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Air Quality: Multi-Pollutant Legislation in the 108th Congress

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Larry Parker
Specialist in Energy Policy
Resources, Science, and Industry Division

John Blodgett
Specialist in Environmental Policy
Resources, Science, and Industry Division

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Summary

With the prospect of new layers of complexity being added to air pollution controls and with electricity restructuring putting a premium on economic efficiency, interest is being expressed in finding mechanisms to achieve health and environmental goals in simpler, more cost-effective ways. The electric utility industry is a major source of air pollution, particularly sulfur dioxide (SO_2), nitrogen oxides (NOx), and mercury (Hg), as well as suspected greenhouse gases, particularly carbon dioxide (CO_2). At issue is whether a new approach to environmental protection could achieve the Nation's air quality goals more cost-effectively than the current system.

One approach being proposed is a "multi-pollutant" strategy – a framework based on a consistent set of emissions caps, implemented through emissions trading. Just how the proposed approach would fit with the current (and proposed) diverse regulatory regimes remains to be worked out; they might be replaced to the greatest extent feasible, or they might be overlaid by the framework of emissions caps.

In February 2002, the Bush Administration announced two air quality initiatives. The first, "Clear Skies," would amend the Clean Air Act to place emission caps on electric utility emissions of SO_2, NOx, and Hg. Implemented through a tradeable allowance program, the emissions caps would generally be imposed in two phases: 2008 and 2018. The second initiative begins a voluntary greenhouse gas reduction program. This plan, rather than capping CO_2 emissions, focuses on improving the carbon efficiency of the economy, reducing current emissions of 183 metric tons per million dollars of GDP to 151 metric tons per million dollars of GDP in 2012.

In the 108th Congress, eight bills have been introduced that would impose multi-pollutant controls on utilities. Two of the bills, H.R. 999/S. 485, are the Administration's three-pollutant proposal, and two other bills, H.R. 203 and S. 1844, are modified versions of the Administration's proposal. The other four bills are four-pollutant proposals that include carbon dioxide. S. 366, is similar to a bill reported by the Senate Environment and Public Works Committee in the 107th Congress while S. 843 and H.R. 3093 are modified versions of S. 3135 introduced in the 107th Congress . Likewise, H.R. 2042 is similar to H.R. 1256 introduced in the 107th Congress. All of these bills involve some form of emission caps, typically taking place in 2008-2009; and most include a tradeable credit program to implement that cap. The provisions concerning SO_2, NOx, and Hg in S. 366, H.R. 203, S. 843, H.R. 2042, and H.R. 3093 are generally more stringent and take effect earlier than the comparable provisions of H.R. 999/S. 485 and S. 1844. S. 366, S. 843, H.R. 2042, and H.R. 3093 would cap emissions of CO_2. It is difficult to compare those CO_2 caps to the Administration's proposal concerning CO_2 – both because the Administration's proposal is voluntary rather than mandatory and because it is broader (covering all greenhouse gas emissions rather than just utility CO_2 emissions). However, it appears that actual U.S. greenhouse gas emissions would be higher under the Administration's proposal than those allowed by these bills. This report will be updated as warranted.

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Introduction

Electric utility generating facilities are a major source of air pollution. The combustion of fossil fuels (petroleum, natural gas, and coal), which accounts for 67% of U.S. electricity generation, results in the emission of a stream of gases. These gases include several pollutants that directly pose risks to human health and welfare, including particulate matter (PM),[1] sulfur dioxide (SO_2), nitrogen oxides (NOx), and mercury (Hg). Particulate matter, SO_2 and NOx are currently regulated under the Clean Air Act (CAA), and the Environmental Protection Agency (EPA) has announced its intention to regulate mercury. Other gases may pose indirect risks, notably carbon dioxide (CO_2), which may contribute to global warming.[2] Table 1 provides estimates of SO_2, NOx, and CO_2 emissions from electric generating facilities. Annual emissions of Hg from utility facilities are more uncertain; current estimates indicate about 48 tons. Utilities are subject to an array of environmental regulations, which affect in different ways both the cost of operating existing generating facilities and of constructing new ones.

Table 1: Emissions From U.S. Fossil-fuel Electric Generating Plants
(thousands of short tons)

Emissions	1994	1995	1996	1997	1998	1999
SO_2	14,211	11,437	12,053	12,317	12,432	11,968
NOx	6,790	6,737	6,996	7,227	7,221	7,051
CO_2	1,986,079	1,995,471	2,065,339	2,142,118	2,209,286	2,191,576

Source: Energy Information Administration, *Electric Power Annual 1999*, vol. II, p. 40

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[1] Particulate matter is regulated depending on the particle size; current regulations address particles less than 10 microns in diameter (PM_{10}); EPA has promulgated regulations for particles less than 2.5 microns in diameter ($PM_{2.5}$) which have not yet been implemented. SO_2 and NOx emissions could be affected by regulations of $PM_{2.5}$. Current concerns about emissions from fossil-fuel electric generating plants do not explicitly address PM, but could indirectly do so through attention to SO_2 and NOx.

[2] Steam-electric utilities produce minor amounts of volatile organic compounds (VOCs), carbon monoxide (CO), and lead — on the order of 2% or less of all sources.

The evolution of air pollution controls over time and as a result of growing scientific understanding of health and environmental impacts has led to a multilayered and interlocking patchwork of controls. Moreover, additional controls are in the process of development, particularly with respect to NOx as a precursor to ozone, to both NOx and SO_2 as contributors to $PM_{2.5}$, and to Hg as a toxic air pollutant. Also, under the United Nations Framework Convention on Climate Change (UNFCCC), the United States agreed to voluntary limits on CO_2 emissions. The current Bush Administration has rejected the Kyoto Protocol, which would impose mandatory limits, in favor of a voluntary reduction program. Thus, mandatory federal CO_2 controls in the United States appear unlikely in the near term.

For many years the complexity of the air quality control regime has caused some observers to call for a simplified approach. Now, with the potential both for additional control programs on SO_2 and NOx and for new controls directed at Hg and CO_2 intersecting with the technological and policy changes affecting the electric utility industry, such calls for simplification have become more numerous and insistent. One focus of this effort is the "multi-pollutant" or "four pollutant" approach. This approach involves a mix of regulatory and economic mechanisms that would apply to utility emissions of up to four pollutants in various proposals – SO_2, NOx, Hg, and CO_2. The objective would be to balance the environmental goal of effective controls across the pollutants covered with the industry goal of a stable regulatory regime for a period of years.[3]

The Bush Administration's Proposals

In February 2002, the Bush Administration announced two air quality proposals to address the control of emissions of SO_2, NOx, Hg, and CO_2.[4] The first proposal, called "Clear Skies," would amend the Clean Air Act to place emission caps on electric utility emissions of SO_2, NOx, and Hg. Implemented through a tradeable allowance program, the emissions caps would be imposed in two phases: 2010 (2008 in the case of NOx) and 2018. As part of a complete rewrite of Title IV of the Clean Air Act, it was introduced in the 108th Congress on February 27, 2003 as H.R. 999 and S. 485.

The second proposal (for which no legislation has been introduced) initiates a new voluntary greenhouse gas reduction program, similar to ones introduced by the earlier George H. W. Bush and Clinton Administrations.[5] Developed in response to the U.S. ratification of the 1992 UNFCCC, these previous plans projected U.S. compliance, or near compliance, with the UNFCCC goal of stabilizing greenhouse

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[3] Larry Parker and John Blodgett, *Electricity Generation and Air Quality: Multi-pollutant Strategies,* CRS Report RL30878.

[4] Papers outlining the Administration's proposals are available from the White House web site: [http://www.whitehouse.gov/news/releases/2002/02/clearskies.html] for the three pollutant proposal and, for the climate change initiative: [http://www.whitehouse.gov/news/releases/2002/02/climatechange.html].

[5] For a discussion of those previous plans, see Larry Parker and John Blodgett, *Climate Change Action Plans*, CRS Report 94-404 ENR, May 9, 1994. (archived, available from the author)

gas emissions at their 1990 levels by the year 2000 through voluntary measures. The new proposal introduced by the Bush Administration does not make that claim, only projecting a 100 million metric ton reduction in emissions from what would occur otherwise in the year 2012. Instead, the plan focuses on improving the carbon efficiency of the economy, reducing current emissions of 183 metric tons per million dollars of GDP to 151 metric tons per million dollars of GDP in 2012. It proposes several voluntary initiatives, along with increased spending and tax incentives, to achieve this goal. The Administration notes that the new initiatives would achieve about one-quarter of the objective, while three-quarters of the projected reduction would occur through already existing efforts underway.

Proposed Legislation and Legislative Action in the 108th Congress

In the 108th Congress, eight bills have been introduced that would impose multi-pollutant controls on utilities. Two of the bills, H.R. 999, introduced by request by Representative Barton, and S. 485, introduced by request by Senator Inhofe, are the Administration's three-pollutant proposal. Two other bills are modified versions of the Administration's Clear Skies proposal. H.R. 203, introduced by Representative Sweeney, is a shortened and more stringent version of the Administration's proposal, while S. 1844, introduced by Senator Inhofe, would maintain the deadlines contained in Clear Skies and includes provisions that, among other things, would weaken the phase 1 Hg cap and exempt co-generation facilities from the bill's mandates. The other four bills are four-pollutant proposals that include carbon dioxide. S. 366, introduced by Senator Jeffords, is basically the same as S. 556 as reported by the Senate Environment and Public Works Committee during the 107th Congress (S.Rept. 107-347).[6] S. 843, introduced by Senator Carper, and H.R. 3093, introduced by Representative Bass, are similar to S. 3135 introduced in the 107th Congress. H.R. 2042, introduced by Representative Waxman, is similar to H.R. 1256 introduced in the 107th Congress. All of these bills involve some form of emission caps, typically taking place (at least initially) in 2008-2009; and most include a tradeable credit program to implement that cap. S. 366, S. 843, H.R. 2042, and H.R. 3093 would cap emissions of CO_2.

The eight bills are summarized in Appendix 1. Each of these bills builds on the SO_2 allowance trading scheme contained in title IV of the 1990 Clean Air Act Amendments (CAAA).[7] Under this program utilities are given a specific allocation of permitted emissions (called allowances) and may choose to use those allowances at their own facilities, or, if they do not use their full quota, to bank them for future use or to sell them to other utilities needing additional allowances.

SO_2, NOx, and Hg Controls. As indicated in Appendix 1, for SO_2 and NOx, the caps in H.R. 999/S. 485 and S. 1844 are less stringent for 2008 than S. 366's or H.R. 2042's requirements for 2009 or H.R. 203's requirements for 2012; and

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[6] The primary difference is S. 366 compliance deadlines for its reduction requirements have been extended one year to 2009 (except for Hg which remains at 2008).

[7] Public Law 101-549.

remain less stringent than S. 366 or H.R. 2042 even through the second phase beginning in 2018. H.R. 203 would require full compliance with its SO_2 and NOx provisions by 2012, in effect accelerating the Administration's proposed emission caps by 6 years. For S. 843 and H.R. 3093, their NOx caps are initially more stringent than the Administration's proposal and S. 1844 but are achieved a year later, while its final NOx cap is the same as the Administration's proposal and S. 1844 but achieved 5 years earlier. S. 843's and H.R. 3093's SO_2 cap is initially the same as Clear Skies and S. 1844 but achieved a year earlier and its final cap is more stringent and achieved 2 years earlier.

Allowance allocation schemes for the bills also differ, with S. 366 containing detailed provisions for allocating SO_2, NOx (and CO_2) allowances to various economic sectors and interests. In most cases, these interests (or their trustees in the case of households and dislocated workers and communities) would auction off (or otherwise sell) their allowances to the affected utilities, and use the collected funds for their own purposes. In contrast, the Administration's proposal initially allocates SO_2, NOx and Hg allowances to affected sources free, with a small percentage sold at auction. Over time, an increasing percentage of the allocation is sold at auction with affected sources receiving fewer allowances free. S. 843 and H.R. 3093 allocate NOx, Hg, and CO_2 allowances based on a powerplant's generating efficiency and its SO_2 allowances based on current formulas within title IV of the 1990 Clean Air Act Amendments. S. 1844 bases its allowance formulas on fuel usage adjusted by factors specified in the bill while H.R. 203 and H.R. 2042 leaves the allocation issue to EPA.

On mercury, H.R. 999/S. 485 and S. 1844's emissions goal allows about 3 times more emissions and ten additional years for compliance than allowed by S. 366, which also mandates plant-by-plant controls; H.R. 2042 is likewise three times more stringent than H.R. 999/S485 and S. 1844, mandates plant-by-plant controls, and has a compliance deadline 9 years in advance of the Administration's bill. H.R. 999/S. 485 is also less stringent than S. 843 and H.R. 3093. H.R. 203 requires EPA to promulgate Hg regulations before 2005. (It is difficult to compare the Hg controls of the Administration's proposal, S. 366, or H.R. 2042 to H.R. 203, which does not specify an Hg emissions goal, leaving regulation up to EPA).

Related Regulatory Provisions. In addition to the emissions caps, H.R. 999/S. 485 and S. 1844 would substantially modify or eliminate several provisions in the Clean Air Act with respect to electric generating facilities. The bills would eliminate New Source Performance Standards (NSPS) (Section 111) and replace them with statutory standards for SO_2, NOx, particulate matter, and Hg for new sources. Modified sources could also opt to comply with these new statutory standards and be exempted from the applicable Best Available Control Technology (BACT) determinations under Prevention of Significant Deterioration (PSD) provisions (CAA, Part C) or Lowest Achievable Emissions Rate (LAER) determinations under non-attainment provisions (CAA, Part D). Compliance with these provisions exempts such facilities from New Source Review (NSR), PSD-BACT requirements, visibility (Best Available Retrofit Technology) BART requirements, Maximum Achievable Control Technology (MACT) requirements for Hg, and non-attainment LAER requirements. The exemption does not apply to PSD-BACT requirements if facilities are within 50 km of a PSD Class 1 area. Existing sources can also receive these exemptions if they agree to meet a particulate matter

standard specified in the bill along with good combustion practices to minimize carbon monoxide emissions within 3 years of enactment. S. 843 and H.R. 3093 would restrict NSR to new facilities (including replacing an existing boiler) and projects that result in increased hourly emissions of regulated pollutants. For pre-1971 generating facilities, S. 843 and H.R. 3093 would impose SO_2 and NOx performance standards beginning in 2020. In contrast, S. 366 requires all powerplants 40-years or older to meet emission limitations based on current best available control technology for a new source.

H.R. 999/S. 485 and S. 1844 also include an exemption for steam electric generating facilities from Hg regulation under Section 112 of the CAA (including the residual risk provisions), and relief from enforcement of any Section 126 petition (with respect to reducing interstate transportation of pollution) before 2012 (2014 in the case of S. 1844). S. 843 and H.R. 3093 provides for removal of Hg MACT provisions for electric generating facilities, but requires EPA to carry out its responsibilities under the residual risk provisions of the CAA within 8 years of enactment.

Neither H.R. 203, S. 366, nor H.R. 2042 provide such regulatory relief provisions.

CO_2. Of the eight bills, S. 366, S. 843, H.R. 2042, H.R. 3093 specify CO_2 reductions. In contrast, the Administration's CO_2 proposal relies on various voluntary programs and incentives to encourage reductions in greenhouse gases from diverse sources, including CO_2 emissions from electric generation.

Based on the estimate provided by the Administration's climate change proposal, and using the 2002 *Climate Action Report*[8] (CAR) for projections to 2010, table 2 presents estimates of U.S. greenhouse gas emissions in 2010, assuming the Administration's voluntary program reaches its goals.[9] This should not be taken as a given, as neither the George H. W. Bush Administration's program nor the Clinton Administration's program achieved their stated goals. Thus, in one sense, comparing a mandatory reduction program, such as that proposed by S. 366, S. 843, H.R. 2042, and H.R. 3093 with the Administration's voluntary program is comparing apples to oranges. The first is legally binding, the second is an exhortation.

While S. 366, S. 843, H.R. 2042, and H.R. 3093 focus on electric utility emissions, their mandated reductions would result in lower total greenhouse gas emissions in 2010 than those projected to occur under the Administration's initiative that includes all sources of all greenhouse gases.[10] However, neither S. 366, S. 843,

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[8] This is the U.S. report to the UNFCCC Secretariat on U.S. emissions and measures taken to reduce them. The *Climate Action Report -- 2002*, available at: http://www.epa.gov/globalwarming/publications/car/index.html

[9] For a discussion of emission projections and trends, see John Blodgett and Larry Parker, *Global Climate Change: U.S. Greenhouse Gas Emissions – Status, Trends, and Projections*, CRS Report 9-235 ENR.

[10] The assessment assumes that the Administration's proposal actually achieves its goal in (continued...)

H.R. 2042, H.R. 3093, nor the Administration's initiative would be sufficient to bring U.S. emissions near the level committed to in the 1992 UNFCCC.

Discussion in the CAR observes that the pace of economic growth would affect emissions. A high economic growth scenario would increase energy use and related carbon emissions, compared to reference case of "business as usual"; likewise, lower economic growth would decrease emissions. For example, under a high economic growth scenario, greenhouse emissions in 2010 would increase 37.7% above those in 1990, based on energy growth alone. This increase would represent an additional 53 million metric tons of emissions.[11] However, S. 366 would cap emissions from increased electricity generation at 1990 levels, which would reduce the 53 million metric tons by 16 million metric tons, or 30% of the high growth increase. The Administration's initiative is voluntary and addresses carbon intensity, not absolute emission levels; it does not cap emissions growth.

Table 2: Comparison of Administration's Voluntary Program with Proposed Legislation

	Percentage Change v. Business as Usual (2010)	Percentage Change v. 1990 levels per UNFCCC
S. 366	-7.5%	+24.2%
S. 843 and H.R. 3093*	-5.1%	+27.5%
H.R. 2042	-9.5%	+21.7%
Administration's Voluntary Program**	-4.4 to -4.5%	+28.3%
Business as Usual	0	+34.4%

*Assumes requirement of S. 843 and H.R. 3093 is achieved in 2010, rather than 2013.

**Assumes goal of the Administration's voluntary program is achieved in 2010, rather than 2012.

Source: CRS calculations based on projections contained in 2002 CAR.

[10] (...continued)
2010, rather than 2012.

[11] Energy Information Administration, *Annual Energy Outlook 2000*, Washington D.C., DOE/EIA-0383 (2002), December 2001. p. 177.

Appendix 1: Comparison of Multi-Pollutant Control Proposals

Provisions	H.R. 203 (Sweeney)	S. 366 (Jeffords)	H.R. 999/S. 485 (Administration's Proposals)	S. 843 (Carper)	H.R. 2042 (Waxman)	H.R. 3093 (Bass)	S. 1844 (Inhofe)
Emissions Cap on NOx	2.1 million tons in 2008, declining to 1.7 million tons in 2012	1.51 million tons in 2009	2.1 million tons in 2008, declining to 1.7 million tons in 2018	1.87 million tons in 2009, declining to 1.7 million tons in 2013	estimated at 1.5 million tons in 2009	1.87 million tons in 2009, declining to 1.7 million tons in 2013	2.1 million tons in 2008, declining to 1.7 million tons in 2018
Emissions Cap on SO_2	4.45 million tons in 2008, declining to 3.0 million tons in 2012	2.25 million tons in 2009	4.5 million tons in 2010, declining to 3.0 million tons in 2018	4.5 million tons in 2009, declining to 2.25 million tons in 2016	2.23 million tons in 2009	4.5 million tons in 2009, declining to 2.25 million tons in 2016	4.5 million tons in 2010, declining to 3.0 million tons in 2018
Emission Cap on CO_2	not covered	2.05 billion tons in 2009	none, program is voluntary	estimated at 2.6 billion tons in 2009, declining to an estimated 2.3 billion tons in 2013	estimated at 1.937 billion tons in 2009	estimated at 2.6 billion tons in 2009, declining to an estimated 2.3 billion tons in 2013	none
Emissions Cap on Mercury	EPA to promulgate regulations by December 15, 2004	5 tons in 2008	26 tons in 2010, declining to 15 tons in 2018	24 tons in 2009, declining to 10 tons by 2013	estimated at 4-5 tons in 2009	24 tons in 2009, declining to 10 tons by 2013	34 tons in 2010, declining to 15 tons in 2018
Scope	50 states and DC	50 states and DC	50 states, DC, and territories	50 states and DC	50 states and DC	50 states and DC	50 states, DC, and territories

Provisions	H.R. 203 (Sweeney)	S. 366 (Jeffords)	H.R. 999/S. 485 (Administration's Proposals)	S. 843 (Carper)	H.R. 2042 (Waxman)	H.R. 3093 (Bass)	S. 1844 (Inhofe)
Affected Units	electric generating facilities 25 Mw or greater; Hg regulations to include industrial sources	electric generating facilities 15 Mw or greater (coal-fired only for Hg)	for SO_2, NOx, and Hg: existing electric generating facilities 25 Mw or greater (coal-fired only for Hg); new facilities have no size minimum (except for natural gas units); voluntary CO_2 program is economy-wide	fossil fuel-fired electric generating facilities greater than 25 Mw (coal-fired facilities in the case of Hg controls)	electric generating facilities 15 Mw or greater	fossil fuel-fired electric generating facilities greater than 25 Mw (coal-fired facilities in the case of Hg controls)	existing electric generating facilities 25 Mw or greater (coal-fired only for Hg); co-generation sources exempted
Penalties for non-compliance	NOx: $6,000 per excess ton plus one-for-one offset from future emission allocations SO_2: same as CAA, title IV Hg: not specified, CAA enforcement provisions would apply	NOx , SO_2 and CO_2 same as CAA, title IV except excess emission penalty is three times the average market price for allowances Hg: three times the average Hg control costs per gram of excess emission	NOx, SO_2, Hg: reduces the excess emissions penalties under CAA, title IV to the EPA auction clearing price for allowances plus one-for-one offset from future emission allocations, if paid within 30 days. Otherwise, penalty is three times the clearing price plus offsets CO_2: none – voluntary program	NOx: $5,000 per ton plus one-for-one offset from future emission allocations SO_2: same as CAA, title IV Hg: $10,000 per lb. plus one-for-one offset from future emission allocations CO_2: $100 per ton plus one-for-one offset from future emission allocations	determined by EPA	NOx: $5,000 per ton plus one-for-one offset from future emission allocations SO_2: same as CAA, title IV Hg: $10,000 per lb. plus one-for-one offset from future emission allocations CO_2: $100 per ton plus one-for-one offset from future emission allocations	NOx, SO_2, Hg: reduces the excess emissions penalties under CAA, title IV to the EPA auction clearing price for allowances plus one-for-one offset from future emission allocations, if paid within 30 days. Otherwise, penalty is three times the clearing price plus offsets

Provisions	H.R. 203 (Sweeney)	S. 366 (Jeffords)	H.R. 999/S. 485 (Administration's Proposals)	S. 843 (Carper)	H.R. 2042 (Waxman)	H.R. 3093 (Bass)	S. 1844 (Inhofe)
Special Provisions	EPA to determine by 2012 whether emission reductions sufficient to protect sensitive regional ecosystems; if not, EPA must promulgate rules requiring additional NOx and SO_2 reductions within two years of such determination	beginning in 2014, all powerplants 40-years or older must meet emission limitations based on current best available control technology for a new major source SO_2 cap divided by region (West and East) with no trading permit between regions EPA to determine by 2012 whether emission reductions sufficient to protect sensitive regional ecosystems; if not, EPA must promulgate rules requiring additional NOx and SO_2 reductions within two years of such determination other provisions to protect local air quality	new performance standards for new sources replace current NSPS for new sources. Compliance with bill's provisions exempts facilities from New Source Review (NSR), PSD-BACT requirements, visibility BART requirements, and non-attainment LAER requirements. The exemption does not apply to PSD-BACT requirements if facility is within 50 Km of Class 1 area. Existing sources can opt in by meeting a particulate standard exempts utility units from Hg regulation under CAA, Section 112, including residual risk provisions prevents EPA from enforcing any Section 126 petition before 2012 NOx cap divided by region (West and East)	tonnage limitations in effect for 20 years; EPA to reassess after 15 years CO_2 limitations include provisions providing CO_2 allowances for renewable energy, sequestration, and other greenhouse gas emission reduction projects revises New Source Review (NSR) to cover new units; and imposes new SO_2 and NOx standards on pre-1971 units beginning in 2020; in 2009, a cost threshold is included in determining Lowest Achievable Emission Rate (LAER)and the offset requirement in non-attainment areas is eliminated for new electric generating facilities	all powerplants 30-years or older must meet current New Source Performance Standard (NSPS) requirements	tonnage limitations in effect for 20 years; EPA to reassess after 15 years CO_2 limitations include provisions providing CO_2 allowances for renewable energy, sequestration, and other greenhouse gas emission reduction projects revises New Source Review (NSR) to cover new units; and imposes new SO_2 and NOx standards on pre-1971 units beginning in 2020; in 2009, a cost threshold is included in determining Lowest Achievable Emission Rate (LAER)and the offset requirement in non-attainment areas is eliminated for new electric generating facilities	new performance standards for new sources replace current NSPS for new sources. Compliance with bill's provisions exempts facilities from New Source Review (NSR), PSD-BACT requirements, visibility BART requirements, and non-attainment LAER requirements. The exemption does not apply to PSD-BACT requirements if facility is within 50 Km of Class 1 area. Existing sources can opt in by meeting a particulate standard exempts utility units from Hg regulation under CAA, Section 112, including residual risk provisions prevents EPA from enforcing any Section 126 petition before 2014 NOx cap divided by region (West and East)

Provisions	H.R. 203 (Sweeney)	S. 366 (Jeffords)	H.R. 999/S. 485 (Administration's Proposals)	S. 843 (Carper)	H.R. 2042 (Waxman)	H.R. 3093 (Bass)	S. 1844 (Inhofe)
Implementation Strategy	tradeable allowance system for SO_2 and NOx. Hg compliance on a source-by-source basis	tradeable allowance system for SO_2 (restricted between East and West regions), NOx and CO_2. Allowances allocated to various sectors and interests, including households, dislocated workers and communities, electricity intensive industries, affected utilities, energy efficiency and renewable energy activities, and sequestration activities Hg compliance on a source-by-source basis (plantwide averaging explicitly allowed)	tradeable allowance system for SO_2, NOx, and Hg. Allocation formulas in the bill initially provide most allowances to affected sources free, with a small percentage sold at auction. Over time, an increasing percentage of the allocation is sold at auction with affected sources receiving fewer allowances free	tradeable allowance system for SO_2, NOx Hg, and CO_2. Allocation formulas for NOx, Hg, and CO_2 based on generating efficiency; SO_2 allocations based on current CAA, title IV provisions Allocations formulas for all four pollutants include a new source reserve to provide allowances to newly constructed sources	to be determined by EPA – market mechanisms permitted (except for Hg)	tradeable allowance system for SO_2, NOx Hg, and CO_2. Allocation formulas for NOx, Hg, and CO_2 based on generating efficiency; SO_2 allocations based on current CAA, title IV provisions Allocations formulas for all four pollutants include a new source reserve to provide allowances to newly constructed sources	tradeable allowance system for SO_2, NOx, and Hg. Allocation formulas based on historic fuel usage adjusted by factors specified in the bill 7% of SO_2 and 5% of NOx and Hg allowances are set aside for new units

Unless otherwise noted, estimates by CRS using Department of Energy and Environmental Protection Agency data.