus supporting the state's farmers.³⁷²¹ In a second phase of the project, DSA would produce molasses from grain and lignin.³⁷²² The EPA completed its regulatory review and issued a renewable fuels certificate to the biorefinery in February 2013.³⁷²³

In January 2011, the North Dakota Department of Commerce began running the NDSwitch campaign funded by ARRA to help people identify energy-saving actions they can take. As part of the campaign, North Dakotans could participate in an online challenge and calculate the benefits of taking such energy-saving actions. The challenge can be found at www.NDSwitch.com, and ran through 2011.³⁷²⁴

2013: Renewable Energy and Transportation/Fuels

ALLETE, Inc. and Minnesota Power completed its \$500 million Bison Wind Energy Center in May 2013.³⁷²⁵ The wind project creates enough electricity to power 85,000 homes per year. In September 2013, ALLETE, Inc. and the Governor further announced detailed plans for a comprehensive energy corridor to ship energy resources to better manage wastewater and carbon dioxide.³⁷²⁶

³⁷²⁰ *North Dakota Ethanol Industry Sets Up Promotion Fund*, BISMARCK TRIB., Apr. 21, 2010, http://www.bismarcktribune.com/news/state-and-regional/article_76af5b72-4d7e-11df-83d8-001cc4c002e0.html (Jan. 23, 2011).

³⁷²¹ Press Release, Office of the Governor, Dalrymple, Industrial Commission Welcome Long-Awaited EPA Approval for Corn-Based Biorefinery (Feb. 8, 2013), <http://www.governor.nd.gov/media-center/news/dalrymple-industrial-commission-welcome-long-awaited-epa-approval-corn-based-biore>.

³⁷²² Press Release, Office of the Governor, Dalrymple Commends AgEnergy Biorefinery Project (Mar. 29, 2011), <http://governor.nd.gov/media-center/news/dalrymple-commends-agenergy-biorefinery-project>.

³⁷²³ Press Release, Office of the Gov. Dalrymple, Industrial Commission Welcome Long-Awaited EPA Approval for Corn-Based Biorefinery (Feb. 8, 2013), <http://www.governor.nd.gov/media-center/news/dalrymple-industrial-commission-welcome-long-awaited-epa-approval-corn-based-biore>.

³⁷²⁴ Press Release, North Dakotans Asked to Take the "Switch" Challenge (Jan. 10, 2011), <http://www.communityservices.nd.gov/news/detail.asp?newsID=895>.

³⁷²⁵ Press Release, Office of the Governor, Wrigley Marks Completion of the Bison Wind Farm Project (May 30, 2013), <http://www.governor.nd.gov/media-center/news/wrigley-marks-completion-bison-wind-farm-center>.

³⁷²⁶ Press Release, Office of the Governor, Dalrymple, Allete Detail Plans for Integrated Energy Corridor (Sept. 25, 2013), <http://www.governor.nd.gov/media-center/news/dalrymple-allete-detail-plans-integrated-energy-corridor>.

Governor Dalrymple announced in September 2013 that E15 fuel (15% ethanol) is now available in four cities throughout the state, making North Dakota the ninth state to offer the fuel blend.³⁷²⁷

Note on Natural Gas

In recent years, North Dakota's natural gas extraction and production has increased dramatically along with laws to incentivize the industry.³⁷²⁸ However, because the effect of the incentives and the boom industry on climate change is unclear, the updates are not included in this chapter. Roughly thirty percent of North Dakota's extracted natural gas is not put on the market, mainly due to flaring or burning of the resource.³⁷²⁹ North Dakota is working to decrease natural gas flaring to capture more of the resource, which will result in a decrease in GHG emissions.³⁷³⁰

OHIO

1999: Renewable Energy and Market-Based Solutions

In 1999, Ohio's General Assembly passed Senate Bill (S.B.) 3, which created the Energy Loan Fund (Fund) in order to offer incentives for renewable energy projects.³⁷³¹ For example, the Fund's renewable energy loan program offered a nearly 50% cut on the interest on loans from participating banks for the implementation of renewable power systems.³⁷³² Administered by the Ohio Department of Development's Office of Energy Efficiency, the Fund expired in 2011 after it collected \$100 million from utilities in the state.³⁷³³

2000: Market-Based Solutions and Renewable Energy

In 2000, Ohio's Public Utilities Commission ordered the state's power utilities to inform customers of the fuel mix and emissions data of their electric products.³⁷³⁴

³⁷²⁷ Press Release, Office of the Governor, Dalrymple: E15 Now Available in North Dakota (Sept. 23, 2013), <http://www.governor.nd.gov/media-center/news/dalrymple-e15-now-available-north-dakota>. The blended fuel can be purchased at six Petro Serve USA locations in Mandan, Bismarck, West Fargo, and Fargo. *Id.*

³⁷²⁸ See Press Release, Office of the Governor, Dalrymple, Energy Industry Announce Natural Gas Advancement (Sept. 16, 2013), <http://www.governor.nd.gov/media-center/news/dalrymple-energy-industry-announce-natural-gas-advancement>.

³⁷²⁹ Clifford Krauss, *Industry in North Dakota to Cut Flared Natural Gas*, N.Y. TIMES (Jan. 29, 2014), http://www.nytimes.com/2014/01/30/business/energy-environment/industry-in-north-dakota-promises-to-reduce-flared-natural-gas.html?_r=0.

³⁷³⁰ See Press Release, Office of the Governor, Dalrymple, Energy Industry Announce Natural Gas Advancement (Sept. 16, 2013), <http://www.governor.nd.gov/media-center/news/dalrymple-energy-industry-announce-natural-gas-advancement>.

³⁷³¹ S.B. 3, 123th General Assemb., 1999 Sess. (Ohio 1999) (codified at OHIO REV. CODE ANN. §§ 4928.61-.63), http://www.legislature.state.oh.us/BillText123/123_SB_3_ENR.html.

³⁷³² *Id.*

³⁷³³ *Id.*

³⁷³⁴ OHIO ADMIN. CODE §§ 4901:1-10-31, 1-21-09 (2014).

Utilities must specifically indicate the levels of carbon dioxide, sulfur dioxide, and nitrogen oxide emissions produced by their facilities.³⁷³⁵ Since 2001, Ohio has also required that utilities provide net metering to customers with renewable power generators.³⁷³⁶

2007: Climate Change Agreement/MOUs and Greenhouse Gas Reduction

In May 2007, Ohio and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report GHG emissions accurately, transparently and consistently across borders and industry sectors.”³⁷³⁷ As of March 2008, thirty-nine total states were participating in the Climate Registry.³⁷³⁸ The Registry is a nonprofit collaboration among U.S. states and other North American territories and provinces that set consistent and transparent standards to calculate verify and publicly report GHG emissions into a single date base.³⁷³⁹ This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”³⁷⁴⁰

Also in 2007, Ohio Governor Ted Strickland signed the Midwestern Greenhouse Gas Accord, making Ohio an observer state to the regional GHG agreement.³⁷⁴¹ On November 15, 2007, the governors of Iowa, Illinois, Kansas, Michigan, Minnesota, and Wisconsin, as well as the Premier of the Canadian Province of Manitoba, established the Midwestern Greenhouse Gas Reduction Accord (MGGRA) to reduce GHG emissions and achieve energy security.³⁷⁴² Signed at the Midwestern Governors Association Energy Security and Climate Change Summit held in Milwaukee, Wisconsin, the Accord will establish GHG emission targets, including a 60 to 80% reduction in emissions, create a market-based, multi-sector cap-and-trade system, and create a tracking and crediting system.³⁷⁴³ Observer states, including Ohio, are states that are in the process of considering participation. The MGGRA’s final model rule was released in April

³⁷³⁵ *Id.*

³⁷³⁶ OHIO REV. CODE ANN. § 4928.67 (2006).

³⁷³⁷ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007),

http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

³⁷³⁸ THE CLIMATE REGISTRY, GENERAL REPORTING PROTOCOL 1 (May 2008),

<http://www.theclimateregistry.org/downloads/GRP.pdf>.

³⁷³⁹ *Id.*

³⁷⁴⁰ *Id.*

³⁷⁴¹ Midwest Greenhouse Gas Reduction Accord, CENTER FOR CLIMATE AND ENERGY SOLUTIONS (Apr. 5, 2014), <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mggra>; MIDWESTERN GOVERNORS ASSOCIATION, MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, MIDWESTERN GREENHOUSE GAS ACCORD (2007),

<http://www.midwesterngovernors.org/Publications/EnergyPlatform.pdf>.

³⁷⁴² *Midwestern Greenhouse Gas Accord 2007*, MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT (Feb. 18, 2009),

http://web.archive.org/web/20081114002536/http://www.midwesterngovernors.org/Publications/Greenhouse%20gas%20accord_Layou%201.pdf.

³⁷⁴³ *Id.*

2010.³⁷⁴⁴ However, although the MGGRA has not been formally suspended, participating states are no longer formally pursuing it.³⁷⁴⁵

2008: Renewable Portfolio Standards, Greenhouse Gas Reduction, and Energy Efficiency

In May of 2008, Ohio created a renewable energy standard by passing Senate Bill (S.B.) 221.³⁷⁴⁶ This standard requires that 25% of electricity sold in the state be generated from renewable sources by 2025. Half of the sources must come from renewables and the other half from nonrenewables (nuclear, energy efficiency, fuel cells, and clean coal technology). The bill also created a Renewable Energy Credit tracking system for compliance purposes. Further, it requires utilities to cut their energy consumption by 22.5% by 2025.³⁷⁴⁷

Ohio enacted House Bill (H.B.) 554 in June 2008, appropriating funding for alternative energy and energy efficiency technologies.³⁷⁴⁸ This funding included \$84 million for renewable technologies and \$66 million for the research and development of technologies to reduce coal emissions.³⁷⁴⁹

2009: American Recovery & Reinvestment Act (ARRA), Green Technology, Energy Efficiency, and Renewable Energy

On March 12, 2009, the U.S. Department of Energy announced that Ohio was eligible for \$96,083,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).³⁷⁵⁰ Governor Strickland joined seven other Midwest states in signing memorandum of understanding (MOU) to coordinate ARRA applications and advocacy for high-speed rail.³⁷⁵¹ Two advanced battery projects received a total of \$34.1 million in ARRA funding for facility construction.³⁷⁵² Vice President Joe Biden also

³⁷⁴⁴ FINAL MODEL RULE FOR THE MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD (2010), http://michigancondemnationblog.com/storage/Final_Model_Rule1.pdf; *Midwest Greenhouse Gas Reduction Accord*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS (Oct. 11, 2013), <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mggra>.

³⁷⁴⁵ *Midwest Greenhouse Gas Reduction Accord*, CENTER FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mggra>.

³⁷⁴⁶ S.B. 221, 127th Gen. Assemb., Reg. Sess. (Ohio 2008) (codified at OHIO REV. CODE ANN. § 4928.64), http://www.legislature.state.oh.us/bills.cfm?ID=127_SB_221.

³⁷⁴⁷ *Id.*

³⁷⁴⁸ H.B. 554, 127th Gen. Assemb., Reg. Sess. (Ohio 2008), http://www.legislature.state.oh.us/BillText127/127_HB_554_EN_N.pdf.

³⁷⁴⁹ *Id.*

³⁷⁵⁰ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS 45 (2009), https://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

³⁷⁵¹ Memorandum of Understanding between the State of Illinois, the State of Indiana, the State of Iowa, The State of Michigan, the State of Minnesota, the State of Missouri, the State of Ohio, the State of Wisconsin, and the City of Chicago for The Implementation of High-Speed Rail Passenger Service and Connections Involving Corridors Linking Cities in their Respective States (July 27, 2009), <http://www.illinois.gov/publicincludes/statehome/gov/documents/midwesthighspeedrail-MOU.pdf>.

³⁷⁵² Press Release, Governor Applauds Release of Federal Stimulus Resources for Production of New Generation Batteries (Aug. 5, 2009),

announced that the Obama administration would invest over \$11 million in the Ohio Advanced Transportation Partnership to put over 250 advanced energy vehicles on the road and build new refueling stations to reduce state petroleum consumption by an expected 875,000 gallons per year.³⁷⁵³

In September 2009, Rolls-Royce Fuel Cell Systems Limited announced that its global fuel cell research and development would take place at its North Canton facility.³⁷⁵⁴ Governor Ted Strickland also asked the Public Utilities Commission of Ohio to postpone a plan where a utility company would supply consumers with two compact fluorescent light bulbs, on the grounds that this supply would cost consumers over \$21.60.³⁷⁵⁵ In October, the Midwestern Governors Association released the Midwestern Energy Infrastructure Accord, which focused on developing smart grid, carbon capture and sequestration, and biofuels in the Midwest.³⁷⁵⁶

Also in October 2009, Ohio University received \$100,000 from the Appalachian Regional Commission to develop energy efficiency and renewable energy services to Ohio's Appalachian communities.³⁷⁵⁷ Various Ohio projects received a total of \$17.3 million in grants from the U.S. Department of Energy for advanced energy research.³⁷⁵⁸

In November 2009, Ohio projected received more than \$13 million in ARRA grant awards. Public and private entities would use the funds to install wind electric, solar electric and solar thermal technologies at businesses, schools, parks and other public locations throughout Ohio.³⁷⁵⁹

<https://web.archive.org/web/20100203141418/http://governor.ohio.gov/News/PressReleases/2009/August2009/News85091/tabid/1148/Default.aspx>.

³⁷⁵³ Press Release, Governor Applauds Recovery Act Investment in Ohio Advanced Transportation Partnership (Aug. 26, 2009), <http://votesmart.org/public-statement/452168/governor-applauds-recovery-act-investment-in-ohio-advanced-transportation-partnership#.U0BwBK1dVPQ>.

³⁷⁵⁴ Press Release Governor, Officials Announce Rolls-Royce Fuel System North American Expansion in North Canton (Sept. 21, 2009), <https://web.archive.org/web/20100527121507/http://www.governor.ohio.gov/News/PressReleases/2009/September2009/News921091/tabid/1243/Default.aspx>.

³⁷⁵⁵ Press Release, Governor Calls for Postponement of First Energy Light Bulb Program (Oct. 7, 2009), <https://web.archive.org/web/20100825203529/http://governor.ohio.gov/News/PressReleases/2009/October2009/News10709/tabid/1269/Default.aspx>.

³⁷⁵⁶ MIDWESTERN GOVERNORS ASSOCIATION, MIDWESTERN ENERGY INFRASTRUCTURE ACCORD (2009), <http://www.midwesterngovernors.org/Publications/InfrastructureAccord.pdf>.

³⁷⁵⁷ Press Release, Strickland Announces \$100,000 Grant to Ohio University for Energy Efficiency, Renewable Energy Project (Oct. 26, 2009), <https://web.archive.org/web/20110106042725/http://governor.ohio.gov/News/PressReleases/2009/October2009/News102609/tabid/1293/Default.aspx>.

³⁷⁵⁸ Press Release, Ohio Advanced Energy Research Projects Receive More Than \$17.3 Million from U.S. Department of Energy (Oct. 27, 2009), <https://web.archive.org/web/20091030003309/http://www.governor.ohio.gov/News/PressReleases/2009/October2009/News102709/tabid/1295/Default.aspx>.

³⁷⁵⁹ Press Release, Governor Announces State Energy Program- ARRA Wind and Solar Award (Nov. 30, 2009), <https://web.archive.org/web/20110106015031/http://governor.ohio.gov/Default.aspx?tabid=1349>.

2010: Green Technology, Renewable Energy, American Recovery & Reinvestment Act (ARRA), Market-Based Solutions, and Green Jobs

Governor Strickland announced in January 2010 that DuPont would expand its next line of films used on photovoltaic solar panels, investing \$175 million to expand production of its high-performance DuPont Tedlar PV2001 series oriented film.³⁷⁶⁰ Tedlar film is a critical component on the back of solar panels, providing long-term durability and performance.³⁷⁶¹ During 2010, Ohio offered incentives to DuPont up to \$6.1 million, for loans, grants and workforce assistance.³⁷⁶²

In February 2010, Governor Strickland announced that 18 Ohio projects would receive more than \$11.8 million in industry efficiency grant awards.³⁷⁶³ These industry efficiency awards were funded through Ohio's \$96 million American Recovery & Reinvestment Act (ARRA) State Energy Program, accepted by the U.S. Department of Energy on June 26, 2009. Target industries for grant recipients included advanced energy; aerospace and aviation; agriculture and food processing; bioscience and bio-products; instruments, controls and electronics; motor vehicles and parts manufacturing; and polymers and advanced materials. Recipients would use the funds for energy efficiency improvements in their manufacturing facilities.³⁷⁶⁴

Also in February 2010, Governor Strickland launched the Ohio Energy Gateway Fund, a public-private partnership that includes a \$40 million commitment of advanced energy funds from the Ohio Bipartisan Job Stimulus Plan and ARRA.³⁷⁶⁵ The \$40 million in state and federal resources was expected to leverage at least \$40 million in additional funding through partnership with private capital resources. Ohio Energy Gateway Fund aimed to accelerate projects in a range of areas, including wind, solar, geothermal, solid waste, energy efficiency, hydroelectric, electric batteries and fuel cells, energy storage, advanced solid waste, and generation III nuclear.³⁷⁶⁶

³⁷⁶⁰ Press Release, Strickland Announces more than 500 Jobs Created, Retained at DuPont Advanced Energy Manufacturing Plant in Circleville (Jan. 18, 2010), <https://web.archive.org/web/20101227141743/http://governor.ohio.gov/Default.aspx?tabid=1473>.

³⁷⁶¹ DuPont™ Tedlar® PVF Films, DUPONT (Apr. 5, 2014), http://www2.dupont.com/Tedlar_PVF_Film/en_US/.

³⁷⁶² Press Release, Strickland Announces more than 500 Jobs Created, Retained at DuPont Advanced Energy Manufacturing Plant in Circleville (Jan. 18, 2010), <https://web.archive.org/web/20101227141743/http://governor.ohio.gov/Default.aspx?tabid=1473>.

³⁷⁶³ Press Release, Strickland Announces Ohio Industry Energy Efficiency Awards (Feb. 18, 2010), <https://web.archive.org/web/20100803141936/http://governor.ohio.gov/Default.aspx?tabid=1491>.

³⁷⁶⁴ *Id.*

³⁷⁶⁵ Press Release, Governor Launches Ohio Energy Gateway Fund (Feb. 10, 2010), <http://votesmart.org/public-statement/482878/governor-launches-ohio-energy-gateway-fund#.U0B2Pq1dVPQ>.

³⁷⁶⁶ *Id.*

United States Senator Sherrod Brown and Governor Strickland outlined plans to advance offshore wind energy projects in March 2010.³⁷⁶⁷ Brown unveiled new legislation aimed at advancing the installation of offshore wind turbines in freshwater bodies like Lake Erie. Strickland gave an update on state efforts to advance wind energy and called again on the state legislature to eliminate the tangible personal property tax on generation equipment for wind and solar.³⁷⁶⁸ Ohio also mapped Lake Erie into square mile grids and color coded them to identify the best places for turbines. Brown's legislation, The Program for Offshore Wind Energy Research and Development (POWERED) Act of 2010, would spur research on potential offshore wind projects, expand incentives for offshore wind development, and require the U.S. Department of Energy to develop a comprehensive roadmap for the deployment of offshore wind.³⁷⁶⁹

In April 2010, Ohio received \$32 million in ARRA funds.³⁷⁷⁰ The Greater Cincinnati Retrofit Ramp-Up program received \$17 million to conduct community and organizational outreach with energy advisory services focused on retrofits in the residential, commercial, and public sectors to reduce energy bills for thousands of home and business owners.³⁷⁷¹ The Toledo-Lucas County Port Authority received \$15 million to support an Advanced Energy and Hybrid-Geothermal Geo-Utility District project, which established a series of Advanced Energy Utility (AEU) Districts to identify, evaluate, install, finance and manage energy efficiency and renewable energy projects, primarily in public and commercial buildings.³⁷⁷²

In May 2010, Governor Strickland and Columbus Mayor Michael Coleman joined officials from Quasar Energy Group, the Solid Waste Authority of Central Ohio (SWACO) and Kurtz Bros., Inc. to celebrate the groundbreaking of Quasar's fourth Ohio biomass waste-to-energy system in Columbus.³⁷⁷³ The energy system seeks to process the City of Columbus' biosolids, regional food waste, and FOG (fats, oil and grease) to generate 1MWh of electricity each hour that will power businesses and homes.³⁷⁷⁴

In June 2010, Ohio enacted S.B. 232, which eliminated Ohio's tangible personal property tax on generation for advanced energy project facilities that began construction before January 1, 2012, produced energy by 2013 (or 2017 for nuclear, clean coal and

³⁷⁶⁷ Press Release, Sen. Brown, Gov. Strickland Outline Plans to Advance Offshore Wind Turbine Projects (Mar. 29, 2010),

<https://web.archive.org/web/20110106023352/http://governor.ohio.gov/Default.aspx?tabid=1576>.

³⁷⁶⁸ *Id.*

³⁷⁶⁹ *Id.*

³⁷⁷⁰ Press Release, Cincinnati and Toledo Energy Efficiency Projects Win ARRA Retrofit Awards (April 2, 2010), <https://web.archive.org/web/20110105235005/http://governor.ohio.gov/Default.aspx?tabid=1614>.

³⁷⁷¹ *Id.*

³⁷⁷² *Id.*

³⁷⁷³ Press Release, Strickland, Quasar Break Ground on Renewable Energy System to Create Jobs in Columbus (May 3, 2010),

<https://web.archive.org/web/20101227141442/http://governor.ohio.gov/Default.aspx?tabid=1632>.

³⁷⁷⁴ *Id.*

cogeneration projects).³⁷⁷⁵ The bill allows companies that are seeking to build advanced energy generation facilities in Ohio to make an annual payment in lieu of taxes.³⁷⁷⁶

Fourteen project recipients received \$10.7 million in grant awards funded through ARRA's Energy Efficiency and Conservation Block Grant in June 2010.³⁷⁷⁷ Thirteen institutions of higher education would use the funds to conduct energy audits, upgrade heating, ventilation and air conditioning systems, as well as replace lighting and windows in their buildings, and install renewable energy technologies at their campuses.³⁷⁷⁸

Also in June 2010, Governor Strickland announced a \$6 million jobs program, the Energizing Careers Program, for training Ohio's workforce for green energy careers.³⁷⁷⁹ ARRA would fund companies looking to train employees for the growing energy economy. The Energizing Careers Program would reimburse the cost of training up to \$6,000 for full-time employees, with preferential project funding to companies located in the 44 Ohio counties impacted by the restructuring of the auto industry.³⁷⁸⁰

At the end of June 2010, a 1.1 megawatt solar array in Washington Township opened after construction began in early 2009.³⁷⁸¹ DP&L's Yankee solar array consists of 9,120 solar panels constructed over seven acres, and generates enough electricity to power the equivalent of 150 homes a year.³⁷⁸² The Northwest Ohio Solar Energy Hub was designated an Ohio Hub of Innovation and Opportunity to promote entrepreneurship, economic development and commercialization in the solar industry by bringing together top solar researchers, entrepreneurs, manufacturers, education institutions, trade associations and training providers.³⁷⁸³ Central Ohio was also designated as an Ohio Hub of Innovation and Opportunity to assist Ohio's advanced energy manufacturing and energy storage industries and received a \$250,000 state grant to further its efforts.³⁷⁸⁴

³⁷⁷⁵ Press Release, Governor Statement on Passage of Bill to Eliminate Tax on Advanced Energy Projects (June 4, 2010),

<https://web.archive.org/web/20110106020726/http://governor.ohio.gov/Default.aspx?tabid=1677>.

³⁷⁷⁶ Press Release, Governor Continues to Lay Foundation for New Energy Jobs in Ohio (June 17, 2010), <https://web.archive.org/web/20110106001612/http://governor.ohio.gov/Default.aspx?tabid=1703>.

³⁷⁷⁷ Press Release, Strickland Announces Recovery Act Energy Awards for Higher Education and State Government (June 10, 2010),

<https://web.archive.org/web/20101227141339/http://governor.ohio.gov/Default.aspx?tabid=1691>.

³⁷⁷⁸ *Id.*

³⁷⁷⁹ Press Release, Governor Continues to Lay Foundation for New Energy Jobs in Ohio (June 17, 2010), <http://votesmart.org/public-statement/521875/governor-continues-to-lay-foundation-for-new-energy-jobs-in-ohio#.U0B3tK1dVPQ>.

³⁷⁸⁰ *Id.*

³⁷⁸¹ Press Release, Governor, DP&L Open Southwestern Ohio's Largest Solar Power Facility in Washington Township (June 22, 2010),

<https://web.archive.org/web/20110106001612/http://governor.ohio.gov/Default.aspx?tabid=1703>.

³⁷⁸² *Id.*

³⁷⁸³ Press Release, Strickland Announces Northwest Ohio Solar Energy Hub in Toledo (June 30, 2010), <https://web.archive.org/web/20110105234202/http://governor.ohio.gov/Default.aspx?tabid=1717>.

³⁷⁸⁴ Press Release, Governor Designates Columbus the Ohio Hub of Advanced Energy Manufacturing & Storage (Sept. 10, 2010),

<https://web.archive.org/web/20110106010251/http://governor.ohio.gov/Default.aspx?tabid=1787>.

The U.S. Department of Energy awarded several Ohio small business grants to assist them in bringing advanced energy technologies to market. Projects included: power plant cooling; advanced industrial materials; software libraries and applications maintenance and scaling to petascale; nanotechnology; increasing efficiency in traditional lighting technologies; high performance networks; advanced technologies and materials for fusion energy systems; solid oxide fuel cell technology for coal-based power plants; and accelerator technology for the international linear collider.³⁷⁸⁵

In August 2010, the 80 acre, 12-megawatt solar facility called PSEG Wyandot Solar Farm became the largest solar energy facility operating in Ohio.³⁷⁸⁶ It has more than 159,000 ground-mounted panels on 80 acres, and produces enough electricity to power about 1,500 homes.³⁷⁸⁷ Additionally, the Depleted Uranium Hexafluoride Conversion Plant opened to process depleted uranium hexafluoride (DUF6), a co-product of the uranium enrichment process, into a more stable form for reuse or disposal.³⁷⁸⁸

The Ohio Department of Development's Home Energy Assistance Program (HEAP) Winter Crisis Program began in November 1, 2010 and ran through March 31, 2011. It received an estimated \$132 million in total federal HEAP funding for Fiscal Year 2011.³⁷⁸⁹ The program assisted qualified low-income and elderly with winter heating costs.

On November 4, 2010, the Ohio Department of Development announced that it would provide \$8.3 million in ARRA-funded grants to fifteen projects that created or preserved jobs and reduced energy usage and greenhouse gas (GHG) emissions. The program would fund energy improvements in multi-family, commercial, and institutional buildings throughout the state.³⁷⁹⁰

The Department of Development announced in December 2010 that eleven Ohio projects would receive \$10 million in ARRA grants through the Transforming Waste to Value Program, in order to convert feedstocks, such as municipal solid wastes, food and farm wastes, and other biomass, to electricity, heat, fuel or other bio-products.

³⁷⁸⁵ Press Release, Governor's Statement Regarding U.S. Department of Energy Small Business Awards (Aug 2, 2010),

<https://web.archive.org/web/20101227141223/http://governor.ohio.gov/Default.aspx?tabid=1747>.

³⁷⁸⁶ Press Release, Governor, Gee, PSEG Open Ohio's Largest Solar Farm to Create New Jobs, Energy in Upper Sandusky (August 19, 2010),

<https://web.archive.org/web/20110106014041/http://governor.ohio.gov/Default.aspx?tabid=1763>.

³⁷⁸⁷ *Id.*

³⁷⁸⁸ Press Release, Governor Opens Uranium Conversion Plant Creating 160 Advanced Energy Jobs in Piketon (Sept 9, 2010),

<https://web.archive.org/web/20101227141123/http://governor.ohio.gov/Default.aspx?tabid=1784>.

³⁷⁸⁹ Press Release, HEAP Winter Crisis Program Begins (November 3, 2010),

[http://development.ohio.gov/files/media/pressrelease/10.18.12 HEAP Winter Crisis Program Begins November 1.pdf](http://development.ohio.gov/files/media/pressrelease/10.18.12%20HEAP%20Winter%20Crisis%20Program%20Begins%20November%201.pdf).

³⁷⁹⁰ Press Release, Patt-McDaniel Announces American Recovery and Reinvestment Act Awards for Making Efficiency Work (Nov. 4, 2010),

<https://web.archive.org/web/20110317055931/http://development.ohio.gov/newsroom/2010PR/November/3.htm>.

2011: Greenhouse Gas Reduction, Renewable Energy, Green Technology, Green Jobs, and American Recovery & Reinvestment Act (ARRA)

In January 2011, Governor Strickland issued Executive Order (EO) 2010-15S to immediately adopt the U.S. EPA permitting thresholds for stationary sources emitting GHGs. The federal regulations, which entered into force on January 2, 2011, require the state to develop GHG rules. To comply with federal law while Ohio EPA drafts state rules, the EO adopted the federal tailoring rule. The order expired on March 29, 2011.³⁷⁹¹

Also in January 2011, Ohio EPA issued a final permit for a renewable energy project proposed by Dayton Power & Light (DP&L). The permit allows DP&L to use a combination of cellulosic energy mixed with coal to provide up to 5% of the plant's heat input.³⁷⁹²

On January 31, 2011, Ohio EPA proposed rules to implement federal GHG regulations. The proposed rules adopt the maximum emissions allowable under the U.S. EPA's Tailoring Rule: between 75,000 and 100,000 tons per year. As of April 15, 2011, the Ohio EPA had not finalized these rules.³⁷⁹³

In April 2011, the Ohio Third Commission, which oversees the Ohio Third Frontier (an initiative providing funding for innovation and entrepreneurship in energy) recommended providing over \$7.5 million in funding to eight companies through the organization's Fuel Cell, Advanced Energy, and Targeted Industry Attraction programs, as well as an additional \$1.7 million commitment for the construction of a Research and Development Center in Cincinnati.³⁷⁹⁴ These programs aimed to accelerate the development of green technologies in the state.³⁷⁹⁵ The Commission is comprised of three state officials and six representatives appointed by the Ohio Governor.³⁷⁹⁶

In addition, the Ohio Third Frontier partnered with Ohio State University's Fisher College of Business to launch the Ohio's New Entrepreneur (ONE) Fund pilot program

³⁷⁹¹ Ohio Exec. Order No. 2010-15S, Immediate Adoption of Rules to Adopt USEPA Permitting Thresholds for Stationary Sources Emitting Greenhouse Gases (Dec. 30, 2010), https://web.archive.org/web/20140405214324/http://www.epa.ohio.gov/portals/27/regs/3745-77/GHG_EO_2010-15S.pdf.

³⁷⁹² Press Release, Ohio EPA, Ohio EPA Issues Final Air Permit to DP&L for Renewable Energy Project in Adams Co. (Jan 5, 2011), <http://www.epa.state.oh.us/portals/47/nr/2011/january/DP&LKillen.pdf>.

³⁷⁹³ Press Release, Ohio EPA, Ohio EPA Proposes Rules to Implement Federal Greenhouse Gas Regulations in Ohio (Jan. 31, 2011), <http://www.epa.state.oh.us/portals/47/nr/2011/january/TailoringHearing.pdf>.

³⁷⁹⁴ Press Release, Ohio Third Frontier Invests in Advanced Energy Sectors and Cincinnati Research and Development Project (April 6, 2011), <http://development.ohio.gov/files/media/pressrelease/11.4.6 - Release - OTF Invests in Advanced Energy Sectors and Cincinnati Research and Development Project.pdf>.

³⁷⁹⁵ *Id.*

³⁷⁹⁶ Ohio Third Frontier, OHIO DEVELOPMENT SERVICES AGENCY (February 25, 2011), http://development.ohio.gov/bs_thirdfrontier/governance.htm.

in that same month.³⁷⁹⁷ The program was designed to teach young technology entrepreneurs what it takes to start a business, and it partners participants with seasoned entrepreneurs, industry experts and investors in approximately ten teams for eleven weeks, during which time the teams work on preparing technology concepts and business models to present to investors at the end of the program.³⁷⁹⁸ The participating teams were selected in May 2011.³⁷⁹⁹

The Ohio Third Frontier Commission recommended additional investments in May 2011, including \$7.5 million through the Ohio Third Frontier Write Projects Program, which would fund several projects including one project focused on alternative energy.³⁸⁰⁰

The Ohio Department of Development announced on July 6, 2011 that Spanish-based energy technology manufacturer, Isofoton, had chosen to construct its North American plant in Ohio.³⁸⁰¹ The new plant was expected to create 330 direct jobs within three years, as well as an additional 1,000 jobs in 2012. American Municipal Power and the Turning Point Solar Project had already agreed to purchase photovoltaic panels from Isofoton's Ohio plant. The Turning Point Solar Project planned to construct a photovoltaic farm on top of reclaimed mine lands in rural Appalachia.³⁸⁰²

The Ohio Department of Development approved more than \$1.1 million in grants through its Energizing Careers Program for ten Ohio companies to train workers in advanced energy technologies. The program, funded ARRA through the U.S. Department of Labor, reimburses up to \$6,000 of the cost of training full-time employees.³⁸⁰³

In November 2011, Ohio EPA awarded several Ohio public school districts \$295,733 in Clean Diesel grants to install pollution control devices on diesel school buses.³⁸⁰⁴ The diesel oxidation catalysts and idle reduction equipment were expected to

³⁷⁹⁷ Press Release, Ohio Third Frontier Support Entrepreneurship by Piloting a Program Targeted to Young Professionals (April 7, 2011), <https://development.ohio.gov/files/otf/10xONEFundpressrelease.pdf>.

³⁷⁹⁸ *Id.*

³⁷⁹⁹ Press Release, Young Professional Teams Selected for Ohio's New Entrepreneurs Fund (May 12, 2011), <http://fisher.osu.edu/supplements/10/11768/20110512-Release-YoungProfessionalTeamsSelected.pdf>.

³⁸⁰⁰ Press Release, Ohio Third Frontier Provides More Than \$10 Million to Support Ohio Innovation (May 24, 2011), <https://development.ohio.gov/files/otf/52411ReleaseOTFProvidesmorethan10MilliontoSupportInnovation.pdf>.

³⁸⁰¹ Press Release, Spanish-Based Energy Technology Manufacturer Lands in Ohio (July 6, 2011), <https://www.aepohio.com/info/news/viewRelease.aspx?releaseID=1075>.

³⁸⁰² *Id.*

³⁸⁰³ Press Release, More than \$1.1 Million Approved Through Energizing Careers Program (August 4, 2011), <https://development.ohio.gov/files/media/pressrelease/11.8.4%20-%20Release%20-%20More%20than%201.1%20million%20Approved%20through%20Energizing%20Careers%20Program.pdf>.

³⁸⁰⁴ Press Release, Ohio Environmental Protection Agency, Ohio EPA Awards Clean Diesel School Bus Grants (Nov. 2, 2011),

remove 1,705 pounds of particulate matter, and more than twenty tons of carbon monoxide, nitrogen oxides and hydrocarbons on a yearly basis from tailpipe emissions.³⁸⁰⁵

In December 2011, the Ohio Department of Development launched the Energy Loan Fund to provide below-rate financing to businesses, industry, non-profits and governmental entities for energy efficiency projects.³⁸⁰⁶ It required eligible projects to achieve at least a 15% reduction in energy use and contain economic benefits.³⁸⁰⁷

2012: Energy Efficiency, Greenhouse Gas Reduction, Green Technology, and Transportation/Fuels

In February 2012, Ohio EPA announced a new Diesel Emission Reduction Grant program to reduce citizens' exposure to diesel exhaust.³⁸⁰⁸ Eligible public and private projects included fleet replacement with higher fuel efficiency vehicles, engine upgrades that meet higher emission standards and adding diesel oxidation catalysts, diesel particulate filters or anti-idling equipment to existing fleet vehicles.³⁸⁰⁹

On April 13, 2012, Governor John Kasich signed Substitute Senate Bill (S.B.) 289 to include cogeneration technology using waste or byproduct gas from a contaminant air source in the definition of a renewable energy source.³⁸¹⁰ However, the law requires that the facility in which the technology is used must be located in a county with a population between 365,000 and 370,000 according to the most recent federal census.³⁸¹¹

On June 11, 2012, Governor Kasich signed S.B. 315 into law.³⁸¹² The bill enacted Ohio's 21st Century Energy Policy, a multi-faceted approach to energy challenges seeking to utilize energy efficient technologies, expanded customer choice for

<http://www.epa.state.oh.us/News/OnlineNewsRoom/NewsReleases/TabId/6596/ArticleId/339/language/en-US/month/6/year/2013/ohio-epa-awards-clean-diesel-school-bus-grants.aspx>.

³⁸⁰⁵ *Id.*

³⁸⁰⁶ Press Release, Ohio Department of Development, Ohio Launches a New Energy-Saving Finance Tool (Dec. 15, 2011), [http://development.ohio.gov/files/media/pressrelease/11.12.15 - Release - Ohio Launches New Energy-Saving Financing Tool The Energy Loan Fund.pdf](http://development.ohio.gov/files/media/pressrelease/11.12.15%20-%20Release%20-%20Ohio%20Launches%20New%20Energy-Saving%20Financing%20Tool%20The%20Energy%20Loan%20Fund.pdf).

³⁸⁰⁷ *Id.*

³⁸⁰⁸ Press Release, Ohio EPA, Ohio EPA Accepting Applications for Diesel Emission Reduction Grants (Feb. 23, 2012),

<http://www.epa.state.oh.us/news/onlinenewsroom/epaarchives/tabid/6414/vw/1/itemid/168/ohio-epa-accepting-applications-for-diesel-emission-reduction-grants.aspx>.

³⁸⁰⁹ *Id.*

³⁸¹⁰ S.B. 289, 129th General Assemb., 2012 Sess. (Ohio 2012),

http://www.legislature.state.oh.us/bills.cfm?ID=129_SB_289; Press Release, Governor John R. Kasich, Legislation Signed by the Governor (Apr. 13, 2012),

<http://governor.ohio.gov/Portals/0/04.13.12.%20SB%20289%20Bill%20Signing.pdf>.

³⁸¹¹ OHIO REV. CODE ANN. § 4928.01(g)(37)(vii) (2012); OHIO REV. CODE ANN. § 3706.25(E) (2012).

³⁸¹² S.B. 315, 129th General Assemb., 2012 Sess. (Ohio 2012),

http://www.legislature.state.oh.us/bills.cfm?ID=129_SB_315; Press Release, Governor John R. Kasich, Kasich Signs Three Bills Into Law (June 11, 2012),

<http://www.governor.ohio.gov/Portals/0/pdf/news/06%2011%2012%20Kasich%20Signs%20Main%20MBR%20Energy%20and%20Gaming%20Bill.pdf>.

renewable energy, making changes in distribution networks to accommodate increased renewable energy supplies, waste heat recovery and combined heat and power systems, promotion of alternative fuel use and a revolving loan fund for alternative fuels, and an increase energy efficiency in state facilities and vehicles.³⁸¹³

In November 2012, Ohio EPA awarded several Ohio public school districts \$277,885.53 to install pollution control devices on diesel school buses.³⁸¹⁴ The diesel oxidation catalysts and anti-idling equipment were expected to remove 262.2 pounds of particulate matter and more than three tons of carbon monoxide, nitrogen oxides and hydrocarbons on a yearly basis from tailpipe emissions.³⁸¹⁵

2013: Greenhouse Gas Reduction

In July of 2013, the Yale Project on Climate Change Communication released a study that found that 70% of Ohioans believe global warming is happening, with about half (49%) believing that if global warming is happening, it is caused mostly by human activities.³⁸¹⁶

OKLAHOMA

2001: Energy Efficiency, Green Technology, Greenhouse Gas Reduction, Renewable Energy, and Transportation/Fuels

In April 2001, Oklahoma H.B. 1192 created a committee to explore the sequestration of carbon via new agricultural initiatives.³⁸¹⁷ The law called for a collaboration of government officials and representatives of the agriculture and energy sectors to devise methods to slow global warming.³⁸¹⁸

2003: Energy Efficiency, Green Jobs, Green Technology, Market-Based Solutions, and Renewable Energy

Since 2003, the Zero-Emissions Facilities Production Tax Credit has been available to Oklahoma electricity producers who utilize renewable energy via a “zero emission facility” (having a production capacity of fifty megawatts or more and producing no emissions that are harmful to the environment).³⁸¹⁹ Electricity generated

³⁸¹³ *Id.*

³⁸¹⁴ Press Release, Ohio EPA, Ohio EPA Awards Clean Diesel School Bus Grants (Nov. 14, 2012), <http://www.epa.state.oh.us/news/onlinenewsroom/epaarchives/tabid/6414/vw/1/itemid/230/ohio-epa-awards-clean-diesel-school-bus-grants.aspx>.

³⁸¹⁵ *Id.*

³⁸¹⁶ YALE PROJECT ON CLIMATE CHANGE COMMUNICATION, CLIMATE CHANGE IN THE OHIOAN MIND (2013), http://environment.yale.edu/climate-communication/files/Ohio_Climate_Change_Report.pdf.

³⁸¹⁷ OKLA. STAT. ANN. tit. 27A, § 3-4-101 to -105 (West 2005).

³⁸¹⁸ *Id.*

³⁸¹⁹ OKLA. STAT. ANN. tit. 68, § 2357.32A (West 2005).

from January 1, 2004 to 2007, the credit was \$0.0050 per kilowatt-hour of generated electricity. From January 1, 2007 to 2012, the credit was \$0.0025 per kilowatt-hour.³⁸²⁰

Also beginning in 2003, Oklahoma briefly offered an income tax credit to manufacturers of small wind turbines.³⁸²¹ The law expired on December 31, 2005.³⁸²²

2008: Cap-&-Trade, Climate Change Agreements, Energy Efficiency, Green Jobs, Green Technology, Greenhouse Gas Reduction, Renewable Energy, Renewable Portfolio Standards, and Transportation/Fuels

In June 2008, Governor Brad Henry signed legislation ensuring continued funding for the Oklahoma Bioenergy Center (OBC).³⁸²³ Established in 2007,³⁸²⁴ the OBC coordinates biofuels research and development at three Oklahoma centers of higher education.³⁸²⁵ The legislature appropriated \$4 million for the project in addition to \$20 million already allocated by federal and state funding in 2007.

In 2008, the Oklahoma Corporation Commission (OCC) approved an order allowing Oklahoma Gas & Electric customers to receive renewable energy credits on their bills.³⁸²⁶ The order allowed recovery of costs of a planned wind-power transmission line and removed barriers for building transmission lines across Oklahoma.

On November 12, 2008, Governor Henry became the thirtieth of a group of present and former governors to sign the “25 x ‘25 Vision” initiative commitment to supplying 25% of the nation’s energy needs from renewable sources by 2025.³⁸²⁷ According to one study, Oklahoma ranked eleventh in the nation in the potential positive economic impact of the 25 x ‘25 goal.³⁸²⁸ A few days later, on November 18, 2009, Henry emphasized the need for domestic production of oil and gas in his address at the annual meeting of the Interstate Oil and Gas Compact Commission (IOGCC).³⁸²⁹ He cautioned against environmental regulations that “come at the expense of handcuffing the [oil and gas] industry.”³⁸³⁰

³⁸²⁰ *Id.*

³⁸²¹ *Id.* § 2357.32B.

³⁸²² *Id.*

³⁸²³ Press Release, Gov. Henry Signs Bill Funding Oklahoma Bioenergy Center, Strengthens State’s Role in Development of Renewable Energy (June 5, 2008), http://www.gov.ok.gov/display_article.php?article_id=1101&article_type=1.

³⁸²⁴ OKLA. STAT. ANN. tit. 62, § 46.3 (West 2007).

³⁸²⁵ Press Release, Gov. Henry Signs Bill Funding Oklahoma Bioenergy Center, Strengthens State’s Role in Development of Renewable Energy (June 5, 2008), http://www.gov.ok.gov/display_article.php?article_id=1101&article_type=1.

³⁸²⁶ Press Release, A Change in the Wind, Oklahoma Corporation Commission Approves OG&E Renewable Program (Sept. 12, 2008), http://www.ok.gov/newsroom.php?page_id=2421&type=1.

³⁸²⁷ Press Release, Office of Okla. Governor, Gov. Brad Gov. Henry Endorses “25x’25” Renewable Energy Goal (Nov. 12, 2008), http://www.governor.state.ok.us/display_article.php?article_id=1157&article_type=1.

³⁸²⁸ *Id.*

³⁸²⁹ Press Release, Office of Okla. Governor, Gov. Henry pushes for energy independence as IOGCC leader (Nov. 18, 2009) http://www.governor.state.ok.us/display_article.php?article_id=1160&article_type=1.

³⁸³⁰ *Id.*

On January 24, 2008, Governor Henry urged state legislators to continue funding the Oklahoma Bioenergy Center (OBC) by providing a \$10 million appropriation in the state's budget.³⁸³¹ He emphasized the role Oklahoma could play in providing the 36 billion gallons of biofuels by 2022 required by recent federal legislation.³⁸³² Switchgrass, a prairie grass native to the state that is the primary focus of OBC's research, could contribute to the half expected to come from cellulosic fuels.³⁸³³

2009: Energy Efficiency, Green Jobs, Green Technology, Market-Based Solutions, Renewable Energy, and American Recovery & Reinvestment Act (ARRA)

On March 12, 2009, the U.S. Department of Energy announced that Oklahoma was eligible for \$46,704,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).³⁸³⁴ The goals of the State Energy Program were to increase energy efficiency to reduce energy costs and consumption, reduce reliance on imported energy, improve the reliability of electricity and fuel supply as well as the delivery of energy services, and to reduce the impacts of energy production and use on the environment. The money was used to advance energy efficiency, building efficiency, renewable energy and alternative fuel consumption projects throughout the state.³⁸³⁵

According to the Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for Oklahoma, the state's clean energy economy grew by 5,465 jobs and 693 businesses from 1998 to 2007.³⁸³⁶ Between 2006 and 2009, Oklahoma attracted over \$5 million in capital investment in clean energy.³⁸³⁷

2010: Green Technology, Renewable Energy, Renewable Portfolio Standards, and Transportation/Fuels

In May 2010, Governor Henry signed the Oklahoma Energy Security Act,³⁸³⁸ which aimed to expand clean energy in Oklahoma. It set a 15% by 2015 goal for renewable energy generation and sought to maximize the state's natural gas resources. It

³⁸³¹ Press Release, Office of Okla. Governor, Gov. Henry Urges Lawmakers to Keep Funding Commitment to Oklahoma Bioenergy Center, Proposes Increase for OCAST (Jan. 24, 2008) http://www.governor.state.ok.us/display_article.php?article_id=1046&article_type=1.

³⁸³² *Id.*

³⁸³³ *Id.*

³⁸³⁴ U.S. Dep't of Energy, Nat'l Energy Tech. Lab., State Energy Program Formula Grants, at 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

³⁸³⁵ SOUTHERN STATES ENERGY BOARD, STATE ENERGY OFFICES IN THE SOUTH 24, (Oct. 2011), <http://www.sseb.org/files/EOS.pdf>. See also *Tulsa County, Okla., funds by Energy, Department of, PROREPUBLICA*, <http://projects.propublica.org/recovery/locale/oklahoma/tulsa/dept/8900> (last visited Feb. 27, 2014).

³⁸³⁶ Pew Charitable Trust, Clean Energy Economy Oklahoma Fact Sheet, available at http://www.pewcenteronthestates.org/uploadedFiles/wwwpewcenteronthestatesorg/Fact_Sheets/Clean_Economy_Factsheet_Oklahoma.pdf.

³⁸³⁷ *Id.*

³⁸³⁸ 17 OKLA. STAT. ANN. § 801.1 (West 2010).

contained compressed natural gas provisions to develop fueling infrastructure in an effort to promote CNG vehicles.³⁸³⁹

2011: Greenhouse Gas Reduction and Transportation/Fuels

On April 13, 2011, Governor Mary Fallin signed H.B. 1909 to “better accommodate” the oil and gas industries’ horizontal hydro-fracking projects.³⁸⁴⁰

2012: Energy Efficiency, Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, and Transportation/Fuels

In February 2012, Oklahoma launched a Community Energy Strategic Plan Program to help municipalities and stakeholders create a roadmap to reduce the energy uses and costs of community operations and identify opportunities for other community-wide energy initiatives, as well as to incorporate renewable energy and community outreach considerations in the plan.³⁸⁴¹

On May 9, 2012, Governor Fallin signed into law S.B. 1096, which directs all Oklahoma government agencies and educational institutions to improve energy efficiency and conservation by at least 20% by the year 2020.³⁸⁴² The law, called the Oklahoma State Facilities Energy Conservation Program, took effect in August 2012 and is expected to save the state between \$300 and \$500 million over the next ten years.³⁸⁴³ The program is modeled after a similar successful program implemented at Oklahoma State University, which achieved 19% efficiency since the start of the program.³⁸⁴⁴

On October 3, 2012, the American Council for an Energy-Efficient Economy named Oklahoma as one of the three most-improved states in the nation along with Montana and South Carolina.³⁸⁴⁵ Governor Fallin credited Oklahoma’s state utility programs, tax incentives and the state’s plan to achieve a 20% improvement in government energy efficiency by 2020.³⁸⁴⁶

³⁸³⁹ Murray Evans, *Henry Signs Okla. Energy Security Act*, Business Week, May 28, 2010, <http://www.businessweek.com/ap/financialnews/D9FVRTA80.htm> (Jan. 23, 2011).

³⁸⁴⁰ Press Release, Office of the Governor. Governor Mary Fallin Signs Energy Reform Measure (Apr. 13, 2011), http://www.ok.gov/triton/modules/newsroom/newsroom_article.php?id=223&article_id=1581.

³⁸⁴¹ Oklahoma Department of Commerce and Oklahoma State Energy Office, *State Energy Program Community Energy Strategic Planning Grant*, October at p. 3, http://www.okcommerce.gov/Libraries/Documents/Community-Energy-Strategic-Pla_3519.pdf. See also Zeke Campfield, *Oklahoma Tribe Developing Solar Panel Business*, NATIVE TIMES (Feb. 23, 2013), <http://www.nativetimes.com/index.php/news/environment/6888-oklahoma-tribe-developing-solar-panel-business>.

³⁸⁴² Press Release, Governor Mary Fallin, The Oklahoman: Oklahoma law directs state agencies, colleges to save energy (May 9, 2012), http://www.ok.gov/triton/modules/newsroom/newsroom_article.php?id=223&article_id=7365.

³⁸⁴³ *Id.*

³⁸⁴⁴ *Id.*

³⁸⁴⁵ Press Release, Governor Mary Fallin, In Case You Missed It: ACEEE: Mass. Still #1 State for Energy Efficiency, OK Among Most Improved (Oct. 3, 2012), http://www.ok.gov/triton/modules/newsroom/newsroom_article.php?id=223&article_id=9289.

³⁸⁴⁶ *Id.*

In October 2012, Oklahoma participated in a 22-state initiative designed to encourage the manufacture and use of compressed natural gas (CNG) vehicles.³⁸⁴⁷ Governor Fallin and Colorado Governor John Hickenlooper announced the start of the project in November 2011 at the Governor's Energy Conference in Oklahoma City and subsequently issued a Request for Proposal, soliciting bids for CNG vehicles to be used in government fleets.³⁸⁴⁸ In November 2012, the Oklahoma Department of Transportation (ODOT) announced the addition of 160 CNG vehicles to its fleet.³⁸⁴⁹ The switch is expected to save the state \$20,000 over the life of each vehicle and to result in cleaner emissions.³⁸⁵⁰ ODOT plans to replace 90% of the ODOT and the Oklahoma Turnpike Authority fleets by 2015.³⁸⁵¹

2013: Energy Efficiency, Green Building, Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, Renewable Energy, and Transportation/Fuels

In January 2013, the University of Oklahoma (OU) completed the transfer over to ensuring that all purchased energy is from renewable sources. The switch comes as part of a 2008 agreement with Oklahoma Electric and Gas (OG&E), where OU would purchase all of its energy from OG&E for the utility's construction of the OU Spirit Wind Farm, a 10,000 acre 101 megawatt (MW) wind farm. OU receives approximately 85% of the renewable energy certificates (RECs) from the wind farm and can trade or sell them. The university's campus energy efficiency program allows OU to pay for the RECs offsetting the purchase price for the certificates. As of February 2013, OU has not noticed any major change in its usual electrical bill and believes the switch over to renewables will prevent against unexpected spikes in energy prices.³⁸⁵²

On May 8, 2013, the U.S. Department of Energy (DOE) released its 2012 Wind Technologies Market Report Summary, where it was revealed that Oklahoma moved up in the wind power capacity rankings, from eighth to sixth. It was reported that Oklahoma installed 1,127 MW of new wind power capacity, bringing its total to approximately 3,130 MW. This new capacity means that Oklahoma can generate about 14% of its electricity from wind energy.³⁸⁵³

On May 13, 2013, the Alternative Fuel Vehicle (AFV) Income tax credit was signed into law. Introduced as H.B. 2005, the one-time income tax credit applies for tax

³⁸⁴⁷ Press Release, Governor Mary Fallin, Governors Fallin and Hickenlooper Announce Results of Successful 22 State CNG Initiative (Oct. 4, 2012), http://www.ok.gov/triton/modules/newsroom/newsroom_article.php?id=223&article_id=9308.

³⁸⁴⁸ *Id.*

³⁸⁴⁹ Press Release, Governor Mary Fallin, Gov. Fallin Announces Addition of CNG Vehicles to ODOT Fleet (Nov. 20, 2012), http://www.ok.gov/triton/modules/newsroom/newsroom_article.php?id=223&article_id=9787.

³⁸⁵⁰ *Id.*

³⁸⁵¹ *Id.*

³⁸⁵² Silas Allen, *University of Oklahoma, OG&E Tout Wind Power Partnership*, NEWSOK (Feb. 19, 2013), <http://newsok.com/university-of-oklahoma-oge-tout-wind-power-partnership/article/3756817>.

³⁸⁵³ RYAN WISER, 2012 WIND TECHNOLOGIES MARKET REPORT SUMMARY 9, (May 28, 2013), http://apps2.eere.energy.gov/wind/windexchange/pdfs/workshops/2013_summit/wiser.pdf

years before January 1, 2020 and is available for 50% of the incremental cost of purchasing a new original equipment manufacturer AFV, excluding electric vehicles, or converting to a vehicle to operate on an alternative fuel. The state also will offer a tax credit of 10% of the total vehicle cost, up to \$1,500, if the incremental cost of the new AFV cannot be determined, or when it is sold (as long as the tax credit has not previously been used on the same vehicle). The eligible fuels for the tax credit are natural gas, liquefied natural gas, hydrogen, and propane. The tax credit may be carried forward for up to five years.³⁸⁵⁴

On June 28, Governor Fallin announced plans to combine the posts of the Secretary of Energy and the Secretary of the Environment into the Secretary of Energy and the Environment.³⁸⁵⁵ The officer shall be in charge of a host of environmental and energy issues from air quality to energy efficiency and renewables. The move was supported by the notion that energy matters are environmental matters and vice versa. This merger finally took place on December 20, 2013.³⁸⁵⁶

Moreover, the State of Oklahoma's energy utilities promote a portfolio of energy efficiency programs. In early 2013, OG&E received approval for their electric and natural gas efficiency programs pursuant to the Oklahoma Corporation Commission (OCC)'s specifications. The OG&E agenda is responsible for the administration and implementation of a demand portfolio of energy efficiency and demand response programs in its service territory. The programs have specific targets for residential and commercial customer classes while many large industrial customers opted out of the programs. OG&E will be working with a significantly larger budget from 2013-2015, and savings as a percentage of sales are expected to double.³⁸⁵⁷

In January 2013, Oklahoma Natural Gas also requested approval for its proposed energy efficiency programs from 2014-2016, as well as for an increased program administration budget. In June 2013, CenterPoint Oklahoma similarly requested approval for its energy efficiency programs for 2014-2016. Additionally, all the utilities may earn an incentive for successfully implementing energy efficiency programs.

Moreover, throughout the year, the Oklahoma Municipal Power Authority (OMPA) offers rebates of HVAC energy efficient equipment through its "Ways I Save Electricity" (WISE) Program. The program encourages the use of energy efficient heating and cooling equipment by offering rebates on various air conditioners, air-source heat pumps, dual fuel heat pumps, and geothermal heat pumps. OMPA will meet 50% of the costs for eligible upgrades through money allocated from ARRA.³⁸⁵⁸

³⁸⁵⁴ OKLA. STAT. ANN. § 68-2357.22.

³⁸⁵⁵ *Oklahoma Governor Mary Fallin's Environmental Secretary to Resign* Post, NEWSOK.COM (June 28, 2013), <http://newsok.com/oklahoma-gov.-mary-fallins-environmental-secretary-to-resign-post/article/3857177>.

³⁸⁵⁶ Okla. Exec. Order No. 2011-06 (Dec. 20, 2013), <https://www.sos.ok.gov/documents/executive/921.pdf>.

³⁸⁵⁷ *Oklahoma*, AMERICAN COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY (last updated Nov., 2013), <http://database.aceee.org/state/oklahoma>.

³⁸⁵⁸ *WISE Rebate Program*, OKLAHOMA MUNICIPAL POWER AUTHORITY, <http://ompa.com/programs/wise-rebate-program/> (last visited Mar. 1, 2014).

For the year 2013, as a part of the property tax incentive for wind generators, owners of wind generation facilities were reimbursed \$17,373,296, constituting 38% of the total ad valorem reimbursement fund.³⁸⁵⁹

OREGON

1977: Renewable Energy

Oregon creates the Oregon Residential Tax Credit program, offering tax credits for household use of solar heating, geothermal heating systems and wind power generation.³⁸⁶⁰ The state added other opportunities for tax credit until 2011, when the program was replaced in 2012 by the Energy Incentives Program.³⁸⁶¹

1979: Energy Efficiency, Renewable Energy, Green Building, and Greenhouse Gas Reduction

Oregon creates its Business Energy Tax Credit Program, offering tax credits for improvements in energy efficiency, recycling, use of renewable energy sources, creating fewer GHG emissions in transportation (both of product and of employees) and building sustainably.³⁸⁶² The program was retired in 2011 and replaced in 2012 by the Energy Incentives Program.³⁸⁶³

1993: Greenhouse Gas Reduction

In 1993, the Oregon Public Utilities Commission mandated that regulated electric utilities analyze the impact of carbon adders from \$10 to \$40 (in 1990 dollars) per ton of CO₂ in their integrated resource plans.³⁸⁶⁴

1997: Greenhouse Gas Reduction

Oregon became the first state in the union to pass a bill targeted at reduction of greenhouse gas emissions with House Bill 3283. House Bill 3283 required that new power plants emit seventeen percent fewer GHGs, either by direct reduction or by

³⁸⁵⁹ JEFF SPELLMAN, OKLA. TAX. COMM'N, EXEMPT MANUFACTURING REPORT JANUARY 2013 12, <http://www.tax.ok.gov/reports/2013ADVAnnualReport.pdf>.

³⁸⁶⁰ OR. DEP'T OF ENERGY, *Oregon Department of Energy Tax Credits* (Apr. 2006), http://www.epa.gov/statelocalclimate/documents/pdf/4_20_06_OR_Tax_Credits_Dillard.pdf.

³⁸⁶¹ ENERGY TRUST OF OREGON, *Understanding Changes to Oregon's Energy Tax Credits*, <http://energytrust.org/library/tax-credits/important-changes.aspx> (Mar. 25, 2014).

³⁸⁶² OR. DEP'T OF ENERGY, *Oregon Department of Energy Tax Credits* (Apr. 2006), http://www.epa.gov/statelocalclimate/documents/pdf/4_20_06_OR_Tax_Credits_Dillard.pdf.

³⁸⁶³ ENERGY TRUST OF OREGON, *Understanding Changes to Oregon's Energy Tax Credits*, <http://energytrust.org/library/tax-credits/important-changes.aspx> (Mar. 25, 2014).

³⁸⁶⁴ CTR FOR CLIMATE AND ENERGY SOLUTIONS, *Oregon Carbon Adder*, <http://www.c2es.org/us-states-regions/news/2007/oregon-carbon-adder> (Feb. 21, 2014).

acquiring credit for investing in non-profit organizations that would use the invested monies to reduce atmospheric GHGs.³⁸⁶⁵

2000: Green Building and Energy Efficiency

Governor John Kitzhaber announced the ambitious goal of statewide sustainability by 2025.³⁸⁶⁶ To achieve this goal, he called on state agencies to consider sustainability at every level of their decision-making, emphasized the importance of setting measurable goals, and vested leadership responsibility in the Department of Administrative Services to reshape practices within state agencies.³⁸⁶⁷ The Strategy also required that all new state building projects meet or exceed Leadership in Energy & Environmental Design (“LEED”) silver building standards, and state agencies were to begin factoring life-cycle costs and sustainability issues into their purchasing decisions, Oregon dedicated its first state park with sustainability as a primary objective.³⁸⁶⁸

2001: Greenhouse Gas Reduction and Green Building

The 2001 Oregon Sustainability Act established a comprehensive statutory framework for sustainability work within the state.³⁸⁶⁹ The Act authorized the creation of a Sustainability Board³⁸⁷⁰ under the Governor and comprised of representatives with expertise in the business and small business sectors, as well as natural resource conservation, sustainable development, health, and economics.³⁸⁷¹ Like the Executive Order 00-07 described *supra*, the Sustainability Act calls on state agencies to consider sustainability at every level – from purchasing through to facilities management.³⁸⁷² The Act also established an Institute for Natural Resources (“INR”) to act as a research clearinghouse, to provide information to the public, and to and work with state agencies striving to meet sustainability-related mandates and goals, under the supervision of Oregon State University.³⁸⁷³

Oregon’s Energy Facility Siting legislation, enacted in 2001 as an amendment to pre-existing siting legislation, required new facilities to limit CO₂ emissions to seventeen percent below emissions of the most efficient and commercially viable combustion

³⁸⁶⁵ H.B. 3283, 69th Leg., Reg. Sess. (Or. 1997).

³⁸⁶⁶ Or. Exec. Order No. 00-07 (2000),

http://archivedwebsites.sos.state.or.us/Governor_Kitzhaber_2003/governor/legal/execorders/eo00-07.pdf

³⁸⁶⁷ *Id.* As a result of this and Governor Ted Kulongoski’s subsequent Executive Orders, twenty state agencies had developed sustainability plans and ongoing monitoring regimes by 2006. *See* Or. Exec. Order No. 06-02 (2006), <http://www.oregon.gov/gov/pdf/eo0602.pdf>.

³⁸⁶⁸ *See* Or. Exec. Order No. 06-02 (2006), <http://www.oregon.gov/gov/pdf/eo0602.pdf>.

³⁸⁶⁹ OR. REV. STAT. §184.421 (2012); *id.* at § 184.423 (2012).

³⁸⁷⁰ OR. REV. STAT. §184.427 (2012); *id.* at § 184.429 (2012).

³⁸⁷¹ *Id.* § 184.429(1)(a)-(e) (2012).

³⁸⁷² *Id.* at § 184.423(1)-(2) (2012).

³⁸⁷³ INST. FOR NATURAL RES., *Who We Are*, <http://oregonstate.edu/inr/> (Mar. 3, 2014).

turbine natural gas-fired energy facility operated in the United States.³⁸⁷⁴ Oregon's facility siting statutes also established specific standards for determining compliance, a streamlined permitting process (allowing for potential conflicts with state and local ordinances to be assessed in one step), public comment periods at the outset of the review process, and the opportunity for direct appeal to the Oregon Supreme Court.³⁸⁷⁵

2004: Greenhouse Gas Reduction

In 2004, Oregon published its Strategy for Greenhouse Gas Reductions ("Oregon Strategy"), with quantitative targets for greenhouse gas reduction and an implementation plan. The Oregon Strategy was crafted by the newly appointed (2004) Governor's Advisory Group on Global Warming, which continues to exist and consists of twenty members representing citizens, interest groups, and public officials.³⁸⁷⁶

2005: Political Action

Oregon passed nonbinding legislation prohibiting agencies from imposing requirements related to greenhouse gas emissions.³⁸⁷⁷

2006: Greenhouse Gas Reduction, Political Action, Climate Change Agreements, Renewable Energy, and Transportation/Fuels

In May 2006, Oregon Governor Ted Kulongoski established the Governor's Climate Change Integration Group.³⁸⁷⁸ He also established the Integration Group to continue and expand on the work of the Governor's Advisory Group on Global Warming, which prepared the Oregon Strategy for Greenhouse Gas Reductions in 2004.³⁸⁷⁹ The Governor's charge to the Climate Change Integration Group is to continue and expand on the work of the Global Warming Advisory Group to develop a climate change strategy for Oregon that provides long-term sustainability for the environment, protect public health, consider social equity, create economic opportunity, and expand public awareness.³⁸⁸⁰ Oregon's goal is to reduce greenhouse gas emissions to 1990 levels by 2010, ten percent below 1990 levels by 2020, and seventy-five percent below 1990 levels by 2100.

³⁸⁷⁴ OR. REV. STAT. § 469.501 (2012). *See also* Chapter 7, *supra*.

³⁸⁷⁵ OR. REV. STAT. § 469.501 (2012). *See also* OR. ADMIN. R. 345-020-0011 (2006) (describing requirements for a Notice of Intent).

³⁸⁷⁶ STATE OF OREGON, GOVERNOR'S ADVISORY GROUP ON GLOBAL WARMING, *Oregon Strategy for Greenhouse Gas Reductions (2004)*, <http://www.oregon.gov/ENERGY/GBLWRM/docs/GWReport-Final.pdf>.

³⁸⁷⁷ H.R. Res. 3, 73d. Leg., Reg. Sess. (Or. 2005).

³⁸⁷⁸ OREGON.GOV, ODOE: CLIMATE CHANGE IN OREGON, *Climate Change Integration Group*, <http://www.oregon.gov/ENERGY/GBLWRM/CCIG.shtml> (accessed Mar. 3, 2014).

³⁸⁷⁹ *Id.*

³⁸⁸⁰ *Id.*

In 2006, Oregon mandated broad-based net power metering. Under this Act, all Oregon utilities providing commercial and residential power are required to provide net metering for customer-generators with up to 25kW capacity.³⁸⁸¹ (The Public Utility Commission may increase this limit for customers of public utilities.)³⁸⁸² Metering is performed at the utilities' expense.³⁸⁸³ The list of qualifying alternative fuel sources includes solar power, wind power, fuel cells, hydroelectric power, landfill gas, digester gas, waste, dedicated energy crops available on a renewable basis, and nontoxic biomass based on solid organic fuels from wood, forest, or field residues.³⁸⁸⁴ At the end of the year, unused credits are either credited to the customer generator, distributed to customers enrolled in the utility's low-income assistance programs, or dedicated for other uses following notice and opportunity for public comment.³⁸⁸⁵

In December 2006, Oregon's Utility Commission signed onto the Western Public Utility Commissions' Joint Action Framework on Climate Change, an inter-state agreement with the public utility commissions of California, New Mexico, and Washington. The utility commissions agreed to work together to recommend ways to identify, develop, and implement greater energy efficiency, demand response capability, low-carbon technologies, and GHG standards.

Under new Oregon tax provisions, value added to real property by installation of a qualifying renewable energy system was no longer to be included in the assessment of a property's value for tax purposes.³⁸⁸⁶ Special provisions enabled renters to install alternative energy equipment (*e.g.*, photovoltaics) without the equipment becoming a 'fixture' and thereby the credit-worthy property of the landlord.³⁸⁸⁷ Oregon also encouraged solar power use by allowing municipalities to enact statutes protecting access to the south face of buildings during solar heating hours (through height and setback requirements for new buildings, restrictions on type and placement of new trees, etc.).³⁸⁸⁸

In 2006, Oregon began offering Small Scale Local Energy Project Loans in support of initiatives to produce or deliver alternative/low-emission fuels or conserve energy by, for instance, modifying vehicles to run on alternative fuels.³⁸⁸⁹

The Oregon Department of Energy also offered the Business Energy Tax Credit (BETC) for businesses investing in Alternative Fuel Vehicles (AFV), Hybrid Electrical Vehicles (HEV), or other alternative fuel or transportation-related conservation

³⁸⁸¹ OR. REV. STAT. § 757.300 (2012).

³⁸⁸² *Id.*

³⁸⁸³ *Id.*

³⁸⁸⁴ *Id.*

³⁸⁸⁵ *Id.*

³⁸⁸⁶ *Id.* at § 307.175.

³⁸⁸⁷ *Id.* at § 90.265.

³⁸⁸⁸ *Id.* at §§ 227.190, 227.195, 215.044, 215.047.

³⁸⁸⁹ *Id.* at §§ 470.050-470.080 (2012).

measures.³⁸⁹⁰ Eligible businesses received a tax credit of 35% of the incremental cost of the equipment over five years.³⁸⁹¹ Private consumers could take up to \$1,500 in tax credits against their state income taxes for the purchase of qualifying AFV's or HEV's and also received credits for the cost of conversion to an alternative fuel system.³⁸⁹² Contractors could take a business tax credit of up to \$750 for the construction or installation in a dwelling of a fueling station needed to operate an AFV.³⁸⁹³ Electric and natural-gas-driven vehicles were excluded from the requirements for certified pollution control systems.³⁸⁹⁴

2007: Greenhouse Gas Reduction, Climate Change Agreements, Renewable Portfolio Standards, Renewable Energy, Energy Efficiency, and Transportation/Fuels

In February 2007, Governor Kulongoski with the governors of California, New Mexico, Oregon, and Washington established the Western Regional Climate Action Initiative (WCI)³⁸⁹⁵ in order to reduce greenhouse gas emissions and address climate change.³⁸⁹⁶ On August 22, 2007, the WCI set a regional greenhouse gas emission reduction goal of 15% below 2005 levels by 2020, or approximately 33% below business-as-usual levels.³⁸⁹⁷ This regional target was compatible with and did not replace the states' individual greenhouse gas reduction targets.³⁸⁹⁸ British Columbia (Canada), joined in April 2007, followed by Utah in May, Manitoba in June, and then by Montana, Quebec (Canada) and Ontario (Canada) in 2008.³⁸⁹⁹

Oregon's Governor Kulongoski and British Columbia's Premier Campbell signed a memorandum of understanding on October 23, 2007, formalizing their commitment to addressing climate change. Together they advocated the continued efforts of the WCI, and urged the adoption of policies to reduce greenhouse gas emissions, curb tail pipe emissions, and support the development of hydrogen-fuel vehicles.³⁹⁰⁰

³⁸⁹⁰ OR. DEP'T OF ENERGY, *Energy Information for Businesses: Business Energy Tax Credits*, <http://oregon.gov/ENERGY/CONS/BUS/BETC.shtml> (Mar. 3, 2014). *See also* Oregon: 2011 and Oregon: 2012, *infra* (discussing sunset of BETC through house bills 3672 (2011) and 4079 (2011)).

³⁸⁹¹ *Id.*

³⁸⁹² OR. REV. STAT. §§ 316.116, 469.165-.170 (2012).

³⁸⁹³ *Id.* at §§ 317.115, 469.165-.170.

³⁸⁹⁴ *Id.* at §§ 815.295-.300, 468A.365.

³⁸⁹⁵ *See also* 2011: WCI, *infra*.

³⁸⁹⁶ WESTERN CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/> (Mar. 3, 2014).

³⁸⁹⁷ WESTERN CLIMATE INITIATIVE, *Statement of Regional Goal*, http://www.swenergy.org/news/news/documents/file/2007-08-Western_Climate_Initiative.pdf (Mar. 3, 2014).

³⁸⁹⁸ *Id.*

³⁸⁹⁹ WESTERN CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/> (Mar. 3, 2014).

³⁹⁰⁰ MEMORANDUM OF UNDERSTANDING BETWEEN THE PROVINCE OF BRITISH COLUMBIA AND THE STATE OF OREGON ON PACIFIC COAST COLLABORATION TO PROTECT OUR SHARED CLIMATE AND OCEAN, <http://www.pacificcoastcollaborative.org/Documents/orbcpc.pdf>.

In May 2007, Oregon and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”³⁹⁰¹

On October 29, 2007, Oregon joined a new coalition called the International Carbon Action Partnership, formed of nine other states, New Zealand, Norway, nine European Union countries, the European Commission, and two Canadian provinces, embracing ICAP’s goal of combating global warming.³⁹⁰² ICAP provides a forum for governments to share information regarding cap-and-trade systems and works to ensure that market programs are compatible.³⁹⁰³ In addition, ICAP promotes low-carbon products and services, innovations, and cost effective reductions.³⁹⁰⁴

Governor Kulongoski signed S.B. 838 in July 2007, creating a renewable electricity portfolio standard that requires Oregon utilities to generate five percent of their electricity load from renewable energy by 2011, fifteen percent by 2015, twenty percent by 2020, and twenty-five percent by 2025.³⁹⁰⁵ Eligible renewable energy sources must be in operation on or after January 1, 1995, and include wind, solar, wave, geothermal, biomass, new hydro not located within environmentally protected areas, or efficiency upgrades to existing hydro facilities.³⁹⁰⁶

The law does not require compliance if it will result in a greater than four percent cost increase for the utility, and utilities with no cost-effective options for compliance may make an “Alternative Compliance Payment,” which will be later used for obtaining renewable energy, conservation, research, or development.³⁹⁰⁷

The legislation exempts utilities contributing less than three percent of the state’s electricity load from meeting the twenty-five percent by 2025 standard unless they invest in coal-fired generation.³⁹⁰⁸ However, these utilities must meet either the five percent by 2011 or fifteen percent by 2015 standard.³⁹⁰⁹

³⁹⁰¹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions, http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf (accessed Mar. 3, 2014).

³⁹⁰² Press Release, International Carbon Action Partnership, Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007), https://icapcarbonaction.com/index.php?option=com_attach&task=download&id=36.

³⁹⁰³ *Id.*

³⁹⁰⁴ *Id.*

³⁹⁰⁵ S.B. 838, 74th Leg., Reg. Sess. (Or. 2007).

³⁹⁰⁶ *Id.*

³⁹⁰⁷ *Id.*

³⁹⁰⁸ *Id.*

³⁹⁰⁹ *Id.*

Later, in July 2007, Governor Kulongoski signed into law H.B. 2210, biofuel legislation that establishes tax incentives for consumers and producers of biofuels and a renewable fuel standard.³⁹¹⁰ In particular, the legislation requires that, subsequent to the state's ethanol production reaching 40 million gallons per year, all gasoline sold in state be blended with 10% ethanol.³⁹¹¹ Additionally, when Pacific Northwest biodiesel fuel production reaches 5 million gallons per year, the law requires that diesel fuel sold in Oregon be blended with 2% biodiesel, increasing this requirement to 5% when biodiesel production reaches 15 million gallons per year.³⁹¹² The legislation also contains tax incentives for producers or collectors of biofuels feedstock and biofuels consumers, as well as a business energy tax credit for biofuels refineries and farm-based equipment.³⁹¹³

Also in July 2007, Governor Kulongoski signed H.B. 3201b, which increases the business energy tax credit for renewable energy projects from thirty-five to fifty percent of qualified costs over five years and increases the maximum amount eligible for a tax credit from ten million to twenty million dollars.³⁹¹⁴ Additionally, H.B. 3201b increases the maximum tax credit for wind generation and fuel cells from \$1,500 to \$6,000 and creates a tax credit of up to twenty-five percent of the cost of re-powering a diesel engine or fifty percent of the cost of retrofitting a diesel engine.³⁹¹⁵ In March 2008 the Bill was amended by H.B. 3619, which extends the amount of credit to forty million dollars for manufacturers of renewable energy equipment.³⁹¹⁶

House Bill 2272 grants new authority to the Environmental Quality Commission to set emissions standards, enables the Department of Transportation to deny registration to vehicles not meeting those standards, and provides additional strength for EQC enforcement of tail-pipe emissions standards promulgated in June of 2006.³⁹¹⁷

Governor Kulongoski signed H.B. 3543 into law. Titled the "Climate Change Integration Act," on August 7, 2007,³⁹¹⁸ the three-pronged Act:

- Requires reduction of greenhouse gas emissions to ten percent below 1990 levels by 2020 and seventy-five percent below 1990 levels by 2050.
- Establishes the Oregon Global Warming Commission, which is charged with evaluating cap-and-trade programs and other market-based devices for reducing greenhouse gas emissions, recommending cost-effective policies to meet the state's greenhouse gas reduction goals, tracking statewide greenhouse gas

³⁹¹⁰ H.B. 2210, 74th Leg., Reg. Sess. (Or. 2007).

³⁹¹¹ *Id.*

³⁹¹² *Id.*

³⁹¹³ *Id.*

³⁹¹⁴ H.B. 3201b, 74th Leg., Reg. Sess. (Or. 2007).

³⁹¹⁵ *Id.*

³⁹¹⁶ H.B. 3619, 75th Leg., Spec. Sess. (Or. 2008).

³⁹¹⁷ H.B. 2272, 74th Leg., Reg. Sess. (Or. 2007).

³⁹¹⁸ H.B. 3543, 74th Leg., Reg. Sess. (Or. 2007).

- emissions, and evaluating the state's greenhouse gas reduction progress and climate change impacts in Oregon.³⁹¹⁹
- Creates and funds the Oregon Climate Research Institute, which is tasked with housing the state's climate change information and supporting the Oregon Global Warming Commission.³⁹²⁰

2008: Greenhouse Gas Reduction, Climate Change Agreements, Renewable Energy, Energy Efficiency, and Transportation/Fuels

In March 2008, Governor Kulongoski traveled to Amsterdam and Israel to meet with European Union officials and industry representatives to discuss carbon cap-and-trade issues and alternative energy technologies.³⁹²¹

The WCI announced draft essential requirements for the reporting of greenhouse gas emissions in July 2008.³⁹²² It also released "Design Recommendations for the WCI Regional Cap-and-Trade Program" on September 23, 2008.³⁹²³ The Design Recommendations for the WCI Regional Cap-and-Trade Program recommends that carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions should all fall under the cap-and-trade scheme.³⁹²⁴ Regulated sources are electricity generation, combustion at industrial and commercial facilities, industrial process, fuel combustion from industrial, residential and commercial sources that are below the threshold for direct regulation, and transportation combustion of gasoline/diesel (excluding biofuels).³⁹²⁵ Each of these sources must emit at least 25,000 metric tons of carbon dioxide equivalent annually in order to participate in the trade.³⁹²⁶ The first compliance periods begins in 2012 and includes half of the economy-wide regulated emissions from the Initiative's member jurisdiction for the electricity generation, industrial combustion and industrial process sectors.³⁹²⁷ The second compliance period begins in 2015, adding the other regulated sectors and includes 90% of the economy-wide regulated emissions.³⁹²⁸

³⁹¹⁹ *Id.*

³⁹²⁰ *Id.*

³⁹²¹ Press Release, Governor Ted Kulongoski, Governor Meets With European Union Officials on Cap and Trade (Mar. 31, 2008), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2008/press_033108.shtml.

³⁹²² *Id.*

³⁹²³ WESTERN CLIMATE INITIATIVE, *Design Recommendations for the WCI Regional Cap-and-Trade Program*, (Sept. 23, 2008), http://www.ecy.wa.gov/climatechange/WCIdocs/092308WCI_ReportSec1_DesignRecs.pdf.

³⁹²⁴ *Id.* at 8.

³⁹²⁵ *Id.* at 8-9.

³⁹²⁶ *Id.* at 10.

³⁹²⁷ *Id.* at 24.

³⁹²⁸ *Id.*

On December 17, 2008, Governor Kulongoski signed Executive Order 08-26³⁹²⁹ creating the Oregon Energy Planning Council (OEPC).³⁹³⁰ OEPC is charged with providing a report to the governor by the end of 2010 that addresses current energy usages and needs, future needs and supply gaps, and alternatives for short, medium and long term energy plans.³⁹³¹

In March 2008, H.B. 3612 was signed into law.³⁹³² This legislation requires any state agency that is authorized to finance construction, purchase or renovation of structures used by the state to reduce the amount of energy the agency uses by at least 20% by June 30, 2015.³⁹³³

H.B. 2620, which requires that public entities spend 1.5% of the total contract price of a public improvement contract for new construction or major renovation of a public building on solar energy technology, took effect on January 1, 2008.³⁹³⁴ Public entities include, but are not limited to, state agencies, universities, community colleges, school districts and education services districts, and local government.³⁹³⁵

In July 2008, the Oregon Energy Facility Siting Council (EFSC) approved a site certificate for a new 908 MW wind farm.³⁹³⁶ Estimates concluded that the Shepherds Flat Wind Farm would double Oregon's wind energy capacity. In a Department of Environmental Quality action to reduce greenhouse gas emissions, the Agency promulgated a rule requiring businesses to report greenhouse gas emissions.³⁹³⁷ This rule, approved on October 23, 2008, will regulate businesses emitting 2,500 metric tons of carbon dioxide equivalent.³⁹³⁸

In April 2008, Governor Ted Kulongoski charged his Transportation Vision Committee with developing a series of recommendations for how Oregon can make improvements within the transportation infrastructure while simultaneously reducing greenhouse gases.³⁹³⁹ The Committee is tasked with incorporating climate change into

³⁹²⁹ Exec. Order 08-26 (Dec. 17, 2008), http://www.oregon.gov/gov/docs/executive_orders/eo_0826r.pdf.

³⁹³⁰ Press Release, Governor Ted Kulongoski, Governor creates Oregon Energy Planning Council (Dec. 19, 2008), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2008/press_121908.shtml.

³⁹³¹ *Id.*

³⁹³² H.B. 3612, 74th Leg., Spec. Sess. (Or. 2008).

³⁹³³ *Id.*

³⁹³⁴ H.B. 2620, 74th Leg., Reg. Sess. (Or. 2007).

³⁹³⁵ *Id.*

³⁹³⁶ *Oregon to have world's largest wind farm*, SEATTLE TIMES, July 27, 2008, http://seattletimes.com/html/localnews/2008075554_windfarm27m.html.

³⁹³⁷ OR. DEP'T OF ENVTL. QUALITY, Air Quality, Climate Change, Greenhouse Gas Reporting Home, <http://www.deq.state.or.us/aq/climate/greenhousegas.htm>.

³⁹³⁸ *Id.*

³⁹³⁹ Press Release, Governor Ted Kulongoski, Governor Outlines Sustainable Transportation Initiatives for 2009 (July 30, 2008),

four areas of transportation planning: low carbon fuels; vehicle technology improvement; reducing vehicle miles traveled; and improving transportation system efficiency.³⁹⁴⁰

On November 19, 2008, Governor Ted Kulongoski announced a partnership between Oregon, Nissan, and Portland General Electric, to provide for a fleet of state government electric vehicles in 2010.³⁹⁴¹ Nissan was scheduled to release its electric vehicle during that model year, and PGE was developing a model charging station infrastructure.³⁹⁴² The initiative aligned with Kulongoski's 2009 legislative proposal to shift tax credits from hybrids to plug-in hybrids and all electric vehicles, discussed *infra*.³⁹⁴³

On October 27, 2008, Governor Kulongoski proposed that a series of climate change legislation be considered during the 2009 legislative session.³⁹⁴⁴ The agenda focused on four areas: greenhouse gas reductions, energy efficiency, renewable energy and sustainable transportation.³⁹⁴⁵ In the greenhouse gas reductions area, Kulongoski focused on authorizing participation in a cap-and-trade program (presumably the Western Climate Initiative), establishing greenhouse gas reduction standards and strengthening greenhouse gas regulatory tools.³⁹⁴⁶ The energy efficiency area included programs for net zero emissions buildings, energy performance certificates for new buildings, and financial tools for residential energy efficiency efforts. The renewable Energy area included expanding solar projects, strengthening strategies towards the government's goal of achieving 100% renewable energy use as well as strengthening the Business Energy Tax Credit. Finally, the sustainable transportation area included encouraging low carbon fuels, setting mile reduction goals and encouraging commercialization of electrical vehicles.³⁹⁴⁷

http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2008/press_073008.shtml

³⁹⁴⁰ Press Release, Governor Ted Kulongoski, Governor Outlines Vision for Green Transportation Policies (Apr. 11, 2008),

http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2008/press_041108.shtml.

³⁹⁴¹ Press Release, Governor Ted Kulongoski, Office of Or. Governor, Governor, Nissan & PGE Partner to Promote Zero-Emission Vehicles (Nov. 19, 2008),

http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2008/press_111908a.shtml.

³⁹⁴² *Id.*

³⁹⁴³ *Id.*

³⁹⁴⁴ Press Release, Governor Ted Kulongoski, Governor announces climate change agenda for 2009 (Oct. 27, 2008),

http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2008/press_102708.shtml

³⁹⁴⁵ STATE OF OR. OFFICE OF THE GOVERNOR, *Answering the Oregon Challenge: Climate Change*,

http://www.oregonrenewables.com/Publications/Kulongoski_climate_change_agenda_1008.pdf

³⁹⁴⁶ *Id.* at 1.

³⁹⁴⁷ *Id.*

2009: Climate Change Agreements, Cap & Trade, Political Action, Renewable Energy, American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

In furtherance of its cap-and-trade program, the Western Climate Initiative released the third draft of the “Background Document and Progress Report for Essential Requirements of Mandatory Reporting For the Western Climate Initiative” on January 6, 2009 for public comment.³⁹⁴⁸ The reporting threshold was set at 10,000 metric tons of CO₂ in a year, well below the 25,000 metric ton threshold for participation in the cap-and-trade program.³⁹⁴⁹ It recommended that stationary combustion sources be subject to the reporting requirement as well as the sources listed in Table 1 of the document. These listed sources must report combustion and non-combustion emissions.³⁹⁵⁰ The WCI recommended that reporting begin in 2011 for facilities that operated prior to 2010.³⁹⁵¹ This was in preparation for the commencement of the cap-and-trade program in 2013.³⁹⁵²

In July 2009, the Western Climate Initiative (WCI) issued an Offsets Whitepaper for comments to its stakeholders.³⁹⁵³ The paper is the initial phase in development of the definition of an offset and a major focus of the paper is additionality.³⁹⁵⁴ WCI’s Cap Setting and Allowance Distribution Committee released its *Draft Statement of Principles on Competitiveness* and the *Review of Proposed Options for Addressing Industrial Competitiveness Impacts* in August 2009.³⁹⁵⁵ The purpose of the draft was to “guide the process by which WCI will evaluate competitiveness effects of a regional cap-and-trade program,” and also reviewed how other cap-and-trade programs address this issue.³⁹⁵⁶

Oregon along with twenty-nine other states formed the Governors’ Energy & Climate Coalition on May 21, 2009.³⁹⁵⁷ The bipartisan group was created to “assist the federal government as it builds out a national energy policy that creates jobs and protects consumers and the environment.” Governor Kulongoski also signed an agreement to

³⁹⁴⁸ WCI Documents, WESTERN CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org> (follow “Documents & Resources” hyperlink; then “Search for Files” for “Background Document”).

³⁹⁴⁹ *Id.* at 10.

³⁹⁵⁰ *Id.* at 11.

³⁹⁵¹ *Id.* at 16.

³⁹⁵² WESTERN CLIMATE INITIATIVE, FREQUENTLY ASKED QUESTIONS, <http://www.westernclimateinitiative.org/the-wci-cap-and-trade-program/faq>.

³⁹⁵³ PERKINS COIE, News/Blogs, Western Climate Initiative Invites Comments Regarding Offset Definition and Eligibility Criteria, <http://www.perkinscoie.com/western-climate-initiative-invites-comments-regarding-offset-definition-and-eligibility-criteria-08-11-2009/>.

³⁹⁵⁴ *Id.*

³⁹⁵⁵ WCI Documents, WESTERN CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org> (follow “Documents & Resources” hyperlink; then “Search for Files” for “Draft Statement of Principles on Competitiveness and Review of Options”).

³⁹⁵⁶ *Id.*

³⁹⁵⁷ ENVTL AND ENERGY STUDY INST., Thirty Governors Form Energy and Climate Coalition (May 21, 2009), http://www.eesi.org/052609_governors.

support federal climate change legislation.³⁹⁵⁸ The agreement contains two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.³⁹⁵⁹

Governor Kulongoski and eleven other governors signed a letter to President Obama urging him to form a strong state/federal leader partnership in administering a initiating a national climate change program.³⁹⁶⁰ This letter was predicated upon the President's letter to the Governors' Global Climate Summit in which he offered the governors a partnership with the White House in addressing climate change issues. The letter writers believe that their states have played a leading role in confronting these issues and stated, "It is crucial that we build on our states' momentum."³⁹⁶¹ The letter also contains suggestions for how a national climate change program should be implemented. One of these suggestions is for the national government to recognize the private investments that have been made in current cap-and-trade programs and to preserve the clean energy plans that are funded by the proceeds from these programs.³⁹⁶²

On May 19, 2009, Governor Kulongoski commended the Obama Administration for its announcement that EPA would adopt federal clean tailpipe standards.³⁹⁶³

According to the Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for Oregon, Oregon's clean energy economy jobs grew by 19,340 jobs and 1,613 businesses from 1998 to 2007.³⁹⁶⁴ Between 2006 and 2009, Oregon attracted over \$70 million in capital investment in clean energy.³⁹⁶⁵

³⁹⁵⁸ *Id.*

³⁹⁵⁹ Press Release, Governor Deval Patrick (Mass.), Governor Patrick Joins New "Governors' Climate Coalition" to build clean energy economy (May 21, 2009), <http://www.mass.gov/governor/pressoffice/pressreleases/2009/governors-climate-coalition-to-build-clean.html>.

³⁹⁶⁰ Letter from Arnold Schwarzenegger, Governor, California; M. Jodi Rell, Governor, Connecticut; Charlie Crist, Governor, Florida; Kathleen Sebelius, Governor, Kansas; Martin O'Malley, Governor, Maryland; Deval Patrick, Governor, Massachusetts; John S. Corzine, Governor, New Jersey; Bill Richardson, Governor, New Mexico; David Paterson, Governor, New York; Theodore R. Kulongoski, Governor, Oregon; Christine O. Gregoire, Governor, Washington; Jim Doyle, Governor, Wisconsin, to Barack Obama, President, United States of America (Jan. 29, 2009), <http://web.archive.org/web/20100306193106/http://www.wisgov.state.wi.us/docview.asp?docid=15821>.

³⁹⁶¹ *Id.* at 1.

³⁹⁶² *Id.* at 2.

³⁹⁶³ Press Release, Gov. Ted Kulongoski, Governor Kulongoski applauds national tailpipe emissions standard (May 19, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press051909.shtml. See also H.B. 2186, 75th Leg. (Or. 2009).

³⁹⁶⁴ PEW CHARITABLE TRUST, CLEAN ENERGY ECONOMY FACT SHEET, http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/Fact%20Sheet%20Clean%20Energy%20Economy%20All%2050%20States.pdf

³⁹⁶⁵ *Id.*

On March 12, 2009, the U.S. Department of Energy announced that Oregon was eligible for \$42,182,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).³⁹⁶⁶

On November 24, 2009, Governor Kulongoski announced that Oregon, Idaho, Washington, Montana and Wyoming had received a total of \$88M in ARRA funding for smart grid investment.³⁹⁶⁷ The funding provided for 50% of the costs associated with the project; project participants invested the other half.³⁹⁶⁸ An estimated 60,000 consumers were to be linked to the smart grid.³⁹⁶⁹

In October 2009, Oregon was selected to receive over \$9.5 million for energy efficiency and conservation projects under Oregon's Energy Efficiency and Conservation Block (OEECB) program.³⁹⁷⁰ Among the projects benefiting from the funds is Oregon Dept. of Transportation (ODOT) solar highway project.³⁹⁷¹ ODOT's solar highway project installs solar panels along the highway to light major intersections.³⁹⁷² Portland Community College will also receive \$1 million in grant money for the initial phase of its Energy Net Zero project.³⁹⁷³ The ultimate goal of the Energy Net Zero project is achieving a completely self-sufficient campus "where carbon emissions are eliminated and all energy needs are met with renewable energy generated on-site."³⁹⁷⁴

Along with H.B. 2186, the low carbon fuel standard, Governor Kulongoski signed into a law a series of other climate change bills.³⁹⁷⁵ The legislation included bills expanding reporting requirements for greenhouse gas emissions,³⁹⁷⁶ increasing energy efficiency requirements in building codes³⁹⁷⁷ and creating solar energy pilot programs.³⁹⁷⁸

³⁹⁶⁶ OREGON.GOV, American Recovery and Reinvestment Act (ARRA), FAQs for ODOE's ARRA Program, http://www.oregon.gov/energy/Recovery/Pages/FAQs_for_ODOE_ARRA_program.aspx (Mar. 25, 2014).

³⁹⁶⁷ Press Release, Governor Kulongoski, Governor Kulongoski announces Smart Grid Investment for Northwest (Nov. 24, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_112409a.shtml.

³⁹⁶⁸ *Id.*

³⁹⁶⁹ *Id.*

³⁹⁷⁰ Press Release, Governor Ted Kulongoski, Oregon to Receive \$9.5 million in Recovery Act Funds for Energy Projects (Oct. 1, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_100109.shtml.

³⁹⁷¹ *Id.*

³⁹⁷² *Id.*

³⁹⁷³ Press Release, Governor Ted Kulongoski, Governor announces next round of Recovery Act grants for energy efficiency projects (Oct. 20, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_102009.shtml.

³⁹⁷⁴ *Id.*

³⁹⁷⁵ *Id.*

³⁹⁷⁶ S.B. 38, 75th Leg., Reg. Sess. (Or. 2009).

³⁹⁷⁷ S.B. 79, 75th Leg., Reg. Sess. (Or. 2009).

Similar to legislation enacted in Washington and California, S.B. 101 “requires that new electricity sources must be as least as clean as natural gas plants, effectively blocking new development of conventional coal.”³⁹⁷⁹

While applauding the new federal standards, he encouraged his own state legislature to enact a proposed low carbon fuel standard bill, stating “[it] is the perfect complement to a federal clean tailpipe standard . . . [n]ot only will gas mileage improve, but every car will use cleaner burning fuel, emitting fewer greenhouse gas emissions on every road in the state.”³⁹⁸⁰ Subsequently, the Senate passed the legislation on June 24, 2009³⁹⁸¹ and Kulongoski signed it on July 22, 2009.³⁹⁸²

In early April 2009, Governor Kulongoski test drove an electric car manufactured by Norwegian automaker Think.³⁹⁸³ The company was considering Oregon as the location of its new manufacturing center.³⁹⁸⁴ To facilitate the electric vehicle market, Kulongoski encouraged the legislature to pass two proposals: one that created tax credits for electric vehicle manufacturers; and another that transitioned hybrid tax credits to incentivize purchases of zero emission vehicles.³⁹⁸⁵ He also announced a partnership with Mitsubishi and Portland General Electric to create an electric vehicle charging network.³⁹⁸⁶

In August 2009, Oregon continued to bolster its electric vehicle initiatives. Governor Kulongoski announced that Oregon was selected as one of five test markets to

³⁹⁷⁸ H.B. 3039, 75th Leg., Reg. Sess. (Or. 2009).

³⁹⁷⁹ Press Release, Governor Ted. Kulongoski, Governor Kulongoski signs climate change legislation into law (July 22, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_072209.shtml. See also S.B. 101, 75th Leg., Reg. Sess. (Or. 2009).

³⁹⁸⁰ *Id.*

³⁹⁸¹ Press Release, Governor Ted Kulongoski, Statement by Governor Ted Kulongoski on passage of low carbon fuel standard (June 24, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_062409.shtml.

³⁹⁸² Press Release, Governor Ted. Kulongoski, Governor Kulongoski signs climate change legislation into law (July 22, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_072209.shtml.

³⁹⁸³ Press Release, Governor Ted Kulongoski, Governor Encourages Legislature to Pass Electric Vehicle Bills (Apr. 7, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_040709.shtml.

³⁹⁸⁴ *Id.*

³⁹⁸⁵ *Id.*

³⁹⁸⁶ Press Release, Governor Ted Kulongoski, Kulongoski, Mitsubishi & PGE Partner to Promote Zero-Emission Vehicles (Apr. 9, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_040909.shtml.

received federal stimulus money for the deployment of electric vehicles.³⁹⁸⁷ The project's goal is provide data on the use of electric vehicles and charging stations that will guide similar deployments nationwide.³⁹⁸⁸ Later that month, Kulongoski toured two start-up electric vehicle companies in Oregon and commended their contribution to sustainability and investment in the state.³⁹⁸⁹

In June 2009, Oregon required all school buses to be retrofitted with more efficient engines and fine-particulate filters, effective January 2017.³⁹⁹⁰

2010: American Recovery & Reinvestment Act (ARRA), Renewable Energy, Transportation/Fuels, and Greenhouse Gas Reduction

On January 20, 2010, Governor Kulongoski announced that Oregon was awarded \$5.3 million in ARRA grant money from the U.S. Dept. of Labor for green jobs training and job placement.³⁹⁹¹

In June 2010, Oregon announced plans to establish a green jobs training center. Funded by a \$1 million American Recovery and Reinvestment Act (ARRA) grant, the center's focus was to be on energy efficient retrofitting and weatherization services.³⁹⁹²

The Oregon Department of Energy awarded more than \$45 million in ARRA funds for 292 energy projects in November 2010, as part of the State Energy Program and the Energy Efficiency and Conservation Block grants available for energy efficiency and renewable energy projects.³⁹⁹³

³⁹⁸⁷ Press Release, Governor Ted Kulongoski, Governor announces major electric vehicle investment in Oregon (Aug. 5, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_080509.shtml.

³⁹⁸⁸ *Id.*

³⁹⁸⁹ Press Release, Governor Ted Kulongoski, Governor Kulongoski tours electric vehicle companies in southern Oregon (Aug. 31, 2009), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2009/press_083109.shtml.

³⁹⁹⁰ H.B. 2795, 75th Leg., Reg. Sess. (Or. 2009).

³⁹⁹¹ Press Release, Governor Ted Kulongoski, Governor Kulongoski announces Recovery Act grant award for green jobs training (Jan. 20, 2010), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2010/press_012010a.shtml.

³⁹⁹² Press Release, Governor Ted Kulongoski, Oregon receives \$1 million grant for green jobs training center (Jun. 4, 2010), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2010/press_060410.shtml.

³⁹⁹³ Press Release, Or. Dep't of Energy, 36 Oregon Counties To Benefit From Stimulus Funds For Energy Projects (Nov. 17, 2010), <http://www.oregon.gov/ENERGY/news/1079ARRA.shtml>.

Oregon received \$3 million in ARRA funds for three biomass energy projects including co-generation and anaerobic digester facilities. Governor Kulongoski praised the grants because they support localized energy generation and create local jobs.³⁹⁹⁴

In February 2010, Governor Kulongoski commended the Oregon House of Representatives for its passage of Business Energy Tax Credit (BETC) and biomass legislation. The latter will recognize pre-1995 biomass facilities “as part of Oregon’s Renewable Portfolio Standard.”³⁹⁹⁵

In December 2010, the Oregon Department of Energy announced that it would launch an Energy Advisory Committee, with the broad mission of providing input into new policy recommendations and providing stakeholders with opportunities to engage in energy policy that affects Oregonians. The Advisory Committee planned to meet regularly and was to be comprised of representatives from around the state.³⁹⁹⁶

Also in July 2010, Oregon became the site of the world’s largest solar nanotechnology manufacturing plant on July 21. Solexant Corp. announced its selection of Gresham, OR as the site of its new facility will produce ultrathin photovoltaic film. The company received a tax credit of \$18.75 million from the Oregon Department of Energy and a \$25 million loan from the State of Oregon Energy Loan Program.³⁹⁹⁷

On April 1, 2010, Governor Kulongoski commended the EPA and the Obama Administration on their nationwide extension of clean car emissions standards already employed in Oregon and thirteen other states.³⁹⁹⁸

Governor Kulongoski signed Executive Order 10-09 to create the Transportation Electrification Executive Council. The Council will be a central point of coordination of electric vehicle strategy, development, and deployment for the state. Specifically, the Council shall: (a) develop a work plan on how Oregon can be the leader in the new emerging vehicle technologies (b) provide a (sic) initial point of contact for companies

³⁹⁹⁴ Cristina Williams, *Oregon Gets \$3M for Biomass Projects*, SUSTAINABLE BUSINESS OREGON, July 8, 2010, http://www.sustainablebusinessoregon.com/articles/2010/07/oregon_gets_3m_for_biomass_projects.html.

³⁹⁹⁵ Press Release, Governor Ted Kulongoski, Statement by Governor Kulongoski on house passage of BETC and biomass legislation (Feb. 10, 2010), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2010/press_021010.shtml.

³⁹⁹⁶ Press Release, Oregon Dep’t of Energy, Oregon Department of Energy launches Energy Advisory Committee (Dec. 15, 2010), http://www.oregon.gov/ENERGY/news/1090_EAC.shtml.

³⁹⁹⁷ *Solexant to Locate 100-MW Manufacturing Facility in Oregon*, RENEWABLE ENERGY WORLD, July 22, 2010, <http://www.renewableenergyworld.com/rea/news/article/2010/07/solexant-to-locate-100-mw-manufacturing-facility-in-oregon>.

³⁹⁹⁸ Press Release, Governor Ted Kulongoski, Statement by Governor Ted Kulongoski on EPA nationwide extension of clean car emissions standards (Apr. 1, 2010), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2010/press_040110.shtml.

that are looking to invest in Oregon (c) collaborate on existing efforts to ensure Oregon's leadership in electric vehicles (d) enhance state, regional, and local strategic efforts to deploy electric vehicle infrastructure (e) facilitate development of public education and acceptance outreach and (f) identify opportunities and barriers to adoption and recommend policy.³⁹⁹⁹

A \$700,000 federal stimulus grant will support the construction of eight electric vehicle fast-charging stations along the I-5 corridor between Portland and Eugene. The stations will deliver an estimated 80% recharge within 20-30 minutes. ECOTALITY, a San Francisco-based company, will lead the infrastructure development.⁴⁰⁰⁰

Oregon received a \$2 million grant from the U.S. Department of Transportation to build up to 24 "DC fast charge" electric vehicle charging stations. The fast charge stations will be deployed in communities throughout northwest Oregon, including small cities throughout the region as well as communities on major travel corridors and key destinations, including US 26, I-84, US 20, OR 18, OR 99W, and US 101.⁴⁰⁰¹

Governor Kulongoski also renewed Oregon's partnership with Mitsubishi Motors in May 2010. The partnership aimed to advance electric vehicles and electric vehicle infrastructure throughout the state. Initial testing was to be and has been conducted along the I-5 corridor.⁴⁰⁰²

In November 2010, the Electric Drive Transportation Association presented Oregon with its E-Visionary Award at the 2010 Electric Vehicle Symposium and Exposition in Shenzhen, China. The award recognizes the state's extraordinary leadership in transitioning to an electrified transportation system. Oregon is the first state to ever receive the industry award.⁴⁰⁰³

On March 17, 2011, the Oregon Global Warming Commission delivered its 2011 Report to the Legislature, including a status report on Oregon's progress toward meeting its climate change goals, as well as recommendations on forty key actions that Oregon

³⁹⁹⁹ Or. Exec. Order No. 10-09 (Sept. 22, 2010), http://www.oregon.gov/Gov/pdf/eo_1009.pdf.

⁴⁰⁰⁰ Christina Williams, *The 'EV Project' Expands Its Reach to Southern Oregon*, SUSTAINABLE BUSINESS OREGON, Sept. 29, 2010, http://www.sustainablebusinessoregon.com/articles/2010/09/ecotality_expands_its_ev_reach_to_southern_oregon.html.

⁴⁰⁰¹ Press Release, Governor Ted Kulongoski, Oregon Receives \$2M DOT Grant for DC Fast Charge Stations (Oct. 15, 2010), http://governor.oregon.gov/Gov/P2010/press_101510a.shtml.

⁴⁰⁰² Press Release, Governor Ted Kulongoski, Governor Kulongoski and Mitsubishi Motors Advance Partnership on E-Vehicles (May 17, 2010), http://archivedwebsites.sos.state.or.us/Governor_Kulongoski_2011/governor.oregon.gov/Gov/P2010/press_051710.shtml; OREGON.GOV, OFFICE OF INNOVATIVE PARTNERSHIPS AND ALTERNATIVE FUNDING, <http://www.oregon.gov/ODOT/HWY/OIPP/Pages/Tiger-II-Phase-2-Public-Comment.aspx>.

⁴⁰⁰³ Richard Read, *Oregon Wins Electric Vehicle Award*, THE OREGONIAN, Nov. 9, 2010, http://www.oregonlive.com/business/index.ssf/2010/11/oregon_wins_electric_vehicle_a.html.

can further take to achieve those goals.⁴⁰⁰⁴ The Commission reported that Oregon has made significant progress in preparing for and adapting to the impacts of climate change, and also found that the state's goal of arresting greenhouse gas emissions by 2010 appears to be on track. However, the Commission was uncertain as to whether the state is on track to meet its 2020 and 2050 goals of reducing emissions by 10% and 75% below 1990 levels, respectively. In addition, the Commission initiated a "Roadmap to 2020" project to develop recommendations to help Oregon meet its greenhouse gas reduction goals.⁴⁰⁰⁵

2011: Climate Change Agreements, Cap & Trade, Greenhouse Gas Reduction, and Renewable Energy

In November 2011, Oregon and five other states exited from the Western Climate Initiative in order to join North America 2050, an organization which promotes carbon dioxide capture and sequestration techniques, offset projects for emissions trading programs and a focus on sustainable biomass in order to achieve meaningful emissions reductions.⁴⁰⁰⁶

On May 18, 2011, Governor Kitzhaber announced that the Oregon Department of Energy awarded grants to three companies through the Forest Products Energy Project, which is designed to develop renewable energy, encourage investment in forest product mills, and retain and create jobs in the wood products industry.⁴⁰⁰⁷ Two of the selected projects will focus on studying the feasibility of developing combined heat and power at lumber mills, while the third will study the expansion of thermal energy production, also at a lumber mill.⁴⁰⁰⁸

On November 22, 2011, the Oregon Department of Energy issued new permanent rules pursuant to Senate Bill 101 (2009).⁴⁰⁰⁹ The rules provide guidance for an output-based calculation of greenhouse gas emissions, how to address electricity with no identified generation source, and the procedure for designating "low-carbon resource" facilities.⁴⁰¹⁰

⁴⁰⁰⁴ Press Release, Or. Dep't of Energy, Oregon Global Warming Commission recommends 40 key actions (Mar. 17, 2011), <http://www.oregon.gov/ENERGY/Pages/news/1125OGWC.aspx>.

⁴⁰⁰⁵ *Id.*

⁴⁰⁰⁶ Geoffrey Craig, *Six US states leave the Western Climate Initiative*, ELECTRIC UTILITY WEEK, Nov. 28, 2011, <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/ElectricPower/6695863>; NORTH AMERICA 2050, na2050.org.

⁴⁰⁰⁷ Press Release, Governor John Kitzhaber, Governor Kitzhaber Announces Grants to Promote Biomass, Energy and Rural Economic Development (May 18, 2011), http://www.oregon.gov/gov/media_room/pages/press_releasesp2011/press_051811.aspx.

⁴⁰⁰⁸ *Id.*

⁴⁰⁰⁹ Press Release, Or. Dep't of Energy, New rules for emissions standard become effective today (Nov. 22, 2011), <http://www.oregon.gov/energy/Pages/news/1176Emissions.aspx>.

⁴⁰¹⁰ *Id.*

As part of Oregon's Business Energy Tax Credit program, the Oregon Department of Energy announced that on October 12, 2011, that it would work with the Oregon Department of Revenue on a tax credit auction. Revenue from the auction would be used to fund grants for renewable energy projects.⁴⁰¹¹ This program is being implemented pursuant to H.B. 3672.⁴⁰¹²

The Oregon Department of Energy's Small-Scale Energy Loan Program announced in April 2011 that it would offer low-interest loans to public K-12 schools to fund energy efficiency projects.⁴⁰¹³

2012: Energy Efficiency, Renewable Energy, and Transportation/Fuels

On October 19, 2012, NOAA announced that Oregon's South Slough National Estuarine Research Reserve was awarded \$546,826 for the reserve to study socioeconomic and environmental conditions that may indicate climate change in the Coos Sanctuary.⁴⁰¹⁴ The research project is designed to make coastal communities understand and adapt to the coastal effects of global climate change.⁴⁰¹⁵

Governor Kitzhaber announced the final version of the Ten-Year Energy Action Plan for Oregon in December 2012.⁴⁰¹⁶ The three pillars of the Plan include meeting new electric load needs entirely with energy efficiency and conservation efforts, streamlining financial and regulatory barriers to the clean energy infrastructure process in order to attract new investment and technology, and improving energy efficiency in the state's transportation sector.⁴⁰¹⁷ The plan also identifies state facility retrofitting as a key strategy.⁴⁰¹⁸

On January 1, 2012, the Biomass Producer or Collector Tax Credit became effective and covers most biofuels that are made and consumed within the state, with a few exceptions.⁴⁰¹⁹ The tax credits issued are based on the amount of biomass produced

⁴⁰¹¹ Press Release, Or. Dep't of Energy, Online Tax Credit Auction Starts October 24 (Oct. 12, 2011), http://www.oregon.gov/ENERGY/news/1168tax_credit_auction.shtml.

⁴⁰¹² H.B. 3672, 76th Leg. Assem., Reg. Sess. (Or. 2011).

⁴⁰¹³ Press Release, Or. Dep't of Energy, SELP to Help Fund School Efficiency Upgrades (Apr. 15, 2011), http://www.oregon.gov/ENERGY/Pages/news/1135SELP_GSI.aspx.

⁴⁰¹⁴ Press Release, Nat'l Oceanic and Atmospheric Ass'n, NOAA announces \$4.9 million for collaborative research projects to help coastal communities manage effects of climate change (Oct. 19, 2012), http://www.noaanews.noaa.gov/stories2012/20121019_climatechangegrant.html.

⁴⁰¹⁵ *Id.*

⁴⁰¹⁶ Press Release, Governor John Kitzhaber, Governor Kitzhaber releases final 10-Year Energy Action Plan for Oregon (Dec. 17, 2012), http://www.oregon.gov/gov/media_room/Pages/press_releasesp2012/press_121712a.aspx.

⁴⁰¹⁷ *Id.*

⁴⁰¹⁸ *Id.*

⁴⁰¹⁹ OR. ADMIN. R. 330-170-10010, 330-170-10040 (2012), http://www.oregon.gov/ENERGY/RENEW/Biomass/docs/BPC_rules_effective_010112.pdf.

or collected.⁴⁰²⁰ The tax credit may be transferred to another taxpayer, but only up to ninety percent of the value of the credit.⁴⁰²¹

In January 2012, the Oregon Department of Energy sought applicants for its Conservation Energy Incentive Program for Small Premium Projects.⁴⁰²² Eligible projects may not exceed \$20,000, and the maximum tax credit available per project is \$7,000 available on a first-come, first-served basis.⁴⁰²³

In August 2012, Oregon replaced its Business Energy Tax Credits program with new rules promulgated under the Energy Incentives Program, as authorized by H.B. 3672 (2011) and H.B. 4079 (2012).⁴⁰²⁴ Under the new rules, an Oregon business that installs a renewable energy system may qualify for a grant of up to \$250,000, provided the grant does not exceed thirty-five percent of the total project cost.⁴⁰²⁵ The regulations explain the application procedure, the application prioritization process, and performance agreement conditions.⁴⁰²⁶ The Energy Incentives Program also encompasses the Alternative Fuel Vehicle Infrastructure rules, which contain application procedures, and allocation and issuance of tax credits for facilities that mix, store, compress or dispense fuels for alternative fuel vehicles, including charging stations for electric vehicles.⁴⁰²⁷

On December 20, 2012, the Oregon Department of Energy announced new regulations for the Small Scale Energy Loan Program.⁴⁰²⁸ The new rules clarify the loan approval process, and describe the procedures for loan amendments, forbearance and delinquent accounts.⁴⁰²⁹ Applicants now also must obtain a favorable land use decision from the municipality where the energy project will be implemented.⁴⁰³⁰

Federal stimulus funds helped the Oregon Department of Energy's State Energy Efficiency Appliance Rebate Program award over \$3 million to Oregonians to replace

⁴⁰²⁰ *Id.* at 330-170-10050.

⁴⁰²¹ *Id.* at 330-170-10070.

⁴⁰²² Press Release, Or. Dep't of Energy, State seeks applicants for small energy conservation projects (Jan. 19, 2012), <http://www.oregon.gov/energy/Pages/news/1205SPP.aspx>.

⁴⁰²³ *Id.*

⁴⁰²⁴ Press Release, Or. Dep't of Energy, New Renewable Energy Development Grant rules effective today (Aug. 15, 2012), <http://www.oregon.gov/energy/Pages/news/2012-49-RED-grants.aspx>.

⁴⁰²⁵ *Id.*

⁴⁰²⁶ *Id.*

⁴⁰²⁷ Press Release, Or. Dep't of Energy, Alternative Fuel Vehicle Infrastructure rules in effect on Aug. 1 (July 30, 2012), <http://www.oregon.gov/energy/Pages/news/afvi-44.aspx>; Press Release, Or. Dep't of Energy, New rules for alternative fuel vehicle infrastructure now in effect (Feb. 7, 2012), <http://www.oregon.gov/energy/Pages/news/1207AFVI.aspx>.

⁴⁰²⁸ Press Release, Or. Dep't of Energy, Permanent rules filed for energy loan program (Dec. 20, 2012), <http://www.oregon.gov/energy/Pages/2012-72-SELP-rules.aspx>.

⁴⁰²⁹ *Id.*

⁴⁰³⁰ *Id.*

inefficient appliances in 2012.⁴⁰³¹ Among other appliances, 1,012 air-source heat pumps, 867 refrigerators and 597 gas furnaces were replaced with more energy efficient models over the course of the program.⁴⁰³² The rebates provided aid to many low-income Oregonians who could not benefit from the Residential Energy Tax Credit program because of limited tax liability.⁴⁰³³

In 2011 and 2012, ARRA funds helped 700 Oregon households to replace inefficient, uncertified wood stoves with new, certified woodstoves, fireplace inserts, pellet stoves or heat pumps, allowing a yearly reduction of about 23 tons of particulate matter.⁴⁰³⁴ In addition to the woodstoves and other appliances provided, the Department of Energy program paid for 6,583 hours of installation.⁴⁰³⁵

On December 26, 2012, the Oregon Department of Energy updated the Residential Energy Tax Credit program in order to keep current with technologies and efficiency standards.⁴⁰³⁶ The amendments address, among other changes, ineligible costs, the use of uncertified woodstoves, and the requirements for ground source heat pump compressor upgrades.⁴⁰³⁷ On December 27, 2012, the Oregon Department of Energy issued new rules to interpret S.B. 1533.⁴⁰³⁸ H.B. 2620 in 2007 required new public construction projects to spend 1.5% of the contract price on solar energy sources.⁴⁰³⁹ S.B. 1533 allows geothermal energy sources for electricity and heating, and allows green technology to be utilized from off-site.⁴⁰⁴⁰

In June 2012, the Oregon Department of Energy filed new permanent rules for transit, conservation, and compliance and pass-through programs, which are part of the replacement of the Business Energy Tax Credit.⁴⁰⁴¹ The new rules detail application procedures, the allocation and issuance of the tax credits, and inspection and verification of projects and systems.⁴⁰⁴²

⁴⁰³¹ Press Release, Or. Dep't of Energy, 3,212 low-income Oregon households aided by stimulus funds (Nov. 19, 2012), <http://www.oregon.gov/energy/Pages/2012-66-SEEARP-impact.aspx>.

⁴⁰³² *Id.*

⁴⁰³³ *Id.*

⁴⁰³⁴ Press Release, Or. Dep't of Energy, Woodstove replacement program helps about 700 homeowners (June 13, 2012), <http://www.oregon.gov/energy/Pages/news/2012-34-Woodstoves.aspx>.

⁴⁰³⁵ *Id.*

⁴⁰³⁶ Press Release, Or. Dep't of Energy, Permanent rules filed for RETC program (Dec. 26, 2012), <http://www.oregon.gov/energy/Pages/2012-73-RETC-rules.aspx>.

⁴⁰³⁷ *Id.*

⁴⁰³⁸ Press Release, Or. Dep't of Energy, Permanent rules filed for green technology program (Dec. 27, 2012), <http://www.oregon.gov/energy/Pages/2012-76-1.5-percent-rules.aspx>.

⁴⁰³⁹ *Id.*

⁴⁰⁴⁰ *Id.*

⁴⁰⁴¹ Press Release, Ore. Dep't of Energy, New rules for Transit, Conservation, and Compliance and Pass-through (June 22, 2012), <http://www.oregon.gov/energy/Pages/news/2012-38-EIP-Rules.aspx>.

⁴⁰⁴² *Id.*

Also in December, Oregon approved Phase 1 of the Oregon Clean Fuels Program, originally passed in 2009, which requires importers and suppliers of fuel in the state to report volumes and carbon intensity and will use lifecycle analysis to determine total emissions from fuel sources.⁴⁰⁴³

2013: Renewable Energy, Energy Efficiency, and Transportation/Fuels

On June 25, Governor Kitzhaber signed several bills in a ceremony intended to draw attention to Oregon's 10-year Energy Action Plan.⁴⁰⁴⁴

- Senate Bill 692 aligns Oregon's energy efficiency standards for household appliances with other members of the WCI (California and British Columbia).
- House Bill 2801 permits public utilities to invest public purchase charge funds in energy efficiency retrofits.
- Senate Bill 242 reduces the amount of coal in the state's future energy resource mix.
- House Bill 2820 establishes permitting thresholds for solar fields.
- House Bill 2893 requires the Oregon Public Utility Commission to invest in research of solar generation to determine the future of solar energy in Oregon; it also extends the feed-in tariff pilot program for an additional two years.
- House Bill 2105 asks the Energy Facility Siting Council to identify and reduce barriers to energy development in the state.
- House Bill 606 promotes responsible Aeolian and wave energy in the Oregonian Territorial Seas.

In March 2013, in conjunction with the U.S. Forest Service, the Oregon Department of Energy awarded grants to six Eastern Oregon communities to study the feasibility of developing biomass energy facilities.⁴⁰⁴⁵

On October 15, Oregon DoE completed the Pacific Northwest's first commercial-food-waste-to-electricity plant, funded partially by ARRA.⁴⁰⁴⁶

In 2012, the Department launched the Wood Energy Cluster Pilot Project to encourage the use of renewable energy and to concurrently support the state's timber industry.⁴⁰⁴⁷

⁴⁰⁴³ CTR. FOR CLIMATE & ENERGY SOLUTIONS, *Oregon Approves Phase One of Clean Fuels Program*, <http://www.c2es.org/us-states-regions/news/2012/oregon-approves-phase-one-clean-fuels-program> (Apr. 29, 2012).

⁴⁰⁴⁴ Press Release, Governor John Kitzhaber, Governor Kitzhaber's 10-Year Energy Action Plan moves forward (June 25, 2013), http://www.oregon.gov/gov/media_room/Pages/press_releases/press_062513.aspx.

⁴⁰⁴⁵ Press Release, Or. Dep't of Energy, Six wood energy cluster grants awarded in central, eastern Oregon (Mar. 7, 2013), <http://www.oregon.gov/energy/Pages/2013-05-Wood-energy-grants-awarded.aspx>.

⁴⁰⁴⁶ News Release, Or. Dep't of Energy, Innovative biomass plant to produce clean energy (Nov. 15, 2013), <http://www.oregon.gov/energy/Pages/2013-17-JC-Biomethane.aspx>.

In January 2013, the Oregon Land Conservation and Development Commission adopted regulations for the siting of marine renewable energy development projects.⁴⁰⁴⁸ The regulation amends the Oregon Territorial Sea Plan and identifies four Renewable Energy Suitability Study Areas where wave energy will be encouraged, taking into account the protection of ecological resources, fishing, other existing uses and viewsheds.⁴⁰⁴⁹ Ocean Power Technologies plans to implement the nation's first federally-licensed commercial wave device near Reedsport.⁴⁰⁵⁰

On May 14, 2013, Governor Kitzhaber praised the International Brotherhood of Electrical Workers Local 280, Portland Electric, Nissan, and others for their partnership leading to the installation of electric vehicle charging stations at the Oregon State Capitol.⁴⁰⁵¹

On October 24, Oregon in conjunction with 7 other states that together comprise nearly one quarter of the United States vehicle market⁴⁰⁵², announced its intention to have 3.3 million zero-emission vehicles on the roads by 2025.⁴⁰⁵³ The memorandum of understanding also included state intentions to align building codes for charging stations, to incorporate zero-emission vehicles into public fleets, to identify and implement incentives to encourage greater private use of zero-emission vehicles, to analyze the practicability of lower electricity rates for home charging of low-emission vehicles, and to develop consistent signage relating to low-emission vehicle use.⁴⁰⁵⁴

2014: Energy Efficiency, Renewable Energy, and Transportation/Fuels

Leading by example, Oregon's residence for governors was renovated to incorporate high-efficiency best practices such as improved insulation, sealed air leakages, energy-saving lighting and heating, all while preserving the heritage of the building. The successful completion of the project was announced in January 2014.⁴⁰⁵⁵

⁴⁰⁴⁷ *Id.*

⁴⁰⁴⁸ Press Release, Governor John Kitzhaber, Governor Kitzhaber thanks LCDC, stakeholders for adopting guidelines on Limited Wave Energy Development (Jan. 25, 2013), http://www.oregon.gov/gov/media_room/Pages/press_releases/press_012513.aspx.

⁴⁰⁴⁹ *Id.*

⁴⁰⁵⁰ *Id.*

⁴⁰⁵¹ Press Release, Governor John Kitzhaber, Governor Kitzhaber praises partnership behind new Capitol charging stations (May 14, 2013), http://www.oregon.gov/gov/media_room/Pages/press_releases/press_051413b.aspx.

⁴⁰⁵² California, Connecticut, Maryland, Massachusetts, New York, Rhode Island, and Vermont.

⁴⁰⁵³ Press Release, Governor John Kitzhaber, Governors announce new initiative to put 3.3 million zero-emission vehicles on road by 2025 (Oct. 24, 2013), http://www.oregon.gov/gov/media_room/Pages/press_releases/press_102413.aspx.

⁴⁰⁵⁴ *Id.*

⁴⁰⁵⁵ Press Release, Governor John Kitzhaber, First Lady, energy leaders highlight Mahonia Hall improvements and growing home performance industry (Jan. 6, 2014), http://www.oregon.gov/gov/media_room/Pages/press_releases/press_010614.aspx.

In February, Oregon was ranked sixth in the U.S. Green Building Council's assessment of leadership in environment and energy design projects, on the basis of 2010 census figures and LEED certification of buildings.⁴⁰⁵⁶

Governor Kitzhaber with Interior Secretary Sally Jewell and the director of the Bureau of Ocean Energy Management announced on February 5 that a Seattle-based company would begin plans to develop an off-shore wind farm, including five floating units equipped with 6-megawatt turbines.⁴⁰⁵⁷

On February 13, 2014, Governor Kitzhaber announced the creation of a new Clean Fuels Work Advisory Committee, in an effort to revive the state's Clean Fuels Program, which was originally passed in 2007.⁴⁰⁵⁸ The committee is composed of business⁴⁰⁵⁹ and labor leaders charged with answering questions as to how best to implement the Clean Fuels Program in Oregon at an accelerated pace.⁴⁰⁶⁰

PENNSYLVANIA

1998: Renewable Energy and Energy Efficiency

Pennsylvania enacted its net metering provisions in 1998.⁴⁰⁶¹

During the 1990s, Pennsylvania formed four sustainable energy funds with its five major distribution utilities.⁴⁰⁶² These funds provide incentives to promote alternative energy and energy efficiency projects via loans and grants. They are funded by each utility's distribution rates.

2003: Greenhouse Gas Reduction

In June 2003, the Pennsylvania Department of Environmental Protection (DEP) released a greenhouse gas (GHG) inventory detailing emissions for Pennsylvania.⁴⁰⁶³

⁴⁰⁵⁶ Andy Giegerich, *Oregon snares #6 spot among nation's LEED-savvy elites*, SUSTAINABLE BUSINESS OREGON, Feb. 18, 2014, <http://www.sustainablebusinessoregon.com/articles/2014/02/oregon-snares-6-spot-among-nations.html>.

⁴⁰⁵⁷ Andy Giegerich, *Principle Power lands 30MW offshore wind project near Coos Bay*, SUSTAINABLE BUSINESS OREGON, Feb. 5, 2014, <http://www.sustainablebusinessoregon.com/articles/2014/02/feds-ok-30-mw-offshore-wind-project.html>.

⁴⁰⁵⁸ See OREGON.GOV, ODA WEIGHTS AND MEASURES, *Biofuel renewable fuel standard*, http://www.oregon.gov/ODA/MSD/pages/renewable_fuel_standard.aspx; see also *supra*, Oregon: 2007.

⁴⁰⁵⁹ Daimler, Intel, Blue Star Gas, Pacific Ethanol, SeQuential Biofuels.

⁴⁰⁶⁰ Press Release, Governor John Kitzhaber, Governor Kitzhaber announces new clean fuels initiative (Feb. 13, 2014), http://www.oregon.gov/gov/media_room/Pages/press_releases/press_021314.aspx.

⁴⁰⁶¹ 52 PA. CODE § 57.34 (b)(4) (2014).

⁴⁰⁶² *Renewable & Sustainable Energy*, PA. PUB. UTIL. COMM'N, http://www.puc.pa.gov/utility_industry/electricity/sustainable_energy_fund.aspx (Jan. 24, 2014).

⁴⁰⁶³ ADAM ROSE ET AL., GREENHOUSE GAS EMISSIONS INVENTORY FOR PENNSYLVANIA PHASE I REPORT (2003), <http://web.archive.org/web/20090113235632/http://www.dep.state.pa.us/dep/deputate/pollprev/inventory.pdf>.

The inventory provided provisional estimates for two years, 1990 and 1999, as well as background data on GHG emissions.⁴⁰⁶⁴

2004: Renewable Energy and Transportation/Fuels

In 2004, Pennsylvania established an Alternative Energy Portfolio Standards Act with a goal of 18% alternative energy resources by compliance year 2021.⁴⁰⁶⁵

In 2004, Pennsylvania instituted an Alternative Fuels Incentive Act to provide financial assistance for the use of hybrid vehicles, alternative fuel vehicles, alternative fuels, and advanced vehicle technology research and development.⁴⁰⁶⁶ It supported the fund by 0.25 mills of the gross receipts tax levied on electric utilities.⁴⁰⁶⁷ Eligible applicants included schools, government agencies, and private for profit and nonprofit organizations.⁴⁰⁶⁸

2006: Transportation/Fuels

In 2006 Pennsylvania adopted California's GHG emission standards for motor vehicles, and these standards began affecting motor vehicles starting in model year 2008.⁴⁰⁶⁹

2007: Greenhouse Gas Reduction, Market-Based Solutions, and Renewable Energy

In May 2007, Pennsylvania and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”⁴⁰⁷⁰ Pennsylvania also participates in the Regional Greenhouse Gas Initiative (RGGI), a cap-and-trade scheme between several northeastern states, as an observer.⁴⁰⁷¹

In June 2007, the Pennsylvania Environmental Council released the *Pennsylvania Climate Change Roadmap*, which inventoried and forecasted the state's GHG emissions, determined appropriate emission goals and targets, and presented 40 recommendations

⁴⁰⁶⁴ *Id.*

⁴⁰⁶⁵ 73 PENN. STAT. §§ 1647.1-7 (2014).

⁴⁰⁶⁶ 2004 Penn. Laws 178.

⁴⁰⁶⁷ *Id.*

⁴⁰⁶⁸ *Id.*

⁴⁰⁶⁹ See 25 PA. CODE § 126.411 (2014); see also CAL. CODE REGS. tit. 13, § 1961.1 (2005) (setting forth California's greenhouse gas exhaust emission standards and test procedures).

⁴⁰⁷⁰ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20071012182817/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

⁴⁰⁷¹ *The 10 States*, REGIONAL GREENHOUSE GAS INITIATIVE, http://web.archive.org/web/20081004212727/http://www.rggi.org/states/ten_states (Jan. 24, 2014).

for reducing GHG emissions.⁴⁰⁷² The Roadmap suggested that Pennsylvania should set a goal of reducing GHG emissions to 25% below 2000 levels by 2025.⁴⁰⁷³ The Roadmap's recommendations included expanding the state's alternative energy portfolio standard; implementing a portfolio of energy efficiency policies; creating incentives for green building; establishing a renewable fuel standard of 25% by 2025; and becoming involved in shaping a national cap-and-trade program (the National Climate Registry) and an emissions reporting system.⁴⁰⁷⁴

2008: Energy Efficiency, Renewable Energy, Transportation/Fuels, Greenhouse Gas Reduction, and Market-Based Solutions

In July 2008, Governor Ed Rendell signed into law three bills relating to energy efficiency and alternative energy. The Alternative Energy Investment Act allocated \$600 million in grants and loans for renewable energy projects, including biofuel, solar, wind, and geothermal.⁴⁰⁷⁵ The Biofuel Development and In-State Production Incentive Act established that diesel and gasoline sold in the commonwealth must have minimum levels of biodiesel, a percentage intended to rise as biodiesel production in Pennsylvania increased.⁴⁰⁷⁶ Once in-state production of biodiesel reached 400 million gallons, all retail diesel fuel would be required to contain 20% biodiesel. Likewise, once in-state ethanol production reached 350 million gallons, all retail gasoline would be required to contain 10% ethanol.⁴⁰⁷⁷ The last bill passed in this set of energy legislation was the Alternative Fuels Incentive Act.⁴⁰⁷⁸ It provided funding opportunities, including a rebate program for alternative fuel vehicles and a production incentive of 75¢ per gallon for biomass-based diesel produced in Pennsylvania.⁴⁰⁷⁹

Also in July 2008, Pennsylvania enacted a series of laws addressing climate change and energy efficiency. The Pennsylvania Climate Change Act, which Governor Rendell signed into law on July 10, was the first climate change legislation enacted in the commonwealth.⁴⁰⁸⁰ It required the Pennsylvania DEP to conduct annual inventories of GHGs for all sources and establish a baseline for emissions. It also required the DEP to create a voluntary registry for businesses and industry, where entities could track their

⁴⁰⁷² *Climate Change Roadmap for Pennsylvania*, PA. ENVTL. COUNCIL, <http://www.pecpa.org/roadmap.htm> (Jan. 24, 2014).

⁴⁰⁷³ *Id.*

⁴⁰⁷⁴ *Id.*

⁴⁰⁷⁵ S.B. 1, 2007 Leg., Reg. Sess. (Pa. 2007),

<http://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2007&sessInd=0&billBody=S&billTyp=B&billNbr=0001&pn=1763>.

⁴⁰⁷⁶ H.B. 1202, 2007 Leg., Reg. Sess. (Pa. 2007),

<http://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2007&sessInd=0&billBody=H&billTyp=B&billNbr=1202&pn=4184>.

⁴⁰⁷⁷ *Id.*

⁴⁰⁷⁸ S.B. 22, 2007 Leg., Spec. Sess. (Pa. 2007),

<http://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2007&sessInd=1&billBody=S&billTyp=B&billNbr=0022&pn=0057>.

⁴⁰⁷⁹ *Id.*

⁴⁰⁸⁰ S.B. 266, 2007 Leg., Reg. Sess. (Pa. 2007),

<http://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2007&sessInd=0&billBody=S&billTyp=B&billNbr=0266&pn=1554>.

emission levels. It provided for the formation of a Climate Change Advisory Committee, which it tasked with developing a state plan to reduce GHG emissions. Finally, it required the DEP to report on potential climate change impacts and monitor national legislation relating to climate change.⁴⁰⁸¹

On October 3, 2008, in furtherance of the Climate Change Act, the DEP adopted The Climate Registry for businesses to voluntarily track their GHG emissions.⁴⁰⁸² The DEP also designated three organizations as offset registries: the Climate Action Reserve, the Voluntary Carbon Standards, and the Gold Standard.⁴⁰⁸³ In keeping with the state policy to reduce carbon dioxide emissions, Governor Rendell signed House Bill (H.B.) 2200 on October 15, 2008.⁴⁰⁸⁴ This Bill promoted energy efficiency by requiring utility providers to assist customers in decreasing their electricity consumption by 1% in 2011 and by 3% in 2013.⁴⁰⁸⁵ This was projected to bring statewide savings of \$500 million over by 2013.⁴⁰⁸⁶

Governor Rendell announced a \$44 million investment in recreation and conservation projects on November 18, 2008.⁴⁰⁸⁷ Projects included preservation of 4,341 acres of open space, 135 community parks, and numerous greenway preservation projects. Regarding another state funded, pollution-reducing program, Rendell announced that 81 businesses would use over \$454,000 in state investments under the Small Business Advantage Program.⁴⁰⁸⁸ Under this program, businesses could receive matching grants up to \$7,500 for purchasing equipment that reduced energy consumption and thus emissions.

On December 31, 2008, RGGI participants and Pennsylvania (an observer) signed a letter of intent to reduce carbon emissions from the transportation sector.⁴⁰⁸⁹

⁴⁰⁸¹ *Id.*

⁴⁰⁸² Press Release, Pa. Dep't of Env'tl. Prot., DEP Adopts Voluntary Registries for Businesses to Track Greenhouse Gas Emissions, Offsets (Oct. 3, 2008), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2029&typeid=1>.

⁴⁰⁸³ *Id.*

⁴⁰⁸⁴ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Signs Energy Conservation Bill to Save Consumers Millions on Electricity; Urges Legislature to Pass Rate Mitigation Bill (Oct. 15, 2008), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2040&typeid=1>.

⁴⁰⁸⁵ H.B. 2200, 2008 Leg., Reg. Sess. (Pa. 2008), at 55.

⁴⁰⁸⁶ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Signs Energy Conservation Bill to Save Consumers Millions on Electricity; Urges Legislature to Pass Rate Mitigation Bill (Oct. 15, 2008), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2040&typeid=1>.

⁴⁰⁸⁷ *Governor Rendell Announces \$44 Million Investment in Recreation, Conservation Projects*, SENSORS & SYSTEMS (Nov. 19, 2008), <http://sensorsandsystems.com/news/top-stories/policy-watch/5345-governor-rendell-announces-44-million-investment-in-recreation-conservation-projects.html> (original press release not found).

⁴⁰⁸⁸ *Governor Rendell: Investments in Energy Efficiency, Pollution Prevention Will Provide Small Businesses with Long-Term Advantages*, PROJECT VOTESMART (Dec. 15, 2008), <https://votesmart.org/public-statement/408086/> (original press release not found).

⁴⁰⁸⁹ Letter from Gina McCarthy, Comm'r Conn. Dep't of Env'tl. Prot., John A. Hughes, Sec'y Del. Dep't of Natural Res. and Env'tl. Control, David P. Littell, Comm'r Me. Dep't of Env'tl. Prot., Shari T. Wilson, Sec'y Md. Dep't of the Env't, Laurie Burt, Comm'r Mass. Dep't of Env'tl. Prot., Philip Guidice, Comm'r Mass. Dep't of Energy Res., Pete Grannis, Comm'r N.Y. Dep't Env'tl. Conservation, Bob Callendar, Vice President for Programs N.Y. State Research and Dev. Auth., Thomas S. Burack, Comm'r N.H. Dep't of

Specifically, these states expressed their intent to incorporate a Low Carbon Fuel Standard (LCFS), which requires reductions in the average lifecycle GHG per unit of useful energy in motor vehicles.⁴⁰⁹⁰

2009: Transportation/Fuels, Renewable Energy, Green Jobs, Green Technology, American Recovery & Reinvestment Act (ARRA), Climate Change Agreements, Greenhouse Gas Reduction, Energy Efficiency, and Green Building

At the Pennsylvania Farm Show on January 15, 2009, Governor Rendell announced that all on-road diesel sold in Pennsylvania would contain at least 2% biodiesel within the next year.⁴⁰⁹¹ Showing further support of increasing energy efficiency in the transportation sector, he publicly supported President Obama's directive to the U.S. EPA to reconsider the California Clean Air Act Waiver on January 26, 2009.⁴⁰⁹² Also on that day, Rendell announced the launch of the Renewable Energy Program to expand Pennsylvania's homegrown energy production.⁴⁰⁹³ This program provided \$25 million for businesses, non-profits, economic development organizations, and political subdivisions to develop wind and geothermal projects.

Governor Rendell announced state grants through existing clean energy programs on January 29, 2009.⁴⁰⁹⁴ These grants consisted of \$7.2 million through the Energy Harvest Program and \$6.5 million through the Alternative Fuels Incentive Grant Program. Rendell estimated that these grants would leverage \$53.1 million in private investments in clean fuels and technologies, create 77 jobs, reduce carbon dioxide emission by 2.5 million tons, and save consumers' energy costs by \$46 million per year.

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Pennsylvania is eligible for \$99,684,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).⁴⁰⁹⁵ After certifying that the state would accept these funds, Governor Rendell urged local governments to take advantage of the funding

Envtl. Serv., Mark N. Mauriello, Acting Comm'r N.J. Dep't of Env'tl. Prot., John Hanger, Acting Sec'y Pa. Dep't of Env'tl. Prot., W. Michael Sullivan, Dir. R.I. Dep't of Env'tl. Mgmt., Laura Q. Pelosi, Comm'r Vt. Dep't of Env'tl. Conservation (Dec. 31, 2008),

http://web.archive.org/web/20110811022823/http://www.mass.gov/Eoea/docs/pr_lcfs_attach.pdf.

⁴⁰⁹⁰ *Id.* at 1.

⁴⁰⁹¹ *Governor Rendell: Pennsylvania Reaches Milestone in Pursuit of Energy Independence*, HIGHBEAM RESEARCH (Jan. 15, 2009), <http://www.highbeam.com/doc/1P3-1627816811.html> (original press release not found).

⁴⁰⁹² *Gov. Rendell Praises Pres. Obama's Decision Directing EPA to Reconsider California Waiver*, REUTERS (Jan. 26, 2009), <http://www.reuters.com/article/2009/01/26/idUS208778+26-Jan-2009+PRN20090126> (original press release not found).

⁴⁰⁹³ *Job-Creating, Green-Energy Development Funding Available, Governor Rendell Says*, RENEWABLE ENERGY JOBS (Jan. 26, 2009), <http://www.renewableenergyjobs.com/content/job-creating-green-energy-development-funding-available-governor-rednell-says> (original press release not found).

⁴⁰⁹⁴ Press Release, Pa. Dep't of Env'tl. Prot., Investments in Clean Energy, Biofuels Boost Energy Independence, Open Markets for Emerging Technologies (Jan. 23, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2126&typeid=1>.

⁴⁰⁹⁵ U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 45 (Apr. 24, 2009),

http://web.archive.org/web/20130421082705/http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

and announced that the Pennsylvania DEP would provide webinars for local leaders to guide them through ARRA and assist them in the application process.⁴⁰⁹⁶

In May 2009, under the Alternative Energy Investment Fund, Governor Rendell announced a solar rebate program to reimburse homeowners and small businesses for up to 35% of the costs of investing these systems.⁴⁰⁹⁷ The Pennsylvania Department of Transportation would also provide \$59.2 million for Smart Transportation-related projects to increase the energy efficiency of transportation systems and \$16.8 million for Safe Routes to School projects to encourage walking and biking to school.⁴⁰⁹⁸ The state also applied for \$8 billion from ARRA for high-speed rail lines⁴⁰⁹⁹ and received \$38.8 million in federal stimulus funds for its state energy plan, which aims to support investments in sustainable energy projects.⁴¹⁰⁰ Rendell then announced a new Alternative Energy Production Tax Credit for up to 15% of the net cost of various types of alternative energy production projects.⁴¹⁰¹

Governor Rendell also signed an agreement with a coalition of other governors to support federal climate change legislation in May 2009.⁴¹⁰² The agreement contained two principles: the support of comprehensive federal legislation and the promotion of a federal-state partnership in implementing this legislation.⁴¹⁰³

⁴⁰⁹⁶ *Governor Rendell Urges Municipalities to Take Advantage of Stimulus Funds to Conserve Energy, Lower Costs*, PR NEWswire (Apr. 2, 2009) <http://www.prnewswire.com/news-releases/governor-rendell-urges-municipalities-to-take-advantage-of-stimulus-funds-to-conserve-energy-lower-costs-61708762.html> (original press release not found).

⁴⁰⁹⁷ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Opens Solar Energy Rebate Program for Homeowners, Small Business (May 18, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2213&typeid=1>.

⁴⁰⁹⁸ Press Release, Dep't of Transp., Governor Rendell Announces \$76 Million to Create Green Jobs, Sustainable Communities (May 28, 2009), <http://www.dot.state.pa.us/pennndot/districts/district2.nsf/a49f8addf0b73b1585256863004ed760/74c1670a3398287a8525783f00624f79?OpenDocument>.

⁴⁰⁹⁹ Press Release, Office of the Governor, Pennsylvania Identifies Potential High-Speed Rail Projects for \$8 Billion in Recovery Funding (July 16, 2009), http://www.portal.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_133877_6016_795529_43/http%3B/pubcontent.state.pa.us/publishedcontent/publish/marketing/sites/recovery_pa_gov/content/announcements/announcements_list/rls_gov_arra_hsrpre_app_071609.pdf.

⁴¹⁰⁰ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Announces Federal Recovery Funds for State Energy Plan (July 20, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2290&typeid=1>.

⁴¹⁰¹ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell: Tax Credit Available for Alternative Energy Production Projects (July 27, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2302&typeid=1>.

⁴¹⁰² Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20100116190854/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

⁴¹⁰³ *Statement of Principles*, GOVERNORS' ENERGY AND CLIMATE COALITION, (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

In July 2009, the state legislature passed the Pennsylvania State-Funded Building Standards Act to create energy efficiency standards for the construction, rehabilitation, and maintenance of buildings.⁴¹⁰⁴

The Pennsylvania Energy Development Authority (PEDA) announced a total of \$20.7 million in investments in 25 alternative energy and energy efficiency projects throughout the state in August 2009.⁴¹⁰⁵ The state's weatherization plan would also receive \$101 million in ARRA funds from the federal government.⁴¹⁰⁶ The state also received \$5.3 million in stimulus funding for twelve clean energy projects throughout the state.⁴¹⁰⁷ Green Energy Works!, a program funded by ARRA, announced that it would accept applications for \$11 million to go towards combined heat and power projects in September.⁴¹⁰⁸ Pennsylvania would also provide \$1.2 million in Recycling Market Infrastructure Development grants to four companies to increase the use of recycled materials in their finished products.⁴¹⁰⁹ That same month, the state also hosted the Clean Energy Economy Forum, where Governor Rendell emphasized the desirability of encouraging clean energy technologies to top Obama administration officials.⁴¹¹⁰ Later that month, Rendell announced the availability of \$5 million for biogas energy projects through the Green Energy Works! program.⁴¹¹¹ He also announced that the state received \$1.5 million to support clean diesel emerging technologies.⁴¹¹² Two days later, the

⁴¹⁰⁴ H.B. 444, 2009 Leg., Reg. Sess. (2009),

<http://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=HTM&sessYr=2009&sessIn d=0&billBody=H&billTyp=B&billNbr=0444&pn=2416>.

⁴¹⁰⁵ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell: Investing in Clean Energy Projects Creates Jobs, Strengthens the Economy, Cleans the Environment (Aug. 10, 2009), http://www.portal.state.pa.us/portal/server.pt/gateway/PTARGS_0_458693_49969_5994_504951_43/http:/pubcontent.state.pa.us/publishedcontent/preview/marketingsites/recovery_pa_gov/content/announcements/home_content/rls_gov_pedagrants_081009.pdf.

⁴¹⁰⁶ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Says Obama Administration Approves PA's Weatherization Plan, Will Receive \$101 Million (Aug. 25, 2009), http://www.revenue.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_60658_0_0_43/http%3B/pubcontent.state.pa.us/publishedcontent/publish/marketingsites/recovery_pa_gov/content/announcements/announcements_list/stimulusweatherizationapprovedrel082509.pdf.

⁴¹⁰⁷ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Announces Grants for Alternative, Renewable Energy Sources (Aug. 26, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2338&typeid=1>.

⁴¹⁰⁸ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Announces Federal Funding Diverse, Renewable Energy Technologies (Sept. 8, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2355&typeid=1>.

⁴¹⁰⁹ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Awards \$1.2 Million to Help Businesses Increase use of Recyclable Materials in Finished Products (Sept. 9, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2356&typeid=1>.

⁴¹¹⁰ Press Release, Pa. Dep't of Env'tl. Prot., White House Forum Explores the Role of Green Energy in Revitalizing the U.S. Economy (Sept. 17, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2364&typeid=1>.

⁴¹¹¹ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Announces that Federal Recovery Funding is Available for Biogas Energy Projects (Sept. 22, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2371&typeid=1>.

⁴¹¹² Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell: PA to Receive \$1.5 Million Clean Diesel Emerging Technology Grant (Sept. 24, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2374&typeid=1>.

electric vehicle technologies company, CT&D Co. Ltd., announced its plan to open two production and distribution facilities in Pennsylvania.⁴¹¹³

After the G-20 Summit was held in Pittsburgh, Governor Rendell attended a September 2009 meeting with representatives from various environmental advocacy organizations based in Washington, D.C. and emphasized that Pennsylvania should be used as an example in a federal effort to combat climate change.⁴¹¹⁴ The next month, Rendell advocated for the potential of hydropower to meet Pennsylvania's energy needs.⁴¹¹⁵

Pennsylvania released its draft climate action plan for public comment in October 2009.⁴¹¹⁶ It created an emission reduction goal of 30% below 2000 levels by 2020.⁴¹¹⁷ The plan set out 52 recommendations for lowering emissions. These included the *Re-Light Pennsylvania* program to increase the use of energy efficient lighting, the Eco-Driving program to provide incentives to drive less, and an urban forestry program to plant more trees in cities.⁴¹¹⁸

The American Wind Energy Association ranked Pennsylvania second among all of the states in wind energy generation growth after the state's wind energy generation capacity increased 30% in the third quarter of 2008.⁴¹¹⁹ The state then applied for \$6 million in ARRA funding for the energy sector and green jobs training.⁴¹²⁰ Pennsylvania then received \$1.1 million in ARRA funds to train its weatherization workforce.⁴¹²¹

⁴¹¹³ *South Korean Electric Car Company to Create 400 with New Operations in PA, Says Gov. Rendell*, PR NEWswire (Sept. 25, 2009), <http://www.prnewswire.com/news-releases/south-korean-electric-car-company-to-create-400-jobs-with-new-operations-in-pa-says-gov-rendell-61449857.html> (original press release not found)

⁴¹¹⁴ *Governor Rendell Stresses Environmental, Economic Importance of Action Against Climate Change*, PR NEWswire (Sept. 25, 2009), <http://www.prnewswire.com/news-releases/gov-rendell-stresses-economic-environmental-importance-of-action-against-climate-change-61480732.html> (original press release not found).

⁴¹¹⁵ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Says Hydropower Represents Incredible Untapped Energy Potential; Could Create Thousands of Jobs (Oct. 13, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2388&typeid=1>.

⁴¹¹⁶ *Office of Pollution Prevention & Energy Assistance*, PA. DEP'T OF ENVTL. PROT., <http://www.depweb.state.pa.us/energy/cwp/view.asp?q=539829> (Jan. 25, 2014).

⁴¹¹⁷ PA. DEP'T OF ENVTL. PROT., PENNSYLVANIA FINAL CLIMATE CHANGE ACTION PLAN, (2009), http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_001957.pdf.

⁴¹¹⁸ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell PA Continuing to Work to Combat Climate Change; Outlines Action Plan to Reduce Greenhouse Gas Emissions (Oct. 14, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2387&typeid=1>.

⁴¹¹⁹ *Governor Rendell Announces New Report Ranking PA 2nd Nationally in Wind Energy Growth*, PROJECT VOTESMART (Oct. 21, 2009), <http://votesmart.org/public-statement/461775/> (original press release not found).

⁴¹²⁰ Press Release, Office of the Governor, Governor Rendell Announces Application for \$6 Million Federal Recovery Act Grant to Strengthen Energy Sector, Train 1,300 Workers (Oct. 23, 2009), http://www.insurance.pa.gov/portal/server.pt/gateway/PTARGS_6_2_60658_0_0_43/http%3B/pubcontent.state.pa.us/publishedcontent/publish/marketing/sites/recovery_pa_gov/content/announcements/announcements_list/rls_gov__arra_wfd_green_jobs_ap_102309.pdf.

⁴¹²¹ Press Release, Office of the Governor, Governor Rendell Announces \$1.1 Million of Recovery Act Funds to Train Weatherization Workforce (Oct. 28, 2009),

As of November 2009, the PA Sunshine Solar Program had helped to double the state's solar generating capacity in less than six months, meeting its first incentive milestone for small business rebates – the deployment of 5 megawatts (MWs) of solar power, or enough to supply electricity to about 575 average homes in the state.⁴¹²² (Five MWs, is enough to offset 5,580 tons of carbon dioxide, 16,000 pounds of nitrogen oxide, and 77,500 pounds of sulfur oxide.)⁴¹²³ The program had committed \$12.5 million for 625 projects by residential and small business consumers, which totaled at least \$50 million in private investment.⁴¹²⁴ The PA Sunshine Solar Program reimburses homeowners and small business owners up to 35% of the purchase and installation costs of solar energy technology. Combining the program reimbursements with 2009 federal tax credits, consumers could reduce system costs by 45%.⁴¹²⁵

In November 2009, Governor Rendell expected Small Business Energy Efficiency grants awarded to 165 small businesses in 43 Pennsylvania counties to decrease their energy bills by 48% and save \$1.8 million annually in energy related costs.⁴¹²⁶ The grant program awarded \$2.3 million to 218 companies in 2009. These businesses were expected to save more than \$2.2 million in the first year of operation and more than \$22 million over the life of the new technologies they incorporated.⁴¹²⁷ Eligible projects included purchasing and installing geothermal heat pumps, energy efficient HVAC systems, lighting and refrigeration systems, insulation, and air sealing projects.⁴¹²⁸

On November 17, 2009, Governor Rendell announced that he had approved more than \$23 million for 36 new solar and other alternative and clean energy projects, including solar energy programs; LEED, mixed-use, high-performance building constructions; photovoltaic electricity projects; geothermal heat pump projects; and a biomass processing and densification facility.⁴¹²⁹

On the same day, Governor Rendell announced that Conservation Works!, a \$22 million competitive grant program funded by ARRA, would help local government and

http://www.portal.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_133877_6016_795529_43/http%3B/pubcontent.state.pa.us/publishedcontent/publish/marketingsites/recovery_pa_gov/content/announcements/announcements_list/rls_gov_arrowxtraining_102809_amended.pdf.

⁴¹²² Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Says PA's Solar Capacity Doubles Under Sunshine Solar Rebate Program (Nov. 2, 2010),

<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2408&typeid=1>.

⁴¹²³ *Id.*

⁴¹²⁴ *Id.*

⁴¹²⁵ *Id.*

⁴¹²⁶ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell: State Investments Helping Small Businesses Realize Big Energy Savings (Nov. 9, 2009),

<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2424&typeid=1>.

⁴¹²⁷ *Id.*

⁴¹²⁸ *Id.*

⁴¹²⁹ *Governor Rendell: New State Investments Will Keep PA at Forefront of Alternative Energy, Energy Conservation*, PR NEWswire (Nov. 12, 2010), <http://www.prnewswire.com/news-releases/governor-rendell-new-state-investments-will-keep-pa-at-forefront-of-alternative-energy-energy-conservation-69865747.html> (original press release not found).

non-profit organizations improve energy efficiency, curb energy consumption, and reduce energy costs by at least 25%.⁴¹³⁰ This program was expected to save more than 570 million kilowatt hours of electricity, generate an additional 14.4 million kilowatt hours, and reduce natural gas use by 2.1 million thousand cubic feet over the lifetimes of the projects it funded.⁴¹³¹ More than \$15.3 million would be distributed to 99 local government projects in 48 counties with the remainder going to non-profit organizations.⁴¹³² Five projects would use solar and wind technology to generate enough electricity to power more than 1,400 homes for one year.⁴¹³³ Conservation Works! provided grants of up to \$250,000 to individual local government and non-profit entities and \$500,000 for combined government projects to conserve or reduce energy use. The program covered Pennsylvania boroughs, townships, and cities with fewer than 35,000 residents and counties with fewer than 200,000 residents.

Nine new large-scale heat and power projects were approved in December 2009, receiving \$12 million from ARRA through Pennsylvania's Green Energy Works! program.⁴¹³⁴ The combined heat and power (CHP) projects were expected to create nearly 15 MWs of power capacity and generate more than 1.8 million MW hours of electricity over their lifetime and reduce carbon dioxide emissions by more than 1.1 million tons.⁴¹³⁵ Putting the generated power to more efficient use onsite would reduce electricity draws and increase the stability of local power distribution networks. Heat is a byproduct of conventional power generation but that heat is often wasted, but CHP projects recycle that thermal energy and put it to beneficial use such as heating buildings and water, processes that would typically require the use of additional forms of energy.⁴¹³⁶

According to the American Wind Energy Association, Pennsylvania ranked second in the nation for wind industry growth during the second and third quarters of 2009.⁴¹³⁷ In December 2009, Governor Rendell announced that the Green Energy Works! Wind program was open to projects located in Pennsylvania using grant funds matched with private investments for wind energy systems of at least 3 MWs of capacity and using Pennsylvania goods and services to the greatest extent possible.⁴¹³⁸ ARRA funding of \$19.8 million was available for large-scale wind projects for purchasing and installing

⁴¹³⁰ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Announces \$22 Million Investment in Energy Conservation Projects (Nov. 17, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2436&typeid=1>.

⁴¹³¹ *Id.*

⁴¹³² *Id.*

⁴¹³³ *Id.*

⁴¹³⁴ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Says Green Energy Works! Grants Making Power Generation More Efficient to Protect Environment, Create Jobs (Dec. 4, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2450&typeid=1>.

⁴¹³⁵ *Id.*

⁴¹³⁶ *Id.*

⁴¹³⁷ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell: Nearly \$20 Million in Federal Funding Available to Spur Wind Energy Projects, Generate Orders for Manufacturers (Dec. 9, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2455&typeid=1>.

⁴¹³⁸ *Id.*

equipment for producing wind energy or distributing energy by covering interconnection costs and network upgrades.⁴¹³⁹

Also in December 2009, more than \$10 million were awarded for twelve new solar energy projects in Adams, Allegheny, Chester, Cumberland, Dauphin, Luzerne, Montgomery, and Philadelphia Counties.⁴¹⁴⁰ The total installed capacity of the planned projects was about 9.1 MWs, or enough to power approximately one thousand homes.⁴¹⁴¹

Investments for six projects, totaling \$15 million, were awarded through the PEDAs with funds made available through the settlement of a ratepayer case between Duquesne Light Company and the Public Utility Commission (PUC).⁴¹⁴² The six grants would generate more than 20.3 million kilowatt hours of electricity and reduce carbon emissions by more than 1,330 tons per year.⁴¹⁴³

Governor Rendell announced in December 2009 that \$5 million in grants would go to eight innovative alternative energy projects using biological materials, such as sewage and animal and food processing waste, to generate enough energy to power more than 80,000 homes.⁴¹⁴⁴ ARRA funds and \$22 million in private investments supported the Green Energy Works! Biogas initiative. The eight projects receiving grants were expected to generate more than 470,000 MW hours of electricity over their lifetimes (the equivalent of 3,183 million cubic feet of natural gas) and reduce the amount of GHGs emitted by 237,000 tons of carbon dioxide.⁴¹⁴⁵

Green Energy Works! also provided funding to other projects in December 2009. Schreiber Foods Inc. received \$1,250,000 to install a 1.1 MW biogas-powered energy recovery system at a dairy plant expansion project to increase its food processing production waste up to three times its current level and generate electricity for internal use.⁴¹⁴⁶ The Derry Township Municipal Authority received \$500,000 to use excess biogas from an anaerobic digester to fuel an internal combustion engine and generate electricity to heat buildings at the plant.⁴¹⁴⁷ Anergy Inc. received \$254,382 to construct anaerobic digesters and improve manure management at three small dairy farms and the biogas produced by the digesters would be used to generate electricity for on-farm

⁴¹³⁹ *Id.*

⁴¹⁴⁰ *Governor Rendell: New Solar Energy Investments to Strengthen Pennsylvania's 'Green' Economy*, PR NEWswire (Dec. 18, 2009), <http://www.prnewswire.com/news-releases/governor-rendell-new-solar-energy-investments-to-strengthen-pennsylvanias-green-economy-79610902.html> (original press release not found).

⁴¹⁴¹ *Id.*

⁴¹⁴² Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Announces \$1.5 Million in Grants to Fund Innovative Green Energy Projects (Dec. 18, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2461&typeid=1>.

⁴¹⁴³ *Id.*

⁴¹⁴⁴ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Announces Green Energy Works! Projects Will Use Waste Material to Generate Power for 80,000 Homes (Dec. 22, 2009), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2469&typeid=1>.

⁴¹⁴⁵ *Id.*

⁴¹⁴⁶ *Id.*

⁴¹⁴⁷ *Id.*

use.⁴¹⁴⁸ The Hermitage Municipal Authority received \$350,000 to expand the average monthly capacity of the Bobby Run Water Pollution Control Plant and upgrade the existing anaerobic digester to allow acceptance of alternative feedstock such as restaurant and grocery store waste, grease trap waste and septage and the increase in biologically derived methane gas would be harnessed to produce electricity.⁴¹⁴⁹ Furmano Foods Inc. received \$850,000 to expand the company's wastewater treatment plant to use methane gas produced from organic waste to generate electricity and supply a portion of the facility's electrical needs.⁴¹⁵⁰ Ideal Family Farms LLC received \$433,716 to install an anaerobic digester to capture biogas from animal manure to fuel an internal combustion engine and produce electricity for use in barn heaters during the winter as a replacement for propane gas. NativeEnergy Inc. received \$893,752 to construct biodigesters on five dairy farms; the resultant biogas would be used for power and thermal energy production.⁴¹⁵¹ The York City Sewer Authority received \$500,000 to replace an obsolete internal co-generation system with a more efficient micro-turbine system. The methane naturally produced during the wastewater treatment process would power a generator and produce electricity for plant operations.⁴¹⁵²

During the 2009-2010 program year, the Department of Public Welfare expected to assist approximately 600,000 families with cash grants (averaging \$326 per family) from the Low-Income Home Energy Assistance Program (LIHEAP), a program designed to keep low-income families warm by helping pay eligible households' heat during the winter months.⁴¹⁵³ Crisis grants were offered to resolve heating emergencies, such as furnace failures or unexpected fuel shortages. In addition to proof of income and household size, applicants were required to provide a recent bill or a statement from their fuel dealer verifying their customer status and the type of fuel used.⁴¹⁵⁴

2010: Renewable Energy, Energy Efficiency, Market-Based Solutions, Renewable Portfolio Standards, and Transportation/Fuels

In January 2010, Governor Rendell announced that eight large-scale solar projects totaling more than 10 MWs of generation capacity would be funded via the Green Energy Works! Solar program and with \$9.5 million funding from ARRA.⁴¹⁵⁵ Additionally, the Department of Labor & Industry and Workforce Investment Boards, in partnership with employers and other workforce development professionals, would use a \$6 million grant

⁴¹⁴⁸ *Id.*

⁴¹⁴⁹ *Id.*

⁴¹⁵⁰ *Id.*

⁴¹⁵¹ *Id.*

⁴¹⁵² *Id.*

⁴¹⁵³ *Efficient Management Allows Expansion of Home Heating Program for Low-Income Families*, KATV (Jan. 5, 2010), <http://www.katv.com/story/11772188/governor-rendell-efficient-management-allows-expansion-of-home-heating-program-for-low-income-families> (original press release not found).

⁴¹⁵⁴ *Id.*

⁴¹⁵⁵ Press Release, Pa. Dep't of Env'tl. Prot., Federal Recovery Funds Making PA Leader in Solar Energy, Putting People to Work (Jan. 20, 2010), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=2924&typeid=1>.

from ARRA to identify green careers, create training programs, and connect the workforce with green industry employers.⁴¹⁵⁶

Also in January 2010, Pennsylvania invested a total of \$9.2 million in grants and loans to benefit seven projects throughout the state ranging from installing a geothermal system, building LEED certified buildings, bio-refinery production facility upgrades, and building a 13 MW biomass energy facility.⁴¹⁵⁷

A February 2010 study showed that two Pennsylvania General Assembly proposals – H.B. 80 and S.B. 92 –⁴¹⁵⁸ would increase the Pennsylvania Alternative Energy Portfolio Standard (AEPS) law’s clean energy requirements from 8 to 15% from 2021 through 2026 and would require 3% of electricity to come from solar photovoltaic panels by 2026.⁴¹⁵⁹ The proposals would also require that 3% of energy purchased by electric distribution companies come from coal-fired power plants that can connect to carbon sequestration facilities and use the latest technology to reduce emissions.⁴¹⁶⁰

Thirteen new solar energy projects received investments of more than \$5 million from the Alternative Energy Investment Fund in February 2010, which was expected to generate enough electricity to power approximately 500 homes.⁴¹⁶¹ The thirteen recipients included: Terradime; VS Solar LP; SEC BESD Solar One LLC; Integrys Energy Services; West Chester Borough; Allen Distribution LP; UGI Development Co.; Axion Power Manufacturing Inc.; Montoursville Area School District; Orion Energy Systems Inc.; Sterman Masser Inc.; and Positive Energy Pennsylvania 1 LLC.⁴¹⁶²

The Reinvestment Fund (TRF), a financial management firm with a successful track record of investing in green technologies and sustainable forms of energy, was

⁴¹⁵⁶ *Pennsylvania Receives \$6 Million to Help Energy Sector Identify, Prepare Workers for Green Careers*, PR NEWswire (Jan. 20, 2010), <http://www.prnewswire.com/news-releases/pennsylvania-receives-6-million-to-help-energy-sector-identify-prepare-workers-for-green-careers-82167667.html> (original press release not found).

⁴¹⁵⁷ *Governor Rendell: State Investment of \$9.2 Million to Support Alternative Energy Projects that Conserve Energy, Cut Costs, Create Jobs*, PR NEWswire (Jan. 21, 2010), <http://www.prnewswire.com/news-releases/governor-rendell-state-investment-of-92-million-to-support-alternative-energy-projects-that-conserve-energy-cut-costs-create-jobs-82271622.html> (original press release not found).

⁴¹⁵⁸ H.B. 80, 2009 Leg., Reg. Sess. (2010), <http://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2009&sessInd=0&billBody=H&billTyp=B&billNbr=0080&pn=2413>. S.B. 92, 2009 Leg., Reg. Sess. (2010), <http://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2009&sessInd=0&billBody=S&billTyp=B&billNbr=0092&pn=0683>.

⁴¹⁵⁹ *New Study Shows Greater Clean Energy Use Will Create Jobs, Save Consumers Billions*, PR NEWswire (Feb. 3, 2010), <http://www.prnewswire.com/news-releases/governor-rendell-new-study-shows-greater-clean-energy-use-will-create-jobs-save-consumers-billions-83486717.html> (original press release not found).

⁴¹⁶⁰ *Id.*

⁴¹⁶¹ Press Release, Pa. Dep’t of Env’tl. Prot., New Solar Energy Investments to Help Businesses, Municipalities Conserve Energy, Cut Expenses (Feb. 22, 2010), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=9282&typeid=2>.

⁴¹⁶² *Id.*

chosen to manage the Green Energy Revolving Loan Fund to support cost-effective, energy conservation, and renewable energy projects in existing, non-residential buildings.⁴¹⁶³ ARRA would provide \$12 million for the Green Energy Revolving Loan Fund on the condition that any firm applying provide a minimum match of \$18 million in private funds. TRF committed to investing \$36 million, raising the total in the fund to \$48 million.⁴¹⁶⁴

Six projects were approved to receive \$5 million in funding in March 2010 from the Commonwealth Financing Authority. The projects were to be built in counties across the state, and included three geothermal system installations, two biofuel projects, and one study of the feasibility of mixed-income housing in Pittsburgh that could reduce utility consumption by up to 90% for its occupants.⁴¹⁶⁵

Also in March 2010, Small Business Advantage Grants provided small businesses (fewer than one hundred employees) with 50% matching reimbursement grants of up to \$7,500 for projects saving at least 20% annually in pollution prevention or energy-related costs.⁴¹⁶⁶ More than 200 small businesses were eligible for projects like HVAC and boiler upgrades; high-efficiency lighting; solvent recovery and waste recycling systems; and auxiliary power units that help large trucks reduce time spent with idling engines.⁴¹⁶⁷

Opening April 21, 2010, the Pennsylvania Home Heating Equipment Rebate Program was expected to help as many as 33,000 households to purchase ENERGY STAR® rated, non-electric residential hot water heaters, furnaces, and boilers through a new rebate program.⁴¹⁶⁸ The \$11 million program was funded through ARRA, and the rebates available ranged from \$100 to \$500, depending on the equipment's efficiency rating.⁴¹⁶⁹

In April 2010, Governor Rendell announced that alternative fuel incentive grants, totaling \$8 million for twenty alternative fuels projects, would help support energy security by saving more than 3 million gallons of conventional liquid fuel.⁴¹⁷⁰ Two of the

⁴¹⁶³ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Says Proven Investment Firm Selected to Manage New Green Energy Revolving Loan Fund (Feb. 24, 2010),

<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=9332&typeid=1>.

⁴¹⁶⁴ *Id.*

⁴¹⁶⁵ Press Release, Pa. Dep't of Env'tl. Prot., State Investments Helping to Replace Inefficient Systems, Foreign Oil with Cleaner Geothermal, Biofuel Alternatives (Mar. 31, 2010),

<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=10184&typeid=2>.

⁴¹⁶⁶ *Grants Will Help 202 Small Businesses Save Nearly \$2 Million Annually on Pollution, Energy Costs*, PR NEWswire (Mar. 31, 2010), <http://www.prnewswire.com/news-releases/governor-rendell-grants-will-help-202-small-businesses-save-nearly-2-million-annually-on-pollution-energy-costs-89598012.html> (original press release not found).

⁴¹⁶⁷ *Id.*

⁴¹⁶⁸ Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell New Home Heating Equipment Rebate Program to Open April 21 Details Now Available Online (Apr. 6, 2010),

<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=10411&typeid=1>.

⁴¹⁶⁹ *Id.*

⁴¹⁷⁰ Press Release, Pa. Dep't of Env'tl. Prot., Investing in Alternative Fuel Transportation Projects Will Drive Pennsylvania Toward Energy Independence (Apr. 7, 2010),

<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=10361&typeid=1>.

projects would produce 5.8 million gallons of biofuel. As a result of these innovative projects, Pennsylvania expected carbon dioxide emissions to decrease by 34.4 million pounds annually.⁴¹⁷¹

In July 2010, the Ben Franklin Technology Development Authority approved a total of \$27 million in investments. These investments included an annual allocation from the Alternative Energy Development Program to the four Ben Franklin Technology Partners.⁴¹⁷² The allocation is part of the \$650 million Alternative Energy Investment Fund agreement that Governor Rendell signed in July 2008. Each partner was scheduled to receive \$10 million by 2015.⁴¹⁷³

On November 16, 2010, the Commonwealth Financing Authority approved nearly \$7.9 million in grants and loans for twelve projects in ten counties that use energy-efficient technologies like cogeneration energy plants and alternative forms of power such as wind, geothermal, and biomass. In total, the projects accounted for \$34.2 million in private investments and, once completed, would save citizens, businesses, and local governments nearly \$2.7 million annually in energy costs.⁴¹⁷⁴

Also in November 2010, the Pennsylvania DEP noted that the National Renewable Energy Laboratory's latest photovoltaic survey ranked Pennsylvania as third in the nation for the number of operating solar projects and fourth in terms of installed capacity.⁴¹⁷⁵ More specifically, the survey showed that Pennsylvania had 2,434 projects producing up to 38.5 MWs of electricity, putting it behind only California and New Jersey. Pennsylvania had met its goal of becoming a top-five solar state ahead of schedule.⁴¹⁷⁶

On December 2, 2010, the PUC approved an updated time-of-use rate for Pennsylvania Power and Light residential and small business consumers. The voluntary program would assess a higher rate for peak usage and a lower rate for off-peak electricity use.⁴¹⁷⁷

On December 16, 2010, the Pennsylvania DEP announced that ninety small businesses across Pennsylvania would receive more than \$560,000 in grants with an additional \$1.1 million in leveraged private investments to fund energy-saving projects. The grants were made possible by the Small Business Advantage Program, which

⁴¹⁷¹ *Id.*

⁴¹⁷² Press Release, Pa. Dep't of Env'tl. Prot., Governor Rendell Says Latest Round of Investments Will Support Alternative Energy, Early-Stage Businesses and Entrepreneurs (July 22, 2010), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=13042&typeid=2>.

⁴¹⁷³ *Id.*

⁴¹⁷⁴ Press Release, Pa. Dep't of Env'tl. Prot., New PA Investments in Alternative, Clean Energy Saving Businesses, Consumers in 10 Counties \$2.7 Million (Nov. 16, 2010), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=15245&typeid=2>.

⁴¹⁷⁵ Press Release, Pa. Dep't of Env'tl. Prot., New Figures Show PA Exceeds its Goals for Solar Among National Leaders in Solar Projects, Energy Capacity (Nov. 23, 2010), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=15417&typeid=1>.

⁴¹⁷⁶ *Id.*

⁴¹⁷⁷ Press Release, Pa. Dep't of Env'tl. Prot., PUC Approves Updated Time-of-Use Rate (Dec. 2, 2010), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=15414&typeid=2>.

matches 50% of a project's cost by providing up to \$7,5000 in grants.⁴¹⁷⁸

2011: Renewable Energy, Energy Efficiency, and Transportation/Fuels

The Pennsylvania DEP announced in April 2011 that it had awarded more than \$538,000 in Environmental Education Grants to 102 non-profit organizations, schools, universities, and conservation districts. The Environmental Education Act of 1993 established the grant program. Projects included hosting sustainability workshops and holding nature programs for children.⁴¹⁷⁹

The Pennsylvania DEP's Alternative Fuels Incentive Grant Program began accepting applications for projects in April 2011. Eligible projects used or produced biofuels, alternative fuels, and alternative fuel vehicles, or deployed fuel-saving technology in the transportation sector. Eligible recipients included school districts, municipal authorities, nonprofit entities, and others.⁴¹⁸⁰

On May 7, 2011, adopting a widely replicated tactic to educate the public and stimulate emerging markets, Pennsylvania's Air Quality Partnership held an event to promote alternative energy lawnmowers. One hundred and forty registrants received a \$50 voucher and additional incentives from participating manufacturers. Sustainable Waste Solutions provided disposal services for old, donated lawnmowers.⁴¹⁸¹

In October 2011, the Pennsylvania DEP awarded more than \$4.4 million in Alternative Fuels Incentive Grants, funded by the state's annual utilities gross tax receipts, to twelve projects across the state. The projects were designed to develop Pennsylvania's natural gas and electric vehicle infrastructure and achieve emissions reductions equivalent to removing 10,000 cars from the road.⁴¹⁸²

The Pennsylvania DEP announced on September 18, 2011 that it would offer grants to small businesses through August 29, 2011 to help offset 50% of the cost of adopting or acquiring energy-efficient or pollution prevention equipment or processes, up to a maximum of \$7,500. The grants were awarded through the DEP's Small Business Advantage Grant program. Among other requirements, eligible projects were required to

⁴¹⁷⁸ Press Release, Pa. Dep't of Env'tl. Prot., DEP Announces Small Business Advantage Grants to Help Improve Energy Efficiency, Reduce Pollution, Lower Operating Costs (Dec. 16, 2010), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=15612&typeid=1>.

⁴¹⁷⁹ Press Release, Pa. Dep't of Env'tl. Prot., DEP Awards Grants to Promote Environmental Education, Stewardship, Renewable Energy (Apr. 22, 2011), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=17134&typeid=1>.

⁴¹⁸⁰ Press Release, Pa. Dep't of Env'tl. Prot., DEP Announces Alternative Fuel Transportation Projects Grant Opportunity (Apr. 22, 2011), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=17133&typeid=1>.

⁴¹⁸¹ Press Release, Pa. Dep't of Env'tl. Prot., Dept. of Env'tl. Protection. Air Quality Partnership to Host Lawn Mower Trade-In Event on May 7 (Mar. 16, 2011), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=16642&typeid=2>.

⁴¹⁸² Press Release, Pa. Dep't of Env'tl. Prot., DEP Awards Nearly \$4.4 Million in Alternative Fuels Grants (Oct. 25, 2011), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=19134&typeid=1>.

save the business at least 25%, plus \$1,000 annually in energy or pollution-related expenses.⁴¹⁸³

PEDA announced in September 2011 that it had awarded \$3.7 million in grants to thirteen projects across the state working to develop and implement clean energy.⁴¹⁸⁴

Pennsylvania was one of nine states to join the Northeast Electric Vehicle Network in October 2011 to increase economic growth and help the states reduce their GHG emissions.⁴¹⁸⁵ The Network focuses on building infrastructure for clean vehicles and fuels as well as attracting public and private investment to support the infrastructure development. Participating states include Connecticut, Delaware, Washington, D.C., Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.⁴¹⁸⁶ The Network is part of the Transportation and Climate Initiative (TCI), a regional collaboration between twelve Northeast and Mid-Atlantic states that aims to reduce GHG emissions from the transportation sector and develop the clean energy economy.⁴¹⁸⁷ The TCI was launched in June 2010 and is facilitated by the Georgetown Climate Center.⁴¹⁸⁸ A nearly \$1 million Electric Vehicle Readiness Grant from the DOE was awarded to New York State Energy Research and Development Authority (NYSERDA) on behalf of the TCI in September 2010 to fund the Network's efforts to deploy electric vehicles throughout the Northeast.⁴¹⁸⁹

In November 2011, the Department of Community and Economic Development (DCED) announced significant investments in alternative energy projects in eight counties in Pennsylvania.⁴¹⁹⁰ The projects, part of the Alternative and Clean Energy Program and the Renewable Energy Program, were administered jointly by the DEP and the DCED and were expected to spur an additional \$58 million in economic investments across the state.⁴¹⁹¹

⁴¹⁸³ Press Release, Pa. Dep't of Env'tl. Prot., DEP Offers Grants to Small Businesses Looking to Reduce Energy Costs, Curb Pollution (July. 26, 2012),

<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=19529&typeid=1>.

⁴¹⁸⁴ Press Release, Pa. Dep't of Env'tl. Prot., PEDA Board Approves \$3.7 Million in Funding for 13 Clean Energy Projects (Oct. 13, 2011),

<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=19086&typeid=1>.

⁴¹⁸⁵ Press Release, Georgetown Climate Ctr., Northeast States Form Regional Electric Vehicle Network (Oct. 19, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

⁴¹⁸⁶ *Id.*

⁴¹⁸⁷ TRANSPORTATION AND CLIMATE INITIATIVE, <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative> (Feb. 25, 2011).

⁴¹⁸⁸ *Id.*

⁴¹⁸⁹ Press Release, Georgetown Climate Ctr., Northeast States Form Regional Electric Vehicle Network (Oct. 19, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

⁴¹⁹⁰ Press Release, Pa. Dep't of Cmty. & Econ. Dev., New State Investments Will Reduce Energy Costs for Taxpayers, Businesses (Nov. 3, 2011), <http://www.newpa.com/newsroom/new-state-investments-will-reduce-energy-costs-for-taxpayers-businesses>.

⁴¹⁹¹ *Id.*

2012: Transportation/Fuels, Market-Based Solutions, Climate Change MOUs, Renewable Energy, and Energy Efficiency

The Pennsylvania PUC and DEP began working together to implement the Natural Gas Energy Development Program.⁴¹⁹² Act 13 of 2012 authorized the DEP to distribute up to \$20 million in grants to help municipal and commercial fleets convert to natural gas.⁴¹⁹³ The agencies solicited stakeholders' questions online and via regional seminars and workshops in an effort to ease the transition process.⁴¹⁹⁴

In March 2012, the Pennsylvania PUC also updated its net metering standards by allowing "operators" to include customer-generators who contract with third parties to operate the alternative energy system on the customer-generator's property.⁴¹⁹⁵ However, such a system, operated by the third party, cannot be designed to generate more than 110% of the customer-generator's yearly energy consumption.⁴¹⁹⁶

Also in March 2012, Pennsylvania signed a memorandum of understanding (MOU) with several other Great Lakes States and federal agencies regarding offshore wind energy.⁴¹⁹⁷ The MOU required regulatory agencies to disclose and share their regulatory regimes for offshore wind projects to facilitate coordination.⁴¹⁹⁸

In July 2012, the Pennsylvania DEP announced a new renewable energy source in use in the state.⁴¹⁹⁹ The Antrim Treatment Plant in Tioga County is now powered exclusively by acid mine water that passes through a hydroelectric turbine.⁴²⁰⁰ The wastewater is the result of nearby severe acid mine drainage which had polluted Pine Creek and Babb Creek.⁴²⁰¹ In 2012, 400 gallons per minute of wastewater passed through the turbine, generating enough electricity to eliminate \$12,000 in electricity costs.⁴²⁰²

On July 5, 2012, Governor Tom Corbett signed H.B. 807 into law, which amended the Biofuel Development & In-State Production Incentive Act of 2008.⁴²⁰³ The 2012 amendments defined and described the approved biodiesel blending method and

⁴¹⁹² Press Release, Pa. Pub. Util. Comm'n, DEP Working with Public Utility Commission to Simplify Fleet Conversions (June 4, 2012), http://www.puc.state.pa.us/about_puc/press_releases.aspx?ShowPR=2992.

⁴¹⁹³ *Id.*

⁴¹⁹⁴ *Id.*

⁴¹⁹⁵ Final Order of the Pa. Pub. Util. Comm'n, Docket No. M-2011-2249441 (Mar. 29, 2012), 15.

⁴¹⁹⁶ *Id.*

⁴¹⁹⁷ Press Release, Michigan.gov, Michigan Enters Multistate Agreement Regarding Offshore Wind Energy (Mar. 30, 2012), http://www.michigan.gov/snyder/0,4668,7-277-57577_57657-274875--,00.html.

⁴¹⁹⁸ *Id.*

⁴¹⁹⁹ Press Release, Pa. Dep't of Env'tl. Prot., DEP Chief Celebrates Plant Using Treated Mine Water to Generate Power New Facility in Tioga County a First for Pennsylvania (July 18, 2012), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=19509&typeid=1>.

⁴²⁰⁰ *Id.*

⁴²⁰¹ *Id.*

⁴²⁰² *Id.*

⁴²⁰³ H.B. 807, 2011 Leg., Reg. Sess. (Pa. 2012), <http://www.legis.state.pa.us/WU01/LI/LI/US/HTM/2012/0/0096..HTM>.

specified the American Society for Testing and Materials (ASTM) standard for biodiesel blends below 6% biodiesel, between 6% and 20% biodiesel, and above 20% biodiesel.⁴²⁰⁴ The amendments also contained new registration requirements and enforcement provisions.⁴²⁰⁵

On August 2, 2012, the Pennsylvania PUC adopted an order to implement Phase II of Act 129 of 2008, requiring utilities in the state with over 100,000 customers to adopt and implement energy efficiency and conservation measures.⁴²⁰⁶ Phase II set further company-specific consumption reduction targets which will become final for any covered electric distribution company unless the electric distribution utility petitions the Commission for an evidentiary hearing before August 20, 2012.⁴²⁰⁷ The electric distribution utilities that petitioned the Commission for an evidentiary hearing were: Peco Energy Company, PPL Electric Utilities Corporation, Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power.

Pennsylvania participates in the DOE's Wind for Schools program.⁴²⁰⁸ Utilizing federal funds, the Pennsylvania Wind for Schools project collaborates with Penn State University to select school districts from across the state to host wind turbines.⁴²⁰⁹ After the first round of applications, Northwestern Area School District in Albion, Pennsylvania was selected for a wind turbine installation in September 2012 along with three other host schools.⁴²¹⁰

2013: Energy Efficiency and Greenhouse Gas Reduction

The Pennsylvania DEP announced the second round of grantees under the Small Business Advantage grant program for energy efficiency and pollution-prevention grants in January 2013.⁴²¹¹ Thirty-two small business recipients in sixteen counties were awarded a total of \$239,809.⁴²¹² The third round of grantees under the Small Business Advantage Grant program for energy efficiency and pollution-prevention grants took place in March 2013.⁴²¹³ Spanning twenty-four counties, thirty-six businesses were

⁴²⁰⁴ *Id.* at (1), (2).

⁴²⁰⁵ *Id.* at (3).

⁴²⁰⁶ Implementation Order of the Pa. Pub. Util. Comm'n, Docket No. M-2012-2289411, 5-6 (Aug. 3, 2012), http://www.puc.pa.gov/filing_resources/issues_laws_regulations/act_129_information/energy_efficiency_and_conservation_ee_c_program.aspx.

⁴²⁰⁷ *Id.* at 120.

⁴²⁰⁸ Press Release, U.S. Dep't of Energy, Pennsylvania Wind for Schools Project Celebrates its First Wind Turbine Installation and Welcomes Three New Host Schools (Sept. 25, 2012), http://www.windpoweringamerica.gov/filter_detail.asp?itemid=3672.

⁴²⁰⁹ *Id.*

⁴²¹⁰ *Id.*

⁴²¹¹ Press Release, Pa. Dep't of Env'tl. Prot., DEP Awards Energy-Efficiency, Pollution-Prevention Grants to 32 Small Businesses (Jan. 30, 2013), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=19837&typeid=1>.

⁴²¹² *Id.*

⁴²¹³ Press Release, Pa. Dep't of Env'tl. Prot., DEP Awards Energy-Efficiency, Pollution-Prevention Grants to 36 Small Businesses (Mar. 8, 2013), <http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=19879&typeid=1>.

awarded \$290,010 in grants for installation of energy efficiency improvements such as high efficiency HVAC and insulation upgrades, high efficiency lighting, and energy-efficient heat pumps auxiliary power units to reduce idling in trucks.⁴²¹⁴ The Small Business Advantage Grant program provides 50% matching reimbursements up to \$9,500 for projects that are able to save 25% per year in pollution prevention or energy costs.⁴²¹⁵

On May 13, 2013 Governor Corbett announced, “more than \$6.7 million in Act 13 funding would be awarded to 18 companies and organizations making the switch to natural gas for their heavy-duty fleet vehicles.”⁴²¹⁶

On December 31, 2013, in accordance with the Pennsylvania Climate Change Act, the Pennsylvania DEP submitted to Governor Corbett and the Pennsylvania state legislature the *Climate Change Action Plan Update*.⁴²¹⁷ The Plan focused on Pennsylvania’s emission-reduction efforts including the DEP implementing new, more stringent requirements for reducing methane emissions from the natural gas industry, fuel incentives, solar rebates, energy efficiency programs, and the preservation of forests and open space.⁴²¹⁸

2014: Renewable Energy and Transportation/Fuels

Governor Corbett announced on January 28, 2014 that Pennsylvania’s Commonwealth Financing Authority (CFA) would invest more than \$4.5 million in grants to advance clean and alternative energy sources.⁴²¹⁹ The CFA approved projects include funding for six compressed gas-fueling stations, and they estimated that the investments would result in more than \$16.7 million in additional economic investments.⁴²²⁰

RHODE ISLAND

2001: Climate Change Agreement and Greenhouse Gas Reduction

In August 2001, Rhode Island agreed, under the auspices of the New England Governors and Eastern Canadian Premiers, to a voluntary short-term goal of reducing

⁴²¹⁴ *Id.*

⁴²¹⁵ *Id.*

⁴²¹⁶ *Governor Corbett Awards 18 Impact Fee Grants for Natural Gas Vehicle Conversion*, PR NEWswire (May 16, 2013), <http://www.prnewswire.com/news-releases/governor-corbett-awards-18-impact-fee-grants-for-natural-gas-vehicle-conversion-207712871.html> (original press release not found).

⁴²¹⁷ See Press Release, Pa. Dep’t of Env’tl. Prot., Pennsylvania Continues Successful Efforts to Reduce Greenhouse Gas Emissions (Jan. 2, 2014),

<http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=20320&typeid=1>.

⁴²¹⁸ PA. DEP’T OF ENVTL. PROT., PA. CLIMATE CHANGE ACTION PLAN UPDATE (2013), http://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/Climate%20Change%20Advisory%20Committee/Final_Climate_Change_Action_Plan_Update.pdf.

⁴²¹⁹ Press Release, Office of the Governor, New Alternative, Clean Energy Investments to Improve Environment; Encourage Domestic Energy Usage (Jan. 28, 2014), http://www.pa.gov/Pages/NewsDetails.aspx?agency=Governors%20Office&item=15225#.UyYqC_0iWDL.

⁴²²⁰ *Id.*

regional greenhouse gas (GHG) emissions to 1990 levels by 2010 and by 10% below 1990 levels by 2020.⁴²²¹ In order to achieve these goals, the Rhode Island Department of Environmental Management and the State Energy Office organized a meeting of over thirty diverse stakeholders to create a state climate change action plan.⁴²²²

2005: Market-Based Solutions, Renewable Energy, Renewable Portfolio Standards, Energy Efficiency, Greenhouse Gas Reduction, and Transportation/Fuels

Since 2005, Rhode Island has offered a personal tax credit of 25% for the cost of residential alternative energy systems.⁴²²³ Furthermore, for the purposes of local property tax assessments, solar-powered systems cannot be assessed at a value more than that of conventional electric generators.⁴²²⁴ Most renewable power generators are also exempt from Rhode Island's sales-and-use tax.⁴²²⁵

Also since 2005, Rhode Island has required utilities to disclose to their customers their power sources, including the percentage of energy sold from renewable energy generators.⁴²²⁶ Utilities must also charge their customers \$0.0003 per kilowatt-hour of energy to be reserved for Rhode Island's Renewable Energy Fund, which supports renewable energy projects and incentives for alternative power sources.⁴²²⁷ Finally, all utilities must sell 3% of their electricity from renewable power generators before 2008, 4.5 % before 2011, and 16% before 2020.⁴²²⁸

Rhode Island also set minimum efficiency standards for 21 appliances. Some of these appliance standards were based on the voluntary U.S. EPA and DOE's ENERGY STAR® standards and California's appliance standards.⁴²²⁹ Rhode Island also adopted sections of the California Low Emission Vehicle program applying to passenger cars, light-duty trucks and medium-duty vehicles into its own Low Emission Vehicle program in 2005.⁴²³⁰

2007: Renewable Portfolio Standards, Cap & Trade, and Greenhouse Gas Reduction

In January 2007, Governor Donald Carcieri announced that Rhode Island would join the Regional Greenhouse Gas Initiative (RGGI). As a member of RGGI, Rhode Island agreed to cap emissions at current levels between 2009 and 2015 and to reduce

⁴²²¹ See NEW ENGLAND GOVERNORS/EASTERN CANADIAN PREMIERS, CLIMATE CHANGE ACTION PLAN 2001 (Aug. 2001), <http://www.negc.org/documents/NEG-ECP%20CCAP.PDF>.

⁴²²² Rhode Island Greenhouse Gas Action Plan, http://rigreenhouse.gas.raabassociates.org/Articles/GREENHOUSE_GASPlanBody7-19-02FINAL.pdf.

⁴²²³ S. 37, 2005 Leg., Reg. Sess. (R.I. 2005).

⁴²²⁴ *Id.*

⁴²²⁵ *Id.*

⁴²²⁶ R.I. GEN. LAWS § 39-26-9 (2005).

⁴²²⁷ R.I. GEN. LAWS § 39-2-1.2(b) (2005).

⁴²²⁸ *Id.* § 39-26-1 (2005).

⁴²²⁹ R.I. GEN. LAWS § 39-27-1 (2006).

⁴²³⁰ 37 R.I. CODE R. (2007), http://www.dem.ri.gov/pubs/regs/regs/air/air37_07.pdf.

levels by 10% by 2018.⁴²³¹ In July 2007, Governor Carcieri signed H.B. 5577, An Act Relating to Health and Safety – Implementation of the Regional Greenhouse Gas Initiative Act, which mandated that the Department of Environmental Management (DEM) create a cap-and-trade program consistent with the requirements of RGGI.⁴²³² The cap-and-trade regulations must ensure that 100% of the issued allowances be sold in an open auction.⁴²³³

In May 2007, Rhode Island and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”⁴²³⁴

2008: Renewable Energy, Climate Change, Renewable Portfolio Standards, Energy Efficiency, Transport/Fuels, and Greenhouse Gas Reduction

The Metro Bay Partnership, a subsidiary of Rhode Island’s Coastal Management Council, addressed sea-level rise in its meeting on March 24, 2008.⁴²³⁵ In its development of the Metro Bay Special Area Management Plan, the partnership considered a prediction of sea-level rise by three to five feet over the next ninety years.⁴²³⁶ It found it necessary to adopt policies in anticipation of such sea-level rise.⁴²³⁷

In support of the state’s renewable portfolio standard, Governor Carcieri ordered the Rhode Island government to purchase 20% of its energy from renewable sources by 2011.⁴²³⁸ In June 2008, he announced the creation of the Wind Energy Proposal Evaluation Team to choose one out of seven proposals to construct an offshore wind farm.⁴²³⁹ After vetoing the General Assembly’s renewable energy bill in June 2008, he urged the Public Utilities Commission to mandate National Grid, an electric utility company, to enter into long-term contracts with renewable energy generators.⁴²⁴⁰

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.⁴²⁴¹ Each of these allowances sold at a clearing price of \$3.07, raising

⁴²³¹ Regional Greenhouse Gas Initiative, <http://www.rggi.org/home> (Oct. 7, 2008).

⁴²³² R.I. GEN. LAWS §§ 23-82-1 *et seq.*

⁴²³³ *Id.*

⁴²³⁴ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions, [http://www.theclimateregistry.org/The Climate Registry Press Release.pdf](http://www.theclimateregistry.org/The%20Climate%20Registry%20Press%20Release.pdf).

⁴²³⁵ Metro Bay SAMP, What’s Happening, <http://seagrant.gso.uri.edu/metrosamp/calendar.html>.

⁴²³⁶ Metro Bay SAMP, What’s Happening, Legal and Policy Presentation, http://seagrant.gso.uri.edu/ccd/slr/SLR_presentation_legalpolicy.pdf

⁴²³⁷ Metro Bay SAMP, What’s Happening, Notes, http://seagrant.gso.uri.edu/metrosamp/calendar/2008_Events/partnership_notes_3.24.08.pdf

⁴²³⁸ R.I. Exec. Order No. 06-02 (2006), <http://www.dsireusa.org/documents/Incentives/RI13R.pdf>.

⁴²³⁹ Press Release, Carcieri Announces Wind Energy Project Evaluation Team (June 11, 2008), <http://www.ri.gov/GOVERNOR/view.php?id=6575>.

⁴²⁴⁰ Press Release, Governor Carcieri Urges Public Utilities Commission to Mandate Renewable Energy Contracts for National Grid (Aug. 14, 2008), <http://www.ri.gov/GOVERNOR/view.php?id=6945>.

⁴²⁴¹ News Release, RGGI States’ First CO₂ Auction Off to a Strong Start (Sept. 29, 2008), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

a total of \$38,575,783.⁴²⁴² These proceeds would be used to fund renewable energy and energy efficiency technologies and programs in the states that offered allowances.⁴²⁴³ The second auction took place on December 17, 2008 and each of the ten states participated.⁴²⁴⁴ All of the available 31,505,898 allowances were sold, 3.5 times lower than the demand of 108,709,000 allowances.⁴²⁴⁵ The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.⁴²⁴⁶

On December 31, 2008, RGGI participants and Pennsylvania (an observer) signed a letter of intent to reduce carbon emissions from the transportation sector.⁴²⁴⁷ Specifically, they stated their intent to incorporate a Low Carbon Fuel Standard (LCFS) into the RGGI agreement, which requires reductions in the average lifecycle GHG per unit of useful energy in motor vehicles.⁴²⁴⁸

2009: Renewable Energy, Green Jobs, American Recovery & Reinvestment Act (ARRA), Green Building, Energy Efficiency, Transportation/Fuels, Cap-&-Trade, Climate Change Agreement, and Market-Based Solutions

Governor Carcieri signed a joint development agreement with Deepwater Wind to construct an offshore wind farm on January 8, 2009.⁴²⁴⁹ Once constructed, the farm will provide 15% of Rhode Island's electricity demand. During the construction process, a manufacturing facility will be built in Quonset, generating 800 jobs with annual wages of \$60 million. With construction slated to begin in 2010, the farm will be the first offshore wind farm in North America.⁴²⁵⁰

On February 26, 2009, Governor Carcieri certified Rhode Island's commitment to participate in the State Energy Program under the American Recovery and Reinvestment Act (ARRA).⁴²⁵¹ To ensure this commitment, he sent letters to the state's Public Utilities Commission (PUC), urging the PUC to consider actions other than current programs to encourage energy efficiency. He also sent letters to the General Assembly, urging consideration of improving building energy codes.⁴²⁵² On March 4, 2009, Carcieri

⁴²⁴² *Id.* at 1.

⁴²⁴³ *Id.*

⁴²⁴⁴ Regional Greenhouse Gas Initiative, CO₂ Auctions, Auction Results, Auction Reports, http://rggi.org/co2-auctions/results/auction_1_reports.

⁴²⁴⁵ News Release, Post-Settlement Auction Report Shows Robust Market for RGGI Carbon Dioxide Emissions Allowances, http://rggi.org/co2-auctions/results/auction_1_reports.

⁴²⁴⁶ *Id.*

⁴²⁴⁷ Northeast/Mid-Atlantic States Low Carbon Fuel Standard Program <http://www.mass.gov/Eoeea/docs/prlcfattach.pdf>.

⁴²⁴⁸ *Id.* at 1.

⁴²⁴⁹ Press Release, Carcieri Signs Development Agreement with Deepwater Wind for Off-Shore Wind Development (Jan. 8, 2009), <http://www.ri.gov/GOVERNOR/view.php?id=7961> (Feb. 21, 2009).

⁴²⁵⁰ *Id.*

⁴²⁵¹ Press Release, Governor Officially Certifies Participation in American Recovery and Reinvestment Act of 2009 at Signing Ceremony (Feb. 26, 2009), <http://www.ri.gov/GOVERNOR/view.php?id=8310>.

⁴²⁵² *Id.*

announced that \$3.22 million would go toward fourteen projects that will protect a total of 1,310.5 acres from development.⁴²⁵³

On March 12, 2009, the U.S. Department of Energy announced that Rhode Island was eligible for \$23,960,000 under the State Energy Program of the ARRA.⁴²⁵⁴

The third RGGI auction was held on March 18, 2009.⁴²⁵⁵ The auction sold 31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse at future market prices for RGGI allowances.⁴²⁵⁶ Prices fell at the fourth auction to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.⁴²⁵⁷

In April 2009, the Department of Environmental Management received \$1.73 million in ARRA funding for its Clean Diesel Program.⁴²⁵⁸ This funding would replace or retrofit government-owned diesel equipment in order to reduce emissions. Governor Carcieri announced that it would allow the state and its cities and towns to replace or retrofit 255 vehicles, reducing emissions by 1.8 tons per year.⁴²⁵⁹

In order to protect their state's wind technology, Governor Carcieri and other governors wrote a May 2009 letter to Congress communicating their opposition to proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.⁴²⁶⁰ In another May effort to protect local industry while reducing transportation emissions and preserving open space, Governor Carcieri and the state's Department of Environmental Management launched a program to promote locally grown crops.⁴²⁶¹

Also in May 2009, Governor Carcieri also signed an agreement with a coalition of

⁴²⁵³ Press Release, Governor Carcieri Announces \$7.55 Million in Water Quality and Open Space Protection Grants (Mar. 4, 2009), <http://www.ri.gov/GOVERNOR/view.php?id=8362>.

⁴²⁵⁴ U.S. Dep't of Energy, Nat'l Energy Tech. Lab., State Energy Program Formula Grants, at 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁴²⁵⁵ Press Release, States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

⁴²⁵⁶ *Id.*

⁴²⁵⁷ Regional Greenhouse Gas Initiative, Auction Results, <http://www.rggi.org/co2-auctions/results>.

⁴²⁵⁸ Press Release, DEM Receives \$1.73 Million in Federal Stimulus Funding for Clean Diesel Program (Apr. 15, 2009), <http://www.ri.gov/GOVERNOR/index.php?month=04&year=2009>.

⁴²⁵⁹ *Id.*

⁴²⁶⁰ Letter from Donald L. Carcieri, Governor (R.I.), Deval Patrick, Governor (Mass.), Jack Markell, Governor (Del.), John Baldacci, Governor (Me.), Martin O'Malley, Governor (Md.), John H. Lynch, Governor (N.H.), Jon S. Corzine, Governor (N.J.), David A. Paterson, Governor (N.Y.), James H. Douglas, Governor (Vt.), and Timothy M. Kaine, Governor (Va.) to Harry Reid, Majority Leader (U.S. Senate), Mitch McConnell, Minority Leader (U.S. Senate), Nancy Pelosi, Leader (U.S. House of Representatives), and John Boehner, Minority Leader (U.S. House of Representatives) (May 4, 2009), <http://www.gov.ri.gov/documents/EastCoastGovsTransmissionLtr.pdf>.

⁴²⁶¹ Press Release, Governor Carcieri Encourages Rhode Islanders to GET FRESH. BUY LOCAL (May 5, 2009), <http://www.ri.gov/GOVERNOR/view.php?id=8816>.

other governors to support federal climate change legislation.⁴²⁶² The agreement contained two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.⁴²⁶³

On June 23, 2009, representatives from RGGI, the Western Climate Initiative (WCI)⁴²⁶⁴, and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.⁴²⁶⁵

In a June 2009 effort to promote renewable energy use, Governor Carcieri signed H.B. 7606, requiring the state's electric distribution companies to enter into long-term contracts with renewable energy producers.⁴²⁶⁶ He stated, "Enacting this law will accelerate our efforts to be the first state in the nation to have an offshore wind farm"⁴²⁶⁷ Shortly thereafter, Deepwater Wind, the developer of the wind farm, agreed to 10-year leases of 117-acres of property for its offshore project.⁴²⁶⁸

Governor Carcieri joined other New England governors in pursuing the development of high-speed rail in this region in July 2009.⁴²⁶⁹ He also supported renewable energy use by signing H-5461A, which authorized net metering for solar and wind at three different capacity limits.⁴²⁷⁰

Various stimulus grants were awarded at the end of October 2009, including \$250,000 for energy auditor training and \$12 million for building weatherization.⁴²⁷¹ The Office of Energy Resources also applied for \$2.3 million to go towards weatherization of

⁴²⁶² Press Release, Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

⁴²⁶³ Governors' Energy and Climate Coalition, Statement of Principles, <http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

⁴²⁶⁴ The Western Climate Initiative dissolved in November of 2011 starting with the formal withdrawal of Arizona from the program and followed by the informal withdrawal of five other states, leaving only California and four Canadian provinces left in the agreement. Michael A. Nesternoff, *The Western Climate Initiative is Dead, Long Live the WCI*, Lexology (Nov. 23, 2011), <http://www.lexology.com/library/detail.aspx?g=16aa30c5-63ab-406c-a3f7-100b3eaae557>.

⁴²⁶⁵ Van Ness Feldman, Weekly Climate Change Policy Update – June 29, 2009, <http://www.vnf.com/news-policyupdates-373.html>.

⁴²⁶⁶ H. 5002, 2009 Leg., Reg. Sess. (R.I. 2009), <http://www.rilin.state.ri.us/BillText09/HouseText09/H5002Aaa.pdf>.

⁴²⁶⁷ *Id.*

⁴²⁶⁸ Press Release, QDC OKs leases for Deepwater (June 30, 2009), http://www.projo.com/ri/northkingstown/content/BZ_DEEPWATER_LEASES_06-30-09_JTESORM_v21.32a6740.html.

⁴²⁶⁹ Press Release, Governor Carcieri Joins New England Governors to Pursue Joint Regional Vision for High Speed Rail (July 14, 2009), <http://www.ri.gov/GOVERNOR/view.php?id=9307>.

⁴²⁷⁰ Press Release, Governor Carcieri Signs Net Metering Legislation (July 20, 2009), <http://www.ri.gov/GOVERNOR/view.php?id=9354>; H-5461A, 2009 Leg., Reg. Sess. (R.I. 2009), <http://portsmouthrienergy.com/h5461a.pdf>.

⁴²⁷¹ Press Release, RI Office of Energy Resources Distributes \$250,000 in Recovery Funds for Training Program (Oct. 15, 2009), <http://www.ri.gov/GOVERNOR/view.php?id=9935>; Press Release, RI Office of Energy Resources Issues Contracts to Disperse \$12 Million in Recovery Weatherization Funds (Oct. 15, 2009), <http://www.ri.gov/GOVERNOR/view.php?id=9936>.

homes above the low-income line.⁴²⁷²

Deepwater Wind and National Grid signed a 20-year, power-purchase agreement subject to the review and approval of the Rhode Island Public Utilities Commission in December 2009 becoming the nation's second power-purchase agreement (PPA) for renewable, offshore wind energy.⁴²⁷³ National Grid agreed to purchase the energy generated from Deepwater Wind's Block Island Wind Farm at 24.4¢ per kilowatt hour in the first full year of operation and escalating at 3.5% per year thereafter.⁴²⁷⁴ Deepwater Wind planned to develop two wind projects, producing 1.32 million megawatts of power annually.⁴²⁷⁵ The Block Island Wind Farm would be about three miles off the southeastern coast of Block Island in state waters, including up to eight turbines and providing approximately one percent of Rhode Island's energy needs. Another large-scale wind farm, not covered by the PPA, would be placed in federal waters about 15 miles from nearest landfall with about 106 turbines.⁴²⁷⁶

In December 2009, the Department of Environmental Management (DEM), in partnership with the Town of Narragansett, began negotiations with Chevron Energy Solutions Co. (Chevron ES) to construct, operate, and maintain onshore wind turbines on state and/or town properties in Narragansett.⁴²⁷⁷ In April, the state and town sent out a joint Request for Proposals (RFP) for experienced developers interested in constructing onshore wind turbine projects in Narragansett and Chevron ES was one of four responding firms.⁴²⁷⁸ No state or municipal funds were required to site and construct the turbines under Chevron ES's proposal, designed to provide a sustainable energy supply to meet the needs of the state and town while maximizing potential revenue over the life of the generating facility.⁴²⁷⁹ The energy produced from these sites would power DEM facilities at the Port of Galilee and state camping and beach facilities located in Narragansett as well as the town's sewage treatment plant and other municipal needs.⁴²⁸⁰

2010: American Recovery & Reinvestment Act (ARRA), Renewable Energy, Climate Change Agreement (MOU), and Energy Efficiency

⁴²⁷² Press Release, RI Office of Energy Resources initiates \$2.3 million request for weatherization of homes above low income guidelines (Oct. 15, 2009), <http://www.ri.gov/GOVERNOR/index.php?month=10&year=2009>.

⁴²⁷³ Press Release, Deepwater Wind and National Grid Sign Historic 20-Year Power-Purchase Agreement for Offshore Wind Energy (Dec. 9, 2009), <http://www.ri.gov/GOVERNOR/view.php?id=10323>.

⁴²⁷⁴ *Id.*

⁴²⁷⁵ *Id.*

⁴²⁷⁶ *Id.*

⁴²⁷⁷ Press Release, State of Rhode Island and Town Of Narragansett Announce Selection of Chevron Energy Solutions Co. to Construct Wind Turbines in Narragansett (Dec. 22, 2010), <http://www.ri.gov/GOVERNOR/view.php?id=10414>.

⁴²⁷⁸ *Id.*

⁴²⁷⁹ *Id.*

⁴²⁸⁰ *Id.*

The Office of Energy Resources announced in January 2010 that it would accept grant applications for non-utility scale renewable energy projects.⁴²⁸¹ The grants, funded through ARRA, were available to residents, businesses, municipalities, non-profit organizations, academic institution, totaling \$8,395,000.⁴²⁸² The grants would help pay up to 25% of the up-front costs of renewable energy projects, including, for example, solar, wind, and hydro installations.⁴²⁸³ Residents could apply for a maximum of \$10,000 for up to a quarter of the project on their property. Businesses could apply up to a total of \$500,000 for projects. Municipalities and institutions, with 1000 or more persons, could apply for a maximum of \$750,000 for projects.⁴²⁸⁴

Forty-five businesses, municipalities, non-profit organizations and private citizens throughout Rhode Island received \$3.3 million in ARRA funding for renewable energy projects.⁴²⁸⁵ Examples of projects include solar, wind, geothermal, and hydro installations, as well as any other proven and accepted renewable energy systems.⁴²⁸⁶ Residents were eligible to apply for a maximum of \$10,000 of grant funding representing up to a quarter of the cost of a renewable energy project on their property. Businesses could apply for up to \$500,000 for projects, and municipalities and institutions that serve or house 1000 or more persons, were eligible to apply for a maximum of \$750,000.⁴²⁸⁷

On June 8, 2010, Governor Carcieri joined the governors of Maine, New Hampshire, Massachusetts, New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina in signing a memorandum of understanding (MOU) with the U.S. Department of Interior formally establishing an Atlantic Offshore Wind Energy Consortium.⁴²⁸⁸ This consortium was tasked with developing an action plan that sets forth priorities, goals, specific recommendations and steps for achieving the objectives outlined in the agreement. Task forces were formally established with Rhode Island, Massachusetts, New Jersey, Virginia, Delaware, and Maryland, and are in process for New York, South Carolina, and Florida.⁴²⁸⁹

Also in June 2010, the Rhode Island General Assembly amended legislation relating to Public Utilities and Carriers, clarifying its original intent to encourage and promote clean, independent, renewable energy through an offshore wind project.⁴²⁹⁰ The

⁴²⁸¹ Press Release, Office of Energy Resources Offers Renewable Energy Grants to Rhode Islanders through Recovery Act (Jan. 11, 2010), <http://www.ri.gov/press/view/10513>.

⁴²⁸² *Id.*

⁴²⁸³ *Id.*

⁴²⁸⁴ *Id.*

⁴²⁸⁵ Press Release, Rhode Island Awards \$3.3 Million in Recovery Act Grants for Non-Utility Scale Renewable Energy Projects to Businesses Community Organizations and Individuals, <http://www.ri.gov/GOVERNOR/view.php?id=11177>.

⁴²⁸⁶ *Id.*

⁴²⁸⁷ *Id.*

⁴²⁸⁸ Press Release, Rhode Island Signs Agreement with Department of Interior to Establish Atlantic Offshore Wind Energy Consortium (June 8, 2010), <http://www.ri.gov/GOVERNOR/view.php?id=11565>.

⁴²⁸⁹ *Id.*

⁴²⁹⁰ Press Release, Governor Carcieri Commends General Assembly on Passage of Legislation Paving the Way for the Block Island Offshore Wind Project (June 10, 2010) <http://www.ri.gov/GOVERNOR/view.php?id=11585>.

amendments required that a new Power Purchase Agreement (PPA) between National Grid and Deepwater Wind be filed with the Public Utilities Commission (PUC) with a decision rendered within 45 days, including public comment.⁴²⁹¹ Additionally, the legislation required the state's Economic Development Corporation and Department of Environmental Management to offer testimony before the PUC on the economic development and environmental benefits of the project.⁴²⁹²

Deepwater Wind and National Grid signed a new 20-year PPA for electricity generated from the Block Island offshore wind project wherein National Grid will purchase the energy generated from Deepwater Wind's Block Island Wind Farm at a capped cost of 24.4¢ per kilowatt hour in the first full year of operation.⁴²⁹³ Proponents expected the Block Island wind farm to provide approximately 1.3% of Rhode Island's electricity needs. Deepwater Wind also planned to build the aforementioned larger-scale wind farm, with about 106 turbines, located in federal waters about 15 miles from nearest landfall.⁴²⁹⁴ In October 2011, Deepwater Wind announced that it would begin construction of its offshore wind farm located in Block Island sometime in 2013-2014.⁴²⁹⁵

In July 2010, Rhode Island hosted an Energy Efficient Appliance Rebate Program funded by \$442,000 from ARRA. Rebates ranging from \$100 to \$500 were available for qualified energy efficient appliances and heating systems.⁴²⁹⁶

Twenty-five businesses, municipalities, and non-profit organizations received a total of \$4.7 million funded through ARRA. The renewable energy projects included biomass, solar, wind, geothermal, and hydroelectric installations.⁴²⁹⁷ Businesses could apply for up to \$500,000 for projects, and municipalities and institutions serving or housing 1000 or more persons were eligible to apply for a maximum of \$750,000.⁴²⁹⁸

Governor Carcieri and Massachusetts Governor Patrick signed a memorandum of understanding (MOU) in July 2010 providing that the two states will coordinate and collaborate in the permitting and development of offshore wind projects in a 400 square mile "area of mutual interest" (AMI) beginning 12 miles southwest of Martha's Vineyard and extending 20 miles westward into Rhode Island Sound.⁴²⁹⁹ If they determine that this

⁴²⁹¹ *Id.*

⁴²⁹² *Id.*

⁴²⁹³ Press Release, Governor Carcieri Commends Deepwater and National Grid for New Power Purchase Agreement (June 30, 2010), <http://www.ri.gov/GOVERNOR/view.php?id=11720>.

⁴²⁹⁴ *Id.*

⁴²⁹⁵ Reuters, *Deepwater to Build First Off-Shore Wind Farm*, October 13, 2011), <http://www.reuters.com/article/2011/10/13/us-deepwater-wind-idUSTRE79C0YC20111013>.

⁴²⁹⁶ Press Release, Additional Funds for Rhode Island Energy Efficient Appliance Rebate Program (July 21, 2010), <http://www.ri.gov/GOVERNOR/view.php?id=11849>.

⁴²⁹⁷ Press Release, Rhode Island Awards \$4.7 Million in Recovery Act Grants for Renewable Energy Projects to Businesses, Municipalities and Community Organizations (July 22, 2010), <http://www.ri.gov/GOVERNOR/view.php?id=11855>.

⁴²⁹⁸ *Id.*

⁴²⁹⁹ Press Release, Rhode Island and Massachusetts Sign Agreement to Collaborate on the Development of Offshore Wind in Federal Waters (July 26, 2010, <http://www.ri.gov/GOVERNOR/view.php?id=11879>.

AMI is favorable for utility-scale wind energy development, the MOU ensures approval by the governors of both states and economic benefits shared by both states on an equitable and fair basis.⁴³⁰⁰

2011: Renewable Energy, Transportation/Fuels, Greenhouse Gas Reduction, Green Jobs, Climate Change, and Energy Efficiency

In March 2011, Governor Lincoln Chafee announced that the Rhode Island Economic Development Corporation (RIEDC) would provide a grant of \$200,310 to fund a portion of predevelopment expenses for the proposed 10-15 megawatt solar farm in the City of East Providence.⁴³⁰¹ Once the project is successfully developed, the city must repay the full grant amount. When operating at full estimated capacity, the solar farm would be one of the largest solar facilities in New England. It would also be built on reclaimed brownfields property.⁴³⁰² As of October 2013, the project was 50% complete, with 6400 of the 12800 total panels installed.⁴³⁰³

On August 18, 2011, the Bureau of Ocean Energy Management (BOEM) published a Notice of Intent (NOI) to prepare an environmental assessment (EA) for Commercial Wind Lease Issuance and Site Characterization Activities on the Atlantic Outer Continental Shelf (OCS) offshore Rhode Island and Massachusetts.⁴³⁰⁴

Rhode Island was one of nine states to join the Northeast Electric Vehicle Network in October 2011.⁴³⁰⁵ The network aims to help the states to increase economic growth and reduce their GHG emissions. It focuses on building infrastructure for clean vehicles and fuels as well as attracting public and private investment to support the infrastructure development. Participating states include Connecticut, Delaware, Washington, D.C., Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania and Vermont.⁴³⁰⁶ The network is part of the Transportation and Climate Initiative (TCI), a regional collaboration between twelve Northeast and Mid-Atlantic states that aims to reduce GHG emissions from the transportation sector and develop the clean energy economy.⁴³⁰⁷ The TCI was launched in June 2010 and is facilitated by the

⁴³⁰⁰ *Id.*

⁴³⁰¹ Press Release, Governor Lincoln D. Chafee Announces RIEDC Funding for East Providence Solar Farm Project (Mar. 29, 2011), <http://www.riedc.com/news/2011/03/chafee-announces-funding-east-providence-solar-farm>.

⁴³⁰² *Id.*

⁴³⁰³ R.I. Tries to Play Catch Up with law that boosts solar arrays, Providence Journal (Oct. 5, 2013) <http://www.providencejournal.com/breaking-news/content/20131005-r.i.-tries-to-play-catch-up-with-law-that-boosts-solar-arrays.ece>.

⁴³⁰⁴ Commercial Wind Lease for wind energy area offshore Rhode Island and Massachusetts, Bureau of Ocean Energy Management (2013), <http://www.boem.gov/Commercial-Wind-Lease-Rhode-Island-and-Massachusetts/>.

⁴³⁰⁵ Press Release, Northeast States Form Regional Electric Vehicle Network (Oct. 17, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

⁴³⁰⁶ *Id.*

⁴³⁰⁷ Georgetown Climate Center, Transportation and Climate Initiative <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative> (Feb. 25, 2011).

Georgetown Climate Center.⁴³⁰⁸ A nearly \$1 million Electric Vehicle Readiness Grant from the U.S. Department of Energy was awarded to the New York State Energy Research and Development Authority (NYSERDA) on behalf of the TCI in September 2010 to fund the network's efforts to deploy electric vehicles throughout the Northeast.⁴³⁰⁹

Also in October 2011, Rhode Island was named the fifth most energy-efficient state in the nation for 2011, tied alongside Washington and Vermont, as part of the State Energy Efficiency Scorecard published by the American Council for an Energy Efficient Economy.⁴³¹⁰

The Department of Environmental Management (DEM) announced in November 2011 that Fishermen's Memorial State Park and Campground completed construction of a new wind turbine providing half of the campground's annual energy needs.⁴³¹¹ DEM would also provide a green energy dashboard so that park visitors could track electricity produced by the turbine, and the corresponding carbon fuels avoided.⁴³¹²

In December 2011, Rhode Island Office of Energy Resources awarded the Department of Environmental Management (DEM) \$1.5 million in federal stimulus funds to install solar panels at DEM facilities throughout the state.⁴³¹³ The project aimed not only to save the state significant energy costs, but also to serve as an educational tool for the public through a web-based dashboard reporting system allowing interested users to follow the amount of solar electricity produced at two facilities.⁴³¹⁴ Solar panels of varying specifications would be installed at Scarborough State Beach in Narragansett; Fishermen's Memorial State Park and Campground in Narragansett; Misquamicut State Beach in Westerly; Burlingame State Park in Charlestown; Lafayette Fish Hatchery in North Kingstown; Dawley State Park in Exeter; Prudence Island Research Reserve; the Urban Edge Farm in Providence; and East Matianuck State Beach in South Kingstown.⁴³¹⁵

The Rhode Island Statewide Planning Program's Planning Challenge Grant Program awarded nearly \$1 million to fifteen state projects in February 2012 for regional

⁴³⁰⁸ *Id.*

⁴³⁰⁹ Press Release, Northeast States Form Regional Electric Vehicle Network (Oct. 17, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

⁴³¹⁰ Press Release, Massachusetts Overtakes California as #1 Energy Efficiency State, Michigan and Illinois Among the Most Improved (Oct. 20, 2011), <http://www.aceee.org/press/2011/10/aceee-massachusetts-overtakes-califo>.

⁴³¹¹ Press Release, R.I. Dep't of Env'tl. Mgmt., DEM Hosts Ribbon-Cutting Ceremony for New Wind Turbine at Fishermen's Memorial State Park and Campground (Nov. 14, 2011), <http://www.dem.ri.gov/news/2011/pr/1114111.htm>.

⁴³¹² *Id.*

⁴³¹³ Press Release, R.I. Dep't of Env'tl. Mgmt., DEM Awarded \$1.5M in Federal Stimulus Funds for Solar Projects (Dec. 8, 2011), <http://www.dem.ri.gov/news/2011/pr/1208111.htm>.

⁴³¹⁴ *Id.*

⁴³¹⁵ *Id.*

and local planning initiatives.⁴³¹⁶ The Coastal Resources Center/Rhode Island Sea Grant program of the University of Rhode Island received \$100,000 to create a comprehensive plan with the Town of Kingston that addresses climate change in relation to transportation and land use.⁴³¹⁷ The project would also list current projects in Rhode Island that address climate change together with transportation and land use issues in order to provide a model for other Rhode Island municipalities.⁴³¹⁸

2012: Renewable Portfolio Standards, Cap-&- Trade, Renewable Energy, American Recovery & Reinvestment Act (ARRA), Energy Efficiency, Climate Change Adaption, and Greenhouse Gas Reduction

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of \$1.93.⁴³¹⁹ The auction generated \$41.6 million in proceeds, which the RGGI participating states would invest in consumer-oriented energy efficiency initiatives.⁴³²⁰

In May 2012, the Department of Environmental Management (DEM) announced the opening of a new energy-efficient bathhouse pavilion at East Matianuck State Park.⁴³²¹ The facility employs a small wind turbine, roof-mounted solar panels, composting toilets, waterless urinals, a solar hot water system, and natural daylight and ventilation, and it is expected that the adaptations will reduce energy costs for the state by \$5,200 annually.⁴³²² State funds, private Clean Air Act settlement funds, National Park Service Land and Water Conservation Funds, and ARRA funds financed construction of the pavilion.⁴³²³

The U.S. Department of Energy announced in June 2012 that Rhode Island, in collaboration with the University of Rhode Island, the Rhode Island Energy Efficiency and Resources Management Council and National Grid, had received \$700,000 in funds to improve energy efficiency in state facilities.⁴³²⁴ The project would inventory all state and municipal facilities and identify energy efficiency and operational enhancement opportunities.⁴³²⁵

⁴³¹⁶ Press Release, Rhode Island Office of the Governor, Governor Lincoln D. Chafee Announces \$1 Million in Funding for Regional and Local Planning Initiatives (Feb. 23, 2012), <http://www.ri.gov/press/view/15958>.

⁴³¹⁷ *Id.*

⁴³¹⁸ *Id.*

⁴³¹⁹ Press Release, RGGI, RGGI Auction Sells 21.5 Million CO2 Allowances (Mar. 16, 2012), http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

⁴³²⁰ *Id.*

⁴³²¹ Press Release, R.I. Dep't of Env'tl. Mgmt., DEM Hosts Ribbon-Cutting for New Energy-Efficient Pavilion at East Matianuck State Park (May 21, 2012), <http://www.dem.ri.gov/news/2012/pr/0521121.htm>.

⁴³²² *Id.*

⁴³²³ *Id.*

⁴³²⁴ Press Release, U.S. Dep't of Energy, Energy Department Announces Building Energy Efficiency Investments in Twenty-Two States (June 27, 2012), <http://energy.gov/articles/energy-department-announces-building-energy-efficiency-investments-twenty-two-states>.

⁴³²⁵ *Id.*

On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.⁴³²⁶ The auction of the 20.9 million allowances generated \$40.4 million in funds, and represented 57% of the allowances offered for sale by all nine participating states.⁴³²⁷

In July 2012, Governor Chafee announced the launch of RIEnergy.org, an online resource for residents, business owners and municipalities in Rhode Island created with the University of Rhode Island through the Renewable Energy Siting Partnership.⁴³²⁸ By centralizing renewable energy information and tools, RIEnergy allows users of all backgrounds to access raw data, to learn about alternative energy programs of interest, or research applicable incentives.⁴³²⁹

In August 2012, the Rhode Island Economic Development Corporation (RIEDC) approved a \$1 million loan guarantee to eNow Inc., which manufactures alternative energy equipment that reduces GHG emissions for trucks, buses and other heavy-duty commercial vehicles.⁴³³⁰ eNow qualified for the Job Creation Guaranty Program loan because it provides wages well beyond the program threshold requirement of 250% of the minimum wage.⁴³³¹ In February 2012, RIEDC had approved a similar \$500,000 Renewable Energy Fund loan to Utilidata, Inc. for the company to relocate from Washington state and expand in Rhode Island.⁴³³² Utilidata manufactures the AdaptiVolt Volt/VAR Optimization System that allows electric utilities to reduce electric demand, increase source reliability and enhance energy efficiency.⁴³³³

On September 7, 2012, RGGI announced the results of its seventeenth quarterly auction for carbon dioxide allowances.⁴³³⁴ The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, which represented 65% of the allowances offered for sale by all nine states.⁴³³⁵

In September 2012, Governor Chafee announced that \$800,000 in competitive grant funds would be available for the study of the effects of climate change on marine

⁴³²⁶ Press Release, RGGI, RGGI Auction Sells 20.9 Million CO2 Allowances (June 8, 2012), http://www.rggi.org/docs/PR060812_Auction16.pdf.

⁴³²⁷ *Id.*

⁴³²⁸ Press Release, Rhode Island Office of the Governor, Governor Chafee Announces Launch of RIEnergy.org-Site to Assist Individuals, Businesses, Municipalities on Energy Issues (July 17, 2012), <http://www.ri.gov/press/view/16964>.

⁴³²⁹ *Id.*

⁴³³⁰ Press Release, R.I. Econ. Dev. Corp., RIEDC Board Approves Financing to Help RI Clean Technology Company Expand and Create New Jobs (Aug. 28, 2012), <http://riedc.com/news/2012/08/e-now>.

⁴³³¹ *Id.*

⁴³³² Press Release, R.I. Econ. Dev. Corp., RIEDC Board Approves Loan to Help Energy Technology Company Relocate to Rhode Island (Feb. 7, 2012), <http://riedc.com/news/2012/02/utilidata-relocation+>.

⁴³³³ *Id.*

⁴³³⁴ Press Release, RGGI, RGGI Auction Sells 24.5 Million CO2 Allowances (Sept. 7, 2012), http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

⁴³³⁵ *Id.*

life.⁴³³⁶ The Rhode Island Science and Technology Advisory Council, in partnership with the National Science Foundation’s Experimental Program to Stimulate Competitive Research (EPSCoR), sought projects attempting to answer the questions of how climate change affects the stress responses and evolutionary potentials of marine life; marine cycles; and marine pathogens and parasites.⁴³³⁷

On November 19, 2012, RGGI reported that RGGI-related investments avoided 12 million tons of carbon dioxide emissions from 2009 to 2011.⁴³³⁸ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement and climate change adaptation programs.⁴³³⁹

2013: Renewable Energy, Renewable Portfolio Standards, Greenhouse Gas Reduction, Cap-&-Trade, and Climate Change Adaptation

On January 1, 2013, the Rhode Island Economic Development Corporation (RIEDC) promulgated rules and regulations for the Renewable Energy Development Fund programs for small-scale solar projects, commercial development of renewable energy, and pre-development feasibility studies.⁴³⁴⁰ The project was funded by utility customers’ “system benefit charge” and Alternative Compliance Payments made by utilities or large energy consumers when they failed to purchase renewable energy credits under the state’s Renewable Energy Portfolio Standard.⁴³⁴¹ RIEDC accepted applications throughout 2013, awarding funds conditionally or outright in its discretion.⁴³⁴²

On January 15, 2013, the Bureau of Ocean Energy Management (BOEM) held a joint public information meeting on Rhode Island – Massachusetts proposed lease sale notice for offshore wind development areas.⁴³⁴³

On February 7, 2013, RGGI announced significant program improvements implemented in the Updated Model Rule after a two-year comprehensive program review.⁴³⁴⁴ Improvements included a reduction of the 2014 regional cap by 45% from

⁴³³⁶ Press Release, R.I. Econ. Dev. Corp., Governor Lincoln Chafee Announces Funding Opportunity for Projects Related to the Impact of Climate Change on Marine Life (Sept. 20, 2012), <http://riedc.com/news/2012/09/stac-competitive-grants-2012>.

⁴³³⁷ *Id.*

⁴³³⁸ Press Release, RGGI, Inc., RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings (Nov. 19, 2012), <http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

⁴³³⁹ *Id.*

⁴³⁴⁰ 20-1 R.I. CODE R. § 10:1.0, 2.0 (2013), <http://www.riedc.com/files/RI-REF-Rules-and-Regulations-2013.pdf>.

⁴³⁴¹ *Id.* at 4.0.

⁴³⁴² *Id.* at 5.0.

⁴³⁴³ Public Information Meeting on Rhode Island-Massachusetts proposed sale notice, Bureau of Ocean Energy Management (Jan. 15, 2013), [http://www.boem.gov/Renewable-Energy-Program/State-Activities/RI/Public-Information-Meeting-on-Rhode-Island-Massachusetts-Proposed-Sale-Notice-\(January-15,-2013\).aspx](http://www.boem.gov/Renewable-Energy-Program/State-Activities/RI/Public-Information-Meeting-on-Rhode-Island-Massachusetts-Proposed-Sale-Notice-(January-15,-2013).aspx).

⁴³⁴⁴ Press Release, RGGI, Inc., RGGI States Propose Lowering Regional CO2 Emissions Cap 45%, Implementing a More Flexible Cost-Control Mechanism (Feb. 7, 2013), http://www.rggi.org/docs/PressReleases/PR130207_ModelRule.pdf.

165 million to 91 million tons and a cap further declining by 2.5% each year from 2015 to 2020; additional adjustments to the cap from 2014 to 2020 in order to account for privately banked allowances, deemed “old” allowances starting in 2014; the creation of a cost containment reserve of allowances accessed only when the price of allowances in a given year exceeds a predetermined level; updates to the offsets program, including a protocol for forestry offsets; the decision not to reoffer unsold allowances from 2012 and 2013; the requirement that regulated entities obtain allowances for at least 50% of their emissions in each of the first two years of the three year compliance period; and developing tools to track electricity imported into participating states from non-participating states in order to address those emissions.⁴³⁴⁵ Each RGGI state would implement these measures in their respective statutory regimes.⁴³⁴⁶

On April 16, 2013, an independent market monitor of RGGI confirmed that there continues to be no material concerns regarding the auction process or the competitiveness of the secondary market for RGGI allowances.⁴³⁴⁷ During 2012, the average auction clearing price was \$1.93 for carbon dioxide allowances.⁴³⁴⁸

On June 4, 2013, the Bureau of Ocean Energy Management (BOEM) issued a revised environmental assessment (EA) for the wind energy area (WEA) offshore of Rhode Island and Massachusetts.⁴³⁴⁹ The EA indicated a finding of no significant impact (FONSI), concluding that wind lease issuance and related activities in the WEA would not significantly impact the environment.⁴³⁵⁰

In July of 2013, Governor Chafee signed into law the Residential Property Assessed Clean Energy Program (PACE).⁴³⁵¹ The PACE program is designed to help qualified homeowners to invest in energy efficiency and renewable energy improvements to property.⁴³⁵² The PACE program addresses one of the major impediments to homeowner investment in renewable energy and energy efficiency installations, which is the access to capital funds to purchase and install the equipment needed.⁴³⁵³ The program functions through a special assessment on program assisted properties, the payment of which coincides with the payment of property taxes.⁴³⁵⁴

⁴³⁴⁵ *Id.*

⁴³⁴⁶ *Id.*

⁴³⁴⁷ Press Release, RGGI, Inc., 2012 Annual Market Monitor Report: In Fifth Year, RGGI CO2 Allowance Market Remains Competitive (Apr. 16, 2013), http://www.rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

⁴³⁴⁸ *Id.*

⁴³⁴⁹ Commercial Wind Lease for the Wind Energy Area Offshore Rhode Island and Massachusetts, Bureau of Ocean Energy Management (2013), <http://www.boem.gov/Commercial-Wind-Lease-Rhode-Island-and-Massachusetts/>.

⁴³⁵⁰ *Id.*

⁴³⁵¹ Rhode Island Residential Property Assessed Clean Energy Program, State of Rhode Island Office of Energy Resources (July 2013), <http://www.energy.ri.gov/renewable/>.

⁴³⁵² *Id.*

⁴³⁵³ *Id.*

⁴³⁵⁴ *Id.*

2014: Renewable Energy and Climate Change Adaptation

The Rhode Island Ocean Special Area Management Plan (SAMP) is a comprehensive management strategy that the state is implementing with the goal of establishing an ecosystem approach in developing public policy for Rhode Island's offshore waters.⁴³⁵⁵ Individual SAMPs have been established for a variety of distinct areas in Rhode Island in a collaborative effort of the state Coastal Resource Management Council, University of Rhode Island Coastal Resources Center, Rhode Island Sea Grant as well as local communities and stakeholders.⁴³⁵⁶ Through SAMP programs, researchers are performing analysis of meteorological and seabed data as well as wind resources, wave, and storm characteristics in order to assess the areas of proposed offshore wind development off of Block Island.⁴³⁵⁷

The Block Island 30 megawatt offshore wind development project is currently under review from state and federal agencies and is anticipated to start construction in 2014 with an anticipated completion date of sometime in 2015.⁴³⁵⁸

SOUTH CAROLINA

2001: Energy Efficiency and Transportation/Fuels

The South Carolina Energy Office developed Rebuild South Carolina Partnerships (RBSC) to help bring energy efficiency to public agencies, school districts, businesses, and industry in the state.⁴³⁵⁹ The program offers energy efficiency assistance including energy use audits, project coordination, and energy consumption monitoring.⁴³⁶⁰ Further, a sales tax incentive in South Carolina caps the maximum tax on the sale of a manufactured home at \$300 if it meets certain energy efficiency requirements.⁴³⁶¹

Via a 2001 Executive Order, Governor Jim Hodges required that, whenever practical and economically feasible, all state agencies operating alternative fuel vehicles

⁴³⁵⁵ Rhode Island Ocean Special Area Management Plan, Rhode Island Coastal Resources Management Council (2014), <http://seagrant.gso.uri.edu/oceansamp/research.html>.

⁴³⁵⁶ *Id.*

⁴³⁵⁷ *Id.*

⁴³⁵⁸ Commercial Wind Lease for the Wind Energy Area Offshore Rhode Island and Massachusetts, Bureau of Ocean Energy Management (2013), <http://www.boem.gov/Commercial-Wind-Lease-Rhode-Island-and-Massachusetts/>.

⁴³⁵⁹ South Carolina Energy Office, Strategic Action Plan http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CDAQFjAB&url=http%3A%2F%2Fwww.scstatehouse.gov%2Farchives%2Faar2000%2Ffl1.doc&ei=4MMxU63gMYi3kAf7mYFA&usg=AFQjCNGD47-99vAOU_FoxLwwAKTT1HqUfg&sig2=-XBkqf6Az0uClXw3JMgBWg&bvm=bv.63587204,d.eW0.

⁴³⁶⁰ *Id.*

⁴³⁶¹ S.C. CODE ANN § 12-36-2110 (2005).

must use alternative fuels in those vehicles, while private businesses are encouraged to increase the use of alternative fuels in the state.⁴³⁶²

2006: Transportation/Fuels

In June 2006, Governor Mark Sanford signed House 4312, creating a state tax credit for individuals purchasing clean vehicles equal to 20% of the federal tax credit for these vehicles.⁴³⁶³ The state also enacted production tax credits for ethanol and biodiesel, and tax credits for solar heating and cooling equipment and landfill gas systems.⁴³⁶⁴

2007: Climate Change Adaptation and Greenhouse Gas Reduction

In February 2007, Governor Sanford issued an executive order that named nine members to his Governor's Climate, Energy and Commerce Advisory Committee, charged with assessing the future impacts of climate change in the state and devising strategies to reduce such impacts. The committee's goals included reviewing the ecological and economic impacts of climate change; creating ways to improve renewable energy use; generating recommendations for energy conservation; reviewing new energy efficiency technology compiling an emissions source list; and assessing the economic feasibility and benefits of any recommendations.

In May 2007, South Carolina and thirty other states founded The Climate Registry to "measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors." This was viewed as a "critical first step in developing robust programs to reduce greenhouse gas emissions."⁴³⁶⁵

2008: Greenhouse Gas Reduction

In August 2008, the Climate, Energy and Commerce Advisory Committee released its final report.⁴³⁶⁶ The report set a voluntary greenhouse gas reduction goal of 5% below 1990 levels by 2020. It contained 51 different recommendations for achieving this goal. Thirty-eight of the recommendations were analyzed for their potential cumulative effects on the environment and 33 were analyzed for their cost-effectiveness. The Commission estimated that the 38 recommendations would "come very close" to achieving the 5% reduction goal and that 33 had an estimated cost-effectiveness of \$5 per ton of reduced carbon dioxide.⁴³⁶⁷

⁴³⁶² S.C. Exec. Order No. 2001-35 (2001).

⁴³⁶³ 2006 S.C. Acts 312.

⁴³⁶⁴ 2006 S.C. Acts 386.

⁴³⁶⁵ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions, http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf

⁴³⁶⁶ South Carolina Climate, Energy, and Commerce Committee, Final Report (2008): <http://www.fws.gov/southeast/climate/policy/ClimateSCClimateActionPlan082008.pdf> (March 2014).

⁴³⁶⁷ *Id.* at EX-2.

In an effort to reduce carbon emissions, Governor Sanford voiced his opposition to a proposal to construct a coal power plant in South Carolina.⁴³⁶⁸ He cited the costs of construction, questions of the need for more energy, and the negative impact that the plant would have on the environment as reasons for his opposition.

2009: American Recovery & Reinvestment Act (ARRA), Greenhouse Gas Reduction, and Renewable Energy

In March 2009, the U.S. Department of Energy announced that South Carolina was eligible for \$50,550,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).⁴³⁶⁹

In August 2009, Governor Sanford applauded Santee-Cooper's decision to halt its plans to construct a coal-fired power plant, citing environmental costs as one of the reasons for his support.⁴³⁷⁰ He then announced that KEMET would expand its facilities in the state to produce capacitors for electric vehicles and alternative energy markets.⁴³⁷¹

2010: Energy Efficiency and Transportation/Fuels

In March 2010, Governor Sanford signed legislation into law aimed at increasing the energy efficiency of homes in South Carolina.⁴³⁷² The bill, S.1096, allowed energy companies to contract with homeowners who want to install efficiency upgrades to their homes and these upgrades allow homeowners to repay over time through their energy bill.⁴³⁷³

In November 2010, the South Carolina Energy Office (SCEO) announced that local governments throughout the state would install eighty electric vehicle charging stations in public spaces to coincide with the release of the Chevrolet Volt and Nissan Leaf. The projects were coordinated by Plug-In Carolina with two grants from the SCEO amounting to \$480,000 and with support from utility companies. All of the charging stations were expected to be operational by January 2011.⁴³⁷⁴

⁴³⁶⁸ Press Release, Governor Sanford Announces Opposition to Coal-Fired Plant (Feb. 11, 2009), <https://votesmart.org/public-statement/408073/governor-sanford-announces-opposition-to-coal-fired-plant#.UzJFz6V5IUQ>

⁴³⁶⁹ U.S. Dep't of Energy, Nat'l Energy Tech. Lab., State Energy Program Formula Grants, at 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁴³⁷⁰ Press Release, Gov. Sanford issues Statement on Decision to Suspend plans for Coal-Fired Plant (Aug. 24, 2009), <https://votesmart.org/public-statement/451445/gov-sanford-issues-statement-on-decision-to-suspend-plans-for-coal-fired-plant#.UzJGB6V5IUQ>

⁴³⁷¹ Press Release, KEMET to Expand Greenville County Operations and Create 113 New Jobs (Oct. 26, 2009), <http://sccommerce.com/news/press-releases/kemet-expand-greenville-county-operations-and-create-113-new-jobs>

⁴³⁷² Press Release, Gov. Sanford Signs Energy Efficiency Legislation (Mar. 31, 2010), <http://sc.statehouseblogs.com/2010/03/31/press-release-gov-sanford-signs-energy-efficiency-legislation/>

⁴³⁷³ S.C. CODE ANN § 58-37-50 (1976)

⁴³⁷⁴ Press Release, Local Governments Installing Car Chargers (Nov. 22, 2011), <http://www.energy.sc.gov/news.aspx?id=286>.

2011: Renewable Energy and Transportation/Fuels

In April 2011, South Carolina's largest solar station was dedicated at Myrtle Beach. The station, which cost \$1.3 million and included 1,300 photovoltaic panels, was expected to produce 311 kilowatts of energy at full capacity.⁴³⁷⁵

In May 2011 Governor Nikki Haley announced Southeast Renewable Energy would build a 15-megawatt, \$50 million biomass plant in Dorchester County, which would generate twenty jobs over the next five years.⁴³⁷⁶ The company entered into an agreement with the county to use its virgin wood residue in the plant, including tree limbs and woody right-of-way clearings. The plant was expected to be completed in 2012.⁴³⁷⁷

In November 2011, the South Carolina Department of Revenue issued a private revenue ruling that extended the use of the biomass energy tax credit to individuals when a limited liability company earned the credit and passed it through to an "S" corporation that in turn passed the credit through to its individual shareholders at a value of up to \$650,000 per tax year.⁴³⁷⁸

In October 2011, the South Carolina Energy Office announced that eight new electric vehicle charging stations would be installed in Charleston by Plug-In Carolina, a non-profit organization that has already installed a number of charging stations in other South Carolina cities in partnership with S.C. Electric and Gas Co. and the South Carolina Energy Office. At the time, South Carolina had 67 electric vehicle charging stations.⁴³⁷⁹

2012: Transportation/Fuels and Energy Efficiency

In May of 2012, the state legislature passes the Plug-in Hybrid Vehicles Tax Credit. The bill, "revises the definition of plug-in hybrid vehicle and provides that they must be manufactured primarily for use on public streets, roads, highways, and not be classified as low or medium speed vehicles, raises the aggregate amount of the credit available each fiscal year and delete its expiration date, provides that the credit must be allocated to eligible claimants during a fiscal year on a first-come, first-serve basis."⁴³⁸⁰

⁴³⁷⁵ Press Release, SC's Largest Solar Station Dedicated Under Sunny Skies (Apr. 18, 2011), <http://www.wmbfnews.com/story/14468626/grand-strand-solar-station-dedicated-in-myrtle-beach>

⁴³⁷⁶ Press Release, Southeast Renewable Energy Announces New Facility in Dorchester County (May 5, 2011), <http://scommerce.com/news/press-releases/southeast-renewable-energy-announces-new-facility-dorchester-county>

⁴³⁷⁷ *Id.* The plant was later sold to a different energy company and was expected to be operational in 2013. See <http://biomassmagazine.com/articles/6357/southeast-renewable-energy-sells-s-c-biomass-plants>.

⁴³⁷⁸ S.C. Private Letter Rul. 11-6, 5-6, 2011, <http://www.sctax.org/NR/rdonlyres/A55E3741-9986-4EBE-A37D-C7CE09B6E665/0/PLR116San.pdf>.

⁴³⁷⁹ Press Release, Car-Charging Stations Unveiled (Jul. 26, 2011), <http://www.prlog.org/11598964-electric-vehicle-charging-station-installed-at-sctac.html>

⁴³⁸⁰ S.C. CODE ANN 12-6-3376 (2012).

In July 2012, the ConserFund of the South Carolina Energy Office awarded the City of Mauldin a loan to allow the municipality to perform several energy-efficiency upgrades to city facilities.⁴³⁸¹ By installing energy-efficient lighting and windows, occupancy sensors, and spray-foam insulation, the city hopes to earn \$54,022 in energy savings annually.⁴³⁸²

A 2012 review of South Carolina's "Help My House" program, which provides on bill financing for energy efficiency improvements, found that the 125 participating households are projected to save an average of \$400 per year and could reduce energy use by 35%.⁴³⁸³

2013: Transportation/Fuels

In March 2013, the South Carolina Budget and Control Board of the state's Department of Energy hosted a South Carolina Electric Vehicle Awareness Day. The event was intended to "highlight different types of electric vehicles currently available to cater to differing driver styles and needs."⁴³⁸⁴

2014: Energy Efficiency

In January 2014, the state legislature passed the Green Apple Day initiative.⁴³⁸⁵ This recognizes the last Saturday of September each year as Green Apple Day of service in South Carolina. "Green Apple is an initiative of the Center for Green schools at USGBC to put all children in schools where they have clean and healthy air to breath, where energy and resources are conserved."⁴³⁸⁶

SOUTH DAKOTA

Note on Renewable Energy and Transportation/Fuels

South Dakota boasts a number of production and consumption incentives for ethanol, wind and other alternative energy sources. Both ethanol and methanol enjoy protected excise tax status (\$.08 per gallon, compared to the \$.22 rate for other motor

⁴³⁸¹ Press Release, S.C. Energy Office, Mauldin plans energy-saving upgrades (July 29, 2012), <http://www.energy.sc.gov/news.aspx?id=327>.

⁴³⁸² *Id.*

⁴³⁸³ *Innovative Financing Program Helps South Carolina Homeowners Save Money Through Energy Efficiency Retrofits*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2012/innovative-financing-program-helps-south-carolina-homeowners-save-money-> (Apr. 29, 2013).

⁴³⁸⁴ South Carolina Energy Office, <http://www.energy.sc.gov/news?id=840> (Mar. 24, 2014).

⁴³⁸⁵ S.C. Code Ann. § 120-975 (2014).

⁴³⁸⁶ South Carolina Chapter of the U.S. Green Building Council, <http://www.usgbcsc.org/site/?p=3621> (Mar. 24, 2014).

fuels).⁴³⁸⁷ Ethanol producers receive an outright \$.20 per gallon production incentive for fuel that is fully produced, distilled, and blended in South Dakota.⁴³⁸⁸

Commercial and residential property owners are eligible for property tax exemptions, based on the installation of solar/photovoltaic, wind, biomass, geothermal, ethanol, and landfill gas-based energy systems.⁴³⁸⁹ Renewable energy facilities with less than 5 mW capacity are exempt from the first \$50,000 or 70% of the assessed value for property taxes.⁴³⁹⁰ Residential users receive a 100% tax exemption for the entire assessed cost of systems for up to three years after installation; commercial users, a 50% tax exemption on the installed cost for up to three years. (The exemption does not apply to producers of energy for sale.)⁴³⁹¹

2008: Renewable Energy and Green Building

Governor Mike Rounds signed H.B. 1320 in March 2008, providing tax incentives for wind energy facilities and transmission lines.⁴³⁹² The law waives all state and local property taxes for wind energy facilities having a minimum capacity of 5 megawatts. Instead of paying property taxes, facility owners pay a tax of \$3 per kilowatt of capacity and 2% of the facility's gross receipts. Additionally, wind facility developers can earn rebates for up to 50% of the costs of installing transmission lines, underground lines, and substations.

South Dakota passed legislation in 2008 that requires all new state buildings to meet a high-performance green building standard.⁴³⁹³ This standard applies to all state buildings with costs exceeding \$500,000 or that exceed 5,000 square feet.⁴³⁹⁴

2009: American Recovery & Reinvestment Act (ARRA), Green Jobs, and Climate Change Agreements

On March 12, 2009, the U.S. Department of Energy announced that South Dakota was eligible for \$23,709,000 under the State Energy Program of the American Recovery

⁴³⁸⁷ S.D. CODIFIED LAW §§ 10-47B-4 (2013).

⁴³⁸⁸ *Id.* § 10-47B-162. Incentive payments to any one facility are capped at \$1,000,000 annually and \$9,682,000 cumulatively. *Id.* In order to be eligible for the incentives, facilities must begin producing qualifying ethyl alcohol by the end of the 2006 calendar year. *Id.*

⁴³⁸⁹ *Id.* §§ 10-6-35.8 -- 10-35.20.

⁴³⁹⁰ *Id.* § 10-4-44. However, geothermal facilities that produce energy, but not electricity are only exempt for the first three continuous years of operation (for commercial facilities) or first four continuous years (for residential facilities). *Id.*

⁴³⁹¹ *Id.*

⁴³⁹² H.B. 1320, 83rd Leg. Assem., Reg. Sess. (S.D. 2008) (codified at S.D. CODIFIED LAW §§ 10-35-17 – 10-35-22 (2013)).

⁴³⁹³ S.D. CODIFIED LAW § 5-14-32 (2013).

⁴³⁹⁴ *Id.*

& Reinvestment Act (ARRA) of which some was used for a rebate program for ENERGY STAR® appliances.⁴³⁹⁵

According to the Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for South Dakota, the state's clean energy economy grew by 1,636 jobs and 169 businesses from 1998 to 2007.⁴³⁹⁶

In October 2009, the Midwestern Governors Association, in which South Dakota participates, issued the Midwestern Energy Infrastructure Accord, which included "agreements by Midwestern governors to expand transmission capacity, adopt smart grid technologies, build new pipelines for biofuels and for the capture and storage of carbon dioxide, and deploy a refueling system for biofuels and other low-carbon transportation fuels."⁴³⁹⁷ The report set renewable energy goals at 10% by 2015 and 30% by 2030.⁴³⁹⁸

2010: American Recovery & Reinvestment Act (ARRA), Energy Efficiency, Greenhouse Gas Reduction, Green Jobs, Renewable Energy, and Transportation/Fuels

In March 2010, South Dakota began an energy efficiency rebate program aimed at encouraging replacement of old appliances with new ENERGY STAR® appliances.⁴³⁹⁹ ARRA funding in the amount of \$772,000 supported the program.⁴⁴⁰⁰ South Dakotans took advantage of the program, and by April 2010 less than 20% of the rebate funding remained.⁴⁴⁰¹

South Dakota filed a Motion to Intervene on March 19, 2010, in a lawsuit filed in D.C. Circuit Court against the U.S. EPA for its proposed regulation of greenhouse gases.⁴⁴⁰² South Dakota's Motion to Intervene was granted, but Coalition for Responsible Regulators, Inc. v. EPA was dismissed in and part denied in part by the D.C. Circuit in 2012 and the court found the EPA's decision was not arbitrary and capricious, the agency was required to extend permitting to major emitters, and that petitioners

⁴³⁹⁵ U.S. Dep't of Energy, Nat'l Energy Tech. Lab., State Energy Program Formula Grants, at 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf (see below for information on the ENERGY STAR® rebate program).

⁴³⁹⁶ Pew Charitable Trust, Clean Energy Economy South Dakota Fact Sheet, *available at* http://www.pewcenteronthestates.org/uploadedFiles/wwwpewcenteronthestatesorg/Fact_Sheets/Clean_Economy_Factsheet_SouthDakota.pdf.

⁴³⁹⁷ Press Release, Midwestern Governors Ass'n, MGA Jobs and Energy Forum Wraps Up; Releases Jobs Platform and Energy Infrastructure Accord (Oct. 9, 2009), <http://www.midwesterngovernors.org/Release/forum.pdf>.

⁴³⁹⁸ *Id.*

⁴³⁹⁹ Press Release, S.D. Official State Gov't, Energy Efficient Appliance Rebate Program Starts March 1 (Dec. 14, 2009), <http://news.sd.gov/newsitem.aspx?id=9138>.

⁴⁴⁰⁰ *Id.*

⁴⁴⁰¹ Press Release, S.D. Official State Gov't, Less Than 20 Percent Remains of Energy Efficient Appliance Rebate Funds (Apr. 5, 2010), <http://news.sd.gov/newsitem.aspx?id=9141>.

⁴⁴⁰² Press Release, S.D. Official State Gov't, State Files Motion to Intervene Lawsuit against the Environmental Protection Agency (Mar. 19, 2010), <http://news.sd.gov/newsitem.aspx?id=11716>.

lacked standing.⁴⁴⁰³ In October 2013, the U.S. Supreme Court agreed to review the EPA's authority to regulate greenhouse gas emissions.⁴⁴⁰⁴

In May 2010, the South Dakota Department of Labor announced awards totaling \$2.5 million for green jobs training programs across the state, which would support the expansion of green business and industry.⁴⁴⁰⁵

Governor Rounds announced a \$1 million grant for blender-pump installations at fueling stations in June 2010.⁴⁴⁰⁶ These pumps allow customers to select a variety of gasoline/ethanol blends.⁴⁴⁰⁷ The state anticipated the installation of an additional one hundred pumps, making South Dakota the leader in blender pumps.⁴⁴⁰⁸ This infrastructure would support the state's corn-based ethanol industry and facilitate the Environmental Protection Agency's new E15 standard.

2011: Green Building, Renewable Portfolio Standards, and Energy Efficiency

On March 20, 2011, Governor Dennis Daugaard signed S.B. 94, adopting the International Energy Conservation Code of 2009 as the voluntary standard applying to the construction of new residential buildings.⁴⁴⁰⁹ The code recommended insulation specifications for dwellings based on eight unique climate zones.⁴⁴¹⁰

In December 2011, the State Public Utilities Commission adopted final rules for renewable energy credits, and renewable, recycled and conserved energy as a part of the South Dakota's Renewable Portfolio Standard.⁴⁴¹¹ The renewable, recycles and conserved energy provisions only apply to retail providers who use conserved energy sources.⁴⁴¹² The amount of conserved energy shall be measured and validated using an energy efficiency impact evaluation in an annual report.⁴⁴¹³ A retail provider of electricity may estimate value by using the deemed savings approach if projects utilize simple energy efficiency measures with "documented per-measure values."⁴⁴¹⁴ The rules

⁴⁴⁰³ Coalition for Responsible Reg., Inc. v. EPA, 684 F.3d 102, 113 (D.C. Cir. 2012).

⁴⁴⁰⁴ Press Release, S.D. Attorney General's Office, United States Supreme Court to hear State Attorneys General Challenge of EPA's Authority to Regulate Greenhouse Gas Emissions (Oct. 16, 2013), <http://news.sd.gov/newsitem.aspx?id=11716>.

⁴⁴⁰⁵ Press Release, Office of Governor Dennis Daugaard, Labor Department receives \$2.5 million green jobs training grant (Jan. 27, 2010), <http://news.sd.gov/newsitem.aspx?id=5240>.

⁴⁴⁰⁶ Press Release, Office of Governor Dennis Daugaard, South Dakota to Lead Nation in Ethanol Blender Pump Locations (June 16, 2010), <http://news.sd.gov/newsitem.aspx?id=10840>.

⁴⁴⁰⁷ *Id.*

⁴⁴⁰⁸ *Id.*

⁴⁴⁰⁹ Press Release, Office of Governor Dennis Daugaard, Gov. Daugaard Signs Several Bills (Mar. 14, 2011), <http://www.sd.gov/governor/docs/News%20Release-Bills%20Signed%20March%202014.pdf>.

⁴⁴¹⁰ Overview of the 2009 IECC, THE RESPONSIBLE ENERGY CODES ALLIANCE, <http://reca-codes.org/iecc-2009.php> (last visited Mar. 15, 2014).

⁴⁴¹¹ S.D. ADMIN. R. 20:10:38 (2011), <http://puc.sd.gov/commission/dockets/rulemaking/2011/RM11-001/finalrules.pdf>.

⁴⁴¹² *Id.* § 20:10:38:02.

⁴⁴¹³ *Id.* § 20:10:38:03.

⁴⁴¹⁴ *Id.* § 20:10:38:04.

also provide for the procedure for retiring renewable energy credits.⁴⁴¹⁵

In December 2011, the City of Madison received \$5,000 from Heartland Consumers Power District, a public corporation and political subdivision of South Dakota, to perform energy-efficient lighting upgrades at municipal maintenance facilities and the city power plant.⁴⁴¹⁶ The projects sought to reduce municipal energy consumption by over 18,000 kilowatt hours per year, resulting in over \$1,500 in annual savings.

2012: Energy Efficiency and Transportation/Fuels

In August 2012, the South Dakota Bureau of Administration awarded the first loan of a program for school energy efficiency projects administered through the State Energy Office.⁴⁴¹⁷ Madison Central School District claimed the \$2.2 million loan and planned to install a geothermal heating and cooling system, upgrades to windows, lighting and insulation, and a digital system to enhance energy efficiency within the district's high school.⁴⁴¹⁸ Loan awards through the program are based on energy savings achieved, and recipients must repay loans within ten years.⁴⁴¹⁹

In September 2012, the City of Sioux Falls announced the launch of its Furnace Replacement Program to provide no-interest loans to help eligible households replace inefficient furnaces with furnaces of at least 95% annual fuel utilization efficiency and the installation of a digital thermostat for up to a total cost of \$3,000.⁴⁴²⁰

The South Dakota Department of Environment and Natural Resources announced in November 2012 the fifth round of the EPA Clean Diesel Grant Program that provides partial funding for school bus replacement and full funding for installing retrofits on mid-age school buses.⁴⁴²¹ From 2009 through 2012, the program helped South Dakota school districts replace 62 buses and install 145 exhaust retrofits, and has reduced the amount of fine particulates and smog-forming pollution emitted around schoolchildren.⁴⁴²²

The Heartland Consumers Power District awarded a \$2,000 energy efficiency grant to the City of Volga to install LED lighting and high-pressure sodium wall packs at the city pool and park.⁴⁴²³ In November 2012, Heartland awarded Power Forward energy

⁴⁴¹⁵ *Id.* § 20:10:38:07.

⁴⁴¹⁶ Press Release, S.D. Energy Smart, Madison receives energy efficiency grant from Heartland Consumers Power District (Dec. 2011), <http://www.sdenergysmart.com/news/201112heartland.aspx>.

⁴⁴¹⁷ Press Release, Office of Governor Dennis Daugaard, New State Energy Program Awards First School Loan (Aug. 14, 2012), <http://news.sd.gov/newsitem.aspx?id=13410>.

⁴⁴¹⁸ *Id.*

⁴⁴¹⁹ *Id.*

⁴⁴²⁰ *Furnace Replacement Program*, CITY OF SIOUX FALLS, S.D., <http://www.sioxford.org/community-development/affordable-housing/furnace-replace-prog.aspx> (last visited Apr. 3, 2013).

⁴⁴²¹ Press Release, S.D. Dep't of Env't and Nat. Res., School Districts Eligible for EPA Clean Diesel Grant Funds (Nov. 1, 2012), <http://denr.sd.gov/dfta/info/pr/pr12/nov12.aspx#School>.

⁴⁴²² *See id.*

⁴⁴²³ Press Release, S.D. Energy Smart, Volga earns energy efficiency grant from Heartland Consumers Power District (July 2012), <http://www.sdenergysmart.com/news/20120712heartland.aspx>.

efficiency grants to the City of Madison and the City of Tyndall for lighting upgrades at the city airport, the fire station, and the community auditorium, respectively.⁴⁴²⁴

2013: Energy Efficiency and Renewable Energy

Heartland also awarded a \$2,000 economic development grant to the City of Arlington in January 2013 for the purchase and installation of an automated meter reading system that allows utilities to see real-time energy consumption data without making individual trips to consumers' meters.⁴⁴²⁵ Real-time information helps consumers to better position to manage their energy consumption.⁴⁴²⁶

Legislation was passed to allow for reinvestment payment of all sales and use taxes for projects for manufacturing facilities that produce renewable energy equipment or that expand renewable energy systems or equipment upgrades to existing systems.⁴⁴²⁷ To be eligible, the projects to create new or expand existing facilities must cost over \$20 million or equipment upgrades must exceed \$2 million.⁴⁴²⁸

2014: Green Building, Renewable Energy, and Transportation/Fuels

Governor Dugaard emphasized the need for energy efficiency in homes in the Governor's House Program, where prisoners build homes for low-income families.⁴⁴²⁹ This request resulted in the incorporation of some Passive House standards into the program.⁴⁴³⁰

To support the \$3.8 billion dollar ethanol industry in South Dakota, Governor Dugaard announced on March 6, 2014 that the state will begin using E15 in its vehicle fleet.⁴⁴³¹ For a test period, the initiative will begin with making the fuel blend available at four major fuel sites across the state.⁴⁴³² The Governor's Office of Economic Development and South Dakota Ethanol Producers also offer funding for retail fueling stations that wish to install ethanol blender pumps.⁴⁴³³ For 2014, \$500,000 is available for the third round of funding for the program.⁴⁴³⁴

⁴⁴²⁴ Press Release, S.D. Energy Smart, Heartland Consumers Power District awards city of Madison with energy efficiency grant (Nov. 2012), <http://www.sdenergysmart.com/news/2012120412.aspx>.

⁴⁴²⁵ Press Release, S.D. Energy Smart, Heartland Consumers Power District awards grant to city of Arlington (Jan. 2013), <http://www.sdenergysmart.com/news/20130125.aspx>.

⁴⁴²⁶ *Id.*

⁴⁴²⁷ S.B. 235, 88th Leg. Assem., Reg. Sess. (S.D. 2013).

⁴⁴²⁸ *Id.*

⁴⁴²⁹ Dennis Dugaard, *Building More Efficient Governor's Houses*, OFFICE OF GOVERNOR DENNIS DAUGAARD (Feb. 28, 2014), <http://news.sd.gov/newsitem.aspx?id=15787>.

⁴⁴³⁰ *Id.*

⁴⁴³¹ Press Release, Office of Governor Dennis Dugaard, State Of South Dakota To Incorporate E15 Into State Fleet, Fuel Sites (Mar. 6, 2014), <http://news.sd.gov/newsitem.aspx?id=15810>.

⁴⁴³² *Id.*

⁴⁴³³ Press Release, S.D. Official State Gov't, Funds Available for Blender Pump Installation (July 2, 2013), <http://news.sd.gov/newsitem.aspx?id=14849>.

⁴⁴³⁴ *Id.*

TENNESSEE

1999: Climate Change Adaptation, Climate Change Agreements, and Renewable Portfolio Standards

The Energy Division of the Tennessee Department of Economic and Community Development completed a climate change action plan for the state in April 1999.⁴⁴³⁵

2000: Greenhouse Gas Reduction, Market-Based Solutions and Renewable Energy

In recognition of the threat of global warming, the Biobased Products for Farmers and Rural Development Act of 2000 authorized Tennessee's Commissioner of Agriculture to promulgate rules promoting the development of biobased products.⁴⁴³⁶

2003: Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, and Renewable Energy

In order to reduce greenhouse gas emissions, Tennessee has offered a property tax exemption of two-thirds the installation cost for wind energy generators operated by public utilities since 2003.⁴⁴³⁷

2008: Energy Efficiency, Green Jobs, Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, Renewable Energy, Renewable Portfolio Standards, and Transportation/Fuels

In 2008, Governor Phil Bredesen issued an executive order creating an Energy Policy Task Force.⁴⁴³⁸ He charged the Task Force with creating an energy plan to make the state a national leader in energy efficiency and conservation, alternative and renewable energy resource use, and clean-energy technology development.⁴⁴³⁹ In further support of this initiative, in July 2008, Bredesen announced that the State of Tennessee was embarking on a partnership with Nissan to introduce zero-emission vehicles in the state in 2010.⁴⁴⁴⁰ Later that month, he announced a partnership between the University of Tennessee and DuPont to build a biorefinery and research and development facility for cellulosic ethanol in the state.⁴⁴⁴¹ The General Assembly allocated \$40 million to this

⁴⁴³⁵ Tenn. Dep't of Econ. & Cmty Dev. Energy Div., http://www.state.tn.us/ecd/energy_init.htm (Sept. 7, 2006).

⁴⁴³⁶ TENN. CODE ANN. §§ 43-37-101 to -105 (2005).

⁴⁴³⁷ *Id.* § 67-5-601.

⁴⁴³⁸ Tenn. Exec. Order 54 (2008),

<http://www.tennesseeanytime.org/governor/AdminCMSServlet?action=viewFile&id=1201>.

⁴⁴³⁹ *Id.*

⁴⁴⁴⁰ Press Release, Tennessee Forms Alliance with Nissan To Move Towards Zero-Emission Vehicles (July 22, 2008), <http://www.tennesseeanytime.org/governor/viewArticleContent.do?id=1246&page=1>.

⁴⁴⁴¹ Press Release, Bredesen Welcomes DuPont As New Partner In Tennessee's Clean Energy Technology Initiative (July 23, 2008), <http://www.tennesseeanytime.org/governor/viewArticleContent.do?id=1247&page=1>.

project.⁴⁴⁴² In December 2008, Hemlock Semiconductor announced that it would open a polycrystalline silicon (a component of solar panels) manufacturing plant in Tennessee.⁴⁴⁴³

2009: Cap-&-Trade, Energy Efficiency, Green Jobs, Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, Renewable Energy, American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

In February 2009, Wacker Chemie AG announced that it would also open a polysilicon manufacturing plant in Tennessee.⁴⁴⁴⁴

Governor Bredesen announced the Tennessee Clean Energy Future Act of 2009 on March 31, 2009.⁴⁴⁴⁵ Later introduced in the legislature as S.B. 2300/H.B. 2318, the bill requires the state government to lead by example by improving the energy management of its buildings and vehicles, encouraging the growth of clean energy businesses via tax credits, and promoting energy efficiency through a statewide residential building code. Around this time, Bredesen also made his support for the solar industry in Tennessee known, proposing a solar research institute at Oak Ridge National Laboratory (ORNL) and the University of Tennessee.⁴⁴⁴⁶ He also invited Nissan, ORNL, and the Tennessee Valley Authority (TVA) to partner with his government in researching the development of solar-powered, electric vehicle power stations in the state.

In May 2009, Governor Bredesen signed an agreement with a coalition of governors to support federal climate change legislation.⁴⁴⁴⁷ The agreement contained two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.⁴⁴⁴⁸ The State Senate, however, in defiance of the governor's support, passed a resolution stating that it would not support federal climate legislation.⁴⁴⁴⁹ It further stated that if a federal cap-and-trade program were promulgated, Tennessee would not participate in it.⁴⁴⁵⁰ Reasons for this refusal included aggravation of price volatility, the federal legislature's sole focus on the electricity sector regarding regulation, and lack of transparency.⁴⁴⁵¹

⁴⁴⁴² *Id.*

⁴⁴⁴³ Press Release, Bredesen Kisber Announce Hemlock Semiconductor Coming to Clarksville (Dec. 15, 2008), <http://news.tennesseeanytime.org/node/729>.

⁴⁴⁴⁴ Press Release, Wacker Plans to Set Up New Polysilicon Production Facility in the United States (Feb. 26, 2009), http://www.wacker.com/cms/en/press_media/press-releases/pressinformation-detail_20540.jsp.

⁴⁴⁴⁵ Press Release, Bredesen, Lawmakers Unveil Clean Energy Future Act (Mar. 31, 2009), <http://www.tennesseeanytime.org/governor/viewArticleContent.do?id=1353&page=0>.

⁴⁴⁴⁶ Press Release, Bredesen highlights Combined Potential for Solar, Electric Vehicles (Apr. 22, 2009), <http://www.tennesseeanytime.org/governor/viewArticleContent.do?id=1366&page=0>.

⁴⁴⁴⁷ Press Release, Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

⁴⁴⁴⁸ Governors' Energy and Climate Coalition, Statement of Principles, <http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

⁴⁴⁴⁹ SJR 0327, 106th Gen. Assem., 2009 Reg. Sess. (Tenn. 2009), <http://www.capitol.tn.gov/Bills/106/Bill/SJR0327.pdf>.

⁴⁴⁵⁰ *Id.* at 2.

⁴⁴⁵¹ *Id.* at 1.

On September 19, 2009, the U.S. Department of Energy (DOE) announced that Tennessee was eligible for \$62,482,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).⁴⁴⁵² The money has been used largely to fund a comprehensive solar energy and economic development program across the state. Specifically, the funding sponsored the Tennessee Solar Institute at the University of Tennessee, which focuses on industry partnerships to improve the efficiency and economic viability of solar products. The money was also allocated to the West Tennessee Solar Farm, a five-megawatt (MW) 20-acre power generation facility that will also serve as a demonstration tool for education and economic development.⁴⁴⁵³

2010: Energy Efficiency, Green Jobs, Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, Renewable Energy, American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

Governor Bredesen and Tennessee Economic announced in January 2010 that Confluence Solar had selected Clinton, Tennessee as the home of their new manufacturing, warehousing and distribution facility.⁴⁴⁵⁴ The company's HiCz™ brand products increased the efficiency of solar cells by 15% or more, helping manufacturers of solar panels generate electricity more efficiently at a cost equivalent to or better than can be done using multi-crystal silicon ingot.⁴⁴⁵⁵ With its investment, Confluence Solar qualified for Tennessee incentive programs including FastTrack Job Training Assistance, FastTrack Infrastructure Development, the Tennessee Jobs Tax Credit and the Super Jobs Tax Credit among others.⁴⁴⁵⁶

In March 2010, Tennessee was selected by the National Governors Association (NGA) Center for Best Practices to participate in the Policy Academy on Shaping a New Approach to Transportation and Land Use Planning.⁴⁴⁵⁷ Tennessee was chosen to develop a Corridor Management Agreement in one of its urban areas as a model to be used and applied to other state transportation corridors.⁴⁴⁵⁸ The NGA Center seeks to coordinate with the state to establish new governance models that align infrastructure development and state goals; create a new planning framework that addresses the state's unique needs and concerns for mobility, accessibility, emissions, financial stability, demographics, climate and topography; adapt new funding and financing approaches that better reflect user costs and benefits; manage demand and help pay for transportation

⁴⁴⁵² *State Agency Reports, TNRECOVERY.COM,*

www.tnrecovery.gov/reports/ecd/ECD_Cumulative_Weekly_Report.xls (last visited Mar. 1, 2014).

⁴⁴⁵³ SOUTHERN STATES ENERGY BOARD, STATE ENERGY OFFICES IN THE SOUTH 27, (Oct. 2011), <http://www.sseb.org/files/EOS.pdf>.

⁴⁴⁵⁴ Press Release, Governor Bredesen, Commissioner Kisber Announce Location of \$200 Million Solar Manufacturing Facility (Jan. 21, 2010), <http://www.tennesseeanytime.org/governor/viewArticleContent.do?id=1451&page=1>.

⁴⁴⁵⁵ *Id.*

⁴⁴⁵⁶ *Id.*

⁴⁴⁵⁷ Press Release, Tennessee to Develop Strategy to Improve Transportation and Land Use Planning (Mar. 18, 2010), <http://www.tennesseeanytime.org/governor/viewArticleContent.do?id=1478&page=0>.

⁴⁴⁵⁸ *Id.*

system management and maintenance; and develop enhanced goals and metrics that best reflect the state's transportation goals.⁴⁴⁵⁹

Governor Bredesen announced in September 2010 that through its participation in the national Electric Vehicle (EV) Project, Tennessee would offer a \$2,500 rebate, complementing a federal tax credit of up to \$7,500, on the first 1,000 electric vehicles purchased in Tennessee.⁴⁴⁶⁰ Tennessee was one of six states and the District of Columbia selected to participate in the EV project, funded through a \$100 million grant from the U.S. Department of Energy (DOE).⁴⁴⁶¹

Also in September 2010, Governor Bredesen announced that more than \$3.5 million in Local Parks and Recreation Fund grants would be awarded to recipients across Tennessee, providing local governments with funds to purchase land for parks, natural areas, greenways and recreational facilities.⁴⁴⁶²

The Tennessee Department of Economic and Community Development announced in October 2010 that it would partner with the National Energy Education Development Project to host the Tennessee Energy Management Workshop for K-12 schools.⁴⁴⁶³ The free, one-day workshops helped schools develop multi-disciplinary energy management plans; gain a better understanding of resources available for improving energy efficiency and conservation; and provide tools, curriculum and hands-on classroom kits to help meet their specific energy goals.⁴⁴⁶⁴

2011: Cap-&-Trade, Climate Change Adaptation, Climate Change Agreements, Energy Efficiency, Green Buildings, Green Jobs, Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, Renewable Energy, Renewable Portfolio Standards (RPS); American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

The Department of Economic and Community Development's Energy Policy Office announced in January 2011 that it would accept applications for the 2011 Energy Camps through April 16, 2011. The Energy Camps are three-day educational sessions that provide K-12 teachers with information and resources to teach the science of energy and energy conservation and to guide students to become leaders in their schools.⁴⁴⁶⁵

On February 2, 2011, Governor Bill Haslam announced that the U.S. Department of

⁴⁴⁵⁹ *Id.*

⁴⁴⁶⁰ Press Release, Tennessee to Provide \$2,500 Rebate for Electric Vehicle Purchases (September 8, 2010), <http://www.tennesseeanytime.org/governor/viewArticleContent.do?id=1547&page=0>.

⁴⁴⁶¹ *Id.*

⁴⁴⁶² Press Release, Bredesen Awards \$3.5 Million in Parks and Recreation Grants (Sept. 29, 2010), <http://news.tennesseeanytime.org/node/6037>.

⁴⁴⁶³ ECD, National Energy Education Development Project Announce Energy Management Workshops for K-12 Schools (Oct 13, 2010), <http://news.tennesseeanytime.org/node/6147>.

⁴⁴⁶⁴ *Id.*

⁴⁴⁶⁵ Press Release, ECD Announces 2011 Energy Camps for K-12 Teachers (Jan. 26, 2011), <http://news.tn.gov/node/6628>.

Energy (DOE) issued a Finding of No Significant Impact for the West Tennessee Solar Farm in Haywood County, clearing the way for project development to begin. Proponents expected the solar farm to produce more than 7 million kilowatt hours (kWh) of electricity annually.⁴⁴⁶⁶

The Tennessee Department of Economic and Community Development (DECD) announced in September 2011 that it would begin accepting applications for a third round of Energy Efficiency and Conservation Block Grants (EECBG) starting on October 17, 2011. The grants were available to fund a variety of energy efficiency programs, including the installation of renewable energy systems. A total of \$12.1 million had been awarded through the EECBG program by September 2011.⁴⁴⁶⁷ DECD announced in December 2011 twelve recipients of the EECBG program grants, totaling \$1.1 million in awards for projects such as the installation of solar arrays, energy efficient heating, ventilation and air conditioning (HVAC) units, remote meter-reading systems, and geothermal systems.⁴⁴⁶⁸

2012: Energy Efficiency, Green Buildings, Green Jobs, Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, Renewable Energy, and Transportation/Fuels

In January 2012, Deputy Governor Ramsey and others announced the launch of the Clean Tennessee Energy Grant Program to fund projects performed by businesses, municipalities and utilities that both reduce emissions and increase energy savings for consumers.⁴⁴⁶⁹ The project would be funded by awards from a 2011 Clean Air Act settlement with the TVA.⁴⁴⁷⁰ In June 2012, seventeen award recipients were named, totaling more than \$2.3 million in grants.⁴⁴⁷¹ The City of Covington received the maximum award of \$250,000 for a Waste Biomass Gasification to Energy project using wood waste and biosolids to create electricity.⁴⁴⁷² Greene Turbine LLC received \$125,000 to develop and market their hydrokinetic underwater turbines to be used in the Mississippi River.⁴⁴⁷³ In November 2012, four recipients were awarded \$780,000: the University of Tennessee at Chattanooga/The Center for Energy, Transportation and the Environment; Northeast State Community College; Tennessee Technological University;

⁴⁴⁶⁶ Press Release, U.S. Dept. of Energy Issues Finding of No Significant Impact, Project Moves Forward (Feb. 2, 2011), <http://news.tn.gov/node/6652>.

⁴⁴⁶⁷ Press Release, ECD Accepting Applications for New Round of Energy Efficiency and Conservation Block Grants Beginning October 17 (September 28, 2011), <http://news.tn.gov/node/7850>.

⁴⁴⁶⁸ Press Release, Tenn. Dep't of Econ. And Cmty. Dev., ECD Announces \$1.1 Million in Energy Efficiency and Conservation Block Grants (Dec. 12, 2011), <http://news.tn.gov/node/8168>.

⁴⁴⁶⁹ Press Release, Tenn. Dep't of Env't and Conservation, State Announces Clean Tennessee Energy Grant Program (Jan. 10, 2012), <http://news.tn.gov/node/8276>.

⁴⁴⁷⁰ *Id.*

⁴⁴⁷¹ Press Release, Tenn. Dep't of Env't and Conservation, \$2.3 Million in Clean Tennessee Energy Grants Awarded (June 21, 2012), <http://news.tn.gov/node/9074>; Tenn. Dep't of Env't & Conservation, CLEAN TENNESSEE ENERGY GRANT PROGRAM, <http://www.tn.gov/environment/energygrants/recipients.shtml> (Apr. 5, 2013).

⁴⁴⁷² Press Release, Tenn. Dep't of Env't & Conservation, TDEC to Announce Statewide Clean Tennessee Energy Grant Recipients in Memphis on June 21 (June 19, 2012), <http://news.tn.gov/node/9065>.

⁴⁴⁷³ *Id.*

and the University of Memphis.⁴⁴⁷⁴ Projects included the installation of solar panels, a geothermal heating, ventilation and air conditioning (HVAC) system, the installation of high-efficiency boilers, conversion of a coal plant to a natural gas burner, and the installation of a unit that produces electricity from methane generated from decomposing organic matter.⁴⁴⁷⁵

In December 2012, Governor Haslam and the State Department of Environment and Conservation (DEC) announced the next cycle of Clean Tennessee Energy Grants, making available \$2.25 million for municipalities and utilities across the state.⁴⁴⁷⁶ Individual awards may not exceed \$250,000 and may be applied toward eligible projects such as installation of alternative energy sources, and utilization of energy efficiency techniques and upgrades.⁴⁴⁷⁷

2013: Cap-&-Trade, Climate Change Adaptation, Energy Efficiency, Green Building, Green Technology, Greenhouse Gas Reduction, Market-Based Solutions, Renewable Energy, Renewable Portfolio Standards (RPS), American Recovery & Reinvestment Act (ARRA), and Transportation/Fuels

Effective January 1, 2013, under H.B. 62, Tennessee offers a special ad valorem property tax assessment for certain renewable energy facilities.⁴⁴⁷⁸ The 2003 wind property tax exemption was reenacted, and, and solar property shall be assessed at a value of no more than 12.5% of total installed costs. Other qualifying renewable energy property shall be assessed at a value determined by the State Board of Equalization and the Tennessee Department of Environment and Conservation (DEC).⁴⁴⁷⁹

In 2013, the Tennessee Valley Authority (TVA) starting offering incentives for mid-sized renewable generators between 50 kW and 20 MW to enter into long term price contracts. The goal is for total production from all participants to equal 100 MW, with no more than 50 MW from any one renewable technology. For projects approved after January 2013, prices increase at a rate of 5% per year beginning in 2014 and may be changed by the TVA within a 90 notice period. The change cannot exceed more than 1% per year. In 2013, the average price was approximately \$0.037 /kWh, and had a maximum of \$0.082/kWh, with a minimum of \$0.029/kWh. Under this program, all energy output, RECs, or other environmental attributes from installations belong to the TVA. Biomass, Wind, or Photovoltaics can be interconnected through either the TVA's or its partner's distribution system under 10, 15, or 20 year term contracts. To be

⁴⁴⁷⁴ Press Release, Tenn. Dep't of Env't & Conservation, \$780,000 in Clean Tennessee Energy Grants Awarded (Nov. 14, 2012), <http://news.tn.gov/node/9911>.

⁴⁴⁷⁵ *Id.*

⁴⁴⁷⁶ Press Release, Tenn. Dep't of Env't and Conservation, Haslam and TDEC Announce Next Clean Tennessee Energy Grant Cycle (Dec. 3, 2012), <http://news.tn.gov/node/9985>.

⁴⁴⁷⁷ *Id.*

⁴⁴⁷⁸ H.B. 62, 108th General Assemb., Reg. Sess. (Tenn. 2013), *available at* <http://www.capitol.tn.gov/Bills/108/Bill/HB0062.pdf>

⁴⁴⁷⁹ TENN. CODE ANN. § 67-5-601, *et seq.*

applicable, biomass systems should co-fire 50% or more with the fuel consumption content approved by the TVA and separately metered. A remainder of the biomass may be purchased through the TVA's Dispersed Power Production Program.⁴⁴⁸⁰

The TVA and other participating power distributors offer a performance-based incentive to homeowners and businesses who install photovoltaic, wind, biomass, or hydropower generation systems under the Green Power Providers Program. The program's contract term is 20 years. For the first ten years, the TVA will purchase 100% of the output from qualifying solar systems at a rate of \$0.04/kWh and at \$0.03/kWh for all other sources in addition to retail electricity rates. For the next ten years of the contract, participants will only be paid the applicable retail rate. All new participants will be provided with a \$1,000 incentive to offset capital costs.⁴⁴⁸¹

On March 26, 2013, the EPA and the U.S. Department of Energy (DOE) honored three Tennessee organizations with the Energy Star Reward for their long-term commitment to climate protection through greater energy efficiency. These winners include the "Partners of the Year" – Eastman Chemical Company, and the "Partners for the Year – Sustained Excellence" – Habitat for Humanity of Greater Nashville, and Nissan North America, Inc. of Smyrna, Tennessee.⁴⁴⁸²

On April 17, 2013, the Obama Administration and the Energy Department additionally honored Nissan as a partner in the "Better Buildings, Better Plants Challenge." Nissan's commitment to reducing energy in three U.S. plants by 25% by 2020, would affect 12 million square feet of plant space. According to Nissan's projections, the Smyrna plant is capable of reducing energy use and carbon emissions by 30%.⁴⁴⁸³

On May 6, 2013, the University of Tennessee conferred its first degrees in sustainability to Nick Alderson and Alyssa Schroder. The degree, comprised of an interdisciplinary curriculum spanning law, business, and science, focuses in areas of economics and sustainability, resource management, ethics, and sustainability and

⁴⁴⁸⁰ *Renewable Standard Offer*, TVA, <http://www.tva.com/renewablestandardoffer> (last visited Mar. 1, 2014).

⁴⁴⁸¹ Green Power Providers, TVA, <http://www.tva.com/greenpowerswitch/providers/> (last visited Mar. 2, 2014).

⁴⁴⁸² Press Release, U.S. EPA, Three Tennessee Organizations Receive 2013 Energy Star Awards (Mar. 26, 2013), <http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/e02d9dad50f0488085257b3a006a075b!OpenDocument>.

⁴⁴⁸³ *Better Buildings Challenge*, U.S. DEP'T OF ENERGY, <http://www4.eere.energy.gov/challenge/> last visited Mar 12, 2013).

climate change. The degree is novel in nature and Tennessee is one of the first large universities in the Southeast to offer it.⁴⁴⁸⁴

On May 16, 2013, the Energy Independence Act of 2013 went into effect. H.B. 1272/S.B. 852, was codified as Public Chapter 423, and amended the state's target goals for the use of green motor vehicles in Title 67 and 68. The bill specifically amended Tenn. Code Ann. § 67-4-2004(9), the definition of a "certified green energy production facility" to include facilities utilizing natural gas in a CHP configuration to produce heat and electricity for consumption on-site.⁴⁴⁸⁵ The bill additionally establishes a rebate program that would pay half the costs of the incremental difference between a petroleum vehicle and natural gas vehicle, up to \$25,000. Moreover, the bill provides that any public utility, commercial, or industrial property certified to fuel natural gas vehicles may not be valued at more than 30% of its total installed costs. However, the Tennessee DEC must certify that the vehicle is projected to displace more than 6,000 gallons of petroleum annually.⁴⁴⁸⁶

Lastly, the bill outlines that state fleets must make every effort to ensure that 100% of newly purchased motor vehicles are energy efficient, as defined by the Energy Policy Act of 1992. State Agencies should also strive to use ethanol and biodiesel in appropriate state-owned vehicles in an effort to develop the biofuels fueling infrastructure.⁴⁴⁸⁷ The bill requires that the Department of General Services ensure that at least 25% of newly purchased passenger motor vehicles, in areas designated by the EPA as nonattainment areas, be electric, hybrid-electric, natural gas, propane, or compact fuel-efficient vehicles.⁴⁴⁸⁸ Consequently, during Fiscal Year 2013, the Tennessee Department of General Services Motor Vehicle Management added 47 new vehicles, all of which were energy-efficient, to its 364-vehicle fleet (an influx 13%).⁴⁴⁸⁹

In early 2013, the Chattanooga Metropolitan Airport Authority, as a part of its Green Initiative, installed two additional 1 MW solar farms, in an effort to make the airport energy self-sufficient and carbon neutral. The solar panels provide 90% of the airport's energy needs.⁴⁴⁹⁰ The program known for its efforts in LEED certification for all new construction and commitment to renewable energy also has a variety of energy-

⁴⁴⁸⁴ *Students First to Graduate with Sustainability Major*, THE UNIV. OF TENN. (May 6, 2013), <http://tntoday.utk.edu/2013/05/06/students-graduate-sustainability-major/>.

⁴⁴⁸⁵ § 67-4-2004(9)

⁴⁴⁸⁶ *Id.*; § 67-5-601

⁴⁴⁸⁷ *Id.*

⁴⁴⁸⁸ § 4-3-1109.

⁴⁴⁸⁹ TENN. DEP'T OF GEN. SERVICES MOTOR VEHICLE MGMT., ANNUAL REPORT ON ENERGY-EFFICIENT PURCHASING FISCAL YEAR 2012-2013 3, <http://www.tn.gov/generalserv/MVM%20Energy%20Report%20FY2013.pdf>.

⁴⁴⁹⁰ Mike Pare, *Chattanooga Airport Nearly 90 Percent Powered by Solar Energy*, TIMESFREEPRESS.COM (Oct. 3, 2013), <http://timesfreepress.com/news/2013/oct/03/airport-here-comes-the-sun-means-savings/>.

efficient lighting upgrades that have reduced energy consumption by two MW.⁴⁴⁹¹ This, in conjunction with the airport's stormwater and flood control measures, its recycling programs, and its community education efforts, prompted the governor to award the 2013 Environmental Stewardship Award on June 4, 2013.⁴⁴⁹²

On November 13, 2013, Governor Bill Haslam and the DEC Commissioner, Bob Martineau announced a third offering of the Clean Tennessee Energy Grants. The grants allot a total of \$1.9 million to fund energy-efficiency projects for municipal governments, county governments, utility districts and other similar entities throughout Tennessee. The grants are applicable to projects regarding 1) cleaner alternative energy, including biomass, geothermal, solar and wind, 2) energy conservation measures improving lighting, heating, ventilation and air conditioning (HVAC), fuel efficiency, insulation and idling, and 3) air quality improvements, including reductions in greenhouse gas emissions, sulfur dioxide, Volatile Organic Compounds (VOC's), nitrogen oxides (NOx), and other hazardous air pollutants. The maximum grant per project is \$250,000, but must be matched by the applicant. Recipients of the grants will be announced in the late spring of 2014.⁴⁴⁹³

On November 26, 2013, it was announced that Tennessee was a recipient of the DOE's Award to Drive Greater Energy Efficiency, Save Money. Tennessee was specifically awarded \$2 million to help retrofit public housing as well as local government and state facilities. The goal of this grant is to improve the energy efficiency of public buildings, including installing low wattage LED lighting and upgrading heating and cooling systems.⁴⁴⁹⁴

TEXAS

1995: Green Buildings; Energy Efficiency; and Renewable Energy

On May 5, 1995, Texas enacted a law requiring the state to consider the economic feasibility of energy alternatives in the construction and repair of government

⁴⁴⁹¹ Press Release, 2013 Governor's Environmental Stewardship Awards Announced (June 4, 2013), <https://news.tn.gov/node/10820>.

⁴⁴⁹² *Id.*

⁴⁴⁹³ Press Release, Haslam and TDEC Announce Next Tennessee Energy Grant Cycle (Nov. 13, 2013), <https://news.tn.gov/node/11666>.

⁴⁴⁹⁴ Press Release, Thirteen States Receive Energy Department Awards to Drive Greater Energy Efficiency, Save Money (Nov. 26, 2013), [http://energy.gov/articles/thirteen-states-receive-energy-department-awards-drive-greater-energy-efficiency-save-money?__utma=1.2035493254.1381961111.1401693749.1401714944.3&__utmb=1.11.10.1401714944&__utmc=1&__utmz=1.1401693749.2.1.utmcsrc=google|utmccn=\(organic\)|utmcmd=organic|utmctr=\(not%20provided\)&__utmv=-&__utmk=113780487](http://energy.gov/articles/thirteen-states-receive-energy-department-awards-drive-greater-energy-efficiency-save-money?__utma=1.2035493254.1381961111.1401693749.1401714944.3&__utmb=1.11.10.1401714944&__utmc=1&__utmz=1.1401693749.2.1.utmcsrc=google|utmccn=(organic)|utmcmd=organic|utmctr=(not%20provided)&__utmv=-&__utmk=113780487)

buildings.⁴⁴⁹⁵ The law mandated the use of alternative energy sources if economically feasibility.⁴⁴⁹⁶

2001: Energy Efficiency

On January 8, 2001, Texas Public Utility Commission Substantive Rules § 25.211 and § 25.212 created interconnection standards for distributed generation.⁴⁴⁹⁷ The standards specify that the total capacity of a facility's on-site generation unit may exceed 10 megawatts; however, no more than 10 megawatts of a facility's capacity may be interconnected at a given time.⁴⁴⁹⁸

2004: Renewable Energy

Texas Public Utility Commission Rules § 25.475 and § 25.476, effective June 1, 2004, required retail electric providers to offer interested customers extensive information, including lists of generators' power sources and charts showing the levels of their carbon dioxide emissions.⁴⁴⁹⁹ On February 20, 2009, Texas Public Utility Commission Rules § 25.476 was amended and § 25.475 was repealed. On November 20, 2009, an amended § 25.475 was adopted.⁴⁵⁰⁰ Under the amended versions, renewable energy disclosures are required,⁴⁵⁰¹ and generators must maintain provide environmental information to customers via a "scorecard" which compares emissions of various pollutants, including carbon dioxide.⁴⁵⁰²

2005: Renewable Portfolio Standard

In August 2005, the Texas legislature established the state's renewable portfolio standard at 5,880 megawatts by 2015.⁴⁵⁰³ Of those 5,880 megawatts, 500 must be from renewable energy power sources other than wind power.⁴⁵⁰⁴ In addition, the law set 10,000 megawatts as the state's renewable energy capacity goal in 2025.⁴⁵⁰⁵

2008: Political Action

On November 25, 2008, Governor Rick Perry submitted a comment on U.S. EPA's Advance Notice of Proposed Rulemaking (ANPR) on Regulation of Greenhouse

⁴⁴⁹⁵TEX. GOV'T CODE ANN. §§ 2166.401, .403 (Vernon 2005).

⁴⁴⁹⁶*Id.*

⁴⁴⁹⁷*See* TEX. UTIL. CODE ANN. § 14.001 (Vernon2005) (empowering the Public Utility Commission), <http://www.puc.texas.gov/industry/electric/business/dg/Dg.aspx>.

⁴⁴⁹⁸*See* PUC Sub. Rules §§ 25.211, 25.212

⁴⁴⁹⁹*See* PUC Sub. Rules §§ 25.475, 25.476.

⁴⁵⁰⁰Public Utility Commission of Texas, Electric Substantive Rules, <http://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.475/25.475ei.aspx> (Mar. 9, 2014).

⁴⁵⁰¹PUC Sub. Rules. § 25.475(g)(5).

⁴⁵⁰²PUC Sub. Rules § 25.476(e)(2).

⁴⁵⁰³TEX. UTIL. CODE ANN. § 39.904.

⁴⁵⁰⁴*Id.*

⁴⁵⁰⁵*Id.*

Gases under the Clean Air Act issued on June 30, 2008.⁴⁵⁰⁶ Based on the findings of the Texas Advisory Panel on Federal Environmental Regulations, Perry argued against implementation of the proposed regulations due to their impact on the Texas economy.⁴⁵⁰⁷ He proposed making alternative energy technologies less expensive rather than imposing costly burdens on the traditional energy sector.⁴⁵⁰⁸

2009: Market-Based Solutions, Climate Change Agreements/MOUs, American Recovery & Reinvestment Act (ARRA), Renewable Energy, and Political Action

On February 3, 2009, House Bill 634, introduced by Representatives Ana Hernandez and Eddie Rodriguez, would enable the state to join the Regional Greenhouse Gas Initiative (RGGI) cap-and-trade program.⁴⁵⁰⁹ However, House Bill 634 died in a chamber action on February 18, 2009.⁴⁵¹⁰

On March 12, 2009, the U.S. Department of Energy announced that Texas was eligible for \$218,782,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).⁴⁵¹¹

According to the Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet, Texas' clean energy economy grew by 55,646 jobs and 4,802 businesses from 1998 to 2007.⁴⁵¹² Between 2006 and 2009, Texas attracted over \$716 million in capital investment in clean energy.⁴⁵¹³

In December 2009, Governor Perry admonished the U.S. EPA for its proposed rule regulating greenhouse gases (GHGs), specifically carbon dioxide.⁴⁵¹⁴ Perry later sent a letter to EPA Administrator Lisa Jackson urging her to withdraw the rule, citing the lack of scientific support for the endangerment finding and the economic impact on residents of Texas.⁴⁵¹⁵

2010: Political Action and Renewable Energy

⁴⁵⁰⁶ Press Release, Tex. Office of the Governor, Gov. Perry: Proposed EPA Rules Will Cripple Texas Economy (Nov. 25, 2008), <http://governor.state.tx.us/news/press-release/11652/>; *see also* Letter from Gov. Rick Perry to EPA Administrator Lisa Jackson, dated Nov. 25, 2008, <http://governor.state.tx.us/files/press-office/O-JohnsonStephen20081125.pdf>.

⁴⁵⁰⁷ *Id.*

⁴⁵⁰⁸ *Id.*

⁴⁵⁰⁹ H.B. 634, 81st Leg. (Tex. 2009).

⁴⁵¹⁰ *See* LegiScan <http://legiscan.com/TX/bill/HB634/2009> (Mar. 9, 2014).

⁴⁵¹¹ U.S. Dep't of Energy, Nat'l Energy Tech. Lab., State Energy Program Formula Grants, at 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁴⁵¹² Pew Charitable Trust, Clean Energy Economy Texas Fact Sheet, *available at* http://www.pewcenteronthestates.org/uploadedFiles/wwwpewcenteronthestatesorg/Fact_Sheets/Clean_Economy_Factsheet_Texas.pdf

⁴⁵¹³ *Id.*

⁴⁵¹⁴ Press Release, Office of the Gov. Rick Perry, Statement by Gov. Rick Perry Regarding EPA Ruling on Carbon Dioxide (Dec. 7, 2009), <http://governor.state.tx.us/news/press-release/14010/>.

⁴⁵¹⁵ Press Release, Office of the Gov. Rick Perry, Gov. Perry Urges EPA to Withdraw Ruling on Danger of Carbon Dioxide (Dec. 9, 2009), <http://governor.state.tx.us/news/press-release/14020/>.

In February 2010, Governor Perry announced that Texas planned to take legal action against the U.S. EPA for its proposed regulation of GHGs.⁴⁵¹⁶ In March, he later signed onto the letter sent to congressional leaders from several state governors urging them to block the proposed regulations.⁴⁵¹⁷

In July 2010, Governor Perry announced the availability of \$8.4 million in research funding to diversify the state's energy portfolio. The grant, provided through the Texas Emerging Technology Fund (TETF) and the Texas Tech University System, specifically targeted wind energy expansion throughout the state.⁴⁵¹⁸

The state invested \$2.75 million in Terrabon Inc. to commercialize its process of converting non-food biomass into fuel. Terrabon uses supply stocks such as municipal solid waste, sewage, forest-product residues, and non-edible crops to produce non-ethanol gasoline, jet fuel, and diesel.⁴⁵¹⁹

2012: Green Buildings; Energy Efficiency,; Renewable Energy, and Transportation/Fuels

In April 2012, the Texas Comptroller of Public Accounts State Energy Conservation Office (SECO) awarded several independent school districts grant funding to replace older, inefficient HVAC equipment with newer, energy-efficient systems.⁴⁵²⁰ Awards were competitively granted, taking into consideration the age of current equipment, district enrollment, district property wealth and expected energy savings.⁴⁵²¹ SECO also subsequently announced the availability of low-interest loans for non-profit corporations, houses of worship, and public entities through the Texas LoanSTAR Program to help finance the entities' energy cost-reduction projects.⁴⁵²²

In June 2011, the Texas Legislature created a grant program for alternative fuels.⁴⁵²³ In May 2012, the Texas Commission on Environmental Quality (TCEQ)

⁴⁵¹⁶ Press Release, Office of the Gov. Rick Perry, Texas Takes Legal Action Against Federal Government Over EPA CO2 Mandates (Feb. 16, 2010), <http://governor.state.tx.us/news/press-release/14253/>.

⁴⁵¹⁷ Press Release, Office of the Gov. Rick Perry, Gov. Perry Supports Congressional Efforts to Block Misguided EPA Endangerment Findings (Mar. 10, 2010), <http://governor.state.tx.us/news/press-release/14332/>.

⁴⁵¹⁸ Press Release, Office of the Governor, Gov. Perry: Wind Power Will Help Address Texas Growing Energy Needs (July 26, 2010), <http://governor.state.tx.us/news/press-release/14931/>.

⁴⁵¹⁹ Press Release, Office of the Governor, Gov. Perry: Emerging Technologies Will Help Texas Meet Future Energy Challenges (July 30, 2010), <http://governor.state.tx.us/news/press-release/14949/>.

⁴⁵²⁰ State Energy Conservation Office, PUBLIC INDEPENDENT SCHOOL DISTRICT ENERGY EFFICIENCY GRANTS, <http://www.seco.cpa.state.tx.us/funding/publicisd022412.php> (Apr. 6, 2013).

⁴⁵²¹ *Id.*

⁴⁵²² State Energy Conservation Office, NOTICE OF LOAN FUND AVAILABILITY (NOLFA) AND REQUEST FOR APPLICATION (RFA), <http://www.seco.cpa.state.tx.us/funding/nolfa/042712/index.php> (Apr. 6, 2013); State Energy Conservation Office, NOTICE OF LOAN FUND AVAILABILITY (NOLFA) AND REQUEST FOR APPLICATION (RFA), <http://www.seco.cpa.state.tx.us/funding/nolfa/041312/index.php> (Apr. 6, 2013).

⁴⁵²³ 2011 Texas Senate Bill No. 385, Texas Eighty-Second Legislature (June 17, 2011).

announced new funds available for the Alternative Fueling Facility Program.⁴⁵²⁴ Eligible projects include the construction or significant reconstruction of a facility that dispenses alternative fuels to vehicles and equipment.⁴⁵²⁵ Alternative fuels covered consist of biodiesel, hydrogen, methanol, natural gas, propane and electricity.⁴⁵²⁶ The program expires on August 31, 2018.⁴⁵²⁷

In June 2012, TCEQ also announced funding available for the Texas Clean Fleet Program, which allowed participants to replace diesel vehicles with alternative fuel and hybrid vehicles.⁴⁵²⁸ Eligible participants were fleet owners who owned 75 or more on-road vehicles registered in Texas.⁴⁵²⁹ Projects were required to result in a 25% reduction in nitrogen oxide emissions.⁴⁵³⁰ Grant-funded vehicles were required to operate within certain metropolitan areas for at least five years or 400,000 miles, whichever occurred first.⁴⁵³¹ This program expired in September 2012.⁴⁵³²

In July 2012, the TCEQ announced \$18 million in grants for the Texas Natural Gas Vehicle Grant Program.⁴⁵³³ The program allows for the replacement of medium- and heavy-duty vehicles that run on gasoline or diesel with natural gas engines.⁴⁵³⁴ However, applicants must apply through a participating dealer as listed on the program website.⁴⁵³⁵ Grants may reimburse the recipient up to 60 to 90% of the conversion cost.⁴⁵³⁶ The conversions must result in a 25% reduction in nitrogen oxide emissions, and grant recipients must operate the subject vehicles within eligible Texas counties for at least 75% of the vehicle's yearly mileage or 400,000 miles, whichever occurs first.⁴⁵³⁷ This program expires August 31, 2017.⁴⁵³⁸

In October 2012, the State Energy Conservation Office (SECO) again announced grants available for Texas public independent school districts to replace inefficient

⁴⁵²⁴ Press Release, Tex. Comm'n on Env'tl. Quality, TCEQ announces grants for alternative fueling stations (May 14, 2012), <http://www.tceq.texas.gov/news/releases/5-12FuelingStations5-14>.

⁴⁵²⁵ *Id.*

⁴⁵²⁶ *Id.*

⁴⁵²⁷ U.S. Dep't of Energy, *Texas Laws and Incentives for Grants*, <http://www.afdc.energy.gov/laws/laws/TX/incentive/3233> (June 12, 2013).

⁴⁵²⁸ Press Release, Tex. Comm'n on Env'tl. Quality, TCEQ announces grants for alternative fuel and hybrid vehicles (June 11, 2012), <http://www.tceq.texas.gov/news/releases/6-12HybridGrants6-11>.

⁴⁵²⁹ *Id.*

⁴⁵³⁰ *Id.*

⁴⁵³¹ *Id.*

⁴⁵³² U.S. Dep't of Energy, *Texas Laws and Incentives for Grants*, <http://www.afdc.energy.gov/laws/laws/TX/incentive/3233> (June 12, 2013).

⁴⁵³³ Press Release, Tex. Comm'n on Env'tl. Quality, TCEQ announces grants for natural gas vehicles (July 9, 2012), <http://www.tceq.texas.gov/news/releases/7-12Grants7-9>.

⁴⁵³⁴ *Id.*

⁴⁵³⁵ *Id.*; Tex. Comm'n on Env'tl. Quality, TEXAS EMISSIONS REDUCTION PLAN (TERP), <http://www.tceq.texas.gov/airquality/terp> (Apr. 5, 2013).

⁴⁵³⁶ Press Release, Tex. Comm'n on Env'tl. Quality, TCEQ announces grants for natural gas vehicles (July 9, 2012), <http://www.tceq.texas.gov/news/releases/7-12Grants7-9>.

⁴⁵³⁷ *Id.*

⁴⁵³⁸ U.S. Dep't of Energy, *Texas Laws and Incentives for Grants*, <http://www.afdc.energy.gov/laws/laws/TX/incentive/3233> (June 12, 2013).

HVAC systems with newer, more energy-efficient models, including the labor and materials directly related to a proper installation.⁴⁵³⁹ SECO also announced the availability of low-interest loans for public education institutions and hospitals to assist in the financing of energy consumption reductions efforts.⁴⁵⁴⁰ The program allows for the repayment of the loan through the cost-savings made through the recipient's energy-efficiency project.⁴⁵⁴¹ Deadlines to apply for both the grant and loan programs passed in 2012.

2013: Renewable Energy and Transportation/Fuels

In January 2013, Texas joined the Association of Air Pollution Control Agencies (AAPCA).⁴⁵⁴² The AAPCA provides a forum where member states may discuss compliance with the Clean Air Act and its implementing regulations and develop avenues for technical assistance.⁴⁵⁴³

In February 2013, SECO announced \$2 million in competitive grants for municipalities, public school districts and educational institutions, and state agencies to demonstrate renewable energy technology by installing small-scale solar and wind systems.⁴⁵⁴⁴ Award criteria take into account the project's readiness, educational and outreach value to the public, location, size, type and cost. Deadlines to apply for this grant passed in 2013.

In April 2013, the State Comptroller and SECO announced the availability of additional funds for the Alternative Fuels Initiatives Grant Program to award to eligible public entities that are able to provide documented evidence of matching funds for 20% of the project's cost.⁴⁵⁴⁵ The grants may be used to purchase an alternative fuel vehicle, or to convert an existing vehicle.⁴⁵⁴⁶ Deadlines to apply for this grant passed in 2013.

UTAH

1998-2013: Clean Energy Economy

According to the Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for Utah, Utah's clean energy economy grew by 5,199 jobs and 579 businesses

⁴⁵³⁹ State Energy Conservation Office, PUBLIC INDEPENDENT SCHOOL DISTRICT ENERGY EFFICIENCY GRANTS, <http://www.seco.cpa.state.tx.us/funding/publicisd20121005.php> (Apr. 6, 2013).

⁴⁵⁴⁰ State Energy Conservation Office, NOTICE OF LOAN FUND AVAILABILITY (NOLFA) AND REQUEST FOR APPLICATION (RFA), <http://www.seco.cpa.state.tx.us/funding/nolfa/102612/> (Apr. 6, 2013).

⁴⁵⁴¹ *Id.*

⁴⁵⁴² Press Release, Tex. Comm'n on Env'tl. Quality, Texas Joins New National Air Quality Association (Jan. 23, 2013), <http://www.tceq.texas.gov/news/releases/1-13AAPCA1-23>.

⁴⁵⁴³ *Id.*

⁴⁵⁴⁴ State Energy Conservation Office, INNOVATIVE ENERGY DEMONSTRATION GRANT PROGRAM (SEP PROGRAM 2.2), http://www.seco.cpa.state.tx.us/funding/sep/sep_2-2.php (Apr. 6, 2013).

⁴⁵⁴⁵ State Energy Conservation Office, ALTERNATIVE FUELS INITIATIVES GRANT PROGRAM (SEP PROGRAM 2.2), http://www.seco.cpa.state.tx.us/funding/sep/sep_2-2_alt_fuel.php (Apr. 6, 2013).

⁴⁵⁴⁶ *Id.*

from 1998 to 2007.⁴⁵⁴⁷ Between 2006 and 2009, Utah attracted nearly \$27 million in capital investment in clean energy.⁴⁵⁴⁸

In March 2011, Utah's Division of Air Quality awarded \$490,500 in grants and loans to help local entities purchase natural gas vehicles and to develop natural gas refueling stations. The awards were part of the agency's effort to encourage cleaner transportation.⁴⁵⁴⁹

That same month, the Utah legislature passed H.B. 475, creating the Utah Office of Energy Development (OED).⁴⁵⁵⁰ The OED is responsible for the development of the state's energy resources, shaping and implementing policy, and assisting industry and citizens by streamlining processes with state and federal agencies.⁴⁵⁵¹ More information about the Office of Energy Development is <http://www.energy.utah.gov/>.

Also in March 2011, Governor Gary Herbert issued Utah's 10-Year Strategic Energy Plan, *Energy Initiatives and Imperatives*.⁴⁵⁵² The plan included guiding principles, goals, models and real-world examples to provide a framework for meaningful conversation about the future of energy in Utah and is <http://www.utah.gov/governor/docs/10year-strategic-energy.pdf>.⁴⁵⁵³

The Utah Office of Energy Development (OED) launched the Utah Renewable Energy Rebate Program in August 2011, offering rebates for solar photovoltaic, solar thermal, and wind energy systems.⁴⁵⁵⁴ The program was funded through the ARRA and initially included \$1 million in available funds, but due to the popularity of the program, the OED added another \$200,000 in October 2011. Between August and October, OED allocated \$830,000 to 139 projects throughout the state, leveraging \$4.6 million in economic activity.⁴⁵⁵⁵

⁴⁵⁴⁷ Pew Charitable Trust, Clean Energy Economy Utah Fact Sheet, *available at* http://www.pewcenteronthestates.org/uploadedFiles/wwwpewcenteronthestatesorg/Fact_Sheets/Clean_Economy_Factsheet_Utah.pdf.

⁴⁵⁴⁸ *Id.*

⁴⁵⁴⁹ Press Release, UT Dept. of Env'tl. Quality, Grants and Loans Awarded to Expand Natural Gas in Utah (Mar. 17, 2011), <http://www.deq.utah.gov/News/docs/2011/cngloans.pdf>.

⁴⁵⁵⁰ H.B. 475, 59th Leg., Gen. Sess. (Utah 2011), *codified* 1953 UTAH CODE ANN. § 63M-4-401 (West 2011).

⁴⁵⁵¹ Office of Energy Dev., About (Sept. 21, 2011), <http://energy.utah.gov/about/>

⁴⁵⁵² Governor Gary R. Herbert, *Energy Initiatives and Imperatives: Utah's 10-Year Strategic Energy Plan*, <http://www.utah.gov/governor/docs/energy-10year-plan.pdf>.

⁴⁵⁵³ Press Release, Governor Unveils 10-Year Strategic Energy Plan (Mar. 18, 2011), <http://energy.utah.gov/download/reports/10year-strategic-energy.pdf>.

⁴⁵⁵⁴ Press Release, Rebate Program for Solar and Wind Energy Systems Expanded (Oct. 20, 2011).

⁴⁵⁵⁵ *Id.*

Governor Herbert announced on November 16, 2011 that Utah had signed a memorandum of understanding (MOU) with several other states to encourage the manufacture of natural gas vehicles in the United States.⁴⁵⁵⁶ Colorado, Oklahoma, Pennsylvania and Wyoming also signed the MOU, with more states expressing interest.⁴⁵⁵⁷ The MOU contained a multi-state request for proposal for the purchase of state fleet natural gas vehicles, and each state agreed to purchase a specific number of natural gas vehicles.⁴⁵⁵⁸

In the 2012 General Session, the Utah legislature passed S.B. 65, allowing alternative energy entities to carry the alternative energy development tax credit or the alternative energy manufacturing tax credit forward for no more than seven years if the tax credit may be claimed and the amount of the tax credit exceeds the entity's tax liability for the taxable year.⁴⁵⁵⁹

On February 1, 2012, Governor Herbert unveiled the Utah Clean Air Partnership (U-CAIR), which he had discussed in the 2012 State of the State Address.⁴⁵⁶⁰ The U-CAIR initiative invites all Utahns to voluntarily reduce their impact upon state air quality.⁴⁵⁶¹ The initiative focuses on educational outreach and partnership creation in order to gain momentum among Utah residents and businesses.⁴⁵⁶² The U-CAIR website allows interested parties to pledge their participation in the initiative and to track and measure individuals' and partnerships' subsequent progress.⁴⁵⁶³

On March 19, 2012, Governor Herbert signed S.B. 12 into law, giving non-utility electricity customers the ability to buy directly from renewable energy sources.⁴⁵⁶⁴

⁴⁵⁵⁶ Press Release, Utah Governor Gary Herbert, Governor to Sign Multi-state MOU to Encourage Production of Natural Gas Vehicles (Nov. 16, 2011),

http://www.utah.gov/governor/news_media/article.html?article=6015 (Mar. 25, 2014).

⁴⁵⁵⁷ *Id.*

⁴⁵⁵⁸ *Id.*

⁴⁵⁵⁹ 1953 Utah Code Ann. § 59-7-614.8 (West 2012).

⁴⁵⁶⁰ Press Release, Utah Governor Gary Herbert, Governor Announces Air Quality Initiative Invites All Utahns to Do Their Part (Feb. 1, 2012),

http://www.utah.gov/governor/news_media/article.html?article=6515; Press Release, Utah Governor Gary Herbert, 2012 State of the State Address (Jan. 25, 2012), http://utah.gov/governor/news_media/2012-state-of-state.html.

⁴⁵⁶¹ Press Release, Utah Governor Gary Herbert, Governor Announces Air Quality Initiative Invites All Utahns to Do Their Part (Feb. 1, 2012),

http://www.utah.gov/governor/news_media/article.html?article=6515.

⁴⁵⁶² *Id.*

⁴⁵⁶³ *Id.*

⁴⁵⁶⁴ CTR. FOR CLIMATE & ENERGY SOLUTIONS, *Utah Passes Key Renewable Energy Law* (Apr. 29, 2013), <http://www.c2es.org/us-states-regions/news/2012/utah-passes-key-renewable-energy-law>.

In November 2012, the Division of Air Quality (DAQ) within the Utah Department of Environmental Quality announced a voluntary program, Ozone Advance, in collaboration with the EPA and Indian tribes.⁴⁵⁶⁵ Ozone Advance encourages early emission reductions in areas of Utah that already experience elevated ozone levels in the winter, a strategy which will allow the state to plan for future emissions under Utah's Clean Air Act State Implementation Plan for ozone.⁴⁵⁶⁶ DAQ is exploring the use of early reduction credits for reductions that are “quantifiable, surplus, enforceable and permanent,” and which permittees may be able to bank for future development.⁴⁵⁶⁷

In the 2013 General Session, the Utah legislature passed a number of air quality amendments. S.B. 275 provided for the creation of an interlocal entity to facilitate the conversion of alternative fuel vehicles and the construction of supporting facilities, and provided for the recovery of expenditures made by a gas company through the implementation of an incremental surcharge.⁴⁵⁶⁸ S.B. 221 authorized municipalities to adopt Commercial Property Assessed Clean Energy (C-PACE) financing programs for energy efficiency upgrades or renewable energy systems installed on commercial properties within a voluntary assessment area.⁴⁵⁶⁹ It also required the owner of the property within the voluntary assessment area to provide assurances that the property was not burdened by liens, delinquent taxes, or other assessments.⁴⁵⁷⁰ H.B. 284 provided flexibility to an electric utility to define the annual bill cycle for net metering as any twelve-month period rather than the April 1st to March 31st cycle first established.⁴⁵⁷¹ H.B. 96 extended corporate and individual income tax credits for cleaner burning fuels until the end of 2019, and required the State Tax Commission to transfer from the General Fund to the Education Fund the amount which the claimed tax credit exceeds \$500,000.⁴⁵⁷² H.B. 202 updated commercial and residential building codes to comply with the 2012 International Energy Conservation Code.⁴⁵⁷³ H.B. 168 required state agencies and school districts to report air quality mitigation efforts currently being utilized and to develop plans to mitigate the emission of air pollutants within certain counties.⁴⁵⁷⁴

1999-2013: Building Energy Efficiency Program

⁴⁵⁶⁵ Press Release, Utah Dep't of Env'tl. Quality, Uintah Basin Turning to Innovative Air Quality Solutions (Nov. – Dec. 2012), <http://www.deq.utah.gov/Newsletter/pastissues/2012/novdec2012.pdf>.

⁴⁵⁶⁶ *Id.*

⁴⁵⁶⁷ *Id.*

⁴⁵⁶⁸ 1953 UTAH CODE ANN. § 54-4-13.4 (West 2013).

⁴⁵⁶⁹ 1953 UTAH CODE ANN. § 17-50-335 (West 2013).

⁴⁵⁷⁰ *Id.* at § 5.

⁴⁵⁷¹ 1953 UTAH CODE ANN. § 54-15-102 (West 2013).

⁴⁵⁷² 1953 UTAH CODE ANN. § 59-7-605 (West 2013).

⁴⁵⁷³ 1953 UTAH CODE ANN. § 15A-2-103 (West 2013).

⁴⁵⁷⁴ 1953 UTAH CODE ANN. § 63G-17-202 (West 2013).

Utah has two main state funding programs supporting energy efficient buildings: the Energy Efficiency Fund for qualified projects, and the State Building Energy Efficiency Program, specific to state owned projects.

In July 1999, Utah Governor Michael O. Leavitt issued an Executive Order establishing a State Building Energy Efficiency Program.⁴⁵⁷⁵ The purpose of the program was multifold. First, the program aimed to achieve significant energy savings through the implementation of a comprehensive and coordinated energy efficiency plan. Second, the program was designed to provide a source of funding for the LeRay McAllister Critical Land Conservation Fund. Finally, the program provided energy management services, technical energy assistance and financial coordination necessary to obtain energy cost reductions and efficiency in state facilities. All state agencies were required to participate in the program and act to meet the state's energy efficiency objectives in compliance with the Executive Order.

In 2007, Utah created the Energy Efficiency Fund to provide public loans to qualified energy efficiency projects. This program coincided with the state's Renewable Energy Systems Tax credit (discussed above). In 2009, Utah amended the rules associated with the Energy Efficiency Fund. Rule changes relaxed eligibility for marginally cost-effective proposals, and changed the application deadlines to a rolling basis, while suggesting several modifications to the fund's administration. In 2012, Utah passed an emergency rule transferring activities from SEP to OED. The 2012 rule also expanded the list of eligible energy efficiency activities and authorizes fees and interests rates on loans.

In 2008, Utah created the State Facility Energy Efficiency Fund, a revolving loan program to support investment in consumer energy efficiency improvements.⁴⁵⁷⁶ Utah amended the State Facility Energy Efficiency Fund in 2013 to require the agency to submit an evaluation memorandum following disbursement of funds.

2001: Net Metering

Utah has a mandatory net metering program, applicable to all electric utilities and cooperatives.⁴⁵⁷⁷ Eligible sources of energy include solar, wind, hydropower, and fuel cells based on renewables.⁴⁵⁷⁸ The size of the program is capped at .1% of capacity at peak demand in 2001.⁴⁵⁷⁹

⁴⁵⁷⁵ Executive Order, Governor's Executive Order Ordering Energy Conservation and Efficiency, issued June 21, 2001, <http://www.rules.utah.gov/execdoks/2001/e2001-06-21.htm>

⁴⁵⁷⁶ 2013-15 Utah Bull. 8 (Aug. 1, 2013). Specific rule is filed as R23-30 – State Energy Efficiency Fund.

⁴⁵⁷⁷ UTAH CODE ANN. § 54-15-103 (2006).

⁴⁵⁷⁸ *Id.* § 54-15-102.

⁴⁵⁷⁹ *Id.* § 54-15-103.

2007: Renewable Energy

Utah enacted S.B. 223 in 2007, expanding a number of tax credits and other provisions to enable the generation of power from solar and other alternative sources, such as biomass, geothermal and ground source heat pumps. Purchases or long-term leases of equipment used to generate energy from renewables are exempt from the state sales tax.⁴⁵⁸⁰ Individuals who install renewable energy systems in their homes are eligible for a tax credit of 25% of the cost of installation, up to \$2,000 per system.⁴⁵⁸¹ Corporate entities can claim tax credits of up to 10% of the installed cost, up to \$50,000 per system.⁴⁵⁸²

Utah requires that solar energy installers be licensed.⁴⁵⁸³ Municipalities are authorized to build solar access concerns into their zoning or planning.⁴⁵⁸⁴ The state code also contains voluntary easement provisions, which ensure that a solar easement runs with the land in perpetuity, unless otherwise stipulated.⁴⁵⁸⁵

2007: The Climate Registry

In May 2007, Utah and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”⁴⁵⁸⁶

2007-2011: Western Climate Initiative

⁴⁵⁸⁰ *Id.* § 54-12-47(a).

⁴⁵⁸¹ *Id.* § 59-10-1014(3)(a) Expands to 25% of the reasonable costs of each residential energy system installed with respect to each residential unit it owns. (2)(a)(i) 10% of \$50,000 per commercial unit.

⁴⁵⁸² *Id.*

⁴⁵⁸³ UTAH ADMIN. CODE r. 156-55a-301 (2006). Utah Construction Trades Licensing Act Rule. S202—Solar Photovoltaic Contractor. Fabrication, construction, installation, and replacement of photovoltaic cell panels and related components. Wiring, connections and wire methods as governed in the National Electrical Code and Subsection R156-55b-102(1) shall only be performed by an S200 General Electrical Contractor or S201 Residential Electrical Contractor. This classification is not required to install stand-alone solar systems that do not tie into premises wiring or into the electrical utility, such as signage or street or parking lighting.

⁴⁵⁸⁴ UTAH CODE ANN. § 10-9a-102 (LexisNexis 2006).

⁴⁵⁸⁵ *Id.* §§ 57-13-1, -2.

⁴⁵⁸⁶ Press Release, The Climate Registry, *Dozens of States Join The Climate Registry to Track Greenhouse Gas Emissions*, (May 8, 2008), <http://www.prnewswire.com/news-releases/dozens-of-states-join-the-climate-registry-to-track-greenhouse-gas-emissions-58041487.html> (Mar. 25, 2014).

In 2006, the Utah Department of Natural Resources completed a climate change action plan for the state for the U.S. EPA.⁴⁵⁸⁷ The analysis includes an economic and policy review of greenhouse gas reduction strategies in the state of Utah.⁴⁵⁸⁸

In May 2007, Governor Jon Huntsman joined the Western Climate Initiative (WCI), originally initiated in February 2007 by the governors of Arizona, California, New Mexico, Oregon, and Washington.⁴⁵⁸⁹ On August 22, 2007, the WCI set a regional greenhouse gas (GHG) emission reduction goal of 15% below 2005 levels by 2020, or approximately 33% below business-as-usual levels.⁴⁵⁹⁰ This regional target was compatible with and did not replace the states' individual GHG reduction targets.⁴⁵⁹¹ Montana and four Canadian provinces joined the WCI subsequent to 2007.⁴⁵⁹² The WCI announced draft essential requirements for the reporting of GHG emissions in July 2008.⁴⁵⁹³ It also released *Design Recommendations for the WCI Regional Cap-and-Trade Program* on September 23, 2008.⁴⁵⁹⁴

The WCI's *Design Recommendations* report recommended that carbon dioxide; methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions should all fall under a regional cap-and-trade scheme.⁴⁵⁹⁵ Regulated sources included electricity generation; combustion at industrial and commercial facilities; industrial process; fuel combustion from industrial, residential and commercial sources that are below the threshold for direct regulation; and transportation combustion of gasoline/diesel (excluding biofuels).⁴⁵⁹⁶ It also recommended that each of these sources must emit at least 25,000 metric tons of carbon dioxide equivalent annually to participate in the trade.⁴⁵⁹⁷ The first compliance periods began in 2012 and include half of the economy-wide regulated emissions from the WCI's member jurisdiction for the electricity generation, industrial combustion and industrial process sectors.⁴⁵⁹⁸ The

⁴⁵⁸⁷ UTAH DEPARTMENT OF NATURAL RESOURCES, GREENHOUSE GAS REDUCTIONS IN UTAH: AN ECONOMIC AND POLICY ANALYSIS (Sept. 7, 2006), http://geology.utah.gov/emp/energydata/statistics/ghg8.0/pdf/ghg_reduction00.pdf.

⁴⁵⁸⁸ *Id.*

⁴⁵⁸⁹ WESTERN CLIMATE INITIATIVE, Home Page, <http://www.westernclimateinitiative.org/>.

⁴⁵⁹⁰ WESTERN CLIMATE INITIATIVE, Statement of Regional Goal, <http://www.westernclimateinitiative.org/ewebeditpro/items/O104F13006.pdf>.

⁴⁵⁹¹ *Id.*

⁴⁵⁹² WESTERN CLIMATE INITIATIVE, Home Page, <http://www.westernclimateinitiative.org/>.

⁴⁵⁹³ *Id.*

⁴⁵⁹⁴ WESTERN CLIMATE INITIATIVE, Design Recommendations for the WCI Regional Cap-and-Trade Program, <http://www.westernclimateinitiative.org/ewebeditpro/items/O104F19865.PDF>.

⁴⁵⁹⁵ *Id.* at 8.

⁴⁵⁹⁶ *Id.* at 8-9.

⁴⁵⁹⁷ *Id.* at 10.

⁴⁵⁹⁸ *Id.* at 24.

second compliance period begins in 2015, adding the other regulated sectors and includes 90% of the economy-wide regulated emissions.⁴⁵⁹⁹

Pursuing its cap-and-trade program, the WCI released the third draft of the *Background Document and Progress Report for Essential Requirements of Mandatory Reporting For the Western Climate Initiative* on January 6, 2009 for public comment.⁴⁶⁰⁰ It set the reporting threshold at 10,000 metric tons of CO₂e in a year, well below the 25,000 metric ton threshold for participation in the cap-and-trade program.⁴⁶⁰¹ It also recommended that stationary combustion sources be subject to the reporting requirement as well as the sources listed in Table 1 of the document. It required these listed sources to report combustion and non-combustion emissions.⁴⁶⁰² Due to strong stakeholder support, it also recommended that reporting begin in 2011 for facilities that began operation before 2010 in preparation for the commencement of the cap-and-trade program in 2012.⁴⁶⁰³

On February 24, 2009, the Utah House of Representatives passed a non-binding resolution to withdraw Utah from the WCI.⁴⁶⁰⁴ The resolution based its opposition to WCI on economic concerns and lack of legislative consultation and public input.⁴⁶⁰⁵

On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the WCI, and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.⁴⁶⁰⁶

In July 2009, the WCI, including Utah, issued an Offsets Whitepaper for comments to its stakeholders.⁴⁶⁰⁷ The paper was the initial phase in development of the definition of an offset and a major focus of the paper was additionality.⁴⁶⁰⁸

WCI's Cap Setting and Allowance Distribution Committee released its *Draft Statement of Principles on Competitiveness* and the *Review of Proposed Options for*

⁴⁵⁹⁹ *Id.*

⁴⁶⁰⁰ WESTERN CLIMATE INITIATIVE, WCI Documents, http://www.westernclimateinitiative.org/WCI_Documents.cfm.

⁴⁶⁰¹ *Id.* at 10.

⁴⁶⁰² *Id.* at 11.

⁴⁶⁰³ *Id.* at 16.

⁴⁶⁰⁴ H.R. 3, 58th Leg., Gen. Sess. (Utah 2009).

⁴⁶⁰⁵ *Id.*

⁴⁶⁰⁶ Van Ness Feldman, Weekly Climate Change Policy Update – June 29, 2009, <http://www.vnf.com/news-policyupdates-373.html>.

⁴⁶⁰⁷ WESTERN CLIMATE INITIATIVE, Offset Definition and Eligibility Criteria White Paper Available for Comment 7/24 - 8/21, <http://www.westernclimateinitiative.org/archives/59-offset-definition-and-eligibility-criteria-white-paper-available-for-comment-724-821->

⁴⁶⁰⁸ *Id.*

Addressing Industrial Competitiveness Impacts in August 2009.⁴⁶⁰⁹ The purpose of the draft was to “guide the process by which WCI will evaluate competitiveness effects of a regional cap-and-trade program,” and also to review how other cap-and-trade programs address this issue.⁴⁶¹⁰

In November 2011, Utah and a number of other states withdrew from the WCI.⁴⁶¹¹

2008-2013: Transportation/Fuels

In March 2008, Utah enacted H.B. 106, providing a \$750 tax credit for vehicles meeting high air quality and fuel efficiency standards.⁴⁶¹² The law also removed a provision that prevented gas/electric hybrid vehicles from receiving tax credits.⁴⁶¹³

Utah announced in March of 2012 that it would replace 73 state fleet vehicles with fuel-efficient hybrid vehicles throughout 2012, as a part of the Utah Clean Air Partnership (U-CAIR).⁴⁶¹⁴ The selected hybrid vehicle models represented an 83% improvement in efficiency as compared to similar non-hybrid sedans.⁴⁶¹⁵ Four compressed natural gas (CNG) vehicles would also be added to the fleet, totaling 85 CNG vehicles in the state fleet.⁴⁶¹⁶ The state also planned to purchase electric vehicles for the fleet.⁴⁶¹⁷

Electric vehicle charging stations became available to both the employees of the Department of Environmental Quality and the general public when the DEQ installed six charging stations at the Multi Agency State Government Office Building.⁴⁶¹⁸ Three levels of charging ability were made available for batteries at different stages of depletion.⁴⁶¹⁹ The project was made possible in part by a grant from the U. S. Department of Energy.⁴⁶²⁰

⁴⁶⁰⁹ WESTERN CLIMATE INITIATIVE, Draft Statement of Principles on Competitiveness and Review of Options, <http://www.westernclimateinitiative.org/archives/62-draft-statement-of-principles-on-competitiveness-and-review-of-options>.

⁴⁶¹⁰ *Id.*

⁴⁶¹¹ Geoffrey Craig, *Six states leave Western Climate Initiative to join new group that promotes carbon sequestration*, ELECTRIC UTILITY WEEK, Nov. 28, 2011, <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/ElectricPower/6695863>.

⁴⁶¹² 2008 Utah Laws 106.

⁴⁶¹³ *Id.*

⁴⁶¹⁴ Press Release, Utah Governor Gary Herbert, State Purchases Hybrids to Replace Part of its Fleet (Mar. 5, 2012), http://www.utah.gov/governor/news_media/article.html?article=6725.

⁴⁶¹⁵ *Id.*

⁴⁶¹⁶ *Id.*

⁴⁶¹⁷ *Id.*

⁴⁶¹⁸ Donna Kemp Spangler, ed., UTAH DEPT. OF ENVTL. QUALITY, *Plug-Ins Available for Electric Cars at DEQ* (Mar. – Apr. 2012), <http://www.deq.utah.gov/Newsletter/pastissues/2012/MarApr2012.pdf>.

⁴⁶¹⁹ *Id.*

⁴⁶²⁰ *Id.*

In May 2012, Governor Herbert signed an executive order requiring all state vehicles be turned off if expected to idle for more than thirty seconds.⁴⁶²¹ Herbert hoped that state employees could set an example for the rest of the state and that businesses and residents would follow suit and pledge to cut engine idling.⁴⁶²² The initiative could also save the state 60,000 gallons per year in fuel consumption.⁴⁶²³

In March 2013, the Utah Department of Environmental Quality awarded \$250,000 in grants from the Clean Fuels Grant and Loan Program to encourage the expansion of natural gas use in state infrastructure.⁴⁶²⁴ The recipients, Salt Lake City Corporation, Utah Transit Authority, and University of Utah, will purchase compressed natural gas vehicles for their fleets, in addition to expanding natural gas refueling stations.⁴⁶²⁵

Utah also enacted S.B. 202, entitled “Energy Resource and Carbon Emission Reduction Initiative,” that month, requiring the state’s utilities to obtain 20% of their “adjusted” electric sales from renewable sources by 2025.⁴⁶²⁶ This percentage would not apply to sales from nuclear and coal plants using carbon sequestration.⁴⁶²⁷

On June 20, 2008, Utah’s Department of Environmental Quality announced a goal of reducing statewide GHG emissions to 2005 levels by 2020.⁴⁶²⁸ It planned to achieve the GHG reduction using several policy tools, including: increased reliance on renewable energy sources; policies to reduce energy demand and increase efficiency; mass transit policies; and participation in the WCI’s cap-and-trade program.⁴⁶²⁹

In July 2008, Utah and eleven other states were awarded grants by the National Governors Association (NGA) to help advance clean energy projects.⁴⁶³⁰ The NGA Center for Best Practices awarded grants of \$50,000 to the states as part of its Clean

⁴⁶²¹ Press Release, Utah Governor Gary Herbert, Governor Signs Executive Order Reducing Idling from State Vehicles (May 31, 2012), http://www.utah.gov/governor/news_media/article.html?article=7154.

⁴⁶²² *Id.*

⁴⁶²³ *Id.*

⁴⁶²⁴ Department of Environmental Quality awards grants for natural gas use, DESERET NEWS (Mar. 21, 2013, 12:06 PM), <http://www.deseretnews.com/article/865576382/Department-of-Environmental-Quality-awards-grants-for-natural-gas-use.html>.

⁴⁶²⁵ *Id.*

⁴⁶²⁶ S.B. 202, 57th Leg., Gen. Sess. (Utah 2008), *enacted* 2008 Utah Code Ann. §§ 10-19-201-2 (LexisNexis 2008)

⁴⁶²⁷ *Id.*

⁴⁶²⁸ PEW CTR. ON GLOBAL CLIMATE CHANGE, Utah Announced Greenhouse Gas Reduction Goal, <http://www.pewclimate.org/node/6026>.

⁴⁶²⁹ *Id.*

⁴⁶³⁰ News Release, Nat’l Governors Ass’n, NGA Awards Clean Energy Grants to 12 States, <http://www.nga.org/portal/site/nga/menuitem.6c9a8a9ebc6ae07eee28aca9501010a0/?vgnextoid=feecd9b353ada110VgnVCM1000001a01010aRCRD>.

Energy States Grant Program. The awards were designed to help develop greater energy efficiency, conservation, and clean energy resources.⁴⁶³¹

In March 2009, the Utah announced a partnership with the University of Utah and Headwaters, Inc. to develop carbon capture and sequestration projects for coal-fired power plants.⁴⁶³²

2009: American Recovery & Reinvestment Act (ARRA)

On March 12, 2009, the U.S. Department of Energy announced that Utah was eligible for \$35,362,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).⁴⁶³³

In May 2009, Governor Huntsman and a coalition of other governors signed an agreement to support federal climate change legislation.⁴⁶³⁴ The agreement contained two principles: the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.⁴⁶³⁵

VERMONT

1998: Market-Based Solutions and Greenhouse Gas Reduction

In 1998, Vermont introduced net metering laws that allow electricity consumers to participate in a net metering program after they apply for and receive a “Certificate of Public Good for Interconnected Net Metered Power Systems.”⁴⁶³⁶ Currently, net metering is only available for renewable energy generators producing at most 15 kilowatts (KW) of energy.⁴⁶³⁷

The Vermont Department of Public Service completed a greenhouse gas (GHG) action plan in 1998.⁴⁶³⁸ This plan suggested that Vermont take actions to capture more energy savings in new and existing homes and multi-family low income housing, increase their use of renewable energy sources, improve transportation energy use, and

⁴⁶³¹ *Id.*

⁴⁶³² Carbon Capture Journal, *University of Utah and Headwaters in carbon services partnership*, <http://www.carboncapturejournal.com/displaynews.php?NewsID=354>.

⁴⁶³³ U.S. DEP’T OF ENERGY, NAT’L ENERGY TECH. LAB., State Energy Program Formula Grants, at 46, http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁴⁶³⁴ Press Release, Georgetown Climate Ctr., Governors’ Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

⁴⁶³⁵ Governors’ Energy and Climate Coalition, Statement of Principles, <http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

⁴⁶³⁶ VT. STAT. ANN. tit. 30, § 219a (2011).

⁴⁶³⁷ *Id.*

⁴⁶³⁸ VT. DEP’T OF PUB. SERV., FUELING VERMONT’S FUTURE: COMPREHENSIVE ENERGY PLAN AND GREENHOUSE GAS AUCTION PLAN, (1998), <http://web.archive.org/web/20090604051803/http://publicservice.vermont.gov/pub/state-plans/cepov.pdf>.

review energy policy and taxation at the state and federal levels to assure that energy goals are promoted.⁴⁶³⁹

2002: Renewable Energy, Greenhouse Gas Reduction, and Energy Efficiency

In 2002, Governor Dean issued an executive order (EO) charging the state with developing a plan for improving efficiency and reducing GHG emissions from government sources.⁴⁶⁴⁰ In the same year, Vermont began offering a sales tax exemption for all renewable power systems with a capacity of up to 15 KWs (or up to 150 KWs for on-farm systems).⁴⁶⁴¹

2003: Greenhouse Gas Reduction

In the following year, Governor Douglas signed an EO for state government buildings to reduce GHG emissions to 1990 levels by 2010, to 10% below 1990 levels by 2020, and, in the long term, to levels “sufficient to eliminate any dangerous threat to the climate.”⁴⁶⁴² He also signed into law the *Vermont Small-Scale Renewable Energy Program*, designed to stimulate market demand for solar and wind systems.⁴⁶⁴³ Vermont agreed, under the auspices of the New England Governors and Eastern Canadian Premiers, to a voluntary short-term goal of reducing regional GHG emissions to 1990 levels by 2010 and by 10% below 1990 levels by 2020.⁴⁶⁴⁴

2005: Climate Change Agreements, Greenhouse Gas Reduction, Transportation/Fuels, Renewable Portfolio Standard, and Renewable Energy

Vermont became a member of the Regional Greenhouse Gas Initiative (RGGI) in 2005, thereby agreeing to cap emissions at current levels between 2009 and 2015 and to reduce these levels by 10% by 2018.⁴⁶⁴⁵

In 2005, Vermont adopted California’s GHG emissions standards for motor vehicles.⁴⁶⁴⁶ The state also set a renewable portfolio goal, calling for the state’s electric utilities to meet growth in electricity demand between 2005 and 2012 by using energy efficiency and renewable-energy resources.⁴⁶⁴⁷ At the end of 2005, Governor Douglas signed EO 07-05, creating the Governor’s Commission on Climate Change. The

⁴⁶³⁹ *Id.*

⁴⁶⁴⁰ Vt. Exec. Order No. 11-02 (2002).

⁴⁶⁴¹ VT. STAT. ANN. tit. 32, § 9741(46) (2005).

⁴⁶⁴² Vt. Exec. Order No. 14-03 (2003).

⁴⁶⁴³ *The Vermont Solar & Small Wind Incentive Program*, The Vt. Dep’t of Pub. Serv., <http://web.archive.org/web/20040326084635/http://www.nerc-vt.org/incentives/> (Nov. 28, 2013).

⁴⁶⁴⁴ *See* NEW ENGLAND GOVERNORS/EASTERN CANADIAN PREMIERS, CLIMATE CHANGE ACTION PLAN 2001 (2001), <http://web.archive.org/web/20040229181939/http://www.negc.org/documents/NEG-ECP%20CCAP.PDF>.

⁴⁶⁴⁵ VT. STAT. ANN. tit. 30, § 255 (2005).

⁴⁶⁴⁶ 12-031-001 VT. CODE R. (2005); *see also* CAL. CODE REGS. tit. 13, § 1961.1 (2005).

⁴⁶⁴⁷ 30 VT. STAT. ANN. § 8001 et seq. (2011).

Commission developed a climate change action plan to reduce GHG emissions in the state and submitted it to Douglas on October 26, 2007.⁴⁶⁴⁸

Additionally, the General Assembly established the Clean Energy Development Fund (CEDF) in 2005.⁴⁶⁴⁹ The CEDF was funded by Entergy, owner of the Vermont Yankee nuclear plant, which agreed to provide \$6 to \$7.2 million annually through March 2012. This funding, managed by the Department of Public Service, was given to renewable and combined heat and power technologies.⁴⁶⁵⁰

2006: Greenhouse Gas Reduction

In 2006, Vermont adopted legislation calling for the state to reduce GHG emissions by 25% from 1990 levels by 2012, 50% by 2028 and “if practical using reasonable efforts,” and 75% by 2050.⁴⁶⁵¹ Governor Douglas also signed a bill in May 2006 setting new energy efficiency standards for industrial and household appliances.⁴⁶⁵²

2007: Climate Change Agreements

In May 2007, Vermont and thirty other states founded The Climate Registry to “measure, track, verify, and publicly report greenhouse gas emissions accurately, transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”⁴⁶⁵³

2008: Renewable Energy, Transportation/Fuels, Market-Based Solutions, Energy Efficiency, and Green Jobs

On March 20, 2008, Governor Douglas signed into law Senate Bill (S.) 209, the *Energy Efficiency and Affordability Act of 2008*.⁴⁶⁵⁴ The Act set a statewide goal of producing 25% of energy consumed in Vermont from renewable sources by 2025.⁴⁶⁵⁵ It increased the use of net metering and expanded the use of biodiesel in state buildings and the state’s vehicle fleet.⁴⁶⁵⁶ It also expanded funding for efficiency programs and tax

⁴⁶⁴⁸ Vt. Exec. Order No. 07-05 (2005). VT. GOVERNOR’S COMM’N ON CLIMATE CHANGE, FINAL REPORT AND RECOMMENDATIONS OF THE GOVERNOR’S COMM’N ON CLIMATE CHANGE (2007), http://www.anr.state.vt.us/anr/climatechange/Pubs/GCCC%20Final%20Report_pages%201-10.pdf.

⁴⁶⁴⁹ VT. STAT. ANN. tit. 10, § 6523 (2005),

<http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=10&Chapter=157&Section=06523>.

⁴⁶⁵⁰ *Id.*

⁴⁶⁵¹ 10 VT. STAT. ANN. 578 (2007).

⁴⁶⁵² H. 253, Gen. Assemb., 2005-2006 Leg. Sess. (Vt. 2006).

⁴⁶⁵³ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007), http://web.archive.org/web/20080208012845/http://www.theclimateregistry.org/The_Climate_Registry_Press_Release.pdf.

⁴⁶⁵⁴ S. 209, Gen. Assemb., 2007-2008 Leg. Sess. (Vt. 2008).

⁴⁶⁵⁵ *Id.*

⁴⁶⁵⁶ *Vermont Governor Signs Efficiency Bill*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.pewclimate.org/node/5699> (Nov. 28, 2013).

incentives designed to help promote investment in renewable energy resources.⁴⁶⁵⁷ In addition, the Act created a fuel efficiency fund that is financed by revenues from the sale of emission allowances under RGGI.⁴⁶⁵⁸

The first RGGI auction took place on September 25, 2008, offering 12,565,387 allowances for sale.⁴⁶⁵⁹ Each of these allowances sold at a clearing price of \$3.07, raising a total of \$38,575,783.⁴⁶⁶⁰ These proceeds would be used to fund renewable energy and energy efficiency technologies and programs in the states that offered allowances.⁴⁶⁶¹ The second auction took place on December 17, 2008, and each of the ten states participated.⁴⁶⁶² All of the available 31,505,898 allowances were sold, 3.5 times lower than the demand of 108,709,000 allowances.⁴⁶⁶³ The clearing price was \$3.38 per allowance, raising a total of \$106.5 million.⁴⁶⁶⁴

Governor Douglas announced a program to provide funds for towns to reduce energy use and promote green jobs on November 20, 2008.⁴⁶⁶⁵ This funding (\$1.8 million paid over a five-year period) came from the settlement of the state's action against American Electric Power Corp., the country's largest operator of coal-fired power plants.⁴⁶⁶⁶ Each local community could receive up to \$12,000 for energy efficiency projects and had to match 10% of this funding. This program was administered by the Vermont Agency of Natural Resources.⁴⁶⁶⁷

On December 31, 2008, RGGI participants and Pennsylvania (an observer) signed a letter of intent to reduce carbon emissions from the transportation sector.⁴⁶⁶⁸ Specifically, they expressed their intent to incorporate a Low Carbon Fuel Standard (LCFS) into the RGGI scheme, requiring reductions in the average lifecycle GHG per unit of useful energy in motor vehicles.⁴⁶⁶⁹ In further support of improving motor vehicle fuel efficiency, Governor Douglas publicly supported President Obama's order that the EPA to reconsider granting the California Clean Air Act waiver to regulate motor vehicle

⁴⁶⁵⁷ *Id.*

⁴⁶⁵⁸ *Id.*

⁴⁶⁵⁹ Press Release, RGGI Inc., RGGI States' First CO₂ Auction Off to a Strong Start (Sept. 29, 2008), http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

⁴⁶⁶⁰ *Id.* at 1.

⁴⁶⁶¹ *Id.*

⁴⁶⁶² Auction 2, RGGI INC., http://www.rggi.org/docs/Auction_2_State_Proceeds_and_Allowances.pdf (Nov. 28, 2013).

⁴⁶⁶³ Auction 2, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/116 (Nov. 28, 2013).

⁴⁶⁶⁴ *Id.*

⁴⁶⁶⁵ Press Release, Vermont.gov, Governor Announces Climate Change Grant Program – Funds Will Help Towns Reduce Energy Use, Save Money and Promote Green Jobs (Nov. 20, 2008), <http://web.archive.org/web/20110104205500/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3245&v=Article>.

⁴⁶⁶⁶ *Id.*

⁴⁶⁶⁷ *Id.*

⁴⁶⁶⁸ Northeast/Mid-Atlantic States Low Carbon Fuel Standard Program, MASS.GOV, http://web.archive.org/web/20090207020343/http://www.mass.gov/Eoeea/docs/pr_lcfs_attach.pdf (Nov. 30, 2013).

⁴⁶⁶⁹ *Id.* at 1.

emissions.⁴⁶⁷⁰ Vermont was the first state to adopt California's motor vehicle GHG emission standards.⁴⁶⁷¹

2009: American Recovery & Reinvestment Act (ARRA), Market-Based Solutions, Energy Efficiency, Cap-&-Trade, Climate Change Agreements & Memorandums of Understanding, Green Technology, Greenhouse Gas Reduction, Renewable Energy, and Transportation/Fuels

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Vermont was eligible for \$21,999,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).⁴⁶⁷²

The third RGGI auction was held on March 18, 2009.⁴⁶⁷³ The auction sold 31,513,765 allowances of the 2009 vintage at a clearing price of \$3.51 per allowance and 2,175,513 allowances of the 2012 vintage at a clearing price of \$3.05 per allowance. This auction provided the first glimpse at future market prices for RGGI allowances.⁴⁶⁷⁴

Taking further steps to address climate change, Governor Douglas announced on March 20, 2009 that a total of \$188,000 would be granted to seventeen energy efficiency projects.⁴⁶⁷⁵ Projects included sealing and insulating a school, replacing the boilers in the town of Waterbury's public facilities, and purchasing hybrid vehicles for CarShare Vermont, Burlington. The seventeen projects would result in a reduction of 270 tons of carbon emissions annually.⁴⁶⁷⁶ Nearly three weeks later, Douglas announced that \$2.57 million would be invested in renewable energy projects.⁴⁶⁷⁷ The projects fell within the following categories: Pre-Project Financial Assistance, Large-Scale Systems, and Special Demonstration Projects.

In order to protect their states' wind technology, Governor Douglas and other governors wrote a letter to Congress in May 2009 communicating their opposition to

⁴⁶⁷⁰ Press Release, Vermont.gov, Governor Douglas' Statement on President Obama's Emission Control Policy (Jan. 26, 2009), <http://web.archive.org/web/20090131024042/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3310&v=Article>.

⁴⁶⁷¹ *Id.*

⁴⁶⁷² U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS, at 45 (Apr. 24, 2009), http://web.archive.org/web/20130421082705/http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁴⁶⁷³ Press Release, RGGI Inc., States Release Results of Third Auction for RGGI CO₂ Allowances (Mar. 20, 2009), <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

⁴⁶⁷⁴ *Id.*

⁴⁶⁷⁵ Press Release, Vermont.gov, Governor Douglas Announces \$188,000 in Climate Change Grants (Mar. 20, 2009), <http://web.archive.org/web/20090604040923/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3389&v=Article>.

⁴⁶⁷⁶ *Id.*

⁴⁶⁷⁷ Press Release, Vermont.gov, Governor Announces More Than \$2.5 Million for Renewable Energy Projects (Apr. 14, 2009), <http://web.archive.org/web/20110104121529/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3424&v=Article>.

proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.⁴⁶⁷⁸ Also in May, in an effort to provide an incentive for electricity generation from renewable sources, Douglas announced that the state Department of Public Service had filed an application for the \$21,999,000 allocated to Vermont under ARRA.⁴⁶⁷⁹ He also applauded the Obama Administration's decision to adopt GHG standards for cars and light trucks based on California's tailpipe emissions standards.⁴⁶⁸⁰

At the end of May 2009, Governor Douglas allowed a bill establishing a feed-in tariff to become law without his signature.⁴⁶⁸¹ Although he objected to the fact that the legislature had not set statutory standard offer rates in the bill, he allowed it to become law on the condition that the Department of Public Service would revisit these rates within the following four months and regularly thereafter.⁴⁶⁸² Feed-in tariffs require electric utilities to obtain a certain amount of their electricity generation sources from renewable sources. This law created long-term contracts for renewable sources: 25 years for solar and 20 years for all other renewables.⁴⁶⁸³

Governor Douglas also signed an agreement with a coalition of other governors to support federal climate change legislation.⁴⁶⁸⁴ The agreement contained two principles: the support of comprehensive federal legislation and promotion of a federal-state

⁴⁶⁷⁸ Letter from Donald L. Carcieri, Governor of R.I., Deval Patrick, Governor of Mass., Jack Markell, Governor of Del., John Baldacci, Governor of Me., Martin O'Malley, Governor of Md., John H. Lynch, Governor of N.H., Jon S. Corzine, Governor of N.J., David A. Paterson, Governor of N.Y., James H. Douglas, Governor of Vt., Timothy M. Kaine, Governor of Va. to Harry Reid, Majority Leader, U.S. Senate, Mitch McConnell, Minority Leader, U.S. Senate, Nancy Pelosi, Speaker, U.S. House of Representatives, John Boehner, Minority Leader, U.S. House of Representatives (May 4, 2009), http://web.archive.org/web/20090507010001/http://www.gov.ri.gov/documents/East_Coast_Govs_Transmission_Ltr.pdf.

⁴⁶⁷⁹ Press Release, Vermont.gov, Governor Announces \$22 Million in ARRA Funds for Vermont Renewable Energy Program (May 14, 2009), <http://web.archive.org/web/20101103132810/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3473&v=Article>.

⁴⁶⁸⁰ Press Release, Vermont.gov, Statement of Governor Jim Douglas Regarding the Obama Administration's Decision to Adopt California Standards for Automobile Tailpipe Emissions (May 18, 2009), <http://web.archive.org/web/20110104142820/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3482&v=Article>.

⁴⁶⁸¹ Press Release, Vermont.gov, Governor Douglas Allows H.466 to Become Law Without His Signature (May 27, 2009), <http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3497&v=Article>.

⁴⁶⁸² *Id.*

⁴⁶⁸³ H. 446, Gen. Assemb., 2009-2010 Leg. Sess. (Vt. 2009), <http://web.archive.org/web/20131021040815/http://www.leg.state.vt.us/docs/2010/bills/House/H-446.pdf>.

⁴⁶⁸⁴ Press Release, Georgetown Climate Ctr., Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://web.archive.org/web/20090817025744/https://www.law.georgetown.edu/gcc/News/documents/Coalitionrelease.pdf>.

partnership in implementing this legislation.⁴⁶⁸⁵ Douglas then vetoed legislation relating to decommissioning funds for nuclear electric facilities because he believed the legislation would increase rates for consumers and “substitute[d] an objective process with political calculations.”⁴⁶⁸⁶ However, he did sign a bill to encourage electricity production from biomass.⁴⁶⁸⁷ This May 2009 bill created a “Biomass Energy Development Working Group” to develop strategies for biomass development as well as safeguards to ensure that biomass development does not unduly harm the environment.⁴⁶⁸⁸

In an effort to promote energy efficiency, Governor Douglas and the state’s Congressional Delegation sent a letter to Vice President Biden encouraging him to accelerate the smart grid funding process under the ARRA.⁴⁶⁸⁹ This would supplement the RGGI auction proceeds allocated to energy efficiency programs (about \$684,554 after the fourth auction).⁴⁶⁹⁰

The fourth RGGI auction was held on June 17, 2009 where prices fell to \$3.23 per allowance of the 2009 vintage and \$2.06 per allowance of the 2012 vintage.⁴⁶⁹¹

On June 23, 2009, representatives from RGGI, the Western Climate Initiative (WCI), and the Midwest Greenhouse Gas Reduction Accord (MGGRA) met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.⁴⁶⁹²

In an effort to encourage climate change action at the state level, Governor Douglas announced the second round of climate change grants on June 29, 2009, with a

⁴⁶⁸⁵ *Statement of Principles*, GOVERNORS’ ENERGY AND CLIMATE COALITION (May 21, 2009), <http://web.archive.org/web/20090816230508/http://www.law.georgetown.edu/gcc/News/documents/GovernorsEnergyandClimateCoalitionUpdated.pdf>.

⁴⁶⁸⁶ Press Release, Vermont.gov, Governor Douglas Vetoes H.436 – Decommissioning Bill (May 22, 2009), <http://web.archive.org/web/20110104185717/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3486&v=Article>.

⁴⁶⁸⁷ Press Release, Vermont.gov, Governor Signs Bill to Encourage Biomass Energy Production (May 27, 2009), <http://web.archive.org/web/20110104095340/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3495&v=Article>.

⁴⁶⁸⁸ H.152, Gen. Assemb., 2009-2010 Leg. Sess. (Vt. 2009), <http://web.archive.org/web/2013102224600/http://www.revermont.org/documents/H-152.pdf>.

⁴⁶⁸⁹ Press Release, Vermont.gov, Governor Douglas and Vermont’s Congressional Delegation Urge Vice President Biden to Expedite ARRA Broadband and SmartGrid Funding (June 15, 2009), <http://web.archive.org/web/20110104182638/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3524&v=Article>.

⁴⁶⁹⁰ Press Release, Vermont.gov, Governor Announces Vermont Yields \$684,554 from Latest RGGI Auction (June 19, 2009), <http://web.archive.org/web/20110104144434/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3531&v=Article>.

⁴⁶⁹¹ *Auction 4*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/114 (Sept. 21, 2013).

⁴⁶⁹² Kyle Danish et al., *Weekly Climate Change Policy Update – June 29, 2009*, VAN NESS FELDMAN (June 29, 2009), <http://www.vnf.com/news-policyupdates-373.html>.

total of \$170,000 going towards fifteen energy efficiency projects.⁴⁶⁹³ He further supported energy efficiency by commending the U.S. EPA's granting of the California Clean Air Act waiver.⁴⁶⁹⁴

Governor Douglas was ranked as one of the top ten "Green Governors" in the nation for his support of clean and efficient energy use by *Greenopia* on June 30, 2009.⁴⁶⁹⁵ He then joined other New England governors in pursuing the development of high-speed rail in the region.⁴⁶⁹⁶

In an effort to support alternative technologies, Governor Douglas announced on August 12, 2009 that solar thermal systems would be installed in all of the toilet buildings and bathhouses in Vermont state park campgrounds.⁴⁶⁹⁷

In September 2009, Governor Douglas announced that fourteen energy efficiency projects were to receive funding totaling \$150,000.⁴⁶⁹⁸ He also announced that the state would be providing \$500,000 in funding for ecosystem restoration projects.⁴⁶⁹⁹

The fifth RGGI action was held on September 9, 2009.⁴⁷⁰⁰ The auction sold 28,408,945 allowances of the 2009 vintage at a clearing price of \$2.19 per allowance and 2,172,540 allowances of the 2012 vintage at a clearing price of \$1.87 per allowance.⁴⁷⁰¹ On September 11, 2009, the one-year anniversary of RGGI, Governor Douglas

⁴⁶⁹³ Press Release, Vermont.gov, Governor Awards Second Round of Climate Change Grants (June 29, 2009), <http://web.archive.org/web/20110104150714/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3550&v=Article>.

⁴⁶⁹⁴ Press Release, Vermont.gov, Statement of Governor Jim Douglas on EPA Decision to Grant California Waiver (June 30, 2009), <http://web.archive.org/web/20101103131930/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3554&v=Article>.

⁴⁶⁹⁵ Press Release, Vermont.gov, Governor Douglas Ranked in Top Ten "Green Governors" (June 30, 2009), <http://web.archive.org/web/20110104111630/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3555&v=Article>.

⁴⁶⁹⁶ Press Release, Vermont.gov, New England Governors Pursuing Joint Regional Vision for High Speed Rail (July 13, 2009), <http://web.archive.org/web/20110104170734/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3577&v=Article>.

⁴⁶⁹⁷ Press Release, Vermont.gov, State Parks Going Solar, Creating Jobs (Aug. 12, 2009), <http://web.archive.org/web/20101103131249/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3621&v=Article>.

⁴⁶⁹⁸ Press Release, Vermont.gov, Governor Announces 14 Climate Change Grants (Sept. 4, 2009), <http://web.archive.org/web/20101103131058/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3651&v=Article>.

⁴⁶⁹⁹ Press Release, Vermont.gov, Governor Announces \$500,000 in Clean & Clear Grants (Sept. 8, 2009), <http://web.archive.org/web/20110104182014/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3652&v=Article>.

⁴⁷⁰⁰ Auction 5, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/113 (Oct. 14, 2013).

⁴⁷⁰¹ *Id.*

announced that Vermont would earn \$471,319 from the fifth RGGI auction, making the first year of auction proceeds for the state \$3.2 million.⁴⁷⁰²

In October 2009, the Vermont Agency of Transportation awarded \$3.9 million in public transit grants to six public transportation providers to mitigate traffic congestion and associated air quality problems.⁴⁷⁰³ The state also received the smart grid grant that Governor Douglas had previously urged Vice President Biden to accelerate on October 27, with the grant totaling nearly \$69 million.⁴⁷⁰⁴

The sixth RGGI auction was held on December 2, 2009. The auction sold 28,591,698 allowances of the 2009 vintage at a clearing price of \$2.05 per allowance and 1,599,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.⁴⁷⁰⁵

Governor Douglas signed a memorandum of understanding (MOU) in December 2009 with RGGI participant governors from Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, and Rhode Island as well as Pennsylvania, a RGGI observer.⁴⁷⁰⁶ The MOU committed each state to a continued participation in a regional effort to reduce GHG emissions from fuels for vehicles and other uses and to develop a regional low carbon fuel standard (LCFS). These states planned to collaborate with the Northeast States for Coordinated Air Use Management (NESCAUM).⁴⁷⁰⁷ The LCFS program would be a market-based, fuel-neutral program to address the carbon in fuels, which represent approximately 30% of emissions region wide.⁴⁷⁰⁸ Signatories to the MOU agreed to work together to analyze low carbon fuel supply options, determine the feasibility of achieving a range of reduction goals and develop a framework for a regional LCFS in order to ensure sustainable use of renewable fuels in the region.⁴⁷⁰⁹

In 2009, state and regional representatives from three regional GHG reduction initiatives, the RGGI, the WCI, and the MGGRA, came together to form North America

⁴⁷⁰² Press Release, Vermont.gov, RGGI Auctions Turn One Year Old (Sept. 11, 2009), <http://web.archive.org/web/20110104183558/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3655&v=Article>.

⁴⁷⁰³ Press Release, Vermont.gov, Governor Douglas Announces \$3.9 Million in Public Transit Grants (Oct. 14, 2009), <http://web.archive.org/web/20101103130632/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3703&v=Article>.

⁴⁷⁰⁴ Press Release, Vermont.gov, Governor Douglas Lauds Smart Grid Stimulus Grant of Almost \$69 Million to Vermont Utilities (Oct. 27, 2009), <http://web.archive.org/web/20110104092843/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3717&v=Article>.

⁴⁷⁰⁵ Auction 6, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/112 (Nov. 14, 2103).

⁴⁷⁰⁶ Press Release, Vermont.gov, Governor Douglas Signs on to Regional Effort to Reduce GHG Emissions (Dec. 30, 2009), <http://web.archive.org/web/20101103125841/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3806&v=Article>.

⁴⁷⁰⁷ *Id.*

⁴⁷⁰⁸ *Id.*

⁴⁷⁰⁹ *Id.*

2050.⁴⁷¹⁰ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.⁴⁷¹¹ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities."⁴⁷¹² North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.⁴⁷¹³

2010: Market-Based Solutions, Transportation/Fuels, and Renewable Energy

The seventh RGGI auction was held on March 10, 2010.⁴⁷¹⁴ The auction sold 40,612,408 allowances of the 2010 vintage at a clearing price of \$2.07 per allowance and 2,091,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.⁴⁷¹⁵

In January 2010, Governor Douglas announced that Vermont would receive a \$51 million ARRA grant to improve passenger rail speeds between St. Albans, Vermont and Springfield, Massachusetts as well as a \$500,000 rail planning grant to extend passenger rail service along Vermont's western rail corridor.⁴⁷¹⁶ The \$51 million grant would fund track and bridge upgrades along a rail line owned and operated by the New England Central Railroad and would result in a 30 minute travel time savings for passengers using Amtrak's Vermonter service between St. Albans and Springfield.⁴⁷¹⁷

In March 2010, Vermont's two largest utilities, Central Vermont Public Service and Green Mountain Power, signed a MOU with provincial utility Hydro-Québec.⁴⁷¹⁸ Under the MOU, the companies extended and modified their current contract by planning for purchases totaling up to about 225 megawatts (MWs) starting in November 2012 and ending in 2038.⁴⁷¹⁹ As part of the agreement, the Vermont General Assembly must enact legislation to designate large hydro plants as renewable resources, which would allow

⁴⁷¹⁰ See NORTH AMERICA 2050, <http://na2050.org/> (Dec. 3, 2013).

⁴⁷¹¹ See *Participants*, NORTH AMERICA 2050, <http://na2050.org/participants/> (Dec. 3, 2013).

⁴⁷¹² NORTH AMERICA 2050, A PARTNERSHIP FOR PROGRESS, <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

⁴⁷¹³ See *id.*

⁴⁷¹⁴ Auction 7, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/111 (Oct. 14, 2013).

⁴⁷¹⁵ *Id.*

⁴⁷¹⁶ Press Release, Vermont.gov, Governor Douglas Announces Stimulus Grants To Improve Passenger Rail Service (Jan. 28, 2010), <http://web.archive.org/web/20110104202422/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3845&v=Article>.

⁴⁷¹⁷ *Id.*

⁴⁷¹⁸ Press Release, Vermont.gov, Governor, Premier Announce Preliminary Vermont-Hydro-Quebec Agreement, (Mar. 11, 2010), <http://web.archive.org/web/20101103125139/http://governor.vermont.gov/tools/index.php?topic=GovPressReleases&id=3899&v=Article>.

⁴⁷¹⁹ *Id.*

Hydro-Québec to obtain renewable credit.⁴⁷²⁰ The state legislature obliged the MOU signatories in June by passing House Bill (H.) 781, *An Act Relating to Renewable Energy*, into law in June 2010, which included a provision to recognize power from Hydro-Québec as renewable.⁴⁷²¹

The eighth RGGI auction was held on June 9, 2010.⁴⁷²² The auction sold 40,685,585 allowances of the 2010 vintage at a clearing price of \$1.88 per allowance and 2,137,993 allowances of the 2012 vintage at a clearing price of \$ 1.86 per allowance.⁴⁷²³ The ninth RGGI auction was held on September 8, 2010.⁴⁷²⁴ The auction sold 34,407,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,312,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.⁴⁷²⁵ The tenth RGGI auction was held on December 10, 2010.⁴⁷²⁶ The auction sold 24,755,000 allowances of the 2010 vintage at a clearing price of \$1.86 per allowance and 1,172,000 allowances of the 2012 vintage at a clearing price of \$1.86 per allowance.⁴⁷²⁷

2011: Transportation/Fuels, Greenhouse Gas Reduction, Renewable Energy, Climate Change Adaptation, and Market-Based Solutions

The eleventh RGGI auction was held on March 9, 2011.⁴⁷²⁸ The auction sold 41,995,813 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance and 2,144,710 allowances of the 2012 vintage at a clearing price of \$ 1.89 per allowance.⁴⁷²⁹

On March 15, 2011, the United States Department of Transportation designated the North East Corridor (NEC) as a high-speed rail corridor, meaning that Vermont would be able to compete with other northeastern states for federal rail funds.⁴⁷³⁰

Vermont filed two motions in the U.S. Supreme Court supporting federal regulations on GHG emissions. The state urged support for climate change mitigation in both *Connecticut v. AEP* and *North Carolina v. TVA*.⁴⁷³¹ In *Connecticut v. AEP*, the

⁴⁷²⁰ *Id.*

⁴⁷²¹ Press Release, Vermont.gov, Governor Signs Final Bills of the 2009-2010 Biennium (June 07, 2010), <http://web.archive.org/web/20101202035542/http://vermont.gov/portal/government/article.php?news=182>.

⁴⁷²² Auction 8, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/110 (Oct. 14, 2013).

⁴⁷²³ *Id.*

⁴⁷²⁴ Auction 9, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/109 (Oct. 14, 2013).

⁴⁷²⁵ *Id.*

⁴⁷²⁶ Auction 10, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/174 (Oct. 14, 2013).

⁴⁷²⁷ *Id.*

⁴⁷²⁸ Auction 11, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/108 (Oct. 14, 2013).

⁴⁷²⁹ *Id.*

⁴⁷³⁰ Press Release, Vermont.gov, Gov. Shumlin Applauds New Rail Designation for High Speed Corridor (Mar. 15, 2011), <http://governor.vermont.gov/http%3A/%252Fgovernor.vermont.gov/node/add/media-rail-release>.

⁴⁷³¹ Press Release, Vermont.gov, Vermont Joins Efforts to Fight Greenhouse Emissions (Mar. 17, 2011), <http://governor.vermont.gov/newsroom-vermont-joins-efforts-to-fight-greenhouse-emissions>. See N.

Plaintiffs filed a public nuisance claim against the Defendant power plants and argued for the Court to set carbon dioxide emissions standards. The Supreme Court held unanimously for Connecticut. The Court remanded the case for a final determination after properly accounting for the new federal GHG regulations. The Court found that the plaintiffs' common law nuisance claim had been rendered obsolete by federal regulations addressing the cause of the alleged tort.⁴⁷³²

In April 2011, Governor Shumlin joined other northeastern governors urging the federal government to increase investments in high-speed rail. The northeastern governors aimed to improve reliability and reduce travel times throughout the NEC.⁴⁷³³

Also in April 2011, Governor Shumlin unveiled his plan to increase funding for renewable energy in the state through Vermont's CEDF. Rather than adding a monthly fee to utility bills, the plan called for those who have already been offered solar tax credits through the CEDF to take a 50% discount on the value of their credits in exchange for receiving a one-time cash grant once their projects become operational.⁴⁷³⁴

On May 17, 2011, Governor Shumlin announced the formation and first meeting of the Vermont Climate Cabinet, a group of senior officials in the administration charged with coordinating climate change efforts across all state agencies and departments in an effort to reduce the state's GHG emissions and reliance on fossil fuels.⁴⁷³⁵ Shumlin tasked the Vermont Climate Cabinet with improving energy efficiency for new and existing buildings, providing Vermonters with information on the potential impacts of climate change, and identifying strategies to reduce Vermont's reliance on fossil fuels for transportation.⁴⁷³⁶

Governor Shumlin signed H. 56, the *Vermont Energy Act of 2011*, into law on May 25, 2011.⁴⁷³⁷ H. 56 expanded Vermont's existing net metering program, which allowed Vermont ratepayers to run their meter backwards when producing excess power from their renewable energy systems. In addition, the Bill required utilities to offer a 20¢

Carolina ex rel. Cooper v. Tennessee Valley Auth., 132 S. Ct. 46 (2011). This case was dismissed pursuant to Rule 46.1 of the Rules of the Supreme Court as the parties had reached a settlement. See *North Carolina Attorney General Settles Public Nuisance Case Against Coal-Fired Power Plant Operator*, COLUMBIA LAW SCHOOL, <http://web.law.columbia.edu/attorneys-general/policy-areas/environment/TVA-vs-north-carolina> (Nov. 30, 2013).

⁴⁷³² Am. Elec. Power Co., Inc. v. Connecticut, 131 S. Ct. 2527 (2011).

⁴⁷³³ Press Release, Vermont.gov, Gov. Shumlin Calls for Federal Investment in High Speed Rail (Apr. 4, 2011), <http://governor.vermont.gov/newsroom-call-for-federa-investment-in-high-speed-rail>.

⁴⁷³⁴ Press Release, Vermont.gov, Governor Shumlin Unveils Plan to Boost Renewable Energy (Apr. 11, 2011), <http://governor.vermont.gov/http%3A/%252Fgovernor.vermont.gov/node/add/media-cedf-release>.

⁴⁷³⁵ Press Release, Vermont.gov, Gov. Shumlin Announces Formation of Vermont Climate Cabinet (May 17, 2011), <http://governor.vermont.gov/newsroom-climate-cabinet>.

⁴⁷³⁶ *Id.*

⁴⁷³⁷ Press Release, Vermont.gov, Gov. Shumlin Signs Renewable Energy Bill Into Law (May 25, 2011), <http://governor.vermont.gov/media-energy-bill>.

credit to their solar net metering customers for the excess energy they produced to incentivize further solar power development.⁴⁷³⁸

The twelfth RGGI auction was held on June 8, 2011.⁴⁷³⁹ The auction sold 12,537,000 allowances of the 2011 vintage at a clearing price of \$1.89 and 943,000 allowances of the 2012 vintage at a clearing price of \$1.89 per allowance.⁴⁷⁴⁰

The largest solar farm in Vermont, constructed by AllEarth Renewables, was unveiled in South Burlington on July 28, 2011. The 28 acres of solar panels would harvest approximately 2.2 MWs of electricity, enough to power 450 Vermont homes. The panels were constructed on movable axes, allowing them to reposition themselves according to the sun's movement and produce 40% more power than fixed solar arrays.⁴⁷⁴¹

The thirteenth RGGI auction was held on September 7, 2011 and the auction sold 7,487,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.⁴⁷⁴²

Vermont was one of nine states to join the Northeast Electric Vehicle Network in October 2011.⁴⁷⁴³ The Network seeks to help the states increase economic growth and reduce their GHG emissions. It focuses on building infrastructure for clean vehicles and fuels as well as attracting public and private investment to support the infrastructure development. Participating states include Connecticut, Delaware, Washington, D.C., Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, and Rhode Island.⁴⁷⁴⁴ The Network is part of the Transportation and Climate Initiative (TCI), a regional collaboration between twelve Northeast and Mid-Atlantic states that aims to reduce GHG emissions from the transportation sector and develop the clean energy economy.⁴⁷⁴⁵ The TCI was launched in June 2010 and is facilitated by the Georgetown Climate Center.⁴⁷⁴⁶ A nearly \$1 million Electric Vehicle Readiness Grant from the DOE was awarded to New York State Energy Research and Development Authority

⁴⁷³⁸ *Governor to Sign the Vermont Energy Act of 2011 on May 25 in So. Burlington*, GREEN ENERGY TIMES (May 23, 2011), <http://www.greenenergytimes.org/2011/05/23/governor-to-sign-the-vermont-energy-act-of-2011-on-may-25th-in-so-burlington/>.

⁴⁷³⁹ *Auction 12*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/187 (Oct. 14, 2013).

⁴⁷⁴⁰ *Id.*

⁴⁷⁴¹ Erik Blokland, *Vermont Solar Farm Opening Generates Positive Energy for Community, State Leaders*, VT DIGGER (July 28, 2011), <http://vtdigger.org/2011/07/28/vermont-solar-farm/>.

⁴⁷⁴² *Auction 13*, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/201 (Oct. 14, 2013).

⁴⁷⁴³ Press Release, Georgetown Climate Ctr., Northeast States Form Regional Electric Vehicle Network (Oct. 19, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

⁴⁷⁴⁴ *Id.*

⁴⁷⁴⁵ *Transportation and Climate Initiative*, GEORGETOWN CLIMATE CTR., <http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative> (Feb. 25, 2011).

⁴⁷⁴⁶ *Id.*

(NYSERDA) on behalf of the TCI in September 2010 to fund the network's efforts to deploy electric vehicles throughout the Northeast.⁴⁷⁴⁷

The thirteenth RGGI auction was held on September 7, 2011 and the auction sold 7,487,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.⁴⁷⁴⁸ The fourteenth RGGI auction was held on December 7, 2011 and the auction sold 27,293,000 allowances of the 2011 vintage at a clearing price of \$1.89 per allowance.⁴⁷⁴⁹

The final Vermont Comprehensive Energy Plan was announced on December 15, 2011. The Plan recommended that Vermont obtain 90% of total energy from renewables by 2050.⁴⁷⁵⁰ At the time, the state obtained 25% of its energy needs from renewable energy sources.⁴⁷⁵¹

2012: Renewable Energy, Greenhouse Gas Reduction, and Market-Based Solutions

In an order entered on January 23, 2012, the Public Service Board recommended an alteration of the standard-offer prices for photovoltaics to \$0.271 per kilowatt hour (kWh) and small wind to \$0.253 kWh for those wind projects with a nameplate capacity of 100 KW or less.⁴⁷⁵² The price revisions reflected a requirement from the Sustainably Priced Energy Enterprise Development (SPEED) program, designed to encourage the development of renewable resources of energy in Vermont.⁴⁷⁵³

On March 16, 2012, RGGI announced the results of its fifteenth quarterly auction in which 21.5 million carbon dioxide allowances were sold at a clearing price of \$1.93.⁴⁷⁵⁴ The auction generated \$41.6 million in proceeds, which the RGGI participating states planned to invest in consumer-oriented energy efficiency initiatives.⁴⁷⁵⁵

In April 2012, the Vermont Agency of Natural Resources announced new rebates and requirements for outdoor wood-fired boilers (OWBs).⁴⁷⁵⁶ The agency required

⁴⁷⁴⁷ Press Release, Georgetown Climate Ctr., Northeast States Form Regional Electric Vehicle Network (Oct. 17, 2011), <http://www.georgetownclimate.org/northeast-states-form-regional-electric-vehicle-network>.

⁴⁷⁴⁸ Auction 13, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/201 (Oct. 14, 2013).

⁴⁷⁴⁹ Auction 14, REGIONAL GREENHOUSE GAS INITIATIVE, http://www.rggi.org/market/co2_auctions/results/Auctions-1-16/204 (Oct. 14, 2013).

⁴⁷⁵⁰ Press Release, Vermont.gov, Final Comprehensive Energy Plan Revealed (Dec. 15, 2011), <http://governor.vermont.gov/newsroom-final-comprehensive-energy-plan-released>.

⁴⁷⁵¹ *Id.*

⁴⁷⁵² *See generally* Review of Standard-Offer Prices Under the SPEED Program (Docket 7780), VT. PUB. SERV. BD., <http://psb.vermont.gov/docketsandprojects/electric/7780> (Nov. 30, 2013).

⁴⁷⁵³ *Id.*

⁴⁷⁵⁴ Press Release, RGGI Inc., RGGI Auction Sells 21.5 Million CO₂ Allowances (Mar. 16, 2012), http://web.archive.org/web/20120415054456/http://www.rggi.org/docs/PR031612_Auction15Results.pdf.

⁴⁷⁵⁵ *Id.*

⁴⁷⁵⁶ Press Release, Vt. Agency of Natural Res., State Offers Financial Incentives for Efficient Heating Systems (Apr. 11, 2012), <http://www.anr.state.vt.us/site/cfm/PressRel/Detail.CFM?ID=1983>.

OWBs that had not been certified to meet emission standards to be retired by December 31, 2012 and uncertified OWBs located within 200 feet of a residence, school or healthcare facility and that were not in use to be destroyed and removed.⁴⁷⁵⁷ The voluntary OWB Change-Out Program will assist OWB owners who wish to upgrade to newer models, which provide 70% more energy efficiency, emit less irritating smoke and are thus more neighbor-friendly.⁴⁷⁵⁸ Available rebates are \$6,000 to replace either an OWB that is within 200 feet of a residence, school or healthcare facility, or an OWB that has caused a valid emissions complaint.⁴⁷⁵⁹ Eligible upgrade models include certified OWBs, including pellet boilers, propane or natural gas boilers, or alternative heating systems.⁴⁷⁶⁰

S. 214, enacted in May 2012, required the establishment of a new market-based pricing mechanism with contracts being awarded from the Public Service Board competitively through a Request for Proposal process.⁴⁷⁶¹ The standard-offer program cap will also be increased yearly from 2013 at 55 MWs to 2022 at 127.5 MWs.⁴⁷⁶²

Governor Shumlin announced on May 2, 2012 that \$1.75 million in funds had been awarded to the Montpelier renovated biomass heating plant.⁴⁷⁶³ One million came from the Clean Energy Development Fund and \$750,000 came from ARRA funds.⁴⁷⁶⁴ The plant would provide reliable, low-cost, renewable heat for the downtown Montpelier business district and the Capital Complex.⁴⁷⁶⁵ Proponents estimated that toxic emissions would be reduced by about 11 tons per year, and taxpayers would save approximately \$200,000 per year in energy costs thanks to the plant upgrade.⁴⁷⁶⁶

On May 11, 2012, Governor Shumlin signed Act 125, amending Vermont's net metering policy to expand eligible solar net metering systems from those that produce up to 5 KWs to those that produce up to 10 KWs.⁴⁷⁶⁷ If the net metering system is connected directly to the utility with a separate meter intended to measure energy generated by the system, the utility must provide the customer with bill credits for all kWhs generated calculated in a manner that includes a service charge, a kWh rate and an inclining block rate if applicable, excluding time-of-use rates and demand rates.⁴⁷⁶⁸ The same shall apply to group net metering systems that serve one or more customers on a demand or time-of-

⁴⁷⁵⁷ *Id.*

⁴⁷⁵⁸ *Id.*

⁴⁷⁵⁹ *Id.*

⁴⁷⁶⁰ *Id.*

⁴⁷⁶¹ S. 214, Gen. Assemb., 2011-2012 Leg. Sess. (Vt. 2012),

<http://web.archive.org/web/20120907045720/http://www.leg.state.vt.us/docs/2012/Acts/ACT170.pdf>.

⁴⁷⁶² *Id.*

⁴⁷⁶³ Press Release, Vermont.gov, Gov. Shumlin Announces \$1.75 Million CEDF Assistance for Montpelier Heating Plant (May 2, 2012), <http://governor.vermont.gov/newsroom-gov-shumlin-announces-cedf-assistance-for-montpelier-heating-plant>.

⁴⁷⁶⁴ *Id.*

⁴⁷⁶⁵ *Id.*

⁴⁷⁶⁶ *Id.*

⁴⁷⁶⁷ H. 475, Gen. Assemb., 2011-2012 Leg. Sess. (Vt. 2012), <http://www.leg.state.vt.us/docs/2012/bills/Passed/H-475.pdf>.

⁴⁷⁶⁸ *Id.* § 3(e)(4).

use rate schedule.⁴⁷⁶⁹ The Act required the Department of Public Service to issue a report no later than January 15, 2013 evaluating Vermont's net metering policy as a whole, analyzing costs, benefits, and whether retail customers not utilizing net metering are subsidizing those retail customers who do.⁴⁷⁷⁰

The legislature also passed H. 679 on May 11, 2012, which exempted renewable energy plants that generate solar electricity from the uniform capacity tax if the plant has a capacity of 10 KWs or less.⁴⁷⁷¹ In the absence of the exemption, there is an assessment of \$4.00 per KW of renewable solar power plant capacity.⁴⁷⁷²

On June 8, 2012, RGGI announced the results of its sixteenth quarterly auction for carbon dioxide allowances.⁴⁷⁷³ The auction of the 20.9 million allowances generated \$40.4 million in funds and represented 57% of the allowances offered for sale by all nine participating states.⁴⁷⁷⁴ On September 7, 2012, the RGGI states announced the results of its seventeenth quarterly auction for carbon dioxide allowances.⁴⁷⁷⁵ The auction of 24.5 million allowances generated \$47.4 million in funds for the participating states, representing 65% of the allowances offered for sale by all nine states.⁴⁷⁷⁶

On October 2, 2012, Governor Shumlin signed EO No. 10-12 creating the Governor's Energy Generation Siting Policy Commission.⁴⁷⁷⁷ The EO tasked the Commission with providing a report to the governor and legislative agencies by April 30, 2013, which they accomplished⁴⁷⁷⁸, analyzing the best practices for public participation and the approval of siting projects for electricity generation and providing recommendations to improve the current process.⁴⁷⁷⁹ It must also consider including

⁴⁷⁶⁹ *Id.* § 4(f)(4).

⁴⁷⁷⁰ *Id.* § 7. The report was issued on January 15, 2013. See VT. PUB. SERV. DEP'T, EVALUATION OF NET METERING IN VERMONT CONDUCTED PURSUANT TO ACT 125 OF 2012 (2013), <http://www.leg.state.vt.us/reports/2013ExternalReports/285580.pdf>.

⁴⁷⁷¹ H. 679, Gen. Assemb., 2011-2012 Leg. Sess. (Vt. 2012), <http://web.archive.org/web/20120813061254/http://www.leg.state.vt.us/DOCS/2012/ACTS/ACT127.PDF>.

⁴⁷⁷² *Id.*

⁴⁷⁷³ Press Release, RGGI Inc., RGGI Auction Sells 20.9 Million CO₂ Allowances (June 8, 2012), http://web.archive.org/web/20120717084904/http://www.rggi.org/docs/PR060812_Auction16.pdf. http://www.rggi.org/docs/PR060812_Auction16.pdf.

⁴⁷⁷⁴ *Id.*

⁴⁷⁷⁵ Press Release, RGGI Inc., RGGI Auction Sells 24.5 Million CO₂ Allowances (Sept. 7, 2012), http://web.archive.org/web/20121116150342/http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf. http://www.rggi.org/docs/Auctions/17/PR090712_Auction17.pdf.

⁴⁷⁷⁶ *Id.*

⁴⁷⁷⁷ Vt. Exec. Order No. 10-12 (Oct. 2, 2012), http://sitingcommission.vermont.gov/sites/cep/files/Siting_Commission/Homepage/EO%2010-12%20Energy%20Gen%20Siting%20Policy%20Commission.pdf. http://governor.vermont.gov/sites/governor/files/executive_orders/EO_10-12_Energy_Generation_Siting_Policy_Commission.pdf.

⁴⁷⁷⁸ ENERGY GENERATION SITING POLICY COMM'N, SITING ELECTRIC GENERATION IN VERMONT (2013), http://sitingcommission.vermont.gov/sites/cep/files/Siting_Commission/Publications/FinalReport/Final%20Report%20-%20Energy%20Generation%20Siting%20Policy%20Commission%2004-30-13.pdf.

⁴⁷⁷⁹ *Id.*

alternative dispute resolution, state-level permit issuance, adequate levels of environmental and cultural protection, and environmental impact monitoring.⁴⁷⁸⁰

On November 19, 2012, RGGI reported that RGGI-related investments avoided 12 million tons of carbon dioxide emissions from 2009 to 2011.⁴⁷⁸¹ RGGI states directed these investments towards energy efficiency projects, renewable energy, direct bill assistance for consumers, GHG abatement and climate change adaptation programs.⁴⁷⁸²

2013: Market-Based Solutions, Greenhouse Gas Reduction, and Renewable Energy

On January 15, 2013, as required by Act 125, the Public Service Department issued its report evaluating the Vermont net metering policy pursuant to Act 125.⁴⁷⁸³ The report incorporated public comments and concluded that net metering permit applications for photovoltaic systems had increased fourfold since 2008, yet capacity participation from net metering remained between 1 and 4%.⁴⁷⁸⁴ The report found few costs to net metering, including: lost revenue to utilities due to customers participating in net metering; the forgone revenue due to the Vermont solar credit for solar photovoltaic systems; and administrative costs of the net metering program.⁴⁷⁸⁵ Benefits of net metering include: avoided energy costs including the internalized cost of GHG emissions; avoided capacity costs and line loss costs; avoided regional and in-state transmission and distribution costs; the achievement of market price suppression; and the value of Vermont SPEED.⁴⁷⁸⁶ As for cross-subsidization, the report concluded that net metering does not represent a significant cost to ratepayers not participating in net metering.⁴⁷⁸⁷

On February 7, 2013, Governor Shumlin and the other RGGI governors announced that the annual carbon dioxide emissions cap will be reduced by almost 40% from 165 million tons to 91 million tons in 2014, and will continue to decrease by 2.5% annually through 2020.⁴⁷⁸⁸ The decision was made in part due to a decrease in electricity demand due to energy efficiency efforts, lower natural gas prices, and milder weather.⁴⁷⁸⁹ The RGGI program in Vermont alone has generated \$7 million in funds that have been

⁴⁷⁸⁰ *Id.*

⁴⁷⁸¹ Press Release, RGGI, Inc., RGGI Investments Avoid 12 Million Tons of Carbon Dioxide Pollution, Generate \$1.3 Billion in Lifetime Energy Bill Savings (Nov. 19, 2012), <http://web.archive.org/web/20130204041411/http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>; <http://www.rggi.org/docs/Documents/2011-Proceeds%20Report%20Press%20Release.pdf>.

⁴⁷⁸² *Id.*

⁴⁷⁸³ VT. PUB. SERV. DEP'T, EVALUATION OF NET METERING IN VERMONT CONDUCTED PURSUANT TO ACT 125 OF 2012 (2013), http://publicservice.vermont.gov/sites/psd/files/Topics/Renewable_Energy/Net_Metering/Act_125_Study_20130115_Final.pdf.

⁴⁷⁸⁴ *Id.* at 3-4, 6.

⁴⁷⁸⁵ *Id.* at 11.

⁴⁷⁸⁶ *Id.* at 11.

⁴⁷⁸⁷ *Id.* at 31.

⁴⁷⁸⁸ Press Release, Vermont.gov, Gov. Shumlin Announces New Cap on Regional Carbon Emissions (Feb. 7, 2013), <http://governor.vermont.gov/newsroom-gov-shumlin-announces-new-cap-on-regional-carbon-emissions>.

⁴⁷⁸⁹ *Id.*

put toward energy efficiency and fuel-savings programs.⁴⁷⁹⁰ The RGGI states have also agreed to adjust the cap to reflect existing unsold allowances, create a cost-containment system, and allow forestry offsets.⁴⁷⁹¹ Other improvements include updates to the offsets program; the decision not to reoffer unsold allowances from 2012 and 2013; the requirement that regulated entities obtain allowances for at least 50% of their emissions in each of the first two years of the three year compliance period; and the development of tools to track electricity imported into participating states from non-participating states in order to address those emissions.⁴⁷⁹² Each RGGI state will implement these measures in their respective statutory regimes.⁴⁷⁹³

In February 2013, Governor Shumlin, state legislators and the Vermont Economic Development Authority proposed to create the Vermont Clean Energy Loan Fund (VCELf) to consolidate existing programs including the Energy Efficiency Loan Guarantee Program, the Small Business Conservation Loan Program, the Renewable Energy Loan Program, and the Agricultural Energy Loan Program.⁴⁷⁹⁴ The Energy Efficiency Loan Guarantee Program is a new VCELf program currently in development that is expected to be able to guarantee approximately \$10 million in loans for energy efficiency projects.⁴⁷⁹⁵ The overall goal of VCELf is to provide low-cost, low-risk financing to encourage private sector clean energy projects in Vermont.⁴⁷⁹⁶

On April 16, 2013, an independent market monitor of RGGI confirmed that there continue to be no material concerns regarding the auction process or in the competitiveness of the secondary market for RGGI allowances.⁴⁷⁹⁷ During 2012, the average auction clearing price was \$1.93 for carbon dioxide allowances.⁴⁷⁹⁸

On June 17, 2013, Governor Shumlin signed into law House Bill (H.B.) 395, which established the Vermont Clean Energy Loan Fund (“VCELf”).⁴⁷⁹⁹ The bill consolidated energy programs already in existence under the Vermont Economic Development Authority (“VEDA”) and authorized VEDA to make loans and other forms of financing that stimulate and encourage development and deployment of sustainable energy projects in Vermont.⁴⁸⁰⁰ Specifically, H.B. 395 authorized the Vermont Treasurer

⁴⁷⁹⁰ *Id.*

⁴⁷⁹¹ *Id.*

⁴⁷⁹² *Id.*

⁴⁷⁹³ *Id.*

⁴⁷⁹⁴ Press Release, Vermont.gov, Gov. Shumlin, Legislative Leaders & Others Propose Vermont Clean Energy Loan Fund (Feb. 20, 2013), <http://governor.vermont.gov/gov-shumlin-legislative-leaders-and-others-propose-vermont-clean-energy-loan-fund>.

⁴⁷⁹⁵ *Id.*

⁴⁷⁹⁶ *Id.*

⁴⁷⁹⁷ Press Release, RGGI Inc., 2012 Annual Market Monitor Report: In Fifth Year, RGGI CO₂ Allowance Market Remains Competitive (Apr. 16, 2013), http://web.archive.org/web/20131115044315/http://rggi.org/docs/PressReleases/PR041613_2012-Annual-Market-Monitor-Report.pdf.

⁴⁷⁹⁸ *Id.*

⁴⁷⁹⁹ H.B. 395, Gen. Assemb., 2013-2014 Leg. Sess. (Vt. 2013), <http://www.leg.state.vt.us/docs/2014/Acts/Act087.PDF>.

⁴⁸⁰⁰ *Id.*

to establish a short-term credit facility for the benefit of VEDA of up to \$10 million to finance commercial sustainable energy projects and up to \$6.5 million to finance residential energy efficiency improvements.⁴⁸⁰¹

Also on June 17, 2013, Governor Shumlin signed H.B. 520, which concerned the efficient use of energy to reduce energy costs and greenhouse gas emissions.⁴⁸⁰² The bill primarily focused on thermal energy efficiency, such as space or water heating, but also included provisions that relate to air pollution and renewable energy.⁴⁸⁰³ Specifically, the bill addressed six areas: 1) thermal efficiency delivery under Public Service Board oversight, 2) building energy standards, 3) voluntary building energy disclosure, 4) home heating and weatherization assistance, 5) air pollution (the bill made clear that the Agency of Natural Resources (ANR) is enabled to implement a revised carbon emissions cap recently agreed upon by the states that are party to the Regional Greenhouse Gas Initiative), and 6) renewable energy (the bill clarified the definition of “plant capacity” as it pertains to solar plants in Vermont).⁴⁸⁰⁴

2014: Renewable Energy and Energy Efficiency

On April 1, 2014, Governor Shumlin signed into law House Bill (H.B.) 702, an act relating to self-generation and net metering of renewable energy, which allows private businesses and homeowners to generate renewable energy and connect it to the power grid.⁴⁸⁰⁵ The bill expands Vermont’s preexisting net metering program under Title 30, § 219a for self-generation and net metering.⁴⁸⁰⁶ Specifically, the new law raised the 4% cap utilities had been using as the limit on their net metering programs to 15% of peak load and applies to grid-connected renewable energy generation systems smaller than 500 kW that are intended primarily to offset the customer’s own electricity.⁴⁸⁰⁷

VIRGINIA

1999: Market-Based Solutions

In 1999, the Virginia Legislature passed the Virginia Electric Utility Restructuring Act, which deregulated electrical generation in the state, and among other things, required Virginia’s electricity providers to disclose “fuel mix and emissions data” to consumers.⁴⁸⁰⁸

⁴⁸⁰¹ *Id.*

⁴⁸⁰² H.B. 520, Gen. Assemb., 2013-2014 Leg. Sess. (Vt. 2013), <http://www.leg.state.vt.us/docs/2014/Acts/ACT089.pdf>.

⁴⁸⁰³ *Id.*

⁴⁸⁰⁴ *Id.*

⁴⁸⁰⁵ H.B. 702, Gen. Assemb., 2013-2014 Leg. Sess. (Vt. 2014), <http://www.leg.state.vt.us/docs/2014/Acts/ACT099.pdf>.

⁴⁸⁰⁶ VT. STAT. ANN. tit. 30, § 219a, <http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=30&Chapter=005&Section=00219A>.

⁴⁸⁰⁷ *Id.*; see also *Net Metering*, VT. PUB. SERV. DEP’T (Apr. 23, 2014), http://publicservice.vermont.gov/topics/renewable_energy/net_metering.

⁴⁸⁰⁸ S.B. 1269, General Assemb., 1999 Sess. (Va. 1999) (amending VA. CODE ANN. § 56-592 and 20 VA. ADMIN. CODE § 5-312-70).

2006: Renewable Energy and Green Technology

Legislation passed in 2006 set forth Virginia's energy policy, which includes promoting and supporting the research, development, and generation of renewable energy, the development of clean-coal technologies, cost-effective energy conservation, alternative-fuel vehicles, and the increased use of biodiesel and ethanol.⁴⁸⁰⁹ In addition, the legislation called for an advisory group to develop a ten-year comprehensive Virginia Energy Plan to propose ways to implement the legislation's policy and objectives.⁴⁸¹⁰

2007: Greenhouse Gas Reduction, Market-Based Solutions, Renewable Portfolio Standards, and Climate Change Adaptation

In January 2007, the Virginia Department of Environmental Quality's Greenhouse Gas Working Group of the State Advisory Board on Air Pollution released a report announcing that global warming poses significant threats to Virginia and listing policy options for reducing greenhouse gas (GHG) emissions for the state legislature and state regulators.⁴⁸¹¹ The policy options included increasing renewable energy usage, public education, and incentive programs to encourage low-emission alternatives to conventional practices.⁴⁸¹² The policy options further included additional taxes for fossil fuel and electricity and technology-based standards that reduce GHG emissions for new power plants.⁴⁸¹³

Passed in April 2007, House Bill (H.B.) 3068 created a voluntary renewable portfolio standard, set at 12% of 2007 electricity sales minus average annual percentage of power supplied by nuclear generators, by 2022.⁴⁸¹⁴

In September 2007, Governor Tim Kaine released the Virginia Energy Plan, which called for a 40% reduction in Virginia's energy use growth rate, a 30% reduction in GHG emissions, and a 20% increase in in-state energy production.⁴⁸¹⁵ Additionally, the plan recommended expanded consumer energy education; the creation of a Climate Change Commission that would assess climate change impacts on Virginia; and research and development in nuclear technologies, alternate transportation fuels, coastal energy production, and carbon sequestration.⁴⁸¹⁶

⁴⁸⁰⁹ S.B. 262, General Assemb., 2006 Sess. (Va. 2006) (codified at VA. CODE ANN. §§ 67-100 to -203).

⁴⁸¹⁰ *Id.*

⁴⁸¹¹ DEP'T OF ENVTL. QUALITY, REPORT FROM THE GREENHOUSE GAS WORKING GROUP OF THE STATE ADVISORY BOARD ON AIR POLLUTION (2007), <http://www.deq.virginia.gov/Portals/0/DEQ/Air/StateAdvisoryBoard/GHGreport.pdf>.

⁴⁸¹² *Id.*

⁴⁸¹³ *Id.*

⁴⁸¹⁴ H.B. 3068, General Assemb., 2007 Sess. (Va. 2007) (codified at VA. CODE ANN. § 56-585.2).

⁴⁸¹⁵ DEP'T OF MINES, MINERALS, AND ENERGY, THE VIRGINIA ENERGY PLAN (2007), <http://dls.virginia.gov/groups/energy/VEP.pdf>.

⁴⁸¹⁶ *Id.*

In December 2007, Governor Kaine issued Executive Order 59, establishing the Governor's Commission on Climate Change.⁴⁸¹⁷ The commission would prepare a plan for Virginia identifying ways to reduce GHG emissions.⁴⁸¹⁸ It would also: inventory the amount of and contributors to Virginia's GHG emissions; evaluate the expected impacts of climate change on Virginia's citizens, natural resources and economy; identify climate change approaches being pursued by other states, regions and the federal government; identify what Virginia needs to do to prepare for the likely consequences of climate change; and identify any actions (beyond those identified in the Virginia Energy Plan) that need to be taken to achieve the 30% GHG reduction goal.⁴⁸¹⁹

2008: Transportation/Fuels, Greenhouse Gas Reduction, Green Jobs, Green Technology, and Market-Based Solutions

In June 2008, Governor Kaine released his proposed transportation legislation to the General Assembly.⁴⁸²⁰ This legislation included a grant to increase passenger rail service. Later that summer, he announced a different transportation grant, providing \$1 million to encourage students to walk or bike to school.⁴⁸²¹

On November 13, 2008, the Commission on Climate Change voted to increase the GHG emissions reductions recommended by the Governor.⁴⁸²² Specifically, the commission voted to adopt the IPCC recommended emission standards of 25% below 1990 levels by 2020 and 80% below 1990 levels by 2050.⁴⁸²³

In December 2008, Governor Kaine announced a partnership between Virginia's Secretary of Natural Resources and the U.S. Department of Defense to encourage sustainable efforts on military installations in Virginia.⁴⁸²⁴ Later that month, Governor Kaine announced the Renew Energy Initiative, creating an interagency task force and market plan to attract green jobs.⁴⁸²⁵

⁴⁸¹⁷ Va. Exec. Order No. 59 (2007), <http://www.mwcog.org/uploads/committee-documents/kl5fXVhc20080122140034.pdf>.

⁴⁸¹⁸ *Id.*

⁴⁸¹⁹ *Id.*

⁴⁸²⁰ Press Release, Governor Kaine Unveils Transportation Legislation (June 19, 2008), <http://www.drpt.virginia.gov/news/details.aspx?id=248>.

⁴⁸²¹ Press Release, Governor Kaine Announces \$1 Million to Promote Walking and Biking to School (July 17, 2008), <https://web.archive.org/web/20100116062420/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=721>.

⁴⁸²² GOVERNOR'S COMMISSION ON CLIMATE CHANGE, NINTH MEETING OF THE GOVERNOR'S COMMISSION ON CLIMATE CHANGE 6 (2008), http://www.sealevelrisevirginia.net/docs/CC_meeting_agendas_notices/CCC_Minutes_final_111308.pdf.

⁴⁸²³ *Id.*

⁴⁸²⁴ Press Release, Governor Kaine Announces New Environmental Stewardship Recognition for Virginia Military Installations (Dec. 4, 2008), https://votesmart.org/public-statement/400912/governor-kaine-announces-new-environmental-stewardship-recognition-for-virginia-military-installations-.Uzs_t61dVPQ.

⁴⁸²⁵ Press Release, Governor Kaine Announces Renew Virginia Initiative (Dec. 11, 2008), <https://web.archive.org/web/20100115171511/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=832>.

On December 15, 2008, the Governor’s Commission on Climate Change released its Climate Change Action Plan.⁴⁸²⁶ The Plan included the following recommendations for reducing net GHG emissions:

- “increasing energy efficiency and conservation;”⁴⁸²⁷
- “advocate[ing] for federal actions that will reduce net GHG emissions;”⁴⁸²⁸
- “. . . expand[ing] commuter choice, improve[ing] transportation efficiency, and improve[ing] community designs;”⁴⁸²⁹
- “. . . increasing efficiency of transportation fleet and use of alternative fuels;”⁴⁸³⁰
- “. . . accelerat[ing] research and development;”⁴⁸³¹
- “. . . increasing the proportion of the energy demands that are met by renewable sources;”⁴⁸³²
- “. . . increasing the proportion of electricity generation provided by emissions-free sources of energy;”⁴⁸³³ and
- “. . . protecting/enhancing natural carbon sequestration capacity and researching/promoting carbon capture and storage technology.”⁴⁸³⁴

2009: Market-Based Solutions, Green Technology, American Recovery & Reinvestment Act (ARRA), Energy Efficiency, Transportation/Fuels, and Renewable Energy

As part of Virginia’s Renew Energy Initiative, Governor Kaine proposed several pieces of legislation in January 2009.⁴⁸³⁵ The first was the Clean Energy Manufacturing Incentive, expanding the photovoltaic tax credit to include other low- and no-carbon energy technologies, which was enacted but later repealed in 2013.⁴⁸³⁶ A second proposed piece of legislation was the Biofuels Incentive Grant, modifying the existing grant so that biofuels produced from non-food sources receive a higher incentive.⁴⁸³⁷ A third proposed piece of legislation was the establishment of the Renewable Energy System Income Tax Credit. A fourth proposed piece of legislation was the Renewable

⁴⁸²⁶ GOVERNOR’S COMM’N ON CLIMATE CHANGE, FINAL REPORT: A CLIMATE CHANGE ACTION PLAN (2008), http://www.sealevelrisevirginia.net/docs/homepage/CCC_Final_Report-Final_12152008.pdf.

⁴⁸²⁷ *Id.* at 12.

⁴⁸²⁸ *Id.* at 14.

⁴⁸²⁹ *Id.* at 15.

⁴⁸³⁰ *Id.* at 18.

⁴⁸³¹ *Id.* at 19.

⁴⁸³² GOVERNOR’S COMM’N ON CLIMATE CHANGE, FINAL REPORT: A CLIMATE CHANGE ACTION PLAN (2008), http://www.sealevelrisevirginia.net/docs/homepage/CCC_Final_Report-Final_12152008.pdf.

⁴⁸³³ *Id.* at 21.

⁴⁸³⁴ *Id.*

⁴⁸³⁵ Press Release, Governor Kaine Announces Legislation to Promote Green Jobs (Jan. 12, 2008), <https://web.archive.org/web/20100115141501/https://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=850>.

⁴⁸³⁶ See VA. CODE ANN. § 45.1-392.

⁴⁸³⁷ H.B. 2001, General Assemb., 2009 Sess. (Va. 2009) (codified at VA. CODE ANN. § 45.1-394).

Energy Equipment Sales Tax Exemption, providing an exemption for solar photovoltaic and thermal systems and small wind systems.

At the end of January 2009, the Virginia's utility co-ops donated 4,200 CFLs to replace the incandescent bulbs in the state parks.⁴⁸³⁸

On February 12, 2009, Governor Kaine signed an agreement with the British Ambassador to the United States to create a partnership for reducing GHG emissions.⁴⁸³⁹ This agreement contained six partnership actions: advance policies promoting a low carbon economy; improve the comprehensiveness of current GHG emission reduction policies;⁴⁸⁴⁰ improve and share the scientific knowledge on climate change; improve and enhance carbon-reducing energy technologies; increase low-carbon commerce between the U.K. and Virginia; and enhance climate change education and public awareness to encourage climate-conscious decision-making by citizens.⁴⁸⁴¹

On March 12, 2009, the U.S. Department of Energy announced that Virginia was eligible for \$70,001,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).⁴⁸⁴²

At the end of March 2009, Governor Kaine signed or amended a number of climate change-related bills.⁴⁸⁴³ He amended Senate Bill (S.B.) 1246, establishing an energy efficiency standard to reduce the state's energy consumption to 19% below 2006 levels by 2020.⁴⁸⁴⁴ The amendment made this reduction voluntary. S.B. 1339 increased the state's renewable portfolio standard (RPS) goal to 15% by 2020.⁴⁸⁴⁵

Governor Kaine signed H.B. 2001, providing a greater incentive for biofuels produced from nonfood sources.⁴⁸⁴⁶ He also signed H.B. 2576, clarifying the definition of solid waste facilities that produce electricity from solid waste so that they can qualify

⁴⁸³⁸ Press Release, Governor Kaine Announces Energy Saving Donation in Virginia State Parks (Jan. 26, 2009),

<https://web.archive.org/web/20100115171613/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=865>.

⁴⁸³⁹ Press Release, UK and Virginia agree to share climate change research and technology (Feb. 12, 2009), <http://www.c2es.org/us-states-regions/news/2009/virginia-united-kingdom-create-climate-change-partnership>.

⁴⁸⁴⁰ Notably, Virginia committed to consult the U.K. on its carbon market practices in reaching this goal. Clean Energy in My State, U.S. Dep't of Energy (Feb. 13, 2009), http://apps1.eere.energy.gov/states/news_detail.cfm/news_id=12241.

⁴⁸⁴¹ *Id.*

⁴⁸⁴² U.S. DEP'T OF ENERGY, NAT'L ENERGY TECH. LAB., STATE ENERGY PROGRAM FORMULA GRANTS 46 (2009), https://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁴⁸⁴³ Press Release, Governor Kaine Announces Action on Energy Bill Advancing Renew Energy Initiative (Mar. 31, 2009), <https://web.archive.org/web/20100115171741/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=910>.

⁴⁸⁴⁴ S.B. 1246, General Assemb., 2009 Sess. (Va. 2009).

⁴⁸⁴⁵ S.B. 1339, General Assemb., 2009 Sess. (Va. 2009).

⁴⁸⁴⁶ H.B. 2001, General Assemb., 2009 Sess. (Va. 2009).

for financial incentives;⁴⁸⁴⁷ S.B. 1212, granting authority to localities to develop clean energy financing programs;⁴⁸⁴⁸ H.B. 1828, creating incentives for green roofs;⁴⁸⁴⁹ H.B. 1994, increasing the RPS for incumbent electric utilities to 15% by 2025;⁴⁸⁵⁰ S.B. 1350, granting authority to the Marine Resource Commission to lease sub-aqueous land for electricity generation;⁴⁸⁵¹ and H.B. 2171, providing that farms using waste-to-electricity technology are excluded from being regulated as electric utilities.⁴⁸⁵²

In order to protect their state's wind technology, Governor Kaine and other governors wrote a May 2009 letter to the U.S. Congress communicating their opposition to proposals to create a national corridor providing electricity transmission from the Midwest to the East Coast.⁴⁸⁵³

In June 2009, Governor Kaine signed the Mid-Atlantic Governors' Agreement on Ocean Conservation.⁴⁸⁵⁴ Two of the priorities in the regional collaboration included supporting offshore renewable energy development and preparing coastal communities for the impacts of climate change. Kaine also issued Executive Order (EO) 82, creating the Green Commonwealth Challenge to encourage and work with the state workforce in greening their facilities.⁴⁸⁵⁵ The EO also directed all state agencies to develop environmental management plans and/or policies; required all new executive government building to conform with LEED silver or Green Globes two-globe standards; directed the Department of General Services and the Virginia Information Technology Agency to develop specifications that encourage the use of recycled materials agencies; and required all agencies to implement transit and ride-share incentive programs.⁴⁸⁵⁶

Later in June 2009, Governor Kaine announced a Virginia Department of Environmental Quality initiative to review facilities that were grandfathered under the Clean Air Act and determine whether their emissions comply with existing National Ambient Air Quality Standards.⁴⁸⁵⁷

⁴⁸⁴⁷ H.B. 2576, General Assemb., 2009 Sess. (Va. 2009).

⁴⁸⁴⁸ S.B. 1212, General Assemb., 2009 Sess. (Va. 2009).

⁴⁸⁴⁹ H.B. 1828, General Assemb., 2009 Sess. (Va. 2009).

⁴⁸⁵⁰ H.B. 1994, General Assemb., 2009 Sess. (Va. 2009).

⁴⁸⁵¹ S.B. 1350, General Assemb., 2009 Sess. (Va. 2009).

⁴⁸⁵² H.B. 2171, General Assemb., 2009 Sess. (Va. 2009).

⁴⁸⁵³ Letter from Donald L. Carcieri, Governor (R.I.), Deval Patrick, Governor (Mass.), Jack Markell, Governor (Del.), John Baldacci, Governor (Me.), Martin O'Malley, Governor (Md.), John H. Lynch, Governor (N.H.), Jon S. Corzine, Governor (N.J.), David A. Paterson, Governor (N.Y.), James H. Douglas, Governor (Vt.), and Timothy M. Kaine, Governor (Va.) to Harry Reid, Majority Leader (U.S. Senate), Mitch McConnell, Minority Leader (U.S. Senate), Nancy Pelosi, Leader (U.S. House of Representatives), and John Boehner, Minority Leader (U.S. House of Representatives) (May 4, 2009), https://web.archive.org/web/20101122130937/http://www.gov.ri.gov/documents/East_Coast_Govs_Transmission_Ltr.pdf.

⁴⁸⁵⁴ MID ATLANTIC GOVERNORS' AGREEMENT ON OCEAN CONSERVATION (2009), <http://midatlanticocean.org/wp-content/uploads/2014/03/MidAtlantic-Governors-Agreement-on-Ocean-Conservation.pdf>.

⁴⁸⁵⁵ Va. Exec. Order No. 82 (2009), [http://www.lva.virginia.gov/public/EO/eo82\(2009\).pdf](http://www.lva.virginia.gov/public/EO/eo82(2009).pdf).

⁴⁸⁵⁶ *Id.*

⁴⁸⁵⁷ Press Release, Governor Kaine Unveils Unique Program to Review Emissions from Grandfathered Facilities (June 23, 2009),

While touring the Virginia Association of Counties headquarters' green roofs in August 2009, Governor Kaine touted the benefits of green construction.⁴⁸⁵⁸ That same month, the state's Clean Cities Program received \$8,605,100 in ARRA funding.⁴⁸⁵⁹ The next month, Kaine announced that Virginia would also use ARRA funding through its Public-Private Educational Facilities Infrastructure Act to develop clean energy projects at state agencies and universities.⁴⁸⁶⁰

During September 2009, Governor Kaine announced a partnership with Dominion Virginia Power to install electric vehicle charging stations at certain state rest areas.⁴⁸⁶¹ He also submitted a letter to the director of the U.S. Department of the Interior's Minerals Management Service, requesting the formation of a task force to guide and facilitate the offshore wind project leasing process.⁴⁸⁶² During that month, Virginia also made \$40 million in loans available for state agencies to finance energy efficiency projects.⁴⁸⁶³ It also launched the Virginia Energy Efficiency Rebate Program, making \$15 million in ARRA funding available for up to 20% of the cost of high-energy efficiency products.⁴⁸⁶⁴

In October 2009, Shenandoah Sustainable Technologies, LLC, a sustainable construction company, brought 72 new green jobs to the state.⁴⁸⁶⁵ The State Energy Plan

<https://web.archive.org/web/20100115132121/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=979>.

⁴⁸⁵⁸ Press Release, Governor Kaine Highlights Benefits of Green Roof Construction (Aug. 17, 2009), https://votesmart.org/public-statement/450575/governor-kaine-highlights-benefits-of-green-roof-construction-.Uztv_q1dVPQ.

⁴⁸⁵⁹ Press Release, Governor Announces Virginia Clean Cities ARRA Grant (Aug. 26, 2009), <https://web.archive.org/web/20100115144555/https://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1048>.

⁴⁸⁶⁰ See S.B. 681, Reg. Sess. (Va. 2002); Press Release, Governor Announces Public-Private Partnership for State Energy Savings (Sept. 18, 2009), <https://web.archive.org/web/20100115160943/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1078>.

⁴⁸⁶¹ Press Release, Governor Kaine Announces Partnership with Dominion Virginia Power to Promote Clean Fuel Vehicles (Sept. 22, 2009), <https://web.archive.org/web/20100115142007/https://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1082>.

⁴⁸⁶² Press Release, Governor Kaine Announces Potential for Offshore Wind in Virginia (Sept. 22, 2009), <https://web.archive.org/web/20100115160959/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1084>.

⁴⁸⁶³ Press Release, Governor Kaine Announces Loan Program for Energy Efficiency Projects (Sept. 25, 2009), <https://web.archive.org/web/20100115142039/https://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1092>.

⁴⁸⁶⁴ Press Release, Governor Kaine Announces Energy Efficiency Rebates and Third Annual Energy Sales Tax Holiday (Oct. 1, 2009), <https://web.archive.org/web/20100116062009/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1101>.

⁴⁸⁶⁵ Press Release, Governor Kaine Announces 72 New Jobs in the Green Building Sector (Oct. 1, 2009), <https://web.archive.org/web/20100116061826/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1099>.

also received \$40 million of ARRA funding during this month.⁴⁸⁶⁶ From October 9-12, 2009, there was a sales tax holiday for energy-efficient products.⁴⁸⁶⁷ Governor Kaine also announced new land conservation projects, bringing the state closer to its goal of preserving 400,000 acres.⁴⁸⁶⁸

2010: Green Jobs, Market-Based Solutions, Renewable Energy, Renewable Portfolio Standards, Transportation/Fuels, Climate Change Adaptation, and Energy Efficiency

In March and April of 2010, Governor Bob McDonnell signed several bills into law in April 2010. In March, House Bill (H.B.) 756 was passed to allocate 80% of future offshore royalties and revenues to transportation (70% to Transportation Trust Fund and 10% to local transportation projects) and the remaining 20% to the Virginia Coastal Energy Research Consortium to research and develop renewable energy solutions.⁴⁸⁶⁹ Additionally, H.B. 787 provided a clear statement in support of oil and natural gas exploration, development, and production 50 miles or more off Virginia's coast.⁴⁸⁷⁰ Senate Bill (S.B.) 623⁴⁸⁷¹ and H.B. 803⁴⁸⁷² (Green Jobs Tax Credit) created a \$500 tax credit for the creation of "green" jobs for taxable years beginning on and after January 1, 2010. H.B. 928⁴⁸⁷³ (Universities Clean Energy Development and Economic Stimulus Foundation) created a foundation as a body corporate and a political subdivision of the Commonwealth to identify, obtain, disburse, and administer funding for (i) research and development of alternative fuels, clean energy production, and related technologies; (ii) support of economic development projects in disadvantaged rural areas; and (iii) the provision of assistance in the commercialization of alternative fuels and clean energy technologies. S.B. 577⁴⁸⁷⁴ and H.B. 389⁴⁸⁷⁵ (Virginia Offshore Wind Development Authority) would facilitate and support the development of the offshore wind industry and wind-powered electric energy facilities located off the coast beyond the three-mile jurisdictional limit. The law charged the Authority with, among other tasks, (i) identifying existing state and regulatory or administrative barriers to the development of the offshore wind industry; (ii) collecting environmental data; (iii) upgrading port

⁴⁸⁶⁶ Press Release, Governor Kaine Announces \$40 Million in Recovery Funds for State Energy Plan (Oct. 6, 2009),

<https://web.archive.org/web/20100115172917/http://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1106>.

⁴⁸⁶⁷ Press Release, Governor Kaine Encourages Virginians to Use Energy Sales Tax Holiday Starting Today (Oct. 9, 2009),

<https://web.archive.org/web/20100115141601/https://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1110>.

⁴⁸⁶⁸ Press Release, Governor Kaine Announces More Land Preserved Toward 400,000 Acre Goal (Oct. 22, 2009),

<https://web.archive.org/web/20100115141549/https://www.governor.virginia.gov/MediaRelations/NewsReleases/viewRelease.cfm?id=1119>.

⁴⁸⁶⁹ H.B. 786, General Assemb., Reg. Sess. (Va. 2010) (codified at VA. CODE ANN. § 67-301).

⁴⁸⁷⁰ S.B. 394, General Assemb., Reg. Sess. (Va. 2010) (codified VA. CODE ANN. § 67-300).

⁴⁸⁷¹ S.B. 623, General Assemb., Reg. Sess. (Va. 2010).

⁴⁸⁷² H.B. 803, General Assemb., Reg. Sess. (Va. 2010).

⁴⁸⁷³ H.B. 928, General Assemb., Reg. Sess. (Va. 2010).

⁴⁸⁷⁴ H.B. 577, General Assemb., Reg. Sess. (Va. 2010).

⁴⁸⁷⁵ H.B. 389, General Assemb., Reg. Sess. (Va. 2010).

facilities to accommodate the manufacturing and assembly of project components and vessels that will support such projects; and (iv) applying to the U.S. Department of Energy for loan guarantees for such projects.⁴⁸⁷⁶

H.B. 1022⁴⁸⁷⁷ (Renewable Portfolio Standard Program) provided that an investor-owned electric utility, with programs for energy derived from offshore wind, will receive triple credit toward meeting the goals of the renewable energy portfolio standard. H.B. 533⁴⁸⁷⁸ and S.B. 112⁴⁸⁷⁹ (SAVE Act) authorized investor-owned natural gas utilities to petition the State Corporation Commission to implement a separate rider to allow for recovery of certain costs associated with eligible infrastructure replacement projects. Eligible projects include those that: (i) enhance safety or reliability by reducing system integrity risks associated with customer outages, corrosion, equipment failures, material failures, natural forces, or other outside force damage; (ii) do not increase revenues by directly connecting the infrastructure replacement to new customers; (iii) reduce GHG emissions; (iv) are not included in the natural gas utility's rate base in its most recent rate case; and (v) begin on or after January 1, 2010. The costs recoverable from an eligible infrastructure replacement project include a return on the investment, a revenue conversion factor, depreciation, property taxes, and carrying costs on the over- or under-recovery of the eligible infrastructure replacement costs.⁴⁸⁸⁰

H.B. 806⁴⁸⁸¹ (Alternative Fuels Revolving Fund) added improvement of infrastructure, such as refueling stations, as a goal of the Alternative Fuels Revolving Fund. S.B. 110⁴⁸⁸² (Clean energy financing) authorized localities to, place liens equal in value to the loan against any property where such clean energy systems are being installed in order to secure loans for the initial acquisition and installation of clean energy improvements. It also allowed the locality to bundle the loans for transfer to private lenders in a way that would allow the liens to remain in full force to secure the loans.⁴⁸⁸³

In April 2010, the Virginia Department of Forestry and the Department of Conservation and Recreation partnered with Isle of Wight County to permanently conserve 2,507 acres of forestland. The Department of Forestry secured \$850,000 in federal Forest Legacy funds; the Virginia Land Conservation Fund contributed \$566,000; and the U.S. Fish and Wildlife Service added \$75,000 through the North American Wetlands Conservation Act program.⁴⁸⁸⁴

⁴⁸⁷⁶ *Id.*

⁴⁸⁷⁷ H.B. 1022, General Assemb., Reg. Sess. (Va. 2010).

⁴⁸⁷⁸ H.B. 533, General Assemb., Reg. Sess. (Va. 2010).

⁴⁸⁷⁹ H.B. 112, General Assemb., Reg. Sess. (Va. 2010).

⁴⁸⁸⁰ *Id.*

⁴⁸⁸¹ H.B. 806, General Assemb., Reg. Sess. (Va. 2010).

⁴⁸⁸² H.B. 110, General Assemb., Reg. Sess. (Va. 2010).

⁴⁸⁸³ *Id.*

⁴⁸⁸⁴ Press Release, On Last Day of Earth Week, Governor McDonnell Announces Conservation of 2,500 Acres of Forestland in Isle of Wight County (April 23, 2010), <http://www.governor.virginia.gov/News/viewRelease.cfm?id=141>.

In June 2010, Governor McDonnell signed a memorandum of understanding (MOU) with U.S. Secretary of the Interior Ken Salazar and nine east coast governors, including Maine, New Hampshire, Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina, to establish the Atlantic Offshore Wind Energy Consortium.⁴⁸⁸⁵ Under the MOU, the consortium would develop an action plan setting forth priorities, goals, specific recommendations and steps to achieve the objectives outlined in the agreement. Additionally, as part of the program, a regional renewable energy office would be located in Virginia.⁴⁸⁸⁶

Governor McDonnell host Virginia's first ever Governor's Conference on Energy in October 2010. The conference program included an examination of Virginia's energy sector, innovative alternative energy projects, and energy research and development underway at the state's universities.⁴⁸⁸⁷ Panels included a discussion of the future of both developed and undeveloped energy resources; a review of conservation and efficiency opportunities; and consideration of transportation issues, including the future potential for electric vehicles and natural gas fleets.⁴⁸⁸⁸

The fourth ENERGY STAR® and WaterSense products sales tax holiday occurred in October 2010, where consumers purchased a variety of products qualified for energy savings by the federal government and were exempt from paying the 5% state and local sales tax.⁴⁸⁸⁹ The ENERGY STAR® products included air conditioners, refrigerators, dishwashers, ceiling fans, and washing machines, as well as compact fluorescent light bulbs (CFLs) and programmable thermostats. WaterSense products included bathroom sink faucets, faucet accessories, showerheads, and toilets.⁴⁸⁹⁰

On November 26, 2010, the Department of Environmental Quality issued a permitting rule for renewable energy projects. The rule streamlined the permitting of wind energy projects producing more than 500 kW. State official expected the rule to

⁴⁸⁸⁵ Memorandum of Understanding between Ken Salazar, Sec'y of the Dep't of the Interior, and John H. Lynch, Governor of New Hampshire; Deval L. Patrick, Governor of Massachusetts; Donald L. Carcieri, Governor of Rhode Island; David A. Paterson, Governor of New York; Chris Christie, Governor of New Jersey; Jack Markell, Governor of Delaware; Martin O'Malley, Governor of Maryland; Robert F. McDonnell, Governor of Virginia; and Beverly Eaves Perdue, Governor of North Carolina (June 6, 2010), <http://www.boem.gov/uploadedFiles/AtlanticConsortiumMOU.pdf>; Press Release, Virginia Joins Atlantic Offshore Wind Energy Consortium (June 08, 2010), <https://web.archive.org/web/20130708175443/http://www.governor.virginia.gov/News/viewRelease.cfm?id=198>.

⁴⁸⁸⁶ *Id.*

⁴⁸⁸⁷ Press Release, Governor McDonnell to Host Virginia's First Governor's Conference on Energy (September 14, 2010), <https://web.archive.org/web/20130718203149/http://www.governor.virginia.gov/News/viewRelease.cfm?id=370>.

⁴⁸⁸⁸ *Id.*

⁴⁸⁸⁹ Press release, Governor McDonnell Announces Sales Tax Holiday on Energy Star and WaterSense Products (September 27, 2010), <https://web.archive.org/web/20130718203209/http://www.governor.virginia.gov/News/viewRelease.cfm?id=401>.

⁴⁸⁹⁰ *Id.*

assist developers in calculating compliance costs.⁴⁸⁹¹

Governor McDonnell finalized a deal in December 2010 with Norfolk Southern to return passenger train service to Norfolk, Virginia. The rehabilitated line would reconnect travelers or commuters with Richmond and Washington, D.C. The \$87 million project would commence in 2010 and begin passenger service in 2013.⁴⁸⁹²

2011: Green Technology, Transportation/Fuels, Renewable Energy, Market-Based Solutions, and Energy Efficiency

On June 27, 2011, the Virginia Secretary of Natural Resources and the Governor's Senior Energy Advisor highlighted some of the recent energy-related bills enacted by the Commonwealth⁴⁸⁹³ and signed by Governor McDonnell on June 15.⁴⁸⁹⁴ House Bill (H.B.) 2105 permitted private parties to sell electric vehicle recharging services, rather than limiting such services to public utilities, thus helping to support Virginia's emerging electric vehicle market.⁴⁸⁹⁵ H.B. 2282 required the Virginia Department of General Services to develop a plan for replacing vehicles in the centralized fleet with vehicles that operate on natural gas, electricity, or other alternative fuels.⁴⁸⁹⁶ H.B. 1686 directed the State Corporation Commission to offer special tariffs to distributed solar generation facilities in order to promote the construction of such customer-owned facilities as an alternative to net energy metering.⁴⁸⁹⁷ H.B. 1983 increased the amount of electricity that homeowners and businesses can generate and sell back to utilities through net metering from 10 to 20 kilowatts, thus encouraging the installation of renewable energy projects.⁴⁸⁹⁸ H.B. 2191 created a Voluntary Solar Resource Development Fund through which utility customers would be able to donate money made available as loans for the construction of solar energy projects. The program also required utilities to post a link to a donations page on their websites.⁴⁸⁹⁹ H.B. 2316 created the Clean Energy Manufacturing Incentive Grant Program to provide financial incentives to companies that manufacture or assemble equipment, systems or

⁴⁸⁹¹ Press Release, Office of the governor, Virginia Fast Tracks Wind Energy Project Approval Process (Nov. 16, 2010), <https://web.archive.org/web/20130718174959/http://www.governor.virginia.gov/News/viewRelease.cfm?id=469>.

⁴⁸⁹² Press Release, Office of the Governor, Virginia and Norfolk Southern Sign Landmark Agreement for Passenger Rail Service (Dec. 20, 2010), <http://governor.vermont.gov/http%3A/%2Fgovernor.vermont.gov/node/add/media-rail-release>.

⁴⁸⁹³ Press Release, Governor McDonnell's Natural Resources and Energy Team Highlights Progress on the Governor's Goals (June 27, 2011), <https://web.archive.org/web/20130708010308/http://www.governor.virginia.gov/News/viewRelease.cfm?id=814>.

⁴⁸⁹⁴ Press Release, Governor McDonnell Signs Legislation to Promote Clean and Renewable Energy in Virginia (June 15, 2011), <https://web.archive.org/web/20130707235146/http://www.governor.virginia.gov/News/viewRelease.cfm?id=792>.

⁴⁸⁹⁵ H.B. 2105, General Assemb., 2011 Sess. (Va. 2011).

⁴⁸⁹⁶ H.B. 2282, General Assemb., 2011 Sess. (Va. 2011).

⁴⁸⁹⁷ H.B. 1886, General Assemb., 2011 Sess. (Va. 2011).

⁴⁸⁹⁸ H.B. 1983, General Assemb., 2011 Sess. (Va. 2011).

⁴⁸⁹⁹ H.B. 2191, General Assemb., 2011 Sess. (Va. 2011).

products used to produce renewable or nuclear energy, as well as products used for energy conservation, storage, or grid efficiency.⁴⁹⁰⁰ H.B. 2389 added renewable energy projects to those projects that the Virginia Resources Authority may finance.⁴⁹⁰¹ S.B. 862 required municipalities adopting local ordinances governing the siting of renewable energy facilities to make the ordinances consistent with the provisions of Virginia's Energy Policies.⁴⁹⁰² Lastly, S.B. 1236 extended the sunset date of the Clean Fuel Vehicle Job Creation Tax Credit from the 2011 taxable year to the 2014 taxable year.⁴⁹⁰³

In October 2011, Governor McDonnell announced that Virginia would host the nation's first facility for the testing and certification of large offshore and land-based wind turbines.⁴⁹⁰⁴

2012: Renewable Energy, Market-Based Solutions, Energy Efficiency, Transportation/Fuels, and Renewable Energy

On April 17, 2012, Governor McDonnell signed a number of bills relating to renewable energy.⁴⁹⁰⁵ House Bill (H.B.) 232 redefined the statutory definition of renewable energy to include landfill gas and defined "renewable thermal energy" as the thermal output from a combined heat and power generating facility used in an industrial process other than the combined heat and power generating facility itself.⁴⁹⁰⁶ The new definition made renewable thermal energy an available source with which utilities may meet Virginia's renewable portfolio standard.⁴⁹⁰⁷

H.B. 1102 allowed utilities to receive renewable energy certificates for making qualified investments which equal one-megawatt hour of renewable energy sales achieved when applied to a renewable portfolio standard goal.⁴⁹⁰⁸ Qualified investments included investments with institutions of higher learning or with industrial or commercial researchers with research and development activities related to renewable or alternative energy resources if the investment enhanced the understanding or development of renewable energy sources on behalf of the utility, or within the state.⁴⁹⁰⁹

⁴⁹⁰⁰ H.B. 2316, General Assemb., 2011 Sess. (Va. 2011).

⁴⁹⁰¹ H.B. 2389, General Assemb., 2011 Sess. (Va. 2011).

⁴⁹⁰² S.B. 862, General Assemb., 2011 Sess. (Va. 2011).

⁴⁹⁰³ S.B. 1236, General Assemb., 2011 Sess. (Va. 2011).

⁴⁹⁰⁴ Press Release, Governor McDonnell Announces Virginia Lands Nation's First Wind Turbine Test and Certification Facility (October 13, 2011), <https://web.archive.org/web/20130709050449/http://www.governor.virginia.gov/News/viewRelease.cfm?id=962>.

⁴⁹⁰⁵ Press Release, Governor Bob McDonnell, Governor McDonnell Signs Energy Legislation Advancing Virginia as the Energy Capital of the East Coast (April 17, 2012), <https://web.archive.org/web/20130709045328/http://www.governor.virginia.gov/News/viewRelease.cfm?id=1207>.

⁴⁹⁰⁶ H.B. 232, General Assemb. 2012 Sess. (Va. 2012), <http://leg1.state.va.us/cgi-bin/legp504.exe?121+ful+CHAP0046>.

⁴⁹⁰⁷ *Id.*

⁴⁹⁰⁸ H.B. 1102, General Assemb., 2012 Sess. (Va. 2012), <http://leg1.state.va.us/cgi-bin/legp504.exe?121+ful+CHAP0274>.

⁴⁹⁰⁹ *Id.*

H.B. 894 provided clarity in assessing the usefulness of utilities' energy efficiency programs through the use of four new tests, applied successively: the Total Resource Cost Test; the Utility Cost Test; the Participant Test; and the Ratepayer Impact Measure Test.⁴⁹¹⁰ In addition, energy efficiency programs may be deemed in the public interest if they provide verifiable energy savings for low-income or elderly consumers.⁴⁹¹¹

H.B. 1016 created the Alternative Fuel Vehicle Conversion Fund to be used solely for supporting state agencies with the incremental costs of establishing and maintaining state-owned alternative fuel vehicle fleets.⁴⁹¹² Eligible incremental costs include conversions and alternative fuel vehicle purchases.⁴⁹¹³

In July 2012, Virginia Energy Sense, Virginia's consumer education and outreach program announced three television public service announcements to encourage consumers to take easy, low-cost steps to evaluate their energy use.⁴⁹¹⁴ One tool offered by Virginia Energy Sense was the new online Home Energy Test, allowing homeowners to measure their home's energy use and providing the consumer with tailored suggestions on how to improve home energy efficiency and reduce energy use.⁴⁹¹⁵

On October 2, 2012, Governor McDonnell signed a multi-state memorandum of understanding (MOU), announced contractual agreements with two private fuel companies, and signed an executive directive all in an effort to encourage the state's fleet to convert to alternative fuels.⁴⁹¹⁶ Oklahoma Governor Mary Fallin spearheaded the effort in which the multi-state commission seeks to drive down the costs of manufacturing alternative fuel vehicles and to bring natural gas and propane fueling stations to participating states at no cost.⁴⁹¹⁷

2013: Green Building, Market-Based Solutions, and Renewable Energy

The U.S. Green Building Council announced in January 2013 that Virginia was the top state for new LEED-certified buildings in 2012 with 170 certified projects and

⁴⁹¹⁰ H.B. 894, General Assemb., 2012 Sess. (Va. 2012), <http://leg1.state.va.us/cgi-bin/legp504.exe?121+ful+CHAP0210>.

⁴⁹¹¹ *Id.*

⁴⁹¹² H.B. 1016, 2012 Leg. General Assembly (Va. 2012), <http://leg1.state.va.us/cgi-bin/legp504.exe?121+ful+CHAP0531>.

⁴⁹¹³ *Id.*

⁴⁹¹⁴ Press Release, Virginia Energy Sense, Virginia Energy Sense Releases PSA, Offers Online Energy Assessment Tool to Help Virginians Keep Energy Use Down as the Summer Months Heat Up (July 13, 2012), https://web.archive.org/web/20130813125529/http://www.scc.virginia.gov/newsrel/ves_upgrade_12.pdf.

⁴⁹¹⁵ *Id.*

⁴⁹¹⁶ Press Release, Governor Bob McDonnell, Governor McDonnell Announces Agreements and Signs Executive Directive to Advance Conversion of State Vehicle Fleet to Alternative Fuels (Oct. 2, 2012), <https://web.archive.org/web/20130709030332/http://www.governor.virginia.gov/News/viewRelease.cfm?id=1446>.

⁴⁹¹⁷ *Id.*

29,709, 574 square feet of LEED-certified space.⁴⁹¹⁸ On a per capita basis, these numbers translate to 3.71 square feet of LEED-certified space per Virginia resident.⁴⁹¹⁹

On March 13, 2013, the legislature enacted H.B. 1695, allowing eligible agricultural customer-generators to participate in net energy metering.⁴⁹²⁰ Eligible agricultural customer-generators include customers who operate a renewable energy generating facility that (i) uses as its sole source of energy solar power, wind power, or aerobic or anaerobic digester gas, (ii) does not have a capacity of over 500 kilowatts, and (iii) is located on land that is owned or controlled by the customer.⁴⁹²¹

On March 14, 2013, Governor McDonnell announced that the federal Bureau of Ocean Energy Management (BOEM) would likely issue a wind energy research lease to the Virginia Department of Mines, Minerals and Energy.⁴⁹²² The research lease would allow Virginia install information towers in order to gather data on the feasibility of public or private wind energy development, including the capture of meteorological and ocean monitoring data, on Virginia's Outer Continental Shelf.⁴⁹²³

In July 2013, the Center for Climate Change Communication at George Mason University released a study of a statewide survey that found that 85% of adult Virginians believe that climate change is happening, with 53% reporting that they are very or extremely sure that climate change is happening.⁴⁹²⁴

WASHINGTON

1991: Greenhouse Gas Reduction

Initially adopted by the Washington State Legislature in 1967, the Washington Clean Air Act was substantially revised in 1991 to “preserve, protect, and enhance the air quality for current and future generations.”⁴⁹²⁵ Washington's key greenhouse gas (GHG)

⁴⁹¹⁸ Press Release, Governor Bob McDonnell, Virginia Improves to Top State for New LEED Certifications in 2012 (Jan. 23, 2013),

<https://web.archive.org/web/20130708161053/http://www.governor.virginia.gov/News/viewRelease.cfm?id=1624>.

⁴⁹¹⁹ *Id.*

⁴⁹²⁰ H.B. 1695, General Assemb., 2013 Sess., (Va. 2013), <http://lis.virginia.gov/cgi-bin/legp604.exe?l31+ful+CHAP0268>.

⁴⁹²¹ *Id.*

⁴⁹²² Press Release, Governor Bob McDonnell, Governor McDonnell Announces Virginia Department of Mines, Minerals and Energy Cleared for Wind Energy Research Lease (Mar. 14, 2013), <https://web.archive.org/web/20130708175342/http://www.governor.virginia.gov/News/viewRelease.cfm?id=1723>.

⁴⁹²³ *Id.*

⁴⁹²⁴ EDWARD MAIBACH, BRITTANY BLOODHART, AND XIAOQUAN ZHAO, PERCEPTIONS OF EXTREME WEATHER AND CLIMATE CHANGE IN VIRGINIA (2013), [http://www.climatechangecommunication.org/sites/default/files/reports/Perceptions of Weather and Climate Change in Virginia, Spring 2013.pdf](http://www.climatechangecommunication.org/sites/default/files/reports/Perceptions%20of%20Weather%20and%20Climate%20Change%20in%20Virginia%20Spring%202013.pdf).

⁴⁹²⁵ Clean Air Washington Act, S.H.B. 1028, 52nd Leg., Reg. Sess. (Wash. 1991) (codified at WASH. REV. CODE § 70.94).

mitigation measures appear as amendments and additions to the Washington Clean Air Act § 70.94. The act:

- Established Reasonable Available Control Technology (RACT) requirements for industrial polluters;⁴⁹²⁶
- Affirmed tax exemptions and credits for air pollution control facilities;⁴⁹²⁷
- Created an Abatement Account and tax incentives for manufacturers taking verifiable steps to reduce sulfur dioxide emissions;⁴⁹²⁸
- Required large employers in counties with populations over 150,000 to implement commuter trip reduction plans;⁴⁹²⁹
- Established a ride-sharing grant program for private, public and non-profit sector employers offering financial incentives for employees to share rides;⁴⁹³⁰
- Created clean fuel matching grants to help local governments offset the costs of purchasing and maintaining “clean fuel” vehicles for public transportation, including school buses;⁴⁹³¹
- Authorized New Source Review for significant sources of ambient air contaminants and require notice of proposed construction of new contaminant sources.⁴⁹³²

1996: Climate Change Adaptation

The Washington State Energy Office completed a climate change action plan for the state in April 1996.⁴⁹³³ The climate change action plan took a 1990 Greenhouse Gas (GHG) emissions inventory for Washington State and a 2010 projected inventory, and detailed alternative GHG mitigation options.

2004: Greenhouse Gas Reduction

In 2004, Washington promulgated new rules to address global warming.⁴⁹³⁴ The new rules related to mitigating carbon dioxide emissions resulting from fossil-fueled electrical generation.⁴⁹³⁵ These carbon dioxide mitigation statutes established mandatory carbon dioxide mitigation strategies for new fossil-fueled thermal electric generation facilities, as well as existing facilities seeking permits to significantly increase their carbon dioxide emissions. The statutes required facilities to mitigate 20% of total emissions using one of three options: (1) payment to a third party to provide mitigation;

⁴⁹²⁶ WASH. REV. CODE § 70.94.154 (2012).

⁴⁹²⁷ *Id.* §§ 70.94.445, 82.34.01-.901.

⁴⁹²⁸ *Id.* § 70.94.630.

⁴⁹²⁹ *Id.* §§ 70.94.527, 43.01.220-.240.

⁴⁹³⁰ *Id.* § 70.94.996.

⁴⁹³¹ *Id.* § 70.94.960.

⁴⁹³² WASH. REV. CODE § 70.94.152 (2012).

⁴⁹³³ NICOLAS GARCIA, WASH. ST. ENERGY OFF., GREENHOUSE GAS MITIGATION OPTIONS FOR WASHINGTON STATE (Apr. 1996), <http://www.osti.gov/scitech/servlets/purl/258175>.

⁴⁹³⁴ Public Utilities-Carbon Dioxide Emissions, S.H.B. 3141, 58th Leg., Reg. Sess. (Wash. 2004).

⁴⁹³⁵ WASH. REV. CODE §§ 80.70.010-.070 (2012).

(2) direct purchase of permanent carbon credits; or (3) investment in applicant-controlled CARBON DIOXIDE mitigation projects, including combined heat and power plants.⁴⁹³⁶

2005: Energy Efficiency and Transportation/Fuels

In 2005, Washington established appliance efficiency standards, finding that “[e]nergy standards save energy and reduce pollution and other environmental impacts associated with the production, distribution, and use of electricity and natural gas.”⁴⁹³⁷ The energy efficiency standards applied to a select range of different types of appliances including commercial refrigerators and freezers, hot water dispensers, mini-tank electrical water heaters, and commercial hot food holding cabinets.⁴⁹³⁸ In addition, Washington adopted California Low Emission Vehicle (LEV) standards for passenger cars, light duty trucks, and medium duty passenger vehicles.⁴⁹³⁹ The legislation specifically rejected, however, the adoption of California Zero Emission Vehicle (ZEV) standards.⁴⁹⁴⁰ Moreover, it stipulated that emissions standards would only be effective for those model years for which the State of Oregon adopted the California motor vehicle emission standards.⁴⁹⁴¹

In 2005, Governor Christine Gregoire signed into law S.B. 5101, which created “feed-in” utility credits of 15¢ per kilowatt (up to \$2,000 annually) for electricity generated by customers’ solar photovoltaic (PV), wind, and anaerobic digester power systems beginning July 1, 2005 and then expiring on June 30, 2014.⁴⁹⁴² The credit would be increased up to 54¢ for a fixed ten-year period if the customer’s system contained components generated in Washington. In addition, during the 2005 legislative session, Governor Gregoire signed S.B. 5111, which gave tax breaks to in-state businesses that manufacture renewable energy components.⁴⁹⁴³

2006: Renewable Energy, Renewable Portfolio Standards, Climate Change Adaptation, and Greenhouse Gas Reduction

In November 2006, Washington residents voted for a renewable portfolio standard, deemed Initiative-937 or I-937, requiring all state utilities to generate 15% of their energy from renewables, including wind, solar, tidal, and landfill-methane capture by 2020.⁴⁹⁴⁴

⁴⁹³⁶ *Id.*

⁴⁹³⁷ *See id.* § 19.260.010.

⁴⁹³⁸ *Id.* § 19.260.030.

⁴⁹³⁹ *Id.* § 70.120A.010.

⁴⁹⁴⁰ *Id.* (California Zero Emission Vehicle (ZEV) standards codified at CAL. CODE REGS. tit. 13, § 1962).

⁴⁹⁴¹ *Id.*

⁴⁹⁴² Renewable Energy Industries – Tax Credits, S.S.B. 5101, 59th Leg., Reg. Sess. (Wash. 2005).

⁴⁹⁴³ Solar Energy – Tax Credits, S.S.B. 5111, 59th Leg., Reg. Sess. (Wash. 2005).

⁴⁹⁴⁴ Initiative Measure – New Energy Resources, I.M. 937, 60th Leg., Reg. Sess. (Wash. 2007).

In December 2006, the Washington State Department of Ecology released a report that forecast the possible effects of climate change on Washington and its economy.⁴⁹⁴⁵ The study, *Impacts of Climate Change on Washington's Economy: A Preliminary Assessment of Risks and Opportunities*, was conducted by the Climate Leadership Initiative at the University of Oregon on behalf of the Washington Department of Ecology and the Washington Department of Community, Trade, and Economic Development.

Also in December 2006, Washington's Utility Commission signed onto the Western Public Utility Commissions' Joint Action Framework on Climate Change, an inter-state agreement with the public utility commissions of California, New Mexico, and Oregon.⁴⁹⁴⁶ Under the agreement, the utility commissions agreed to work together to recommend ways to identify, develop, and implement greater energy efficiency, demand response capability, low-carbon technologies, and GHG emissions standards.

2007: Greenhouse Gas Reduction, Climate Change Adaptation, Green Jobs, and Cap-&-Trade

In February 2007, Governor Gregoire signed Executive Order 07-02, which created GHG reduction goals calling for a reduction below 1990 emission levels by 2035 and 50% below 1990 levels by 2050.⁴⁹⁴⁷ As part of Executive Order 07-02, Governor Gregoire commenced the Washington Climate Change Challenge to achieve the goals set in the order.⁴⁹⁴⁸

Also in February 2007, the Governors of Arizona, California, New Mexico, Oregon, and Washington established the Western Climate Initiative (WCI) in order to reduce GHG emissions and tackle climate change.⁴⁹⁴⁹ On August 22, 2007, the Initiative set a regional GHG emission reduction goal of 15% below 2005 levels by 2020, or approximately 33% below business-as-usual levels.⁴⁹⁵⁰ However, the WCI all but ended with every state but California withdrawing with the economic downturn in 2008 and 2009. The departing states have gone on to join North America: 2050, a completely voluntary GHG reduction initiative and discussed in detail below.

However, Governor Gregoire put these GHG reduction goals into state law by signing Senate Substitute Bill (S.S.B.) 6001 in May 2007.⁴⁹⁵¹ S.S.B. 6001 called for a

⁴⁹⁴⁵ DEP'T OF ECOLOGY, IMPACTS OF CLIMATE CHANGE ON WASHINGTON'S ECONOMY: A PRELIMINARY ASSESSMENT OF RISKS AND OPPORTUNITIES (2006), <https://fortress.wa.gov/ecy/publications/publications/0701010.pdf>.

⁴⁹⁴⁶ W. PUB. UTIL. COMM'N, JOINT ACTION FRAMEWORK ON CLIMATE CHANGE (2006), <http://www.puc.state.or.us/news/2006/2006026jointaction.pdf>.

⁴⁹⁴⁷ See Washington Climate Change Challenge, Wash. Exec. Order No. 07-02 (2007), http://www.governor.wa.gov/office/execorders/eoarchive/eo_07-02.pdf.

⁴⁹⁴⁸ See *Id.*

⁴⁹⁴⁹ WESTERN CLIMATE INITIATIVE (Aug. 25, 2013), <http://www.wci-inc.org>.

⁴⁹⁵⁰ *Statement of Regional Goal*, WESTERN CLIMATE INITIATIVE (Aug. 27, 2007), http://azclimatechange.gov/download/082207_statement.pdf.

⁴⁹⁵¹ S.S.B. 6001, 60th Leg., Reg. Sess. (Wash. 2007).

reduction of GHG emissions to below 1990 levels by 2020, 25% below 1990 levels by 2035, and 50% below 1990 levels by 2050.⁴⁹⁵² In addition, S.S.B. 6001 called for the creation of over 16,000 new clean energy jobs, required GHG emissions reports from state agencies, required the governor to make recommendations for achieving GHG emissions goals, and established a GHG emissions performance standard for new baseload electric power generation utilities, which, beginning in July 2008, capped GHG emissions at 1,100 pounds per megawatt-hour.⁴⁹⁵³ The bill also required a state agency to adopt rules for carbon capture and sequestration; the Washington Department of Ecology's Water Quality Program amended one of its regulations in response.⁴⁹⁵⁴ The amendment authorized geologic sequestration while protecting the existing quality of aquifers used for irrigation and drinking water.⁴⁹⁵⁵

Also in May 2007, Governor Gregoire signed House Bill (H.B.) 1303, creating a school bus replacement incentive program to fund up to 10% of the cost of replacing old diesel school buses with model 2007 or newer buses.⁴⁹⁵⁶ In addition the bill required local governments and state agencies to fuel their vehicles, vessels, and equipment with 100% biofuels made from Washington feedstocks or recycled materials by 2015. It also mandated that the state reduce vehicle fossil fuel consumption to 25% below 2006 levels by 2020.⁴⁹⁵⁷ Other provisions included expanding the Washington Department of Agriculture's "energy freedom" program; supporting cellulosic ethanol production; developing refueling stations, plug-in hybrid projects, and hydrogen vehicle projects; and permitting ports to install equipment to reduce emissions.⁴⁹⁵⁸

Governor Gregoire signed substitute H.B. 1929 on May 7, 2007, which authorized local municipalities to develop GHG emission reduction plans and pass the costs onto ratepayers.⁴⁹⁵⁹

Also in May 2007, Washington and thirty other states founded The Climate Registry to "measure, track, verify, and publicly report GHG emissions accurately, transparently and consistently across borders and industry sectors."⁴⁹⁶⁰ As of March 2008, thirty-nine total states were participating in the Climate Registry.⁴⁹⁶¹ The Registry is a nonprofit collaboration among U.S. states and other North American territories and provinces that set consistent and transparent standards to calculate verify and publicly

⁴⁹⁵² *Id.*

⁴⁹⁵³ *Id.*

⁴⁹⁵⁴ *Id.*

⁴⁹⁵⁵ WASH. ADMIN. CODE § 173-218-010 (2014).

⁴⁹⁵⁶ S.S.H.B. 1303, 60th Leg., Reg. Sess. (Wash. 2007).

⁴⁹⁵⁷ *Id.*

⁴⁹⁵⁸ *Id.*

⁴⁹⁵⁹ S.H.B. 1929, 60th Leg., Reg. Sess. (Wash. 2007).

⁴⁹⁶⁰ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions (May 8, 2007),

http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

⁴⁹⁶¹ The Climate Registry, General Reporting Protocol 1 (May 2008),

<http://www.theclimateregistry.org/downloads/GRP.pdf>.

report GHG emissions into a single date base.⁴⁹⁶² This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”⁴⁹⁶³

On October 29, 2007, Washington joined a coalition with nine other states, New Zealand, Norway, nine European Union countries, the European Commission, and two Canadian provinces to form the International Carbon Action Partnership (ICAP) in order to combat global warming.⁴⁹⁶⁴ ICAP provides a forum for governments to share information regarding cap-and-trade systems and works to ensure that market programs are compatible.⁴⁹⁶⁵ In addition, ICAP will promote low-carbon products and services, innovations, and cost effective reductions.⁴⁹⁶⁶

2008: Green Jobs, Climate Change Adaptation, Greenhouse Gas Reduction, Cap-&-Trade, and Energy Efficiency

On March 13, 2008, Governor Gregoire signed House Bill (H.B.) 2815, the Climate Change Framework/Green-Collar Jobs Act.⁴⁹⁶⁷ It seeks to reduce Washington’s GHG emissions to 1990 levels by 2020, to 25% below 1990 levels by 2035, and 50% below 1990 levels by 2050.⁴⁹⁶⁸ The bill directs the Department of Ecology to submit a comprehensive plan for reaching reduction targets and to update the legislature on Washington’s ongoing participation in the WCI cap-and-trade design process.⁴⁹⁶⁹ In addition, it required the Department of Ecology to promulgate an emissions reporting system by 2010 for large industrial and fleet emitters.⁴⁹⁷⁰

Another climate change bill became effective on June 12, 2008.⁴⁹⁷¹ Senate Bill (S.B.) 6580 requires the Department of Community, Trade, and Economic Development (the Department) to help local governments adapt to the effects of climate change.⁴⁹⁷² Specifically, the Department must provide local governments advisory climate change response methodologies, a computer-modeling program, and estimates of GHG emission reductions that would result from certain measures.⁴⁹⁷³ Besides this technical assistance,

⁴⁹⁶² *Id.*

⁴⁹⁶³ *Id.*

⁴⁹⁶⁴ Press Release, Int’l Carbon Action P’ship, Launch Ceremony: Nations, States, Provinces Announce Carbon Markets Partnership to Reduce Global Warming (Oct. 29, 2007), http://icapcarbonaction.com/index.php?option=com_content&view=article&id=5:what-is-icap-goal&catid=2:press-releases&Itemid=34.

⁴⁹⁶⁵ *Id.*

⁴⁹⁶⁶ *Id.*

⁴⁹⁶⁷ H.B. 2815, 60th Leg., Reg. Sess. (Wash. 2008), <http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/House Passed Legislature/2815-S2.PL.pdf>.

⁴⁹⁶⁸ *Id.*

⁴⁹⁶⁹ *Id.*

⁴⁹⁷⁰ *Id.*

⁴⁹⁷¹ S.B. 6580, 60th Leg., Reg. Sess. (Wash 2008), <http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/Senate%20Passed%20Legislature/6580-S.PL.pdf>.

⁴⁹⁷² *Id.*

⁴⁹⁷³ *Id.*

the Department is required to provide grants to assist local governments in their climate change adaptation actions.⁴⁹⁷⁴

Also in June 2008, Washington's Environmental Facility Site Evaluation Council (EFSEC) adopted rules that set the procedure for carbon dioxide mitigation for thermal energy facilities and implemented GHG emission performance standards and enforcement for baseload electric generation.⁴⁹⁷⁵ In addition, in August 2008 EFSEC proposed to adopt a mandatory GHG reporting rule for owners and operators of EFSEC-permitted facilities.⁴⁹⁷⁶

In a greater effort to reduce its carbon footprint, Washington released a Climate Action Plan in December 2008.⁴⁹⁷⁷ The plan seeks to help the state reduce its GHG emissions to 1990 levels and to create 25,000 green jobs by 2020 primarily through participation in the WCI.⁴⁹⁷⁸ However, the plan also suggested implementation of the following policies to obtain these goals: energy efficiency programs; green building requirements and combined heat and power (CHP) plants; increasing public transportation and rideshare options; promoting compact development, recycle and reuse programs; and preserving forest and agricultural lands.⁴⁹⁷⁹

2009: Greenhouse Gas Reduction, Green Jobs, Energy Efficiency, Green Jobs, American Recovery & Reinvestment Act (ARRA), Transportation/Fuels, and Market-Based Solutions

Pursuing its cap-and-trade program, the Western Climate Initiative (WCI) released the third draft of the *Background Document and Progress Report for Essential Requirements of Mandatory Reporting For the Western Climate Initiative* on January 6, 2009 for public comment.⁴⁹⁸⁰ It set the reporting threshold at 10,000 metric tons of carbon dioxide per year, well below the 25,000 metric ton threshold for participation in the cap-and-trade program.⁴⁹⁸¹ It recommended that stationary combustion sources be subject to the reporting requirement as well as numerous other listed sources from Adipic acid manufacturing to Zinc production.⁴⁹⁸² These listed sources must report combustion

⁴⁹⁷⁴ *Id.*

⁴⁹⁷⁵ WASH. ADMIN. CODE § 463-85-005 (2014).

⁴⁹⁷⁶ Notice of Proposed Rulemaking, New Chapter 463-90 WAC – Reporting of Emissions of Greenhouse Gases, [http://www.efsec.wa.gov/Rulesreview/CO2/GHG reporting rule/Notice of Proposed Rule Making.pdf](http://www.efsec.wa.gov/Rulesreview/CO2/GHG%20reporting%20rule/Notice%20of%20Proposed%20Rule%20Making.pdf).

⁴⁹⁷⁷ DEP'T OF ECOLOGY, GROWING WASHINGTON'S ECONOMY IN A CARBON-CONSTRAINED WORLD: A COMPREHENSIVE PLAN TO ADDRESS THE CHALLENGES AND OPPORTUNITIES OF CLIMATE CHANGE (2008), <https://fortress.wa.gov/ecy/publications/publications/0801025.pdf>.

⁴⁹⁷⁸ *Id.* at 9.

⁴⁹⁷⁹ *Id.* at 36.

⁴⁹⁸⁰ WESTERN CLIMATE INITIATIVE, BACKGROUND DOCUMENT AND PROGRESS REPORT FOR ESSENTIAL REQUIREMENTS OF MANDATORY REPORTING FOR THE WESTERN CLIMATE INITIATIVE THIRD DRAFT (2009), [http://www.westernclimateinitiative.org/document-archives/Reporting-Committee-Documents/Draft-Essential-Requirements-for-Mandatory-Reporting---Third-Draft-\(January-6-2009\)/Background-Documents-and-Progress-Report-for-Essential-Requirements-of-Mandatory-Re](http://www.westernclimateinitiative.org/document-archives/Reporting-Committee-Documents/Draft-Essential-Requirements-for-Mandatory-Reporting---Third-Draft-(January-6-2009)/Background-Documents-and-Progress-Report-for-Essential-Requirements-of-Mandatory-Re).

⁴⁹⁸¹ *Id.* at 10.

⁴⁹⁸² *See id.* at 7.

and non-combustion emissions.⁴⁹⁸³ Due to strong stakeholder support, it also recommended that reporting begin in 2011 for facilities that began operation before 2010 in preparation for the commencement of the cap-and-trade program in 2012.⁴⁹⁸⁴

On January 29, 2009, Governor Gregoire and state lawmakers announced a Green Jobs and Climate Action legislative package.⁴⁹⁸⁵ Package highlights included: \$455 million total in biennium investment in “energy-reducing transportation projects, energy efficiency projects, green buildings and clean-energy technology;” legislation to limit GHG emissions and create market incentives through a cap-and-trade system designed by the WCI; tax exemptions for plug-in electric vehicles; and a 30% improvement in building energy efficiency standards.⁴⁹⁸⁶ The final bill was passed on April 15, 2009 but did not include a cap-and-trade system.⁴⁹⁸⁷

Governor Gregoire and eleven other governors signed a letter to President Obama urging him to form a strong state-federal leader partnership in administering a national climate change program.⁴⁹⁸⁸ This letter was predicated upon the President’s letter to the Governors’ Global Climate Summit in which he offered the governors a partnership with the White House in addressing climate change issues. The letter writers believed that their states had played a leading role in confronting these issues and stated, “It is crucial that we build on our states’ momentum.”⁴⁹⁸⁹ The letter also contained suggestions for how a national climate change program should be implemented. One of these suggestions was for the national government to recognize the private investments that had been made in existing cap-and-trade programs and to preserve the clean energy plans funded by the proceeds from these programs.⁴⁹⁹⁰

After President Barack Obama signed the American Recovery & Reinvestment Act (ARRA) into law on February 17, 2009, Washington was allocated \$131,000,000 for energy related projects as of August 2009.⁴⁹⁹¹

⁴⁹⁸³ *Id.* at 11.

⁴⁹⁸⁴ *Id.* at 16.

⁴⁹⁸⁵ Press Release, Gov. Gregoire, Legislative Leaders Announce Green Jobs and Climate Action legislation http://www.ecy.wa.gov/news/2009news/gov_20090129.html.

⁴⁹⁸⁶ DEP’T OF ECOLOGY, 2009 GREEN JOBS AND CLIMATE ACTION LEGISLATION (2009), <https://fortress.wa.gov/ecy/publications/publications/0901003.pdf>.

⁴⁹⁸⁷ H.B. 1819, 61st Leg., Reg. Sess. (Wash. 2009); S.B. 5735, 61st Leg., Reg. Sess. (Wash. 2009).

⁴⁹⁸⁸ Letter from Arnold Schwarzenegger, Governor of Cal., M. Jodi Rell, Governor of Conn., Charlie Crist, Governor of Fla., Kathleen Sebelius, Governor of Kan., Martin O’Malley, Governor of Md., Deval Patrick, Governor of Mass., John S. Corzine, Governor of N.J., Bill Richardson, Governor of N.M., David Paterson, Governor of N.Y., Theodore R. Kulongoski, Governor of Or., Christine O. Gregoire, Governor of Wash., Jim Doyle, Governor of Wis., to Barack Obama, President of the United States of America (Feb. 20, 2009), <http://web.archive.org/web/20090214185812/http://www.wisgov.state.wi.us/docview.asp?docid=15821>.

⁴⁹⁸⁹ *Id.* at 1.

⁴⁹⁹⁰ *Id.* at 2.

⁴⁹⁹¹ American Recovery and Reinvestment Act, Pub. L. 111-5, 123 Stat 115; *see* AMERICAN RECOVERY AND REINVESTMENT ACT: LAYING THE FOUNDATION FOR WASHINGTON’S 21ST CENTURY ECONOMY 7 (2009), <http://www.recovery.wa.gov/documents/ARRAreportJuly2009final.pdf>; *see* NATIONAL GOVERNORS ASSOCIATION, STATE OPPORTUNITIES UNDER THE AMERICAN RECOVERY AND REINVESTMENT ACT: ENERGY AND GREEN JOBS PROGRAMS (2009), http://www.recovery.wa.gov/documents/Energy_and_green_jobs026909.pdf.

In May 2009, Governor Gregoire issued an executive order directing state actions to “reduce climate-changing greenhouse gas emissions, increase transportation and fuel-conservation options for Washingtonians, and protect our state’s water supplies and vulnerable coastal areas.”⁴⁹⁹² She issued Executive Order 09-05, Washington’s Leadership on Climate Change, on May 21, 2009 following her testimony before a U.S. EPA panel in Seattle.⁴⁹⁹³ In her testimony, Gregoire noted that the projected 20% reduction in Cascade Mountain snowpack would have a dramatic impact on the state’s water supply, natural resources, recreation and agriculture industry.⁴⁹⁹⁴

Governor Gregoire released a statement on May 29, 2009 outlining the projects benefiting from the \$2.2 billion in U.S. Dept. of Energy ARRA funding awarded to Washington State.⁴⁹⁹⁵ The recipients included many climate change initiatives, such as research facilities, carbon capture and storage projects, and residential weatherization programs.⁴⁹⁹⁶ An additional \$24.3 million was awarded a few weeks later, which was specifically directed at energy efficiency and renewable energy projects.⁴⁹⁹⁷

According to the Pew Charitable Trust’s June 2009 Clean Energy Economy Fact Sheet for Washington, Washington’s clean energy economy grew by 17,013 jobs and 2,008 businesses from 1998 to 2007.⁴⁹⁹⁸ Between 2006 and 2009, Washington attracted over \$635 million in capital investment in clean energy.⁴⁹⁹⁹

Governor Gregoire encouraged Washington’s congressional delegation to support the American Clean Energy and Security Act of 2009 when it was presented for a vote on June 25, 2009.⁵⁰⁰⁰ In a letter to congressional leaders, Gregoire wrote, “[t]he United States cannot afford to wait any longer to take comprehensive action to break our dependence on foreign oil. We must seize the opportunity to develop 21st century energy technologies, create jobs, reduce greenhouse gas emissions and arrest global

⁴⁹⁹² Press Release, Gov. Chris Gregoire, Gov. Gregoire orders state actions to reduce greenhouse gases and battle climate change (May 21, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1242&newsType=1>.

⁴⁹⁹³ See Wash. Exec. Order No. 09-05 (May 21, 2009) http://www.governor.wa.gov/office/execorders/eoarchive/eo_09-05.pdf.

⁴⁹⁹⁴ *Id.*

⁴⁹⁹⁵ Press Release, Gov. Chris Gregoire, U.S. Department of Energy Awards Washington State \$2.2 billion in recovery funds (May 29, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1246&newsType=1>.

⁴⁹⁹⁶ *Id.*

⁴⁹⁹⁷ Press Release, Gov. Chris Gregoire, Gov. Gregoire’s statement on Department of Energy stimulus award (June 24, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1269&newsType=1>.

⁴⁹⁹⁸ PEW CHARITABLE TRUST, THE CLEAN ENERGY ECONOMY 7 (2009), [http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/Clean Energy Economy.pdf](http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/Clean%20Energy%20Economy.pdf).

⁴⁹⁹⁹ *Id.*

⁵⁰⁰⁰ Press Release, Gov. Chris Gregoire, Gov. Gregoire urges Washington delegation to support energy and climate legislation (June 22, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1265&newsType=1>.

warming.”⁵⁰⁰¹ On June 26, 2009, Gregoire applauded the U.S. House of Representatives on its passage of the legislation.⁵⁰⁰² Later that week, she commended the EPA on its approval for “clean car” standards paving the way for Washington and other states to move forward with their emissions standards for new vehicles.⁵⁰⁰³

On July 15, 2009, Governor Gregoire joined Totem Ocean Trailer Express (TOTE) CEO Bill Deaver at the port of Tacoma to celebrate TOTE’s completion of its first phase of retrofits targeted at diesel emission reduction.⁵⁰⁰⁴ TOTE used \$121,000 in ARRA funding to retrofit 25 shipyard trucks with exhaust devices that would reduce emissions by 65%.⁵⁰⁰⁵

In August 2009, Governor Gregoire convened the first meeting of Washington’s Clean Energy Leadership Council (CELC), comprised of energy industry leaders, government officials and legislators meeting to devise a clean energy strategy to be delivered by December 1, 2010.⁵⁰⁰⁶ The Council focuses on “getting Washington’s energy policies, technologies and capital aligned to ensure Washington continues to be a leader in clean energy development.”⁵⁰⁰⁷

Governor Gregoire co-hosted the Governors’ Global Climate Summit held in Los Angeles in September 2009.⁵⁰⁰⁸ She led panel discussion sessions on transportation and adaptation to climate change among other activities.⁵⁰⁰⁹

On October 9, 2009, Governor Gregoire announced that \$14 million in ARRA funding would be awarded to programs providing energy efficiency upgrades to middle income residences and small businesses.⁵⁰¹⁰

⁵⁰⁰¹ *Id.*

⁵⁰⁰² Press Release, Gov. Chris Gregoire, Gov. Gregoire’s statement applauding Congress on comprehensive energy and climate legislation (June 26, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1270&newsType=1>.

⁵⁰⁰³ Press Release, Gov. Chris Gregoire, Gov. Gregoire’s statement on EPA approval for ‘clean car’ standards for greenhouse gases (June 30, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1274&newsType=1>.

⁵⁰⁰⁴ Press Release, Gov. Chris Gregoire, Gov. Gregoire, area ports highlight federal recovery money to reduce air pollution (July 15, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1289&newsType=1>.

⁵⁰⁰⁵ *Id.*

⁵⁰⁰⁶ Press Release, Gov. Chris Gregoire, Clean Energy Leadership Council convenes (Aug. 12, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1307&newsType=1>.

⁵⁰⁰⁷ *Id.*

⁵⁰⁰⁸ Press Release, Gov. Chris Gregoire, Gov. Gregoire co-hosts global climate summit (Sept. 30, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1339&newsType=1>.

⁵⁰⁰⁹ *Id.*

⁵⁰¹⁰ Press Release, Gov. Chris Gregoire, Gov. Gregoire announces \$14 million in energy efficiency upgrades (Oct. 9, 2009), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1344&newsType=1>; see also AMERICAN RECOVERY AND REINVESTMENT ACT:

In December 2009, following Governor Gregoire's participation in the United Nations climate summit in Copenhagen, she announced \$5 million in ARRA funding for energy efficiency retrofitting in residential and commercial buildings.⁵⁰¹¹ The funds were expected to create 500 jobs and power 4,700 households.⁵⁰¹²

2010: American Recovery & Reinvestment Act (ARRA), Greenhouse Gas Reduction, Transportation/Fuels, and Green Jobs

On January 6, 2010, Governor Gregoire announced that over \$13 million in ARRA grants would be disbursed to various energy partners for workforce training in clean energy and renewable energy industries.⁵⁰¹³ A few months later, Gregoire awarded \$16.5 million to various clean and renewable energy projects throughout the state⁵⁰¹⁴

In February 2010, Governor Gregoire released a statement applauding the U.S. EPA for its endangerment finding on GHGs, a necessary step in their eventual regulation.⁵⁰¹⁵ In April, Gregoire also gave her support for EPA's adoption of new emission standards for vehicles.⁵⁰¹⁶

The results of statewide survey published in March 2010 demonstrated Washington's green jobs economy was growing, with a total of nearly 100,000 green jobs in both the private and government sector – 3.3% of all Washington Jobs.⁵⁰¹⁷

In June 2010, the state announced the creation of a \$100 million competitive grant program for energy efficiency improvements in public education institutions. Funds

ECONOMIC RECOVERY IN WASHINGTON (2009),

<http://www.recovery.wa.gov/documents/public/ARRAreportOctober2009final.pdf>.

⁵⁰¹¹ Press Release, Gov. Chris Gregoire, Gov. Gregoire announces follow up actions after trip to Copenhagen climate summit (Dec. 23, 2009),

<http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1401&newsType=1>.

⁵⁰¹² *Id.*

⁵⁰¹³ Press Release, Gov. Chris Gregoire, Gov. Gregoire announces Recovery Act grants to train workers for clean energy economy (Jan. 6, 2010), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1406&newsType=1>.

⁵⁰¹⁴ Press Release, Gov. Chris Gregoire, Gov. Gregoire announces \$16.5 million for energy efficiency and renewable energy projects (Mar. 30, 2010),

<http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1465&newsType=1>.

⁵⁰¹⁵ Press Release, Gov. Chris Gregoire, Gov. Gregoire's statement on EPA finding (Feb. 22, 2010), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1437&newsType=1>.

⁵⁰¹⁶ Press Release, Gov. Chris Gregoire, Gov. Gregoire's statement EPA adopting new emission standards (Apr. 1, 2010), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1470&newsType=1>.

⁵⁰¹⁷ Press Release, Gov. Chris Gregoire, Gov. Gregoire announces Washington state economy is getting "greener" (Mar. 18, 2010), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1454&newsType=1>.

would be dispersed based on performance-based construction contracting to ensure cost effectiveness and maximized energy savings.⁵⁰¹⁸

Also in June 2010, Washington received \$1.32 million in stimulus funding for electric vehicle infrastructure projects. The ARRA funds would work in conjunction with similar funded projects in Oregon to electrify Interstate 5 with recharging stations that use fast charge technology.⁵⁰¹⁹

In August 2010, the U.S. Department of Energy awarded five Washington state small businesses grants through its Small Business Innovation Research and Technology Transfer programs. The five companies were Enertechnix, Inc. in Redmond (\$999,995); Houghton Cascade Holdings, LLC in Tacoma (\$998,367); Hummingbird Precision Machine Inc. in Olympia (\$1,000,000); Forest Concepts, LLC in Auburn (\$1,000,000); and Eagle Harbor Technologies, Inc. in Bainbridge Island (\$860,226).⁵⁰²⁰ Governor Gregoire also announced almost \$17 million in grants to make 29 public schools more energy efficient. Governor Gregoire highlighted the benefits of creating roughly 660 jobs in the short-term and reducing public education utility bills in the long-term.⁵⁰²¹

2011: Greenhouse Gas Reduction, Green Technology, Transportation/Fuels, and Energy Efficiency

On April 29, 2011, Governor Gregoire signed into law Senate Bill (S.B.) 5769, calling for the state's two coal boilers at the TransAlta coal-fired power plant in Centralia to close, the first in 2020 and the second in 2025.⁵⁰²² The law aimed help Washington to transition away from coal-fired energy and to provide sufficient time for the transition to take place while ensuring stability to the electrical grid.⁵⁰²³

A month later, the U.S. Department of Agriculture (USDA) awarded \$80 million in grants to two Washington universities, one of the largest sums ever awarded by that agency.⁵⁰²⁴ The grants would be used by Washington State University and the University

⁵⁰¹⁸ Press Release, Office of the Governor, \$100 Million Now Available for School Energy, Operational Improvements (June 10, 2010), <http://housedemocrats.wa.gov/hans-dunshee/100-million-now-available-for-school-energy-operational-improvements/>.

⁵⁰¹⁹ Press Release, Office of the Governor, Gov. Gregoire Announces Plan to Launch Nation's First Electric Highway (June 28, 2010), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1523&newsType=1>.

⁵⁰²⁰ Press Release, Office of the Governor, Gov. Gregoire's Statement on DOE Financial Awards to Washington Small Businesses (Aug. 2, 2010), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1550&newsType=1>.

⁵⁰²¹ Press Release, Office of the Governor, State Jobs Act Awards \$17 Million for Energy Cost Savings in Public Schools (Aug. 11, 2010), <http://www.digitalarchives.wa.gov/GovernorGregoire/news/news-view.asp?pressRelease=1556&newsType=1>.

⁵⁰²² S.S.B. 5769, 62nd Leg., Reg. Sess. (Wash. 2011), <http://apps.leg.wa.gov/documents/billdocs/2011-12/Pdf/Bills/Senate/Passed/Legislature/5769-S2.PL.pdf>.

⁵⁰²³ FINAL BILL REPORT, E2SSB 5769 (2011), <http://apps.leg.wa.gov/documents/billdocs/2011-12/Pdf/Bill/Reports/Senate/5769-S2.E SBR FBR 11.pdf>.

⁵⁰²⁴ Shannon Dininny, *USDA Announces \$80M for Washington-Led Research*, BLOOMBERG BUS. WEEK (Sept. 29, 2011), <http://www.businessweek.com/ap/financialnews/D9Q27QSO0.htm>.

of Washington to research the conversion of Pacific Northwest wood and forest residues into biofuels, in partnership with other universities, research entities and corporations. More specifically, the University of Washington project would explore the conversion of poplar trees grown on plantations into aviation, diesel and gasoline fuels, while the Washington State University project would research the potential for using residual wood after logging and forest thinning for aviation fuel.⁵⁰²⁵

On November 3, 2011, the state's Department of Ecology planned to provide \$500,000 to public school districts to install anti-idle devices on school buses to reduce emissions and save on fuel costs.⁵⁰²⁶ The devices allow heating of bus cabins, window defrosting and engine heating and circulation without idling the bus engine.⁵⁰²⁷ It was estimated that each bus with the installed technology would be able to conserve 125 gallons of fuel per year.⁵⁰²⁸

Later in November 2011, Washington and five other states left the WCI in order to join North America 2050, an organization which promotes carbon dioxide capture and sequestration techniques, offset projects for emissions trading programs and a focus on sustainable biomass in order to achieve meaningful emissions reductions.⁵⁰²⁹ North America 2050 was first created in 2009 when state and regional representatives from three regional greenhouse gas (GHG) reduction initiatives, the Regional Greenhouse Gas Initiative (RGGI), the Western Climate Initiative (WCI), and the Midwestern Greenhouse Gas Reduction Accord (MGGRA), came together to form North America 2050.⁵⁰³⁰ As of December 2013, the participating states include Arizona, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, Montana, New Jersey, Mexico, Oregon, Rhode Island, Vermont, and Washington, along with the Canadian provinces of British Columbia, Manitoba, Ontario, and Quebec.⁵⁰³¹ North America 2050's mission is to "facilitate[] state and provincial efforts to design, promote and implement cost-effective policies that reduce greenhouse gas emissions and create economic opportunities."⁵⁰³² North America 2050 is open to all U.S. States, Canadian Provinces, and Mexican States, and may also include other stakeholders and experts from the private and public sectors.⁵⁰³³

⁵⁰²⁵ *Id.*

⁵⁰²⁶ Press Release, Dep't of Ecology, Ecology helps school districts reduce air pollution, fuel costs (Nov. 3, 2011), <http://www.ecy.wa.gov/news/2011/303.html>.

⁵⁰²⁷ *Id.*

⁵⁰²⁸ *Id.*

⁵⁰²⁹ Geoffrey Craig, *Six states leave Western Climate Initiative to join new group that promotes carbon sequestration*, ELECTRIC UTILITY WEEK, Nov. 28, 2011, <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/ElectricPower/6695863>; NORTH AMERICA 2050, <http://na2050.org/> (Feb. 23, 2013).

⁵⁰³⁰ See NORTH AMERICA 2050 (Dec. 3, 2013), <http://na2050.org/>.

⁵⁰³¹ See *Participants*, NORTH AMERICA 2050 (Dec. 3, 2013), <http://na2050.org/participants/>.

⁵⁰³² NORTH AMERICA 2050, NORTH AMERICA 2050: A PARTNERSHIP FOR PROGRESS (Feb. 2012), <http://na2050.org/wp-content/uploads/2012/01/NA2050-Overview.pdf>.

⁵⁰³³ See *id.*

Also in November 2011, the Washington Legislature provided the Department of Ecology with \$3 million to reduce smoke emissions in the state.⁵⁰³⁴ The grants were distributed to regional air quality agencies with an emphasis on replacing low-efficiency, uncertified, wood-burning stoves with other more efficient, low-emitting heating devices.⁵⁰³⁵

In December 2011, the Washington Department of Commerce released the 2012 State Energy Strategy, the first undertaken by the state since 1993.⁵⁰³⁶ The strategy focuses on energy use in the transportation sector as a major target for reducing GHG emissions through efficient coordination of transportation systems.⁵⁰³⁷ The report also recommended continuing to increase energy efficiency in buildings and continuing to seek alternative and renewable energy use.⁵⁰³⁸

2012: Renewable Energy, Energy Efficiency, Green Technology, Climate Change Adaptation, and Greenhouse Gas Reduction

In February 2012, the Washington Utilities and Transportation Commission announced the creation of a Conservation and Energy Planning Section in recognition of the need and increased visibility of conservation and renewable energy.⁵⁰³⁹ The section falls within the jurisdiction of the Regulatory Services Division.⁵⁰⁴⁰

On February 22, 2012, the Department of Ecology awarded \$250,000 to Thurston County fire districts to install exhaust emission controls on 83 fire vehicles, as well as \$390,000 for idle-reduction technology for 40 fire vehicle engines.⁵⁰⁴¹ The installations would protect the health of firefighters and people at the scene and save the departments an estimated \$10 million in fuel and maintenance costs over a ten to fifteen year period.⁵⁰⁴² Similar efforts by the Department since 2002 resulted in \$48 million in grants to public entities providing upgrades to over 9,000 public vehicle engines.⁵⁰⁴³

In April 2012, the Washington Department of Ecology released the report *Preparing for a Changing Climate: Washington State's Integrated Climate Response*

⁵⁰³⁴ Press Release, Dep't of Ecology, State grants help local clean air agencies target harmful smoke (Nov. 15, 2011), <http://www.ecy.wa.gov/news/2011/313.html>.

⁵⁰³⁵ *Id.*

⁵⁰³⁶ *Energy Strategy & Biennial Energy Reports*, WASH. DEP'T OF COMM. (Apr. 14, 2013), <http://www.commerce.wa.gov/Programs/Energy/Office/Topics/Pages/EnergyStrategy.aspx>.

⁵⁰³⁷ WASH. DEP'T OF COMM., 2012 WASHINGTON STATE ENERGY STRATEGY vii-xi (Dec. 2011), <http://www.commerce.wa.gov/Documents/2012WASateEnergyStrategy.pdf>.

⁵⁰³⁸ *Id.* at xi – xv.

⁵⁰³⁹ Press Release, Wash. Util. and Transp. Comm'n, Utilities and Transportation Commission creates a Conservation Energy Section (Feb. 7, 2012), <http://www.utc.wa.gov/aboutUs/Lists/News/DispForm.aspx?ID=130>.

⁵⁰⁴⁰ *Id.*

⁵⁰⁴¹ Press Release, Dep't of Ecology, Fire districts, Ecology team up to cut harmful air emissions, save taxpayer money; Feb. 23 event at State Capitol spotlights innovative project (Feb. 22, 2012), <http://www.ecy.wa.gov/news/2012/063.html>.

⁵⁰⁴² *Id.*

⁵⁰⁴³ *Id.*

Strategy, which Governor Gregoire and the Washington Legislature had requested.⁵⁰⁴⁴ The report highlighted key areas where Washington could best respond to the challenges of climate change. These areas included:

- Protecting health of individuals and communities;
- Identifying infrastructure vulnerabilities;
- Preparing for and preventing coastal damage due to rising sea levels and storm surges; improving water conservation;
- Monitor invasive species, pests and diseases and transitioning to resilient forest species;
- Protecting and restoring habitats of vulnerable species; and
- Coordinating with and empowering local governments to respond to climate change challenges.⁵⁰⁴⁵

On June 27, 2012, the U.S. Department of Energy announced that Washington had received nearly \$1 million for two major topic areas.⁵⁰⁴⁶ The first project, in collaboration with the Washington State University Energy Program and the Washington Department of Commerce, would enhance the Energy Services Performance Contracting Program by creating an energy management strategy to develop upgrade projects in state buildings greater than 10,000 square feet.⁵⁰⁴⁷ The second project, in collaboration with Washington utilities and energy councils, would analyze electric utilities' progress toward compliance with Washington's 2006 Energy Efficiency Resource Standard.⁵⁰⁴⁸

On July 27, 2012, the Washington Department of Revenue approved an emergency rulemaking that clarified the appeal rights of consumers who suffered a denial or revocation of approval to certify a renewable energy system for participation in the renewable energy incentive payment program, or if the denial or revocation had resulted from a determination that a component of the renewable energy system was not manufactured in Washington State.⁵⁰⁴⁹ Appeals must be brought within thirty days of the notice of denial or revocation, or the decision will be final.⁵⁰⁵⁰

On August 8, 2012, the Washington Department of Commerce announced more than \$11 million in awards for energy-efficiency projects for public educational institutions and local governments under the second round of the Energy Efficiency Grant

⁵⁰⁴⁴ Press Release, Dep't of Ecology, Report outlines state's strategies for responding and adapting to changing climate conditions (Apr. 3, 2012), <http://www.ecy.wa.gov/news/2012/102.html>.

⁵⁰⁴⁵ DEP'T OF ECOLOGY, PREPARING FOR A CHANGING CLIMATE: WASHINGTON STATE'S INTEGRATED CLIMATE RESPONSE STRATEGY 5-6 (Apr. 2012), <https://fortress.wa.gov/ecy/publications/publications/1201004.pdf>.

⁵⁰⁴⁶ Press Release, U.S. Dep't of Energy, Energy Department Announces Building Energy Efficiency Investments in Twenty-Two States (June 27, 2012), <http://energy.gov/articles/energy-department-announces-building-energy-efficiency-investments-twenty-two-states>.

⁵⁰⁴⁷ *Id.*

⁵⁰⁴⁸ *Id.*

⁵⁰⁴⁹ WASH. ADMIN. CODE § 458-20-273 (2014).

⁵⁰⁵⁰ *Id.*

program.⁵⁰⁵¹ Competitive grants must be used solely for energy and operational efficiency improvements.⁵⁰⁵²

2013: Energy Efficiency and Greenhouse Gas Reduction

On March 13, 2013, Governor Jay Inslee announced \$18 million in grants for the Energy Efficiency Grant program that provides funding for public higher education institutions and local governments to install energy efficiency upgrades.⁵⁰⁵³ The program began in 2012 and had awarded two full rounds of grants by March 2013.⁵⁰⁵⁴ Ten percent of award rounds must be set aside specifically for small cities or towns with populations of 5,000 residents or less.⁵⁰⁵⁵

On April 2, 2013, Governor Inslee signed Senate Bill (S.B.) 5802, creating the Climate Legislative Executive Workgroup.⁵⁰⁵⁶ The Group's primary purpose is to evaluate and prepare credible approaches to reducing GHG emissions, taking into consideration costs, benefits, initiatives put in place by other states, regions and countries; and state and federal related law and policies.⁵⁰⁵⁷ S.B. 5802 charged the Climate Legislative Working Group recommend "a state program of actions and policies to reduce greenhouse gas (GHG) emissions, that if implemented would ensure the achievement of the state's emissions reductions limits" by the 2008 Washington State Legislature.⁵⁰⁵⁸

2014: Greenhouse Gas Reduction and Climate Change Mitigation

In January 2014, pursuant to the requirements of Senate Bill (S.B.) 5802, the Climate Legislative Executive Workgroup submitted two separate reports to the Washington Legislature.⁵⁰⁵⁹ The Democrat members of the Workgroup submitted a majority report and the Republican members submitted a minority report.⁵⁰⁶⁰ In the majority report, the Workgroup found that Washington would not, despite "significant

⁵⁰⁵¹ Press Release, State of Washington Dep't of Commerce, Commerce awards more than \$11 million for energy cost savings projects (Aug. 8, 2012), <http://www.commerce.wa.gov/media/Pages/PressReleaseView.aspx?pressreleaseid=1>.

⁵⁰⁵² *Id.*

⁵⁰⁵³ Press Release, Washington Governor Jay Inslee, Governor Inslee announces \$18 million for projects to reduce energy costs, create jobs (Mar. 13, 2013), <http://www.governor.wa.gov/news/releases/article.aspx?id=65>.

⁵⁰⁵⁴ *Id.*

⁵⁰⁵⁵ *Id.*

⁵⁰⁵⁶ S.B. 5802, 63rd Leg., Reg. Sess. (Wash. 2013), <http://apps.leg.wa.gov/documents/billdocs/2013-14/Pdf/Bills/Session Laws/Senate/5802-S2.SL.pdf>.

⁵⁰⁵⁷ FINAL BILL REPORT: E2SSB 5802 (2013), <http://apps.leg.wa.gov/documents/billdocs/2013-14/Pdf/Bill Reports/Senate/5802-S2.E SBR FBR 13.pdf>.

⁵⁰⁵⁸ Climate Legislative and Executive Workgroup (CLEW), WASH. GOV. (Mar. 30, 2014), <http://www.governor.wa.gov/issues/economy/climateWorkgroup/>.

⁵⁰⁵⁹ A REPORT TO THE LEGISLATURE ON THE WORK OF THE CLIMATE LEGISLATIVE AND EXECUTIVE WORKGROUP (2014), http://www.governor.wa.gov/documents/Jan_30_2014_CLEW_final_combined_report.pdf.

⁵⁰⁶⁰ Svend Brand-Erichsen, *Split in Washington State Climate Workgroup Recommendations Shows Challenges in Moving Climate Policy Forward*, MARTEN LAW (Jan. 27, 2014), <http://www.martenlaw.com/newsletter/20140127-washington-state-climate-policy-edn1>.

progress,” meet its statutory emissions reduction under WASH. REV. CODE ANN. § 70.235.020, and proposed that five programs should be developed and implemented in Washington:

- A cap on carbon pollution emissions should be established;
- Adopt measures to reduce our use of electricity generated by coal-powered facilities in other states;
- Establish an energy smart building program to include promotion of new financing, incentives and support;
- Take actions to help finance the use of clean energy to include dedicated and sustained funding to help our research institutions, utilities and businesses develop, demonstrate and deploy new renewable energy and energy-efficiency technologies; and
- Adopt measures that will modernize our system for transporting goods and people by increasing efficiency and reducing costs and emissions.⁵⁰⁶¹

Alternatively, the minority report recommended six policies for Washington to follow:

- Incentivize hydroelectric power generation;
- Replace fossil fuels with nuclear generation;
- Promote research and development (R&D) for new technologies;
- Encourage conservation under the Energy Independent Act (I-937);
- Allow renewable energy credit banking under I-937; and
- Modify fuel mix reporting system.⁵⁰⁶²

WEST VIRGINIA

1998: Climate Policy Impediments

In March 1998, however, the West Virginia legislature passed a bill barring the state’s Department of Environmental Protection (WV DEP), without legislative or federal authority, from “proposing or promulgating any new rule intended, in whole or in part, to reduce emissions of greenhouse gases from the residential, commercial, industrial, electric utility or transportation sectors in order to comply with the Kyoto Protocol.”⁵⁰⁶³

2001: Renewable Energy

In May 2001, West Virginia passed House Bill (H.B.) 2968, which clarified the tax treatment of certain wind power projects and the valuation of wind power turbines and related towers for property tax purposes.⁵⁰⁶⁴ H.B. 2968, codified at § 11-6A-5A,

⁵⁰⁶¹ *Id.* at 13-14.

⁵⁰⁶² *Id.* at 28.

⁵⁰⁶³ *Id.* § 22-23-2.

⁵⁰⁶⁴ *See* H.B. 2968, 75th Leg., 1st Reg. Sess. (W. Va. 2001).

provides tax benefits to wind power projects by valuing all wind turbines at salvage value for taxation.⁵⁰⁶⁵

2007: Greenhouse Gas Reduction

In April 2007, Governor Joe Manchin III signed Senate Bill (S.B.) 337, which established a program to inventory greenhouse gas (GHG) emissions, reductions, and carbon sequestrations, created a registry for voluntary reductions made before required by law, and provided public recognition for voluntary reductions of emissions.⁵⁰⁶⁶ In order to implement S.B. 337, the West Virginia Department of Environmental Protection promulgated Rule 42, a GHG rule entitled “Greenhouse Gas Emissions Inventory Program.”⁵⁰⁶⁷ This program requires GHG emissions reporting by stationary sources emitting greater than de minimis amounts of GHGs; source inventories of GHG emissions; reduction, capture, and sequestration accounts; a voluntary reduction registry; and a WV DEP analysis of whether West Virginia is a net sink or source.⁵⁰⁶⁸

2009: American Recovery & Reinvestment Act (ARRA) and Greenhouse Gas Reduction

On March 12, 2009, the Department of Energy announced that West Virginia was eligible for \$32,746,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA) to fund energy efficiency projects.⁵⁰⁶⁹

At the end of March 2009, the U.S. EPA sent two letters to the U.S. Army Corp of Engineers, halting between 150 and 200 coal mining permits applications in Virginia, West Virginia, Kentucky, and Tennessee in order to investigate the mining operations’ impact on water quality.⁵⁰⁷⁰ In an effort to decrease this pollution, the WV DEP issued its first carbon sequestration permit to the American Electric Power.⁵⁰⁷¹ Specifically, the permit mandated the injection of a maximum of 165,000 metric tons of carbon dioxide per year over a four to five year period at AEP’s New Haven plant.

West Virginia also exhibited a commitment to reducing carbon emission when Governor Manchin signed H.B. 103, the Alternative and Renewable Energy Portfolio Act

⁵⁰⁶⁵ W. VA. CODE ANN. § 11-6A-5A (West 2007).

⁵⁰⁶⁶ See S.B. 337, 78th Leg., Reg. Sess. (W. Va. 2007).

⁵⁰⁶⁷ See 45 CSR 42 (2007); W. VA. CODE ANN. § 22-5-19 (West 2007).

⁵⁰⁶⁸ See *id.*

⁵⁰⁶⁹ *Rahall Announces \$70M for Weatherization and Energy Efficiency in West Virginia*,

RECOVERY.WV.GOV,

[http://www.recovery.wv.gov/news/Pages/RahallAnnounces\\$70MforWeatherizationandEnergyEfficiencyinWestVirginia.aspx](http://www.recovery.wv.gov/news/Pages/RahallAnnounces$70MforWeatherizationandEnergyEfficiencyinWestVirginia.aspx) (Mar. 12, 2009).

⁵⁰⁷⁰ Press Release, EPA Act to Reduce Harmful Impacts from Coal Mining (Mar. 24, 2009),

<http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceac8525735900400c27/bd03fe27c0c12718852575830062f672!OpenDocument>.

⁵⁰⁷¹ Press Release, Governor Announces AEP Plant Receives State’s First Carbon Sequestration Permit (May 4, 2009),

<http://www.wv.gov/news/governor/Pages/GovernorAnnouncesAEPPlantReceivesState'sFirstCarbonSequestrationPermit.aspx>.

in June 2009.⁵⁰⁷² This act requires electric utilities to obtain 25% of their electricity from renewable or alternative sources by 2025.⁵⁰⁷³

In July 2009, West Virginia received \$13.1 million in ARRA funding for energy efficiency projects.⁵⁰⁷⁴

Governor Manchin recommended in August 2009 that West Virginia Division of Energy receive a \$400,000 grant from the Appalachian Regional Commission Investment Program for the purpose of reusing lands modified by surface mining to install solar or wind technologies or to grow biomass crops.⁵⁰⁷⁵ He also announced that the state's second ENERGY STAR® sales tax holiday would take place September 1 through November 30, 2009.⁵⁰⁷⁶

Governor Manchin announced in September 2009 that various local solid waste authorities would receive a total of \$300,000 in grants to support litter control and recycling programs.⁵⁰⁷⁷ That same month, the U.S. EPA announced that it had identified 23 pending surface mining permits for which it was going to extend its review.⁵⁰⁷⁸ Manchin opined that this extension was unfair to miners.

In October 2009, Governor Manchin visited the Research Ridge Test Facility, a smart grid demonstration facility, touting the benefits of smart grid technology.⁵⁰⁷⁹ During that same month, the U.S. EPA chose not to grant a Clean Water Act permit to

⁵⁰⁷² H.B. 103, 79th Leg., Spec. Sess. (W. Va. 2009), http://www.legis.state.wv.us/Bill_Status/bills_text.cfm?billdoc=hb103%20ENR.htm&yr=2009&sesstype=1X&i=103; W. VA. CODE ANN. § 24-2F-2 (West 2009).

⁵⁰⁷³ H.B. 103, 79th Leg., Spec. Sess. (W. Va. 2009), http://www.legis.state.wv.us/Bill_Status/bills_text.cfm?billdoc=hb103ENR.htm&yr=2009&sesstype=1X&i=103.

⁵⁰⁷⁴ Press Release, Obama Administration Awards More than \$13 for West Virginia's State Energy Program (July 1, 2009), [http://www.wv.gov/news/governor/Pages/ObamaAdministrationAwardsmorethan\\$13MillionforWestVirginia%E2%80%99sStateEnergyProgram.aspx](http://www.wv.gov/news/governor/Pages/ObamaAdministrationAwardsmorethan$13MillionforWestVirginia%E2%80%99sStateEnergyProgram.aspx).

⁵⁰⁷⁵ Press Release, Governor Recommends Projects for West Virginia's ARC Investment Package (Aug. 11, 2009), <http://www.governor.wv.gov/media/pressreleases/2012/Pages/GovernorTomblinRecommendsProjectsforWestVirginia'sAppalachianRegionalCommissionInvestmentPackage.aspx>.

⁵⁰⁷⁶ *Second Energy Star Sales Tax Holiday announced*, THE W. VA. REC., <http://wvrecord.com/news/220675-second-energy-star-sales-tax-holiday-announced> (Aug. 20, 2009).

⁵⁰⁷⁷ Press Release, Governor Announces Solid Waste Authority Grant Awards (Sept. 1, 2009), <http://www.wv.gov/news/governor/Pages/GovernorAnnouncesSolidWasteAuthorityGrantAwards.aspx>.

⁵⁰⁷⁸ Press Release, Statement from Gov. Manchin: About EPA's Additional Review of Surface Mine Permits (Sept. 11, 2009), <http://www.wv.gov/news/Pages/StatementFromGovManchinAboutEPAsAdditionalReviewOfSurfaceMinePermits.aspx>.

⁵⁰⁷⁹ Press Release, Governor Touts West Virginia's Smart Grid Opportunities (Oct. 9, 2009), <http://www.wv.gov/news/governor/Pages/GovernorToutsWestVirginia%E2%80%99sSmartGridOpportunities.aspx>.

one of the proposed surface mining projects under review.⁵⁰⁸⁰ Manchin responded, “To say that I am mad would be an understatement.”⁵⁰⁸¹

November 30, 2009 was the last day to take advantage of the West Virginia’s second ENERGY STAR® Sales Tax Holiday.⁵⁰⁸² Starting September 1, West Virginians did not have to pay sales and use tax on certain ENERGY STAR® qualified products valued at \$5,000 or less if the products were for personal or noncommercial use.⁵⁰⁸³

2010: Energy Efficiency

West Virginia had another ENERGY STAR® Sales Tax Holiday from September 2010 through November 2010, where residents were exempt from paying sales and use tax on certain ENERGY STAR® qualified products valued at \$5,000 or less.⁵⁰⁸⁴ In addition to the ENERGY STAR® Sales Tax Holiday, residents could take advantage of the West Virginia Energy Efficient Appliance Rebate Program, which began in June 2010.⁵⁰⁸⁵

2011: Energy Efficiency and Market-Based Solutions

In February 2011, the WV DEP reloaded the WV Energy Efficient Appliance Rebate Program. An additional \$300,000 would provide rebates valued between \$50 and \$100 for residents who replaced old, less-efficient appliances. The program would no longer provide rebates for freezers and room air conditioners.⁵⁰⁸⁶

On November 22, 2011, the Public Service Commission of West Virginia issued a rule clarifying that the ownership of alternative energy credits belonged to the purchaser of the power (the electric utility) in PURPA (Public Utility Regulatory Policies Act) qualifying facility contracts where the ownership of the credits is not otherwise addressed.⁵⁰⁸⁷

2012: Energy Efficiency, Green Building, Greenhouse Gas Reduction, Renewable

⁵⁰⁸⁰ Press Release, Statements from the Governor Regarding EPA’s Actions Today (Oct. 12 2009), <http://votesmart.org/public-statement/462089/statement-from-the-governor-regarding-epas-actions-today>.

⁵⁰⁸¹ *Id.*

⁵⁰⁸² Press Release, West Virginia’s Second Energy Star Sales Tax Holiday Ends This Month (Nov. 5, 2009), <http://www.wv.gov/news/governor/Pages/WestVirginia%E2%80%99sSecondEnergyStarSalesTaxHolidayEndsThisMonth.aspx>.

⁵⁰⁸³ *Id.*

⁵⁰⁸⁴ *Energy Star sales tax holiday ends Nov. 30*, THE W. VA. REC. (Sept. 2, 2010), <http://wvrecord.com/news/229424-energy-star-sales-tax-holiday-ends-nov-30>.

⁵⁰⁸⁵ *Id.*

⁵⁰⁸⁶ Press Release, Dept. of Env’tl. Protection, Funding Re-loaded into Three Appliance Rebate Categories (Feb. 15, 2011), <http://www.dep.wv.gov/news/Pages/Fundingre-loadedintothreeApplianceRebatecategories.aspx>.

⁵⁰⁸⁷ Public Service Commission Order, Case No. 11-0249-E-P (Nov. 22, 2011), http://www.dsireusa.org/documents/Incentives/PSC_Order_11-0249-E-P.pdf; Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117.

Energy, and American Recovery & Reinvestment Act (ARRA)

On January 26, 2012, the WV DEP signed a memorandum of understanding with Appalachian Power Company in order to pool their resources in educating the public about the environmental benefits of energy efficiency measures and programs.⁵⁰⁸⁸

On March 10, 2012, West Virginia passed House Bill (H.B.) 2740, declaring any solar energy covenant, restriction or condition contained in a housing association document unenforceable.⁵⁰⁸⁹ However, the law allowed a housing association to impose reasonable restrictions on solar energy systems, which did not interfere with the system's conservation benefits or economic practicality.⁵⁰⁹⁰ It applied exceptions for buildings with architectural, historical, cultural or religious value, or solar energy systems installed in common areas.⁵⁰⁹¹ H.B. 2740 became effective on June 8, 2012.

On March 16, 2012, the West Virginia Legislature enacted Senate Bill (S.B.) 76, the Green Buildings Act, requiring new public construction projects and projects receiving state funds designed after July 1, 2012 to be constructed in compliance with both the International Energy Conservation Code and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2007, unless federal standards apply.⁵⁰⁹² S.B. 76 became effective on June 8, 2012.

On June 19, 2012, the WV DEP recognized Fayette County Schools for their efforts to reduce school bus emissions around children.⁵⁰⁹³ DEP presented the Fayette County Board with a grant of \$189,436 for the purchase of four new school buses that meet federal emissions standards.⁵⁰⁹⁴ The DEP required the retired buses to be destroyed in order to permanently eliminate their emissions.⁵⁰⁹⁵

On July 23, 2012, the WV DEP announced the near completion of its pilot solar project at its facility in Charleston.⁵⁰⁹⁶ The photovoltaic and solar hot water system was funded through ARRA grants, and would be the first state government facility to be

⁵⁰⁸⁸ Press Release, W.Va. Dep't of Env'tl. Prot., DEP, Appalachian Power coordinating efforts on energy efficiency (Jan. 26, 2012),

<http://www.dep.wv.gov/news/Pages/DEP.AppalachianPowercoordinatingeffortsonenergyefficiency.aspx>.

⁵⁰⁸⁹ H.B. 2740, 81st Leg., 1st Sess., (W.Va. 2012),

http://www.legis.state.wv.us/Bill_Status/bills_text.cfm?billdoc=HB2740%20SUB%20ENR.htm&yr=2012&sesstype=RS&i=2740.

⁵⁰⁹⁰ *Id.*

⁵⁰⁹¹ *Id.*

⁵⁰⁹² S.B. 76, 81st Leg., 1st Sess., (W.Va. 2012),

http://www.legis.state.wv.us/Bill_Status/bills_text.cfm?billdoc=SB76%20SUB1%20eng.htm&yr=2012&sesstype=RS&i=76.

⁵⁰⁹³ Press Release, W.Va. Dep't of Env'tl. Prot., State recognizes Fayette County for school bus project (June 19, 2012),

<http://www.dep.wv.gov/news/Pages/StaterecognizesFayetteCountyforschoolbusproject.aspx>.

⁵⁰⁹⁴ *Id.*

⁵⁰⁹⁵ *Id.*

⁵⁰⁹⁶ Press Release, W.Va. Dep't of Env'tl. Prot., Solar pilot project nearing completion at DEP facility in Charleston (July 23, 2012),

<http://www.dep.wv.gov/news/Pages/SolarpilotprojectnearingcompletionatDEPCharlestonfacility.aspx>.

powered by solar energy.⁵⁰⁹⁷ The DEP expected to see a 15% reduction in energy use and approximately \$4,000 in savings in the first year of operation.⁵⁰⁹⁸

On October 29, 2012, Governor Earl Ray Tomblin encouraged West Virginians to take advantage of the West Virginia Weatherization Assistance Program, allowing low-income residents to perform energy audits, air sealing, insulation and heating analysis, and other energy efficiency improvements.⁵⁰⁹⁹ Tomblin also proclaimed October 30 to be Weatherization Day in order to bring attention to the issue.⁵¹⁰⁰

2013: Transportation/Fuels

On February 21, 2013, Governor Tomblin's Natural Gas Vehicle Task Force, created by executive order in June 2012, produced its final recommendations on how West Virginia might utilize natural gas in state fleets.⁵¹⁰¹ The report recommended converting a portion of the state fleet to natural gas and state buses to propane; increasing to \$400,000 the maximum tax credit for building natural gas fueling infrastructure; and encouraging public education on the benefits of natural gas vehicle use, among other recommendations.⁵¹⁰²

On April 13, 2013, the West Virginia legislature passed (Senate Bill) S.B. 185, limiting the term "alternative fuel" for purchases or installations made after April 15, 2013 to compressed natural gas or liquefied natural gas.⁵¹⁰³ The bill also outlined new restrictions on the availability of the tax credit for alternative-fuel motor vehicle purchases, conversions and the installation of alternative-fuel infrastructure.⁵¹⁰⁴ S.B. 185 became effective on May 15, 2013.

2014: Greenhouse Gas Reduction

⁵⁰⁹⁷ *Id.*

⁵⁰⁹⁸ *Id.*

⁵⁰⁹⁹ See *West Virginia Weatherization Assistance Program*, BENEFITS.GOV, <http://www.benefits.gov/benefits/benefit-details/1886> (Dec. 9, 2013); Press Release, W. Va. Dep't of Commerce, Gov. Tomblin encourages eligible West Virginians to apply for the Weatherization Assistance Program (Oct. 29, 2012), <http://www.wvcommerce.org/news/story/Gov/2876/default.aspx>.

⁵¹⁰⁰ *Id.*

⁵¹⁰¹ Press Release, Office of the Governor Earl Ray Tomblin, Governor Tomblin's Natural Gas Vehicle Task Force Presents Report (Feb. 21, 2013), <http://www.governor.wv.gov/media/pressreleases/2013/Pages/GovernorTomblin'sNaturalGasVehicleTaskForcePresentsReport.aspx>.

⁵¹⁰² NATURAL GAS VEHICLE TASK FORCE (2013), http://www.governor.wv.gov/media/pressreleases/2013/Documents/Natural_Gas_Vehicle_Task_Force_Report.pdf.

⁵¹⁰³ S.B. 185, 81st Leg., 2d Sess. (W. Va. 2013), http://www.legis.state.wv.us/bill_status/bills_text.cfm?billdoc=SB185%20SUB2.htm&yr=2013&sesstype=RS&i=185.

⁵¹⁰⁴ *Id.*

On April 1, 2014, Governor Tomblin signed House Bill (H.B.) 4346.⁵¹⁰⁵ The bill, which limits the flexibility of the West Virginia Department of Environmental Protection to implement a state plan to reduce GHGs under section 111(d) of the Clean Air Act,⁵¹⁰⁶ established separate performance standards for carbon dioxide emissions from existing coal-fired and natural gas-fired power plants, and established general factors and considerations to be reflected in the development of state plan. These factors and considerations include: consumer impacts (including any disproportionate impacts of energy price increases on lower income populations), non-air quality health and environmental impacts, projected energy requirements, market-based considerations in achieving performance standards, the costs of achieving emission reductions, physical difficulties, feasibility of implementation, absolute cost of applying the performance standard, and “any other factors specific to the unit that make application of a modified or less stringent standard or a longer compliance schedule more reasonable.”⁵¹⁰⁷

WISCONSIN

1999: Renewable Energy and Renewable Portfolio Standards

Since 1999, Wisconsin’s Energy Conservation Corporation has administered a public benefits fund providing grants for renewable energy and energy efficiency projects and services.⁵¹⁰⁸ The program provides both information and technical aid for renewable energy systems to the citizens, businesses, and local governments of Wisconsin.⁵¹⁰⁹ As an added incentive for the commercial, industrial, and residential sectors to purchase renewable energy generators, any additional value added to property from the addition of a solar or wind power system is exempt from Wisconsin’s general property tax.⁵¹¹⁰

Also in 1999, Wisconsin enacted legislation that established a renewable portfolio standard (RPS) for electric utilities.⁵¹¹¹ It required that 2.2% of energy come from renewable sources by 2012.⁵¹¹²

2006: Renewable Portfolio Standards, Renewable Energy, Energy Efficiency, and Green Technology

⁵¹⁰⁵ H.B. 4346, 82nd Leg., Reg. Sess. (W. Va 2014), http://www.legis.state.wv.us/Bill_Status/bills_text.cfm?billdoc=hb4346%20ENR.htm&yr=2014&sesstype=RS&i=4346.

⁵¹⁰⁶ 42 U.S.C. § 7411(d) (2012).

⁵¹⁰⁷ H.B. 4346, 82nd Leg., Reg. Sess. (W. Va 2014), http://www.legis.state.wv.us/Bill_Status/bills_text.cfm?billdoc=hb4346%20ENR.htm&yr=2014&sesstype=RS&i=4346.

⁵¹⁰⁸ Wis. Act 9, 1999, § 109m, 1999 Wis. Sess. Laws 34-38 (codified at WIS. STAT. ANN. § 16.957 (1999) (subsequently amended)); *see* RACHEL JOHNSON, WISCONSIN LEGISLATIVE FISCAL BUREAU, DEPARTMENT OF ADMINISTRATION’S ENERGY SERVICES (2013), http://legis.wisconsin.gov/lfb/publications/Informational-Papers/Documents/2013/89_Department%20of%20Administration's%20Energy%20Services.pdf.

⁵¹⁰⁹ WIS. STAT. ANN. §§ 16.95-16.969 (1999).

⁵¹¹⁰ *Id.* § 70.111.

⁵¹¹¹ *Id.* § 196.378 (defining renewable fuels and setting renewable portfolio standards).

⁵¹¹² *Id.*

Wisconsin significantly increased its Renewable Portfolio Standard (RPS) requirements with the passage of Senate Bill 459 in 2006.⁵¹¹³ The law requires that 10% of utilities' electricity production come from renewable sources by 2015. It also increased funding to local governments for energy efficiency projects and mandated that the state's six largest agencies purchase 20% of their energy from renewable sources by 2011. It further required the state to support research on and development of anaerobic digesters; to launch a pilot residential heating program using leftover corn plants; and to include higher energy efficiency standards in building codes.⁵¹¹⁴

In April 2006, Wisconsin Governor Jim Doyle signed an executive order requiring all state buildings to conform to "green building" standards. Applying to both new and existing buildings, the order directed the Wisconsin Department of Administration to establish standards based on the U.S. Green Building Council LEED certification. The order also required overall energy use by state buildings to be reduced by 10% by 2008 and by 20% by 2010.⁵¹¹⁵

2007: Energy Efficiency, Climate Change Agreements/MOUs, and Greenhouse Gas Reduction

In April 2007, Governor Doyle signed an executive order that created the Office of Energy Independence.⁵¹¹⁶ This office would be the contact for stakeholders promoting bio development, energy efficiency, and energy independence. The office was also charged with identifying federal funding opportunities and working with the Public Service Commission to build a "clean coal" electric generation facility. Doyle signed another executive order that created the Task Force on Global Warming.⁵¹¹⁷ This task force was charged with determining the adverse economic and ecological impacts of global warming, identifying solutions, and estimating current statewide emissions. In June 2008, the group finalized recommendations, including the following: increasing Wisconsin's investment in renewable energy; implementing a renewable portfolio standard requiring utilities to produce 10% of their electricity from renewable sources by 2013 and 25% by 2025; reducing greenhouse gas (GHG) emissions to 2005 levels by 2014 and a 75% below 2005 levels by 2050; and implementing a clean cars standard.⁵¹¹⁸

In May 2007, Wisconsin and thirty other states founded The Climate Registry to "measure, track, verify, and publicly report greenhouse gas emissions accurately,

⁵¹¹³ S.B. 459, 97th Leg. (Wis. 2006), <http://legis.wisconsin.gov/2005/data/SB-459eng.pdf>.

⁵¹¹⁴ Wisconsin Legislative Reference Bureau, Energy Efficiency and Renewable Sources (June 2006), <http://legis.wisconsin.gov/lrb/pubs/lb/06lb7.pdf>

⁵¹¹⁵ Wis. Exec. Order No. 145 (2006), https://docs.legis.wisconsin.gov/code/executive_orders/2003_jim_doyle/2006-145.pdf.

⁵¹¹⁶ Wis. Exec. Order No. 192 (2007).

⁵¹¹⁷ Wis. Exec. Order No. 191 (2007).

⁵¹¹⁸ Press Release, Global Warming Task Force Finalizes Recommendations (June 26, 2008) (original press release not found); *Global Warming Task Force Finalizes Recommendations*, CLEAN WISCONSIN (June 26, 2008), <http://www.cleanwisconsin.org/index.php?module=cms&page=259>.

transparently and consistently across borders and industry sectors.” This was viewed as a “critical first step in developing robust programs to reduce greenhouse gas emissions.”⁵¹¹⁹

On November 15, 2007, Governor Doyle joined the governors of Illinois, Iowa, Kansas, Michigan, and Minnesota, as well as the Premier of the Canadian Province of Manitoba to sign and establish the Midwestern Regional Greenhouse Gas Reduction Accord (MGGRA) in order to reduce GHG emissions and achieve energy security.⁵¹²⁰ Signed at the Midwestern Governors Association Energy Security and Climate Change Summit held in Milwaukee, WI, the Accord aimed to establish GHG emission targets, including a 60 to 80% reduction in emissions and to create a market-based, multi-sector cap-and-trade system and a tracking and crediting system.⁵¹²¹ The governors agreed to implement the Accord within thirty months.⁵¹²²

Also at the Summit, Wisconsin, Illinois, Iowa, Kansas, Michigan, Minnesota, Nebraska, and North Dakota adopted an Energy Security and Climate Stewardship Platform.⁵¹²³ The Platform’s goals for the Midwest region included promoting energy efficiency, advances in biobased products, electricity production from renewables, and advanced coal and carbon capture and storage.⁵¹²⁴ Platform members also signed cooperative regional initiatives to create a Carbon Management Infrastructure Partnership, a bioproduct procurement program, electricity transmission adequacy for new wind energy, renewable fuels corridors, advanced bioenergy permitting, and low-carbon energy transmission infrastructure.⁵¹²⁵

2008: Market-Based Solutions, Climate Change Agreements/MOUs, and Climate Change Adaption

In spring 2008, the Office of Energy Independence released *Clean Energy Wisconsin: A Plan for Energy Independence*.⁵¹²⁶ The plan described investment strategies to achieve the following goals for the state: generate 25% of its energy from renewable sources by 2025; capture 10% of the market share for the production of renewable energy and bioproducts; and become a national leader in designing more

⁵¹¹⁹ Press Release, The Climate Registry, Dozens of States Join *The Climate Registry* to Track Greenhouse Gas Emissions, http://www.theclimateregistry.org/downloads/States_Join_Press_Release.pdf.

⁵¹²⁰ It should be noted, however, that in 2009 Wisconsin and other signatory states stopped pursuing the MGGRA. See MIDWEST GREENHOUSE GAS REDUCTION ACCORD, CENTER FOR CLIMATE CHANGE SOLUTIONS (2007), <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mggra>; 2007 MGA SUMMIT, MIDWESTERN GOVERNORS ASSOCIATION, <http://www.midwesterngovernors.org/energysummit.htm>.

⁵¹²¹ MIDWEST GREENHOUSE GAS REDUCTION ACCORD, CENTER FOR CLIMATE CHANGE SOLUTIONS (2007), <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mggra>.

⁵¹²² *Id.*

⁵¹²³ MIDWESTERN ENERGY SECURITY & CLIMATE STEWARDSHIP SUMMIT, ENERGY SECURITY AND CLIMATE STEWARDSHIP PLATFORM FOR THE MIDWEST (2007), <http://www.midwesterngovernors.org/resolutions/Platform.pdf>.

⁵¹²⁴ *Id.*

⁵¹²⁵ *Id.*

⁵¹²⁶ WISCONSIN OFFICE OF ENERGY INDEPENDENCE, CLEAN ENERGY WISCONSIN: A PLAN FOR ENERGY INDEPENDENCE (Spring 2008), <http://cdm16119.contentdm.oclc.org/cdm/singleitem/collection/p267601coll4/id/1009/rec/19>.

accessible alternative energy technologies.⁵¹²⁷

In accordance with the plan's goals, Governor Doyle announced that state-owned heating plants could not use coal.⁵¹²⁸ Additionally, \$5 million was awarded in the 2007-09 state budget to Flambeau River Papers in Park Falls, WI to help the mill become the first pulp and paper mill to operate without fossil fuels..⁵¹²⁹ In September 2008, Governor Doyle announced \$7.3 million in funding for research, development, commercialization, and/or adoption of new clean energy technologies in the state.⁵¹³⁰

In May 2008, Governor Doyle signed a memorandum of understanding (MOU) between the United Kingdom and Wisconsin regarding climate change issues.⁵¹³¹ The MOU promoted a working relationship between the two entities and built upon existing efforts to reduce GHG emissions and promote low carbon technologies.⁵¹³²

In November 2008, Governor Doyle co-hosted the Governors' Global Climate Summit.⁵¹³³ He also signed the Global Climate Solutions Declaration, agreeing that he and the other signatories would engage in a collaborative effort to reduce GHG emissions and promote a green economy.⁵¹³⁴ Later that month, Doyle commended Wisconsin's Focus on Energy Program, a renewable energy and energy efficiency initiative, announcing that the program had saved the state's residents and businesses more than \$193 million annually.⁵¹³⁵ These cost-savings occurred through the assistance the program provided in implementing energy-saving projects. For example, the program provided Cash-Back Awards for residents that installed qualified water heaters, heating and cooling systems and lighting. The program also prevented the emission of more than 3.2 billion pounds of carbon dioxide.⁵¹³⁶

2009: Greenhouse Gas Reduction, Climate Adaptation, Climate Change Agreements/MOUs, Green Technology, Renewable Energy, and American Recovery & Reinvestment Act (ARRA)

⁵¹²⁷ *Id.* at 4.

⁵¹²⁸ Press Release, Governor Says No to Coal for State Heating Plants in Madison (Aug. 1, 2008), <http://votesmart.org/public-statement/365221/governor-says-no-to-coal-for-state-heating-plants-in-madison>.

⁵¹²⁹ Press Release, Governor Doyle Announces Renewable Energy Advances at Flambeau River Papers (Aug. 13, 2008), <http://www.commerce.state.wi.us/NEWS/releases/2008/132.html>.

⁵¹³⁰ Press Release, Governor Doyle Announces \$7.3 Million in Clean Energy Funding (Sept. 16, 2008), <http://commerce.wi.gov/NEWS/releases/2008/149.html>.

⁵¹³¹ Press Release, Governor Doyle Signs Climate Change Agreement With United Kingdom (May 12, 2008), <http://www.wisbusiness.com/index.iml?Article=125898>.

⁵¹³² *Id.*

⁵¹³³ Press Release, Governor Doyle to Co-Host Governors' Global Climate Summit (Nov. 11, 2008), <http://www.wkow.com/Global/story.asp?S=9332107>.

⁵¹³⁴ Press Release, Governor Doyle Signs Global Climate Agreement (Nov. 19, 2008), <http://www.wkow.com/Global/story.asp?s=9384454&clienttype=printable>.

⁵¹³⁵ Press Release, Governor Doyle Announces Renewable Energy Efforts Saves State More Than \$193 Million a Year (Nov. 21, 2008), <http://www.wkow.com/Global/story.asp?S=9370812>.

⁵¹³⁶ *Id.*

In January 2009, the advisory group to MGGRA (Midwest Greenhouse Gas Reduction Accord) released preliminary trade design recommendations.⁵¹³⁷ The group recommended that carbon dioxide, nitrous oxide, hydro-fluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions be reduced 15 to 25% below 2005 levels by 2020 and 60 to 80% below 2005 levels by 2050. It also recommended that the following sources be subject to these reductions: power plants; industrial facilities; industrial combustion sources; industrial process sources; and transportation fuels.⁵¹³⁸ It further recommended that an offset component be incorporated in the program and that allowance value be used only for climate-related purposes by participating states.⁵¹³⁹ However, the group refused to comment on whether allowances should be auctioned or allocated, maintaining that this decision must be made by each state.⁵¹⁴⁰

Governor Doyle announced on January 14, 2009 that local communities would receive \$400,000 to create “25x25” plans in order to implement the state’s goal of obtaining 25% of its energy from renewable sources by 2025.⁵¹⁴¹ This program is part of the Wisconsin Energy Independent Community Partnership created as part of the governor’s energy independence plan. At that time, 75 communities (a term including counties, towns, villages, schools, tribes, and cities) had committed to the partnership and 250 more communities were interested.⁵¹⁴²

Governor Doyle and eleven other governors signed a letter to President Obama urging him to form a strong state/federal leader partnership in initiating a national climate change program on January 29, 2009.⁵¹⁴³ This letter was predicated upon the President’s letter to the Governors’ Global Climate Summit in which he offered the governors a partnership with the White House in addressing climate change issues. The letter writers believed that their states had played a leading role in confronting these issues and stated, “It is crucial that we build on our states’ momentum.”⁵¹⁴⁴ The letter also contained suggestions for how a national climate change program should be implemented. One of these suggestions was for the national government to recognize the private investments made in current cap-and-trade programs and to preserve the clean energy plans funded by the proceeds from these programs.⁵¹⁴⁵

⁵¹³⁷ See MIDWEST GREENHOUSE GAS REDUCTION ACCORD, CENTER FOR CLIMATE CHANGE SOLUTIONS (2007), <http://www.c2es.org/us-states-regions/regional-climate-initiatives/mgggra>.

⁵¹³⁸ See *id.*

⁵¹³⁹ See *id.*

⁵¹⁴⁰ See *id.*

⁵¹⁴¹ Press Release, Governor Doyle Awards \$400,000 to Energy Independent Communities for “25x25” Plans (Jan. 14, 2009), <http://commerce.wi.gov/NEWS/releases/2009/007.html>.

⁵¹⁴² *Id.*

⁵¹⁴³ Letter from Arnold Schwarzenegger, Governor, California; M. Jodi Rell, Governor, Connecticut; Charlie Crist, Governor, Florida; Kathleen Sebelius, Governor, Kansas; Martin O’Malley, Governor, Maryland; Deval Patrick, Governor, Massachusetts; John S. Corzine, Governor, New Jersey; Bill Richardson, Governor, New Mexico; David Paterson, Governor, New York; Theodore R. Kulongoski, Governor, Oregon; Christine O. Gregoire, Governor, Washington; Jim Doyle, Governor, Wisconsin, to Barack Obama, President, United States of America (Jan. 29, 2009).

⁵¹⁴⁴ *Id.* at 1.

⁵¹⁴⁵ *Id.* at 2.

In pursuit of his goal to stop coal use in state-owned heating plants, Governor Doyle announced on February 6, 2009 that a biomass boiler would be installed at a coal-fired plant located in Madison.⁵¹⁴⁶

Governor Doyle traveled to Washington D.C. on March 2, 2009 to meet with the Obama administration's energy, environment and agricultural cabinet to determine how the national government could capitalize upon local and state climate change policies in structuring its own.⁵¹⁴⁷ The next day, he participated in a symposium entitled "U.S. Climate Change Action: A Global Economic Perspective" with other international and national leaders. At the symposium, the leaders discussed how the United States could create a low-carbon economy.⁵¹⁴⁸

In order to enhance Wisconsin's low-carbon economy, Governor Doyle and Dane County Executive Falk announced a March 10, 2009 plan to put two anaerobic digesters in the community.⁵¹⁴⁹ Doyle proposed \$6.6 million for the "Cow Power Project." Proponents estimated that 12,000 tons of GHGs would be eliminated annually per digester.⁵¹⁵⁰

On March 12, 2009, the U.S. Department of Energy (DOE) announced that Wisconsin was eligible for \$55,488,000 under the State Energy Program of the American Recovery and Reinvestment Act (ARRA).⁵¹⁵¹ That same day, Governor Doyle announced that \$141,502,133 would go to the state's Weatherization Assistance Program.⁵¹⁵² The next day, while hosting DOE Secretary Chu in Milwaukee, Doyle announced that Wisconsin would spend twice as much on energy efficiency during the next winter as it had in the previous winter as part of the program.⁵¹⁵³ Specifically, Wisconsin planned to spend an average \$6,500 per home and to assist families earning up to 200% of the federal poverty level. He also announced the On-the-Job Training Pilot, a green workforce training project targeted towards disadvantaged, unemployed individuals in Milwaukee.⁵¹⁵⁴

⁵¹⁴⁶ Press Release, Governor Doyle Announces Charter Street to Burn Biomass (Feb. 6, 2009), <http://www.wisbusiness.com/index.iml?Article=197625>.

⁵¹⁴⁷ Press Release, Governor Doyle Works to Fight Climate Change, Develop National Clean Energy Policy (Mar. 2, 2009), <http://votesmart.org/public-statement/411759/governor-doyle-works-to-fight-climate-change-develop-national-clean-energy-policy>.

⁵¹⁴⁸ Press Release, Governor Doyle, Former Prime Minister Blair Commit to Combating Climate Change (Mar. 3, 2009), <http://votesmart.org/public-statement/411762/governor-doyle-former-prime-minister-blair-commit-to-combating-climate-change>.

⁵¹⁴⁹ Press Release, Governor Doyle Announces Plan to Clean Dane County Lakes, Increase Renewable Energy (Mar. 10, 2009), <http://votesmart.org/public-statement/412756/governor-doyle-announces-plan-to-clean-dane-county-lakes-increase-renewable-energy>.

⁵¹⁵⁰ *Id.*

⁵¹⁵¹ U.S. Dep't of Energy, Nat'l Energy Tech. Lab., State Energy Program Formula Grants (2009), http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

⁵¹⁵² Press Release, Governor Doyle Announces \$197 Million for Weatherization Assistance and Energy Efficiency (Mar. 12, 2009), <http://www.wqow.com/story/10002290/197-million-for-weatherization-assistance-and-energy-efficiency>.

⁵¹⁵³ Press Release, Governor Doyle Announces Weatherization Initiatives, Increasing Efficiency and Creating Jobs (Mar. 13, 2009), <http://votesmart.org/public-statement/416840/>.

⁵¹⁵⁴ *Id.*

Also in March 2009, Governor Doyle announced the inaugural meeting of Wisconsin's Energy Independent Communities.⁵¹⁵⁵ At the meeting on the 26th, community leaders discussed how they planned to achieve Wisconsin's 25x25 goal. The agenda included discussions on renewable energy and energy efficiency efforts and on how ARRA funding could be used towards these efforts.⁵¹⁵⁶ That same day, Doyle announced that 26 local governments would receive grants for Smart Growth planning.⁵¹⁵⁷ Individual grants ranged from \$8,000 to \$136,000.

On April 14, 2009, Governor Doyle announced that \$1.7 million would go towards green energy projects.⁵¹⁵⁸ The U.S. EPA for clean diesel projects awarded this money. Public and private Wisconsin-based fleets were eligible for up to \$100,000 in grants.⁵¹⁵⁹ Matches were required for projects with a direct financial benefit to fleets. It was estimated that 2,100 pieces of equipment would receive grants from the ARRA funding.⁵¹⁶⁰ On April 23, Doyle announced that \$1,865,000 would be invested in five clean diesel buses in Eau Claire.⁵¹⁶¹

The American Council for an Energy Efficient Economy recognized these efforts when it announced that Wisconsin was the fifth best state in the country in energy efficiency accomplishments in May 2009.⁵¹⁶² The state achieved another energy efficiency accomplishment two weeks later when it released a report to provide technical and financial analysis in converting two coal-fired power plants, one powering the University of Wisconsin campus and the other powering state buildings, to biomass plants that would also heat the buildings with captured waste heat produced during electricity generation.⁵¹⁶³

Governor Doyle signed a May 2009 agreement with a coalition of other governors to support federal climate change legislation.⁵¹⁶⁴ The agreement contained two principles:

⁵¹⁵⁵ Press Release, Wisconsin's Energy Independent Communities to Discuss 25x25 Plans at Inaugural Meeting (Mar. 24, 2009), <http://votesmart.org/public-statement/416844/wisconsins-energy-independent-communities-to-discuss-25x25-plans-at-inaugural-meeting>.

⁵¹⁵⁶ *See id.*

⁵¹⁵⁷ Press Release, Governor Doyle Announces Comprehensive Planning Grants for 26 Local Governments (Mar. 26, 2009), <http://www.doa.state.wi.us/docview.asp?docid=8266>.

⁵¹⁵⁸ Press Release, Governor Doyle Announces \$1.7 Million for Green Energy Projects, Job Creation (Apr. 14, 2009), <http://votesmart.org/public-statement/418224/governor-doyle-announces-17-million-for-green-energy-projects-job-creation>.

⁵¹⁵⁹ *Id.*

⁵¹⁶⁰ *Id.*

⁵¹⁶¹ Letter from Frank J. Busalacchi, Sec'y Wisconsin Dep't of Transportation to Ray LaHood, Sec'y U.S. Dep't of Transportation (Apr. 23, 2009), http://testimony.ost.dot.gov/arracerts/1511/1511_certification_042309_wi.pdf.

⁵¹⁶² Press Release, Governor Doyle Announces Wisconsin 5th in Achieving Energy Efficiency Goals (May 1, 2009), http://wispolitics.com/1006/050109_doyle_energy.pdf.

⁵¹⁶³ Press Release, Governor Doyle Releases Plans for Biomass Projects (May 19, 2009), <http://wtnews.com/articles/6105/>.

⁵¹⁶⁴ Press Release, Governors' Energy and Climate Coalition Calls for Action on Climate, Energy Legislation (May 21, 2009), <http://www.georgetownclimate.org/state-action/governors-energy-and-climate-coalition>.

the support of comprehensive federal legislation and promotion of a federal-state partnership in implementing this legislation.⁵¹⁶⁵ Doyle then met with federal government official to discuss bringing high-speed rail to Wisconsin.⁵¹⁶⁶ He also announced various clean transit projects that received ARRA funding, including the purchase of hybrid and clean diesel buses and support for a ride-share program.⁵¹⁶⁷

In June 2009, Governor Doyle announced that Wisconsin's Focus on Energy Program, which assisted businesses, farms and residents in becoming more energy efficient and implementing renewable energy measures, had reduced GHG emissions by more than 3.9 billion pounds between July 1, 2001 and December 31, 2008.⁵¹⁶⁸ That month, Doyle also signed S.B. 126, which renewed the Green Tier Program, streamlining the regulatory process for environmentally responsible businesses.⁵¹⁶⁹

The MGGRA Advisory Group released its draft final recommendations for the design of a regional cap-and-trade program.⁵¹⁷⁰ It suggested emission reduction goals of 20% below 2005 levels by 2020 and then 80% below 2005 levels by 2050. The group also recommended that the program cover electricity generation and imports, industrial combustion sources, industrial process sources, fuels serving industrial, commercial, and residential buildings, and transportation fuels.⁵¹⁷¹ The recommendations also included exemptions for biofuels, authorization of offset projects, and free allocation of allowances. The governors of the member states had to approve these recommendations before they could be implemented.⁵¹⁷² On June 23, 2009, representatives from the Regional Greenhouse Gas Initiative (RGGI), the Western Climate Initiative (WCI), and MGGRA met to discuss linking the regional cap-and-trade programs if Congress did not pass a federal cap-and-trade program.⁵¹⁷³

⁵¹⁶⁵ Governors' Energy and Climate Coalition, Statement of Principles, <http://www.georgetownclimate.org/state-action/governors-energy-and-climate-coalition>.

⁵¹⁶⁶ Press Release, Governor Doyle Discusses High Speed Rail with Vice President Joe Biden in Washington D.C. (June 3, 2009), <http://votesmart.org/public-statement/428547/>.

⁵¹⁶⁷ Press Release, Governor Doyle Approves Central Wisconsin Transit Projects for ARRA Funding (June 10, 2009), http://www.wisgov.state.wi.us/journal_media_detail.asp?locid=19&prid=4309.

⁵¹⁶⁸ Press Release, Governor Doyle Announces Residents, Businesses Save Over \$239 Billion Annually in Energy Costs (June 16, 2009), <http://votesmart.org/public-statement/432546/governor-doyle-announces-residents-businesses-save-over-239-million-annually-in-energy-costs>.

⁵¹⁶⁹ Press Release, Governor Doyle Signs Two Bills Into Law (July 8, 2009), <http://votesmart.org/public-statement/449552/governor-doyle-signs-two-bills-into-law>; *see also* Wisconsin Department of Natural Resources, Green Tier, <http://dnr.wi.gov/topic/greentier/>.

⁵¹⁷⁰ MIDWEST GREENHOUSE GAS REDUCTION ACCORD, ADVISORY GROUP DRAFT FINAL RECOMMENDATIONS, <http://www.c2es.org/us-states-regions/news/2009/midwestern-greenhouse-gas-reduction-accord-releases-recommendations>.

⁵¹⁷¹ *See id.*

⁵¹⁷² *See id.*

⁵¹⁷³ Van Ness Feldman, Weekly Climate Change Policy Update – June 29, 2009, <http://www.vnf.com/news-policyupdates-373.html>.

In July 2009, the federal government gave Wisconsin \$56.6 million of ARRA funding for its weatherization program.⁵¹⁷⁴ Under a recommendation of the Governor's Task Force on Global Warming, the state created the Wisconsin Climate Change Action Initiative to educate various members of the public in reducing their carbon footprint.⁵¹⁷⁵ Governor Doyle joined seven other Midwest states in signing a memorandum of understanding to coordinate ARRA applications and advocacy for high-speed rail.⁵¹⁷⁶ He also announced \$28 million in ARRA funding for clean energy manufacturing projects.⁵¹⁷⁷ Then the U.S. Department of Energy gave the state \$15 million to convert municipal transportation fleets to cleaner energy vehicles.⁵¹⁷⁸

The Domtar Paper Mill in Rothschild, WI announced on September 1, 2009 that it would convert to cleaner energy by constructing a biomass co-generation project at its facility.⁵¹⁷⁹ The Cardinal Solar Technologies facility, a solar panel glass manufacture, opened in Mazomanie, WI.⁵¹⁸⁰ Governor Doyle also announced a plan to improve rail and bus services in southeastern Wisconsin and that Frito-Lay would become part of the Green Tier program.⁵¹⁸¹ Wisconsin also received \$11.7 million through the Energy Efficiency and Conservation Block Grant of the ARRA.⁵¹⁸²

In September 2009, the governors of MGGRA (Midwestern Regional Greenhouse Gas Reduction Accord) decided to no longer pursue a regional cap-and-trade program. Instead, the Midwestern Governors' Association released the Midwestern Energy Infrastructure Accord.⁵¹⁸³ The Accord focused on developing smart grid, carbon capture and sequestration, and biofuels in the Midwest. Governor Doyle then joined Governors Schwarzenegger (CA) and Quinn (IL) in drafting and signing a memo with regional leaders from Brazil and Indonesia, urging national leaders to put strong anti-deforestation

⁵¹⁷⁴ Press Release, Governor Doyle Announces \$56.6 Million in Federal Recovery Act Funding for Weatherization Program (July 13, 2009),

<http://www.nbc15.com/news/newsyoucanuse/headlines/50636692.html>.

⁵¹⁷⁵ Press Release, Governor Doyle Announces Nonprofit Organization to Promote Greenhouse Gas Reduction Efforts (July 17, 2009) (original press release not found).

⁵¹⁷⁶ THE IMPLEMENTATION OF HIGH-SPEED RAIL PASSENGER SERVICE AND CONNECTIONS INVOLVING CORRIDORS LINKING CITIES IN THEIR RESPECTIVE STATES,

<http://www.illinois.gov/publicincludes/statehome/gov/documents/midwesthighspeedrail-MOU.pdf>.

⁵¹⁷⁷ Press Release, Governor Announces \$28 Million Available for State Clean Energy Manufacturing Projects (July 27, 2009), <http://www.commerce.state.wi.us/NEWS/releases/2009/049.html>.

⁵¹⁷⁸ Press Release, Governor Doyle Announces \$15 Million Clean Energy Grant to Wisconsin (Aug. 26, 2009), <http://commerce.wi.gov/NEWS/releases/2009/062.html>.

⁵¹⁷⁹ Press Release, Governor Doyle Announces Rothschild Biomass Project (Sept. 1, 2009), <http://www.waow.com/story/11028596/governor-doyle-announces-rothschild-biomass-project?clienttype=printable>.

⁵¹⁸⁰ Press Release, Governor Doyle Opens New Cardinal Solar Technologies Facility (Sept. 1, 2009), <http://commerce.wi.gov/NEWS/releases/2009/066.html>.

⁵¹⁸¹ Press Release, Governor Doyle Announces Proposal for Regional Transit Authority for Southeastern Wisconsin (Sept. 8, 2009) (original press release not found); Press Release, Governor Doyle Announces \$2 Million for Frito-Lay, Inducts Company into Green Tier Program (Sept. 9, 2009), <http://www.commerce.state.wi.us/NEWS/releases/2009/068.html>.

⁵¹⁸² Press Release, Governor Doyle Announces \$11.7 Million to Improve Energy Efficiency in Communities (Sept. 17, 2009), <http://www.commerce.state.wi.us/NEWS/releases/2009/073.html>.

⁵¹⁸³ MIDWESTERN GOVERNORS' ASSOCIATION, MIDWESTERN ENERGY INFRASTRUCTURE ACCORD, <http://www.midwesterngovernors.org/Publications/InfrastructureAccord.pdf>.

measures in any instrument that might result of the then upcoming Copenhagen climate negotiations.⁵¹⁸⁴

Governor Doyle then announced that he would be co-hosting the second annual Governors' Global Climate Summit in October.⁵¹⁸⁵ Also in October, he signed S.B. 185 into law, which created more uniform siting standards for wind projects.⁵¹⁸⁶ He also applied for federal funding for a high-speed rail line between Madison and Milwaukee.⁵¹⁸⁷ As of October 21, 2009, one hundred communities had joined the Wisconsin Energy Independent Community Partnership, pledging to work towards the governor's "25x25" goal.⁵¹⁸⁸ These communities then received \$500,000 in Energy Efficiency and Conservation Block Grant funds.⁵¹⁸⁹

Focus on Energy, Wisconsin's energy efficiency and renewable energy initiative, helped Wisconsin residents and businesses save more than \$268 million in annual energy costs in 2009.⁵¹⁹⁰ As a result of the program, businesses reduced energy consumption by more than 1.2 billion kilowatt-hours (kWh) and more than 76 million therms, resulting in annual energy costs savings of over \$172 million.⁵¹⁹¹

2010: Energy Efficiency, Green Building, Green Technology, Climate Change Adaptation, and American Recovery & Reinvestment Act (ARRA)

Governor Doyle announced in January 2010 that Wisconsin received a \$31 million grant in federal funds for the Low-Income Energy Assistance Program (LIHEAP).⁵¹⁹² These funds supported the Wisconsin Home Energy Assistance Program (WHEAP), providing financial assistance to low-income residents struggling to pay for heating during the winter depending upon household size, income level, and home energy costs.⁵¹⁹³ WHEAP was part of the Home Energy Plus program, providing assistance with

⁵¹⁸⁴ Colin Sullivan, *Leaders from Indonesia, Brazil Join 3 U.S. States in Deforestation Accord*, N.Y. TIMES, Oct. 2, 2009, <http://www.nytimes.com/cwire/2009/10/02/02climatewire-leaders-from-indonesia-brazil-join-3-us-stat-93701.html>.

⁵¹⁸⁵ Press Release, Governor Doyle to Co-Host Governors' Global Climate Summit (Oct. 1, 2009), <http://www.wkow.com/Global/story.asp?S=9332107>.

⁵¹⁸⁶ Press Release, Governor Doyle Signs Bill Strengthening Wisconsin's Wind Industry (Oct. 1, 2009), <http://sbaustinlaw.com/governor-doyle-signs-bill-strengthening-wisconsins-wind-industry/>.

⁵¹⁸⁷ Press Release, Governor Doyle Submits Application for High-Speed Rail Line to Federal Railroad Administration (Oct. 2, 2009), <http://www.biztimes.com/article/20091002/ENEWSLETTERS02/310029988/>.

⁵¹⁸⁸ Press Release, Governor Doyle Announces over 100 Communities Support "25x25" Clean Energy Goal (Oct. 21, 2009), <http://www.renewwisconsin-blog.org/2009/10/over-100-communities-support-25x25.html>.

⁵¹⁸⁹ Press Release, Governor Doyle Announces \$500,000 for Communities to Plan for Clean Energy Future (Oct. 28, 2009), <http://www.renewwisconsin-blog.org/2009/10/doyle-announces-500000-for-communities.html>.

⁵¹⁹⁰ Press Release, Governor Doyle Announces Energy Efficiency Efforts Save State More than \$268 Million a Year (Jan. 20, 2010), <http://aesp-wi.blogspot.com/2010/02/energy-efficiency-efforts-save-state.html>.

⁵¹⁹¹ *Id.*

⁵¹⁹² Press Release, Governor Doyle Announces \$31 Million for Low-Income Heating Assistance (Jan. 20, 2010), <http://www.superiortelegam.com/event/article/id/39650/>.

⁵¹⁹³ *Id.*

emergency energy needs, emergency furnace repairs, conservation service and assistance weatherizing low-income households.⁵¹⁹⁴

The City of Madison, Kenosha County and the Milwaukee Metropolitan Sewerage District joined the Wisconsin Energy Independent Community Partnership pledging to work toward Governor Doyle's "25x25" goal of generating 25% of the state's electricity and transportation fuels from renewable resources by the year 2025.⁵¹⁹⁵ Under the Clean Energy Jobs Act, Wisconsin must update its renewable portfolio standards to generate 25% of its fuel from renewable sources by 2025 and sets a goal of a 2% annual reduction in energy consumption by 2015.⁵¹⁹⁶

Eighty-two Wisconsin communities would receive \$9.5 million in grant awards through the ARRA's Energy Efficiency and Conservation Block Grant (EECBG) program for retrofits and lighting projects⁵¹⁹⁷ and the funding would be used to retrofit village halls, community centers, libraries and public works buildings are eligible.⁵¹⁹⁸

Governor Doyle announced in April 2010 that 33 public and private fleets had received a total of \$15 million grant awards funded by ARRA for the purchase of alternative-fuel and advanced-technology vehicles.⁵¹⁹⁹ The program aimed to put 340 alternative-fuel and advanced-technology vehicles on the road throughout the state, including propane, CNG (compressed natural gas) and a variety of electric-drive vehicles ranging from neighborhood-electric, hybrid-electric, plug-in hybrid-electric, and full electric. Additionally, eleven alternative fuel refueling stations will be implemented, including two propane, four CNG, two E-85, two solar-electric, and one biodiesel. Thirteen new plug-in charging stations will be constructed as well.⁵²⁰⁰ The initiative was expected help displace over 1.6 million gallons of petroleum per year.⁵²⁰¹

Clean Energy Generation, Transmission and Storage Systems (CEGTS) was created in May 2010, combining the expertise of state industry and government partners with the research and development capabilities of the public and private academic institutions of Wisconsin.⁵²⁰² The Center for Renewable Energy Systems (CRES) in Madison and the Southeastern Wisconsin Energy Technology Research (SWETR) consortium in Milwaukee would join together as a focused single statewide Power and Energy organization.⁵²⁰³ This consortium aimed to provide continuous research and

⁵¹⁹⁴ *Id.*

⁵¹⁹⁵ Press Release, Governor Doyle Announces New Supporters of '25x25' Clean Energy Goal (Feb. 10, 2010), <http://votesmart.org/public-statement/483283/>.

⁵¹⁹⁶ *Id.*

⁵¹⁹⁷ Press Release, Governor Doyle Announces \$9.5 Million in Recovery Act Grants for Clean Energy Projects (Apr. 6, 2010), <http://www.commerce.state.wi.us/NEWS/releases/2010/055.html>.

⁵¹⁹⁸ *Id.*

⁵¹⁹⁹ Press Release, Governor Doyle Announces Partners for \$15 Million Recovery Act Clean Energy Grant (Apr. 29, 2010), http://wispolitics.com/1006/100429_Clean_Energy_Recovery_Grants.pdf.

⁵²⁰⁰ *Id.*

⁵²⁰¹ *Id.*

⁵²⁰² Press Release, Governor Doyle Establishes Clean Energy Consortium (May 4, 2010), <http://wisbusiness.com/?Article=195321>.

⁵²⁰³ *Id.*

development for: energy efficiency; wind turbines and power conversion; photovoltaic and concentrated solar; fuel cells; biofuels; superconductivity: transmission and energy storage; smart grid power systems; composite structures and nanomaterials; power electronics and power conversion equipment; and energy storage for stationary and mobile applications.⁵²⁰⁴

S.B. 651 was enacted in May 2010, authorizing the Wisconsin Green to Gold Fund including a \$100 million revolving loan fund for manufacturers to reduce their energy costs, improve their bottom line and create jobs.⁵²⁰⁵

A study of 2009 energy savings released in July 2010 found that residents, farms and businesses saved more than \$319 million in energy costs in 2009 – compared to \$239 million in 2008 – through energy efficiency and renewable energy initiatives from the Wisconsin’s Focus on Energy program.⁵²⁰⁶ For every dollar invested in the program in 2009, citizens and businesses saved \$2.20 in energy costs.⁵²⁰⁷ The \$319 million in annual savings was equivalent to: the amount of electricity consumed annually by approximately 220,041 average homes in Wisconsin; the amount of natural gas consumed annually by more than 113,000 average Wisconsin homes; almost 5 billion pounds of carbon dioxide; the amount of electricity produced by burning 10,958 rail car loads of coal; and the same energy value as 6.2 million barrels of oil.⁵²⁰⁸

Governor Doyle broke ground in August 2010 on a \$12 million community digester project that would generate enough clean energy to power 2,500 homes.⁵²⁰⁹ The state provided \$3.3 million in assistance for the first of two Dane County Digesters, which use cow manure to produce energy. In 2010, Dane County had 400 dairy farms with 50,000 milking cows.⁵²¹⁰ Also in August, Doyle announced \$984,300 in Grazing Lands and Conservation Initiative grants to fund 32 projects across the state.⁵²¹¹ Grazing is a low-cost, environmentally-friendly method of farming where animals move to a fresh pasture regularly while resting unused pastures so that plants can re-grow before being re-grazed.⁵²¹²

Wisconsin awarded over \$1.1 million in funds, including \$800,000 from ARRA, to support Sun Power Biodiesel, a small canola-based cold flow biodiesel producer with

⁵²⁰⁴ *Id.*

⁵²⁰⁵ See *Governor Doyle signs recovery zone bond bill* (May 13, 2010), <http://www.wqow.com/story/11940123/governor-doyle-signs-recovery-zone-bond-bill>.

⁵²⁰⁶ Press Release, Governor Doyle Announces Residents, Businesses Saved Over \$319 Million in Energy Costs in 2009 (July 02, 2010) (original press release not found).

⁵²⁰⁷ *Id.*

⁵²⁰⁸ *Id.*

⁵²⁰⁹ Press Release, Governor Doyle, County Executive Falk Break Ground on Dane County Clean Energy Project (Aug. 4, 2010), http://danedocs.countyofdane.com/webdocs/pdf/press/8-4_Cow_Power_Press_Release.pdf.

⁵²¹⁰ *Id.*

⁵²¹¹ Press Release, Governor Doyle Announces Over \$984,000 in Grazing and Land Conservation Grants (Aug. 20, 2010), <http://www.wisbusiness.com/index.iml?Article=207349>.

⁵²¹² *Id.*

the ability to produce up to three million gallons annually.⁵²¹³ The state also awarded a \$349,825 Community Development Block Grant-Public Facilities for Economic Development grant to the City of Cumberland to provide project infrastructure.⁵²¹⁴

In late August 2010, Ace Ethanol, LLC – a dry mill facility and produces over 40 million gallons of ethanol fuel annually – received \$595,000 in ARRA funds to support the company's \$850,000 project to expand and equip its operations.⁵²¹⁵ The company planned to install heat exchange equipment on the regenerative thermal oxidizer (RTO) to recover waste heat for process heating.⁵²¹⁶

Betin, Inc. one of the nation's largest goat-cheese manufacturers received a \$550,000 loan funded by the ARRA to install an anaerobic digester to process whey and wastewater.⁵²¹⁷ The resultant methane would be used to help meet up to 80% of the company's energy needs.⁵²¹⁸

McCain Foods USA, Inc. was awarded \$1.1 million in ARRA funding for equipment purchases to increase the efficiency of the company's heat recovery capabilities.⁵²¹⁹ TecStar Manufacturing was awarded \$3.75 million in ARRA funding to build injection molding machines for producing frames for photovoltaic panels.⁵²²⁰ Orion Energy Systems received \$260,000 in ARRA funding to invest in solar photovoltaic panels, wiring, and cabling for their facility.⁵²²¹ 5N Plus Corporation used \$500,000 in ARRA funds to purchase equipment for its 60,500 square foot manufacturing facility, which would recycle metal coatings used in the production of solar panels.⁵²²² Synchrotek, Inc., which designs rotating electric machinery, specializing in generators and motors, received a \$500,000 ARRA loan to manufacture and commercialize a 100-kW generator.⁵²²³ Synchrotek serves a wide variety of industries, such as hybrid technology, hydroelectric, defense, and alternative energy.

Oneida Energy, LLC received a \$2 million ARRA loan to convert landfill, farm, and other bioorganic waste to energy.⁵²²⁴ Wisconsin Film & Bag, Inc. received a \$1.8

⁵²¹³ Press Release, Governor Doyle Announces Over \$1.1 Million in Support for Sun Power Biodiesel Expansion (Aug. 24, 2010), (original press release not found).

⁵²¹⁴ *Id.*

⁵²¹⁵ Press Release, Governor Doyle Announces \$595,000 in Support for Ace Ethanol Project to Retain 40 jobs (Aug. 26, 2010), <http://www.wisbusiness.com/index.iml?Article=207968>.

⁵²¹⁶ *Id.*

⁵²¹⁷ Press Release, Governor Doyle Announces \$550,000 State Energy Program Loan for Betin Incorporated (Oct. 8, 2010), <http://www.wisbusiness.com/index.iml?Article=213824>.

⁵²¹⁸ *Id.*

⁵²¹⁹ Press Release, Governor Doyle Announces \$4.85 Million in Energy Funding for McCain Foods, TecStar Manufacturing Company (Oct. 12, 2010), <http://www.weau.com/mobi/news?storyid=104802319>.

⁵²²⁰ *Id.*

⁵²²¹ Press Release, Governor Doyle Announces \$260,000 in Energy Funding for Orion Energy Systems (Oct. 15, 2010), <http://www.commerce.state.wi.us/NEWS/releases/2010/151.html>.

⁵²²² Press Release, Governor Doyle Announces \$500,000 in Energy Funding for 5N Plus Corporation (Oct. 18, 2010), <http://www.commerce.state.wi.us/NEWS/releases/2010/152.html>.

⁵²²³ Press Release, Governor Doyle Announces \$6.85 Million in Energy Funding for Five Companies in Northeast Wisconsin (Oct. 19, 2010), <http://www.commerce.state.wi.us/NEWS/releases/2010/154.html>.

⁵²²⁴ *Id.*

million ARRA loan to create an industrial plastic film recycling center to convert post-consumer plastic scrap materials into resin pellets to use in the film and bag-making facility.⁵²²⁵ C.A. Lawton Co. of DePere received a \$1.3 million ARRA loan to produce large-energy wind castings.⁵²²⁶ Greenwood Fuels WI, LLC received a \$1.25 million ARRA loan to convert a range of abundant and sustainable non-recyclable materials into biomass fuel pellets.⁵²²⁷ Standard Process, Inc. received \$250,000 in tax credits from the Economic Development Tax Credit Program from Commerce.⁵²²⁸ The company manufactures nutritional whole food supplements with ingredients grown on the company's certified organic farm and planned to use the money to construct and equip an 11,000-sq.-ft. addition to its main plant and add a storage shed, greenhouse and crop dryer.

United Ethanol LLC – an ethanol plant that generates 50 million gallons of ethanol per year – received \$2,250,000 in ARRA funds to install an anaerobic digester at its Milton plant to reduce natural gas use at the plant by up to 25%.⁵²²⁹ Idle Free Systems, Inc., which sells battery-powered, idle-elimination systems for over-the-road trucks, received \$450,000 in ARRA funds to expand production capabilities.⁵²³⁰ DuBay Biofuels-Greenwood, LLC used \$1.7 million in ARRA loans to construct and equip a plant in Greenwood, WI capable of producing around 3 million gallons of ethanol and 3 million pounds of active dry yeast annually.⁵²³¹

On November 24, 2010, Governor Doyle broke ground on Wisconsin's new Energy Institute, which would provide state-of-the-art laboratory space and foster opportunities for collaboration between the University of Wisconsin's leading researchers.⁵²³²

Governor Doyle announced in December 2010 that ARRA would provide \$5 million to the Milwaukee Metropolitan Sewage District (MMSD) and \$3 million to Price Engineering Co. to allow both companies to invest in their operations.⁵²³³ The MMSD planned to use the funds to purchase turbines capable of burning landfill gas; the resultant electricity would be used as part of MMSD's process of manufacturing natural organic fertilizer from biosolids. Price Engineering planned to use the funds to establish a wind-turbine service facility in Hartland, WI.⁵²³⁴

⁵²²⁵ *Id.*

⁵²²⁶ *Id.*

⁵²²⁷ *Id.*

⁵²²⁸ Press Release, Governor Doyle Announces Nearly \$3 Million in State Funding for Three Companies (Oct. 21, 2010), <http://www.commerce.state.wi.us/NEWS/releases/2010/160.html>.

⁵²²⁹ *Id.*

⁵²³⁰ *Id.*

⁵²³¹ Press Release, Governor Doyle Announces Nearly \$1.9 Million for Renewable Fuels Project in Greenwood (Oct. 28, 2010), <http://www.commerce.state.wi.us/NEWS/releases/2010/165.html>.

⁵²³² Press Release, Governor Breaks Ground on Wisconsin Energy Institute (Nov. 24, 2010), <http://news.cals.wisc.edu/communities/2010/11/24/governor-breaks-ground-on-wisconsin-energy-institute/>.

⁵²³³ Press Release, Governor Doyle Announces \$8 Million in Energy Funding for Milwaukee Metropolitan Sewerage District and Price Engineering Co, Inc. (Dec. 16, 2010), <http://commerce.wi.gov/NEWS/releases/2010/199.html>.

⁵²³⁴ *Id.*

2011: Green Technology and Transportation/Fuels

In April 2011, Dane County became the first county in Wisconsin to power its vehicles with landfill gas. The Dane County landfill produced about 100 gallons of compressed natural gas (CNG) from landfill gas, and a number of Dane County parks and public works trucks would make the conversion to CNG.⁵²³⁵

2012: Climate Change Agreements/MOUs, Energy Efficiency, Renewable Portfolio Standards, Climate Change Adaptation, and Energy Efficiency

On January 25, 2012, the Department of Administration announced that Wisconsin was one of three states to earn a State Energy Extension Partnership (SEEP) grant from the U.S. Department of Energy.⁵²³⁶ The grant would allow the Wisconsin State Energy Office and the Cooperative Extension of the University of Wisconsin to collaborate in order to spur participation by municipalities, private entities and the public in energy efficiency, renewable energy projects, and education throughout the state.⁵²³⁷ Wisconsin also planned to use the SEEP funds to promote homegrown bioenergy in the state economy.⁵²³⁸

On March 9, 2012, Governor Scott Walker signed Executive Order (EO) No. 63, directing all new state facilities to achieve at least a ten percent improvement in energy efficiency beyond the commercial-code requirement in effect at the time of the EO.⁵²³⁹ However, he required that the efficiency improvements be cost-effective on a life-cycle basis.⁵²⁴⁰

On March 16, 2012, the Wisconsin Public Service Commission's wind siting rules, adopted in 2010, became effective after the legislature failed to enact a replacement.⁵²⁴¹ For large wind systems (systems greater than 300 kW or an individual turbine greater than 100 kW), the owner must provide written notice to install 90 kW before filing an application; the system must be set back from the property line 1.1 times the height at the maximum tip of a turbine blade or 3.1 times such a height or 1,250 feet, whichever is less, if the system is near unrelated occupied buildings; and the system must operate so that noise does not exceed 50 dBA during daytime hours or 45 dBA during nighttime hours, among other restrictions.⁵²⁴² For small wind systems (systems of 300 kW or less or an individual turbine of 100 kW or less), the owner must provide written notice to install 60

⁵²³⁵ Press Release, Dane County First in State to Fill up County Vehicles with Landfill Gas (Apr. 7, 2011), <http://www.countyofdane.com/press/details.aspx?id=2472>.

⁵²³⁶ Press Release, Wis. Dep't of Admin., UW-Extension, State Energy Office join forces to improve Wisconsin's energy efficiency (Jan. 25, 2012), <http://energyindependence.wi.gov/docview.asp?docid=22705&locid=160>.

⁵²³⁷ *Id.*

⁵²³⁸ *Id.*

⁵²³⁹ Wis. Exec. Order No. 63 (Mar. 9, 2012).

⁵²⁴⁰ *Id.*

⁵²⁴¹ *Wisconsin Wind Siting Rules and Model Small Wind Ordinance*, DSIRE: DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (Dec. 14, 2012), http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=W116R&re=0&ee=0.

⁵²⁴² WIS. ADMIN. CODE ch. PSC 128 (2012), http://docs.legis.wisconsin.gov/code/admin_code/psc/128.

days before filing an application; the system must be set back from the property line by the height of the maximum blade tip; and the same noise restrictions apply as for large wind systems, among other restrictions.⁵²⁴³

On April 3, 2012, the Public Service Commission enacted CR 10-147, allowing utilities to satisfy the state RPS with renewable energy credits, in addition to renewable resource credits (RRCs).⁵²⁴⁴ A renewable energy credit is defined as an electronic certificate representing one MWh of total renewable energy from a certified renewable facility that meets statutory requirements, including the fact the net energy generation must be measured at the facility's bus bar and that the delivered energy is measured at the retail customer's meter, ignoring transmission distribution losses.⁵²⁴⁵

On April 13, 2012, the Wisconsin Public Service Commission approved a shift in the Focus on Energy renewable resource program funding.⁵²⁴⁶ The new percentage will award seventy-five percent of program funding to biomass and biogas, with the remaining percentage going toward wind and solar energy projects.⁵²⁴⁷

On April 26, 2012, the Wisconsin Public Service Commission issued an order allowing continued funding for the Focus on Energy program for 2013 and 2014, but only if (i) the benefit-to-cost balance is maintained at least at a 2:3 ratio and (ii) the renewables program does not reduce the energy savings of the entire program by more than 7.5%.⁵²⁴⁸

On June 27, 2012, the U.S. Department of Energy awarded Wisconsin a \$500,000 grant to help the state prepare an energy efficiency strategy for the Conserve Wisconsin Program.⁵²⁴⁹ Conserve Wisconsin will focus on improving energy efficiency in 6 million square feet of state facilities that have not yet been assessed for enhancements.⁵²⁵⁰

The Wisconsin Department of Revenue in August 2012 issued final rules in response to previous emergency rules to clarify that, for the purposes of the wind, solar and gas powered products sales tax exemption, a "product" is "tangible personal property that converts wind energy, direct radiant energy received from the sun, or gas generated from the anaerobic digestion of animal manure and other agricultural waste into alternating current electricity or heat."⁵²⁵¹ However, a "product" is not tangible personal

⁵²⁴³ *Id.*

⁵²⁴⁴ WIS. ADMIN. CODE ch. PSC 118 (2012); *see* CR 10-147 Order Adopting Final Rules, http://docs.legis.wisconsin.gov/code/chr/related/2010/cr_10_147/cr_10_147_final_rule_filed_with_lrb.pdf.

⁵²⁴⁵ WIS. ADMIN. CODE ch. PSC 118 (2012).

⁵²⁴⁶ Press Release, Pub. Serv. Comm'n of Wis., PSC Approves Responsible Renewables Plan (Apr. 13, 2012), <http://psc.wi.gov/pdf/News%20Releases/2012/04%20April/04132012RenewablesPlan.pdf>.

⁵²⁴⁷ *Id.*

⁵²⁴⁸ Pub. Serv. Comm'n of Wis., Order 5-GF-191 (Apr. 26, 2012), http://www.dsireusa.org/documents/Incentives/PSC_REF_163778.pdf.

⁵²⁴⁹ Press Release, U.S. Dep't of Energy, Energy Department Announces Building Energy Efficiency Investments in Twenty-Two States (June 27, 2012), <http://energy.gov/articles/energy-department-announces-building-energy-efficiency-investments-twenty-two-states>.

⁵²⁵⁰ *Id.*

⁵²⁵¹ WIS. ADMIN. CODE TAX § 11.10(2)(e) (2012).

property that consumes electricity or heat produced by a “product.”⁵²⁵²

2013: Renewable Energy

In the spring of 2013, the Wisconsin Focus on Energy program concluded requests for proposals for the years 2012 and 2013. Applicants eligible for the incentives were business customers of participating Wisconsin electric and natural gas utilities.⁵²⁵³ In 2012, \$750,000 in grants was allocated for biogas, biomass and geothermal projects, and \$750,000 in grants was allocated for photovoltaics, solar thermal and wind projects.⁵²⁵⁴ In 2013, biogas and biomass technologies were eligible for a maximum grant of \$500,000; geothermal was eligible for \$200,000; and photovoltaics, solar thermal and wind were eligible for maximum grants of \$100,000 per project.⁵²⁵⁵ Winning applicants were notified of their status on April 12, 2013 and were required to accept the award by April 29, 2013.⁵²⁵⁶

In July of 2013, following President Obama’s announcement of a national climate change plan, the World Resources Institute released a report, which examined various scenarios on how Wisconsin could reduce power sector emissions under its existing energy policies.⁵²⁵⁷ The report found, among other things, that Wisconsin could reduce its carbon dioxide emissions by 2% below 2011 levels in 2020 by meeting Wisconsin’s current renewable energy standards and by meeting Wisconsin’s Focus on Energy Program energy efficiency goals.⁵²⁵⁸

WYOMING

2001: Market-Based Solutions

In February 2001, Wyoming established statewide net metering.⁵²⁵⁹ Wyoming offers statewide net metering for solar, wind, and hydropower systems up to 25 kW.⁵²⁶⁰ Sales of equipment used to generate electricity from renewable resources are exempt from the state excise tax.⁵²⁶¹ Effective until July 1, 2015, ethanol producers are eligible for a tax credit of \$.40/gallon of ethanol produced in Wyoming.⁵²⁶²

⁵²⁵² *Id.* § 11.10(4).

⁵²⁵³ See *Renewable Energy*, FOCUS ON ENERGY, <http://www.focusonenergy.com/business/renewable> (Apr. 17, 2013).

⁵²⁵⁴ *Wisconsin Renewable Energy Grant Programs*, DSIRE: DATA, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=W123F&re=0&ee=0.

⁵²⁵⁵ See *Renewable Energy*, FOCUS ON ENERGY, <http://www.focusonenergy.com/business/renewable> (Apr. 17, 2013).

⁵²⁵⁶ *Id.*

⁵²⁵⁷ MICHAEL OBEITER, KRISTIN MEEK, AND REBECCA GASPER, WORLD RESOURCE INSTITUTE, POWER SECTOR OPPORTUNITIES FOR REDUCING CARBON DIOXIDE EMISSIONS: WISCONSIN (2013), http://www.wri.org/sites/default/files/WI_fact_sheet_final.pdf.

⁵²⁵⁸ *Id.* at 2.

⁵²⁵⁹ WYO. STAT. ANN. §§ 37-16-101 to 4 (2012).

⁵²⁶⁰ *Id.*

⁵²⁶¹ *Id.* § 39-15-105(a)(viii)(N) (2012).

⁵²⁶² *Id.* § 39-17-109 (2012).

2007: Greenhouse Gas Reduction

In May 2007, Wyoming and thirty other states founded The Climate Registry. The Climate Registry, a collaboration between North American states, provinces, and territories, seeks to set consistent and transparent standards to calculate, verify and publicly report GHG emissions into a single registry.⁵²⁶³

2008: Greenhouse Gas Reduction

In March 2008, Wyoming became the first state to enact comprehensive carbon sequestration legislation when then Governor Dave Freudenthal signed two bills, House Bills (H.B.) 89 and 90, positioning the state to regulate the storing of carbon emissions from coal-fired power plants.⁵²⁶⁴ H.B. 89, titled “Ownership of Pore Space,” addressed ownership rights of open space in subsurface geologic formations that could be used for carbon storage,⁵²⁶⁵ while H.B. 90, titled “Carbon capture and sequestration,” gave regulation of the state’s carbon sequestration program to the Wyoming Department of Environmental Quality (DEQ).⁵²⁶⁶

2009: Greenhouse Gas Reduction, American Recovery & Reinvestment Act (ARRA), and Renewable Energy

On February 26 and 27, 2009 Governor Freudenthal signed a bill package regulating carbon capture and storage.⁵²⁶⁷ The first of the three bills, H.B. 57, prioritized mining and drilling rights over geologic sequestration sites.⁵²⁶⁸ The second bill, H.B. 58, recognized that CO₂ injectors have ownership rights over the sequestered carbon.⁵²⁶⁹ The final bill, H.B. 80, created a procedural mechanism for unitizing sequestration sites into one multi-party carbon storage project.⁵²⁷⁰

On March 12, 2009, the U.S. Department of Energy announced that Wyoming was eligible for an award of \$24,941,000 under the State Energy Program of the American Recovery & Reinvestment Act (ARRA).⁵²⁷¹ The State Energy Program primarily funded two projects with the award, a facility retrofit program, a grant program to promote a set of energy efficiency upgrades for public, Tribal, non-profit, and joint powers board owned facilities, and a residential photovoltaic expansion program to

⁵²⁶³ THE CLIMATE REGISTRY (Sept. 11, 2013), <http://www.theclimateregistry.org/>.

⁵²⁶⁴ H.R. 89, 90, 59th Leg., Budget Sess. (Wyo. 2008).

⁵²⁶⁵ H.R. 89, 59th Leg., Budget Sess. (Wyo. 2008).

⁵²⁶⁶ H.R. 90, 59th Leg., Budget Sess. (Wyo. 2008).

⁵²⁶⁷ See CENTER FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.c2es.org/us-states-regions/news/2009/wyoming-governor-signs-carbon-capture-storage-legislation>; H.R. 57, 58, 80, 60th Leg., Gen. Sess. (Wyo. 2009).

⁵²⁶⁸ See H.R. 57, 60th Leg., Gen. Sess. (Wyo. 2009).

⁵²⁶⁹ See H.R. 58, 60th Leg., Gen. Sess. (Wyo. 2009).

⁵²⁷⁰ See H.R. 80, 60th Leg., Gen. Sess. (Wyo. 2009).

⁵²⁷¹ *State Energy Program Formula Grants*, U.S. DEP’T OF ENERGY (Sept. 16, 2013), http://www1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf.

include other renewable energy sources specifically wind and geothermal energy.⁵²⁷² As of September 16, 2013, the total ARRA expenditure from the award was \$22,694,472.92.

In May 2009, Governor Freudenthal sent a letter to one of the co-sponsors of the Waxman-Markey Cap and Trade Bill, Henry Waxman (D-Calif.), expressing his concerns over the bill's potential to disproportionately burden small oil refineries.⁵²⁷³ Freudenthal was most concerned with businesses' responsibility for hundreds of millions of dollars in annual costs for the carbon emissions of the entities to which they supply fuel.⁵²⁷⁴

Also in May 2009, Governor Freudenthal expressed his concerns about the "gold rush pace" of wind energy development in a letter to the Wyoming legislature's Wind Energy Task Force.⁵²⁷⁵ He noted the need to balance the interest of creating carbon-neutral technologies with possible negative environmental impacts, including destruction of habitat for sensitive species and "important viewsheds."⁵²⁷⁶ Freudenthal also expressed support for federal carbon sequestration legislation.⁵²⁷⁷ In a May 20, 2009 letter to U.S. Senator Jeff Bingaman, Chairman of the Senate Energy and Natural Resources Committee, Freudenthal indicated that the ability to sequester CO₂ was growing critically important especially "since it is becoming a pre-condition to the continued use of coal."⁵²⁷⁸ He encouraged Bingaman's committee to address the long-term liability of the sequestered carbon, which he believed the biggest impediment to sequestration's growth.⁵²⁷⁹

On May 21, 2009, Governor Freudenthal hosted U.S. EPA Administrator Lisa Jackson on a tour of Wyoming energy production sites, including a wind farm and a natural gas field.⁵²⁸⁰ Jackson and Freudenthal also toured the Powder River Basin's coalmines, which produce 10% of the nation's sub-bituminous coal.⁵²⁸¹

⁵²⁷² *Wyoming ARRA – Monthly Summary Report*, WYOMING.GOV (Sept. 16, 2013), <http://wyoming.gov/recovery/Documents/Reports/201307.pdf>.

⁵²⁷³ *Climate Bill Should Not Hurt Small Business Refiners Governor Says*, CHEYENNE WYOMING (May 7, 2009), <http://www.american towns.com/wy/cheyenne/news/climate-bill-should-not-hurt-small-business-refiners-governor-says-185310>.

⁵²⁷⁴ *Id.*

⁵²⁷⁵ *See Wyoming Governor Freudenthal's letter to the State's Wind Energy Task Force*, INDUSTRIAL WIND ACTION GROUP (May 18, 2009), <http://www.windaction.org/documents/22058>.

⁵²⁷⁶ *Id.*

⁵²⁷⁷ John J. Fialka, *Carbon Capture: Wyoming's crash program to develop 'green' coal*, CLIMATEWIRE (Mar. 17, 2010), <http://www.eenews.net/climatewire/stories/88760>.

⁵²⁷⁸ *Letter to Senator Jeff Bingaman, Chairman and Senator Lisa Murkowski, Ranking Member, Senate Energy and Natural Resources Committee*, PROJECT VOTE SMART (Jan. 9, 2009), <http://votesmart.org/public-statement/410467/letter-to-senator-jeff-bingaman-chairman-and-senator-lisa-murkowski-ranking-member-senate-energy-and-natural-resources-committee>.

⁵²⁷⁹ *Id.*

⁵²⁸⁰ *EPA Administrator Jackson Wraps Up Two Day Tour of Wyoming Energy Production Sites with Governor Freudenthal*, EPA (May 22, 2009), <http://yosemite.epa.gov/opa/admpress.nsf/f0d7b5b28db5b04985257359003f533b/dcd76861741aad42852575be00590f1d!OpenDocument>.

⁵²⁸¹ *Id.*

According to the Pew Charitable Trust's June 2009 Clean Energy Economy Fact Sheet for Wyoming, Wyoming's clean energy economy grew by 1,419 jobs and 225 businesses from 1998 to 2007.⁵²⁸² Between 2006 and 2009, Wyoming attracted nearly \$7 million in capital investment in clean energy.⁵²⁸³

In mid-August 2009, Governor Freudenthal hosted the Wyoming Wind Symposium, a two-day conference that explored key issues surrounding wind energy development.⁵²⁸⁴ The symposium included sessions on environmental impacts, the role of transmission, and the economics of wind energy development.⁵²⁸⁵

2010: Renewable Energy

From 2010-2013 Wyoming passed several pieces of legislation concerning wind energy development and generation within the state. In 2010, the Wyoming legislature passed H.B. 72 that requires all wind energy generating facilities producing more than 0.5 megawatts of electricity to obtain a permit from every county in which the facility is located.⁵²⁸⁶ Also in 2010, and then extended in 2013, Wyoming passed H.B. 78 placing a moratorium on the exercise of eminent domain for the purpose of erecting "collector systems" associated with wind energy projects until June 30, 2015.⁵²⁸⁷ The following year, in 2011, Wyoming passed H.B. 101 that created a tax upon the production of wind energy, specifically imposing an exercise tax of \$1 per megawatt hour of operation to be distributed 60% to the counties where the generating facility is located and 40% to a general fund.⁵²⁸⁸

2011: Renewable Energy and Energy Efficiency

On April 15, 2011, Governor Matt Mead and state business officials announced that construction would soon begin on Wyoming's first wind tower manufacturing facility, which would cost \$40 million and create 150 new jobs.⁵²⁸⁹ However, the initial construction date has been delayed⁵²⁹⁰ and as of September 2013, construction has yet to begin.

⁵²⁸² *Clean Energy Economy Wyoming Fact Sheet*, THE PEW CHARITABLE TRUST (Sept. 16, 2013), http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/WY-Clean%20Energy%20Economy.pdf.

⁵²⁸³ *Id.*

⁵²⁸⁴ *See* WYOMING WIND SYMPOSIUM (Sept. 17, 2013), <http://www.uwyo.edu/haub/ruckelshaus-institute/research-and-policy-analysis/projects-and-events/energy-environment/wyoming-wind-symposium.html>.

⁵²⁸⁵ *See id.*

⁵²⁸⁶ *See* H.R. 72, 60th Leg., Budget Sess. (Wyo. 2010).

⁵²⁸⁷ *See* H.R. 79, 60th Leg., Budget Sess. (Wyo. 2010); *See* H.R. 40, 62rd Leg., Gen. Sess. (Wyo. 2013).

⁵²⁸⁸ *See* H.R. 101, 60th Leg., Budget Sess. (Wyo. 2011).

⁵²⁸⁹ Jeremy Pelzer, *Companies Plan to Build Wind Towers in Cheyenne*, WYOMING BUSINESS COUNCIL (April 15, 2011), <http://www.wyomingbusiness.org/news/article/companies-plan-to-build-wind-towers-in-1125>.

⁵²⁹⁰ *See* Bob Moen, *Wyoming wind tower plant delayed until next year*, BLOOMBERG BUSINESSWEEK (Dec. 2, 2011), <http://www.businessweek.com/ap/financialnews/D9RCK3Q81.htm>.

In August 2011, Wyoming received \$23,536 in federal grants to help the state's agricultural producers and rural small businesses implement energy efficiency and renewable energy projects. The Rural Energy for America Program (under the 2008 Farm Bill initiative) funds the grants.⁵²⁹¹

2012: Greenhouse Gas Reduction, Transportation/Fuels, and Green Technology

On March 6, 2012, Governor Mead signed legislation allowing Wyoming to regulate GHG emissions from in-state polluters.⁵²⁹² The enacted bill created a framework whereby the Wyoming Department of Environmental Quality and Environmental Quality Council may obtain primacy over the regulation of GHGs if the U.S. Congress enacts legislation or a federal court issues a final judgment prohibiting EPA from regulating GHGs, eliminating the air quality “dual permitting” scenario with EPA.⁵²⁹³

On May 3, 2012, Governor Mead joined twelve other state governors in a multi-state request-for-proposal seeking information on obtaining natural gas vehicles for state fleets.⁵²⁹⁴ The governors sought to build momentum around the need for manufacturing natural gas vehicles and the installation of the necessary infrastructure.⁵²⁹⁵

On December 6, 2012, the Wyoming State Loan and Investment Board (SLIB) approved a \$1.5 million DataPlant economic development grant to the city of Cheyenne.⁵²⁹⁶ The funds would allow the city's waste recycling plant to utilize the biogas methane byproduct to power a Microsoft server through fuel cell technology.⁵²⁹⁷ Project sponsors anticipated that the fuel cell technology would demonstrate how data centers might be powered in an energy-efficient manner.⁵²⁹⁸

2013: Energy Efficiency, Renewable Energy, and Green Technology

In June 2013, Wyoming Governor Matt Mead released his proposed energy strategy for the state.⁵²⁹⁹ In the energy strategy, Governor Mead proposed four themes to serve as a framework for energy policy initiatives: 1) economic competitiveness,

⁵²⁹¹ *The Rural Energy for America Program*, USDA (Sept. 18, 2013),

http://www.rurdev.usda.gov/BCP_Reap.html.

⁵²⁹² See S.R. 86, 61st Leg., Budget Sess. (Wyo. 2012).

⁵²⁹³ *Id.*

⁵²⁹⁴ See *13 Governors Notify Automakers of Their Desire for Natural Gas Vehicles*, OFFICE OF THE GOVERNOR MATT MEAD (May 3, 2012), <http://governor.wy.gov/media/pressReleases/Pages/13GovernorsNotifyAutomakersofTheirDesireforNaturalGasVehicles.aspx>.

⁵²⁹⁵ See *id.*

⁵²⁹⁶ *Wyoming Business Council, State Loan and Investment Board approves \$1.5 million DataPlant grant*, WYOMING BUSINESS COUNCIL (Dec. 6, 2012), <http://www.wyomingbusiness.org/news/article/state-loan-and-investment-board-approves-/7020>.

⁵²⁹⁷ *Id.*

⁵²⁹⁸ *Id.*

⁵²⁹⁹ GOV. MATT MEAD, LEADING THE CHARGE: WYOMING'S ACTION PLAN FOR ENERGY, ENVIRONMENT AND ECONOMY (2013), [https://web.archive.org/web/20140408221746/http://energy.wyo.gov/pdf/Leading the Charge.pdf](https://web.archive.org/web/20140408221746/http://energy.wyo.gov/pdf/Leading%20the%20Charge.pdf).

expansion, and diversification; 2) efficient, effective regulation; 3) natural resource conservation, reclamation, and mitigation; and 4) education, innovation, and new technologies.⁵³⁰⁰ Although the proposed energy strategy incorporates energy efficiency initiatives, the strategy does not specifically address climate change, GHG reduction, or an expansion of renewable energy development in Wyoming.⁵³⁰¹

⁵³⁰⁰ *Id.* at 35-37.

⁵³⁰¹ See *id.*