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Air Quality: Multi-Pollutant Legislation in the 109th Congress

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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 109th Congress, six bills have been introduced that would impose multi-pollutant controls on utilities. Two of the bills, H.R. 227 and S. 131, are modified versions of the Administration's three-pollutant proposal. The other four bills, S. 150, S. 730, H.R. 1451, and H.R. 1873, are four-pollutant proposals that include carbon dioxide. S. 150 is similar to a bill reported by the Senate Environment and Public Works Committee in the 107th Congress. Likewise, H.R. 1451 is similar to H.R. 1256 introduced in the 107th Congress. All of these bills involve some form of emission caps, typically beginning in 2010; and most include a tradeable credit program to implement that cap. The provisions concerning SO_2, NOx, and Hg in S. 150, S. 730, H.R. 1451, and H.R. 1873 are generally more stringent and take full effect earlier than the comparable provisions of S. 131. S. 150, S. 730, H.R. 1451, and H.R. 1873 would cap utility 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 S. 150, S. 730, and H.R. 1451.

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 about two-thirds 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 proposed rules 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 the cost of constructing new ones.

Table 1. Emissions from U.S. Fossil-Fuel Electric Generating Plants

(thousands of metric tons)

Emissions	1998	1999	2000	2001	2002	2003
SO_2	12,509	12,445	11,297	10,966	10,515	10,594
NOx	6,235	5,732	5,380	5,045	4,802	4,396
CO_2	2,313,013	2,326,558	2,429,394	2,379,603	2,397,937	2,408,961

Source: Energy Information Administration. Includes emissions from combined-heat-and-power plants.

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

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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 ($PM_{2.5}$) that are in the process of being 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.

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. In contrast to the Administration's position, in June 2005, the Senate passed a Sense of the Senate calling for mandatory controls on greenhouse gases while not imposing significant harm to the economy.[3]

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.[4]

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.[5] 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, the Administration's proposal was introduced in the 108th Congress as H.R. 999 and S. 485. Revised versions of Clear Skies legislation have been introduced in the 109th Congress as H.R. 227 and S. 131.[6]

The second proposal initiates a new voluntary greenhouse gas reduction program, similar to ones introduced by the earlier George H. W. Bush and Clinton Administrations.[7] Developed in response to the U.S. ratification of the 1992

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[3] S.Amdt. 866 to H.R. 6, The Energy Policy Act of 2005 (June 22, 2005).

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

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

[6] While H.R. 227 adopts the SO_2 and NOx emission caps of the Administration's Clear Skies proposal, it does not include many other provisions, including regulatory changes.

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

(continued...)

UNFCCC, these previous plans projected U.S. compliance, or near compliance, with the UNFCCC goal of stabilizing greenhouse gas emissions at their 1990 levels by the year 2000 through voluntary measures. The Bush Administration proposal 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.[8]

Proposed Legislation and Legislative Action in the 109th Congress

In the 109th Congress, six bills have been introduced that would impose multi-pollutant controls on utilities. Two of the bills, H.R. 227 and S. 131, are modified versions of the Administration's three-pollutant proposal. The other four bills, S. 150, S. 730, H.R. 1451, and H.R. 1873, are four-pollutant proposals that include carbon dioxide. S. 150 is similar to a bill reported by the Senate Environment and Public Works Committee in the 107th Congress. Likewise, H.R. 1451 is similar to H.R. 1256 introduced in the 107th Congress. All of these bills involve some form of emission caps, typically beginning in 2010; and most include a tradeable credit program to implement that cap. The provisions concerning SO_2, NOx, and Hg in S. 150, S. 730, H.R. 1451, and H.R. 1873 are generally more stringent and take full effect earlier than the comparable provisions of S. 131. S. 150, S. 730, H.R. 1451, and H.R. 1873 would cap utility 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 S. 150, S. 730, and H.R. 1451.

The six bills are summarized in the Appendix. Each of these bills, except S. 730, builds on the SO_2 allowance trading scheme contained in Title IV of the 1990 Clean Air Act Amendments (CAAA).[9] 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.

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[7] (...continued)
authors).

[8] In debate on H.R. 6, the Senate passed S.Amdt. 817, introduced by Senator Hagel, that would provide some legislative support to the Bush Administration initiative on climate change. S.Amdt. 817 would provide an array of credit-based incentives to encourage deployment of technologies that improve the country's greenhouse gas intensity.

[9] P.L. 101-549.

In contrast, S. 730 permits emissions averaging within a single facility, but not across sites.

SO_2, NOx, and Hg Controls. As indicated in the Appendix, the caps for SO_2 and NOx in S. 131 are less stringent for 2010 than in S. 150, S. 730, and H.R. 1451, and remain less stringent even through the second phase beginning in 2018. H.R. 227 would require full compliance with its SO_2 and NOx provisions by 2014, in effect accelerating S. 131's proposed phase 2 emission caps by four years. However, S. 131's phase 1 NOx reduction would begin two years earlier (2008) than S. 150, S. 730, H.R. 227, or H.R. 1451, and one year sooner than H.R. 1873.

Allowance allocation schemes for the bills also differ, with S. 150 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, S. 131 would base its allowance formulas on fuel usage adjusted by factors specified in the bill, while H.R. 227 and H.R. 1451 would leave the allocation issue to EPA. S. 730 provides no specifics on allocating and implementing its SO_2, NOx, and CO_2 caps on electric utilities, while H.R. 1873 specifies limitations based on electricity output.

On mercury, S. 131's emissions goal would allow about three times more emissions and eight more years for compliance than S. 150, S. 730, and H.R. 1451, which also would mandate plant-by-plant controls; H.R. 227 would require EPA to promulgate Hg regulations by March 15, 2005; and H.R. 1873 provides for limitations in between those of S. 150 and S. 131, but includes unit-by-unit emissions limitations. (It is difficult to compare the Hg controls of S. 131, S. 150, S. 730, H.R. 1451, or H.R. 1873 to H.R. 227, which does not specify an Hg emissions goal, leaving regulation up to EPA.) S. 730 is the most comprehensive bill with respect to Hg control, including not only a stringent cap on electric utility emissions but also substantial reduction requirements for six other categories of Hg emitters.

Related Regulatory Provisions. In addition to the emissions caps, S. 131 would substantially modify or eliminate several provisions in the Clean Air Act with respect to electric generating facilities. The bill 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 and offset 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 three years of enactment. In addition, S. 131 would provide these exemptions for industrial sources that choose to opt into the Clear Skies program.

H.R. 1873 also contains significant regulatory provisions. The bill would revise the NSR program to require pre-1971 electric generating units to meet specific SO_2 and NOx performance standards. In addition, H.R. 1873 would require LAER and BACT definitions be revised on a biannual basis and place a cost cap on any LAER definition. In conjunction with these changes, the bill would eliminate the current CAA offset requirement in non-attainment areas beginning in 2010. H.R. 1873 would also provide affected units a 20-year exemption from BART requirements under the CAA visibility provisions. Other changes to the visibility provision include the codification of the Western Regional Air Partnership (WRAP) agreement with respect to sulfur dioxide emissions.

S. 150 would require all powerplants 40 years or older to meet emission limitations based on current best available control technology for a new source. In a similar vein, H.R. 1451 would require all powerplants 30 years or older to meet current New Source Performance Standards (NSPS) requirements.

S. 131 also would 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 December 31, 2014.

Neither H.R. 227, S. 150, S. 730, nor H.R. 1451 would provide such regulatory relief provisions.

CO_2. Of the six bills, S. 150, S. 730, H.R. 1451, and H.R. 1873 would 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*[10] (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.[11] 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. 150, S. 730, H.R. 1451, or H.R. 1873 with the Administration's voluntary program is comparing apples to oranges. The first is legally binding, the second is an exhortation.

While S. 150, S. 730, and H.R. 1451 focus on electric utility emissions, the mandated reductions would result in lower total greenhouse gas emissions in 2010

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

[11] For a discussion of emission projections and trends, see CRS Report 98-235 ENR, *Global Climate Change: U.S. Greenhouse Gas Emissions — Status, Trends, and Projections*, by John Blodgett and Larry Parker.

than those projected to occur under the Administration's initiative that includes all sources of all greenhouse gases.[12] Only H.R. 1873 requires fewer reductions than the Administration hopes to achieve from its economy-wide initiative. However, neither S. 150, S. 730, H.R. 1451, H.R. 1873, 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 the 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 over the reference case.[13] However, S. 150 and S. 730 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. 150, S. 730	-7.5%	+24.2%
H.R. 1451	-9.5%	+21.7%
H.R. 1873	-0.8%	+33.2%
Administration's Voluntary Program*	-4.4 to -4.5%	+28.3%
Business as Usual	0	+34.4%

Source: CRS calculations based on projections contained in 2002 CAR.
*Assumes goal of the Administration's voluntary program is achieved in 2010, rather than 2012.

[12] The assessment assumes that the Administration's proposal actually achieves its goal in 2010, rather than 2012.

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

Appendix. Comparison of Multi-Pollutant Control Proposals

Provisions	H.R. 227 (Sweeney)	S. 150 (Jeffords)	S. 131 (Inhofe)	S. 730 (Leahy)	H.R. 1451 (Waxman)	H.R. 1873 (Bass)
Emissions Cap on NOx	2.1 million tons in 2010, declining to 1.7 million tons in 2014.	1.51 million tons in 2010.	2.19 million tons in 2008, declining to 1.79 million tons in 2018.	1.51 million tons from utilities in 2010.	Estimated at 1.5 million tons in 2010.	1.87 million tons in 2009, declining to 1.7 million tons in 2015
Emissions Cap on SO_2	4.45 million tons in 2010, declining to 3.0 million tons in 2014.	2.25 million tons in 2010.	4.5 million tons in 2010, declining to 3.0 million tons in 2018.	2.25 million tons from utilities in 2010.	2.23 million tons in 2010.	4.5 million tons in 2010, declining to 3.5 million tons in 2014, and to 2.25 million tons in 2017.
Emission Cap on CO_2	Not covered.	2.05 billion tons from utilities in 2010.	Not covered.	2.05 billion tons from utilities in 2010	Estimated at 1.937 billion tons in 2010.	Estimated at 2.46 billion tons in 2010, declining to 2.38 billion tons in 2015.
Emissions Cap on Mercury	EPA to promulgate regulations by March 15, 2005.	5 tons in 2009.	34 tons in 2010, declining to 15 tons in 2018.	5 tons in 2009 from utilities; percentage reductions up to 95% for other Hg sources	Estimated at 4-5 tons in 2010.	24 tons in 2010, declining to 10 tons in 2015
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
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).	Existing electric generating facilities 25 Mw or greater (coal-fired only for Hg); co-generation sources exempted.	For all pollutants: all electric generating facilities. For Hg only: Six categories of industrial boilers, processes, incinerators and combusters.	Electric generating facilities 15 Mw or greater.	Electric generating facilities 25 Mw or greater (coal-fired only for Hg)

Provisions	H.R. 227 (Sweeney)	S. 150 (Jeffords)	S. 131 (Inhofe)	S. 730 (Leahy)	H.R. 1451 (Waxman)	H.R. 1873 (Bass)
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, the number of excess emissions is multiplied by 1.5 for penalty purposes.	For NOx, SO_2 CO_2: not specified, CAA enforcement would apply Hg: CAA enforcement defined.	Determined by EPA.	NOx: $5,000 per excess ton plus one-for-one offset from future emission allocations. SO_2: same as CAA, title IV. Hg: $10,000 per excess pound plus one-for-one offset from future emissions allocations. CO_2: $100 per excess ton plus one-for-one offset from future emissions allocations.

Provisions	H.R. 227 (Sweeney)	S. 150 (Jeffords)	S. 131 (Inhofe)	S. 730 (Leahy)	H.R. 1451 (Waxman)	H.R. 1873 (Bass)
Special Provisions	EPA to determine by 2014 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 permitted between regions. EPA to determine by 2013 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 and offset 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 December 31, 2014. NOx cap divided by region (West and East).	SO_2 cap divided by region (West and East); however, regions are not defined.	All powerplants 30 years or older must meet current New Source Performance Standard (NSPS) requirements.	Revises NSR program to require pre-1971 electric generating units to meet specific SO_2 and NOx performance standards. Requires EPA to revise LAER and BACT definition on bi-annual basis and puts a cost cap on LAER definition. Current CAA offset requirement in non-attainment areas eliminated in 2010. Western Regional Air Partnership (WRAP) agreement codified. Exempts affected units from visibility BART requirements for 20 years.

Provisions	H.R. 227 (Sweeney)	S. 150 (Jeffords)	S. 131 (Inhofe)	S. 730 (Leahy)	H.R. 1451 (Waxman)	H.R. 1873 (Bass)
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 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.	For SO_2, NOx, and CO_2: no allocation formula or implementation strategy specified. For Hg from electric generating facilities: allocation is based on electricity output. Emissions averaging is permitted within a facility. For Hg from other sources: allocation is based on a percentage reduction from an historic baseline or, for some categories, an emission performance rate.	To be determined by EPA — market mechanisms permitted (except for Hg).	Tradeable allowance system for all pollutants. For NOx, Hg, and CO_2, allocations based on historic electricity output. For SO_2 allocations based on current Title IV scheme. Special reserves for new units provides for all pollutants covered. CO_2 program includes allowance allocations for incremental nuclear capacity and renewable energy. For Hg, unit-by-unit emissions limitations included.

Source: Congressional Research Service.