Obama Administration Efforts to Control Stationary Source Greenhouse Gas Emissions Through Rulemaking

by Tom Mounteer

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Summary

The Obama EPA has put forth several actions to regulate the emissions of greenhouse gases from stationary sources. These regulatory developments take place in the context of failed efforts to pass comprehensive federal legislation and the Supreme Court's death blow to federal common-law remedies. Two of the Administration's regulatory initiatives—the Endangerment Finding and the embrace of greenouse gases in the prevention of significant deterioration program—are embroiled in litigation, the outcome of which may not be known for some time. The Administration's new source performance standard for electric generating units has yet to be proposed. Actual reductions in greenhouse gas emissions achieved through these rules will not be knowable for years.

From its early days, the Barack Obama Administration seemed sanguine about the need for it to control greenhouse gas (GHG) emissions using existing Clean Air Act (CAA)[1] authority if the U.S. Congress did not enact comprehensive legislation.[2] U.S. Environmental Protection Agency (EPA) Administrator Lisa Jackson drew a distinction with the George W. Bush Administration: "The difference between this administration and the last is that we don't believe we have an option to do nothing."[3] There has been much analysis on the use of existing statutory provisions to control GHG emissions.[4] At first, when the Administration seemed prepared to go down the regulatory path, many perceived its willingness as a not-so-veiled threat to Congress to enact comprehensive legislation: "legislate or else!"[5] Indeed, an EPA press release in December 2009 continued to urge legislation as a means of forestalling regulation,[6] and Administrator Jackson acknowledged legislation as a more efficient means of proceeding.[7] After the mid-term election doomed the chances

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1. 42 U.S.C. §§7401-7671q, ELR Stat. CAA §§101-618.
2. "If Congress fails to pass cap-and-trade legislation, it will rapidly approach a fork in the road in addressing global warming. Members can sit back while unelected bureaucrats at the Environmental Protection Agency follow through on their moves toward regulating greenhouse gases as a pollutant under the Clean Air Act." *Cap and Rage: The Fight Over Health-Care Reform Could Hobble Climate-Change Legislation*, Wash. Post (editorial), Aug. 18, 2009, at A14.
3. Daniel Stone, *Regulate, Baby, Regulate*, Newsweek, Mar. 29, 2010, *available at* http://www.thedailybeast.com/newsweek/2010/04/01/regulate-baby-regulate.html.
4. *See, e.g.*, Arnold W. Reitze Jr., *Federal Control of Greenhouse Gas Emissions*, 40 Envtl. L. 1261 (2010); Robert B. McKinstry Jr., *The Clean Air Act: A Suitable Tool for Addressing the Challenges of Climate Change*, 40 ELR 10301 (Apr. 2011).
5. Indeed, Sens. John Kerry (D-Mass.) and Lindsey Graham (R-S.C.), then working together on a Senate bill (*see infra* notes 22-42 and accompanying text) explicitly stated as much in a *Wall Street Journal* op-ed. John Kerry & Lindsey Graham, *Yes We Can (Pass Climate Change Legislation)* Wall St. J., Oct. 11, 2009.
6. In a December 2009 EPA press release regarding GHG emissions from on-road vehicles, EPA stated:
   > President Obama and Administrator Jackson have publicly stated that they support a legislative solution to the problem of climate change and Congress' efforts to pass comprehensive climate legislation. However, climate change is threatening public health and welfare, and it is critical that EPA fulfill its obligation to respond to the 2007 U.S. Supreme Court ruling that determined that greenhouse gases fit within the Clean Air Act definition of air pollutants.

   Press Release, U.S. EPA, *EPA: Greenhouse Gases Threaten Public Health and the Environment*, Dec. 7, 2009, *available at* http://yosemite.epa.gov/opa/admpress.nsf/6424ac1caa800aab85257359003f5337/08d11a451131bca585257685005bf252!OpenDocument.
7. Stone, *supra* note 3.

for comprehensive legislation,[8] and even more so after the U.S. Supreme Court's determination that common-law claims were unavailable,[9] rulemaking clearly became an end in itself.

It is far from the case that using existing statutory authority was the brainchild of the Obama Administration. A couple years before the new Administration's arrival, Congress had insisted on stationary source reporting of GHG emissions. The thoroughness of the "staff draft" incorporated into the Bush Administration's response to the Supreme Court's directive that EPA determine whether GHG emissions endangered human health and welfare, i.e., the Endangerment Finding,[10] demonstrates how much thought the Agency had put into proceeding under a number of statutory provisions before President Obama's election.

If the concept of proceeding administratively did not originate with the Obama Administration, the manner in which the Administration has done so is significant. The philosophical differences between the two Administrations are likely no starker than in connection with the Endangerment Finding.[11] Where the Bush Administration resisted making that finding for fear of the cascading regulatory consequences to ensue, and its view that the current statute was "not up to the job," the Obama Administration felt compelled to act by congressional inaction.[12] The Obama Administration has demonstrated willingness to expand the Emissions Inventory to new industrial sectors,[13] to "tailor" existing statutory authority to regulate GHG emissions from all new and modified GHG-emitting sources,[14] to direct states to apply that directive to permits for construction of such sources,[15] and to develop emissions standards for new and modified utilities and refineries.[16]

I. The Road to Regulation

The 2010 mid-term election made it clear that there was little hope for enactment of federal cap-and-trade legislation. More recently, the Supreme Court determined that regulations adopted pursuant to the CAA displaced federal common-law public nuisance claims targeting GHG emissions.[17] These developments make it pretty clear that—on the federal level—regulation is, for the time being, "the only game in town."

8. *See infra* notes 19-42 and accompanying text.
9. *See infra* notes 43-56 and accompanying text.
10. *Infra* note 57.
11. *Infra* notes 57-87 and accompanying text.
12. In a press release announcing the Agency's intention to move forward with establishing GHG standards for petroleum refineries and fossil fuel power plants, Administrator Jackson stated that EPA was ". . . following through on our commitment to proceed in a measured and careful way to reduce GHG pollution that threatens the health and welfare of Americans, and contributes to climate change." Press Release, U.S. EPA, *EPA to Set Modest Pace for Greenhouse Gas Standards*, Dec. 23, 2010, *available at* http://www.epa.gov/agingepa/press/epanews/2010/2010_1223_1.htm.
13. *See infra* notes 119-58 and accompanying text.
14. *See infra* notes 207-37 and accompanying text.
15. *See infra* notes 240-47 and accompanying text.
16. *See infra* notes 265-90 and accompanying text.
17. *See infra* note 42.

A. *The Demise of Federal Cap-and-Trade Legislation*

From the months following the U.S. House of Representatives' passage of comprehensive federal GHG cap-and-trade legislation in June 2009,[18] through the mid-term election of November 2010, there were glimmers of hope that the U.S. Senate would pass a counterpart bill. That glimmer ended with the mid-term election. With an eye toward the mid-term election, the president conceded that cap and trade "was just one way of skinning the cat; it was not the only way. It was a means, not an end."[19] The president could not turn a blind eye to the new reality. According to some accounts, "[f]ive of the six new GOP senators and 35 of the 85 incoming Republican freshmen in the House ha[d] questioned whether [GHG] emissions caused by human activity contribute to climate change."[20]

Through the waning days of Senate hopefulness, Sen. John Kerry (D.-Mass.) was more steadfast in his support than other legislators. Toward the end of 2009, he joined with Sens. Joe Lieberman (I.-Conn.) and Lindsey Graham (R.-S.C.) to develop consensus on what comprehensive federal climate change legislation should contain.[21] Champions of comprehensive federal legislation were hoping that international talks in Copenhagen would provide momentum. In mid-December 2009, Senator Kerry boldly predicted: "With a successful deal here in Copenhagen, next year, the United States Congress . . . will pass comprehensive energy/climate legislation" that will reduce U.S. GHG emissions.[22] At the same time, the Congressional Budget Office released a report that estimated that the legislation Senator Kerry favored would lead to a net increase in federal revenues of approximately $21 billion in the first decade after the legislation's passage.[23] By year's end, however, many Democrats were urging their leadership to abandon the cap-and-trade approach, and even Senator Kerry was seen as equivocating on the method "by which we might price carbon."[24]

Through the spring of 2010, there were various efforts to breathe life into the dying patient. The devastating effect that putting a price on carbon would have on the U.S. economy—a principal line of attack by the legislation's opponents[25]—continued to be a focus. Early in the year, in exchange for Sen. George Voinovich's (R-Ohio) dropping his opposition to the confirmation of EPA Deputy Administrator Robert Perciasepe, EPA committed to release a less

18. *See generally* Tom Mounteer, *Comprehensive Federal Legislation to Regulate Greenhouse Gas Emissions*, 39 ELR 11068 (Nov. 2009).
19. Juliet Eilpern & Steven Mufson, *Obama Shifting Climate Strategy After GOP Gains*, Wash. Post, Nov. 5, 2009, at A3.
20. *Id.* (citing survey by Daily Kos blogger R.L. Miller and Think Progress, an arm of the Center for American Progress).
21. Darren Samuelson, *With an Eye on Copehagen, Senate Tiptoes Back Into Climate Debate*, Climate Wire, Dec. 1, 2009.
22. Dean Scott, *Kerry Still Confident Over Senate Bill, Says Passage Hinges on Copenhagen Deal*, Daily Env't Rep. (BNA) Dec. 17, 2009, at A-4.
23. Congressional Budget Office, Cost Estimate: S. 1733: Clean Energy Jobs and American Power Act (Dec. 16, 2009).
24. Lisa Lerer, *Dems to W.H.: Drop Cap-and-Trade*, Capitol News Co. (Dec. 27, 2009).
25. *See* Mounteer, *supra* note 18, at 11070-71.

rosy prediction of the legislation's economic impact.[26] Business and labor opposition mounted, however, early in the new year. In a January speech before the U.S. Chamber of Commerce's "State of American Business 2010" forum, Chamber President Thomas Donohue stated that the legislation would "tie economic activity in knots and eliminate jobs from one end of the country to another."[27] Organized labor picked up on the concern about job loss.[28] Oil companies BP and ConocoPhillips and heavy-equipment manufacturer Caterpillar withdrew from the U.S. Climate Action Partnership, a three-year-old business group supporting comprehensive federal legislation.[29] The three companies withdrew from the Partnership, because they believed legislation the Partnership supported put the transportation sector at an unfair disadvantage, penalized the refinery industry, and failed to promote natural gas usage.[30]

The Administration continued to appear to support comprehensive legislation in the early part of 2010. While the president seemed to equivocate somewhat in his support for cap-and-trade legislation on February 2, 2010,[31] his Council of Economic Advisors' "Economic Report of the President," released a week later, continued to embrace a cap-and-trade approach.[32] Later in February, White House Office of Energy and Climate Change Director Carol Browner scoffed at those who claimed the Administration was no longer advocating cap-and-trade legislation.[33]

On March 19, 2010, 22 Democratic senators wrote Majority Leader Harry Reid (D-Nev.) encouraging the Senate to take up energy and climate change legislation during the session.[34] Just one month later, Senator Graham withdrew from his troika with Senators Kerry and Lieberman, saying: "I thought we had a shot if we got the business and environmental community behind our proposal . . . . What happened is that firm, strong commitment disappeared."[35] Eventually, Senators Kerry and Lieberman introduced a 987-page "discussion draft" bill, the American Power Act, which contained provisions comparable to the House-passed legislation. It would have preempted state cap-and-trade programs.[36] It would have been even more generous in its distribution of free allowances to U.S. industry than the House-passed legislation.[37] It was less generous than the House-passed legislation in the financial incentives it provided for renewable energy and energy efficiency.[38]

On the day of the release of the Kerry-Lieberman discussion draft, pundits were all but declaring it DOA.[39] Competing legislative demands, the challenged economy, and the "politics of the moment" were causes of pessimism.[40] By early summer, proponents were hoping to append climate change legislation to an energy bill given greater chances of passing.[41] All hopes for a legislative approach disappeared with the outcome of the mid-term election.

B. Unavailability of Common-Law Remedies

On June 20, 2011, the Supreme Court closed another possible avenue for shaping policy in the climate change arena: common-law tort litigation. On that date, the Court handed down its decision in the case *American Electric Power Co. v. Connecticut (AEP)*,[42] holding that the CAA displaced federal public nuisance actions to address climate change. By the time the Supreme Court issued its *AEP* ruling, the Obama Administration was well along in its efforts to address GHG emissions regulatorily. The Supreme Court's decision left only the regulatory avenue available at the federal level.

In 2005, eight states (including California), New York City, and three public interest groups sued six electrical power corporations—five of them the largest carbon dioxide (CO_2) emitters in the United States—under both federal common law and state law to abate the alleged public nuisance of global warming.[43] The plaintiffs had sought an order: (1) holding each defendant jointly and severally liable for contributing to the public nuisance; and (2) enjoin-

26. *EPA Agrees to New Climate Analysis, Ending EPA Deputy Dispute*, Inside EPA, Jan. 5, 2010.
27. Andrew Childers, *Cap-and-Trade Bill Would Stifle Economy, Will Fail in Senate, Chamber President Says*, World Climate Change Rep., BNA, Jan. 12, 2010.
28. Letter From Mark Ayers, President, Building and Construction Trades Dept., AFL-CIO, to Rahm Emmanuel, White House Chief of Staff (Jan. 27, 2010).
29. Stephen Power & Ben Casselman, *Defections Shake Up Climate Coalition*, Wall St. J., Feb. 17, 2010, A1.
30. Michael Burnham, *Conoco, BP, Caterpillar Leave Climate Coalition*, N.Y. Times, Feb. 16. 2010, *available at* http://www.nytimes.com/gwire/2010/02/16/16greenwire-conoco-bp-caterpillar-leave-climate-coalition-73582.html. A BP spokesman went on to say: "We [BP] don't think the allowance structure in the bills will create a deep and liquid carbon market," and added: "The markets will be volatile, and so will the price of carbon." *Id.*
31. Dean Scott, *Obama Says Senate May Have to Drop Cap-and-Trade, Focus on Energy Measures*, World Climate Change Rep., BNA, Feb. 10, 2010.
32. Dean Scott, *White House Report Says Cap-and-Trade Key to Emissions Cuts, Clean Energy Growth*, World Climate Change Rep., BNA, Feb. 11, 2010.
33. Dean Scott, *Kerry Nears Release of Compromise Bill; Browner Says No White House Bill Planned*, World Climate Change Rep., BNA, Feb. 23, 2010.
34. Kim Chapman, *Democratic Senators Push for Climate Bill This Year*, Energy & Climate Letter (Mar. 22, 2010).
35. Juliet Eilperin, *Democrats Work to Salvage Climate Change Proposal in Senate*, Wash . Post, Apr. 25, 2010, at A5. Senator Graham's withdrawal was attributed to an inability of his efforts to get the climate bill to proceed before the immigration bill and a desire to "limit the number of fronts on which he [was] confronting his party's leadership." *Id.*
36. Steven Cook, *Kerry-Lieberman Bill Would Preempt State Emissions Trading, Some EPA Authority*, World Climate Change Rep., BNA May 12, 2010, at 14. *Cf.* Mounteer, *supra* note 18, at 11079.
37. Dean Scott, *Kerry-Lieberman Unveil Climate Bill, With Increased Allowances for Utilities, Manufacturing*, World Climate Change Rep., BNA, May 12, 2010. *Cf.* Mounteer, *supra* note 18, at 11076-78. Indeed, citizen group Clean Air Watch President Frank O'Donnell "said the bill ought to be named 'Let's Make a Deal'" because of its largesse to regulated industry. Eilperin, *supra* note 35.
38. Ari Natter, *Climate Bill Proposal Would Provide Billions for Clean Energy, But Less Than Other Bills*, World Climate Change Rep., BNA, May 12, 2010. *Cf.* Mounteer, *supra* note 18, at 11079-82.
39. Jesse Greenspan, *Senate Bill Won't Pass Easily, If at All: Experts*, Law 360 Env't (May 13, 2010).
40. *Id.* (quoting Bill Bumpers).
41. Jesse Greenspan, *Dem Plot to Keep Cap-and-Trade Alive*, Law 360 Env't (June 10, 2010).
42. No. 10-174, 41 ELR 20210 (U.S. June 20, 2011).
43. Connecticut v. American Electric Power Co., 406 F. Supp. 2d 265, 267-68, 35 ELR 20186 (S.D.N.Y. 2005).

ing the defendants to cap their CO_2 emissions and then reduce those emissions by a specified percentage each year for at least a decade.[44] The district court held that the suit presented a nonjusticiable political question and that it would be "judicial fiat" to entertain the claim.[45]

In September 2009, the U.S. Court of Appeals for the Second Circuit reversed the district court's decision.[46] Most significantly, the court held that the lower court had wrongly dismissed the claim on political question grounds and that the plaintiffs, in fact, had standing to make their claim.[47] On the political question issue, the court observed that "federal courts have successfully adjudicated complex common law public nuisance cases [including on environmental matters] for over a century."[48] The court added that it was an error for the defendants "to equate a political question with a political case," and that Congress was perfectly able to amend the CAA deal with global warming if it chose to do so.[49]

As for the plaintiffs' standing, the Second Circuit relied on *Massachusetts v. EPA* to hold that the plaintiff's contended injury, although one that would occur incrementally as sea levels rose, was sufficient to constitute an injury-in-fact.[50] The court found that such injuries were, in fact, "fairly traceable" to the defendants' GHG emissions.[51] And lastly, the court held that the defendants' emissions could plausibly and unreasonably interfere with the public's health, safety, comfort, and convenience.[52] Accordingly, the court held that the plaintiffs' claim against the defendant GHG emitters had been appropriately brought pursuant to the federal common law of nuisance.[53] The merits of *AEP* were left open to be debated at the district court level.

The outcome of the case at the Supreme Court was widely expected, although the 8-0 decision might not have been apparent until the day of the case's argument. On August 24, 2010, the Solicitor General, on behalf of defendant Tennessee Valley Authority, a government-owned company, filed a brief urging the Court to remand the case back to the Second Circuit, not only to reconsider its judgment on the standing issue, but also to consider whether EPA regulatory activity displaced the public nuisance claims.

> Since this Court held in 2007 that [CO_2] falls within [the Agency's] regulatory authority, EPA has taken several significant steps toward addressing the very question presented here . . . . That regulatory approach is preferable to what would result if multiple district courts—acting without the benefit of even the most basic statutory guidance—could use common law nuisance claims to sit as arbiters of scientific and technology-related disputes and de facto regulators of power plants and other sources of pollution both within their districts and nationwide.[54]

Upon hearing the argument of the case, a leading law professor observed that the Justices' questioning suggested that the Justices had accepted that the Agency's regulatory activities since the case had been filed so many years earlier "implicitly displace federal common law."[55] That was exactly the outcome.

With hopes for comprehensive federal legislation dashed, the outcome in the *AEP* decision made the Obama Administration's (perhaps reluctant) moving ahead regulatorily appear prescient. The Administration did so on a number of fronts.

II. Endangerment Finding

The Bush and Obama Administrations' reactions to an earlier Supreme Court decision, *Massachusetts v. EPA*,[56] could not be more different. The Bush Administration was not just wary of using existing CAA authority to tackle the problem of GHG emissions but was openly hostile to doing so. The Obama Administration, on the other hand, seemed eager to find that continued emissions of GHGs endanger human health and welfare, regardless of the cascading regulatory consequences—particularly those affecting stationary sources—triggered by such a finding. The Obama Administration's making that finding launched 16 lawsuits, as well as challenges to EPA's refusal to reverse the decision administratively. The lawsuits focus chiefly on the scientific underpinnings of the Agency's finding. The lawsuits are ongoing, with the current briefing schedule continuing through late 2011.

A. *Bush Administration Response to Massachusetts*

Six months before the end of the Bush Administration, EPA issued an advance notice of proposed rulemaking (ANPRM) in response to the Supreme Court's decision in *Massachusetts*.[57] The ANPRM was a curious document, with "[n]one of the views or alternatives raised in [the] notice represent[ing] the Agency's decisions or policy recommendations."[58] In essence, the ANPRM presented a "staff draft"[59] outlining many ways in which the Agency, under existing CAA authority, could choose to regulate GHGs. The Office of Management and Budget explicitly sanctioned the publication of the "staff draft" in the

44. *Id.* at 270.
45. *Id.* at 274.
46. Connecticut v. AEP, 582 F.3d 309, 39 ELR 20215 (2d Cir. 2009).
47. *Id.* at 316, 349.
48. *Id.* at 326.
49. *Id.* at 332.
50. *Id.* at 344.
51. *Id.* at 345.
52. *Id.* at 370.
53. *Id.* at 371.
54. Brief for the Tennessee Valley Authority in Support of Petitioners, American Electric Power Co., Inc. v. Connecticut, No. 10-174 (Aug. 24, 2010).
55. James R. May, *Recent Developments in Climate Change Litigation: Oral Arguments in* AEP v. Connecticut *and Related Cases*, Toxics Law Rep. BNA, June 16, 2011, at 696 (correctly predicting unanimous outcome).
56. *See* Tom Mounteer, Climate Change Deskbook, §3.1.1.1.1. (Envtl. L. Inst. 2009).
57. 73 Fed. Reg. 44354-520 (July 30, 2008).
58. *Id.* at 44355.
59. *Id.* at 44385 (letter from Council of Environmental Quality (CEQ) Chairman James Connaughton).

absence of explicit Agency policy recommendations on the theory that "consensus is not necessary in order for EPA to seek public comment on the wide-ranging issues raised by the draft regarding the potential regulation of [GHG] under the Clean Air Act."[60] Overlaying the "staff draft" was a series of statements by senior Administration officials to the effect that the CAA is alternately either "an outdated law . . . ill-suited for the task of regulating [GHGs]"[61] or "a deeply flawed and unsuitable vehicle for reducing [GHGs]."[62]

Three aspects of the ANPRM were significant: (1) EPA's staff's view on the Agency's multiple authorities for regulating GHGs under the existing Act; (2) the statements by senior Administration officials on why exercising such authority would be poor public policy; and (3) the manner in which the ANPRM took up the "endangerment assessment" directive that was at the core of the Court's decision in *Massachusetts*.

EPA staff identified a smorgasbord of statutory authority under which the Agency could regulate GHGs. In many respects, the theories set forth were similar to those plaintiffs had asserted in their various challenges involving stationary sources.[63]

- ***More Stringent Tailpipe Emission Standards.*** The ANPRM concluded that the Agency could use its authority to regulate emissions from mobile sources under Title II of the CAA to "achieve additional GHG emissions reductions based on a variety of criteria, including the amount of reduction needed, technological feasibility, and cost effectiveness."[64]
- ***Cap-and-Trade Systems for Motor Vehicle Emissions.*** The ANPRM sought comment on whether the Agency should, contrary to its current exercise of CAA Title II authority (which limits emissions trading to within individual mobile source subsectors), allow credit trading "across all mobile source sub-sectors."[65]
- ***National Ambient Air Quality Standard (NAAQS).*** The ANPRM indicated that Agency precedent would allow setting a NAAQS for a group of compounds and that "there would be increased complexity in setting NAAQS for individual GHGs rather than for GHGs as a group."[66] The Agency would face "special challenges in determining the level of the NAAQS," consonant with the statutory standard requiring an "adequate margin of safety" given that "the full effects associated with elevated concentrations of these pollutants occur over a long period of time and there are significant uncertainties associated with the health or welfare impacts at any given concentration."[67]
- ***New Source Performance Standards (NSPS).*** EPA could promulgate an "independent, comprehensive program for regulating most stationary sources of GHGs" under its NSPS program as it has for more than 70 source categories and subcategories.[68]
- ***National Emission Standards for Hazardous Air Pollutants (NESHAP).*** EPA could add GHGs to the list of hazardous air pollutants (HAPs) under the statutory standard and regulatory criteria for adding HAPs and then regulate their emission from source categories that emit them.[69]

For as many avenues of potential regulation that staff identified, senior Bush Administration officials advanced public policy reasons for EPA's not exercising authority under the CAA to regulate GHGs.

- "All current forecasts of global warming that extend roughly a decade are based on scenarios that assume a pattern of human behavior." "Of all the effects that complicate the scientific analysis of GHG regulation, none is more profound and less tractable than the unpredictability of human behavior. Because the largest sources of anthropogenic CO_2 are linked to the use and production of energy, and because energy is an essential ingredient of all economically productive activity, GHG producing activities cannot be simply extracted from this tightly woven matrix of any economy. And economic globalization ensures that this matrix of anthropogenic climate influence is global."[70]
- "Controlling GHG emissions in the United States will reduce atmospheric concentrations of those gases only if our emissions reductions are not simply replaced with emission increases elsewhere in the world."[71]
- "[T]he use of the Clean Air Act to regulate GHG emissions unilaterally as envisioned in the draft would harm America's international competitiveness."[72]
- "The potential regulation of [GHGs] under any portion of the Clean Air Act could result in an unprecedented expansion of EPA authority that would have

60. *Id.* at 44356 (letter from Office of Information and Regulatory Affairs Administrator Susan Dudley).
61. *Id.* at 44355 (preface by U.S. EPA Administrator Stephen Johnson).
62. *Id.* at 44356 (letter from Office of Information and Regulatory Affairs Administrator Susan Dudley); *see also* 44385 (statement of CEQ Director Connaughton).
63. *See* Mounteer, *supra* note 56, at §3.1.1.2.
64. 73 Fed. Reg. 44437 (July 30, 2008).
65. *Id.* at 44438-39.
66. *Id.* at 44477.
67. *Id.* at 44478-79.
68. *Id.* at 44486-87.
69. *Id.* at 44493.
70. *Id.* at 44381 (joint letter from Council of Economic Advisers Chairman Edward Lazaer and Office of Science and Technology Policy Director John Marburger).
71. *Id.* at 44359 (joint letter from Edward Schafer, Agriculture Secretary; Carlos Gutierrez, Commerce Secretary; Mary Peters, Transportation Secretary; and Samuel Bodman, Energy Secretary).
72. *Id.* at 44360.

a profound impact on virtually every sector of the economy and touch every household in the land."[73]

- "The draft offers a number of legal constructs to support its position, but there is no certainty of how those theories will work in actuality, or whether they would be upheld by the courts."[74]

The ANPRM did not present the endangerment assessment invited by the *Massachusetts* Court, but it did present the Agency's "work to date on an endangerment analysis"[75] and specifically solicited comment on an Endangerment Technical Support Document.[76] While the ANPRM stated unequivocally that "[t]he scientific record shows there is compelling and robust evidence that observed climate change can be attributed to the heating effect caused by global anthropogenic GHG emissions," "[q]uantifying the exact nature and timing of impacts due to climate change over the next few decades and beyond . . . is currently not possible."[77]

B. Obama Administration Endangerment Finding

Less than one year after the Bush Administration's curious ANPRM, the Obama Administration answered the Supreme Court's *Massachusetts* remand more directly. On April 17, 2009, EPA released a proposed rule in which it found that six GHGs endangered human health and welfare.[78] Eight months later, the finding became final. Pursuant to her authority under CAA §202(a),[79] EPA Administrator Jackson signed two findings on December 7, 2009. First, she found that elevated atmospheric concentrations of "six key directly-emitted, long-lived and well-mixed [GHGs]" may be reasonably expected "to endanger the public health and to endanger the public welfare of current and future generations."[80] Second, she found that emission of these six GHGs by new motor vehicles "contribute[s] to the air pollution that may reasonably be anticipated to endanger public health and welfare."[81] In making these findings, Administrator Jackson relied on major assessments by the U.S. Global Climate Research Program, the Intergovernmental Panel on Climate Change (IPCC), and the National Research Council as "the primary scientific and technical basis of her endangerment decision . . . ."[82]

Because CAA §202(a) permits regulatory action upon a finding of both endangerment and cause and contribution, the EPA Administrator's findings set the stage for future regulation regarding emission of the six named air pollutants by new motor vehicles or new motor vehicle engines.[83] In particular, the findings paved the way for EPA to finalize the GHG emission standards for light-duty vehicles it proposed alongside the U.S. Department of Transportation's Corporate Average Fuel Economy standards.[84] EPA, however, stressed that the Administrator's findings are "standalone" and do "not contain any regulatory requirements."[85]

While there exists "[n]o equivalent judicial mandate" to *Massachusetts* "for the regulation of stationary sources," "in the wake of an endangerment finding" under one statutory section, EPA "does not have the option of refusing to regulate at all."[86]

C. Challenges to the Endangerment Finding

The Endangerment Finding was challenged almost immediately.[87] Among the more formidable challenges, Rep. Joe Barton (R-Tex.) and 120 co-sponsors requested that Congress disapprove of the Administrator's finding and render it without force or effect.[88] Even before Representative Barton's resolution, in fact on December 15, 2009, the day the Finding was published in the *Federal Register*, Rep. Rodney Alexander (R-La.) "[u]rg[ed] the Administra-

73. *Id.* (preface by U.S. EPA Administrator Stephen Johnson).
74. *Id.*
75. *Id.* at 44421.
76. *Id.* at 44425.
77. *Id.* at 44427.
78. 74 Fed. Reg. 18886 (Apr. 17, 2009). *See* Endangerment and Cause or Contribute Findings for Greenhouse Gases Under §202(a) of the Clean Air Act, http://www.epa.gov/climatechange/endangerment.html (last visited Oct. 23, 2011).
79. This section provides that "[t]he Administrator shall by regulation prescribe (and from time to time revise) . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in [her] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." CAA §202(a), 42 U.S.C. §7521.
80. 74 Fed. Reg. 66496, 66516 (Dec. 15, 2009) (to be codified at 40 C.F.R. ch. 1). The six gases are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. *Id.*
81. *Id.* at 66537.
82. *Id.* at 66510; *see also* U.S. EPA, Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act 4-8 (2009), *available at* http://www.epa.gov/climatechange/endangerment/downloads/Endangerment%20TSD.pdf (summarizing the data and scientific findings considered by the EPA Administrator in making her findings, including the core reference documents: the IPCC's *2007 Fourth Assessment Report*; *Synthesis and Assessment Products of the U.S. Climate Change Science Program*, published between 2006 and 2009; the USGCRP's 2009 scientific assessment; NRC reports under the U.S. National Academy of Sciences; the National Oceanic and Atmospheric Administration's 2009 *State of the Climate in 2008* report; U.S. EPA's 2009 *U.S. Inventory of Greenhouse Gas Emissions and Sinks*; and U.S. EPA's 2009 assessment of the impacts of global climate change on U.S. air quality).
83. 42 U.S.C. §7521; *see also* 74 Fed. Reg. at 66505.
84. U.S. EPA's Endangerment Finding Frequently Asked Questions, http://www.epa.gov/climatechange/endangerment/downloads/Endangerment-Finding_FAQs.pdf. The proposed standards are available in the *Federal Register*. Proposed Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 74 Fed. Reg. 49454 (Sept. 28, 2009) (to be codified at 40 C.F.R. pts. 86, 600).
85. 74 Fed. Reg. at 66515; *see also* U.S. EPA's Endangerment Finding Frequently Asked Questions, *supra* note 84 ("The action does not itself impose any requirements on industry or other entities.").
86. Nathan Richardson et al., *Greenhouse Gas Regulation Under the Clean Air Act: Structure, Effects, and Implications of a Knowable Pathway*, 41 ELR 10098, 10100 (Apr. 2011).
87. *See* 74 Fed. Reg. at 66506-09, 66521-23, 66540-45 (responding to various issues raised during the public comment period).
88. H.R.J. Res. 77, 111th Cong. (2010). The broad support for Representative Barton's joint resolution indicated fairly widespread support within Congress for legislative action to halt administrative rulemaking. Indeed, the number of co-sponsors on joint resolutions with matching language increased. On January 21, 2010, Sen. Lisa Murkowski (R-Alaska) submitted a joint resolution of disapproval with 40 co-sponsors. S.J. Res. 26, 111th Cong. (2010). Rep. Ike Skelton's (D-Mo.) joint resolution submitted one month later carried 51 co-sponsors. H.R.J. Res. 76, 111th Cong. (2010).

tor of the Environmental Protection Agency to reevaluate the endangerment and cause or contribute findings . . . ."[89] Issuing the finding, he argued, stretched the Administrator's authority under the CAA. Worse, he argued, the data underlying the finding was tainted, and the climatic impacts the finding identified were not universally accepted.[90] Representative Alexander's resolution was submitted with only one co-sponsor, while Representative Barton, obviously, drew more.

The opposition ascended to House Republican leadership. In December 2010, Rep. Fred Upton (R-Mich.), the incoming House Energy Committee Chairman after the widespread Republican victories of November 2010, said: "[w]e will not allow the administration to regulate what they have been unable to legislate—this [regulation] is nothing short of a backdoor attempt to implement their failed . . . cap-and-trade scheme."[91] In early 2011, Representative Upton introduced a bill that would have nullified EPA's Endangerment Finding. The bill passed the House 255-172, but an identical bill failed in the Senate.[92] Though none of the bills to reverse EPA's Endangerment Finding became law, opposition to the Agency's Endangerment Finding persisted. Rep. Ed Whitfield (R-Ky.), chairman of the House Energy and Commerce Subcommittee on Energy and Power, vowed to make it an election-year issue. "Our goal is, number one, to elevate this issue for the 2012 general election."[93]

Challenges have likewise arisen from outside the halls of Congress, as individuals, activist groups, business federations, state governments, and others have submitted petitions for reconsideration and lawsuits in federal courts. Almost immediately after the issuance of the Endangerment Finding, a coalition of industry groups submitted a legal challenge, and 16 states intervened in support of EPA.[94] Meanwhile, the state of Texas joined industry organizations in challenging the Endangerment Finding[95]; the U.S. Chamber of Commerce filed its own petition challenging the finding[96]; and a coalition of 12 House Republicans and 17 trade associations and companies also filed suit.[97] In June 2010, the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit held these cases in abeyance until EPA could respond to 10 petitions asking the Administrator to reconsider the Endangerment Finding.[98]

Two principal arguments have emerged in the legal challenges. One is that the scientific underpinnings of the Endangerment Finding—based as they are chiefly on the IPCC's judgment—are suspect. The other is that the Administrator exceeded her authority in making the finding.

- ***Reliance on Third-Party Judgments.*** Several petitioners have argued that the EPA Administrator failed to exercise her own, independent judgment in deciding whether to make the endangerment and cause or contribute findings.[99] Instead, she delegated this responsibility to third parties in contravention

89. H.R. Res. 974, 111th Cong. (2009). The following day, Rep. Jerry Moran (R-Kan.) submitted a joint resolution requesting that Congress officially disapprove of the Administrator's findings and render them without force or effect. H.R.J. Res. 66, 111th Cong. (2009).
90. *Id.*
91. Press Release, Fred Upton, Upton Decries EPA's Latest Assault on Jobs (Dec. 23, 2010), *available at* http://upton.house.gov/News/DocumentSingle.aspx?DocumentID=218630.
92. Dean Scott, *House Passes Bill to Scrap EPA Authority; Survival of Policy Rider in Budget Talks Unclear*, World Climate Change Rep., BNA Apr. 7, 2011, http://climate.bna.com/climate/summary_news.aspx?ID=159240. Other Senate resolutions have also failed. In June 2010, the Senate rejected Senator Murkowski's resolution of disapproval 53 to 47. Carl Hulse, *Senate Rejects Republican Effort to Thwart Carbon Limits*, N.Y. Times (June 10, 2010), http://www.nytimes.com/2010/06/11/us/politics/11epa.html. Immediately after Senator Murkowski's resolution was rejected, Sen. Jay Rockefeller (D-W. Va.) introduced a bill to delay regulation of GHGs, but he lost support of his bill after the 2010 elections. Steven D. Cook, *Rockefeller Says Republicans Pull Support for Bill to Delay EPA Greenhouse Gas Rules*, World Climate Change Rep., BNA, Dec. 17, 2010, http://climate.bna.com/climate/summary_news.aspx?ID=151387.
93. Dean Scott, *Republicans Hope Bill to Bar EPA Regulation of Greenhouse Gases Ready Before Summer*, World Climate Change Rep., BNA, Mar. 9, 2011, http://climate.bna.com/climate/summary_news.aspx?ID=156299.
94. Petition for Review, Coalition for Responsible Regulation v. EPA, No. 09-1322 (D.C. Cir. Dec. 23, 2009). *See also Sixteen States File Motion to Intervene in Industry Challenge to Endangerment Rule*, World Climate Change Rep., BNA, Jan. 22, 2010, bna.com/clln/CLLNWB/split_display.adp?fedfid=16818278&vname=ccrnotallissues&fn=16818278&jd=a0c1w9g8d1&split=0.
95. Petition for Review, Perry v. EPA, No. 10-1041 (D.C. Cir. Feb. 16, 2010).
96. Petition for Review, Chamber of Commerce v. EPA, No. 10-1030 (D.C. Cir. Feb. 12, 2010).
97. Petition for Review, Southeastern Legal Foundation, Inc., v. EPA, No. 10-1035 (D.C. Cir. Feb. 20, 2010). *See also* Steven D. Cook, *Texas, Industry Groups Sue EPA Over Finding That Greenhouse Gases Endanger Health*, World Climate Change Rep., BNA, Feb. 16, 2010, http://news.bna.com/clln/CLLNWB/split_display.adp?fedfid=16323530&vname=ccrnotallissues&wsn=517686000&searchid=14956811&doctypeid=1&type=date&mode=doc&split=0&scm=CLLNWB&pg=0.
98. Order Holding Cases in Abeyance, Coalition for Responsible Regulation v. EPA, No. 09-1322 (D.C. Cir. June 16, 2010) (holding in abeyance until two weeks after EPA issued its ruling on the petitions for reconsideration or until Aug. 16, 2010, whichever was earlier). *See also* Petitions for Reconsideration of the Endangerment and Cause or Contribute Findings Under Section 202(a) of the Clean Air Act, http://www.epa.gov/climatechange/endangerment/petitions.html (last visited July 23, 2010) (providing PDF versions of each petition and any supplements filed with EPA).
99. *See*, *e.g.*, Petition for Reconsideration of Endangerment and Cause or Contribute Finding for Greenhouse Gases Under Section 202(a) of the Clean Air Act by the Commonwealth of Virginia ex rel. Kenneth T. Cuccinelli II, Attorney General of Virginia [hereinafter Virginia Petition] at 3, No. EPA-HQ-OAR-2009-0171 (Feb. 16, 2010), *available at* http://www.epa.gov/climatechange/endangerment/downloads/Petition_for_Reconsideration_Commonwealth_of_Virginia.pdf; Petition of Arthur G. Randol III for Reconsideration of the Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66496 (Dec. 15, 2009) [hereinafter Randol Petition] at 3-4, No. EPA-HQ-OAR-2009-0171 (Feb. 16, 2010), *available at* http://www.epa.gov/climatechange/endangerment/downloads/Petition_for_Reconsideration_Arthur_Randol.pdf; Petition of the Ohio Coal Ass'n for Reconsideration and Withdrawal of EPA's Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act (Ohio Coal Ass'n Petition) at 4-5, No. EPA-HQ-OAR-2009-0171 (Feb. 12, 2010), *available at* http://www.epa.gov/climatechange/endangerment/downloads/Petition_for_Reconsideration_The_Ohio_Coal_Association.pdf; Petition of Coalition for Responsible Regulation, Inc. et al., for Reconsideration of the Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66496 (Dec. 15, 2009) (Coalition for Responsible Regulation Petition) at 16-22, No. EPA-HQ-OAR-2009-0171 (Feb. 11, 2010), *available at* http://www.epa.gov/climatechange/endangerment/downloads/Petition_for_Reconsideration_Coalition_for_Responsible_Regulation.pdf; Petition of the State of Texas for Reconsideration of Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act [hereinafter Texas Petition] at 11-15, No. EPA-HQ-OAR-2009-0171,

of CAA §202(a).[100] Worse, the petitioners contend, Administrator Jackson unreasonably relied on these third parties. Petitioners have particularly criticized the IPCC and its reports. Some have questioned the methods and models of IPCC scientists,[101] but many more have challenged the very data on which the IPCC studies were based.[102] Petitioners have also questioned the IPCC itself, alleging that the Panel was politically motivated, that it suppressed dissenting viewpoints, and that the reports it provided EPA were closer to policy recommendations than to neutral scientific assessments.[103] (Reports that the IPCC suppressed opposing views came to be known as the "climategate" scandal.[104]) Together, these allegations, the petitioners insist, demonstrate that the Administrator's reliance on third-party assessments was misplaced and that the findings arising from that reliance are flawed. EPA, they contend, must, therefore, reconsider the endangerment and cause or contribute findings.

- ***Exceeded Authority.*** At least one petitioner maintained that, even if Administrator Jackson properly relied on third-party assessments, she overstepped the intended limits of her CAA §202(a) authority when she signed the findings.[105] That the Department of Transportation and National Highway Traffic Safety Administration have independent authority to regulate GHG emissions by new motor vehicles rendered the Administrator's findings superfluous and made her overextension of power even less justifiable.[106]

EPA has been unpersuaded by these challenges, and the litigation continues. EPA "determined that the petitioners' arguments and evidence are inadequate, generally unscientific, and do not show that the underlying science supporting the Endangerment Finding is flawed, misinterpreted by EPA, or inappropriately applied by EPA," and published its denial of the petitions to reconsider in the *Federal Register* on August 13, 2010.[107] After EPA denied these petitions, the D.C. Circuit consolidated the 16 cases challenging the Endangerment Finding with the 10 appeals challenging the denial of the petitions to reconsider.[108] The petitioners raised roughly the same arguments in their lawsuits as they had in their petitions for reconsideration. One of the petitioners' briefs alleged that

> [t]he climategate emails support arguments that the IPCC data upon which EPA relied were manipulated, critical IPCC records were lost or destroyed, the peer review process was corrupted and dissent suppressed, IPCC personnel had conflicts of interest, and EPA's reliance on IPCC data ensured that the process underlying the Endangerment Finding lacked transparency.[109]

The final reply brief was due November 14, 2011.[110]

III. Mandatory Reporting of GHGs

Under the Fiscal Year 2008 Consolidated Appropriations Act, Congress directed EPA to promulgate regulations for the mandatory reporting of GHG emissions "above appro-

available at http://www.epa.gov/climatechange/endangerment/downloads/Petition_for_Reconsideration_State_of_Texas.pdf.

100. CAA §202(a) provides that
> [t]he Administrator shall . . . prescribe . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, *which in* [*her*] *judgment* cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.

42 U.S.C. §7521(a)(1) (emphasis added).

101. *E.g.*, Randol Petition, *supra* note 99, at 4-11.

102. *See*, *e.g.*, Virginia Petition, *supra* note 99, at 2; Petition for Reconsideration of the Nongovernmental International Panel on Climate Change, the Science and Environmental Policy Project, and the Competitive Enterprise Institute (Nongovernmental International Panel on Climate Change Petition) at 2-6, No. EPA-HQ-OAR-2009-0171 (Feb. 12, 2010), *available at* http://www.epa.gov/climatechange/endangerment/downloads/Petition_for_Reconsideration_Competitive_Enterprise_Institute.pdf; Coalition for Responsible Regulation Petition, *supra* note 94, at 5-16; Pacific Life Foundation's Petition for Reconsideration of Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202 of the Clean Air Act (Pacific Life Foundation Petition) at 15-34, No. EPA-HQ-OAR-2009-0171 (Feb. 5, 2010), *available at* http://www.epa.gov/climatechange/endangerment/downloads/Petition_for_Reconsideration_Pacific_Legal_Foundation.pdf; Petition of the Southeastern Legal Foundation Inc. for Reconsideration of "Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act" (Southeastern Legal Foundation Petition) at 5-18, No. EPA-HQ-OAR-2009-0171 (Dec. 23, 2009), *available at* http://www.epa.gov/climatechange/endangerment/downloads/Petition_for_Reconsideration_Southeastern_Legal_Foundation.pdf; Texas Petition, *supra* note 99, at 15-17.

103. *See* Nongovernmental International Panel on Climate Change Petition, *supra* note 102, at 6; Ohio Coal Ass'n Petition, *supra* note 99, at 5; Coalition for Responsible Regulation Petition, *supra* note 94, at 16-22, 23-26; Southeastern Legal Foundation Petition, *supra* note 97, at 18-24; Texas Petition, *supra* note 99, at 23-31.

104. *See* David A. Fahrenthold & Juliet Eilperin, *In E-Mails, Science of Warming Is Hot Debate*, Wash. Post, Dec. 5, 2009, http://www.washingtonpost.com/wp-dyn/content/article/2009/12/04/AR2009120404511.html. The "climategate" scandal was put to rest by a blue ribbon collection of leading climate scientists wrote to Congress stating that the conclusions regarding climate change were unaffected by the discoveries. David Archer et al., *An Open Letter to Congress From U.S. Scientists on Climate Change and Recently Stolen E-Mails*, Dec. 4, 2009, *available at* http://www.ucsusa.org/assets/documents/global_warming/scientists-statement-on.pdf.

105. Petition of the Chamber of Commerce of the United States for Reconsideration and for Stay Pending Reconsideration [hereinafter Chamber of Commerce Petition] at 3, No. EPA-HQ-OAR-2009-0171 (Mar. 15, 2010), *available at* http://www.epa.gov/climatechange/endangerment/downloads/Petition_for_Reconsideration_US_Chamber_of_Commerce.pdf (arguing that CAA §202(a) "authority was neither designed, nor intended, . . . to regulate 'pollutants' such as greenhouse gases that, because of rapid dispersion, are found in essentially equal concentrations throughout the globe and, to the extent they cause harms, cause them on a global scale").

106. *Id.* at 19-22.

107. 75 Fed. Reg. 49556, 49557 (Aug. 13, 2010). For a three-volume, 360-page response to petitions, see Denial of Petitions for Reconsideration of the Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, http://www.epa.gov/climatechange/endangerment/petitions.html (last visited Oct. 20, 2011).

108. Order Granting in Part and Denying in Part the Motion for Coordination of Related Cases, Coalition for Responsible Regulation v. EPA, No. 09-1322 (D.C. Cir. Nov. 16, 2010) (designating the matter as complex, as well).

109. Opening Brief for State Petitioners Texas and Virginia at 10-11, Coalition for Responsible Regulation v. EPA, No. 09-1322 (D.C. Cir. May 20, 2011) (also arguing "the EPA denied reconsideration even though petitioners objected on grounds that arose after the public comment period had closed and that were of central relevance to the outcome of the Endangerment Finding").

110. Order Setting Briefing Schedule, Coalition for Responsible Regulation v. EPA, No. 09-1322 (D.C. Cir. Mar. 22, 2011).

priate thresholds in all sectors of the economy."[111] Accordingly, on October 30, 2009, EPA promulgated a final rule that requires a broad range of industries to monitor and report annual GHG emissions from covered sources effective January 1, 2010.[112] The rule also requires most engine manufacturers to report emission rates for certain GHGs.[113] EPA estimates that the rule's reporting requirements include about 10,000 facilities and cover 85% of U.S. GHG emissions.[114] EPA's mandatory reporting rule will gather economywide data to assist in controlling GHG emissions under other rules described here.

On March 18, 2011, EPA extended the reporting deadline for some sector's 2010 GHG data from March 31, 2011, to September 30, 2011.[115] According to EPA, the purpose of the extension was to provide time for EPA to test and refine the online reporting tool used for submitting GHG reports.[116] The extension met with mixed reviews. Although the industries were pleased that EPA had recognized problems with its reporting tool, members of the energy community expressed concern that EPA had not taken the time needed to adequately address the intricacies of the reporting rule.[117] EPA has further extended the required deadline for other commercial sector—including electronics manufacturing, fluorinated gas production, petroleum, and natural gas systems—from March 31, 2012, to September 28, 2012.[118]

A. *Covered Facilities*

EPA's rule imposes reporting requirements on several categories of GHG-emitting sources, covering two dozen industrial sectors, as well as other large sources of GHG emissions, based on an aggregate maximum-rated heat-input capacity of 30 million British thermal units per hour (Btu/hr.) or greater.[119] The rule requires reporting of GHG emissions that could result from the use of fossil fuel or industrial gas that is produced or imported from upstream sources, such as fuel suppliers, as well as emissions directly emitted from facilities or downstream sources.[120] For all covered sources, EPA mandates emissions reporting for the six GHGs covered under the United Nations Framework Convention on Climate Change (UNFCCC): CO_2; methane (CH_4); nitrous oxide (N_2O); sulfur hexafluoride (SF_6); hydrofluorocarbons (HFCs); perfluorochemicals (PFCs); as well as other fluorinated gases, e.g., nitrogen trifluoride and hydrofluorinated ethers.[121] Gases other than CO_2 are measured in metric tons of CO_2 equivalent (CO_2e).[122]

EPA will collect emissions data at the facility level for the majority of covered sources. "Facility" is defined as "any physical property, plant, building, structure, source, or stationary equipment located on one or more contiguous or adjacent properties in actual physical contact or separated solely by a public roadway or other public right-of-way and under common ownership or common control, that emits or may emit any greenhouse gas."[123] EPA identified a number of source categories for which the reporting requirements apply, regardless of a facility's annual GHG emissions.[124] For other specified categories, EPA used an annual reporting threshold of 25,000 metric tons CO_2e[125] (which approximately equals the annual GHG emissions of 4,500 passenger vehicles[126]). For instance, a petroleum refinery is required to report, even if its annual emissions are less than 25,000 metric tons CO_2e, whereas a pulp and paper manufacturing facility only needs to report if it meets or exceeds the emissions threshold.[127] The rule also applies to certain engine manufacturers.[128] The categories of covered sources are summarized in more detail below.

- ***Downstream Industrial Sources.*** Downstream sources include plants and facilities that directly emit GHGs through their processes or fuel combustion.[129] The rule, as amended,[130] identifies 35 downstream source categories for monitoring and reporting of annual GHG emissions. Twenty-two of these industrial sources, such as electricity generating facilities already subject to the Acid Rain Program, petrochemical producers, and cement producers, are required to report their GHG emissions, regardless of whether they meet the 25,000 metric ton CO_2e threshold.[131] Other industrial sources—pulp and paper manufacturers, steel, lead, glass, hydrogen, and zinc producers—are not subject to reporting requirements unless their annual emissions exceed the 25,000 metric ton CO_2e threshold.[132]

111. Consolidated Appropriations Act of 2008, Pub. L. No. 110-161, 121 Stat. 1844 (2007) at 285.
112. *See* Mandatory Greenhouse Gas Reporting Rule, 40 C.F.R. pt. 98 (2010).
113. 74 Fed. Reg. 56352 (Oct. 30, 2009).
114. U.S. EPA, *Mandatory Reporting of Greenhouse Gases Fact Sheet*, http://www.epa.gov/climatechange/emissions/downloads09/FactSheet.pdf.
115. *See* 40 C.F.R. §98.3(b); Final Regulation Extending the Reporting Deadline for Year 2010 Data Elements Required Under the Mandatory Reporting of Greenhouse Gases Rule, 76 Fed. Reg. 14812 (Mar. 18, 2011).
116. U.S. EPA, *Fact Sheet: Amendment to Extend 2010 Reporting Deadline*, http://www.epa.gov/climatechange/emissions/downloads11/documents/extension-factsheet.pdf.
117. Lenora Falk, *EPA Postpones Deadline for Filing Reports on Greenhouse Gas Emissions to Refine Tool*, Env. Rep. (BNA), Mar. 4, 2011, http://www.bna.com/epa-postpones-deadline-n4979/.
118. Andrew Childers, *EPA Proposes Six-Month Extension to Report Certain Greenhouse Gas Emissions*, Daily Env't Rep. (BNA), Aug. 4, 2011, at A-3.
119. 40 C.F.R. §98.2(a)(3)(ii).
120. *Id.* §98.1(a).
121. *Id.* §98.3(c)(4).
122. *Id.*
123. *Id.* §98.6.
124. *Id.* §98.2(a)(1) tbl. A-3.
125. *Id.* §98.2(a)(2) tbl. A-4.
126. U.S. EPA, *EPA Proposes First National Reporting on Greenhouse Gas Emissions* (Mar. 10, 2009), http://yosemite.epa.gov/opa/admpress.nsf/6424ac1caa800aab85257359003f5337/4bd0e6c514ec1075852575750053e7c0!OpenDocument.
127. *See* 40 C.F.R. §98.2(a)(1)-(2) tbls. A-3 and A-4.
128. 74 Fed. Reg. at 56266.
129. *Id.* at 56264.
130. *See infra* notes 141-52 and accompanying text.
131. 40 C.F.R. §98.2(a)(1) tbl. A-3; 74 Fed. Reg. at 56266. The original rule applied to 17 sources. Subsequent additions added additional source categories. *See infra* notes 141-52 and accompanying text.
132. *Id.* §98.2(a)(2) tbl. A-4.

- ***Upstream Sources.*** Upstream sources are comprised of suppliers of fuel and natural gas.[133] Although these sources are not directly releasing GHGs into the air, they must report the GHG content of their fuel and gases as a proxy for the GHG emissions that occur from the end-use of their product. Fuel suppliers of coal-based liquid fuels, petroleum products, and natural gas, as well as suppliers of industrial GHGs, such as refrigerants, are covered upstream sources.[134]
- ***Mobile Sources.*** Certain vehicle and engine manufacturers must report emissions rates for CO_2, CH_4, and N_2O.[135] Manufacturers meeting the definitions of "small business" or "small volume manufacturer" are generally exempt from this requirement.[136] Additionally, light-duty vehicles, light-duty trucks, and medium-duty passenger vehicles are not covered by the final rule.[137] Under the rule, manufacturers must measure and report CO_2 for all engines beginning with model year 2011 and other GHGs in subsequent model years.[138] Reporting requirements for aircraft engine manufacturers will apply for the engine models in production beginning in 2011.[139]
- ***Non-Industrial Stationary Sources.*** Facilities that do not fall under the other source categories above are subject to the rule's reporting requirements if: (1) they emit more than 25,000 metric tons of CO_2e annually in combined emissions from stationary combustion; and (2) their stationary combustion units have an aggregate maximum-rated heat-input capacity of at least 30 million Btu/hr.[140] Stationary combustion units include boilers, combustion turbines, engines, incinerators, and process heaters.[141] While this category of covered sources appears as though it could cover large commercial and residential buildings, EPA believes that the majority of commercial and residential building owners will not be required to report.[142] According to EPA, over 75% of buildings have combustion units totaling less than 1 million Btu/hr.[143] Moreover, EPA states that approximately 80% of commercial buildings have boilers with less than 10 million Btu/hr.[144] Thus, EPA expects only a very small number of commercial and residential buildings with large electrical, heating, and cooling systems to be subject to reporting requirements.

In late 2010, EPA began adding to the emission source categories covered by the GHG reporting rule through a series of amendments. EPA has extended these sources' reporting deadline until September 28, 2012.[145]

- ***Petroleum and Natural Gas Facilities.*** On September 30, 2010, EPA finalized a rule requiring GHG reporting from petroleum and natural gas facilities emitting at least 25,000 metric tons of CO_2.[146] The sector covered under the rule is comprised of extraction wells, storage and processing facilities, and transmission and distribution pipelines.[147] Fugitive and vented GHG emissions from this sector represent a major source of GHG emissions.[148]
- ***Emitters of Fluorinated GHGs.*** On December 1, 2010, EPA finalized an amendment to the GHG reporting rule adding mandatory reporting of fluorinated GHGs from five additional downstream sources, including electronics manufacturers, provided they emit 25,000 metric tons or more of CO_2e per year.[149] According to EPA, the addition of these sources is important, because fluorinated GHGs are the most powerful and persistent of GHGs, remaining in the atmosphere for thousands of years.[150]
- ***Geologic Sequestration.*** On December 1, 2010, EPA finalized a rule requiring GHG reporting from facilities that conduct geologic sequestration (GS) and facilities that inject CO_2 for enhanced oil and gas recovery (EOR).[151] GS entails pumping CO_2 underground as a way of decreasing the amount of GHGs in the atmosphere.[152] This process is being hailed as potential climate change mitigation technology.[153] EOR entails injecting CO_2 underground to improve the amount of oil and gas recoverable from a well.[154] EPA intends to use the information gathered from these industries to monitor the effectiveness of GS as a way to reduce GHGs in the atmosphere.[155] Under the rule, facilities that conduct GS are required to: (1) report the amount and source of CO_2 injected;

133. 74 Fed. Reg. at 56264.
134. *Id.*
135. *Id.* at 56352.
136. *Id.*
137. *Id.*
138. *Id.*
139. *Id.*
140. *Id.* at 56267.
141. *Id.* at 56397. The rule exempts emergency generators from reporting requirements.
142. U.S. EPA, *Frequently Asked Questions: Proposed Mandatory Greenhouse Gas Reporting Rule*, http://www.epa.gov/climatechange/emissions/ghg_faq.html (last visited Oct. 23, 2011).
143. *Id.*
144. *Id.*
145. *See supra* note 118.
146. Mandatory Reporting of Greenhouse Gases: Petroleum and Natural Gas Systems, 75 Fed. Reg. 74458 (Sept. 30, 2010) (to be codified at 40 C.F.R. pt. 98 subpt. W).
147. U.S. EPA, *Subpart W: Petroleum and Natural Gas Systems Frequently Asked Questions*, http://www.epa.gov/climatechange/emissions/downloads10/Subpart-W_FAQ.pdf.
148. *Id.*
149. Mandatory Reporting of Greenhouse Gases: Additional Sources of Fluorinated GHGs, 75 Fed. Reg. 74774 (Dec. 1, 2010) (to be codified at 40 C.F.R. pt. 98 subpts. I, L, DD, QQ, SS).
150. U.S. EPA, *Fact Sheet for Additional Sources of Fluorinated Greenhouse Gases: Subparts I, L, DD, QQ, SS*, *available at* http://www.epa.gov/climatechange/emissions/downloads10/F-gas_factsheet.pdf.
151. Mandatory Reporting of Greenhouse Gases: Injection and Geologic Sequestration of Carbon Dioxide, 75 Fed. Reg. 75060 (Dec. 1, 2010) (to be codified at 40 C.F.R. pt. 98 subpts. RR and UU).
152. U.S. EPA, *Frequently Asked Questions for Geologic Sequestration and Injection of Carbon Dioxide: Subparts RR and UU*, *available at* http://www.epa.gov/climatechange/emissions/downloads10/Subpart-RR-UU_FAQ.pdf.
153. *Id. See also* Mounteer, *supra* note 56, §1.2.3.1.2.
154. *See id.*
155. *Id.*

(2) develop a Monitoring, Reporting, and Verification (MRV) plan to be approved by EPA; and (3) report the amount of CO_2 sequestered underground using a "mass balance" approach.[156] Facilities engaged in EOR are required to report the amount and source of the CO_2 received for injection.[157]

B. Emissions Monitoring and Calculation Methodologies

There was a good deal of focus in the rulemaking on emissions monitoring and calculation methodologies. In the proposed rule,[158] EPA sought to minimize the regulatory burden by using GHG monitoring and calculation methodologies similar to those used by existing mandatory and voluntary reporting programs, such as the Climate Registry, the California Climate Action Registry, state mandatory GHG reporting rules, and EPA's voluntary program, Climate Leaders.[159] As EPA explained in the April 2009 proposal, a manufacturing facility using raw materials could calculate its GHG emissions by measuring the amount of fuels, raw materials, and additives used and the site-specific carbon content of those materials.[160] While direct emission measurement through the use of continuous emissions monitoring systems (CEMS) is a more accurate method of determining GHG emission amounts, EPA noted that installation of CEMS is costly, making facility-specific calculation methods a necessary alternative for some covered sources.[161]

The final rule requires direct measurement of GHG emissions by covered industrial sources that already use CEMS to report emissions of certain pollutants under other programs.[162] Facilities without CEMS installed may choose from two emissions monitoring alternatives: (1) install and operate CEMS to directly measure emissions; or (2) use facility-specific GHG calculation methods, which differ depending on the source category.[163] For the first three months of 2010, an owner or operator was permitted to use the Best Available Monitoring Methods (BAMM) for any parameters that could not reasonably be measured otherwise.[164] BAMM consists of measuring estimates based on supplier data, engineering calculations, and owner and operator records.[165] Though subject to "possible extension" beyond March 31, 2010,[166] BAMM will not be approved beyond December 31, 2010.[167]

Additionally, the final rule allows for self-certification of GHG reports with EPA verification.[168] To verify reports, EPA first conducts a largely automated, centralized review of the data.[169] The Agency will then follow up with facilities regarding any errors, discrepancies, or questions that arise through the review of reported data and conduct onsite audits of selected facilities.[170]

With the expansion of the reporting rule to additional source categories, EPA has also tailored emissions monitoring and calculation methodologies to the sources:

- ***Petroleum and Natural Gas Facilities.*** The rule extending reporting to the petroleum and natural gas sector specifies measuring methodologies for each petroleum and natural gas facility, but it allows a time period for the use of BAMM.[171] Comments in response to the proposed rule opined that the time period allotted for the optional use of BAMM was insufficient for facilities to make the switch to the rule-specified methodologies.[172] In response to these comments, on April 25, 2011, EPA extended the period during which reporters may use BAMMs without having to request approval from June 30, 2011, to September 30, 2011.[173] Additionally, EPA extended the deadline to submit requests to use BAMMs during 2011 from April 30, 2011, to July 31, 2011.[174] A proposed rule seeks to expand the list of sources that may use BAMM and further extend the deadline for requesting BAMM.[175]
- ***Emitters of Fluorinated GHGs.*** As with the petroleum and natural gas amendment, the December 1, 2010, fluorinated GHG rule allows facilities to use or request the use of BAMM for specified time periods.[176] On June 22, 2011, EPA extended the period owners and operators may use BAMM until September 30, 2011.[177]
- ***Geologic Sequestration.*** EPA recommends that GS facilities use flow meters to accurately measure the CO_2 sequestered but does not prescribe any specific

156. Mandatory Reporting of Greenhouse Gases: Injection and Geologic Sequestration of Carbon Dioxide, 75 Fed. Reg. at 75065-67 (Dec. 1, 2010).
157. *U.S. EPA*, *Injection of Carbon Dioxide Fact Sheet*, http://www.epa.gov/climatechange/emissions/downloads/infosheets/InjectionCarbonDioxide.pdf (last visited July 19, 2011).
158. Proposed Rule, Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. 16448, 16456 (Apr. 10, 2009).
159. 74 Fed. Reg. at 56280.
160. 74 Fed. Reg. at 16475.
161. *Id.*
162. 74 Fed. Reg. at 56280.
163. *Id.*
164. 40 C.F.R. §98.3(d).
165. *Id.*
166. *Id.*
167. *Id.*
168. *Id.* §98.4.
169. *Id.*
170. *Id.*
171. 75 Fed. Reg. at 74462-64.
172. 76 Fed. Reg. 22825 (Apr. 25, 2010) (to be codified at 40 C.F.R. pt. 98).
173. *Id.*
174. *Id.*
175. 76 Fed. Reg. 37300 (June 27, 2011) (to be codified at 40 C.F.R. pt. 98).
176. 75 Fed. Reg. at 74775.
177. Mandatory Reporting of Greenhouse Gases: Additional Sources of Fluorinated GHGs: Extension of Best Available Monitoring Provisions for Electronics Manufacturing, 76 Fed. Reg. 36339 (June 22, 2011) (to be codified at 40 C.F.R. pt. 98). *See also supra* note 118.

monitoring technique.[178] Instead, GS facilities are required to adopt MRVs that are site-specific.[179]

C. Reporting and Recordkeeping; Administrative Requirements

Once a covered source is subject to the reporting requirements, the owner or operator is generally required to continue reporting each year thereafter, unless emissions fall below certain benchmarks for a consistent period of time.[180] If reported emissions fall below 25,000 metric tons CO_2e per year for five consecutive years, the rule offers a process for cessation of reporting.[181] A similar process exists if reported emissions are less than 15,000 metric tons CO_2e per year for three consecutive years.[182] An owner or supplier who ceases all applicable GHG-emitting processes can also become exempt from the reporting requirements under the rule by submitting notification to the Administrator and certifying the closure of all such processes, though reporting must resume for any future calendar year during which any of the processes resume.[183]

Under EPA's GHG reporting rule, operators and upstream suppliers, with the exception of engine manufacturers, must maintain records related to their monitoring activities, including a list of all units, operations, processes, and activities for which GHG emissions are calculated, and the data used to calculate the GHG emissions for each unit, operation, process, and activity, categorized by fuel or material type.[184] Covered sources that fail to monitor according to the requirements of the rule could be subject to enforcement action by EPA under the CAA, including injunctive relief and civil and administrative penalties of up to $37,500 per day per violation.[185]

For 2010, the first reporting period, EPA estimates that the average cost of reporting for the private sector will amount to $115 million.[186] EPA expects that cost to fall to $72 million in subsequent years.[187] EPA further estimates that the cost of reporting will be less than 1% of average annual sales, even for sectors with the largest economic impacts.[188]

On September 22, 2010, EPA finalized a rule requiring facilities and suppliers covered under the GHG reporting rule to list three additional pieces of information in their yearly report: (1) the names and addresses of all U.S. parent companies and their respective percentages of ownership; (2) the primary North American Industry Classification System codes; and (3) whether or not any reported emissions came from a cogeneration unit.[189] With the corporate information, EPA intends to form a clearer picture of aggregate GHG emissions from specific corporations and industries.[190] The cogeneration information will help EPA understand how cogeneration units can create differences in emissions between similar facilities.[191]

D. Criticism of the Reporting Rule

EPA's GHG reporting rule has drawn significant fire. Critics have complained that EPA's requiring both downstream and upstream reporting is duplicative.[192] They note that a "double-reporting" occurs when, for example, a coal company reports the amount of GHGs that will be produced by the combustion of its coal, and then a power plant reports CO_2 emissions from the burning of the very same coal.[193] According to EPA, this duplicative aspect of the rule is necessary in order to form both upstream *and* downstream policies.[194]

Businesses have also seen the GHG reporting rule as simply another EPA regulation that will impede their ability to grow.[195] A meeting of businesses and industry groups revealed widespread discontent with EPA's growing number of regulations.[196] Specifically, covered sources worry that information reported to EPA in accordance with the GHG reporting rule will reveal trade secrets.[197] Businesses are especially nervous about submitting the arithmetic behind the emissions calculations, or "subnumbers."[198] In response to these concerns, EPA proposed a rule on December 27, 2010, that would delay submission of subnumbers until March 2014.[199] Although some observers believe that this delay is tolerable so long as the total emissions are being submitted, activist groups are upset with EPA's decision,[200] and environmental groups are worried that the deferral would seriously undermine the brunt of the reporting rule,

178. *U.S. EPA*, *Injection of Carbon Dioxide Fact Sheet*, http://www.epa.gov/climatechange/emissions/downloads/infosheets/InjectionCarbonDioxide.pdf (last visited July 19, 2011).
179. Frequently Asked Questions for Geologic Sequestration and Injection of Carbon Dioxide, *supra* note 152.
180. *See* 40 C.F.R. §98.2(i).
181. *Id.* §98.2(i)(1).
182. *Id.* §98.2(i)(2).
183. *Id.* §98.2(i)(3).
184. Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. at 56268-69.
185. *Id.* at 56360.
186. Mandatory Reporting of Greenhouse Gases Fact Sheet, *supra* note 114.
187. *Id.*
188. Frequently Asked Questions: Proposed Mandatory Greenhouse Gas Reporting Rule, *supra* note 142.
189. *See* 40 C.F.R. §98.3, 75 Fed. Reg. 57669 (Sept. 22, 2010).
190. U.S. EPA, *Factsheet: Corporate Parent/NAICS Code Amendments*, http://www.epa.gov/climatechange/emissions/downloads11/documents/corp-parent-factsheet.pdf (last visited July 19, 2011).
191. *Id.*
192. *EPA Proposes National Reporting of GHG Emissions*, Envtl. Leader (Mar. 10, 2009), http://www.environmentalleader.com/2009/03/10/epa-proposes-national-reporting-of-ghg-emissions/.
193. *See* Andy Hultgren, *Is Criticism of EPA GHG Reporting Rule Justified?*, Envtl. Leader (Mar. 16, 2009), http://www.environmentalleader.com/2009/03/16/is-criticism-of-epa-ghg-reporting-rule-justified/.
194. *Id.*
195. Kenneth P. Green & Hiwa Alaghebandian, *Industry Has Spoken . . . Will the President Listen?*, The American (Feb. 23, 2011), http://www.american.com/archive/2011/february/industry-has-spoken-will-the-president-listen.
196. *Id.*
197. Elizabeth McGowan, *EPA's Greenhouse Gas Reporting Program Faces Fire From Both Sides*, Reuters (Mar. 16, 2011), http://www.reuters.com/article/2011/03/16/idUS103330735820110316 [hereinafter McGowan, *Fire*].
198. *Id.*
199. Interim Final Regulation Deferring the Reporting Date for Certain Data Elements Required Under the Mandatory Reporting of Greenhouse Gases Rule, 75 Fed. Reg. 81338 (proposed Dec. 27, 2010) (to be codified at 40 C.F.R. pt. 98).
200. McGowan, *Fire*, *supra* note 197.

because vital emissions information will be kept from the public.[201] Additionally, activists are concerned that without the subnumber information, it will be difficult to verify the accuracy of an emitter's calculations.

On May 26, 2011, EPA finalized confidentiality determinations defining which information from the GHG reports will be treated as confidential and which will be released to the public.[202] (The May 26, 2011, rule did not make a determination regarding the proposed deferral of input "subnumbers" discussed above.[203]) The determination came in response to industry group complaints that facilities may be forced to disclose process information and trade secrets.[204] Although EPA usually makes confidentiality determinations on a case-by-case basis, the sheer magnitude of the GHG reporting rule necessitated a "one-size-fits-all" approach.[205]

On August 25, 2011, EPA announced further postponement of certain aspects of the GHG Reporting Rule to sort out the trade secret concerns. Reporters in the electric transmission, fuel combustion, coal mine, landfill, and certain other sectors were given until March 31, 2013, to provide several emission inputs. Aluminum production, ammonia manufacturing, cement production, and electronic manufacturers were given until March 31, 2015.[206]

IV. Prevention of Significant Deterioration Tailoring Rule

EPA's Prevention of Significant Deterioration (PSD) Tailoring Rule[207] is another outgrowth of the Supreme Court's *Massachusetts* decision[208] and the Obama Administration's Endangerment Finding.[209] In its PSD Tailoring Rule, the Obama EPA "tailored" the CAA's grant of PSD authority to fit the reality of CO_2 emissions. The Tailoring Rule met with immediate controversy, including state resistance to conforming their PSD programs to EPA's, as well as numerous lawsuits. Assuming the Tailoring Rule withstands challenge, EPA intends to embrace CO_2 emissions within the PSD program in a phased approach. Whether the Tailoring Rule will withstand challenge may not be known for some time. The current briefing schedule for consolidated cases challenging the rule extends through the end of 2011.

The PSD program, which originates in Title 1, Part C of the CAA,[210] is a permitting program for major new and modified stationary sources. The program applies to areas with a NAAQS designation of "attainment" or "unclassifiable." A "major emitting facility" stationary source subject to the PSD permitting program is one that emits above 100 tons per year (tpy) of one of 28 pollutants, or above 250 tpy of all other pollutants subject to regulation under the CAA §169.[211] Under the PSD program, a major stationary source must implement best available control technology (BACT), which involves the application of methods or use of equipment producing the maximum degree of reduction in emissions that can be achieved cost-effectively.[212] A major stationary source must also perform an air quality analysis and additional impact analyses, such as those on vegetation and water.

While the PSD Tailoring Rule is an outgrowth of the *Massachusetts* decision and EPA's Endangerment Finding, it is the more direct result of two other Agency actions: the so-called Triggering Rule and the Vehicle Rule. The Obama EPA published the Triggering Rule[213] to clarify a memorandum dated December 18, 2008, issued by Bush EPA Administrator Stephen L. Johnson.[214] Administrator Johnson's December 18, 2008, memorandum stated that pollutants "subject to regulation"—thereby causing them to be subject to the PSD program—do not include those pollutants subject only to monitoring requirements (which CO_2 is), but include only those subject to "actual control of emissions" (which CO_2 is not). The effect of the Johnson memorandum was to prevent—albeit until the change in Administration—CO_2's inclusion in the PSD program. The Triggering Rule stated that EPA would follow the Johnson memorandum "with one refinement"[215]: the "actual control" requirement, which causes a pollutant to be subject to the PSD program, is met when a regulation imposing a control to limit emissions of a pollutant "takes effect."[216]

EPA's Vehicle Rule also played a role in the PSD Tailoring Rule's genesis. The Vehicle Rule, which went into effect on January 2, 2011, limits GHG emissions (including CO_2) from light trucks and automobiles.[217] While the

201. Gabriel Nelson, *Greens Slam EPA Over Exemption for Greenhouse Gas Emissions Data*, N.Y. Times, Mar. 8, 2011, http://www.nytimes.com/gwire/2011/03/08/08greenwire-greens-slam-epa-over-exemption-for-greenhouse-92029.html (last visited Nov. 10, 2011).
202. Confidentiality Determinations for Data Required Under the Mandatory Greenhouse Gas Reporting Rule and Amendments to Special Rules Governing Certain Information Obtained Under the Clean Air Act, 76 Fed. Reg. 30782 (May 26, 2011).
203. U.S. EPA, Fact Sheet, Final Confidentiality Determinations for Data Collected Under the Greenhouse Gas Reporting Program and Amendments to Special Rules Governing Certain Information Obtained Under the Clean Air Act, http://www.epa.gov/climatechange/emissions/downloads11/documents/CBI-factsheet-final.pdf (last visited July 22, 2011).
204. Hannah Bill, *Balancing Business Confidentiality and Transparent Reporting of Greenhouse Gas Emissions*, RegBlog (Feb. 24, 2011), http://www.law.upenn.edu/blogs/regblog/2011/02/balancing-business-confidentiality-and-transparent-reporting-of-greenhouse-gas-emissions.html.
205. *Id.*
206. Andrew Childers, *EPA Defers Deadline to Report Factors Used to Calculate Greenhouse Gas Emissions,* Daily Env't Rep. (BNA), Aug. 25, 2011, http://www.bna.com/epa-defers-deadline-n12884903210/; Christopher Norton, *EPA Puts Off Some GHG Reporting Requirements*, Law 360, Aug. 26, 2011.
207. 75 Fed. Reg. 31514 (June 3, 2010).
208. *See* Mounteer, *supra* note 56, §3.1.1.1.
209. *See supra* notes 78-86 and accompanying text.
210. 42 U.S.C. §§7470-7479.
211. *Id.* §7479. *See generally* James R. Farrell, *The Future of the Greenhouse Gas Tailoring Rule*, 41 ELR 10247 (Mar. 2011).
212. *Id.* §7479(3). *See infra* notes 239-63 and accompanying text.
213. 75 Fed. Reg. 17004 (Apr. 2, 2010).
214. Mounteer, *supra* note 56, §3.2.2.2.
215. 75 Fed. Reg. at 17006.
216. *Id.* at 17016 ("EPA will henceforth interpret the date that a pollutant becomes subject to regulation under the [Clean Air] Act to be the point in time when a control or restriction that functions to limit pollutant emissions takes effect or becomes operative to control or restrict the regulated activity.").
217. 75 Fed. Reg. 25324 (May 7, 2010).

Vehicle Rule directly applies to mobile sources, it would cause the stationary source PSD program to embrace CO_2 emissions in the following way. Under the Triggering Rule, once GHGs are subject to an emissions control under the Vehicle Rule, they are embraced by the PSD program because they are "subject to regulation."[218]

Reconciling the consequences of the Triggering and Vehicle Rules with CAA §169's 100/250 tpy thresholds for "major emitting facilities" subject to the PSD program created a complication for EPA. The PSD program originally regulated only pollutants that power plants emitted in the amount of hundreds of tpy. GHGs, on the other hand, are released into the air in much greater amounts. Applying the 100/250 tpy thresholds to GHGs would mean subjecting many thousands of stationary sources to the PSD program.[219] The resulting influx of permit applications would be overwhelming.[220] EPA, therefore, published a rule that "tailored" the statutory emission threshold.

Setting aside the existing statutory thresholds for the PSD program, EPA's Tailoring Rule raised the threshold to 75,000 tpy of CO_2 e.[221] The Tailoring Rule then brings sources of CO_2 emissions into the PSD program in three phases.

(1) The first phase, effective January 2, 2011 (the Vehicle Rule's effective date), captures only stationary sources that would already be subject to PSD regulation. The sources already subject to regulation are now also regulated on the basis of their GHG emissions.

(2) The second phase, effective July 1, 2011, captures two previously unregulated sources: (1) a new source that emits or has the potential to emit 100,000 tpy of CO_2 e; and (2) a modified source that emits or has the potential to emit 100,000 tpy of CO_2 e and that undertakes a modification that increases emissions by 75,000 tpy of CO_2 e. On July 1, 2011, EPA issued a rule deferring regulation—for three years—of biogenic GHG emissions that would exceed these thresholds.[222] Examples of biogenic emissions include biological decomposition in landfills, electric utilities burning biomass fuels, and fermentation for ethanol or other production that results in CO_2 emissions.

(3) The emission sources to be captured in the third phase, effective July 1, 2013, are yet to be determined. In the Tailoring Rule, EPA indicated that it would undertake another rulemaking in 2011 to decide whether to extend regulation to more sources and, if so, to which ones. According to the Tailoring Rule, EPA will not regulate sources that emit less than 50,000 tpy of CO_2e or make modifications resulting in an increase of less than 50,000 tpy of CO_2 e before April 20, 2016, providing a buffer period for smaller source emitters.

States, which generally carry out the PSD program, did not all warmly embrace the Tailoring Rule. Perhaps anticipating some opposition, EPA warned that it would enforce the new program in states that chose not to. Consistent with the system of CAA-delegated programs, a majority of states carry out their own PSD programs.[223] EPA sought to "facilitate rapid implementation" of the Tailoring Rule by states.[224] EPA sought to bring about this rapid implementation by treating "GHG emissions from sources above the threshold" as "subject to regulation" and, therefore, subject to PSD and Title V permitting.[225] Through this approach, EPA hopes that states can avoid needing legislative authorization or new rulemaking to adopt the Tailoring Rule's approach. That is, states will be able to interpret "subject to regulation" in existing state rules as including emitters above the threshold.[226] In the Tailoring Rule, EPA asked each state agency to notify EPA if it will interpret "subject to regulation" in accordance with the Tailoring Rule's scheme. EPA coupled the inquiry with the warning. Any state that is unwilling to follow the Tailoring Rule scheme will not have its permitting program fully approved.[227] EPA will issue PSD permits in noncooperating states. A few states informed EPA that they did not intend to enforce the PSD requirement for GHG emissions.[228]

Numerous lawsuits challenge the Tailoring Rule and seek a stay of its enforcement. The suits were consolidated in the D.C. Circuit in the case captioned *Coalition for Responsible Regulation, Inc. et al. v. EPA*.[229] On December 10, 2010, the D.C. Circuit denied a motion to stay the Tailoring Rule's effectiveness.[230] At this writing, the briefing schedule extends through December 2011.[231] These challenges focus not only on the Tailoring Rule itself, but also the Endangerment Finding, Triggering Rule, and Vehicle Rule from which the Tailoring Rule springs.

EPA was not unaware that its tailoring of CAA §169's "major emitting facility's" tpy thresholds would be contro-

218. 75 Fed. Reg. at 31528.
219. *Id.* at 31557.
220. *Id.*
221. *Id.* at 31523.
222. 76 Fed. Reg. 43490 (July 20, 2011).
223. 40 C.F.R. §51.166 requires states to include PSD limitations in their state implementation plans (SIPs).
224. 75 Fed. Reg. at 31525.
225. *Id.*
226. *Id.*
227. *Id.*
228. Most notably, Texas informed EPA that it had neither the intention nor the authority to apply the PSD program to GHG-emitting sources, to which EPA responded by promulgating a federal implementation plan (FIP). 75 Fed. Reg. 25178 (May 3, 2011). Texas took issue with reinterpreting the meaning of "subject to regulation" in accordance with the Tailoring Rule, because it claimed state case law precluded that term "from automatically incorporating newly regulated pollutants." *Id.* at 25191. Additionally, it argued that EPA would have to promulgate a NAAQS standard for GHGs before they could be swept up in the PSD program. *Id.* The FIP partially disapproves of Texas' permitting authority and allows EPA to become the permitting authority for all large GHG-emitting sources in the state in accordance with its PSD program and Tailoring Rule. Texas remains the permitting authority only for non-GHG emitters. *Id.* at 25179.
229. No. 10-1073 (D.C. Cir. filed Apr. 2, 2010).
230. Order at 3, Coalition for Responsible Regulation, Inc. et al. v. EPA, No. 10-1073 (D.C. Cir. Dec. 10, 2010).
231. Order at 2, Coalition for Responsible Regulation, Inc. et al. v. EPA, No. 10-1073 (D.C. Cir. Mar. 21, 2011).

versial. In announcing the Tailoring Rule, EPA asserted three rationales for acting as it had.

- ***Absurd Results Doctrine.*** An agency is authorized to apply statutory requirements differently than a literal reading would require in order to avoid undermining congressional intent. In that it would be absurd to regulate thousands of small emitters, the tailoring was necessary.[232]
- ***Administrative Necessity Doctrine.*** An agency is authorized to apply statutory requirements in a way that avoids impossible administrative burdens by adjusting the requirements. In that regulating every small emitter would impose insurmountable administrative burdens on state and local permitting authorities, which are EPA partners, the tailoring was justified.[233]
- ***One-Step-at-a-Time Doctrine.*** An agency is authorized to implement statutory requirements through phased action as it develops a more nuanced understanding of the best course of action. Given the Supreme Court's *Massachusetts* conclusion that the CAA applies to GHGs, EPA wants to start by regulating the largest emitters.[234]

Challengers refute EPA's rationales for departing from the statutory PSD "major emitting facility" tpy thresholds for the following reasons.

- ***Separation of Powers.*** The Tailoring Rule goes beyond EPA's authority, in that it seeks to replace, rather than simply implement, the unambiguous language of the CAA with thresholds of EPA's own making. The rule is a violation of separation of powers in that it represents an unconstitutional appropriation of legislative power by the Executive Branch.[235]
- ***Creation of Absurdity.*** EPA may not deliberately produce absurd results by choosing to regulate GHGs through the Triggering and Vehicles Rules and, then, use the absurd results doctrine to argue that the Tailoring Rule is necessary to effectuate congressional intent.[236]
- **Chevron *Deference Unwarranted.*** EPA cannot show that Congress meant to delegate authority to the Agency to decide whether GHGs can be swept up in the PSD program. The language in the Triggering Rule is not sufficiently ambiguous to give rise to *Chevron* deference for EPA's interpretation.[237]
- ***Similarity to Invalidated FDA Rule to Regulate Cigarettes.*** The Tailoring Rule is akin to a rule struck down as unconstitutional in *FDA v. Brown & Williamson Tobacco Corp.*[238] In that case, an organic statute banned the interstate sale of any drug or device that is "dangerous to health." When the Food and Drug Administration (FDA) asserted authority to regulate tobacco products under this statute, FDA "tailored" its regulations to restrict the marketing of such products to children rather than banning such products altogether in line with the literal language of the statute. The Supreme Court concluded that FDA did not have the authority to regulate tobacco products because of the far-reaching implications, and that Chevron deference was unwarranted, because Congress did not intend to delegate to the agency such a significant area of jurisdiction. The far-reaching burdens created by EPA's regulation of GHGs under the PSD program are similar to those in the *Brown & Williamson* case, and thus EPA lacks authority for its regulatory scheme.[239]

The fate of the Tailoring Rule and EPA's extension of the PSD program to GHGs remains to be seen.

V. Construction Permits BACT Determinations

State permitting authorities have begun to apply the PSD Tailoring Rule to major stationary sources seeking to build new facilities or modify their facilities.[240] In November 2010, EPA issued the "PSD and Title V Permitting Guidance for Greenhouse Gases,"[241] and updated the Guidance in March 2011.[242] The Guidance provides permitting authorities and permit applicants with general information about emission threshold requirements, PSD applicability, and an explanation of how to determine whether a facility limits GHG emissions efficiently.

Permit authorities must analyze the facility's application to determine whether it applies BACT to regulate emissions. Through this process, the permitting authority will provide "a numeric emission limitation that reflects the maximum degree of reduction achievable for each pollutant subject to BACT through the application of the selected technology or technique."[243] If the applicant's proposed technique does not meet that established standard, it will not receive a permit to construct or modify its facility. The Guidance emphasizes that BACT determinations must be done on a case-by-case basis.[244] Permitting authorities must

232. 75 Fed. Reg. at 31542-43.
233. *Id.* at 31543-44.
234. *Id.* at 31544-45.
235. Brief of State Petitioners and Supporting Intervenor at 37-38, Coalition for Responsible Regulation, Inc. et al. v. EPA, No. 10-1073 (D.C. Cir. filed June 20, 2011) [hereinafter State Petitioners' Brief].
236. Non-State Petitioners' Joint Briefing Proposal at 6, Coalition for Responsible Regulation, Inc. et al. v. EPA, No. 10-1073 (D.C. Cir. filed Jan. 11, 2011).
237. State Petitioners Brief, *supra* note 235, at 39. *See also* Farrell, *supra* note 211, at 10255-56.
238. 529 U.S. 120 (2000).
239. *Id.* at 40-41.
240. 40 C.F.R. §52.21(a)(2).
241. U.S. EPA, PSD and Title V Permitting Guidance for Greenhouse Gases (Nov. 2010), *available at* http://www.epa.gov/region4/air/permits/GHG%20Permitting%20Guidance%20-%2011-10-10%20public.pdf.
242. BACT Guidance (Mar. 2011), *available at* http://www.epa.gov/nsr/ghgdocs/ghgpermittingguidance.pdf.
243. *Id.* at 17.
244. *Id.*

consider "energy, environmental, and economic and other costs associated with each technology or technique," as well as the level of emissions reductions.[245]

The CAA generally defines what constitutes BACT.[246] EPA's BACT Guidance shares EPA's view of how to determine appropriate emissions control technology given the statutory standard. The Guidance details the five steps permitting authorities and applicants should follow to complete the "top-down" BACT analysis. The five steps are:

(1) identify all available control technologies;

(2) eliminate technically infeasible options;

(3) rank remaining control technologies;

(4) evaluate most effective controls and document results; and

(5) select the BACT.[247]

The top-down process requires permitting authorities to research all possible techniques meant to control an emission and rank them; the best option being the first choice. Next, the authorities should eliminate any options that would not be compatible for that particular source. Afterward, the remaining options are then ranked again. Then, the authorities must evaluate the energy, environmental, and economic costs of implementing the highest-ranking choice. After conducting this analysis and eliminating any inefficient methods, the remaining top-ranked choice is that source's BACT. The top-down BACT process forces permitting authorities to consider all methods, but it allows them to evaluate and eliminate the choices that do not fit in particular situations.

To date, only a handful of permit authorities have used the BACT process to determine whether to issue a construction permit.[248] Since EPA issued its Guidance, Louisiana, South Dakota, and Michigan were the first three states to issue draft proposals and/or permits to applicants.

Louisiana was the first state to issue a construction permit after the Guidance was issued. The Louisiana Department of Environmental Quality (LDEQ) issued the air permit to Nucor Corp to construct an iron and steel plant.[249] The permit includes an energy-efficiency standard for the plant[250] and a limit of "13 million British thermal units of natural gas used per metric ton of direct reduced iron produced as a surrogate for greenhouse gas emissions."[251] Nucor submitted its application before EPA issued its BACT Guidance, and the LDEQ's permit contained minimal explanations and analysis of the BACT process. It only provides a limited discussion of other control technologies and the reasons the LDEQ did not chose them.[252]

The next permit issued, however, included a more detailed analysis of the BACT process. The South Dakotan facility Hyperion, a "greenfield petroleum refinery and an integrated gasification combined-cycle power plant," applied to the South Dakota Department of Environment and Natural Resources (DENR) for a construction permit. The facility will "use waste gas produced in the refining process to power the processes at the plant [and will] use petroleum coke derived from the refining process, and coal as a backup."[253] On February 14, 2011, the DENR provided detailed analysis of its BACT choices in its draft permit proposal[254] and its proposed construction permit from May 2, 2011.[255] It considered the cost and efficiency of available control methods before providing emissions determinations for different types of equipment.

For example, the DENR chose the maximum coke/coal design option as the BACT for Hyperion to produce additional electrical power, even though other types of designs, like the natural gas design and sequestration, existed. According to the DENR, "the maximum coke design case would generate higher [GHG] emissions during the gasification process, but would generate less [GHGs] from burning the produced syngas in the combustion turbines."[256] The disadvantages of the maximum coke design were outweighed by its advantages. The DENR eliminated the other designs as inefficient and costly.[257]

In response to comments criticizing Hyperion and the DENR's BACT choice, the DENR wrote: "Hyperion should be allowed the flexibility to decide which design to implement as long as it meets the established BACT limits."[258] The other options might have been the best technology available for that industry, but after conducting the BACT analysis and ruling out those options, the DENR agreed that its emissions determinations satisfied GHG requirements.

245. *Id.*

246. 42 U.S.C. §7479(3). *See also* John-Mark Stensvaag, *Preventing Significant Deterioration Under the Clean Air Act: The BACT Requirement and BACT Definition*, 41 ELR 10902 (Oct. 2011).

247. BACT Guidance, *supra* note 242, at 18.

248. *See* Jesse Greenspan, *Jackson Subjected to More Criticism of EPA*, Law 360, Mar. 16, 2011, http://www.law360.com/articles/232597/jackson-subjected-to-more-criticism-of-epa (U.S. EPA Administrator Jackson stated that "about 100 greenhouse gas permit applications have been filed, that 26 of those have completed their best available control technology analysis, and that two permits have already been reviewed and issued").

249. Steven D. Cook, *Smooth Start for EPA Greenhouse Permitting, but Opponents Warn of Problems to Come*, World Climate Change Rep., BNA, Mar. 28, 2011.

250. Andrew Childers, *Environmental Groups to Ask EPA to Object to First Permit With Greenhouse Gas Limits*, World Climate Change Rep., BNA May 3, 2011.

251. Andrew Childers, *Challenge to Nucor Steel Permit Says Limits on Natural Gas Not Best Control Technology*, World Climate Change Rep., BNA, May 4, 2011.

252. Patricia F. Braddock & Robert K. Greenslade, *The Evolution of BACT Demonstrations for GHGs*, Law 360 Env't, Mar. 14, 2011, http://www.law360.com/articles/231491/the-evolution-of-bact-demonstrations-for-ghgs.

253. Steven D. Cook, *Draft Air Permit for Refinery, Power Plant in South Dakota Includes Greenhouse Gas Limits*, World Climate Change Rep., BNA, Feb. 18, 2011.

254. South Dakota DENR, PSD Air Quality Preconstruction Permit (Feb. 14, 2011), *available at* http://denr.sd.gov/Hyperion/Air/20110211dp.pdf.

255. South Dakota DENR, PSD Air Quality Preconstruction Permit (May 2, 2011), *available at* http://denr.sd.gov/Hyperion/Air/20110502ProposedPermit.pdf.

256. South Dakota DENR, DENR's Response to Comments Received on Extension Request on Amended Draft Prevention of Significant Deterioration Preconstruction Air Quality Permit 46 (May 2, 2011), *available at* http://denr.sd.gov/Hyperion/Air/20110502ResponseToComments.pdf.

257. *Id.*

258. *Id.*

On June 29, 2011, the Michigan Department of Environmental Quality (MDEQ) became the third state to approve a permit. The permit was for Wolverine Power Supply Cooperative Inc. to "install and operate a 600-megawatt, coal-fired steam electric power plant."[259] In its "Response to Comments Document," the MDEQ provided reasons and quantitative analysis supporting the use of circulating fluidized bed boilers in the plant, instead of pulverized coal boilers[260] or integrated gasification combined cycle.[261] In addition, the MDEQ included a cursory "top-down" BACT determination, though it combined steps while doing so.[262] In the end, the MDEQ was able to provide explanations for the cost-effectiveness and energy efficiency associated with circulating fluidized bed boilers as the BACT for Wolverine Power Supply.

To date, EPA has raised no objections to the three permits issued by state authorities. EPA's silence "provide[s] tacit approval for" them.[263] Of course, EPA still has to handle the direct challenge to the PSD Tailoring Rule that underlies these state BACT determinations,[264] so it remains to be seen whether EPA will play a more aggressive role on this front.

VI. NSPS for Utilities and Refineries

A willingness to develop emissions standards for new and modified electric generating units (EGUs) and refineries under CAA §111 is another way in which the Obama Administration departed from the Bush Administration's reticence to use existing authority to regulate GHGs. In December 2010, EPA settled litigation brought by several states to use existing statutory authority to issue such standards. There are both proponents and detractors from the Agency's use of its statutory authority in this manner. It will not be clear how EPA intends to exercise its authority until it issues a proposed rule in September 2011. What is clear already, however, is the breadth that the EGU NSPS will have on U.S. domestic electricity production. EPA estimates 48% of electricity generation will be subject to the NSPS.[265]

A. Bases for Regulating Under CAA §111

CAA §111, creating the NSPS program, is one of the Act's two provisions creating industrial-category-specific standards, the other being the hazardous air pollution program of §112. Section 111 has no emissions threshold,[266] but, unlike other statutory provisions with the "endangerment" concept, §111 requires the air pollutant to "significantly" endanger public health and welfare, though it is unclear how much discretion this adverb affords EPA.[267] The Bush EPA did not set CO_2 emissions limits in refinery and Portland cement NSPS in 2008,[268] but the *Massachusetts* decision made "it difficult for the Agency to avoid adding CO_2 requirements to NSPS."[269]

Section 111 requires EPA to set performance standards "reflecting the degree of emission limitation achievable through the application of the best system of emission reduction" that has been "adequately demonstrated."[270] EPA can consider cost in setting NSPS. Stationary sources do not have to "install a particular technology"; they must only "meet an emissions standard that EPA determines based on technological options."[271] Section 111(b)(1)(B) requires EPA to review NSPS every eight years, and its review is frequently the subject of litigation.[272]

It has been observed that, among the existing statutory authorities by which EPA could address GHG emissions, the NSPS program was "the most plausible and practical candidate for regulation of GHGs from stationary sources, chiefly because it lacks the conceptual and practical problems" and "legal difficulties" presented by other statutory provisions.[273] It does not hurt, of course, that "EPA is arguably required to issue GHG NSPS."[274] Among the advantages to EPA's using this statutory authority are the Agency's long-standing experience with the program; its relative speed; its flexibility, including the consideration of costs; and the plausibility of including an emissions trading component.[275]

B. Settlements Setting Rulemaking Timeline

On December 23, 2010, EPA entered into two settlement agreements requiring it to issue NSPS rules for CO_2 from

259. Press Release, MDEQ, DEQ Approves Rogers City Power Plant Permit (June 29, 2011), *available at* http://www.michigan.gov/deq/0,1607,7-135-3308-258549--,00.html. The press release noted that the MDEQ denied Wolverine Power Supply's original permit application because it saw no need for a new power plant. On January 28, 2011, however, the "Missaukee County Circuit Court ruled . . . that an alleged lack of need for the proposed facility alone, separate from air quality concerns, was not a legal basis to deny the permit application." *Id.* As such, the MDEQ had to reconsider Wolverine Power Supply's application.
260. MDEQ, Wolverine Power Supply Cooperative, Inc.: Response to Comments Document 95-98 (June 29, 2011), *available at* http://www.deq.state.mi.us/aps/downloads/permits/PubNotice/317-07/Remand/317-07RTC.pdf.
261. *Id.* at 102.
262. *Id.* at 101-02.
263. Childers, *supra* note 250.
264. *See supra* notes 201-33 and accompanying text.
265. Dawn Reeves, *EPA Outlines Options for Shaping First-Time Power Plan Climate NSPS Rule*, Inside EPA, June 16, 2011.
266. New York v. EPA, 442 F.3d 880, 890 (D.C. Cir. 2006).
267. Reitze, *supra* note 4, at 1311.
268. 73 Fed. Reg. 35838 (June 24, 2008) (refinery NSPS); Reitze, *supra* note 4, at 1311, n.512 (citing *EPA Defers to ANPR in Opting Against Climate Controls for Cement NSPS*, 19 Clean Air Rep. (Inside EPA) June 12, 2008, at 19).
269. Reitze, *supra* note 4, at 1311.
270. 42 U.S.C. §7411(a)(1).
271. Richardson et al., *supra* note 86, at 10105.
272. *Id.*
273. *Id.* at 10106.
274. *Id.* ("Because *Massachusetts* determined that GHGs are pollutants, and the mobile-source rules have further made them pollutants regulated under the CAA, any new NSPS probably must include performance standards for GHGs.")
275. *Id.* at 10109-10 (noting, however, that "[e]missions trading under the NSPS program carries some legal risk"). *See also* McKinstry, *supra* note 4, at 10306-07.

certain fossil-fuel power plants and refineries.[276] Under the terms of the settlements, EPA must propose an NSPS for GHGs for new and modified EGUs, as well as guidelines for existing EGUs by July 26, 2011, and then finalize the NSPS by May 26, 2012. (It has been noted that, "[w]hile guidelines sound like mere suggestions, the reality is that they become enforceable performance standards within the jurisdiction of the states."[277]) EPA must propose NSPS for GHGs for new and modified refineries by December 15, 2011, and finalize those standards by November 15, 2012.[278] By mid-September 2011, EPA acknowledged it would not meet the month-end deadline for issuing the proposed rule, though when making the acknowledgment, the Agency did not indicate whether the deadline for issuing the final rule would slip.[279]

On June 13, 2011, the government signed a modification to the settlement agreement to extend the July 26, 2011, date for proposing an EGU NSPS to September 30, 2011.[280] Representatives of the private sector have been critical of the tight timelines for EPA to absorb all the information it needs to absorb in setting EGU NSPS.[281] Environmental groups, on the other hand, have been dispirited by the delays, and on September 20, 2011, wrote to President Obama, calling for the proposed rule's issuance "without further delay."[282]

C. Agency Approach and Controversy

While EPA has extended the date for proposing an EGU NSPS, it has provided some advance word of how it might regulate.[283] EPA expects the standards to affect 1,200 coal-fired boilers at 450 facilities, 150 oil-fired boilers at 75 facilities, and 175 gas-fired boilers at 80 facilities.[284]

Available NSPS for EGUs fall into four general categories: work practice and design standards; energy-efficiency standards for boilers or power plants; requiring substitution of biomass for some types of coal-fired plants; and market-based regulatory mechanisms.[285]

- The energy efficiency of a power plant is frequently expressed as its "heat rate," which is the heat input required per unit of electricity output.[286] Reducing heat rates can include such things as "optimizing the performance of basic plant systems, improving control systems, installing high efficiency electrical components . . . and reducing the moisture content of solid fuel."[287]
- Biomass can be mixed with coal and fired in a conventional coal-fired boiler to replace "roughly 10% of the heat input."[288]
- There continue to be those who find support for market-based approaches, e.g., cap-and-trade, within the NSPS program,[289] though EPA Assistant Administrator for Air Gina McCarthy denied the Agency intended to introduce a GHG cap-and-trade NSPS program.[290]

The regulated community faults EPA for proceeding with EGU NSPS at the same time as it is subjecting the utility sector to hazardous air pollution controls (MACT, or maximum available control technology) under §112 of the CAA and warns of imperiling electric reliability.[291]

> The NSPS and Utility MACT, coupled with the other rules [that EPA is intending to impose on the utility sector], will impact roughly 400,000 megawatts of oil and coal-fired generation. That accounts for approximately 40% of current available capacity and almost 50% of total U.S. electric generation. . . . Most experts agree that, based upon historical performance, it will be exceedingly difficult for the power sector to come to grips with all these overlapping rules without some substantial sacrifice to electric reliability.[292]

VII. Conclusion

It is too soon to assess whether the Obama Administration will be successful in controlling GHG emissions through existing CAA provisions. For one thing, several of it rules are the subject of litigation, the outcome of which is unpredictable. EPA has not yet issued its EGU NSPS.

What is clear, however, is that the Administration, for as long as it remains in power, will proceed administratively and expansively. Its doing so will continue to be met with controversy, especially by those who will bear the brunt of the regulation. That is a wide swath of U.S. domestic electricity production, nearly 50%, but the Tailoring Rule and Emissions Reporting extend well beyond power generation alone.

To the extent one believes controlling GHG emissions is an urgent public policy need, the need to proceed administratively is necessitated by Congress' inability to adopt

276. Jonathan Martel & Christopher Jaros, *Major Clean Air Act Developments in 2010*, 26 Toxic L. Rep. (BNA), Mar. 10, 2011, at 283. The two settlements were reached in *New York v. EPA*, No. 06-1322 (D.C. Cir. Dec. 23, 2010); *see also* U.S. EPA Fact Sheet, Settlement Agreements to Address [GHG] Emissions From Electric Generating Units and Refineries, *available at* http://www.epa.gov/airquality/pdfs/settlementfactsheet.pdf; Am. Petroleum Inst. v. EPA, No. 08-1277 (D.C. Cir. Dec. 23, 2010).
277. Scott Segal, *New Source Performance Standards for Global Greenhouse Gas Emissions From the Power and Refining Sectors: Wrong Mechanism at the Wrong Time*, 41 ELR 10312 (Apr. 2011).
278. *Id.*
279. Andrew Childers, *EPA Will Miss Second Deadline to Propose Greenhouse Gas Rule for Power Plants*, Daily Env't Rep. (BNA), Sept. 13, 2011.
280. Modification to Settlement Agreement, *available at* http://www.epa.gov/airquality/pdfs/20110613ghgsettlementmod.pdf (last visited Oct. 2, 2011).
281. *See e.g.*, Segal, *supra* note 277, at 10312.
282. *Environmental Groups Seek Deadline for Utility Rule*, Daily Env't Rep. (BNA), Sept. 21, 2011.
283. Reeves, *supra* note 265.
284. *Id.*
285. Richardson et al., *supra* note 86, at 10111.
286. *Id.*
287. *Id.*
288. *Id.*
289. *Id.*
290. Reeves, *supra* note 265.
291. Segal, *supra* note 277, at 10313.
292. *Id.*

comprehensive climate change legislation (either cap and trade or some other form). The Supreme Court's death blow to federal common-law public nuisance claims as a means of addressing GHG emissions further drives the need to act by rulemaking.

These regulations will continue to take shape over the years to come, and their implementation is even further away. We may not know their ultimate effect in reducing GHG emissions for a decade or longer.