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## ARTICLE

# Using Building Codes to Rewrite the Tailoring Rule and Mitigate Climate Change

ALBERT MONROE\*

### I. INTRODUCTION

In 2007, in *Massachusetts v. Environmental Protection Agency (Mass. v. EPA)*,<sup>1</sup> the Supreme Court ruled that the Environmental Protection Agency (EPA) had authority under the Clean Air Act (CAA) to regulate emissions of greenhouse gases (GHGs), which include carbon dioxide, methane, nitrous oxide, and fluorinated gases.<sup>2</sup> GHGs trap excess heat in the atmosphere and cause climate change.<sup>3</sup> On December 7, 2009, the EPA Administrator found that GHGs “may reasonably be anticipated to endanger public health or welfare” due to their contribution to climate change, triggering EPA regulation of GHG emissions from cars and trucks (mobile sources) under the CAA.<sup>4</sup>

The EPA’s endangerment finding also requires the EPA to regulate GHGs from stationary sources under the CAA.<sup>5</sup> Stationary sources are defined in the CAA as “any building,

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1. 549 U.S. 497, 498 (2007).

2. *Greenhouse Gas Emissions: Greenhouse Gases Overview*, EPA, <http://epa.gov/climatechange/ghgemissions/gases.html> (last updated Aug. 31, 2012).

3. *Id.*

4. Endangerment Findings for GHGs, 74 Fed. Reg. 66,496, 66,505 (Dec. 15, 2009).

5. See discussion *infra* Part II.

structure, facility, or installation which emits or may emit any air pollutant.”<sup>6</sup> The CAA states that any new or existing stationary source that emits more than either 100 or 250 tons per year (tpy) of regulated pollutants requires a permit.<sup>7</sup> Millions of stationary sources, mostly buildings, emit more than 100 tpy of carbon dioxide.<sup>8</sup>

According to the EPA, the plain language of the CAA would cause six million stationary sources (mostly commercial and residential buildings) to need operating permits.<sup>9</sup> Currently, only about 15,000 sources already have operating permits for other types of air pollution under the CAA.<sup>10</sup> In the EPA’s estimation, requiring permits from six million stationary sources would cost permitting authorities (federal and state governments) \$22.5 billion annually, instead of the \$105 million cost of requiring permits from only the largest polluters, similar to current practice.<sup>11</sup> Most single family houses would be exempt from CAA regulation of GHG emissions; a typical household only emits about 13.5 tpy of carbon dioxide, measured in carbon dioxide equivalent (CO<sub>2</sub>e).<sup>12</sup> However, larger buildings for commercial, industrial, and residential use would be regulated and therefore require permits.

The Obama Administration promulgated the Tailoring Rule in June 2010 to greatly reduce the cost to permitting agencies and

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6. 42 U.S.C. § 7411(a)(3) (2006).

7. See 42 U.S.C. § 7479(1) (2006) (Prevention of Significant Deterioration); see also 42 U.S.C. § 7661 (2006) (Title V).

8. EPA, *Final Rule: Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule: Fact Sheet*, 1 (May 13, 2010), <http://www.epa.gov/nsr/documents/20100413fs.pdf>.

9. EPA, *Operating Permits Burden Reductions With and Without the Tailoring Rule* (May 13, 2010), <http://www.epa.gov/NSR/documents/20100413piecharts.pdf> [hereinafter *Operating Permits Burden*].

10. *Id.*

11. *Id.*

12. *Household Emissions Calculator Assumptions and References*, EPA, <http://www.epa.gov/climatechange/ghgemissions/ind-assumptions.html> (last visited Oct. 29, 2012). Methane, nitrous oxide, and fluoridated gases are more powerful greenhouse gases than carbon dioxide. Greenhouse gas emissions are measured in terms of total climate change potential, otherwise known as units of carbon dioxide (hence carbon dioxide equivalent).

the number of permits required.<sup>13</sup> The Tailoring Rule limits regulation of GHG emissions from stationary sources to sources that emit at least 100,000 tpy CO<sub>2e</sub>, or emit at least 100,000 tpy CO<sub>2e</sub> and undertake a modification that increases GHG emissions by at least 75,000 tpy CO<sub>2e</sub>.<sup>14</sup>

Industry groups and states opposed to the Tailoring Rule filed suit against the EPA to get the Tailoring Rule vacated. These cases were consolidated in the D.C. Circuit under *Coalition for Responsible Regulation, Inc. v. EPA*.<sup>15</sup> The D.C. Circuit did not evaluate the lawfulness of the Tailoring Rule on the merits; instead, the court stated that none of the petitioners had standing because the Tailoring Rule would help them, not harm them, by reducing the cost of complying with the CAA.<sup>16</sup> Therefore, the petitioners suffered no injury-in-fact and did not have standing to challenge the Tailoring Rule.<sup>17</sup>

The combination of *Mass. v. EPA* and the CAA gives the EPA three plausible paths to regulate GHG emissions from buildings. The EPA can:

- (1) follow the plain language of the CAA and require millions of buildings (and other sources of GHG emissions) to get individualized permits—costing permitting agencies \$22.5 billion;<sup>18</sup>
- (2) regulate fewer buildings on an individualized basis—the Tailoring Rule does this and only costs permitting agencies \$105 million, instead of \$22.5 billion.<sup>19</sup> However, the Tailoring Rule leaves millions of buildings unregulated that the CAA and *Mass. v. EPA* imply should be regulated. The EPA instead could:
- (3) regulate millions of buildings on a general (not individualized) basis, issuing regulations for certain types of buildings, rather than for each individual building.

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13. Tailoring Rule, 75 Fed. Reg. 31,514, 31,516 (June 3, 2010).

14. *Id.*; see also discussion *infra* Part III.a.

15. 684 F.3d 102 (D.C. Cir. 2012).

16. *Id.* at 146.

17. *Id.*

18. *Operating Permits Burden*, *supra* note 9.

19. *Id.*

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In this paper, I propose that the EPA regulate buildings emitting more than 100 or 250 tpy CO<sub>2</sub>e by forcing states to enact more energy-efficient building codes for those buildings.

Furthermore, in this paper I show that my proposal is legally sound while the Tailoring Rule is legally suspect. In general, federal courts force administrative agencies to regulate all entities that congressional statutes state they must regulate. This suggests that the EPA cannot refuse to regulate buildings that emit more than 100 or 250, and less than 100,000, tpy CO<sub>2</sub>e as the EPA does in its Tailoring Rule. Instead, the EPA should forego the case-by-case regulatory approach normally mandated in the CAA for a more manageable approach that regulates all mandated buildings, but does so through more energy-efficient building codes.

Using building codes to regulate buildings is also good policy. The savings from better building design; heating, ventilation, and cooling systems (HVAC); and insulation usually pay for themselves in energy savings. Market failures, especially for buildings that are not owner-occupied, cause buildings to expend more energy than they would in an efficient market.

Part II describes regulation of GHG emissions under the CAA. Part III discusses why the Tailoring Rule is legally suspect. Part IV describes the legal implications of using building codes to regulate GHG emissions under the CAA. Part V shows why using building codes to regulate GHG emissions is good policy. Part VI concludes.

## II. THE CLEAN AIR ACT

*Mass. v. EPA* and the language of the CAA forced the EPA to regulate GHG emissions. Under the CAA, an “air pollutant” is defined as “any air pollution agent . . . which is emitted into . . . the ambient air.”<sup>20</sup> In *Mass. v. EPA*, the Supreme Court declared that GHGs, including carbon dioxide, were air pollutants under the CAA.<sup>21</sup> Under the CAA, the EPA is required to regulate emissions of any “air pollutant” which in the “judgment” of the

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20. 42 U.S.C. § 7602(g) (2006).

21. 549 U.S. 497, 532 (2007).

EPA Administrator “cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”<sup>22</sup> After *Mass. v. EPA* and years of studies detailing the potential harms of climate change, it was clear that the EPA would have to find that GHG emissions “endanger[] public health or welfare.”<sup>23</sup> In 2009, the EPA made its endangerment finding and GHG emissions came under CAA regulation.<sup>24</sup>

The EPA’s endangerment finding triggered several types of CAA regulation:

- New Source Performance Standards (NSPS);
- Performance standards for existing sources;
- Prevention of Significant Deterioration (PSD); and
- Title V permitting requirements.

I describe each of these in turn.

NSPS for stationary sources are mandated in section 111 of the CAA.<sup>25</sup> NSPS are EPA-imposed emission control requirements. Under this section, the EPA imposes emission control requirements for categories of emitters that “cause[], or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.”<sup>26</sup> NSPS are the best demonstrated technology for reducing emission from that category of sources, taking into account the costs of imposing such

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22. See 42 U.S.C. § 7521(a)(1) (2006) (mobile sources); 42 U.S.C. § 7411(b)(1)(A) (2006) (stationary sources, including buildings).

23. See INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC), IPCC FOURTH ASSESSMENT REPORT: CLIMATE CHANGE 2007 (2007) (detailing how GHG emissions endanger public health and welfare); see also Letter from Lisa P. Jackson, Adm’r, EPA, to Jay Rockefeller, U.S. Senator (Feb. 22, 2010) (“As a result of the Court’s decision, EPA became obligated to treat greenhouse-gas emissions as air pollution under the Clean Air Act and to engage with the best available science in determining whether those emission endanger Americans’ health or welfare.”).

24. Endangerment Findings for GHGs, 74 Fed. Reg. 66,496 (Dec. 15, 2009) (final rule).

25. 42 U.S.C. § 7411 (2006). Note that these provisions apply to GHGs because there is no National Ambient Air Quality Standard (NAAQS) for GHGs. If the EPA were to classify GHGs as criteria pollutants, then 42 U.S.C. §§ 7409, 7410 (2006) would apply instead.

26. 42 U.S.C. § 7411(b)(1)(A).

controls.<sup>27</sup> These controls must be adopted by new and modified sources in the relevant categories.<sup>28</sup>

Recently, the EPA promulgated proposed GHG emissions standards for new power plants.<sup>29</sup> The power plant NSPS for GHGs is such that natural gas power plants can meet the standard, but new coal plants cannot without carbon capture and storage.<sup>30</sup>

Section 111 also requires the EPA to issue guidelines to states for the creation of standards for existing sources for which NSPS have been promulgated.<sup>31</sup> States then must develop the equivalent of State Implementation Plans (SIPs) which establish and impose emission standards for existing sources similar to those the EPA sets for new and modified sources.<sup>32</sup> In applying these standards to any given source, the state may “take into consideration, among other factors, the remaining useful life of the existing source to which such standard applies.”<sup>33</sup> If a state fails to adopt an NSPS plan that meets EPA approval, the EPA must impose its own NSPS plan.<sup>34</sup>

Major sources of air pollution are governed by the PSD provisions of the CAA.<sup>35</sup> PSD defines major sources as those that emit or have the potential to emit 250 tpy of a regulated pollutant (100 tpy of several specified types, none of which are likely to apply to buildings).<sup>36</sup> Under PSD, new or modified major sources must adopt specified emissions controls—“best available control technology” (BACT). BACT is defined as:

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27. 42 U.S.C. § 7411(a)(1) (defining standards of performance).

28. 42 U.S.C. § 7411(b)(1).

29. Standards of Performance for GHGs for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. 22,392 (Apr. 13, 2012).

30. EPA, *EPA Fact Sheet: Proposed Carbon Pollution Standard for New Power Plants*, 2 (Mar. 27, 2012), <http://epa.gov/carbonpollutionstandard/pdfs/20120327factsheet.pdf>; see also George Peridas, *EPA’s New Power Plant Rule – How Does It Affect Coal-Fired Power Generation*, SWITCHBOARD (Mar. 27, 2012), [http://switchboard.nrdc.org/blogs/gperidas/epas\\_new\\_power\\_plant\\_rule\\_-\\_ho.html](http://switchboard.nrdc.org/blogs/gperidas/epas_new_power_plant_rule_-_ho.html).

31. 42 U.S.C. § 7411(d).

32. *Id.*

33. 42 U.S.C. § 7411(d)(1)(B).

34. 42 U.S.C. § 7411(d).

35. 42 U.S.C. §§ 7470-7479 (2006).

36. 42 U.S.C. § 7479(1) (2006).

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[A]n emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques . . . .<sup>37</sup>

Sources subject to PSD must file permits to demonstrate regulatory compliance.<sup>38</sup> These permits must be approved on a case-by-case basis, making sure that the particular source complies with permit requirements.<sup>39</sup>

All sources that emit or have the potential to emit 100 tpy of a regulated pollutant are required to obtain Title V permits under the CAA.<sup>40</sup> These permits require fees to the permitting authority and are limited to five years.<sup>41</sup> Title V permits have a long list of requirements, including enforceable emissions limitations, a schedule of compliance, and self-monitoring.<sup>42</sup>

Very few facilities currently have to submit PSD and Title V permit applications. Today, about 280 sources require PSD permits each year for either new construction or modifications.<sup>43</sup> Under the plain language of the CAA, the EPA estimates that almost 41,000 new and modified sources would require PSD permits, and millions of existing sources would require Title V permits.<sup>44</sup>

GHGs, especially carbon dioxide, are emitted at much higher volumes than other air pollutants because other pollutants come from impurities in the fossil fuel burned, or incomplete

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37. 42 U.S.C. § 7479(3).

38. 42 U.S.C. § 7475 (2006). The permitting authorities are usually state – or local – level authorities, although the EPA can retain or recapture such authority at the federal level if states do not conform to federal standards. See 40 C.F.R. pt. 70 (2012), for standards state permitting programs must follow.

39. 42 U.S.C. § 7475.

40. 42 U.S.C. § 7661a (2006).

41. 42 U.S.C. § 7661a(b).

42. 42 U.S.C. § 7661c(a) (2006).

43. Tailoring Rule, 75 Fed. Reg. 31,514, 31,535 (June 3, 2010).

44. *Id.*



combustion.<sup>45</sup> But carbon dioxide is one of the core results of combustion, and is therefore emitted at very high volumes.<sup>46</sup> The result is that many, many sources are considered major sources for GHG emissions, while very few sources are major sources for emissions of other air pollutants.

The cost of regulating GHG emissions from buildings under the CAA would be extremely high, both for permitting authorities and for owners of regulated buildings. The EPA estimates that the compliance cost of Title V permits for GHG emissions would be over \$49 billion for affected sources and over \$21 billion for permitting authorities.<sup>47</sup> Permitting authorities would have to spend 200 times what they currently do.<sup>48</sup> Most (96%) of these sources would be commercial and residential buildings.<sup>49</sup> The required cost to regulate GHG emissions by the plain language of the CAA would be astronomical and is therefore unrealistic.

The CAA requires that new major sources receive individualized permit determinations of BACT as part of PSD.<sup>50</sup> For existing facilities, the CAA requires Title V permits for any source emitting more than 100 tpy of a regulated pollutant (now including GHGs).<sup>51</sup> Furthermore, the EPA cannot exempt major sources from the requirements of Title V.<sup>52</sup> Title V has stringent requirements for permitting major sources that imply individualized permit determinations. Title V permits for major sources require enforceable emission limitations and standards, a schedule of compliance, submission of required self-monitoring, and an implementation plan.<sup>53</sup> All Title V permits for major

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45. See, e.g., Charles Ophardt, *Combustion of Fossil Fuels*, VIRTUAL CHEMBOOK: ELMHURST COLLEGE (2003), available at <http://www.elmhurst.edu/~chm/vchembook/511natgascombust.html>.

46. *Id.* (for example, natural gas is mostly methane, and the combustion of methane combines a molecule of methane with two molecules of oxygen to create a molecule of carbon dioxide, two molecules of water and lots of energy).

47. EPA, REGULATORY IMPACT ANALYSIS FOR THE FINAL PREVENTION OF SIGNIFICANT DETERIORATION AND TITLE V GREENHOUSE GAS TAILORING RULE 36 (2010) [hereinafter REGULATORY IMPACT ANALYSIS].

48. *Operating Permits Burden*, *supra* note 9.

49. REGULATORY IMPACT ANALYSIS, *supra* note 47, at 29.

50. 42 U.S.C. § 7479(3) (2006).

51. See 42 U.S.C. § 7661 (2006); 42 U.S.C. § 7602 (2006).

52. 42 U.S.C. § 7661(a) (2006).

53. 42 U.S.C. § 7661(c) (2006).

sources have to be sent from the permitting authority to the EPA for approval, as well as be available for public notice and comment.<sup>54</sup>

### III. THE TAILORING RULE IS LEGALLY SUSPECT

#### A. The Tailoring Rule

On May 13, 2010, the Obama Administration issued the Tailoring Rule, which regulates GHG emissions from major sources. It controls the regulatory burden of regulating GHG emissions by sharply limiting the number of regulated sources. The Tailoring Rule regulates emissions of six GHGs: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.<sup>55</sup> Since each of these GHGs has a different global warming potential (GWP) per ton of emissions, the EPA uses standard international practice and expresses GHGs in carbon dioxide equivalents (CO<sub>2</sub>e).<sup>56</sup> The Tailoring Rule details a three-step process for regulating GHG emissions from stationary sources.<sup>57</sup>

During the first step of the Tailoring Rule, from January 2, 2011 to June 30, 2011, the EPA did not force any stationary sources to get PSD or Title V permits solely for GHG emissions.<sup>58</sup> Instead, only sources that would otherwise require PSD or Title V permits for other air pollutants were subject to permitting for GHG emissions.<sup>59</sup> The only sources subject to PSD requirements for Step 1 of the Tailoring Rule would be projects that increase

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54. 42 U.S.C. § 7661(d) (2006) (EPA approval); 42 U.S.C. § 7661a (2012) (public notice and comment).

55. Tailoring Rule, 75 Fed. Reg. 31,514, 31,518 (June 3, 2010).

56. For the purpose of calculating GHG emissions limits, the GWPs of the different GHGs are: carbon dioxide (1), methane (21), nitrous oxide (310), HFC-23 (11,700), HFC-134a (1,300), and sulfur hexafluoride (23,900). These GWPs are calculated using a 100-year time horizon using the IPCC's Second Assessment Report (SAR) in order to be consistent with the international standards under the United National Framework Convention on Climate Change (UNFCCC) (IPCC, 1996).

57. Tailoring Rule, 75 Fed. Reg. at 31,516.

58. *Id.*

59. *Id.*

net GHG emissions by 75,000 tpy CO<sub>2e</sub> and significantly increased at least one non-GHG pollutant.<sup>60</sup>

The second step of the Tailoring Rule is from July 1, 2011 to June 30, 2013.<sup>61</sup> During this period, PSD permitting requirements cover new construction projects that emit at least 100,000 tpy CO<sub>2e</sub> even if they do not exceed the permitting thresholds for any other pollutant.<sup>62</sup> Modifications at existing facilities that increase GHG emissions by at least 75,000 tpy CO<sub>2e</sub> are also subject to permitting requirements, even if they do not significantly increase emissions of any other pollutant.<sup>63</sup> Also, facilities that emit at least 100,000 tpy CO<sub>2e</sub> are subject to Title V permitting requirements.<sup>64</sup> EPA will need to issue about 1,100 new Title V permits (mostly solid waste landfills and industrial manufacturers) and 900 additional PSD permits.<sup>65</sup>

In the third step of the Tailoring Rule, the EPA chose to leave unchanged the GHG emission thresholds from Step 2.<sup>66</sup> The EPA also made other technical changes to streamline permitting for GHG emissions.<sup>67</sup>

Furthermore, by the end of April 2015, the EPA will complete a study on remaining GHG permitting burdens that would exist if the CAA were fully applied to smaller sources.<sup>68</sup> The results of this study will be used to complete a rule by April 30, 2016 further addressing CAA permitting for these facilities.<sup>69</sup> At that time, the EPA may decide that successful streamlining will allow them to require that more sources obtain permits, but the EPA also reserves the right to decide that certain smaller sources be permanently excluded from permitting.<sup>70</sup>

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60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.*

65. *Id.* at 31,568.

66. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule Step 3 and GHG Applicability Limits, 77 Fed. Reg. 41,051, 41,052 (July 12, 2012).

67. *Id.*

68. Tailoring Rule, 75 Fed. Reg. 31,514, 31,516 (June 3, 2010).

69. *Id.*

70. *Id.*

**B. The EPA's Arguments in Favor of the Legality of the Tailoring Rule**

As described above, the CAA requires that major sources get permits, which are subject to strict requirements and approved by permitting authorities on an individualized basis. However, the Tailoring Rule states that most major sources of GHG emissions do not have to get permits at all. The Tailoring Rule therefore clashes with the plain language of the CAA.

The EPA gives three defenses for the Tailoring Rule and its sharp departure from the plain language of the CAA:

- (1) Congress did not intend for the EPA and other permitting authorities to have to issue so many permits for GHG emissions (absurd results);
- (2) Permitting authorities cannot issue so many permits (impossibility or administrative necessity);
- (3) Permitting authorities cannot issue so many permits now, and can postpone issuing so many permits until the future when they can do so. (one-step-at-a-time).

Judicial review of regulations begins with *Chevron, U.S.A. v. Natural Resources Defense Council*.<sup>71</sup> In the two-part *Chevron* test, a reviewing court determines:

- (1) "First, always, is the question whether Congress has spoken directly to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."
- (2) "[I]f the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute."<sup>72</sup>

The Tailoring Rule appears to fall afoul of *Chevron*. The reasons for this require a close look at case law on similar cases, which I undertake below.

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71. 467 U.S. 837, 842-43 (1984).

72. *Id.*

## a. Absurd Results

### 1. Definition and Expansion of the Absurd Results Doctrine

In general, courts interpret statutes according to their plain language, and the literal terms of a statute are to be overridden only when the absurdity is so gross as to shock the general moral or common sense.<sup>73</sup> It is not enough that absurd consequences, which were probably not within the contemplation of the legislature, are produced.<sup>74</sup>

A classic example of the absurd results doctrine is *United States v. Kirby*.<sup>75</sup> In *Kirby*, a mail carrier was arrested for murder while delivering the mail.<sup>76</sup> The police officers who arrested the mail carrier accused of murder were then indicted for knowing and willfully obstructing the passage of the mail.<sup>77</sup> The Supreme Court decided that the mail carrier's arrest did not violate the federal law against obstructing mail delivery, even though the arrest while the mail carrier was delivering the mail did knowingly obstruct mail delivery.<sup>78</sup> The Supreme Court allowed the police officers to violate the plain language of the statute because:

All laws should receive a sensible construction. General terms should be so limited in their application as not to lead to injustice, oppression, or an absurd consequence. It will always, therefore, be presumed that the legislature intended exceptions to its language, which would avoid results of this character. The reason of the law in such cases should prevail over its letter.<sup>79</sup>

In recent years, the absurd results doctrine has expanded to include any case where a statute is interpreted contrary to its

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73. See *Crooks v. Harrelson*, 282 U.S. 55, 60 (1930).

74. *Id.*

75. 74 U.S. 482 (1868).

76. *Id.* at 484.

77. *Id.*

78. *Id.* at 487.

79. *Id.* at 486-87.

plain meaning.<sup>80</sup> In its brief to the D.C. Circuit defending the Tailoring Rule, the EPA defines the absurd results doctrine (for administrative agencies) as allowing an agency to divert from the literal meaning of a statute where “acceptance of that meaning would lead to absurd results . . . or would thwart the obvious purpose of the statute.”<sup>81</sup>

The CAA requires major new and existing sources of GHG emissions to get individualized permits. Major sources emit more than 100 or 250 tons per year (100/250 tpy) of a regulated air pollutant.<sup>82</sup> For the Tailoring Rule to be legal by *Chevron* step 1, the EPA has to argue that the CAA’s requirement to regulate sources on an individualized basis emitting more than 100/250 tpy of a regulated pollutant (which GHGs now are) is not clear. If the Tailoring Rule is legal by *Chevron* step 1, then in *Chevron* step 2, EPA has to argue that the Tailoring Rule’s limitation of GHG regulation to sources emitting more than 100,000 tpy CO<sub>2</sub>e is a permissible construction of the CAA.

## **2. The EPA’s Arguments That the Tailoring Rule Is Legal According to the Absurd Results Doctrine**

The EPA’s argument in its brief to the D.C. Circuit is based on their definition of the absurd results doctrine, which is that the plain language “would lead to absurd results . . . or would thwart the obvious purpose of the statute.”<sup>83</sup> However, regulating more sources does not “thwart the obvious purpose of the

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80. See Katherine Kirklin O’Brien, Comment, *Beyond Absurdity: Climate Regulation and the Case for Restricting the Absurd Results Doctrine*, 86 WASH. L. REV. 635, 638 (2011); NRDC v. Muszynski, 268 F.3d 91 (2d Cir. 2001) (stating that a state could express limits on phosphorus under the Clean Water Act in terms of annual loads, even though the statute prescribes total maximum *daily* loads) (emphasis added).

81. Brief of Respondent at 64, *Coal. for Responsible Regulation, Inc. v. EPA*, No. 10-1073 (D.C. Cir. 2011) (quoting *In re Trans Alaska Pipeline Rate Cases*, 436 U.S. 631, 633 (1978) (quoting *Comm’r v. Brown*, 380 U.S. 563, 571 (1965))) [hereinafter EPA Brief].

82. 42 U.S.C. § 7661(2) (2006).

83. EPA Brief, *supra* note 81, at 65 (quoting *In re Trans Alaska Pipeline Rate Cases*, 436 U.S. 631, 633 (1978) (quoting *Comm’r v. Brown*, 380 U.S. 563, 571 (1965))).

statute.” The purpose of the CAA is to “promote reasonable . . . governmental actions . . . for pollution prevention.”<sup>84</sup> As I show later in this paper, there are reasonable ways to regulate more sources. Furthermore, regulating more sources of GHG emissions reduces GHG pollution and mitigates climate change.

The EPA justifies the Tailoring Rule by stating that “the discretion accorded EPA to determine how to achieve Congress’s intended objective is particularly acute when a situation arises that may not have been contemplated by the specific terms of the statute,”<sup>85</sup> and as long as “the agency exercises its delegated authority with common sense and fidelity to the intent of Congress, its decision must be upheld.”<sup>86</sup>

In its defense of the Tailoring Rule, the EPA argues that it can unilaterally exclude entities from regulation that Congress has explicitly ordered it to regulate. The EPA, and not Congress, would determine the scope of its own authority, and this violates both *Chevron* and the separation of powers under the Constitution.<sup>87</sup>

Furthermore, the EPA’s position that it can exclude entities that Congress told it to regulate based on absurd results (or any other doctrine) is contradicted by case law. In several cases, agencies have attempted to avoid regulating entities because of cost, stating that it would be absurd to spend large amounts of money to fulfill statutory mandates. In these cases, courts force agencies to regulate the entities that Congress has mandated that they regulate.

In *Tennessee Valley Authority (TVA) v. Hill*, the Supreme Court forced the TVA to follow the statutory mandates of the

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84. 42 U.S.C. § 7401(c) (2006).

85. EPA Brief, *supra* note 81, at 69 (citing *United States v. Haggard Apparel Co.*, 526 U.S. 380, 393 (1999)). The EPA also cites *Am. Trucking Ass’n v. United States*, 344 U.S. 298, 309-10 (1953); *Indep. Bankers Ass’n v. Marine Midland Bank*, 757 F.2d 453, 461 (2d Cir. 1985) (“Fashioning policies in response to events that were unforeseeable when the legislation was written is one of the primary functions of executive agencies.”).

86. EPA Brief, *supra* note 81, at 69-70 (citing *Cablevision Sys. Dev. Co. v. Motion Picture Ass’n of Am.*, 836 F.2d 599, 612 (D.C. Cir. 1988)).

87. See Nathan A. Sales & Jonathan H. Adler, *The Rest Is Silence: Chevron Deference, Agency Jurisdiction, and Statutory Silences*, 2009 U. ILL. L. REV. 1497 (2009).

Endangered Species Act (ESA), even though the ESA's mandates would halt the nearly completed construction of the multi-million dollar Tellico Dam.<sup>88</sup> The ESA requires that federal agencies do not take any action that is likely to jeopardize the continued existence of endangered or threatened species or destroy or adversely modify the habitat of such species.<sup>89</sup> When the Tellico Dam was almost complete, biologists discovered a previously unknown species of perch, the snail darter.<sup>90</sup> The area that would be flooded by the Tellico Dam was the only known habitat of the snail darter, and therefore there was legitimate fear that the completion of the Tellico Dam would render the snail darter extinct.<sup>91</sup> This triggered District Court litigation for an injunction against the completion of the Tellico Dam.<sup>92</sup>

The District Court ruled that it would be absurd to require "a court to halt impoundment of water behind a fully completed dam if an endangered species were discovered in the river on the day before such impoundment was scheduled to take place. We cannot conceive that Congress intended such a result."<sup>93</sup> The Court of Appeals reversed and issued an injunction against the completion of the Tellico Dam.<sup>94</sup> The Supreme Court agreed, maintaining the injunction and thereby rejecting TVA's claim that following the plain language of the ESA and prohibiting the completion of a near complete multimillion dollar dam would be absurd.<sup>95</sup> *TVA v. Hill* stands for the idea that the absurd results doctrine cannot be used to overturn the plain language of Congressional statutes just because following those dictates would be expensive. Similarly, the EPA is at risk of having a court vacate the Tailoring Rule on the merits because it does not regulate most major sources of GHG emissions that Congress demands the EPA regulate.

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88. 437 U.S. 153 (1978).

89. 16 U.S.C. § 1536(a)(2) (2006). This part of the ESA is unchanged since its original passage. See *TVA*, 437 U.S. at 160.

90. *TVA*, 437 U.S. at 158.

91. *Id.* at 162-63.

92. *Id.* at 165-66.

93. *Id.* at 166-67 (citing *Hill v. TVA*, 419 F. Supp. 753, 763 (E.D. Tenn. (1976))).

94. *Hill v. TVA*, 549 F.2d 1064, 1069 (6th Cir. 1977).

95. *TVA*, 437 U.S. at 195.



The most damning indictment of the Tailoring Rule comes from current interpretations of the Clean Water Act (CWA). The CWA prohibits the discharge of pollutants into the waters of the United States without a permit.<sup>96</sup> A permit can be granted pursuant to the National Pollutant Discharge Elimination System (NPDES).<sup>97</sup>

In two cases, *Natural Resources Defense Council (NRDC) v. Costle*,<sup>98</sup> and *Northwest Environmental Advocates v. EPA*,<sup>99</sup> the EPA attempted to exclude categories of pollution sources from permit requirements of the NPDES and was rebuked by federal appeals courts. In both cases, the EPA lost and was forced to regulate the sources of pollution that it tried to exclude. These decisions suggest that the Tailoring Rule is legally suspect because it excludes from regulation sources of pollution that Congress requires the EPA to regulate.

In *NRDC v. Costle*, the EPA excluded several classes of pollution sources from NPDES permit requirements that otherwise would have required permits by the plain language of the CWA.<sup>100</sup> For example, concentrated animal feeding operations (CAFOs) are defined as point sources in the CWA and require permits, but EPA's 1973 regulations stated that CAFOs below a certain size did not require permits.<sup>101</sup> The EPA justified the exclusion of small CAFOs and other pollution sources by stating that it wanted to conserve its enforcement resources for more significant sources of water pollution.<sup>102</sup>

Furthermore, the justifications for the EPA's unlawful exclusion of sources from regulation in *NRDC v. Costle* sound similar to EPA's justifications for the Tailoring Rule. The D.C. Circuit stated:

The appellants have stressed . . . the extraordinary burden on the EPA that will be imposed by [forcing EPA to require permits of

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96. See 33 U.S.C. § 1311(a) (2006).

97. 33 U.S.C. § 1342 (2006).

98. 568 F.2d 1369 (D.C. Cir. 1977).

99. 537 F.3d 1006 (9th Cir. 2008).

100. 568 F.2d at 1377.

101. 33 U.S.C. § 1362(14) (2006) (defining point sources); 40 C.F.R. § 125.4 (1975), *vacated by NRDC*, 568 F.2d 1369.

102. *Costle*, 568 F.2d at 1372-73.

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sources now excluded]. The spectre of millions of applications for permits is evoked both as part of appellants' legislative history [absurd results] argument that Congress could not have intended to impose such burdens on the EPA . . . .<sup>103</sup>

The D.C. Circuit went on to reject the EPA's concerns, stating, "[t]he technological or administrative infeasibility of such limitations may result in adjustments in the permit programs . . . but it does not authorize the Administrator to exclude the relevant point source from the NPDES program."<sup>104</sup> The D.C. Circuit made this decision even though it acknowledged that over 400,000 additional sources might require permits.<sup>105</sup>

Similarly, the EPA promulgated a regulation that excluded several types of discharges from ships (vessels) from permitting requirements, and in *Northwest Environmental Advocates v. EPA*, the Ninth Circuit affirmed the vacating of the EPA's regulation.<sup>106</sup> In this case, the EPA had excluded vessel wastes from NPDES permitting requirements in order to "reduce administrative costs drastically."<sup>107</sup> This is similar to the goals of the Tailoring Rule. However, the text of the CWA does not exempt vessel discharges from NPDES requirements.<sup>108</sup> EPA's defense of its regulation did not explicitly use the absurd results doctrine, but did state that the CWA could be interpreted to exclude vessel discharges from CWA permit requirements. But the Ninth Circuit followed *NRDC v. Costle* and forced the EPA to regulate the vessel discharges in question.<sup>109</sup>

To summarize, the precedents of *TVA v. Hill*, *NRDC v. Costle*, and *Northwest Environmental Advocates v. EPA* strongly suggest that an agency cannot use the large number of permits or cost of providing those permits required under law as a justification for promulgating a regulation that waives permitting

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103. *Id.* at 1377.

104. *Id.* at 1379.

105. *Id.* at 1380.

106. 537 F.3d 1006, 1010 (9th Cir. 2008) (affirming the district court decision to vacate 40 C.F.R. § 122.3(a) (2006)).

107. National Pollution Discharge System, 38 Fed. Reg. 13,528, 13,528 (May 22, 1973).

108. *See* 33 U.S.C. § 1342 (2006).

109. *Nw. Envtl. Advocates*, 537 F.3d at 1021.

for most of those sources of pollution. This suggests that the EPA's "absurd results" justification for the Tailoring Rule would likely be rejected by a court reaching a decision on the merits of the rule.

### b. Administrative Necessity

The CAA provides the EPA with a very difficult problem because it was not designed to mitigate climate change.<sup>110</sup> The last major amendments to the CAA were made in 1990, when climate change was not broadly debated in Congress.<sup>111</sup> At the same time, the CAA is a blanket statute meant to deal with all air pollutants, and carbon dioxide is an air pollutant by the letter of the CAA. Attempts to update or supersede the CAA to mitigate climate change have died in Congress.

Without the Tailoring Rule, millions of smaller sources would require permits under the CAA, compared to about 15,000 stationary sources today.<sup>112</sup> The EPA's position is that the administrative burdens of permitting large numbers of newly-subject sources would "greatly increas[e] the number of required permits, impos[e] undue costs on small sources, overwhelm[] the resources of permitting authorities, and severely impair[] the functioning of the programs."<sup>113</sup> The Tailoring Rule is designed to avoid overburdening the EPA and state and local permitting agencies.<sup>114</sup>

The D.C. Circuit gave its standard for administrative necessity in *Alabama Power v. Costle*.<sup>115</sup> *Alabama Power* is a very complicated case, dealing with regulations under the CAA as

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110. See, e.g., Arnold W. Reitze, Jr., *Federal Control of Greenhouse Gas Emissions*, 40 ENV. L. 1261, 1323 (2010) ("The CAA is not a tool designed to deal with GHG emissions, or more specifically CO<sub>2</sub>."); Arnold W. Reitze, Jr., *Federal Control of Carbon Dioxide Emissions: What Are the Options?*, 36 B.C. ENVTL. AFF. L. REV. 1 (2009).

111. But see generally AL GORE, *EARTH IN THE BALANCE* (1992) (detailing Gore's vision for solving the world's environmental crises, including climate change).

112. EPA, *Final Rule: Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule: Fact Sheet* (May 13, 2010), <http://www.epa.gov/nsr/documents/20100413fs.pdf>.

113. Tailoring Rule, 75 Fed. Reg. 31,514, 31,514 (June 3, 2010).

114. *Id.*

115. 636 F.2d 323 (D.C. Cir. 1979).

they existed after the 1977 Amendments (but before the 1990 amendments which created the current CAA).<sup>116</sup> One major issue was the promulgation of an EPA regulation that excluded sources that actually emitted less than 50 tpy (but had the potential to emit more than the PSD program's 100/250 tpy threshold) from the CAA's statutory requirement to regulate sources with the potential to emit more than 100/250 tpy.<sup>117</sup> The D.C. Circuit overturned this regulation as beyond agency discretion.<sup>118</sup>

The D.C. Circuit justified the overturning of the regulation above by developing a test for agency claims of administrative necessity. For cases in which an agency seeks approval of a prospective exemption of certain categories from a statutory demand (like the Tailoring Rule and *Alabama Power*), the test is as follows:

- “[c]ategorical exemptions from the clear commands of a regulatory statute, though sometimes permitted, are not favored.”<sup>119</sup> The court uses *NRDC v. Costle* (where the EPA tried to exempt categories of pollution sources from permit requirements of the CWA) as precedent to deny categorical exemptions from statutory mandates.<sup>120</sup>
- “Categorical exemptions may also be permissible as an exercise of agency power . . . to overlook circumstances that in context may fairly be considered *de minimis*.”<sup>121</sup>
- But, “[t]hat implied authority [of categorical exemptions for *de minimis*] is not available for a situation where the regulatory function does provide benefits, in the sense of furthering the regulatory objectives, but the agency concludes that the acknowledged benefits are exceeded by the costs.”<sup>122</sup>

The Tailoring Rule is legally suspect according to the precedent of *Alabama Power* because it exempts categories of emitters from regulation (those between 100/250 and 75,000/100,000 tpy CO<sub>2</sub>e)

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116. *See id.* at 349.

117. *Id.* at 355-56.

118. *Id.* at 356.

119. *Id.* at 358.

120. *Id.* at 360.

121. *Id.*

122. *Id.* at 361.

instead of using streamlined methods of administering an expanded regulatory program. Furthermore, the Tailoring Rule is legally suspect because it is a categorical exemption by rule that cannot be fairly called *de minimis*. By the EPA's own admission, without the Tailoring Rule, 78% of total national stationary source GHG emissions would be regulated, compared with 67% of such emissions with the Tailoring Rule.<sup>123</sup>

### c. One-Step-at-a-Time

The one-step-at-a-time doctrine comes from case law, and recognizes that agencies may implement statutory mandates incrementally when the agency remains on track to implement the statutory mandate as a whole.<sup>124</sup> In promulgating the Tailoring Rule, the EPA argues that more time to implement regulation of GHG emissions will allow time to “develop streamlining measures, acquire expertise, and increase resources.”<sup>125</sup>

The test for one-step-at-a-time agency implementation of statutory mandates was developed by the D.C. Circuit in *National Ass'n of Broadcasters v. Federal Communications Commission*.<sup>126</sup> In *Broadcasters*, the court examined the FCC's interim regulations of new satellite broadcasting technology called “direct broadcast satellite service” (DBS).<sup>127</sup> The interim regulations left crucial details about how to allocate spectrum until a future rulemaking.<sup>128</sup> Several intervenors sued to overturn this part of the regulation, calling it arbitrary and capricious.<sup>129</sup>

The D.C. Circuit developed a two-part test for one-step-at-a-time rulemaking:

- (1) “As long as the agency's predictions [of the nature and magnitude of the problem it will have to confront when

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123. *Operating Permits Burden*, *supra* note 9.

124. Tailoring Rule, 75 Fed Reg. 31,514, 31,544 (June 3, 2010).

125. *Id.* at 31,533.

126. *Nat'l Ass'n of Broadcasters v. FCC*, 740 F.2d 1190 (D.C. Cir. 1984).

127. *Id.* at 1195.

128. *Id.* at 1209.

129. *Id.*

it comes to resolve the postponed issue] of future events are plausible and flow from the factual record compiled, a reviewing court should accept the agency's estimation."<sup>130</sup>

- (2) "Postponement will be most easily justified when an agency acts against a background of rapid technical and social change and when the agency's initial decision as a practical matter is reversible should the future proceedings yield drastically unexpected results."<sup>131</sup> In contrast, an incremental approach to agency decision making is least justified when small errors in predictive judgment can have catastrophic effects on the public welfare, or when future proceedings are likely to be systematically defective in taking into account certain relevant interests.<sup>132</sup>

The FCC passed that test in *Broadcasters*.<sup>133</sup> First, the FCC had reasonable estimates of the nature and magnitude of the problem it had to confront.<sup>134</sup> Second, DBS technology was so new that the FCC could not predict the demand for spectrum.<sup>135</sup> So the FCC waited a short period of time and then promulgated a regulation to answer the spectrum allocation questions left unanswered in the interim regulation.<sup>136</sup>

The FCC's two-part test needs to be evaluated in context with the rest of the case. The D.C. Circuit in *Broadcasters* states that agencies have "no authority to experiment with its statutory obligations."<sup>137</sup> This statement is made concerning part of the DBS regulation that exempted some DBS systems from the broadcast restrictions of Title III of the Communications Act of 1934.<sup>138</sup> These include, but are not limited to, requirements that

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130. *Id.* at 1210.

131. *Id.* at 1211.

132. *Id.*

133. *Nat'l Ass'n of Broadcasters*, 740 F.2d at 1211.

134. *Id.*

135. *Id.*

136. *Id.* at 1212.

137. *Id.* at 1201.

138. *Nat'l Ass'n of Broadcasters*, 740 F.2d at 1199.

qualified candidates for office be provided reasonable access to broadcast facilities.<sup>139</sup>

However, section 3(o) of the Communications Act defined “broadcasting” as “the dissemination of radio communications intended to be received by the public, directly or by the intermediary of relay stations.”<sup>140</sup> This meant that exempting DBS systems that transmitted signals directly to homes was unlawful, and that part of the FCC’s DBS regulations was overturned.<sup>141</sup>

In this respect, the Tailoring Rule is very similar to the part of the DBS regulation in *Broadcasters*; both attempt to exempt categories of entities explicitly regulated by statute from regulation. The D.C. Circuit would not allow this in *Broadcasters*, and is unlikely to allow the EPA to exempt major sources of GHG emissions from CAA regulation. The Tailoring Rule does not promise to regulate all major sources of GHG emissions under the CAA; instead the EPA only promises a study and further rulemaking in 2016.<sup>142</sup> The EPA justifies this by noting that it can exclude some major sources from regulation through the absurd results doctrine.<sup>143</sup> So if the use of the absurd results doctrine in the Tailoring Rule is unlawful, so is the use of the one-step-at-a-time doctrine.

Furthermore, it is questionable whether the EPA could pass the second prong of *Broadcasters* two-part test for use of the one-step-at-a-time doctrine. The second prong requires a background of “rapid technical and social change.”<sup>144</sup> In *Broadcasters*, there was serious uncertainty about the use of spectrum associated with new technology, which was crucial information to the regulation.<sup>145</sup> The EPA asserts that it is working within uncertain factual circumstances and future events because the ability of the EPA to follow the statutory directive depends not

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139. *Id.* at 1200.

140. *Id.* at 1201.

141. *Id.* at 1203.

142. Tailoring Rule, 75 Fed. Reg. 31,514, 31,516 (June 3, 2010).

143. *Id.*

144. *Nat’l Ass’n of Broadcasters*, 740 F.2d at 1211.

145. *Id.* at 1209.

only on the development of streamlining measures, but also on enhancing the resources of permitting agencies.<sup>146</sup>

There is always uncertainty, so the type of uncertainty relevant to whether or not the EPA can comply with the letter of the law is whether the factual landscape is so uncertain that they cannot adequately regulate. In *Broadcasters*, the FCC was hesitant to regulate a very new technology where no one knew how the technology would develop.<sup>147</sup> With the Tailoring Rule, patterns of carbon emissions do not change quickly and can be determined. The federal government might not have this information right now, but they can and should have this information well before 2016, the date at which the EPA plans to possibly comply with the plain language of the CAA.

The EPA is correct when they state that there is uncertainty about future budgets of both the EPA and permitting authorities. *Mass. v. EPA* did greatly change enforcement of the CAA, as it potentially added millions of sources, mostly buildings, to the CAA regulatory program. However, this could be said about all agencies and all regulations. Furthermore, enforcement of the CWA has had similar issues of large-scale expansion of the number of permits required. The vacating of the EPA's regulation excluding many vessels caused between 115,000 and 138,000 smaller vessels and about 71,000 larger vessels to require permits.<sup>148</sup>

To conclude, the EPA likely cannot defend the Tailoring Rule using the one-step-at-a-time doctrine. The Tailoring Rule likely fails the second prong of the test in *Broadcasters* ("rapid technical and social change"), and *Broadcasters* probably cannot be interpreted to allow agencies to preemptively exempt a category of sources from anti-pollution regulations.

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146. See Tailoring Rule, 75 Fed. Reg. at 31,547.

147. *Nat'l Ass'n of Broadcasters*, 740 F.2d at 1211.

148. See EPA, ECONOMIC AND BENEFITS ANALYSIS OF THE PROPOSED SMALL VESSEL GENERAL PERMIT ix (Nov. 30, 2011), available at [http://www.epa.gov/npdes/pubs/vgp\\_economic\\_analysis\\_svgp2011.pdf](http://www.epa.gov/npdes/pubs/vgp_economic_analysis_svgp2011.pdf) (number of smaller vessels requiring permits) [hereinafter SMALL VESSEL GENERAL PERMIT]; EPA, ECONOMIC AND BENEFITS ANALYSIS OF THE PROPOSED 2013 VESSEL GENERAL PERMIT 1 (2011), available at [http://www.epa.gov/npdes/pubs/vgp\\_economic\\_analysis\\_draftpermit2011.pdf](http://www.epa.gov/npdes/pubs/vgp_economic_analysis_draftpermit2011.pdf) (number of larger vessels, including domestic flag and foreign flag vessels, requiring permits).



#### IV. LEGAL IMPLICATIONS OF USING BUILDING CODES TO REGULATE GHG EMISSIONS UNDER THE CAA

Earlier in this paper, I stated the three possible approaches the EPA could use to regulate GHG emissions from buildings:

- (1) follow the plain language of the CAA and require millions of buildings (and other sources of GHG emissions) to get individualized permits—costing permitting agencies \$22.5 billion;<sup>149</sup>
- (2) regulate fewer buildings on an individualized basis. The EPA chose to do this with the Tailoring Rule, and the Tailoring Rule costs permitting agencies only \$105 million, instead of \$22.5 billion.<sup>150</sup> However, the Tailoring Rule leaves millions of buildings unregulated that the CAA and *Mass. v. EPA* imply should be regulated; or
- (3) regulate millions of buildings on a general (not individualized) basis, issuing regulations for certain types of buildings, rather than for each individual building. In this paper, I propose that the EPA regulate buildings emitting more than 100 or 250 tpy CO<sub>2</sub>e by forcing states to enact more energy-efficient building codes for those buildings.

Option 2, embodied in the Tailoring Rule, is legally suspect. In the rest of this paper, I demonstrate that Option 3, forcing states to adopt more energy efficient building codes, is both legally sound and good policy.

##### A. The EPA's Description of Its Options

On July 12, 2012, the EPA released its final rule for Step 3 of the Tailoring Rule.<sup>151</sup> Its proposed rule maintains the applicability thresholds (75,000/100,000 tpy CO<sub>2</sub>e) and proposed streamlining approaches to improve the administration of GHG

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149. *Operating Permits Burden*, *supra* note 9.

150. *Id.*

151. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule Step 3 and GHG Applicability Limitations, 77 Fed. Reg. 41,051, 41,055 (July 12, 2012).

PSD and Title V permitting programs.<sup>152</sup> The proposed rule also solicits comments on these streamlining approaches, including general permits and presumptive BACT (pBACT) in case EPA is forced to regulate all sources above the statutory threshold.<sup>153</sup> The EPA concluded that these options were promising, but would take more than two years to develop, propose, and finalize and therefore would not be available by January 2, 2011, the date PSD and Title V permitting requirements would be triggered.

The proposed rule shows that the EPA is struggling with the idea of how to regulate smaller major sources. In 2010, EPA estimated that PSD and Title V requirements would require regulation of over six million sources.<sup>154</sup> Almost 1.4 million of those sources are commercial, while another 4.5 million of those sources are residential.<sup>155</sup> Almost 179,000 of those sources are industrial.<sup>156</sup>

## **B. General Permits**

The CAA authorizes general permits for existing major sources (Title V), but not for new major sources (PSD). A general permit covers numerous single sources and is completed after notice and opportunity for a public hearing.<sup>157</sup> Sources subject to a general permit must still apply for that permit and fulfill all of the requirements of that permit.<sup>158</sup>

Permit applications have to have (a) a date the permit is active, and (b) a compliance plan for how the source will comply with all applicable requirements, including a schedule of compliance and a schedule by which a permittee will submit progress reports at least every six months.<sup>159</sup> The permitting official shall certify the accuracy of the information submitted, and a copy of each permit application, compliance plan (including schedule of compliance), emissions or compliance monitoring

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152. *Id.* at 41,052.

153. *Id.* at 41,055.

154. REGULATORY IMPACT ANALYSIS, *supra* note 47, at 29.

155. *Id.*

156. *Id.*

157. 42 U.S.C. § 7661c(d) (2006).

158. *Id.*

159. 42 U.S.C. § 7661b (2006).

report, certification, and issued permit shall be available to the public.<sup>160</sup> The conditions attached to general permits come from the rest of the CAA.

Under the CAA, the EPA lists categories of stationary sources that can “reasonably be anticipated to endanger public health or welfare.”<sup>161</sup> There are separate standards for new and existing sources, and the standards for existing sources take into account the remaining useful life of the source and other factors.<sup>162</sup>

The EPA may find it very difficult, if not impossible, to enforce all of the requirements of general permits for GHG emissions from buildings. The permitting official may not even be able to certify the accuracy of the information submitted. However, a copy of each permit application and each issued permit can be made available to the public electronically, fulfilling the language of the CAA.

General permits exist under the CAA and other environmental laws. The exact nature of general permits varies from state to state, but the number of general permits is extensive. To take Pennsylvania as an example, Pennsylvania has a very long list of general permits.<sup>163</sup> Many of these general permits are CAA permits. They include (but are not limited to): storage tanks for volatile organic liquids, burn-off ovens, petroleum dry cleaning, nonroad engines, crematories, dry abrasive blasting operations, and others.

Most general permits are under the Clean Water Act (CWA). Examples of these permits include Construction General Permits, Nationwide Permits, and Vessel General Permits.

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160. *Id.*

161. 42 U.S.C. § 7411 (2006).

162. *Id.*

163. See *Licensing, Permits and Certification*, PA. DEP'T OF ENVTL. PROT., [http://www.depweb.state.pa.us/portal/server.pt/community/licensing%2C\\_permit\\_s\\_\\_\\_certification/6009](http://www.depweb.state.pa.us/portal/server.pt/community/licensing%2C_permit_s___certification/6009) (last visited Oct. 30, 2012).

**a. Construction General Permits**

Construction General Permits (CGPs) under § 402 of the Clean Water Act (CWA)<sup>164</sup> regulate stormwater discharges associated with construction activity (such as cleaning, grading, excavating, and stockpiling) that disturb one or more acres, or smaller sites that are part of a larger common plan of development or sale. This is part of the CWA's National Pollution Discharge Elimination System (NPDES) stormwater program.<sup>165</sup> Prior to discharging stormwater, construction operators must obtain coverage under an NPDES permit, which is administered by the state (if it has been authorized to operate the NPDES stormwater program) or EPA, depending on where the construction site is located. The CGP requires compliance with effluent limits and other permit requirements, such as the development of a Stormwater Pollution Prevention Plan (SWPPP). Construction operators intending to seek coverage under EPA's CGP must submit a Notice of Intent (NOI) certifying that they have met the permit's eligibility conditions and that they will comply with the permit's requirements (install and maintain Best Management Practices, conduct biweekly inspections, record any plan changes, etc.). The operator submits the NOI online.

**b. Nationwide Permits**

The Nationwide Permit Program (NWP) under § 404(e) of the CWA,<sup>166</sup> which authorizes the discharge of dredged or fill materials into waters of the U.S., was specifically designed to provide a relatively streamlined mechanism for the Corps to approve projects with relatively minor environmental impacts, freeing the Corps to use administrative resources for more environmentally significant requests for individual permits.<sup>167</sup> In

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164. 33 U.S.C. § 1342 (2006); *see also EPA Construction General Permit*, EPA, <http://cfpub.epa.gov/npdes/stormwater/cgp.cfm#final2008cgp> (last visited Oct. 30, 2012).

165. *Id.*

166. 33 U.S.C. § 1344(e) (2006).

167. Letter from Nat'l Ass'n of Home Builders to Lisa Jackson, Adm'r, EPA (April 20, 2012) (on file with author) (comments on Prevention of Significant

its comments to the EPA, the National Association of Home Builders (NAHB) states that over time the Corps has made the NWP requirements more stringent to limit their availability and make them more cumbersome and difficult to obtain.<sup>168</sup> NAHB notes that when first adopted, a project proponent who believed his or her project met an NWP's requirements could proceed immediately, operating under the auspices and protection of the NWP without further notice to the Corps. Now, the Corps requires most applicants to comply with extensive pre-construction notification requirements. Likewise, current NWPs impose significant paperwork burdens both on those who use the NWPs and the Corps staff who have to implement the requirements, creating delays and undermining the administrative efficiency the NWPs were originally designed to achieve.<sup>169</sup> The average applicant for a nationwide permit spends 313 days and \$28,915—not counting costs of mitigation or design changes.<sup>170</sup>

The experience with the NWP permit suggests that general permits for GHG emissions would have to be extremely streamlined to be at all practical.

**c. Vessel General Permits (including Small Vessel General Permits)**

The EPA regulates vessel (ship) discharges with the Vessel General Permit (VGP). The VGP regulates discharges incidental to the normal operation of vessels operating in a capacity as a means of transportation. The VGP includes general effluent limits applicable to all discharges; general effluent limits applicable to 26 specific discharge streams; narrative water-based effluent limits; inspection, monitoring, recordkeeping, and reporting requirements; and additional requirements applicable to certain vessel types. Submission is generally through the Vessels eNOI system.

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Deterioration and Title V Greenhouse Gas Tailoring Rule Step 3, Docket Number EPA-HQ-OAR-2009-0517, at 5-6).

168. *Id.* at 6.

169. *Id.*

170. *Rapanos v. United States*, 547 U.S. 715, 721 (2006) (plurality opinion).

The EPA has proposed a Small Vessel General Permit (sVGP) for non-recreational, non-military vessels less than 79 feet, starting in 2013.<sup>171</sup> To get a sVGP, a vessel operator must:

- Meet the sVGP eligibility requirements;
- Obtain a Permit Authorization and Record of Inspection (PARI) form onboard their vessel to certify that they have read and understood the terms of the permit and to document performance of the required annual inspection (there is no requirement to submit a Notice of Intent);
- Implement the effluent limits according to the requirements in Part 2 of the sVGP, including by conducting routine inspections that may be needed to verify compliance with the discharge limits; and
- Conduct the required annual self-inspection.<sup>172</sup>

Between 115,000 and 138,000 vessels will be potentially subject to the sVGP.<sup>173</sup> EPA finds that per vessel incremental compliance costs average between \$17 and \$98 per year, depending on the number of applicable discharge categories and baseline practices.<sup>174</sup> A majority of vessels subject to the sVGP are commercial fishing vessels.<sup>175</sup>

#### **d. Problems with the Use of General Permits under the CWA and CAA**

The EPA has accepted the problems associated with the use of general permits to fulfill permitting requirements under the CWA. It has not had much choice; several parts of the CWA would be unworkable without general permits because of the large number of entities that require permits. Many pollution plans are neither reviewed nor approved by the government, and there is limited public participation in permit issuance and enforcement.<sup>176</sup>

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171. SMALL VESSEL GENERAL PERMIT, *supra* note 148, at ix.

172. *Id.*

173. *Id.*

174. *Id.* at x.

175. *Id.* at 4.

176. See Jeffrey M. Gaba, *Generally Illegal: NPDES General Permits Under the Clean Water Act*, 31 HARV. ENVTL. L. REV. 410, 412 (2007).

Similarly, the EPA would have to accept problems with a general permit regime under the CAA to regulate GHGs. The huge numbers of permits required means that the EPA cannot allow comment on individual permits if it hopes to administer the program. Furthermore, EPA's ability to regulate existing buildings may be severely limited, even with the use of general permits, because millions of buildings need to be regulated. This is especially true because the CAA allows for citizen suits to enforce permit requirements or dereliction of nondiscretionary duties by the EPA Administrator.<sup>177</sup>

Furthermore, EPA's ability to enforce general permits may be very limited. In some cases, the general permit process may be simply a notification of requirements under the law, and violations of those requirements will tend to go unnoticed and unpunished. This is mostly unavoidable with a very large number of permits, and the notification of requirements coming from the general permit may be enough to induce at least limited compliance, which is probably an improvement over no regulation at all for relatively small emitters.

### C. Presumptive BACT (pBACT)

PSD requires that new sources of regulated pollutants (now including GHGs) be subject to best available control technology (BACT). BACT is defined in the CAA as:

[A]n emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this Act emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant.<sup>178</sup>

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177. 42 U.S.C. § 7604 (2006).

178. 42 U.S.C. § 7479(3) (2006).

To determine BACT, EPA usually uses a five-step “top-down” analysis.

The steps are: (1) “[i]dentify all available control technologies;” (2) “[e]liminate technically infeasible options;” (3) evaluate and rank the remaining technologies based on environmental effectiveness; (4) evaluate the cost-effectiveness of controls after considering energy and other environmental impacts; and (5) “[s]elect BACT.”<sup>179</sup> The primary guidance is EPA’s 1990 New Source Review Workshop Manual.<sup>180</sup> Determining the appropriate technology requires consideration of process changes, fuel substitution, add-on controls, and any other available methods to obtain the maximum degree of emission reduction.<sup>181</sup> The process begins by requiring a permit applicant seeking a permit to meet new source performance standards (NSPS) for its industrial category (promulgated by EPA pursuant to section 111 of the CAA).<sup>182</sup> States may impose additional standards, and EPA may delegate authority to run the PSD program to states.<sup>183</sup> Many states administer all or part of the PSD program. However, there is no technology to control CO<sub>2</sub> emissions that appears to fit the BACT definition in the CAA.<sup>184</sup>

Since BACT must now be done on a case-by-case basis for each permit applicant, EPA is evaluating the use of pBACT, under which it would develop a “standardized BACT for certain emissions units [sources of GHG emissions].”<sup>185</sup> Similar to general permits, the agency would determine pBACT for certain sources and expect industry to comply with its determination.<sup>186</sup>

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179. GHG Plantwide Applicability Limitations and GHG Synthetic Minor Limitations, 77 Fed. Reg. 14,226, 14,252 (Mar. 8, 2012).

180. EPA, DRAFT NEW SOURCE REVIEW WORKSHOP MANUAL: PREVENTION OF SIGNIFICANT DETERIORATION AND NONATTAINMENT AREA PERMITTING (1990), <http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf> [hereinafter NEW SOURCE REVIEW WORKSHOP MANUAL].

181. 42 U.S.C. § 7479(3).

182. 42 U.S.C. § 7411 (2006).

183. 42 U.S.C. § 7416 (2006).

184. Arnold W. Reitze, Jr., *Clean Air Symposium: The Intersection of Climate Change and Clean Air Act Stationary Source Programs*, 43 ARIZ. ST. L.J. 901, 916 (2011); *see also* 42 U.S.C. § 7479(3).

185. GHG Plantwide Applicability Limitations and GHG Synthetic Minor Limitations, 77 Fed. Reg. 14,226, 14,252 (Mar. 8, 2012).

186. *Id.* at 14,251.



EPA suggests that pBACT could be implemented through the general permit process.<sup>187</sup> EPA uses natural gas-fired boilers as an example application of pBACT and expressly suggests tying pBACT to the Department of Energy's (DOE) statutory obligation to set energy efficiency standards or to the ENERGY STAR program.<sup>188</sup>

EPA has considered several approaches to implement pBACT. The first approach would develop, through notice-and-comment rulemaking or permitting guidance, a pBACT level for sources in a particular source category that subsequently could be applied and assessed in individual permitting actions.<sup>189</sup> In that approach, the top-down analysis for an individual permit would be fulfilled by a request to include the pBACT limit; there would still be an opportunity for permitting authorities and the public to examine individual permits to assess whether there are significant case-specific energy, economic, and/or environmental impacts that would require adjustment of the presumed limit for that particular source.<sup>190</sup> This shifts the burden to the permitting authority or other interested parties to produce credible evidence that the application of pBACT to a particular source would not comply with BACT requirements.<sup>191</sup>

This approach might be suitable and appropriate for some relatively large sources. However, for smaller sources, this could be problematic because it would give extra opportunities for anti-development forces to stop development by challenging the energy efficiency of a development. This could even be a problem for larger sources; some large apartment buildings emit tens of thousands of GHGs per year, and anti-development activists could challenge these permits in order to stop development.

The EPA has also discussed an approach where pBACT levels for a specific category of emissions would be developed through notice-and-comment rulemaking, and public comment would not be allowed for an individual source. This would not

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187. *Id.*

188. *Id.* at 14,251 (natural gas boilers as example for general permits and pBACT); *Id.* at 14,254 (tying pBACT to ENERGY STAR program).

189. *Id.* at 14,252-53.

190. *Id.* at 14,253.

191. *Id.*

follow the individual case-by-case BACT determinations envisioned in the CAA, but would be much more practical for regulating large numbers of small sources.<sup>192</sup>

Using pBACT would streamline PSD permitting and promote consistency in BACT determinations as various permitting authorities gain experience with GHG permitting.<sup>193</sup> The EPA is especially interested in combining general permits and pBACT, but worries that it might lose the technology forcing aspect of case-by-case BACT determinations.<sup>194</sup> Controls identified in prior permits are considered in subsequent BACT determinations, so an approach using pBACT could lose that.<sup>195</sup> Periodic revisions of pBACT could avoid this. Combining these approaches could provide an economical means of issuing very large numbers of permits and achieving reductions in GHG emissions from buildings and other stationary sources from smaller major emitters not currently covered by the Tailoring Rule.

#### **D. Building Codes**

EPA attempts to justify the Tailoring Rule by noting that millions of buildings would be subject to regulation for GHG emissions without the Tailoring Rule. However, the EPA's justification does not acknowledge that all buildings are already subject to government regulation—building codes. These codes are generally state and local codes, but they cover every local home and business.

##### **a. The Legality of Using Building Codes to Regulate GHG Emissions**

Under PSD, new major sources are regulated using BACT. BACT is defined in the CAA as:

[A]n emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this Act

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192. See discussion *infra* Part IV.d.

193. See 77 Fed. Reg. at 14,253.

194. *Id.*

195. *Id.*

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emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant.<sup>196</sup>

As stated above, this provides a problem in that many new major sources would have to apply for permits, which would have to be approved on a case-by-case basis. This would be very expensive, both for permittees and permitting agencies.

The EPA's idea for combining general permits and pBACT is a good idea, but in order to use it for PSD, the EPA has to be able to interpret BACT as allowing the use of categorical (and not case-by-case) determinations for smaller major sources of GHG emissions. In fact, case law suggests that the EPA can (and should) interpret the CAA in this fashion.

In *Alabama Power*, the D.C. Circuit states that “[c]ourts frequently uphold streamlined agency approaches or procedures where the conventional course, typically case-by-case determinations, would, as a practical matter, prevent the agency from carrying out the mission assigned to it by Congress.”<sup>197</sup> It is clear that the EPA cannot do case-by-case determination for tens of thousands of new buildings and millions of existing buildings. Even though it may depart from the statutory requirements of BACT, using pBACT and general permits for smaller major sources of GHG emissions may be closer to the congressional intent for the PSD program.<sup>198</sup>

*Mova Pharmaceutical Corp. v. Shalala*,<sup>199</sup> also supports this interpretation. *Mova Pharmaceutical Corp.* concerned the question of whether the FDA could approve a drug that was being attacked under a patent infringement action.<sup>200</sup> The D.C. Circuit

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196. 42 U.S.C. § 7479(3) (2006).

197. *Ala. Power Co. v. Costle*, 636 F.2d 323, 358 (D.C. Cir. 1980).

198. *See* 77 Fed. Reg. at 14,253.

199. 140 F.3d 1060 (D.C. Cir. 1998).

200. *Id.* at 1062.

disagreed with the FDA's interpretation of the underlying statute, writing "[w]hen the agency concludes that a literal reading of a statute would thwart the purposes of Congress, it may deviate no further from the statute than is needed to protect congressional intent."<sup>201</sup> A rule that avoids using case-by-case determination of BACT and regulates all of the sources that Congress says to regulate does less violence to the statute than the Tailoring Rule, which does not regulate all of the sources that Congress says to regulate. *Alabama Power* also states, "[b]efore a court sanctions such actions, it will carefully study the governing statute . . . to ascertain whether the statute authorizes approaches that deviate from the legislative mandate in response to concerns about feasibility."<sup>202</sup> The use of general permits and pBACT to regulate smaller major GHG emitters likely passes these tests.

Furthermore, the EPA has some flexibility when determining BACT. When the EPA determines BACT, it generates a list of categories of stationary sources that "cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."<sup>203</sup> The EPA then establishes federal "standards of performance" for new sources within each category, and can distinguish between different "classes, types, and sizes" within each category in establishing such standards.<sup>204</sup> A "standard of performance" is defined as

a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the [EPA] determines has been adequately demonstrated.<sup>205</sup>

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201. *Id.* at 1068.

202. *Ala. Power Co.*, 636 F.2d at 360.

203. 42 U.S.C. § 7411(b)(1)(A) (2006).

204. 42 U.S.C. § 7411(b)(1)(B).

205. 42 U.S.C. § 7411(a)(1).

The EPA can issue a design, equipment, work practice, or operation standard if “it is not feasible to prescribe or enforce a standard of performance.”<sup>206</sup> This covers any situation where:

(A) a pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State, or local law, or (B) the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations.<sup>207</sup>

The definition of BACT, especially the phrase “emitted from or results from any major emitting facility,” is probably capacious enough to include building codes.<sup>208</sup> This strongly suggests that even if a building was all-electric and the power plant, not the building, emitted GHGs, the GHGs emissions could be seen as resulting from the building.

Furthermore, not allowing the use of building codes to regulate GHG emissions from buildings would be an absurd result. Not allowing the use of building codes could, and probably would, lead to absurdities like regulation of natural gas boilers but no similar regulation of electric heaters because electric heaters themselves do not emit GHGs and natural gas heaters do. This could encourage builders to build using electric heat, even when natural gas would be most appropriate on air pollution and energy efficiency grounds.

The use of building codes to regulate GHG emissions is in some ways analogous to regulating lead in public drinking water systems in *American Water Works Ass’n*.<sup>209</sup> In *American Water Works Ass’n*, the D.C. Circuit stated that “where a literal reading of a statutory term would lead to absurd results, the term simply ‘has no meaning . . . and is the proper subject of construction by the EPA and the courts.’”<sup>210</sup> In *American Water Works Ass’n*, the EPA regulated lead by corrosion controls and not by an MCL set

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206. 42 U.S.C. § 7411(h)(1).

207. 42 U.S.C. 7411(h)(2).

208. 42 U.S.C. § 7479(3) (2006).

209. *Am. Water Works Ass’n v. EPA*, 40 F.3d 1266 (D.C. Cir. 1994).

210. *Id.* at 1271.

at the tap because lead contamination of drinking water comes from old pipes (usually in private homes beyond the jurisdiction of the EPA) carrying the water, not from the water source.<sup>211</sup> Therefore, it is almost impossible to determine the level of lead in a public water system; it varies depending on where the water is drawn and the temperature of the water.<sup>212</sup> Building codes would be a way to regulate GHG emissions from buildings that would both regulate actual emissions, as well as reduce energy needed inside of buildings.

**b. Outline of a Building Code Approach to Regulating GHG Emissions from Buildings**

A building code approach to regulating GHG emissions from buildings would have to cover both new and existing buildings. The approach is clearer for new (or extensively rebuilt) buildings, but the EPA has options for regulating existing buildings as well.

The CAA gives the EPA and permitting authorities the authority to write general permits for existing sources. These general permits would be difficult to enforce due to how many would need to be issued, but the EPA would likely be within the letter of the law. These general permits would enforce more energy efficient building codes for existing buildings and be enforced by each state as part of a document like a State Implementation Plan (SIP).<sup>213</sup> If a state refused to enact and enforce more energy efficient building codes for existing buildings, the federal government could enforce something like a Federal Implementation Plan (FIP).

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211. Drinking Water Regulations; Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper, 53 Fed. Reg. 31,516, 31,526-27 (proposed Aug. 18, 1988) (noting that lead contamination of drinking water is rarely from the source of the water); Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper, 56 Fed. Reg. 26,460, 26,473-76 (final June 7, 1991) (noting that lead contamination of drinking water comes from pipes, often in people's homes).

212. See *Am. Water Works Ass'n*, 40 F.3d at 1269.

213. 42 U.S.C. § 7411(d) (2006).

Unfortunately, most U.S. building codes for existing buildings do not have provisions for energy efficiency.<sup>214</sup> Therefore, there is not a clear U.S.-based model for such building codes.

However, the European Union (EU) has issued a directive to improve energy efficiency of all buildings.<sup>215</sup> In the EU, directives are issued by the European Union, and each member state (country) of the EU has to pass legislation or regulations to enforce EU directives.<sup>216</sup> The EU's Directive on the Energy Performance of Buildings requires member states to write and enforce energy efficiency building codes for both new and existing buildings.<sup>217</sup> New buildings, rented buildings, and public buildings will need to have an "energy performance certificate" which details the relative energy efficiency of every building.<sup>218</sup>

There is no single approach to regulating energy efficiency in existing buildings. The current approach in Europe mandates high-energy efficiency standards for renovations and energy performance certificates for rented buildings. Some states in the United States have programs where extra taxes on energy bills are used to retrofit existing buildings.<sup>219</sup> Some combination of these methods of increasing energy efficiency could be mandated in the equivalent of SIPs.<sup>220</sup>

Building codes cover all new buildings, not just buildings whose GHG emissions would be covered by the CAA.<sup>221</sup> To convert these codes into regulation of new buildings, the EPA would likely use general permits and pBACT to regulate smaller major sources of GHGs. BACT is set in a five step process: (1) identify all available control technologies; (2) eliminate

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214. See U.S. DEPT OF ENERGY, BUILDING ENERGY CODES 101: AN INTRODUCTION 5 (2010) [hereinafter BUILDING ENERGY CODES].

215. Council Directive 2010/31, 2010 O.J. (L 153) 13 (EU).

216. See Consolidated Version of the Treaty on the Functioning of the European Union art. 194(2), Mar. 30, 2010, 2010 O.J. (C 83) 135 [hereinafter TFEU].

217. Council Directive 2010/31, art. 4, 2010 O.J. (L 153) 13, 19 (EU).

218. *Id.* art. 12.

219. See *Energy Programs*, CONN. ENERGY EFFICIENCY FUND, <http://ctsaves.energy.org/programs/index.php> (last visited Oct. 30, 2012).

220. See 42 U.S.C. § 7411 (2006).

221. BUILDING ENERGY CODES, *supra* note 214, at 5.

technically infeasible options; (3) evaluate and rank the remaining technologies based on environmental effectiveness; (4) evaluate the cost-effectiveness of controls after considering energy and other environmental impacts; and (5) select BACT.<sup>222</sup> Presumptive BACT would be set the same way, but not case-by-case as is prescribed by the CAA.<sup>223</sup> Instead, the EPA would have to issue general permits because of the very large number of permits required. The EPA issues many general permits under the CWA, it stands to reason that this type of administration could be adopted for the CAA.<sup>224</sup> The result of the pBACT and general permit process would be minimum requirements for state and local building codes as part of each state's SIP, and a FIP if a state does not adopt a SIP with more energy efficient building codes.<sup>225</sup> States would be allowed to have more energy efficient building codes, but would be forced to have building codes that were at least as efficient as the standard code developed through pBACT.

The EPA would then effectuate a two-tiered system for issuing GHG permits. The first tier would include all of those sources now regulated under the Tailoring Rule. The permit process for those stationary sources would be unchanged from the current process, and would regulate few sources.

The second tier would include smaller sources not currently included under the Tailoring Rule, but subject to regulation under the 100/250 tpy threshold. All of these emitters would be regulated with general permits. These permits would include building codes, which include requirements for energy efficiency of heating, ventilation, and air conditioning (HVAC) systems, as well as insulation and design requirements.<sup>226</sup>

The possible use of building codes to regulate GHG emissions suggests that the EPA has greatly overstated the administrative burdens of having smaller emitters comply with the plain language of the CAA. Buildings that emit below the thresholds contemplated by the Tailoring Rule could all be required to have

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222. NEW SOURCE REVIEW WORKSHOP MANUAL, *supra* note 180, at B.6.

223. *See* 42 U.S.C. § 7479(3) (2006).

224. *See* discussion *supra* Part IV.b.

225. *See* 42 U.S.C. § 7411.

226. *See* BUILDING ENERGY CODES, *supra* note 214, at 5.



general permits. This could be done in a fashion that does not increase the administrative burden on most states and localities because most state and local governments already have energy efficiency standards as part of their building codes.<sup>227</sup> In general, new buildings and major renovations require building permits, and those permits have energy efficiency requirements.<sup>228</sup> Furthermore, most CAA enforcement is already at the state level.<sup>229</sup> A general permit could be nothing more than an additional page on an electronic building permit that can be sent to state environmental agencies and the federal EPA, noting that a building is being built or rebuilt to federal energy standards with federally approved appliances. The federal EPA would not have to approve the permits, and state agencies would not have to approve additional permits.

### c. Selecting a Building Code

The use of building codes requires (1) selecting or writing an energy efficient building code and (2) selecting codes for new and existing buildings. Current building codes cover new buildings and major modifications. New buildings emitting more than 100/250 tpy CO<sub>2</sub>e would be subject to national building energy efficiency standards through EPA approval of SIPs. States could also develop plans under their SIPs to encourage owners of existing buildings to weatherize their buildings and increase energy efficiency subject to another type of building code. The EPA, other organizations, and agencies (especially the Department of Energy) would likely collaborate and develop an energy efficiency code for existing buildings.

This collaboration is analogous to regulation of GHG emissions from cars and trucks (mobile sources). In regulating mobile sources for GHG emissions, the EPA partnered with the Department of Transportation (DOT) to develop higher mileage

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<sup>227</sup>. *Id.*

<sup>228</sup>. *Id.*

<sup>229</sup>. See *Clean Air Act Permitting for Greenhouse Gases*, EPA, <http://www.epa.gov/nsr/ghgpermitting.html> (last visited Oct. 30, 2012).

standards for mobile sources.<sup>230</sup> The EPA would probably do the same and work with DOE to develop minimum standards for large buildings. Most of the work is already completed, so EPA could just borrow that work to promulgate new national minimum standards for large buildings.

Selecting a building code would rely, at least in part, on EPA's current five step process for BACT: (1) identify all available control technologies; (2) eliminate technically infeasible options; (3) evaluate and rank the remaining technologies based on environmental effectiveness; (4) evaluate the cost-effectiveness of controls after considering energy and other environmental impacts; and (5) select BACT.<sup>231</sup>

The U.S. Department of Energy (DOE) has a Building Energy Codes Program (BECP) to develop more energy efficient building codes.<sup>232</sup> The BECP works with the International Code Council (ICC), the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), the Illuminating Engineering Society of North America (IESNA), American Institute of Architects (AIA), the building industry, and state and local officials to develop and promote more stringent and easy-to-understand building energy codes and to assess potential code barriers to new energy efficient technologies.<sup>233</sup>

DOE's work on building energy codes was established by the Energy Conservation and Production Act of 1976 (ECPA).<sup>234</sup> ECPA established requirements for the development and implementation of performance standards for all new residential and commercial buildings.<sup>235</sup> BECP was funded in 1993 in response to the Energy Policy Act of 1992, which mandated that DOE participate in the model national codes development process

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230. See JAMES E. MCCARTHY, CONG. RESEARCH SERV., R 40506, CARS, TRUCKS, AND CLIMATE: EPA REGULATION OF GREENHOUSE GASES FROM MOBILE SOURCES 17 (2010), available at <http://crs.ncseonline.org/NLE/CRSreports/10Oct/R40506.pdf>.

231. See 42 U.S.C. § 7479(3) (2006).

232. *About Building Energy Codes*, U.S. DEP'T OF ENERGY, <http://www.energycodes.gov/about/> (last visited Oct. 30, 2012).

233. See *Development*, U.S. DEP'T OF ENERGY, <http://www.energycodes.gov/development/> (last visited Oct. 30, 2012).

234. Energy Conservation and Production Act, Pub. L. No. 94-385, 90 Stat. 1125 (1976).

235. *Id.*

and that DOE help states adopt and implement progressive energy codes.<sup>236</sup> DOE does energy and cost analysis throughout the code change proposal process, which fits with the cost-efficiency requirements of BACT.

EPA and DOE would have to partner to determine or develop a building code for new and existing buildings that conforms to BACT. This could be a multiyear process; so for the present, EPA should require that states adopt and enforce the most recent International Energy Conservation Code, released in 2012.<sup>237</sup> A similar process would be necessary for developing energy efficiency codes for existing buildings.

In setting energy efficiency codes for existing buildings, the United States should look to other countries' energy efficiency programs. There has been only limited development toward widespread, mandatory requirements for existing buildings.<sup>238</sup> In general, countries have increased energy efficiency requirements for new buildings, and used information (Energy Performance Certificates) and fiscal incentives to improve energy efficiency in existing buildings.<sup>239</sup>

The two primary baseline building energy efficiency codes are the International Energy Conservation Code (IECC) and the ANSI/ASHRAE/IESNA Standard 90.1 Energy Standard for Buildings Except Low-Rise Residential Buildings.<sup>240</sup> The "IECC addresses all residential and commercial buildings. ASHRAE 90.1 covers commercial buildings, defined as buildings other than single-family dwellings and multi-family buildings three stories or less above grade."<sup>241</sup> The IECC adopted, by reference,

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236. Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776.

237. INT'L CODE COUNCIL, 2012 INTERNATIONAL ENERGY CONSERVATION CODE (2012).

238. BLAIR HAMILTON, REGULATORY ASSISTANCE PROJECT, A COMPARISON OF ENERGY EFFICIENCY PROGRAMS FOR EXISTING HOMES IN ELEVEN COUNTRIES 5 (2010), [http://www.raonline.org/docs/RAP\\_Hamilton\\_ComparisonOfEEProgrammesForExistingHomesInElevenCountries\\_2010\\_02\\_19.pdf](http://www.raonline.org/docs/RAP_Hamilton_ComparisonOfEEProgrammesForExistingHomesInElevenCountries_2010_02_19.pdf).

239. Council Directive 2002/91, art. 7, 2002 O.J. (L 1) 65, 68 (EU) (requiring Energy Performance Certificates in the European Union).

240. BUILDING ENERGY CODES, *supra* note 214, at 5.

241. *Id.*

ASHRAE 90.1—“compliance with ASHRAE 90.1 qualifies as compliance with IECC for commercial buildings.”<sup>242</sup>

The “IECC is developed under the auspices of the ICC using a government consensus process. Per this process, all interested parties may participate, but the final vote . . . is made by individuals associated with federal, state, and local governments who are also members of the ICC.”<sup>243</sup> ICC codes are updated every three years; the most recent was released in 2012. Since “the IECC is written in mandatory, enforceable language, state and local jurisdictions can easily adopt, implement, and enforce the IECC as their energy code.”<sup>244</sup>

States vary greatly in their adoption of IECC building codes, but most states have at least some adoption of such codes, making it a good candidate for adoption nationwide. Currently, 39 states have standards that are at or above the 2009 standards.<sup>245</sup> However, most states only adopted these standards at the urge of the federal government. In 2009, the Department of Energy stipulated that any state receiving funding from the American Recovery and Reinvestment Act’s State Energy Program had to meet the 2009 IECC and ASHRAE standards.<sup>246</sup> This was effective as a majority of states updated their codes; in 2008, only 18% of states had updated their residential codes and 12% had implemented or upgraded their commercial codes.<sup>247</sup> This suggests that most states will not update their energy efficiency codes unless the federal government gives them an incentive to do so.

California is an important exception because it has long had by far the strictest energy efficiency requirements. In 1978, California adopted Title 24, “a set of high-efficiency standards dictating energy-saving requirements for walls, roofs, windows,

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242. *Id.*

243. *Id.*

244. *Id.*

245. *Status of State Energy Code Adoption*, U.S. DEP’T OF ENERGY, <http://www.energycodes.gov/adoption/states> (last visited Oct. 30, 2012).

246. Linda Baker, *Reconstructing Building Codes for Greater Energy Efficiency*, GOVERNING (May 2011), <http://www.governing.com/topics/energy-env/reconstructing-building-codes-greater-energy-efficiency.html>.

247. *Id.*

insulation, heating, water heating, lighting, and ventilating and air conditioning systems.”<sup>248</sup> “Along with mandates for energy-efficient appliances, the Title 24 standards have saved Californians more than \$56 billion in electrical and natural gas expenses” over the last thirty years, which greatly outweighs increases in buildings costs caused by more energy efficient codes.<sup>249</sup> “Although per capita electricity use in the U.S. has increased by nearly 50% since the mid-1970s,” California’s per capita electricity use has remained almost constant.<sup>250</sup>

The 2012 ASHRAE and ICC building energy codes have learned from California’s experience and are about 30% more efficient than the 2006 codes.<sup>251</sup> This is by far the largest increase in efficiency in the history of the codes, and will actually be about 12% more efficient than California’s code.<sup>252</sup> Among major changes to the code are “lighting that shuts off automatically in commercial buildings; minimum energy performance standards for heating systems in computer rooms; and more efficient water-cooled air conditioners.”<sup>253</sup>

An application of BACT to buildings would require that states adopt codes at least as stringent as the 2012 ASHRAE and ICC building codes for buildings that emit more than the 100/250 tpy threshold of CO<sub>2</sub>e. Since DOE conducts cost-benefit analyses on building codes, such analyses can be made to conform to the BACT process.

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248. *Id.*; see also California Building Code, Title 24 (2010).

249. Baker, *supra* note 246.

250. *Id.*

251. *Id.*; FED’N OF AM. SCIENTISTS, BENCHMARKING STANDARDS, MODEL CODES, CODE AND VOLUNTARY GUIDELINES ON THE HERS INDEX, <https://www.fas.org/programs/energy/btech/policy/Benchmarking%20standards%20and%20model%20codes.pdf>.

252. Stephen Selkowitz, Int’l Energy Agency, *Overview of U.S. Building Regulations* (Nov. 17, 2011), <http://www.slideshare.net/internationalenergyagency/16-selkowitz>; ARCHITECTURE 2030, MEETING THE 2030 CHALLENGE THROUGH BUILDING CODES 4 (2008) (showing that California 2008 building code, effective 2010, is not as energy efficient as 2012 code described in Selkowitz).

253. Baker, *supra* note 246.

## V. USING BUILDING CODES TO REGULATE GHG EMISSIONS UNDER THE CAA IS GOOD POLICY

Buildings consume 70% of the electricity in the United States, and result in 39% of total carbon dioxide emissions.<sup>254</sup> Building emissions in the United States are 8% of the world's total emissions.<sup>255</sup> The Department of Energy has released a report entitled *Building Energy Codes 101: An Introduction* that discusses these issues at length.<sup>256</sup> *Building Codes 101* discusses: (1) “[b]enefits in terms of the current energy, economic, and environmental challenges facing our world today;” (2) “[c]hallenges in terms of adoption, implementation, compliance, and enforcement;” (3) “[d]evelopment processes led by the International Code Council (ICC) and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE);” (4) “[a]doption and incorporation into building design and construction by states and jurisdictions;” and (5) “[e]nforcement at the state and local level.”<sup>257</sup>

According to DOE, “[r]ecent research shows that if the 2006 International Energy Conservation Code (IECC) and ANSI/ASHRAE/IESNA Standard 90.1-2004 were upgraded to be 30 to 50 percent more stringent, adopted among states, and effectively implemented, significant benefits would be gained in terms of energy consumption, cost savings, and [carbon dioxide] emissions reduction.”<sup>258</sup> Note again that the 2012 IECC is 30% more energy efficient than the 2006 IECC.<sup>259</sup> By 2030, the effects of improved residential and commercial building codes would reduce building energy use by 3.5 quadrillion Btu.<sup>260</sup> This is equivalent to power generated by 260 medium-sized (450-MW) power plants.<sup>261</sup> By 2030, total annual savings to building owners would be \$30 billion.<sup>262</sup> “Even accounting for the

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254. BUILDING ENERGY CODES, *supra* note 214, at 1.

255. *Id.*

256. *Id.*

257. *Id.*

258. *Id.* at 3.

259. Baker, *supra* note 246.

260. BUILDING ENERGY CODES, *supra* note 214, at 3.

261. *Id.*

262. *Id.*

increased investment cost of the measures, the net benefits to the nation are large.”<sup>263</sup> “Transforming the building sector to employ more energy-efficient designs, equipment, and solar power could cut projected overall household energy expenses in 2030 from \$285 billion to \$130 billion.”<sup>264</sup> Failing to transform the building sector “will raise the cost of meeting long-term climate goals by at least \$500 billion per year,” as more expensive means would have to be used to reduce carbon emissions.<sup>265</sup>

Others have found that the United States economy provides tremendous opportunities for net present value (NPV) positive increases in energy efficiency.<sup>266</sup> In 2009, McKinsey found that an investment of \$520 billion in energy efficiency would unlock energy efficiency gains of \$1.2 trillion, both in NPV terms.<sup>267</sup>

In its report, McKinsey found many barriers to investment in energy efficiency. These barriers include:

- Agency (incentives split between parties, impeding capture of potential),
- Ownership transfer (owner expects to leave before payback time),
- Transaction barriers (unquantifiable incidental costs of deployment),
- Pricing distortions (by regulatory, tax, or others distortions);
- Risk and uncertainty (about ability to capture benefit of the investment),
- Lack of awareness/information (about product efficiency and own consumption behavior),
- Custom and habit (practices that prevent capture of potential),
- Elevated hurdle rate (similar options treated differently);
- Adverse bundling (combining efficiency savings with costly options),
- Capital constraints (inability to raise initial outlay),
- Product availability (insufficient supply or channels to market), and

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263. *Id.*

264. *Id.*

265. *Id.*

266. HANNAH CHOI GRANADE ET AL., MCKINSEY GLOBAL ENERGY AND MATERIALS, UNLOCKING ENERGY EFFICIENCY IN THE U.S. ECONOMY 3 (2009).

267. *Id.* at xii.

- Installation and use (improperly installed and/or operated).<sup>268</sup>

All of these barriers to the proper realization of energy efficiency suggest that government intervention is needed.<sup>269</sup> Agency and ownership transfer problems are especially severe. Energy efficiency is difficult to measure, and therefore it is difficult to effectively capitalize the value of it into rent or property values. For a rented property, a landlord has little market incentive to increase energy efficiency in his rented property because he cannot gain the full value of increased rent from his investment. Property owner-occupiers will be reluctant to invest in energy efficiency because they may not be around to gain the full benefits of the investment, and they will likely not receive the full value of the investment into energy efficiency when they sell the property.

Government intervention solves these problems because all building owners are forced to invest in energy efficiency. Everyone then pays for less energy, and there is less environmental degradation. Adopting stricter building and appliance codes would save money, not including the environmental benefits from reducing pollution from mining and burning fossil fuels (which provide most of our energy). The national implementation of stricter building and appliance codes would be cost-effective *if climate change did not exist*. The existence of climate change makes the national implementation of stricter building and appliance codes even more pressing.

Regulating building codes under the CAA would also solve major problems with building code implementation. Currently, adoption of stricter building codes as they are developed is not automatic in most states.<sup>270</sup> Requirement of BACT for larger buildings would make this automatic, as the new building codes would be considered part of SIPs that must be enforced by the state. Furthermore, since all jurisdictions would have high energy efficiency standards for large buildings, most builders would be able to deliver high energy efficiency standards. There would still be the challenges of implementation, compliance, and

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268. *Id.* at ix.

269. *Id.* at 70.

270. BUILDING ENERGY CODES, *supra* note 214, at 3.



enforcement, but these problems currently exist and would not likely be exacerbated by stricter building codes.

## VI. CONCLUSIONS

In 2009, the EPA found that GHGs endanger public health and welfare, responding to *Mass v. EPA* (2007). The EPA started regulating GHGs by regulating mobile sources, and then moved to regulate stationary sources.

Regulation of GHGs under the CAA is difficult; the CAA was certainly not written with GHGs in mind. Most air pollutants are emitted in such small quantities that only very large sources (like power plants and large industrial facilities) require permits. In contrast, carbon dioxide is emitted in such large quantities that most commercial, industrial, and large multifamily residential buildings emit more than 100/250 tpy and require permits under the plain language of the CAA. Instead of hundreds of permits per year, EPA would have to issue millions of permits.

The plain language of the CAA states that the EPA must regulate sources emitting more than 100/250 tpy of any regulated air pollutant. However, permits require BACT, which is supposed to be determined on a case-by-case basis. The EPA cannot regulate millions of sources on a case-by-case basis. In the Tailoring Rule, the EPA chose to limit GHG regulation to sources emitting more than 75,000/100,000 tpy CO<sub>2</sub>e.

The EPA justified the Tailoring Rule's departure from the plain language of the CAA with three doctrines: (1) absurd results, (2) administrative necessity, and (3) one-step-at-a-time. None of these three doctrines adequately justify the Tailoring Rule, and therefore it will likely be overturned based on *Chevron* if the D.C. Circuit reaches the merits of the case.

The best way to regulate smaller major sources for GHG emissions is by using building codes. Precedent and the language of the CAA suggest that forcing states to adopt and enforce more energy efficient building codes through their SIPs to reduce GHG emissions would be a permissible reading of the CAA.

While regulating smaller major sources provides some difficulties (like how to regulate existing buildings), forcing building owners to increase the energy efficiency of new and existing buildings is cost-effective, even disregarding positive

effects on the environment. Market failures prevent the full realization of energy efficiency. Federal government intervention, as required by the CAA, could appropriately incentivize state and local governments to include high levels of energy efficiency in their building codes.

The Tailoring Rule is unlawful and thwarts national progress in energy efficiency. It should be replaced, and we should embrace the challenge of using the CAA and more energy efficient building codes to regulate GHGs and move towards a cleaner, greener future.