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COMMENT

New York's Proposed Solar Renewable Energy Market: Lessons Learned From Other States' SREC Markets and Recommendations In Moving Forward

JESSE GLICKSTEIN*

I. INTRODUCTION

A relatively recent bill in the New York State legislature, titled the New York Solar Industry Development and Jobs Act of 2011 (Act),¹ proposed a solar renewable energy credit (SREC) carve-out from the current New York Renewable Portfolio Standard (RPS). If the bill had passed, many observers think the SREC market “could [have] further accelerate[d] the statewide solar market by several orders of magnitude during the next decade.”² Although the legislation expired, as it was never brought to the floor for a vote prior to the end of the 234th session of the legislature,³ strong bipartisan support⁴ for the bill suggests

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1. Assemb. B. No. 5713, 234th Sess. (N.Y. 2011); S. B. No. 4178, 234th Sess. (N.Y. 2011).

2. MEISTER CONSULTING GRP., NEW YORK CITY SOLAR ENERGY FUTURE: 2011 UPDATE 19 (2011).

3. *New York State Assembly Fails to Vote on Solar Jobs Act*, SOLARSERVER.COM (June 28, 2011), <http://www.solarserver.com/solar-magazine/solar-news/current/2011/kw26/new-york-state-assembly-fails-to-vote-on-solar-jobs-act.html>.

4. *New York Solar Bill are Moving Forward*, CLEANENERGYAUTHORITY.COM (Apr. 19, 2011), <http://www.cleanenergyauthority.com/solar-energy-news/ny-solar-jobs-bill-has-bipartisan-support-041911/>.

that some type of SREC program will eventually be passed in New York.⁵ Commentators predicted that the Act would lead to the addition of 2500 megawatts (MW) to 5000 MW of solar electricity generation capacity in New York State, which currently has only about fifty MW of solar installations.⁶ The Act set a target of achieving 1.5% of the RPS by 2020, with a first year target of 0.15%.⁷ The Act also called for the implementation of a Solar Alternative Compliance Payment (SACP) in order to encourage buyers into the market and to set a price ceiling for the SRECs.

After the Act failed to pass, a coalition of solar industry representatives in New York emerged that has proposed new legislation in an effort to create a viable SREC market in New York State. The New York Solar Jobs Coalition set forth a plan that would install 5000 MW of solar power, or roughly 3% of the state's energy portfolio, over a fifteen-year period. It would also require that 20% of the SRECs come from systems smaller than fifty KW in order to prevent large facilities from dominating the market.⁸ This group also hopes to attract financing, particularly for large-scale projects, by requiring utilities to offer long-term contracts for periods of up to fifteen years. This proposal does not have any SACP, which would differentiate the New York market from other states. The Coalition predicts their proposal will build

5. As of September, 2012, a bill was introduced in the New York State Assembly, but still does not have a sponsor in the Senate, watering down the requirements of the 2011 Act. *New York Solar Legislation Update*, SRECTRADE (Sept. 21, 2012), <http://www.sretrade.com/blog/srec-markets/new-york-solar-legislation-update>. "This new bill . . . eliminates language creating a state-wide SREC market" and also "sets a solar target of 670 MW in 2015 and ramps up to 3,000 MW in 2021 but segments goals in to three separate requirements, based on type of utility. The bill allows the utilities the ability to define how they plan to achieve the solar mandate and does not specify interim solar requirements between 2015 and 2021." *Id.*

6. Lisa Wood, *N.Y. SREC Legislation Races to Beat the Clock*, ELEC. POWER DAILY, June 13, 2011, at Front Page, available at 2011 WLNR 12775361.

7. *NY SREC Program Put on Hold*, SRECTRADE (June 28, 2011), <http://www.sretrade.com/blog/srec-markets/ny-srec-market-put-on-hold>.

8. *Proposed Legislation Would Create NY SREC Market by 2013*, SOL SYSTEMS (Dec. 12, 2011), <http://www.solssystemscapacity.com/blog/2011/12/12/proposed-ny-legislation-pushes-for-srec-market>; Gloria Gonzalez, *Corrected: New York Eyeing Solar SREC Market*, ENVTL. FIN. (Dec. 11, 2011), <http://www.environmental-finance.com/news/view/2167>.

a \$20 billion industry in New York while increasing the state's energy independence and reducing its carbon footprint.⁹ It is not yet clear whether the legislature will adopt this proposed legislation, as the Governor's office has yet to review the bill or perform a cost-benefit analysis. Further, there is significant opposition by utilities to fixed long-term contracts that will likely lead to issues in passing the proposed legislation in its current form.¹⁰

This paper presents analysis of eight states that currently have operating SREC markets as part of their state's RPS,¹¹ in order to make recommendations as to how the New York legislature should amend the pending legislation based on lessons learned from those other states. In Part II, the different SREC markets that have been implemented in different states throughout the United States are examined. In Part III, the different issues that varying SREC markets have encountered will be discussed, and several possible explanations as to the causes of these issues are presented. In Part IV, recommendations are set forth for lawmakers in New York in how to create a viable SREC market while using lessons learned from other states in order to avoid many of the issues they have encountered. Lastly, the future outlook for a viable SREC market in New York is summarized.

II. STATE SREC MARKETS

A. SRECs Overview

SRECs are tradable credits that represent the renewable attributes of solar energy. Each credit is equal to one megawatt-hour (MWh) of solar electricity. In states that have developed

9. *New York Solar Jobs Coalition Sets Aggressive Targets*, SRECTRADE (Dec. 11, 2011, 9:44 PM), <http://www.srectrade.com/blog/srec-markets/new-york/new-york-solar-jobs-coalition-sets-aggressive-targets>.

10. Reggie Norris, *New York Trying to Create New Solar Rebate Market*, CLEANTECHNICA (Dec 9, 2011), <http://cleantechnica.com/2011/12/09/new-york-trying-to-create-new-solar-rebate-market/>.

11. *Solar Renewable Energy Credits*, SRECTRADE, <http://www.srectrade.com/background.php> (last visited July 10, 2012) (stating that DC, DE, MA, MD, NC, NJ, OH, and PA have SREC markets).

SREC programs to comply with the requirements of a Renewable Portfolio Standard (RPS),¹² specific solar targets are required for energy suppliers to meet yearly goals. Power providers can either generate the SRECs themselves by investing directly in projects, or purchase the credits from project owners, brokers, and aggregators. The value of credits is driven by simple supply and demand. If there is a shortage of solar electricity in a given state, SREC prices will be high, thus stimulating more development. If there is an oversupply of solar electricity available on the market, SREC prices should drop. Prices are effectively capped by a penalty, the SACP, that power providers pay if they do not meet their targets.¹³ Prices can fluctuate greatly, depending on several factors that will be discussed below. The goal of SREC markets is to

drive economies of scale and create a competitive market for solar technologies. If prices are pushed downwards in SREC markets, system developers will be incentivized to reduce the costs of the development in order to maintain margins. In the event prices are too low, the supply of SRECs will be short, energy suppliers will be required to pay higher prices for SRECs, and the market will receive the stimulus needed to push development forward again. In a state with an RPS program and a robust SREC market, the winners will be those that can stay ahead of the curve in developing systems at lower and lower costs compared to other developers. The losers will be those that continually lag in developing systems at lower costs compared to other developers in the market. In so doing, an RPS program creates competition

12. There is currently no national RPS, although there have been several attempts to pass legislation that would create a nationwide RPS. The prospects for a national RPS based on the current political landscape seem slim. This discussion is beyond the scope of this comment, however, in the event that a national RPS was created, it would likely have dramatic effects on individual state's SREC markets. See Roberta F. Mann, *Federal, State, and Local Tax Policies for Climate Change: Coordination or Cross-Purpose?*, 15 LEWIS & CLARK L. REV. 369, 376 (2011).

13. Stephen Lacey, *How are State SREC Programs Performing?*, RENEWABLEENERGYWORLD.COM (Apr. 8, 2011), <http://www.renewableenergyworld.com/rea/news/article/2011/04/how-are-state-srec-markets-performing>.

in the market that will ultimately drive down the costs of solar energy and make it more affordable for more people.¹⁴

The most recent prices can be found online at the Flett Exchange, the leading brokerage firm specializing in SRECs.¹⁵

B. New Jersey

New Jersey has one of the most aggressive RPS programs in the United States, requiring electricity suppliers to include 22.5% qualifying renewables in the electricity they sell.¹⁶ When initially enacted in 2004, New Jersey used a percentage-based goal for its solar carve-out, which was increased in 2006 to 2.12% by 2021.¹⁷ However, in 2010 the state switched to an energy-based gigawatt-hours (GWh) goal, with an ultimate goal of 5316 GWh of solar generation in 2026.¹⁸ New Jersey uses an online marketplace for registering, tracking, and trading SRECs.¹⁹ The price of SRECs is determined primarily by market availability and the price of the SACP for the state RPS.²⁰ The SACP is the per MWh payment that electricity suppliers must make if they fail to obtain enough SRECs to cover their RPS obligation, effectively acting as a ceiling on the value of SRECs.²¹ The lifetime of a SREC has been extended to three years (the year of generation plus the following two compliance years) from an original trading lifetime of two years.²² Even though New Jersey has a reputation for having a viable and aggressive market, as stated in a recent article, “[a] year ago, solar panels seemed to be going on every rooftop in New Jersey . . . [b]ut with the value of [SRECs]

14. Daniel Yonkin, *SREC Market Better than FITs for Long-term Growth*, SOL SYSTEMS (Nov. 19, 2010), <http://www.solsystemscompany.com/blog/2010/11/19/which-is-more-efficient-rps-or-feed-in-tariffs/>.

15. FLETT EXCH., <http://www.flettexchange.com/#> (last visited July 10, 2012).

16. *New Jersey Solar Renewable Energy Certificates*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NJ07F&re=1&ee=1 (last visited July 10, 2012).

17. *Id.*

18. *Id.*

19. *Id.*

20. *Id.*

21. *Id.*

22. *New Jersey Solar Renewable Energy Certificates*, *supra* note 16.

dropping dramatically this past summer, many entities and private homeowners are struggling to reap the benefits.”²³ As of September 2012, energy year 2012 SRECs in New Jersey were trading at \$75,²⁴ down from \$245 in January 2012 and \$640 for year 2011 SRECs in June 2011.²⁵ Energy year 2013 SRECs were trading at \$80.52 as of September 2012, down from their opening price of \$130 in August 2012.

New Jersey recently released a proposed revision of its Energy Master Plan (EMP) which would accelerate the RPS targets in order to provide some relief for the current market and an opportunity for the industry to adjust. “This acceleration would require increasing the RPS over the next three years and reducing the outlier years of the RPS schedule to minimize the impact to ratepayers.”²⁶ Importantly, the eventual 22.5% RPS by 2021 remains intact, while simultaneously reducing the SACP to reflect the massive drop in SREC prices over the past two years.²⁷ However, it is important to note that this proposed EMP must go through a period of public comment and be passed by the legislature in order to come into effect.²⁸

Another plan that was recently passed by the legislature in New Jersey and signed by Governor Christie would implement changes to the current solar carve-out in the RPS.²⁹ The relevant provisions in this legislation are as follows: beginning June 1, 2013, SREC solar goals will shift from a fixed megawatt hour

23. Rebecca Forand, *Solar Panel Investors Upset as SREC Value Drops*, GLOUSTER CNTY. TIMES, Oct. 23, 2011, http://www.nj.com/gloucester-county/index.ssf/2011/10/solar_panel_investors_upset_as.html.

24. *SREC Market Prices*, SRECTRADE, http://srectrade.com/srec_prices.php (last visited July 10, 2012).

25. *New Jersey SREC Market*, SRECTRADE, http://srectrade.com/new_jersey_srec.php (last visited Sept. 12, 2012).

26. *Newsletter*, FLETT EXCH., <http://www.flettexchange.com/newsletter/> (last visited July 10, 2012).

27. Jessica Lillian, *N.J. Solar Market Preview: With A New Energy Plan, What Lies Ahead In 2012?*, SOLAR INDUS. (Dec. 13, 2011), http://solarindustrymag.com/e107_plugins/content/content.php?content.9313.

28. N.J. STAT. ANN. § 52:27F-14 (West 2011).

29. Assemb. B. No. 2966, 215th Sess. (N.J. 2012); Sen. B. No. 1925, 215th Sess. (N.J. 2012); *NJ Governor Christie Signs Bill to Increase Solar Requirements*, SRECTRADE (July 23, 2012), <http://www.srectrade.com/blog/srec-markets/nj-governor-christie-signs-bill-to-increase-solar-requirements>.

requirement to a percentage-based requirement; beginning in the 2014 energy year, the SACP will be reduced to \$339 declining to \$239 by 2028; and SRECs will be eligible to meet compliance obligations the year in which they are generated and the following four compliance years.³⁰ Therefore, under this plan SRECs will increase in the near term by 900,000 or more each year through the 2020 reporting year, but beginning in 2024 SREC requirements will begin to reduce.³¹ It is likely, at least in the short term, that SREC prices in New Jersey will recover to some degree if this legislation is put into place.

C. Massachusetts

“Massachusetts is increasingly seen as a promising growth market in the Northeast.”³² Massachusetts’ RPS requires each regulated electricity supplier and provider that serves customers in the state to include 15% qualifying renewables in the electricity it sells by December 31, 2020.³³ In January 2011, final rules were implemented for the state’s Solar Carve-Out program, which is the portion of required renewable energy that must be generated at qualified, in-state, interconnected solar facilities.³⁴ Massachusetts’ Solar Carve-Out provides a means for SRECs to be created and verified, and allows electric suppliers to buy these certificates in order to meet their solar RPS requirements. All electric suppliers must use SRECs to demonstrate compliance with the RPS.³⁵ The SACP is set at \$550 for 2012.³⁶ Further, on December 28, 2011, the Massachusetts Department of Energy Resources (DOER) announced that it was suggesting a ten-year

30. *Id.*; see also *A Break In The Clouds? - NJ Legislature Passes S1925/A2966*, SRECTRADE (June 26, 2012), <http://www.srectrade.com/blog/srec-markets/a-break-in-the-clouds-nj-legislature-passes-s1925a2966>.

31. *Id.*

32. Carolyn Campbell, *Massachusetts: A Bright Spot in the Northeast*, GREENTECH MEDIA (Oct. 4, 2011), <http://www.greentechmedia.com/articles/read/massachusetts-a-bright-spot-in-the-northeast/>.

33. *Massachusetts Solar Renewable Energy Credits*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=MA98F&re=1&ee=1 (last visited July 10, 2012).

34. *Id.*

35. *Id.*

36. *Id.*

forward schedule for the SACP for which they published a guideline to establish the ten-year rolling SACP rate schedule.³⁷ This guideline will act as an interim step to implement permanent regulatory change.³⁸ Over the course of the 2012 and 2013 compliance periods, the rate will stay at \$550 but decline by 5% every year moving forward.³⁹ Additionally, by January 31st of each year, the DOER will announce the new tenth year price in order to maintain a complete ten-year schedule at all times.⁴⁰

There is a fixed price of \$300 per MWh for SRECs, which effectively acts as price floor. The Solar Carve-Out program is intended to support approximately 400 MW of solar facilities in Massachusetts. Once the state reaches that goal and the opt-in term for all solar facilities has expired, SRECs will no longer be generated. Solar facilities will at that time generate renewable energy credits (RECs).⁴¹ According to a recent report, Massachusetts installed 0.9 MWh of residential capacity and 4.5 MWh of non-residential capacity in the second quarter of 2011 to bring their total to 5.4 MWh, which represents a 12% increase over the first quarter.⁴² Further, the auction for energy year 2011 SRECs closed in October 2011 with SRECs transacted at clearing prices of \$535,⁴³ and June 2012 at \$545.⁴⁴ These prices represent more than 97% of the SACP, indicating a strong demand for SRECs in Massachusetts in 2011. Energy year 2012 SRECs closed at \$225 in September 2012 which potentially indicates oversupply in the market there,⁴⁵ although two quarters remain in the 2012 energy year.

37. *MA DOER Releases Solar Carve-out ACP Guideline*, SRECTRADE (Dec. 29 2011, 4:06 PM), <http://www.srectrade.com/blog/srec-markets/massachusetts/ma-doer-releases-solar-carve-out-acp-guideline>.

38. *Id.*

39. *Id.*

40. *Id.*

41. *Massachusetts Solar Renewable Energy Credits*, *supra* note 33.

42. Campbell, *supra* note 32.

43. Stephen Eisenberg, *MA2011 SREC Trade Auction Closes at \$535/SRE*, RENEWABLEENERGYWORLD.COM (Oct. 18, 2011), <http://www.renewableenergyworld.com/rea/blog/post/2011/10/ma2011-srectrade-auction-closes-at-535srec>.

44. *SREC Market Prices*, *supra* note 24.

45. *Massachusetts SRECs Headed for Oversupply*, MASS. SOLAR INFO. BLOG (June 30, 2012), <http://massolarinfo.com/wordpress/2012/06/30/massachusetts-sreCs-headed-for-over-supply/>.

D. Ohio

In May 2008, Ohio enacted a standard that requires utilities to provide 25% of their retail electricity supply from alternative energy resources by 2025 with specific annual benchmarks for renewable and solar energy resources.⁴⁶ The renewable benchmarks began in 2009 and increase annually to an eventual target of 12.5% of retail electricity sales by year-end in 2024 and thereafter.⁴⁷ The requirement also contains a carve-out for solar energy resources with an ultimate solar target of 0.5% of the total electricity supply in 2024 and thereafter.⁴⁸ The total renewable percentage requirement includes the solar-specific portion.⁴⁹ At least half of the renewable requirement, including solar, must be generated within the state of Ohio and the other half must come from adjoining states from which it can be shown that the electricity could be delivered to Ohio.⁵⁰ In Ohio, retail electricity suppliers must purchase or generate SRECs in order to meet their compliance obligations or pay a SACP for any shortfalls in SREC purchases. The Ohio legislature set the SACP at \$450 per MWh in 2009. It has been reduced to \$400 per MWh in 2010 and 2011, and will be reduced by \$50 every two years thereafter to a minimum of \$50 per MWh in 2024.⁵¹ The Ohio market is divided between in-state and out-of-state sited systems, which results in a substantial number of systems from Pennsylvania, as well as several bordering states without SREC markets, contributing to Ohio's market through the sale of SRECs. The in-state and out-of-state markets are traded separately from one another, and to date SRECs on each market trade at starkly different prices, with the in-state market boasting significantly higher prices. As of

46. *Ohio Alternative Energy Portfolio Standard*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=OH14R (last visited July 10, 2012).

47. *Id.*

48. *Id.*

49. *Id.*

50. *October 2011 SREC Prices*, SRECTRADE (Oct. 3, 2011, 7:02 PM), <http://www.sretrade.com/blog/srec-markets/october-2011srec-auction-results> (“In-State SRECs continue to be in high demand in Ohio as prices are near the SACP. Meanwhile, the demand for out-of-state SRECs has slowed down at this time, likely due to the effects of a significant oversupply in Pennsylvania.”).

51. *Ohio Alternative Energy Portfolio Standard*, *supra* note 46.

September 2012, the energy year 2012 in-state SREC price was at \$115,⁵² dropping from \$190 in March 2012,⁵³ whereas the out-of-state SREC price is \$1,⁵⁴ decreasing from \$35 during the same period.⁵⁵

E. Delaware

In 2005, Delaware established a RPS requiring retail electricity suppliers to purchase 10% of the electricity sold in the state from renewable sources by 2019.⁵⁶ In 2007, the target percentage increased to 20%, and the legislature added a requirement that a portion of the requirement be met with solar photovoltaic (PV) resources.⁵⁷ The standard was expanded again to 25% renewables and 3.5% PV by 2026 in July 2010.⁵⁸ This expansion has significantly strengthened what had been considered a weak market for SRECs, because it requires power providers to purchase larger quantities of SRECs and has a more competitive SACP.⁵⁹ Under Delaware law, a SREC is equivalent to one MWh of retail electricity sales in the state that is derived from a qualifying PV resource. Electricity suppliers must purchase SRECs in order to meet their compliance obligations under the law, or pay a SACP for any shortfalls in SREC purchases. In the compliance year spanning June 2010 through May 2011, the SACP was initially set at \$400 per MWh. However, the SACP will increase to \$450 per MWh if the electricity supplier has opted for the SACP in any previous year, and then will increase to \$500 with any subsequent use of the SACP.⁶⁰ Moreover, the Delaware Public Service Commission

52. *SREC Market Prices*, *supra* note 24.

53. *Ohio SREC Market*, SRECTRADE, http://srectrade.com/ohio_srec.php (last visited July 10, 2012).

54. *SREC Market Prices*, *supra* note 24.

55. *Ohio SREC Market*, *supra* note 53.

56. *Delaware Solar Renewable Energy Credits*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=DE13F&re=1&ee=1 (last visited July 10, 2012).

57. *Id.*

58. *Id.*

59. *Delaware SREC Market*, SRECTRADE, http://www.srectrade.com/delaware_srec.php (last visited July 10, 2012).

60. *Delaware Solar Renewable Energy Credits*, *supra* note 56.

approved the SREC Procurement Pilot Program on November 8, 2011. This program will allow qualified solar energy system owners to sell their SRECs at a fixed price for the next twenty years.⁶¹ It is unclear whether Delaware's market will prove to be stable as the expanded standards only recently came into effect. Energy year 2011 SRECs prices in Delaware were at \$99.99 in August 2011,⁶² but have dropped to \$45 as of July 2012.⁶³ Energy year 2012 SRECs were trading at \$40 as of September 2012.

F. Pennsylvania

Pennsylvania's Alternative Energy Portfolio Standard (AEPS) was created in 2004, and requires each electric distribution company and electric generation supplier to retail electric customers in Pennsylvania to supply roughly 18% of its electricity using alternative energy by 2021.⁶⁴ The standard also contains a solar set-aside requiring obligated entities to procure a small percentage of their electricity sales from PV systems, with the percentage requirement ramping up slowly over time.⁶⁵ The obligation is set at 0.0120% for the compliance year running from June 2009 through May 2010, accelerating to an ultimate target of 0.5% in compliance years 2020-21.⁶⁶ Under Pennsylvania law, a solar alternative energy credit (SAEC) represents proof that one MWh of electricity was generated by a qualifying PV facility. In Pennsylvania, the SACP varies from year to year based largely on the market price of SAECs traded during the prior compliance year, thus it is calculated only after the end of a compliance year.⁶⁷ Legislation was recently introduced to rescue the state's

61. *Delaware PSC Approves SREC Procurement Pilot Program*, SRECTRADE (Nov. 11, 2011), <http://www.srectrade.com/blog/srec-markets/delaware-psc-approves-srec-procurement-pilot-program>.

62. *Delaware SREC Market*, *supra* note 59.

63. *SREC Market Prices*, *supra* note 24.

64. *Pennsylvania Solar Alternative Energy Credits*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=PA64F&re=1&ee=1 (last visited July 10, 2012).

65. *Id.*

66. *Id.*

67. *Id.*

crashing SREC market, where SREC prices for energy year 2011 dropped to \$16.25 in August 2012 from a height of \$301 in September 2010, and energy year 2012 SRECs were trading at \$17 as of August 2012, while year 2013 SRECs were trading slightly higher at \$20 as of September 2012.⁶⁸ The proposed legislation would increase the state's solar carve-out, moving the total requirement of SRECs forward by three years to increase the number of SRECs required for electricity producers to purchase⁶⁹ and would close Pennsylvania's borders to the purchase of SREC credits from other markets.⁷⁰ However, the fate of this legislation is still uncertain,⁷¹ and prices for Pennsylvania SRECs have remained low.⁷²

68. *SREC Market Prices*, *supra* note 24.

69. *Last Minute push to revive Pennsylvania HB 1580*, SRECTRADE (May 21, 2012, 8:30 PM), <http://www.srectrade.com/blog/srec-markets/last-minute-push-to-revive-pennsylvania-hb-1580>.

70. Chris Meehan, *As PA's Solar Subsidies Wane, Local Solar Industry is Losing Jobs*, CLEANENERGYAUTHORITY.COM (Oct. 28, 2011), <http://www.cleanenergyauthority.com/solar-energy-news/pennsylvania-losing-solar-jobs-and-incentive-funds-102811/>.

71. *Pennsylvania Solar Bill Goes to Committee*, SRECTRADE (Jan. 17, 2012), <http://www.srectrade.com/blog/page/2>. A report of the legislation stated that:

On Wednesday, 1/11/12, Pennsylvania House Bill (HB) 1580 sponsored by Rep. Chris Ross (R-Chester) was presented to the House Consumer Affairs Committee for debate. HB 1580 is a proposal to move forward the Pennsylvania SREC requirement to the current compliance requirement for 2015 without changing the overall number of SRECs required after 2015. This would alleviate the over-supply of SRECs and increase the value of Pennsylvania SRECs. While the hearing was a critical first step for HB 1580, followers of the Pennsylvania solar industry will have to wait on the Consumer Affairs Committee's vote before the fate of the bill is known. Should the bill make it out of committee it will also need to pass the House and Senate where both the House and Senate have voiced initial majority support for bill.

During the hearing solar industry representatives and solar consumers testified in support of the bill while utility groups and the Pennsylvania Chamber of Business spoke against it. The PA Environment Digest put together a detailed account of the testimonies. Generally those in support of the bill argue: 1) that the bill is essential for maintaining highly skilled solar jobs in Pennsylvania; 2) doesn't increase the overall requirement for SRECs; 3) merely accelerates the requirement; and 4) brings Pennsylvania's SREC market more in line with the design of other SREC markets

G. Maryland

Maryland's RPS, enacted in May 2004, requires electricity suppliers to use renewable energy sources to generate a minimum portion of their retail sales.⁷³ The renewables requirement increases gradually, ultimately reaching a level of 20% in 2022.⁷⁴ The law was amended in April 2007 to include a PV requirement of 2% by 2022, which is included within the 20% RPS.⁷⁵ The requirement ramps up progressively over time.⁷⁶ In May 2011, the law was amended to allow solar water heating systems to qualify for meeting the standard.⁷⁷ Under Maryland law, a SREC represents the generation attributes of one MWh of electricity generation from a qualifying solar facility.⁷⁸ Electricity suppliers must purchase and retire SRECs in order to meet their compliance obligations under the law, or pay a SACP for any shortfalls in SREC purchases.⁷⁹ In Maryland, the SACP is set at \$400 per MWh for 2009 through 2014, but will decline in future years, ultimately reaching \$50 per MWh in 2023 and thereafter.⁸⁰ Currently, utilities that can prove they are unable to meet their SREC obligation with in-state SRECs can satisfy the statutory

by closing the market to out-of-state sited systems (currently PA accepts SRECs from anywhere in the PJM region i.e. most states in the mid-Atlantic and some states in the Midwest). Utility companies that testified against the bill argue that it would place an undue burden on rate payers by forcing utilities to charge more for the electricity that they supply. According to the PA Environment Digest article, there was some disagreement over the actual cost of the bill to rate payers, but on the high side utilities estimate that it would be an increase of \$120 million over four years to four million Pennsylvania rate payers, which equates to an increase of about \$3.33 per year to each rate payer.

Id.

^{72.} *Id.*; *Last Minute push to revive Pennsylvania HB 1580*, *supra* note 69.

^{73.} *Maryland Solar Renewable Energy Certificates*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=MD55F&re=1&ee=1 (last visited July 10, 2012).

^{74.} *Id.*

^{75.} *Id.*

^{76.} *Id.*

^{77.} *Id.*

^{78.} *Id.*

^{79.} *Maryland Solar Renewable Energy Certificates*, *supra* note 73.

^{80.} *Id.*

requirement with SRECs from a solar renewable energy facility not connected with the electric distribution grid serving Maryland.⁸¹ However, in January 2012, the market in Maryland became an in-state market only.⁸² As of September 2012, the energy year 2012 SREC market price in Maryland is \$180, while year 2011 SRECs closed in August 2012 at that same price, dropping from the opening price of \$275 in March 2011.⁸³

H. District of Columbia

In January 2005, the District of Columbia (D.C.) Council enacted a renewable RPS with a solar carve-out that applies to all retail electricity sales in the District.⁸⁴ In October 2008, the D.C. Council increased the percentage and number of benchmarks that utilities must meet under the RPS, included solar water heating as an eligible technology, increased the alternative compliance payment, and amended reporting requirements.⁸⁵ Under D.C. law, a SREC is equivalent to one MWh of electricity derived from an eligible solar resource.⁸⁶ Electricity suppliers must purchase SRECs in order to meet their compliance obligations, or pay a SACP. The SACP is set at a flat rate of \$500 per MWh.⁸⁷ The value of a SREC varies based on market conditions.⁸⁸ The District of Columbia recently passed a law preventing out-of-state systems registered after January 31, 2011 from participating in the D.C. SREC Market.⁸⁹ Though it is a small market, with a fairly low requirement, D.C. energy year 2011 SRECs were trading well in November 2011 at \$150, and doubled to \$300 as of

81. *Maryland SREC Market and Out-of-State SRECs*, SRECTRADE (Mar. 14, 2011), <http://www.srectrade.com/blog/srec-markets/maryland/maryland-srec-market-out-of-state>.

82. *Id.*

83. *SREC Market Prices*, *supra* note 24; *see also DC SREC Market*, SRECTRADE, http://srectrade.com/dc_srec.php (last visited July 10, 2012).

84. *District of Columbia Solar Renewable Energy Certificates*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=DC13F&re=1&ee=1 (last visited July 10, 2012).

85. *Id.*

86. *Id.*

87. *Id.*

88. *Id.*

89. *District of Columbia Solar Renewable Energy Certificates*, *supra* note 84.

August 2012, while year 2012 SRECs are trading at \$290.90 Washington also ranks as a leader in installed solar capacity when calculated based on kilowatts per square mile.⁹¹

I. North Carolina

North Carolina's Renewable Energy and Energy Efficiency Portfolio Standard (REPS) was established in 2007, and requires all investor-owned utilities in the state to supply 12.5% of 2020 retail electricity sales from eligible energy resources by 2021.⁹² The overall target for renewable energy includes a 0.2% target for solar by 2018 (which includes solar electric, solar water heating, solar absorption cooling, solar dehumidification, solar thermally driven refrigeration, and solar industrial process heat).⁹³ North Carolina is still in the early stages of implementing their SREC program, so there is not yet much of a market.⁹⁴

III. ISSUES

A. Price Crashes

Recently, several states have had major issues with the prices for SRECs dramatically falling over a short period of time.⁹⁵ In its 2011-2012 energy year (June 1 through May 31), New Jersey reached its SREC goal within the first four months of the year.⁹⁶ This means there was a clear oversupply in the

90. *SREC Market Prices*, *supra* note 24.

91. Jessica Robbins, *D.C. Leading in Solar Density*, RENEWABLEENERGYWORLD.COM (Feb. 24, 2012), <http://www.renewableenergyworld.com/rea/blog/post/2012/02/d-c-leading-in-solar-density>.

92. *North Carolina Renewable Energy and Energy Efficiency Portfolio Standard*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NC09R&re=1&ee=1 (last visited July 10, 2012).

93. *Id.*

94. *North Carolina SREC Market*, SRECTRADE, http://www.srectrade.com/north_carolina_srec.php (last visited July 10, 2012).

95. FLETT EXCH., *supra* note 15; *see also* CHRIS BOLMAN ET AL., GOLD RUSH FOR U.S. SOLAR INCENTIVES COMING TO AN END (2011); Amanda H. Miller, *Report Predicts End of the Solar Gold Rush*, CLEANENERGYAUTHORITY.COM (Sept. 28, 2011), <http://www.cleanenergyauthority.com/solar-energy-news/report-predicts-end-of-the-solar-gold-rush-092811/>.

96. FLETT EXCH., *supra* note 15.

market and explains why SREC prices have been crashing in New Jersey. This would cause the market to start the next energy year with the target already met and thus result in no motivation for utility companies to purchase more SRECs.⁹⁷ A report titled, “The End of the Gold Rush,” created by Boston-based solar research company Photon Consulting stated that “exponential growth in solar power installation will soon surpass the volume of SRECs that utilities in key states are required to purchase, causing the solar market to crash. . . .”⁹⁸

Pennsylvania has faced similar oversupply issues resulting in the price of SRECs crashing. Various factors have led to an oversupply of SRECs in Pennsylvania. One of these is the ability of out-of-state SRECs to be used for Pennsylvania compliance.⁹⁹ The Pennsylvania SREC market allows other Pennsylvania, Jersey, Maryland Power Pool (PJM) Interconnection states¹⁰⁰ to register and sell their SRECs in Pennsylvania.¹⁰¹ PJM is the Eastern Regional Transmission Interconnection. This renewable energy region consists of all or part of thirteen US states and Washington D.C. (Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia comprise the PJM region).

Some PJM regional states do not have a RPS or a viable SREC market, but can still register and sell their SRECs into Pennsylvania. Allowing out-of-state solar installations to sell their SRECs into the Pennsylvania SREC market is disenfranchising Pennsylvania solar installations. Instead of rewarding in-state solar generators; Pennsylvania legislation is

97. *Solar Capacity in the SREC States – February 2011*, SRECTRADE (Mar. 2, 2011, 2:50 AM), <http://www.sretrade.com/blog/srec-markets/solar-capacity-in-the-srec-states-%E2%80%93-february-2011>.

98. Forand, *supra* note 23.

99. Ronald Black, *Has the Pennsylvania SREC Market Found Support?*, FLETT EXCH. (June 16, 2011), <http://markets.flettexchange.com/2011/06/16/has-the-pennsylvania-srec-market-found-support/>.

100. PJM is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of thirteen states and the District of Columbia. *See About PJM*, PJM, <http://www.pjm.com/about-pjm.aspx> (last visited Sept. 13, 2012).

101. Black, *supra* note 99.

diluting their investment by allowing out-of-state installations to flood the PA market with SRECs.¹⁰²

Other PJM states like New Jersey have a closed SREC market,¹⁰³ and as mentioned above the District of Columbia and Maryland have also recently closed their markets which were formerly open to other states. The data supports the conclusion that New York should not allow out-of-state SRECs to be traded on the New York SREC market.

A major issue is the lack of effective mechanisms that allow the market to quickly adjust to volatility. Even in New Jersey, where legislation states that if SRECs decline three consecutive energy years in a row, solar requirements will automatically increase by 20% each year,¹⁰⁴ there has been an inability to cope with crashing SREC prices. This law theoretically acts as a “circuit breaker” to keep the market from collapsing and ensures that the market remains viable; however, it seems that the 20% increase is not sufficient to counter the glut of SRECs due to oversupply that currently exists in New Jersey.¹⁰⁵ Another suggested mechanism would be to control the amount of SRECs that are being registered and sold into a market by instituting a megawatt cap on solar installations, which may inhibit large solar farms from dominating a developing market. In essence, these mechanisms protect the quota from being satisfied too quickly and flooding the state with SRECs.¹⁰⁶ However, it is unclear whether any of these mechanisms would be sufficient to counter the oversupply that both Pennsylvania and New Jersey have experienced.

B. Alternative Compliance Payments

Some states, such as Pennsylvania, have experienced issues resulting from setting their SACP too low, thereby making it

102. *Id.*

103. *Id.*

104. *Id.*

105. *Id.*

106. *Id.*

more profitable for companies to pay the penalty SACP instead of purchasing SRECs.¹⁰⁷

In Pennsylvania, the SACP is not set in advance but rather is set six months after the close of a compliance year based on a formula using data generated during the year. This leads to uncertainty in the market as buyers and sellers are forced to estimate the value of the SACP.¹⁰⁸

In contrast, the market in neighboring New Jersey is based on a fixed SACP price for the year.¹⁰⁹ “This lends certainty to the market by allowing buyers to gauge their exposure and make meaningful decisions regarding the purchase of SRECs in the market.”¹¹⁰ Another good example is Massachusetts, where SREC prices have climbed to 97% of the value of the SACP, which was set at \$550 for 2011.¹¹¹ Based on the Massachusetts Department of Energy Resources’ proposed ten-year forward schedule, over the course of the 2012 and 2013 compliance periods the rate will stay at \$550 and then decline by 5% every year moving forward.¹¹²

C. Commerce Clause

Although there has only been one case claiming that a SREC program violated the Commerce Clause, and a lawsuit brought by TransCanada Power against Massachusetts settled out of court,¹¹³ the use of exclusions of out-of-state electricity providers should be considered in constructing legislation as further

107. Neil A. Cooper & Daniel J. Bauer, *Re-Energizing Pennsylvania’s Solar Energy Industry*, LEGAL INTELLIGENCER (July 26, 2011), <http://www.law.com/jsp/pa/PubArticleFriendlyPA.jsp?id=1202503359952&slreturn=1>.

108. *Id.*

109. *Id.*

110. *Id.*

111. Campbell, *supra* note 32.

112. MA DOER Releases Solar Carve-Out ACP Guideline, *supra* note 37.

113. Erin Ailworth, *Deal Reached in State Energy Suit*, BOSTON GLOBE, May 29, 2010, http://www.boston.com/business/technology/articles/2010/05/29/deal_reached_in_state_energy_suit/.

litigation could be on the horizon.¹¹⁴ TransCanada's lawsuit against the Massachusetts SREC program asserted that the program was unconstitutional on the grounds that it violated interstate commerce laws.¹¹⁵

It argued that the exclusion of out-of-state solar facilities from SREC eligibility discriminated against out-of-state electricity providers. In the deal reached with the Department of Energy, electricity supply contracts signed prior to the January 1, 2010 start of the SREC program will be grandfathered in and protected from the requirements. In return, TransCanada has agreed to drop claims against the state's solar program.¹¹⁶

There is potential for further lawsuits, but most states do not have language in their RPS requirements for the use of in-state resources that is as strong as the language used in Massachusetts.

New York should take this issue into consideration when crafting SREC legislation in order to avoid legal challenges. Certainly the New York legislature will be concerned with boosting the state's solar portfolio.¹¹⁷ However, it inevitably will also be concerned with creating jobs within New York and boosting the local economy, especially considering the strong union support for the creation of a SREC market.¹¹⁸ This type of pressure could tempt the legislature to craft a SREC market that encourages in-state generation and/or prohibits out-of-state generators from participating in the market. This is an

114. Kirsten H. Engel, *The Dormant Commerce Clause Threat to Market-Based Environmental Regulation: The Case of Electricity Deregulation*, 26 *ECOLOGY L.Q.* 243, 245-46 (1999).

115. *Deal Reached in TransCanada Lawsuit Against Mass SREC Program*, SRECTRADE (June 1, 2010, 11:49 AM), <http://www.srectrade.com/blog/srec-markets/massachusetts/deal-reached-in-transcanada-lawsuit-against-mass-srec-program>.

116. *Id.*; see also *Commerce Clause Challenge to Renewable Portfolio Standard*, RENEWABLE ENERGY LAW BLOG (Apr. 30, 2010, 11:49 AM), <http://renewableenergylaw.blogspot.com/2010/04/commerce-clause-challenge-to-renewable.html>.

117. See MEISTER CONSULTING GRP., *supra* note 2.

118. Larry Rulison, *Unions Endorse Solar Proposal*, TIMES UNION, Nov. 29, 2011, <http://www.timesunion.com/business/article/Unions-endorse-solar-proposal-2308754.php>.

important decision, because if it decides to create a solar carve-out “with additional incentive multipliers for in-state generation, the potential for future litigation based upon the Commerce Clause is on the table.”¹¹⁹ However, it is important to stress that one of the main complaints expressed by TransCanada in their lawsuit against Massachusetts was the fact that they had a pre-existing contract for SREC generation, and the case was resolved in a settlement.¹²⁰ Further, because this was the only lawsuit filed on Commerce Clause grounds in relation to a SREC market’s structure, New York can likely follow other states in creating restrictions for out-of-state generators as long as they do from the outset of the program, thereby avoiding the pre-existing contract issue encountered by Massachusetts.

D. Floor Prices

There is a question as to whether setting a floor price for SRECs is an effective policy. Massachusetts’ recent legislation attempted to set a floor price of \$285, through a Clearinghouse Auction which is a fixed-price auction in the last quarter of each year guaranteeing the seller a \$300 price less a 5% fee if it is unable to sell the SRECs through the market.¹²¹ The concept of setting a floor price is to give project financiers a minimum value they can expect per SREC, but it is not yet clear whether a floor price in the Massachusetts program will prevent the type of market crashes seen recently in other states.¹²² Although the price floor should be effective in maintaining a minimum price, it may ultimately be irrelevant because the market viability seems to be more directly influenced by questions of supply and demand. The fact that SRECs are currently trading at \$225, which is lower than the floor supposedly created by the Clearinghouse Auction, illustrates that “it is possible that not all credits will be sold in the auction . . . [and] that during a year of expected over supply,

119. Stephen Lacey, *Is Requiring In-State Generation Constitutional?*, RENEWABLEENERGYWORLD.COM (June 21, 2011), <http://www.renewableenergyworld.com/rea/blog/post/2010/06/is-in-state-generation-unconstitutional>.

120. *Id.*

121. *Massachusetts SREC Market*, SRECTRADE, http://www.srectrade.com/massachusetts_srec.php (last visited July 10, 2012).

122. *Id.*

generation unit owners would be willing to take a lesser amount to get their credits sold during the current year instead of waiting for the auction the following July.”¹²³ It is also not clear that every state can set a floor price based on the way the market is set up in that state. Massachusetts is currently the only SREC market with an established floor price.¹²⁴ This may be due to the fact that there are differences in the way the Massachusetts and other SREC markets are structured. For example, the structure of the market in New Jersey makes it impossible for New Jersey to copy the Massachusetts model.¹²⁵ Further, there will be a glut of SRECs on the market in the case of oversupply regardless of whether there is a price floor set or not. The same will be true even in states that allow SRECs to be used to fulfill the remainder of their RPS requirement. It simply will not make financial sense for utilities to use their SRECs as RECs so long as prices of RECs remain extremely low. As an example, RECs in New Jersey in December 2011 sold at under \$2.00,¹²⁶ and even with a crashing SREC market, the price of SRECs closed for that month at \$225.¹²⁷

IV. RECOMMENDATIONS

A. Responsive Mechanisms

As exemplified by New Jersey and Pennsylvania’s current SREC market price crashes,¹²⁸ it is important to have a

123. Alane Lakritz, *MA SREC Update*, KNOLLWOOD ENERGY (July 16, 2012), http://www.knollwoodenergy.com/blog/post/ma_srec_update.

124. *New Jersey Looks to Address SREC Volatility, But Does it Know Where to Look?*, SRECTRADE (Sept. 14, 2011), <http://www.srectrade.com/blog/srec-markets/new-jersey/new-jersey-looks-to-address-srec-volatility>.

125. The RPS law in New Jersey focuses on predictability and the yearly SREC requirement through 2026 is predetermined and cannot be altered. “Since NJ does not have a maximum capacity target of systems eligible for the SREC program (like MA does), the cost to the state could skyrocket with the imposition of a long-term price floor.” *Id.*

126. *New Jersey Class I RECs*, FLETT EXCH., <http://markets.flettexchange.com/new-jersey-class-i-rec/> (last visited July 10, 2012).

127. *New Jersey SREC Market*, SRECTRADE, http://www.srectrade.com/new_jersey_srec.php (last visited July 10, 2012).

128. *SREC Market Prices*, *supra* note 24.

mechanism in place to quickly deal with issues that arise in the SREC market, specifically in relation to prices.¹²⁹ Even though New Jersey is currently attempting to revise its Energy Master Plan in an effort to address the struggling SREC market,¹³⁰ the process takes time to go through public comment and a vote by the legislature. Even if this adjustment to the New Jersey SREC market eventually passes through the legislature, which is not guaranteed, or other legislative efforts are successful that have been introduced independently of the revised Energy Master Plan,¹³¹ it is clear that without an adjustment mechanism built into the system from the beginning, a crashing SREC market may flounder while politicians work to pass legislation in an attempt to solve the crisis. It is worth noting, however, that the concept of building in a mechanism similar to the recent proposal in the New Jersey Assembly should be considered as New York crafts its own SREC market. This proposal would have the solar carve-out automatically increase 20% if the production requirement is met or exceeded in three consecutive years and SREC prices drop during that same period.¹³² As discussed above, it remains unclear whether any mechanism, short of automatic increases to the solar carve-out of an RPS as requirements are met, can prevent SREC market volatility.

B. Solar Alternative Compliance Payments (SACP)

It is also important that New York sets a high SACP, which as discussed above, is essentially a ceiling on the price of SRECs. It should also create the SACP so that those who are attempting to use the SACP as a way of evading the SREC market pay a penalty. A good example of this practice is Delaware's system of increasing the SACP from \$400 to \$450 the first year a company chooses to pay the fine instead of participating in the market, and increasing to \$500 if the SACP has been used by an entity in the

129. See Tom Johnson, *State Schedules Solar Summit to Discuss Stabilizing Prices*, NJ SPOTLIGHT (Sept. 12, 2011), <http://www.njspotlight.com/stories/11/0911/1925/>.

130. See *supra* Part II.B.

131. See *supra* Part II.B.

132. Assemb. B. No. 4226, 214th Sess. (N.J. 2011).

previous two years.¹³³ This concept acts as a strong deterrent for those entities that make a conscious decision not to participate in the SREC market.

There is also a strong trend towards creating a declining SACP schedule for those entities taking part in the market. Proponents of the declining schedule claim it acts as an incentive for solar installers and developers to lower their installation costs, because a lower SACP means solar developers must develop and install projects at lower costs to ensure profitability, and it limits ratepayers' exposure to rate increases by containing the costs required by companies to meet the RPS requirements. Further, a SACP schedule provides utilities with predictability, as opposed to markets where the SACP changes when the state feels it necessary to make an adjustment.¹³⁴ These declining SACP schedules likely lead to declining SREC prices, an event which is not necessarily a bad occurrence, so long as the solar carve-out requirement is raised to prevent an oversupply of SRECs from flooding the market.

Those who support a declining schedule point to Massachusetts, which created its market with a SACP that only the Department of Environmental Resources has the power to reduce on a yearly basis by up to 10% the trading value, but has recently proposed creating a ten year SACP schedule that would start with a SACP of \$550 in 2012 and lead to a SACP of \$365 in 2021.¹³⁵ This adjustment has yet to be made in Massachusetts, and so there is no data to support or contradict these proponents and there is certainly no consensus among the different states as to whether a declining SACP schedule is necessary to maintain a strong market.¹³⁶ There does seem to be agreement that there must be a strong SACP system in place in order for a SREC market to thrive. As an example, Pennsylvania maintains a SACP that is 200% of the average price of SRECs purchased in a

133. *Delaware Solar Renewable Energy Credits*, *supra* note 56.

134. *Alternative Compliance Penalties and SREC Markets in MD, OH and PA*, SOL SYSTEMS (Oct. 6, 2010), <http://www.solsystemscompany.com/blog/2010/10/06/alternative-compliance-penalties-and-srec-markets-in-md-oh-and-pa/>.

135. *MA DOER Releases Solar Carve-Out ACP Guideline*, *supra* note 37.

136. *Id.*

year.¹³⁷ However, when the SREC market dropped 73% between 2010 and 2011 based on an oversupply of credits available in the market,¹³⁸ the SACP price became insignificant because 200% of \$17 (the current trading price of SRECs in Pennsylvania),¹³⁹ is not really a penalty at all in the eyes of large utilities. Therefore, it is important that New York implement a strong SACP with increasing penalties for those entities that consciously avoid entering the market, while at the same time taking into consideration the potential benefits of creating a SACP schedule to prevent large costs from being passed on to consumers in the form of rate increases.

C. Incorporate the SREC market into New York's Energy Master Plan¹⁴⁰

New Jersey incorporated the SREC program into its Energy Master Plan, which ensures that the program cannot simply be scrapped by a change of administrations, but would have to go through a public comment process and vote by the legislature.¹⁴¹ This gives the market more stability.¹⁴² The Energy Master Plan involves a commenting process so that citizens, government officials, organizations, and industry representatives have an opportunity to provide the regulatory agencies with necessary information to make sound policy whenever the plan is revised. In New Jersey, there is currently a Draft Energy Master Plan that will replace the 2008 Energy Master Plan, which has received extensive comments from those involved with the SREC

137. Black, *supra* note 99.

138. *Id.*

139. *SREC Market Prices*, *supra* note 24.

140. See NYS Energy Planning Bd., *Framework for Implementing the Work of the NYS Energy Planning Board* (NYS Energy Planning Bd., Working Paper, May 30, 2008), available at <http://www.nysenergyplan.com/presentations/NYS%20Energy%20Plan%20Framework%20Document2.pdf>.

141. N.J. STAT. ANN. § 52:27F-14 (West 2011).

142. STATE OF N.J., NEW JERSEY ENERGY MASTER PLAN 69 (2008), available at http://www.nj.gov/emp/docs/pdf/081022_emp.pdf.

market.¹⁴³ New York should follow New Jersey's lead and incorporate any SREC program into its Energy Master Plan.

D. Aggressive Solar Carve-Out

There seems to be a correlation between the strength of a state's SREC market and the inclusion of more aggressive solar carve-outs from their RPS percentage. As discussed in Part II, New Jersey started its program with a 2.12% carve-out and is generally recognized as having had the strongest SREC market through early 2011. However, now that SREC prices are crashing in New Jersey, the program may be in jeopardy if the carve-out is not raised. This is important because the proposed legislation in New York only calls for a 1.5% carve-out,¹⁴⁴ which will likely lead to problems unless there is a mechanism to respond to oversupply and crashing SREC prices. As stated by Daniel Hurson, an Assistant Attorney General at the Maryland Energy Administration, in the Maryland Bar Journal, "[s]olar energy producers will gravitate towards the states with the highest solar RPS requirement."¹⁴⁵ Therefore, it is vital that New York create an aggressive solar carve-out that cannot be easily exceeded prior to the end of a trading year. Additionally, New York must create a response mechanism to adjust the carve-out in the event that an oversupply occurs and the SREC price begins to crash.

There is also a strong argument for New York to use an energy-based carve-out such as the ones implemented in Massachusetts,¹⁴⁶ where SREC prices are highest, and in New Jersey, which switched to an energy-based goal in an effort to

143. See, e.g., Kate Bolcar, *Comments of the Solar Alliance on the New Jersey 2011 Draft Energy Master Plan* (Aug. 25, 2011), http://s3.amazonaws.com/zanran_storage/www.solaralliance.org/ContentPages/2524710478.pdf.

144. See *NY SREC Program Put on Hold*, *supra* note 7.

145. Daniel W. Hurson, *Renewable Energy Mandate: Requiring Use of Clean Power in Electricity Supply*, MD. B.J., Jan./Feb. 2011, at 38, 41.

146. *Massachusetts Solar Renewable Energy Credits*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=MA98F&re=1&ee=1 (last visited July 10, 2012); *SREC Market Prices*, *supra* note 24.

stabilize their crashing market.¹⁴⁷ New York should also pay close attention to the market in Maryland to see the impact that allowing solar water heating systems to qualify for meeting the solar carve-out will have on the SREC market.¹⁴⁸ If New York includes solar water heating as part of the carve-out, it would be even more important to create a higher solar-carve, or the solar requirement may be met quickly leading to a potential market crash.

E. Create an In-State Market

It is clear from observing the markets in every state that allowing out-of-state participation in a SREC market is flawed policy. This is evident from looking at prices in Ohio where the market is divided between in-state and out-of-state sited systems, essentially creating two distinct markets which trade at different prices. As of December 2011, the in-state SREC prices were near \$190, whereas out-of-state SREC prices were at \$35.¹⁴⁹ Further, states which initially started their SREC program by allowing out-of-state SRECs to trade on the market have since reversed course. These states include Maryland which closed its market in 2012,¹⁵⁰ and the District of Columbia which did so on January 31, 2011.¹⁵¹ These actions by states who have experimented with a bifurcated SREC market, illustrate that allowing out-of-state SRECs to be used in a New York SREC market would be bad policy. As mentioned above, Pennsylvania is also attempting to close its border through legislation that is pending in an effort to stave off a crashing market.¹⁵² This further illustrates the

147. *New Jersey Solar Renewable Energy Certificates*, DSIRE, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NJ07F&re=1&ee=1 (last visited July 10, 2012); Tom Johnson, *Senate Ratifies Bill to Save Solar Sector*, NJ SPOTLIGHT, June, 1, 2012, <http://www.njspotlight.com/stories/12/0531/2009/>.

148. *Maryland Solar Renewable Energy Certificates*, *supra* note 73.

149. *Ohio SREC Market*, *supra* note 53.

150. *Maryland SREC Market and Out-of-State SREC*, SRECTRADE (Mar. 14, 2011), <http://www.srectrade.com/blog/srec-markets/maryland/maryland-srec-market-out-of-state>.

151. *DC SREC Market*, *supra* note 83.

152. Meehan, *supra* note 70.

importance of creating an exclusively in-state market from a SREC program's inception.

F. Long-Term Contracts

It would also be useful for New York to incentivize, or potentially mandate, the use of long-term SREC contracts, ideally for spans of ten to fifteen years, in order to allow investors to mitigate their risk and lock-in profits, granting them greater confidence that they are guaranteed certain returns. The issue of long-term contracts has been a tough sell to utilities who have opposed legislation containing mandated long-term contracts, pointing to market crashes in their effort to illustrate that it would be unfair to set future prices when there is such volatility in the market, and claim that long-term contracts shift all of the risk of solar developers onto electric suppliers who then pass that cost onto ratepayers.¹⁵³ However, a truly aggressive carve with a high SACP should result in stable SREC prices, thereby negating the utilities' argument. Currently, long-term contracts are available through private companies, but are not *required* by any of the states with SREC markets in place.¹⁵⁴

V. CONCLUSION

Although there is uncertainty as to whether the New York legislature will create a solar carve-out in the form of a SREC program from the current RPS, there should be bipartisan support for the measure, such that there is a high probability that some form of a SREC market will come into effect sometime in the future. New York is at an advantage in that it can look at both the successes and difficulties experienced by other states that have embarked on similar efforts. New York should implement a SREC market that begins with an aggressive carve-out closed to out-of-state SRECs, that sets a steep SACP for those

153. Michael Flett, *New Jersey Senator Bob Smith S2371 Bill May Prevent NJ SREC Oversupply*, FLETT EXCH. (July 7, 2012), <http://markets.flettexchange.com/2011/07/07/new-jersey-senator-bob-smith-s2371-bill-may-prevent-nj-srec-oversupply/>.

154. *Long-Term SREC Contracts*, FLETT EXCH., <http://www.flettexchange.com/index.php?page=longterm> (last visited July 10, 2012).

entities who decide not to participate in the program, and establishes a floor price for SRECs, while creating a mechanism that will either address the threat of a market crash in the event of oversupply, or attempt to prevent that oversupply from occurring. There is certainly no guaranteed system for success, and there will likely be a need for the legislature to make adjustments to the program in the future, as other states who have established SREC markets over the past decade are experiencing now. However, New York has the advantage of looking at the successes and failures of other SREC markets and having a better opportunity to anticipate the challenges that may arise in the future.