EPA Regulation of Greenhouse Gases: Congressional Responses and Options

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Summary

As a direct result of the Environmental Protection Agency's promulgation of an "endangerment finding" for greenhouse gas (GHG) emissions in December 2009, and its subsequent promulgation of GHG emission standards for new motor vehicles in 2010, the agency has proceeded to control GHG emissions from new and modified *stationary* sources as well. Stationary sources, including power plants, refineries, manufacturing facilities, and others account for 69% of U.S. emissions of greenhouse gases. If the United States is to reduce its total GHG emissions, as President Obama has committed to do, it will be necessary to reduce emissions from these sources.

EPA's regulations limiting GHG emissions from new cars and light trucks automatically triggered two Clean Air Act (CAA) provisions affecting stationary sources of air pollution. First, since January 2, 2011, new or modified major stationary sources must undergo New Source Review (NSR) with respect to their GHGs in addition to any other pollutants subject to regulation under the CAA that are emitted by the source. This review requires affected sources to install Best Available Control Technology (BACT) to address their GHG emissions. Second, major sources of GHGs (existing and new) must now obtain permits under Title V of the CAA (or have existing permits modified to include their GHG requirements).

Beyond these permitting requirements, EPA has begun the process of establishing emission standards for large stationary sources of GHG emissions under the act. In December 2010, EPA reached settlement agreements under which it was required to promulgate final decisions on New Source Performance Standards (NSPS) for electric generating units (EGUs) by May 2012 and for petroleum refineries by November 2012. These deadlines have not been met.

EPA shares congressional concerns about the potential scope of these regulations, primarily because a literal reading of the act would have required as many as 6 million stationary sources to obtain permits. To avoid this result, on May 13, 2010, the agency finalized a "Tailoring Rule" that focuses its resources on the largest emitters while deciding over a six-year period what to do about smaller sources.

Many in Congress have suggested that EPA should delay taking action on any stationary sources or should be prevented from doing so. There were at least 10 bills introduced in the 112th Congress that would have delayed or prevented EPA actions on greenhouse gas emissions. In February 2011, the text of one bill, H.R. 153, was added to the Full-Year Continuing Appropriations Act (H.R. 1) during floor debate, on a 249-177 vote. H.R. 1 passed the House, February 19, but failed in the Senate, March 9, 2011. On April 7, 2011, the House passed Representative Upton's H.R. 910, which would have repealed EPA's endangerment finding, redefined "air pollutants" to exclude greenhouse gases, and prohibited EPA from promulgating any regulation to address climate change. In the Senate, similar legislation failed to pass, April 6. Since then, EPA has taken no final action on stationary source GHG standards, but final action on EGU standards is expected in 2013. With that, congressional interest may be renewed.

This report discusses elements of this controversy, providing background on stationary sources of GHG pollution and identifying options Congress has at its disposal to address the issues, including (1) resolutions of disapproval under the Congressional Review Act; (2) freestanding legislation; (3) the use of appropriations bills as a vehicle to influence EPA activity; and (4) amendments to the Clean Air Act, including legislation to establish a new GHG control regime.

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Introduction

On April 1, 2010, Lisa Jackson, the Environmental Protection Agency (EPA) Administrator, signed final regulations that require auto manufacturers to limit emissions of greenhouse gases (GHGs) from new cars and light trucks.[1] These regulations have triggered two Clean Air Act provisions affecting *stationary* sources of air pollution such as electric power plants. First, effective January 2, 2011, new or modified major stationary sources have to undergo New Source Review (NSR) with respect to their GHG emissions in addition to any other pollutants subject to regulation under the Clean Air Act that they emit. This review requires affected sources to install Best Available Control Technology (BACT) to address their GHG emissions. Second, existing sources (in addition to new ones) have to obtain permits under Title V of the Clean Air Act (or have existing permits modified to include their GHG requirements).

Congressional Concerns

EPA's potential regulation of GHG emissions (particularly from stationary sources) has led some in Congress to suggest that the agency delay taking action or be stopped from proceeding. In both the 111th and 112th Congresses, bills were introduced affecting EPA's greenhouse gas authority, as well as amendments addressing the same issues.

EPA has attempted to respond to congressional concerns by clarifying the direction and schedule of its actions. However, the agency has been limited to the degree it can delineate specifics as many of the regulatory components, such as new New Source Performance Standards (NSPS) for stationary sources, are in the early stages of the rulemaking process. EPA has provided three clear responses so far to the congressional concerns outlined above:

- the first came on March 29, 2010, when the Administrator reinterpreted a 2008 memorandum concerning the effective date of the stationary source permit requirements.[2] Facing a possibility of having to begin the permitting process on April 1, 2010 (the date the first GHG standard for automobiles was finalized), the March 29 decision delayed for nine months (to January 2, 2011) the date on which EPA would consider stationary source GHGs to be subject to regulation, and thus, subject to the permitting requirements of PSD-NSR and Title V.[3]
- On May 13, 2010, the Administrator signed the GHG "Tailoring" Rule, which provided for a phasing in of Title V and PSD-NSR permitting requirements, and is discussed in detail below.

[1] The regulations, which took effect with the 2012 model year, appeared in the *Federal Register* on May 7, 2010, at 75 *Federal Register* 25324. Related information is available on EPA's website at http://www.epa.gov/otaq/climate/regulations.htm.

[2] The reinterpretation memo appeared in the *Federal Register*, April 2, 2010, at 75 *Federal Register* 17004.

[3] The term "subject to regulation" is the key Clean Air Act term that determines when affected sources would be subject to the permitting requirements of NSR and Title V. By interpreting the term to refer to January 2, 2011, rather than the date of the final regulations implementing the mobile source endangerment finding (April 1, 2010), EPA effectively delayed the impact of that rulemaking on stationary sources for nine months. For a further discussion of the term, "subject to regulation," see CRS Report R40984, *Legal Consequences of EPA's Endangerment Finding for New Motor Vehicle Greenhouse Gas Emissions*.

- On November 10, 2010, the EPA released a package of guidance and technical information to assist local and state permitting authorities in implementing PSD and Title V permitting for greenhouse gas emissions.[4]

The EPA Administrator and the President have repeatedly expressed their preference for Congress to take the lead in designing a GHG regulatory system. However, EPA simultaneously stated that, in the absence of congressional action, it must proceed to regulate GHG emissions: a 2007 Supreme Court decision (*Massachusetts v. EPA*[5]) compelled EPA to address whether GHGs are air pollutants that endanger public health and welfare, and if so to embark on a regulatory course that is prescribed by statute. Having made an affirmative decision to the endangerment question, EPA is now proceeding with regulations.

Thus, EPA and a number of Members and Senators have been on a collision course. EPA is proceeding to regulate emissions of GHGs under the Clean Air Act, as it maintains it must, while trying to focus those efforts on the largest emitters within a feasible timeframe. Opponents of this effort in Congress continue to explore approaches to alter the agency's course.

The President, in his second inaugural address, promised to "respond to the threat of climate change," and, in his State of the Union address, said he would direct his Cabinet to come up with "executive actions we can take" to reduce [carbon] pollution. Thus, EPA can be expected to renew its focus on greenhouse gas emissions in the coming months, leaving Congress, once again, to consider how best to respond.

This report discusses elements of this controversy, providing background on stationary sources of greenhouse gas pollution and identifying options Congress has if it chooses to address the issue. The report discusses four sets of options: (1) resolutions of disapproval under the Congressional Review Act; (2) freestanding legislation directing, delaying, or prohibiting EPA action; (3) the use of appropriations bills as a vehicle to influence EPA activity; and (4) amendments to the Clean Air Act, including legislation to establish a new GHG control regime. The report considers each of these in turn, but first provides additional detail regarding the sources of GHG emissions, the requirements of the Clean Air Act, and the significance of regulating emissions from stationary sources.

Regulation of Stationary Source GHGs

When EPA finalized its first regulation of greenhouse gas emissions from new mobile sources, legal and policy drivers were activated that have led to regulation of stationary sources as well. Stationary sources are the major sources of the country's GHG emissions. Overall, 69% of U.S. emissions of greenhouse gases come from stationary sources (the remainder come from mobile sources, primarily cars and trucks). Relatively large sources of fossil-fuel combustion and other industrial processes are responsible for more than half the country's total emissions (see **Table 1**). If EPA (or Congress) is to embark on a serious effort to reduce greenhouse gas emissions, stationary sources, and in particular large stationary sources, will have to be included.

[4] U.S. EPA, Office of Air And Radiation, "PSD and Title V Permitting Guidance for Greenhouse Gases," November 2010 (subsequently revised, March 2011), at http://www.epa.gov/nsr/ghgdocs/ghgpermittingguidance.pdf.

[5] 549 U.S. 497 (2007). For more information, see CRS Report R41505, *EPA's BACT Guidance for Greenhouse Gases from Stationary Sources*.

The substantial amount of greenhouse gas emissions emanating from stationary source categories is even more important from a policy standpoint: reductions in greenhouse gas emissions from these sources are likely to be more timely and cost-effective than attempts to reduce emissions from the transport sector.

Table 1. Selected U.S. Stationary Sources of Greenhouse Gases

(million metric tons of CO_2-equivalent)

Source	2010 Emissions	% of Total GHGs
Electricity Generation (CO_2, CH_4, N_2O)		
Coal-fired	1840.1	27.0%
Natural gas-fired	405.5	5.9%
Fuel oil-fired	31.3	0.5%
Industrial fossil-fuel combustion (CO_2, CH_4, N_2O)		
Mostly petroleum refineries, chemicals, primary metals, paper, food, and nonmetallic mineral products		
Coal-fired	96.9	1.4%
Natural gas-fired	394.5	5.8%
Fuel oil-fired	287.9	4.2%
Industrial Processes		
Iron and steel production (CO_2, CH_4)	53.0	0.8%
Cement production (CO_2)	30.5	0.4%
Nitric acid production (N_2O)	16.7	0.2%
Substitution for ozone-depleting substances (HFCs)	114.6	1.7%
Other		
Natural gas systems (CO_2, CH_4)	247.7	3.6%
Landfills (CH_4)	107.8	1.6%
TOTAL	**3626.5**	**53.1%**

Source: EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2010*, April 15, 2012.

Two factors are driving the concerns about EPA's decisions on mobile sources spilling over to decisions on stationary sources: (1) the non-discretionary triggers within the CAA, discussed above, that impose permitting requirements on stationary sources because of the mobile source action; and (2) legal and policy linkages between mobile and stationary sources with respect to greenhouse gases that are likely to force EPA to issue additional endangerment findings and accompanying regulations on stationary sources. In particular, three potential impacts on stationary sources have raised the most concern:

- mandatory permitting requirements under the Prevention of Significant Deterioration / New Source Review (PSD-NSR) program (Sections 165-169);
- mandatory permitting requirements under Title V, the permit title of the Clean Air Act; and

- further endangerment findings that would require greenhouse gas reductions under different parts of the act,[6] particularly Section 111, New Source Performance Standards.

Prevention of Significant Deterioration / New Source Review (PSD-NSR)

Under Sections 165-169 of the Clean Air Act, any new or modified facility emitting (or potentially emitting) over 100 or 250 tons of any regulated pollutant[7] must undergo preconstruction review and permitting, including the installation of Best Available Control Technology (BACT) to limit emissions. State permitting agencies determine BACT on a case-by-case basis, taking into account energy, environmental, and economic impacts. BACT cannot be less stringent than the federal New Source Performance Standard, if there is one, but it can be more so.[8] EPA issues guidelines to states to assist them in making BACT determinations.[9]

PSD-NSR is required for any pollutant "subject to regulation" under the Clean Air Act, a requirement that was fulfilled for GHGs when the mobile source regulations EPA finalized April 1, 2010, took effect January 2, 2011. Two aspects of invoking the New Source Review provision have been raised. First, as noted above, PSD-NSR has specified thresholds for triggering its provisions: a "major emitting facility" is defined as emitting or having the potential to emit either 100 tons or 250 tons annually of a regulated pollutant (Sec. 169(1)).[10] With respect to greenhouse gases, this is a very low threshold. EPA concludes that at 100 tons per year, even large residential and commercial structures could be required to obtain permits. By comparison, the Waxman-Markey bill (H.R. 2454) of the 111th Congress generally used 25,000 metric tons as a regulatory threshold.

The second administrative issue for PSD-NSR is the requirement that BACT be determined on a case-by-case basis. Combined with a 100-ton or 250-ton threshold, this could mean a massive

[6] For a further discussion of the act's various endangerment finding provisions, see CRS Report R40984, *Legal Consequences of EPA's Endangerment Finding for New Motor Vehicle Greenhouse Gas Emissions*.

[7] Except those pollutants regulated under Sections 112 (hazardous air pollutants) and 211(o) (renewable fuels).

[8] The PSD program (Part C of Title I of the CAA) focuses on ambient concentrations of sulfur dioxide (SO_2), nitrogen oxides (NOx), and particulate matter (PM) in "clean" air areas of the country (i.e., areas where air quality is better than the air quality standards (NAAQS)). The program allows some increase in clean areas' pollution concentrations depending on their classification. In general, historic or recreation areas (e.g., national parks) are classified Class I with very little degradation allowed, while most other areas are classified Class II with moderate degradation allowed. States are allowed to reclassify Class II areas to Class III areas, which would be permitted to degrade up to the NAAQS, but none have ever been reclassified to Class III. There are no PSD emission limitations for GHGs, nor is there a NAAQS for GHGs. This presumably gives EPA and the states increased latitude in determining how much additional GHG pollution can be allowed by a new or modified source.

[9] See CRS Report R41505, *EPA's BACT Guidance for Greenhouse Gases from Stationary Sources*.

[10] Section 169(1) lists 28 categories of sources for which the threshold is to be 100 tons of emissions per year. For all other sources, the threshold is 250 tons. It should be noted that a different threshold applies in the case of major modifications, which are defined by regulation, not statute. For sulfur dioxide and nitrogen oxides, the threshold for a major modification is an increase in emissions of 40 tons per year. Facilities exceeding that threshold are subject to NSR.

Given that EPA has identified by regulation the *de minimis* emission increases for triggering NSR review for modifications, it is possible EPA could set a substantially higher level for at least carbon dioxide emissions, and perhaps other greenhouse gases, if it determined such thresholds were appropriate. In the final Tailoring Rule, the agency set a threshold of 75,000 tons per year of CO_2-equivalent for applying NSR to modifications.

increase in state determinations of BACT: the resulting increased permit activity would be at least two orders of magnitude, according to EPA.

EPA has addressed this threshold problem in the Greenhouse Gas Tailoring Rule, signed by the Administrator May 13, 2010.[11] The rule phased in the PSD-NSR requirements:

- in Step 1, from January 2, 2011, to June 30, 2011, there were no new permitting actions due solely to GHG emissions. Only sources undertaking permitting actions anyway for other pollutants needed to address GHGs, with a threshold of 75,000 tons per year (tpy) of CO_2-equivalent (CO_2-e) for applicability;
- in Step 2, beginning July 1, 2011, new sources that are not subject to major source permit requirements for any other air pollutant require PSD-NSR and Title V permits if they have the potential to emit 100,000 tpy or more of CO_2-e. Modifications of sources not otherwise subject to permit requirements will have a permit threshold of 75,000 tpy;
- in Step 3, which would have required a new rulemaking from EPA, the agency said it would consider lowering the permit threshold, but not below 50,000 tpy of CO_2-e, beginning July 1, 2013 (the agency announced on March 8, 2012, however, that it would not lower the permit threshold[12]);
- in Step 4, the agency said it will complete a study by 2015 projecting the administrative burden of requiring permits from smaller sources, considering available streamlining measures, and will solicit comment on permanent exclusion of certain sources from PSD, Title V, or both requirements in a rulemaking to be completed by April 30, 2016.

EPA estimated that under Steps 1 and 2, 1,600 new or modified sources annually would be required to obtain NSR permits for their GHG emissions. Without the Tailoring Rule, the estimate would be that 82,000 facilities would have required permits.[13] The actual number of permits has been substantially below the agency's estimate: in the first 11 months of the program, only 18 permits were issued by EPA and state permitting authorities, with an additional 50 applications received, but permits not yet issued.[14]

Title V Permits

When invoked by EPA's mobile source action, Title V requires all new and existing facilities that have the potential to emit a GHG pollutant in amounts of 100 tons per year or more to obtain permits. This size threshold is even more stringent than the above NSR requirement. If not modified, it would have resulted in substantial numbers of smaller sources having to obtain a state

[11] The rule appeared in the June 3 *Federal Register*. See U.S. EPA, "Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule," 75 *Federal Register* 31514. A six-page EPA Fact Sheet summarizing the rule is available at http://www.epa.gov/nsr/documents/20100413fs.pdf.

[12] 77 *Federal Register* 14226.

[13] U.S. EPA, Office of Air Quality Planning and Standards, "Summary of Clean Air Act Permitting Burdens With and Without the Tailoring Rule," p. 6, at http://www.epa.gov/nsr/documents/20100413piecharts.pdf.

[14] 77 *Federal Register* 14233. At a June 29, 2012 House Energy and Commerce Committee hearing, EPA Assistant Administrator Gina McCarthy said that 44 permits had been issued, and that evaluation of permit applications was being completed within 12 months of the application's receipt.

permit for the first time (most larger sources already have permits because they emit other pollutants regulated under the act).

In the preamble to its Tailoring Rule, EPA estimated that more than 6 million sources would potentially be subject to Title V if the threshold remained at 100 tons per year of emissions.[15] Thus, like PSD-NSR, a major complication that Title V introduces is the potential for very small sources of greenhouse gases to need permits in order to operate (or continue operating). Furthermore, Title V requires that covered entities pay fees established by the permitting authority, and that the total fees be sufficient to cover the costs of running the permit program.

It should be noted that Title V permits are designed to help states and the EPA in enforcing a source's various Clean Air Act-related requirements; they do not impose any requirements themselves. They simply put all the affected facility's Clean Air Act requirements in one place to make enforcement more efficient. Thus, for large facilities that already have Title V permits because of their emission of other regulated pollutants, the addition of GHGs to that permit does not represent a significant additional administrative burden. It was the potential for millions of sources not currently required to have a Title V permit that would have to obtain one under GHG regulations that represented the additional burden identified here, and was the impetus for EPA's Tailoring Rule described above. As a result of the Tailoring Rule, EPA estimated that 15,500 sources annually would need to obtain Title V permits.

Potential GHG Emission Standards Under Section 111

Because stationary sources are a major source of greenhouse gas emissions, EPA is likely to be compelled to issue further endangerment findings under separate parts of the act, resulting in regulation of greenhouse gases from various categories of stationary sources.[16] There are numerous paths such regulation might take: in the immediate future, the most likely route to stationary source GHG regulations would be Section 111, New Source Performance Standards (NSPS).

New Source Performance Standards are emission limitations imposed on designated categories of major new (or substantially modified) stationary sources of air pollution. A new source is subject to NSPS regardless of its location or ambient air conditions. Section 111 provides authority for EPA to impose performance standards on stationary sources—directly in the case of new (or modified) sources (Section 111(b)), and through the states in the case of existing sources (Section 111(d)). The authority to impose performance standards on new and modified sources refers to any category of sources that the Administrator judges "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare" (Sec. 111(b)(1)(A))—language similar to the endangerment and cause-or-contribute findings EPA promulgated for motor vehicles on December 15, 2009.

In establishing these standards, Section 111 gives EPA considerable flexibility with respect to the source categories regulated, the size of the sources regulated, the particular gases regulated, along

[15] 75 *Federal Register* 31547, Table VI-1, p. 31547. All but 3% of these sources would be commercial establishments and large residences, according to EPA.

[16] For a discussion of the similarities and differences in the various endangerment findings contained in the Clean Air Act, see CRS Report R40984, *Legal Consequences of EPA's Endangerment Finding for New Motor Vehicle Greenhouse Gas Emissions*.

with the timing and phasing-in of regulations (Sec. 111(b)(2)). This flexibility extends to the stringency of the regulations with respect to costs, and secondary effects, such as non-air-quality, health and environmental impacts, along with energy requirements. This flexibility is encompassed within the Administrator's authority to determine what control systems she determines have been "adequately demonstrated." Standards of performance developed by the states for existing sources under Section 111(d) can be similarly flexible.

Much attention, including EPA's, has been on this path. Section 111 gives EPA authority to set NSPS for emissions of "air pollutants," a term that now has been determined to include greenhouse gases.[17] Section 111(d), which broadens the NSPS authority to state plans for existing sources of air pollutants, refers to any air pollutant that *isn't* either a criteria air pollutant under Section 108 or a toxic air pollutant under Section 112. Again, greenhouse gases would fit within the boundaries of the term.

In addition, attention will be focused on Section 111 as any potential federally determined NSPS for new sources would constitute the "floor" for state BACT determinations under PSD-NSR. Thus, as states move to implement NSR for greenhouse gases, the pressure on EPA to set the NSPS floor on those determinations may increase.

The potential schedule for Section 111 NSPS standards has been the subject of much speculation. On December 23, 2010, EPA announced that it had reached settlement agreements with numerous parties under which it would promulgate final decisions on NSPS for electric generating units by May 2012 and for petroleum refineries by November 2012. The agency has not met these deadlines: it proposed NSPS for new electric generating units on April 13, 2012, and has said that the Administrator expects to sign final standards in March 2013; but, over the last year, agency officials have repeatedly said they have no timetable for the deployment of guidelines applicable to existing EGUs, despite having committed in the December 2010 consent agreement to developing such guidelines on the same schedule as the NSPS.[18] Similarly, standards and guidelines for petroleum refineries have not been proposed as of this writing – more than a year after they were due—despite the December 2010 settlement agreement.

Even if EPA were to act quickly to produce Section 111(d) guidelines, it would likely be at least five years before existing power plants, refineries, or other stationary sources would be subject to emission limits for GHGs as a result of EPA's action.[19] EPA must first propose and promulgate the guidelines, a process that normally takes at least two years. Following that, the states would be given time to develop implementation plans. How much time the states would be given to submit these plans is unclear, but the statute says that the regulations shall establish a procedure "similar to that" provided for State Implementation Plans under Section 110, which generally give states three years to submit a plan. Following a plan's submission, EPA would review it to determine its adequacy. This process normally takes at least a year. After approval of the plans, the act

[17] GHGs would likely be considered a "designated pollutant" under Section 111. The term "designated pollutant" is a catch-all phrase for any air pollutant that isn't either a criteria air pollutant under Section 108 or a toxic air pollutant under Section 112. Examples of these include fluorides from phosphate fertilizer manufacturing or primary aluminum reduction, or sulfuric acid mist from sulfuric acid plants.

[18] See, for example, "McCarthy Says Any Greenhouse Gas Rule for Existing Plants Still Several Years Away," *Daily Environment Report*, November 14, 2012.

[19] States are, of course, free to impose GHG emission standards under their own authority at any time: California and nine Northeastern states have already done so. For more information on the nine Northeastern (RGGI) states, see CRS Report R41836, *The Regional Greenhouse Gas Initiative: Lessons Learned and Issues for Policymakers.*

envisions case-by-case determinations of emission limits, another potentially time-consuming process: the states would have considerable flexibility in this process, considering "among other factors, the remaining useful life of the existing source" in setting an emission limit.

Congressional Options

As noted earlier, if Congress would like to see a different approach to GHG controls than the one on which EPA has embarked, at least four sets of options are available to change the agency's course: the Congressional Review Act; freestanding legislation; appropriations riders; and amendments to the Clean Air Act. Among the most widely discussed has been the Congressional Review Act.

Congressional Review Act[20]

The Congressional Review Act (CRA, 5 U.S.C. §§ 801-808), enacted in 1996, establishes special congressional procedures for disapproving a broad range of regulatory rules issued by federal agencies. Before any rule covered by the act can take effect, the federal agency that promulgates the rule must submit it to Congress. If Congress passes a joint resolution disapproving the rule under procedures provided by the act, and the resolution becomes law,[21] the rule cannot take effect or continue in effect. Also, the agency may not reissue either that rule or any substantially similar one, except under authority of a subsequently enacted law.

No CRA resolutions of disapproval for EPA's greenhouse gas emission regulations were introduced in the 112th Congress; but the CRA was much discussed as a tool for overturning EPA's regulatory actions on GHG emissions in the 111th Congress. After EPA promulgated the first of its GHG rules, the endangerment finding[22] on December 15, 2009, four identical resolutions were introduced to disapprove it under the CRA—one in the Senate (Senator Murkowski's S.J.Res. 26) and three in the House (Representative Jerry Moran's H.J.Res. 66, Representative Skelton's H.J.Res. 76, and Representative Barton's H.J.Res. 77). If enacted, these resolutions would have disapproved both the "endangerment" and "cause or contribute" findings that EPA promulgated, with the result that the findings would have "no force or effect." These resolutions garnered substantial support: the Murkowski resolution had 40 Senate cosponsors, and the identical House measures had 3, 52, and 121 cosponsors respectively.

The path to enactment of such a resolution is a steep one. The Obama Administration has made the reduction of GHG emissions one of its major goals; as a result, many have concluded that

[20] This section of this report, discussing the effect of the Congressional Review Act, the procedures under which a disapproval resolution is taken up in the Senate, floor consideration in the Senate, and final congressional action, is adapted from CRS Report RL31160, *Disapproval of Regulations by Congress: Procedure Under the Congressional Review Act*, by Richard S. Beth. Additional discussion of the form of disapproval resolutions, statutory time frames, other elements of the expedited procedures, and limitations of the expedited procedures can be found in that report.

[21] For the resolution to become law, the President must sign it or allow it to become law without his signature, or the Congress must override a presidential veto.

[22] 74 *Federal Register* 66496. While generally referred to as the "endangerment finding" (singular), the *Federal Register* notice consists of two separate findings: a Finding that Emissions of Greenhouse Gases Endanger Public Health and Welfare, and a Finding that Greenhouse Gases From Motor Vehicles Cause or Contribute to the Endangerment of Public Health and Welfare.

legislation restricting EPA's authority to act, if passed by Congress, would encounter a presidential veto. Overriding a veto requires a two-thirds majority in both the House and Senate, and is seen by many as unlikely.

Opponents of the above resolutions noted at least two reasons for their opposition. First, a successful resolution of disapproval for the endangerment and cause-or-contribute findings would not have overturned a rule that imposes regulatory controls, but rather EPA's scientific findings that are the prerequisite for any EPA regulatory action on GHGs. Such findings are under the purview of the Congressional Review Act, but a disapproval resolution would put Congress in the position of overruling a science-based conclusion resulting from a regulatory agency's review and analysis of available scientific evidence.

Second, since the endangerment and cause-or-contribute findings were made under the motor vehicle section of the act (Section 202(a)), EPA argued that a resolution of disapproval would make it impossible for the agency's GHG standards for light duty vehicles to take effect. Section 202(a) only allows the Administrator to set standards for pollutants that she finds "may reasonably be anticipated to endanger public health or welfare." Thus, the absence of an endangerment finding would remove the prerequisite to the promulgation of standards.

The light-duty-vehicle GHG standards, finalized April 1, 2010, were not particularly controversial in and of themselves. They were the product of negotiations among nine auto manufacturers; the states of California, Michigan, and Massachusetts; the United Auto Workers; environmental groups; EPA; the Department of Transportation; and the White House. The auto manufacturers, including GM, Ford, and Chrysler, supported them because, in their absence, states would be free to impose GHG standards themselves, leading to what auto industry spokespersons termed a "patchwork" of regulatory requirements that would be more difficult for the automakers to meet.[23]

The CRA is designed primarily to specify the procedures under which a resolution of disapproval is to be considered in the Senate. Pursuant to the Congressional Review Act, an expedited procedure for Senate consideration of a disapproval resolution may be used at any time within 60 days of Senate session after the rule in question has been published in the *Federal Register* and received by both houses of Congress. The expedited procedure provides that, if the committee to which a disapproval resolution has been referred has not reported it by 20 calendar days after the rule has been received by Congress or published in the *Federal Register*, the panel may be discharged if 30 Senators submit a petition for that purpose. The resolution is then placed on the Calendar.

Under the expedited procedure, once a disapproval resolution is on the Calendar in the Senate, a motion to proceed to consider it is in order. Several provisions of the expedited procedure protect against various potential obstacles to the Senate's ability to take up a disapproval resolution. The Senate has treated a motion to consider a disapproval resolution under the Congressional Review Act as not debatable, so that this motion cannot be filibustered through extended debate. After the Senate takes up the disapproval resolution itself, the expedited procedure of the Congressional

[23] For additional information on the motor vehicle standards, see CRS Report R42721, *Automobile and Truck Fuel Economy (CAFE) and Greenhouse Gas Standards*.

Review Act protects the ability of the body to continue and complete that consideration. It limits debate to 10 hours and prohibits amendments.[24]

On May 24, 2010, a unanimous-consent agreement was reached providing for a vote on S.J.Res. 26 under procedures similar to those provided by the Congressional Review Act, but on June 10, 2010, the Senate voted 47-53 not to take up the resolution.

The Congressional Review Act sets no deadline for final congressional action on a disapproval resolution, so a resolution could theoretically be brought to the Senate floor even after the expiration of the deadline for the use of the CRA's expedited procedures. To obtain floor consideration, the bill's supporters would then have to follow the Senate's normal procedures. Similarly, a resolution could reach the House floor through its ordinary procedures, that is, generally by being reported by the committee of jurisdiction (in this case, the Energy and Commerce Committee). If the committee of jurisdiction does not report a disapproval resolution submitted in the House, a resolution could still reach the floor pursuant to a special rule reported by the Committee on Rules (and adopted by the House), by a motion to suspend the rules and pass it (requiring a two-thirds vote), or by discharge of the committee (requiring a majority of the House [218 Members] to sign a petition).

If either house passes a disapproval resolution, the CRA provides that the other house should consider its own companion measure, but then vote on the measure received from the house that acted first. This procedure facilitates clearing the measure for presentation to the President. Yet the CRA establishes no expedited procedure for further congressional action on a disapproval resolution if the President vetoes it. In such a case, Congress would need to attempt an override of a veto using its normal procedures for considering vetoed bills.

Freestanding/Targeted Legislation

To provide for a more nuanced response to the issue than permitted under the CRA, Members have introduced freestanding legislation or legislation that amends the Clean Air Act in a targeted way. At least 10 bills (and several amendments) were introduced in the 112th Congress that would have prohibited temporarily or permanently EPA's regulation of greenhouse gas emissions. These bills faced the same obstacle as a CRA resolution of disapproval, however (i.e., being subject to a presidential veto). Among those introduced, attention focused on two: Senator Rockefeller's and Representative Capito's S. 231 / H.R. 199, and Representative Upton's and Senator Inhofe's H.R. 910 / S. 482.

S. 231/H.R. 199

S. 231, entitled the EPA Stationary Source Regulations Suspension Act and H.R. 199, entitled the Protect America's Energy and Manufacturing Jobs Act of 2011, provided that during the two-year period beginning on the date of their enactment, EPA could not take any action under the Clean Air Act with respect to any stationary source permitting requirement or any requirement under the

[24] These provisions help to ensure that the Senate disapproval resolution will remain identical, at least in substantive effect, to the House joint resolution disapproving the same rule, so that no filibuster is possible on the resolution itself. In addition, once the motion to proceed is adopted, the resolution becomes "the unfinished business of the Senate until disposed of," and a non-debatable motion may be offered to limit the time for debate further. Finally, the act provides that at the conclusion of debate, the Senate automatically proceeds to vote on the resolution.

New Source Performance Standards section of the act relating to carbon dioxide or methane.[25] A stated reason for the two-year delay was to allow Congress to enact legislation specifically designed to address climate change. By specifically identifying stationary sources and the two specific pollutants as its objectives, the bill would have allowed EPA to proceed with GHG controls for mobile sources (including, cars, trucks, ships, aircraft, and nonroad engines of all kinds—which account for 31% of U.S. greenhouse gas emissions), and it would have allowed the agency to regulate emissions of non-CO_2 and non-methane greenhouse gases (including nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, which together account for 6.8% of GHGs, expressed as CO_2-equivalents). The bill was designed to be more acceptable to Members willing to consider a delay of EPA action, as opposed to overturning EPA's scientific conclusions or blocking EPA action altogether. The bill was offered as an amendment to S. 493 (S.Amdt. 215) on April 6, 2011, and was not agreed to, on a vote of 12-88.

H.R. 910/S. 482/S.Amdt. 183

Also in the 112th Congress, Chairman Upton of the House Energy and Commerce Committee and Senator Inhofe, then-ranking Member of the Senate Environment and Public Works Committee, sponsored legislation to permanently remove EPA's authority to regulate greenhouse gases (H.R. 910/S. 482 in the 112th Congress). The House version was reported (amended) by the Energy and Commerce Committee April 1, 2011, and was passed by the House, 255-177, April 7. In the Senate, Senator McConnell introduced language identical to Senator Inhofe's bill as an amendment to S. 493 (S.Amdt. 183). The amendment was not agreed to, on a vote of 50-50, April 6, 2011. The Upton-Inhofe-McConnell bill's provisions were similar in many respects to a bill introduced by Senator Barrasso in the 112th Congress, S. 228. Like S. 228, the bill would have repealed a dozen EPA greenhouse-gas-related regulations, including the Mandatory Greenhouse Gas Reporting rule, the Endangerment Finding, and the PSD and Title V permitting requirements. It would have redefined the term "air pollutant" to exclude greenhouse gases. And it stated that EPA may not "promulgate any regulation concerning, take action related to, or take into consideration the emission of a greenhouse gas to address climate change."

The bill would have had no effect on Title VI of the Clean Air Act (ozone depletion), or federal research, development, and demonstration programs. The already promulgated light-duty motor vehicle GHG standards and the GHG emission standards for Medium- and Heavy-Duty Engines and Vehicles would have been allowed to stay in effect, but no future mobile source rules for GHG emissions would have been allowed.

The bill would not have pre-empted state authority to regulate greenhouse gases, but would not have allowed EPA to permit such regulations within a state SIP or to federally enforce them. Also, EPA would have been prohibited from granting another California waiver for greenhouse gas controls from mobile sources.

Other Amendments to S. 493

In addition to the McConnell and Rockefeller amendments, two other amendments to S. 493 to address EPA's greenhouse gas authority were considered in the Senate on April 6, 2011. One was

[25] The phrase "relating to carbon dioxide or methane," presumably modified both the permitting and regulation-setting prohibitions.

Senator Baucus's S.Amdt. 236; the other was S.Amdt. 277, authored by Senator Stabenow and Senator Sherrod Brown. S.Amdt. 236 would have set thresholds (similar to EPA's "Tailoring Rule") to exempt most sources of greenhouse gas emissions from having to obtain Clean Air Act permits for those emissions. It would also have excluded agricultural sources from PSD-NSR permitting requirements based on their GHG emissions. The Stabenow-Brown amendment would have suspended EPA greenhouse gas requirements for stationary sources, including permits and New Source Performance Standards, for a two-year period. It would have exempted GHG emissions from agricultural sources from regulation. And it would have extended the tax credit for Advanced Energy Projects, with an authorization of $5 billion. Both the Baucus and Stabenow-Brown amendments were not agreed to, on votes of 7-93.

Appropriations Bills

A third option that Congress has used to delay regulatory initiatives is to place an amendment, or "rider" on the agency's appropriation bill that prevents funds from being used for the targeted initiative. In its FY2011 budget submission,[26] EPA requested $43 million for "additional regulatory efforts aimed at taking action on climate change," $25 million "for state grants focused on developing technical capacity to address greenhouse gas emissions under the Clean Air Act," and $13.5 million "for implementing new emission standards that will reduce Greenhouse Gas (GHG) emissions from mobile sources" including "developing potential standards for large transportation sources such as locomotives and aircraft engines, and analyzing the potential need for standards under petitions relating to major stationary sources."[27] These were small sums in an agency budget request of slightly more than $10 billion, but GHG regulations were among the most controversial questions at congressional hearings on the agency's budget submission. Thus, it was not surprising to see further discussion of amendments to the EPA appropriation or report language limiting or delaying EPA's GHG regulatory actions.

In comparison to a CRA resolution of disapproval or stand-alone legislation, addressing the issue through an amendment to the EPA appropriation—an approach that was discussed at some length beginning in 2009—may be considered easier. The overall appropriation bill to which it would be attached would presumably contain other elements that would make it more difficult to veto.

Funding amendments might take several forms. Since it is the triggering of standards for stationary sources (power plants, manufacturing facilities, and others) that has raised the most concern, however, it seems fair to assume that any effort to delay or prevent EPA action under an appropriations rider, like the freestanding legislation discussed above, would focus on these sources. An example of this focus was Representative Poe's H.R. 153 in the 112th Congress. H.R. 153 would have prohibited EPA funding for implementing or enforcing a greenhouse gas cap-and-trade program or any other greenhouse gas regulatory requirement on stationary sources issued or effective after January 1, 2011 (including permitting requirements under PSD and Title V). This bill would have permitted continued regulation of mobile sources, as it only addressed stationary sources.

[26] EPA's appropriations are part of the Interior, Environment, and Related Agencies appropriation.

[27] Testimony of Lisa P. Jackson, Administrator, U.S. Environmental Protection Agency, "Hearing on the President's Proposed EPA Budget for FY 2011," Senate Environment and Public Works Committee, February 23, 2010, pp. 2-3.

FY2011 appropriations for EPA and the rest of the government were provided through early April, 2011, by a series of continuing resolutions, leaving the question of EPA appropriations and potential riders affecting the agency's GHG regulatory efforts for the 112th Congress to decide. In February, 2011, language similar to H.R. 153 was added to the Full-Year Continuing Appropriations Act, 2011 bill (H.R. 1) during floor debate on a 249-177 vote (H.Amdt. 101), and the House subsequently passed the bill. However, the Senate failed to pass the bill, 44-56, March 9, 2011.

Language prohibiting FY2012 funding for EPA GHG regulatory actions was added to H.R. 2584, the Interior, Environment, and Related Agencies Appropriations Act, 2012, which was reported by the Appropriations Committee July 19, 2011. As reported, the bill would have prohibited EPA (during the one-year period following enactment) from requiring the issuance of permits for GHG emissions from livestock and prohibited requiring the reporting of GHG emissions from manure management systems; would have prohibited the agency from proposing or promulgating New Source Performance Standards for GHG emissions from electric generating units and refineries; would have declared any statutory or regulatory GHG permit requirement to be of no legal effect; would have prohibited common law or civil tort actions related to greenhouse gases or climate change, including nuisance claims, from being brought or maintained; and would have prohibited the preparation, proposal, promulgation, finalization, implementation, or enforcement of regulations governing GHG emissions from motor vehicles manufactured after model year 2016, or the granting of a waiver to California so that it might implement such standards. The bill came to the House floor under an open rule during the last week of July, 2011, and about 200 amendments were filed for consideration. Action on the bill was suspended July 28, with more than 150 amendments still pending.

Comprehensive Amendments to the Clean Air Act

The most comprehensive approach that Congress might take to alter EPA's course would be to amend the Clean Air Act to modify EPA's current regulatory authority as it pertains to GHGs and to provide alternative authority to address the GHG emissions issue. This was the option chosen by the House in passing H.R. 2454, the American Clean Energy and Security Act (the Waxman-Markey bill) and by the Senate Environment and Public Works Committee in its reporting of S. 1733, the Clean Energy Jobs and American Power Act (the Kerry-Boxer bill), in the 111th Congress. The bills would have amended the Clean Air Act to establish an economy-wide cap-and-trade program for GHGs, established a separate cap-and-trade program for HFCs, preserved EPA's authority to regulate GHG emissions from mobile sources while setting deadlines for regulating specific mobile source categories, and required the setting of New Source Performance Standards for uncapped major sources of GHGs.

At the same time, both bills contained provisions to limit EPA's authority to set GHG standards or regulate GHG emissions under Sections 108 (National Ambient Air Quality Standards), 112 (Hazardous Air Pollutants), 115 (International Air Pollution), 165 (PSD-NSR), and Title V (Permits) because of the climate effects of these pollutants.[28] The bills would not have prevented EPA from acting under these authorities if one or more of these gases proved to have effects other than climate effects that endanger public health or welfare.

[28] The Clean Air Act exemption provisions under H.R. 2454 were in Part C, Sections 831-835; under S. 1733, the provisions were in Section 128(g).

With respect to exemption from the permitting requirements of the PSD program and Title V, the bills differed in the extent of their exemptions. The H.R. 2454 provision would have prevented new or modified stationary sources from coming under the PSD-NSR program solely because they emit GHGs. In contrast, the Senate bill's provision would have simply raised the threshold for regulation under PSD from the current 100 or 250 short tons to 25,000 metric tons with respect to any GHG, or combination of GHGs. Likewise, with respect to Title V permitting, the H.R. 2454 provision would have prevented any source (large or small) from having to obtain a state permit under Title V solely because they emit GHGs. In contrast, the exemption under the Senate bill was restricted to sources that emit under 25,000 metric tons of any GHG or combination of GHGs.[29]

Amending the Clean Air Act to revoke some existing regulatory authority as it pertains to GHGs while establishing new authority designed specifically to address their emissions is the approach advocated by the Administration and, indeed, by many participants in the climate debate regardless of their position on EPA's regulatory initiatives. However, the specifics of a bill acceptable to a majority would be difficult to craft.

Conclusion

In some respects, EPA's greenhouse gas decisions are similar to actions it has taken previously for other pollutants. Beginning in 1970, and reaffirmed by amendments in 1977 and 1990, Congress gave the agency broad authority to identify pollutants and to proceed with regulation. Congress did not itself identify the pollutants to be covered by National Ambient Air Quality Standards (NAAQS), for example; rather, it told the agency to identify pollutants that are emitted by numerous and diverse sources, and the presence of which in ambient air endangers public health and welfare. EPA has used this authority to regulate six pollutants or groups of pollutants, the so-called "criteria pollutants."[30] EPA also has authority under other sections of the act—notably Sections 111 (New Source Performance Standards), 112 (Hazardous Air Pollutants), and 202 (Motor Vehicle Emission Standards)—to identify pollutants on its own initiative and promulgate emission standards for them.

Actions with regard to GHGs follow these precedents and can use the same statutory authorities. The differences are of scale and of degree. Greenhouse gases are global pollutants to a greater extent than most of the pollutants previously regulated under the act;[31] reductions in U.S. emissions without simultaneous reductions by other countries may somewhat diminish but will not solve the problems the emissions cause.[32] Also, GHGs are such pervasive pollutants, and arise from so many sources, that reducing the emissions may have broader effects on the economy than most previous EPA regulations.

[29] For further information, see CRS Report R40896, *Climate Change: Comparison of the Cap-and-Trade Provisions in H.R. 2454 and S. 1733*.

[30] The six are ozone, particulate matter, carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead.

[31] An exception would be chlorofluorocarbons, regulated under Title VI of the act to protect the stratospheric ozone layer. This also was a global problem, but in this case an international agreement, the Montreal Protocol, preceded EPA action and the enactment of Clean Air Act authority.

[32] However, the Administration is working in parallel internationally to obtain commitments to global GHG reductions. Demonstrating timely and significant progress toward reduction of U.S. GHG emissions is considered essential by most experts for success internationally.

EPA's focus on Section 111 as the most likely vehicle for controlling GHGs from stationary sources may reflect concerns both about potential economic effects and about implementation difficulties with respect to controlling such pervasive pollutants. Indeed, in a 2008 *Federal Register* notice, EPA made an argument that authority for a market-based control program may exist under Section 111.[33] Even if that argument fails to pass legal scrutiny, the section does provide EPA with substantial authority to address economic and implementation issues in tailoring its GHG response to the various realities surrounding stationary source controls.

Nevertheless, as noted here, the Administration's position has been that a new market-based program authorized by new legislation is the preferred option for controlling GHGs. New legislation is also the preferred option of many in Congress, regardless of whether they agree or disagree with EPA's regulatory initiatives. Until the issue is resolved through legislative negotiations or through legal or regulatory venues, EPA will likely proceed under existing authorities of the Clean Air Act and the complex interplay of legal, regulatory, and legislative events will continue.

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[33] U.S. Environmental Protection Agency, "Regulating Greenhouse Gas Emissions Under the Clean Air Act; Proposed Rule," 73 *Federal Register* 44514-44516, July 30, 2008. Whether EPA can set up a cap-and-trade program under the Clean Air Act has been the subject of considerable debate in the literature. See Lisa Heinzerling, Testimony Before the Subcommittee on Energy and Air Quality of the Committee on Energy and Commerce, Hearing (April 10, 2008); Robert R. Nordhaus, "New Wine into Old Bottles: The Feasibility of Greenhouse Gas Regulation Under the Clean Air Act," *N.Y.U. Environmental Law Journal* (2007), pp. 53-72; Inimai M. Chettiar and Jason A. Schwartz, *The Road Ahead: EPA's Options and Obligations For Regulating Greenhouse Gases* (April 2009); Alaine Ginocchio, et al., *The Boundaries of Executive Authority: Using Executive Orders to Implement Federal Climate Change Policy* (February 2008); Nathan Richardson, "Playing Without Aces: Offsets and the Limits of Flexibility Under the Cean Air Act Climate Policy, 42 Envtl. L. 735, 738 (2012); and Gregory Wannier et al., "Prevailing Academic View on Compliance Flexibility Under §111 of the Clean Air Act," Discussion Paper 11-29 (Resources for the Future 2011)..