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Clean Air Act Issues in the 108th Congress

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James E. McCarthy
Resources, Science, and Industry Division

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SUMMARY

Perhaps the most prominent air quality issue in recent months has been what to do about emissions from coal-fired electric power plants. On January 30, 2004, EPA proposed standards for mercury, sulfur dioxide, and nitrogen oxide emissions from power plants. The proposed mercury standards have been particularly controversial: EPA claims that technology to achieve more than a 30% reduction in emissions cannot be implemented until 2018, an assertion widely disputed. Legislation has also been proposed on the subject — a group of bills referred to as "multi-pollutant" legislation. The Administration version (the Clear Skies Act, H.R. 999/S. 485/S. 1844) proposes to replace numerous existing Clean Air Act requirements with a national cap and trade program for sulfur dioxide, nitrogen oxides, and mercury. Senators Jeffords and Carper, and Representatives Sweeney, Waxman, and Bass have also introduced bills. These bills are all more stringent than Clear Skies, and four of the five would regulate carbon dioxide in addition to the other pollutants.

Controversy has also arisen over EPA's proposed and promulgated changes to the Clean Air Act's New Source Review (NSR) requirements. NSR requires installation of best available emission controls when power plants and other major facilities are modified. Since December 31, 2002, EPA has promulgated several changes to streamline (and, many argue, weaken) the NSR requirements. On January 22, 2003, the Senate approved an amendment to H.J.Res. 2 that directed the National Academy of Sciences to conduct a study of the NSR changes. The President signed the bill, with the amendment, February 20, 2003 (P.L. 108-7).

The conference report on the energy bill (H.R. 6), which came to the House and Senate floor for action the week of November 17, 2003, contained several Clean Air Act provisions. Most of these are also contained in S. 2095, a revised version of the bill introduced February 12, 2004, and in H.R. 4503, which passed the House June 15, 2004. Most of the air provisions concern the gasoline additives MTBE and ethanol, used to meet Clean Air Act requirements that reformulated gasoline (RFG) sold in the nation's worst ozone nonattainment areas contain at least 2% oxygen, to improve combustion. MTBE has contaminated ground water in several states. All three bills would ban the use of MTBE as a fuel additive nationwide, except in states that specifically authorize its use, after December 31, 2014; repeal the requirement that RFG contain oxygen; provide a major new stimulus to the use of ethanol; authorize $2 billion in grants to assist merchant MTBE production facilities in converting to the production of other fuel additives; and authorize funds for MTBE cleanup. H.R. 6 and H.R. 4503 would also provide a "safe harbor" from product liability lawsuits for producers of MTBE and renewable fuels; S. 2095 would not.

The 108th Congress has also enacted changes to the "small engine" provisions of the Clean Air Act and is considering changes to the requirement that metropolitan area transportation plans "conform" to the act.

MOST RECENT DEVELOPMENTS

On June 15, 2004, the House passed H.R. 4503, a comprehensive energy bill virtually identical to the conference version of H.R. 6, which it had passed November 18, 2003. The bill includes provisions amending the Clean Air Act to address reformulated gasoline, renewable fuels, and MTBE. Although the conference report on H.R. 6 passed the House in November, the Senate was unable to muster the 60 votes necessary to terminate debate, leaving the bill's future uncertain.

On April 15, 2004, EPA designated 474 counties in 32 states and the District of Columbia as "nonattainment areas" for a new 8-hour ozone air quality standard. Implementation of the standard has raised a number of questions in areas affected by the designations. Amendments that would modify some of the implementation procedures for areas affected by upwind pollution are also attached to the energy bill (H.R. 6 / H.R. 4503).

Both the House and Senate have passed surface transportation legislation that would modify the Clean Air Act's conformity provisions. The Senate bill, S. 1072, passed February 12, 2004. The House bill, H.R. 3550, passed April 2. Conferees began meeting to attempt to reconcile the bills' provisions June 14.

BACKGROUND AND ANALYSIS

This Issue Brief looks at seven prominent air issues that have been of interest in the 108th Congress: designation of nonattainment areas for the new 8-hour ozone standard; MTBE and ethanol; New Source Review; multi-pollutant (or Clear Skies) legislation; mercury from power plants; transportation conformity; and emission standards for small engines. Most of these issues are addressed at greater length in separate CRS reports, which are referenced in the appropriate sections.

Designation of Nonattainment Areas for the 8-Hour Ozone Standard. On April 15, 2004, EPA designated 474 counties in 32 states and the District of Columbia as "nonattainment areas" for a new 8-hour ozone air quality standard. The standard was promulgated in 1997, but due to legal challenges and other delays, is just now being implemented. The nonattainment areas must adopt emission control programs sufficient to bring air quality into attainment by an EPA deadline, generally 5 or 10 years after designation in areas being designated for the first time.

The prospect of designation has raised numerous questions in these areas, including when and why the standard was established; what criteria are used to determine nonattainment; how boundaries of the nonattainment area are established; whether special provisions can be made for areas affected by pollution from upwind; what the deadline will be for reaching attainment; and how designation might affect economic development and transportation investments in an area. How areas already designated nonattainment for EPA's existing 1-hour ozone standard (51 areas, including 239 counties) will be affected by implementation of the new standard presents additional questions. (For additional information on all of these questions, see CRS Report RL32345, *Implementation of EPA's 8-Hour Ozone Standard*.)

In many — perhaps a majority of — cases, EPA has concluded that new nonattainment areas will have little difficulty demonstrating attainment: the Agency projects that other federal requirements, such as new auto and truck emission standards and federal controls on power plants, will be sufficient to demonstrate attainment in 88% of monitored nonattainment counties by 2015. The nonattainment areas will face deadlines for reaching attainment sooner than 2015, however, in most cases. This has left many complaining that the Agency has done a poor job of matching the implementation timelines of its various programs, and should either grant nonattainment areas more time to comply, or speed implementation of federal controls on emission sources.

Another issue that has been widely discussed concerns the boundaries of the designated nonattainment areas. The Clean Air Act establishes a process for setting these boundaries, but, in general, it allows the EPA Administrator some discretion in determining how large or small an area should be. EPA has recommended that Metropolitan Statistical Areas or Consolidated Metropolitan Statistical Areas serve as the "presumptive boundaries" for new nonattainment areas. Even though specific counties within such an area may meet the standard, they are likely to be included in the nonattainment area if the pollution generated there could influence ozone readings elsewhere in the metropolitan area. The inclusion of such counties in nonattainment areas has proven controversial in many states.

The new standard is widely viewed as a strengthening of requirements to control ozone pollution, but it may have the opposite effect in many cases. In areas already designated nonattainment under the old *one-hour* ozone standard (51 areas with 110 million people), the principal effect of the new standard is likely to be more time to reach attainment — as many as 16 years more, in some cases. This is so, because EPA plans to revoke the one-hour standard, which had stringent, statutory deadlines, and recategorize the 51 areas under the new standard, with additional time to comply. The legality of the planned revocation raises numerous questions; but, for officials facing deadlines under the old standard as early as 2005, EPA's plan may be welcome news.

In any event, the implementation plan (like most EPA rules) appears likely to be challenged in the courts. The Agency's first attempt at an implementation plan was among the issues remanded by the Supreme Court in a 2001 decision (Whitman v. American Trucking Ass'ns, 121 S. Ct. 903 (2001)). It would not be surprising if interested parties returned to the courts in the months ahead as the Agency attempts to implement a new version of its implementation plan.

Concern over the potential impacts of the new standard has also led to several legislative attempts to modify the implementation requirements. These have generally been attached to larger pieces of legislation, and (with one minor exception) have not been enacted. Section 1443 of the energy bill (H.R. 6), for example, would extend attainment deadlines in areas affected by upwind pollution, and Section 970 of the bill would require a demonstration project to address the effect of transported ozone and ozone precursors on air quality in southwestern Michigan, prohibiting EPA from imposing any requirements or sanctions during the two years pending the project's completion. As noted earlier, the conference report on H.R. 6 passed the House November 18, 2003. The Senate began debate on it November 19, but a cloture vote on November 21 failed to achieve the 60 votes necessary to end debate on the bill, leaving its future uncertain.

The Administration has also proposed to modify the ozone (and fine particle, $PM_{2.5}$) requirements in its Clear Skies bill (H.R. 999 / S. 485). In Section 3, Clear Skies would allow EPA to avoid designating 8-hour ozone and $PM_{2.5}$ areas as nonattainment until 2016, provided that the area demonstrates that it will attain the standards by December 31, 2015. Areas fitting into this new "transitional" category could avoid additional regulatory controls, including the requirement to demonstrate conformity between their clean air and highway construction programs, if they could demonstrate that attainment would be achieved through the imposition of federal controls on utilities, diesel engines, automobiles, and other sources. No action has been taken on this bill.

MTBE and Ethanol. A second set of issues in the 108th Congress, regulation of the gasoline additives MTBE and ethanol, has been considered by several previous Congresses. At least initially, the issues seemed on a faster track in this Congress: the House passed legislation to address them in April 2003; the Senate did so in late July 2003; and a conference report (H.Rept. 108-375) was agreed to in the House, November 18. On November 21, however, the Senate failed to achieve the 60 votes necessary to end debate on the conference report, and the bill (H.R. 6) was pulled from the floor. A revised version (S. 2095, introduced February 12, 2004), which removes some of its most controversial provisions and lowers its cost, could serve as a vehicle for further deliberations.

MTBE is used to meet Clean Air Act requirements that reformulated gasoline (RFG), sold in the nation's worst ozone nonattainment areas, contain at least 2% oxygen, to improve combustion. Under the RFG program, areas with "severe" or "extreme" ozone pollution (90 counties with a combined population of 64.8 million) must use reformulated gas; areas with less severe ozone pollution may opt into the program as well, and many have. In all, portions of 17 states and the District of Columbia use RFG, and about 30% of the gasoline sold in the United States is RFG.

The law requires that RFG contain at least 2% oxygen by weight. Refiners can meet this requirement by adding a number of ethers or alcohols, any of which contains oxygen and other elements. By far the most commonly used oxygenate has been MTBE. In 1999, 87% of RFG contained MTBE, a number reduced to 56% by late 2003. MTBE has also been used since the late 1970s in non-reformulated gasoline, as an octane enhancer, at lower concentrations. As a result, gasoline with MTBE has been used virtually everywhere in the United States, whether or not an area has been subject to RFG requirements.

MTBE leaks, generally from underground gasoline storage tanks, have been implicated in numerous incidents of ground water contamination. The substance creates taste and odor problems in water at very low concentrations, and some animal studies indicate it may pose a potential cancer risk to humans. For these reasons, 19 states have taken steps to ban or regulate its use. The most significant of the bans (in California and New York) took effect at the end of 2003, leading many to suggest that Congress revisit the issue to modify the oxygenate requirement and set more uniform national requirements regarding MTBE and its potential replacements (principally ethanol).

Support for eliminating the oxygen requirement on a nationwide basis is widespread among environmental groups, the petroleum industry, and states. In general, these groups have concluded that gasoline can meet the same low emission performance standards as RFG without the use of oxygenates. But potential opposition to enacting legislation removing the

oxygen requirement arises from a number of agricultural interests. Nearly 10% of the nation's corn crop is used to produce the competing oxygenate, ethanol. If MTBE use is reduced or phased out, but the oxygen requirement remains in effect, ethanol use will soar, increasing demand for corn. (In fact, ethanol use has already grown substantially as MTBE begins to be phased out.) Conversely, if the oxygen requirement is waived by EPA or legislation, not only would MTBE use decline, but so, likely, would demand for ethanol. Thus, Members of Congress and Governors from corn-growing states have taken a keen interest in MTBE legislation.

Relying heavily on legislation that reached a conference committee in the 107th Congress, the 108th moved quickly to address the MTBE and ethanol issue. On April 11, 2003, the House passed H.R. 6, a comprehensive energy bill. Title VII of the bill addressed MTBE and ethanol. The Senate passed its version of the bill, also numbered H.R. 6, July 31. A conference report (H.Rept. 108-375) was approved by the House November 18, but failed to achieve the 60 votes necessary to end debate in the Senate. The conference version of H.R. 6 now appears unlikely to be the final version of the bill. On February 12, Senator Domenici introduced a scaled down version of the bill (S. 2095) that may serve as a vehicle for further deliberations.

Both H.R. 6 and S. 2095 contain numerous MTBE and ethanol provisions in Title XV. They would ban the use of MTBE as a fuel additive, except in states that specifically authorize its use, after December 31, 2014, unless the President determines not to ban it. The Clean Air Act requirement to use MTBE or other oxygenates in RFG would be repealed, 270 days after enactment. In place of this requirement, the bills would provide a major new stimulus to the use of ethanol: under a renewable fuels standard (RFS), annual production of gasoline would be required to contain at least 5 billion gallons of ethanol or other renewable fuel (about double the current production of ethanol) by 2012. To prevent backsliding on air quality, the bills require that the reductions in emissions of toxic substances achieved by RFG be maintained; they authorize $2 billion in grants to assist merchant MTBE production facilities in converting to the production of other fuel additives. The bills also authorize funds for MTBE cleanup, and perhaps most controversially, H.R. 6 would provide a "safe harbor" from product liability lawsuits for producers of MTBE, ethanol, and other renewable fuels: product liability lawsuits have been used to force petroleum and chemical companies to pay for cleanup of ground and surface water contaminated by releases of fuels containing MTBE. The safe harbor provision was cited by numerous opponents of H.R. 6 in Senate debate on the conference report. As a result, S. 2095 drops it while retaining all of the other MTBE and ethanol provisions. (For a detailed comparison of the House, Senate, and conference provisions, see CRS Report RL31912, *Renewable Fuels and MTBE: Side-by-Side Comparison of House and Senate Energy Bills and the Conference Report on H.R. 6*. For additional background on the MTBE issue, see CRS Report 98-290, *MTBE in Gasoline: Clean Air and Drinking Water Issues*. For information on ethanol, see CRS Report RL30369, *Fuel Ethanol: Background and Public Policy Issues*.)

New Source Review (NSR). The most prominent air quality issue for much of 2003 was whether to modify the Clean Air Act's New Source Review requirements. EPA promulgated changes to these rules on December 31, 2002 and October 27, 2003, the net effect of which will be to allow modification of numerous existing major sources of air pollution without subjecting them to current emission standards.

The controversy over the NSR process stems from EPA's application of New Source Performance Standards to existing stationary sources of air pollution that have been modified. The Clean Air Act states that new sources (subject to NSR) include modifications of existing sources as well as plants that are totally new. Industry has generally avoided the NSR process, however, by claiming that changes to existing sources were "routine maintenance" rather than modifications. In the 1990s, EPA began reviewing records of electric utilities, petroleum refineries, and other industries to determine whether the changes were routine. As a result of these reviews, since late 1999, EPA and the Department of Justice have filed suit against 17 electric utilities, claiming that they made major modifications to 64 plants in 16 states, extending their lives and increasing their electric generating capacity without undergoing required New Source Reviews and without installing best available pollution controls. With four exceptions, these suits were filed during the Clinton Administration.

Six of the 17 utilities charged with NSR violations (Tampa Electric, PSEG of New Jersey, Dominion Resources/Virginia Electric Power, Wisconsin Electric Power, Southern Indiana Gas and Electric, and South Carolina Public Service Authority/Santee Cooper) have settled with EPA, agreeing to spend more than $3.5 billion over the next decade on pollution controls or fuel switching in order to reduce emissions at their affected units. One other utility (Cinergy) reached agreement in principle over three years ago to spend more than $1 billion to resolve NSR violations, but final settlement negotiations have not been concluded. An eighth utility, the Tennessee Valley Authority, has announced plans to spend $1.5 billion to reduce emissions at four of its plants, although not as part of a settlement agreement. Between July 25, 2000, and December 20, 2001, the Agency also reached agreement with nine petroleum refiners representing more than 30% of industry capacity. The refiners agreed to settle potential charges of NSR violations by paying fines and installing equipment to eliminate 153,000 tons of pollution.

Most of the utilities have not settled with EPA. They and other critics of the Agency's enforcement actions claim that EPA reinvented the rules. A strict interpretation of what constitutes routine maintenance, they contend, will prevent them from making changes that were previously allowed, without a commitment of time and money for permit reviews and the installation of expensive pollution control equipment. This provides disincentives for power producers, refiners, and others to expand output at existing facilities, they maintain.

The first case involving one of the non-settling utilities went to trial in February 2003. In an August 7, 2003 decision, U.S. District Judge Edmund Sargus found that Ohio Edison had violated the Clean Air Act 11 times in modifying its W.H. Sammis power plant. Penalties will be determined in a separate trial that is scheduled to begin in July 2004.

EPA has promulgated five sets of changes to NSR. The most controversial are new regulations defining what constitutes routine maintenance, which is exempt from review. These changes appeared in the Federal Register October 27. The new regulations will exempt industrial facilities from undergoing NSR (and thus from installing new emission controls) if they are replacing safety, reliability, and efficiency rated components with new, functionally equivalent equipment, and if the cost of the replacement components is less than 20% of the replacement value of the process unit. Using this benchmark, few, if any, plant modifications would trigger new pollution controls.

These changes are highly controversial. The Administration and its supporters have characterized them as a streamlining or improvement of the program; others see them as permanently "grandfathering" older, more polluting facilities from ever having to meet the clean air standards required of newer plants. On the day the first set of changes were promulgated (December 31, 2002), nine Northeastern states filed suit to overturn them. In addition, 14 states and numerous municipalities have filed suit to block the "routine maintenance" portion of the rule. This portion of the rule was stayed by the U.S. Court of Appeals for the D.C. Circuit, December 24, 2003.

Implementation of the changes also raises questions about the Agency's ongoing NSR enforcement actions. While the Agency states in the new rule that "we do not intend our actions today to create retroactive applicability for today's rule," continued pursuit of the enforcement actions filed during the Clinton Administration would create a double standard for utilities, with one set of rules applicable to those utilities unlucky enough to have been cited for violations prior to promulgation of the new rule, and a different standard applicable afterwards. Despite earlier Agency denials that the rule would affect ongoing investigations, in early November 2003, EPA's enforcement chief, J.P. Suarez, and another EPA official were reported to have indicated that the Agency would drop enforcement actions against 47 facilities that had already received notices of violation, and would drop investigations of possible violations at an additional 70 power companies. Agency staff who were involved in the enforcement actions argue the prospect of an NSR rollback caused utilities already charged with violations to withdraw from settlement negotiations over the pending lawsuits, delaying emission reductions that could have been achieved in the near future. (For additional information, see CRS Report RS21608, *Clean Air and New Source Review: Defining Routine Maintenance*, and CRS Report RL31757, *Clean Air: New Source Review Policies and Proposals*.)

On January 22, 2003, the Senate narrowly defeated an amendment offered by Senator Edwards (S.Amdt. 67 to H.J.Res. 2) that would have delayed implementation of changes to the NSR requirements for six months pending a study by the National Academy of Sciences. The Senate did approve a separate amendment offered by Senator Inhofe (S.Amdt. 86) directing NAS to conduct such a study, but not delaying implementation of the standards. The amendment was enacted as Section 356 of the FY2003 Omnibus Appropriations bill (P.L. 108-7).

Besides the ongoing NAS study, on April 21, 2003, the National Academy of Public Administration released a report commissioned by Congress that made sweeping recommendations to modify NSR. The report concluded that the NSR permitting process works as Congress intended for new industrial facilities, but has not been effective in reducing air pollution when changes at existing sources are likely to increase emissions. "Instead — contrary to Congressional intent — many large, highly polluting facilities have continued to operate and have expanded their production (and pollution) over the past 25 years without upgrading to cleaner technologies," the report states. The study panel recommended that Congress end the "grandfathering" of major air emission sources, by requiring all major sources that have not obtained an NSR permit since 1977 to install Best Available Control Technology or Lowest Achievable Emissions Rate control equipment. In the interim, the NAPA panel concluded, EPA and the Department of Justice should continue to enforce NSR vigorously, especially for changes at existing facilities.

Clear Skies / Multi-Pollutant Legislation. In addition to its proposed and promulgated regulatory changes in NSR, the Administration has asked Congress to modify Clean Air Act requirements for power plants by enacting "Clear Skies" or "multi-pollutant" legislation. A number of multi-pollutant bills have been introduced. Depending on the bill's author, such legislation comes in 3- or 4-pollutant versions. The 3-pollutant bills would set standards for sulfur dioxide, nitrogen oxides, and mercury. The 4-pollutant bills add carbon dioxide to the mix.

Such legislation, it is argued — whether in 3- or 4-pollutant form — would both reduce emissions and encourage investment in new plants by providing certainty regarding future regulatory requirements. In some proposed bills, the new requirements would replace numerous existing regulatory programs, including NSR, New Source Performance Standards, Prevention of Significant Deterioration, Lowest Achievable Emission Rate standards, Best Available Retrofit Technology, and regulations under development to control mercury emissions from electric utilities.

The number of these current and prospective regulations on power plant emissions has suggested to many in industry, environmental groups, Congress, and the Administration that the time is ripe for such comprehensive legislation. The key questions are how stringent the controls should be, and whether carbon dioxide (CO_2) will be among the emissions subject to controls.

Regarding the stringency issue, bills introduced in the 108th Congress would require reduction of NOx emissions to 1.5 or 1.7 million tons per year (a 70% - 80% reduction from 1998 levels) and reduction of sulfur dioxide emissions to 2.23 - 3.0 million tons per year (also a reduction of 70% - 80% versus 1998). Regarding mercury, the bills would either require EPA to determine the level of reductions, or require reductions of 70% - 90% from current levels of emissions (from 48 to 5, 10, or 15 tons annually, depending on the bill). In the most stringent of the bills (Senator Jeffords' S. 366 and Representative Waxman's H.R. 2042), these reductions would take place by 2008 or 2009. Four of the bills (Senator Jeffords', Representative Waxman's, Senator Carper's S. 843, and Representative Bass's H.R. 3093) would also set caps on CO_2 emissions, at the level emitted in 1990 or 2000. (For additional information and a detailed comparison of the legislative proposals, see CRS Report RL31779, *Air Quality: Multi-Pollutant Legislation in the 108th Congress* and CRS Report RL31881, *Mercury Emissions to the Air: Regulatory and Legislative Proposals*.)

The Administration's "Clear Skies" bill (H.R. 999/S. 485) and a variant of it introduced later by Senator Inhofe (S. 1844) envision less stringent standards than those in the other bills, phased in over a much longer period of time. For NOx, the Administration would reduce emissions to 1.7 million tons per year by 2018, with an intermediate limit of 2.1 million tons in 2008. For sulfur dioxide, the limit would be 3.0 million tons annually in 2018, with an intermediate limit of 4.5 million tons in 2010. For mercury, the limit would be 26 tons per year in 2010, declining to 15 tons in 2018. (The Inhofe bill changes the interim mercury limit to 34 tons.) "Clear Skies" and most of the other bills envision a system like that used in the acid rain program, where national or regional caps on emissions are implemented through a system of tradeable allowances.

The Administration opposes controls on CO_2, viewing them as a step towards implementing the Kyoto Protocol to the United Nations Framework Convention on Climate

Change, which it opposes. The absence of CO_2 from the mix leads to different strategies for achieving compliance, preserving more of a market for coal, and lessening the degree to which power producers might switch to natural gas or renewable fuels as a compliance strategy.

Four hearings on multi-pollutant legislation were held by the Senate Environment and Public Works Committee in the 107th Congress, and the Committee narrowly approved Senator Jeffords' 4-pollutant bill, with amendments, June 27, 2002 (S. 556, S.Rept. 107-347). Opposed by the Administration and by the electric utility and coal industries, the bill died without reaching the Senate floor. Senator Jeffords has reintroduced this bill in the 108th Congress as S. 366.

Prospects for Clear Skies and other multipollutant bills are complicated. The House, with its larger Republican majority and more formal rules, could presumably pass Clear Skies if the leadership decided to make it a priority. In the Senate, however, consensus has yet to emerge in the Environment and Public Works Committee, to which the bill and other multipollutant bills have been referred. At least at present, Clear Skies does not enjoy the support of a majority of the Committee's members. Faced with this obstacle, some have suggested that the Senate leadership take the bill directly to the Senate floor, bypassing the committee; but it might face determined opposition there, as well. For now, the Environment Committee and the Energy and Commerce Committee have held hearings and the Administration continues to say the bill is a high priority, but the prospects for action in this Congress appear increasingly remote. (For additional information on regulation of electric utility emissions, see CRS Report RS20553, *Air Quality and Electricity: Initiatives to Increase Pollution Controls*.)

Mercury from Power Plants. In addition to all the other regulatory and legislative proposals related to power plants discussed above, in mid-December 2003 EPA proposed regulations addressing mercury, SO_2, and NOx under its existing legislative authority. (These proposals appeared in the Federal Register January 30, 2004.) The Agency was required by the terms of a 1998 consent agreement to propose Maximum Achievable Control Technology (MACT) standards under Section 112 of the Clean Air Act for emissions of hazardous air pollutants (principally mercury and nickel) from electric power plants by December 15, 2003. The Agency's proposal offered two alternatives, one of which would be chosen after review of public comment and further analysis, and promulgated by March 15, 2005. The first alternative met the Agency's requirement under the consent agreement by proposing MACT standards. The standards would apply on a facility-by-facility basis, and would result in emissions of 34 tons of mercury annually, a reduction of about 30% from the 1999 level. They would take effect in 2008, three years after promulgation, with possible one-year extensions.

The second mercury alternative would use Section 111(d) of the act, a section of the act rarely used before — and never for hazardous air pollutants. Under this proposal, there would be a national "cap and trade" system for power plant emissions of mercury. The cap would be 15 tons of emissions nationwide in 2018 (about a 70% reduction from 1999 levels). There would also be an intermediate cap in 2010. The Agency did not specify this cap, except to say that it would be the level of reductions achieved under its Interstate Air Quality Rule (as explained below). The caps would be implemented through an "allowance" system similar to that used in the acid rain program, through which utilities could either control the

pollutant directly or purchase excess allowances from other plants that have controlled more stringently than they were required. Early reductions could be banked for later use, which the Agency says would result in reductions being achieved sooner than required. If this happens, however, it would also mean that the full 70% reduction would be delayed well beyond 2018, as utilities used up their banked allowances rather than installing further controls.

One of the main criticisms of the cap and trade proposal is that it would not address "hot spots," areas where mercury emissions and/or concentrations in water bodies are greater than elsewhere. It would allow a facility to purchase allowances and avoid any emission controls, if that compliance approach makes the most sense to the plant's owners and operators. If plants near hot spots do so, the cap and trade system may not have an impact on mercury concentrations at the most contaminated sites. By contrast, a MACT standard requires reductions at all plants, and would therefore be expected to improve conditions at hot spots.

The Section 111 mercury proposal mirrors the approach of Clear Skies, as does EPA's simultaneous proposal to regulate emissions of SO_2, and NOx from power plants in 29 eastern states and the District of Columbia. This proposal (the Interstate Air Quality Rule, IAQR, or Clean Air Interstate Rule) is designed to reduce interstate transport of fine particulates ($PM_{2.5}$) and ozone in order to facilitate attainment of the new $PM_{2.5}$ and ozone standards that will begin to be implemented in 2004. Like the mercury proposal, the IAQR would establish a cap and trade program, with caps in 2010 and 2015.

Many argue that the mercury regulations should be more stringent or implemented more quickly. These arguments and EPA's counterarguments rest on assumptions concerning the availability of control technologies. Controlling SO_2, NOx, and mercury simultaneously, as the Agency prefers, would allow utilities to maximize "co-benefits" of emission controls. Controls such as scrubbers and fabric filters, both of which are widely used today to control SO_2 and particulates, have the side effect (or co-benefit) of reducing mercury emissions to some extent. EPA has attempted to calibrate the required SO_2 and mercury standards to substantially reduce the costs of compliance. In fact, under EPA's preferred (cap and trade) mercury proposal, the 2010 mercury emission standard would be set at the level of these co-benefits. Thus, no controls would be required to specifically address mercury emissions until 2018, and the costs specific to controlling mercury before then would be zero. The Agency's MACT alternative, which would take effect in late 2007 or early 2008, makes the same technology assumptions. It sets a limit of 34 tons of mercury emissions, a reduction of only 29% compared to 1999 levels (and probably less if compared to current emissions).

Besides citing the cost advantage of relying on co-benefits, EPA claims that technology specifically designed to control mercury emissions (such as activated carbon injection, ACI) would not be generally available until after 2010. This assertion is widely disputed. ACI and fabric filters have been in use on municipal waste and medical waste incinerators for nearly a decade, and have been successfully demonstrated on at least four coal-fired power plants. Manufacturers of pollution controls and many others maintain that, if the Agency required the use of ACI and fabric filters at power plants, reductions in mercury emissions as great as 90% could be achieved at reasonable cost in the immediate future.

The Agency can take cost into consideration under the MACT rules, and cost to electric utilities appears to have been a determining factor in EPA's analysis. But calculations of

overall societal costs seem to support the imposition of a more stringent standard. The Agency projects MACT compliance costs at $945 million per year, versus quantifiable annual benefits of more than $15 billion (a 16 to 1 advantage). The IAQR would achieve greater reductions of mercury and have a benefit-cost ratio of 21 to 1. If minimizing costs to society is the criterion, a more stringent standard would better achieve that end.

In addition to the arguments over technology availability and cost, it is unclear whether EPA has legislative authority to establish a cap and trade program for mercury: many argue that the Agency is required by the statute to impose MACT standards on each individual plant once it has decided to control mercury emissions. Questions have also arisen regarding the role of industry lobbyists in crafting portions of the EPA proposal. For many of these reasons, 45 Senators wrote EPA Administrator Leavitt at the beginning of April to request that he withdraw the mercury proposal and begin over. If promulgated in a form similar to the Agency's proposal, it appears likely the rule will be subject to court challenge. (For additional information on the mercury and IAQR proposals, see CRS Report RL31881, *Mercury Emissions to the Air: Regulatory and Legislative Proposals*, and CRS Report RL32273, *Air Quality: EPA's Proposed Interstate Air Quality Rule*.)

Conformity of Transportation Plans and SIPs. A sixth clean air issue being considered in the 108th Congress is the conformity of metropolitan area transportation plans with the Clean Air Act. Under the act, areas that have not attained one or more of the six National Ambient Air Quality Standards must develop State Implementation Plans (SIPs) demonstrating how they will reach attainment. At least 124 areas with a combined population in excess of 159 million are subject to the SIP requirements. Section 176 of the Clean Air Act prohibits federal agencies from funding projects in these areas unless they "conform" to the SIPs. Specifically, projects must not "cause or contribute to any new violation of any standard," "increase the frequency or severity of any existing violation," or "delay timely attainment of any standard." Because new highways generally lead to an increase in vehicle miles traveled and related emissions, both the statute and regulations require that an area's Transportation Improvement Program (TIP), which identifies major highway and transit projects an area will undertake, demonstrate conformity each time it is revised (i.e., at least every two years). Highway and transit projects in most nonattainment areas cannot receive federal funds unless they are part of a conforming TIP.

The impact of conformity requirements is expected to grow in the next few years for several reasons. The growth of emissions from SUVs and other light trucks and greater than expected increases in vehicle miles traveled have both made it more difficult to demonstrate conformity; recent court decisions have tightened the conformity rules; and the implementation of more stringent air quality standards for both ozone and fine particulates in 2004 will mean that additional areas are subject to conformity. Thus, numerous metropolitan areas could face a temporary suspension of highway and transit funds unless they impose sharp reductions in vehicle, industrial, or other emissions. In a recent survey, the General Accounting Office found that, over the past six years, only five metropolitan areas have had to change transportation plans in order to resolve a conformity lapse; but about one-third of local transportation planners surveyed expected to have difficulty demonstrating conformity in the future. (See U.S. GAO, *Environmental Protection: Federal Planning Requirements for Transportation and Air Quality Protection Could Potentially Be More Efficient and Better Linked,* April 2003.)

The Clean Air Act provides no authority for waivers of conformity, and the only grace period allowed is for one year following an area's initial designation as nonattainment. Only a limited set of exempt projects (mostly safety-related or replacement and repair of existing transit facilities) can be funded in lapsed areas: the rules do not even allow funding of new projects that might reduce emissions, such as new transit lines. These limitations are among the issues of concern. In addition, many have raised concerns about a mismatch between the SIP, TIP, and long range transportation planning cycles, and have called for less frequent, but better coordinated demonstrations of conformity.

In the 108th Congress, conformity provisions are contained in S. 1072, the surface transportation bill passed by the Senate February 12, 2004, and H.R. 3550, the House version that passed April 2. The Senate bill would require less frequent conformity demonstrations (at least every four years instead of every two years in current law), and would shorten the planning horizon over which conformity must be demonstrated to 10 years in most cases, instead of the current 20 years. The House version of the bill is similar, but it would require that the local air pollution control agency agree if the planning horizon were to be shortened. The House bill also establishes a 12-month grace period following a failure to demonstrate conformity before a lapse would be declared. Conferees began meeting to reconcile differences in the House and Senate bills on June 14. (For additional information, see CRS Report RL32106, *Transportation Conformity Under the Clean Air Act: In Need of Reform?)*

Small Engines. Section 209 of the Clean Air Act allows California to adopt and enforce emission standards for some nonroad engines and vehicles, a category including such equipment as lawnmowers, chain saws, leaf blowers, and string trimmers. It also permits other states that contain nonattainment or maintenance areas for any of the National Ambient Air Quality Standards to adopt the California standards. Beginning in 1990, California has used this authority to set emission requirements for lawn and garden equipment, as well as other nonroad engines. California served as a model for what eventually became national standards for new small engines. On September 25, 2003, the California Air Resources Board (CARB) adopted "Tier 3" standards that would require further emission reductions from new small engines, beginning in 2007.

Manufacturers of the equipment raised several objections to the new standards, including safety issues (related to heat generated by catalytic converters), increased cost, and the potential impacts if other states adopt California standards. One manufacturer, Briggs and Stratton, stated that if the standards were implemented, it would be forced to move production facilities abroad, with the potential loss of more than 20,000 jobs.

In response to these concerns, on September 5, the Senate Appropriations Committee approved a legislative rider to S. 1584, the VA-HUD, Independent Agencies Appropriation bill that would have amended Section 209 to strip California and other states of their authority to regulate small engines. A modified amendment was approved by voice vote in the full Senate on November 12 (S.Amdt. 2156), and the appropriation bill passed the Senate as H.R. 2861, November 18. The bill then went to a conference on the omnibus appropriations measure, however, where the amendment was stripped from the bill on November 19. Opponents of the amendment claimed that the industry arguments were overstated. They noted that it would deprive California of the ability to reduce emissions and place in jeopardy $2.5 billion annually in federal highway funds. Objections were also raised on procedural grounds that the amendment was a legislative provision that did not belong in

an appropriations measure. Instead, the conference report (H.Rept. 108-401), which was approved by the House December 8, approved by the Senate January 22, and signed by the President January 23 (P.L. 108-199) would allow California to set such standards, would prohibit other states from following suit, and would require EPA to promulgate revised national standards for nonroad engines smaller than 50 horsepower by December 31, 2005.

LEGISLATION

(This listing does not include bills whose principal purpose is to address global climate change. For information on that subject, including a list of bills introduced, see CRS Issue Brief IB89005, *Global Climate Change*.)

H.R. 6 (Tauzin) / H.R. 4503 (Barton)

Energy Policy Act of 2003/2004. Title XV amends the Clean Air Act to: remove the oxygen content requirement for RFG; increase production and use of renewable fuels such as ethanol; ban use of MTBE in motor fuels after 2014 unless the President determines otherwise and except in states where the Governor authorizes its use; provide a "safe harbor" from lawsuits for producers of renewable fuels and MTBE; provide assistance for conversion of merchant MTBE production facilities; and prevent backsliding on emissions of toxic air pollutants from RFG. Section 1443 amends the Clean Air Act to extend deadlines for ozone nonattainment areas affected by emissions in upwind areas. Incorporates provisions of H.R. 1644 (Barton), reported April 8, 2003 (H.Rept. 108-65, Part 1, Title IX). H.R. 6 introduced April 7, 2003; referred to Committees on Energy and Commerce, Science, Ways and Means, Resources, Education and the Workforce, Transportation and Infrastructure, Financial Services, and Agriculture. Passed House, 247-175, April 11. Received in the Senate, April 29. Amended by S.Amdt. 1537 and passed, 84-14, July 31. Conference Report (H.Rept. 108-375) adopted by the House November 18, 2003. H.R. 4503 (identical to the conference version of H.R. 6) introduced June 3,2004. Passed House, 244-178, June 15, 2004.

H.R. 185 (Serrano)

Amends the Internal Revenue Code of 1986 to provide a business credit relating to the use of clean-fuel vehicles by businesses within areas designated as nonattainment areas under the Clean Air Act. Introduced January 7, 2003; referred to Committee on Ways and Means

H.R. 203 (Sweeney)

Amends the Clean Air Act to reduce emissions of sulfur dioxide, nitrogen oxides, and mercury from electric powerplants. Introduced January 7, 2003; referred to Committee on Energy and Commerce.

H.R. 244 (Issa)

Amends the Clean Air Act to permit the exclusive application of California State regulations regarding reformulated gasoline in federal RFG areas within the State. Introduced January 7, 2003; referred to Committee on Energy and Commerce.

H.R. 427 (Sensenbrenner)

Fuel Price Stability Act of 2003. Amends the Clean Air Act to allow the Governors of Illinois, Indiana, and Wisconsin to permit the sale of conventional gasoline in a reformulated

gasoline area if the Governor finds that reduced availability of RFG has resulted in, or is likely to result in, a significant price increase in that area. Introduced January 28, 2003; referred to Committee on Energy and Commerce.

H.R. 673 (K. Brady)

Safe Highways and Roads Act of 2003. Repeals the existing transportation conformity regulations, replacing them with those in effect prior to a March 1999 court decision, and requires EPA to promulgate revised criteria and procedures for conformity within one year. Introduced February 11, 2003; referred to Committee on Energy and Commerce.

H.R. 837 (C. Peterson)

Fuels Security Act of 2003. Amends the Clean Air Act to ban MTBE from the U.S. fuel supply not later than four years after enactment, to eliminate the oxygen content requirement for reformulated gasoline while maintaining reductions in emissions of air toxics, to increase production and use of renewable fuels such as ethanol to 5 billion gallons per year by 2012, to provide a "safe harbor" from liability resulting from the use of renewable fuels, to require federal agencies to purchase fuels containing ethanol and biodiesel if available at competitive prices, and to authorize $400 million for remediation of MTBE contamination and $750 million in grants for conversion of merchant MTBE production facilities. Introduced February 13, 2003; referred to Committee on Energy and Commerce.

H.R. 999 (Barton, by request)

Clear Skies Act of 2003. The Administration's multi-pollutant legislation for electric utility emissions of sulfur dioxide, nitrogen oxides, and mercury. Introduced February 27, 2003; referred to Committee on Energy and Commerce. Hearing, Subcommittee on Energy and Air Quality, July 8, 2003.

H.R. 1020 (P. Ryan)

Amends the Clean Air Act requirements relating to gasoline to prevent future supply shortages and price spikes in the gasoline market by reducing the proliferation of "boutique fuels." Introduced February 27, 2003; referred to Committee on Energy and Commerce.

H.R. 1891 (Paul)

Amends the Clean Air Act to prohibit liability for the effects of emissions resulting from or caused by an act of nature including volcanic eruptions and dust storms; accident; war; terrorism; or fires that occur beyond a local jurisdiction related to land clearing, agriculture and ecological restoration and management. Introduced April 30, 2003; referred to Committee on Energy and Commerce and Committee on the Judiciary.

H.R. 2042 (Waxman)

Clean Smokestacks Act of 2003. Amends the Clean Air Act to reduce emissions of sulfur dioxide, nitrogen oxides, mercury, and carbon dioxide from electric powerplants. Introduced May 8, 2003; referred to Committee on Energy and Commerce.

H.R. 2136 (P. King)

Amends the Clean Air Act to prohibit the use of MTBE as a gasoline additive and to repeal the oxygenate requirement for reformulated gasoline, and to provide funding for the clean up of underground storage tanks. Introduced May 15, 2003; referred to Committee on Energy and Commerce.

H.R. 2253 (Pombo)

Amends the Clean Air Act to require EPA to ban the use of MTBE in gasoline as soon as practicable and to prohibit any gasoline additive unless it has been determined (through scientific testing and peer review) not to have any adverse effects on the public. Introduced May 22, 2003; referred to Committee on Energy and Commerce.

H.R. 2865 (Cardoza)

Clean Air Incentive Act of 2003. Amends the Internal Revenue Code of 1986 to provide a credit for qualified clean-fuel vehicles which are used in serious, severe, or extreme ozone nonattainment areas. Introduced July 24, 2003; referred to Committee on Ways and Means.

H.R. 3093 (Bass)

Clean Air Planning Act of 2003. House version of S. 843. Introduced September 16, 2003; referred to Committee on Energy and Commerce.

H.R. 3403 (Radanovich)

Amends the Clean Air Act to modify provisions regarding methyl bromide. Introduced October 29, 2003; referred to Committee on Energy and Commerce.

H.R. 3550 (Young)

Transportation Equity Act: A Legacy for Users. Reauthorizes highway and transit programs, including the Congestion Mitigation and Air Quality program. Also modifies the Clean Air Act's conformity provisions. Introduced November 20, 2003; referred to Committees on Transportation and Infrastructure, Education and the Workforce, Energy and Commerce, Judiciary, Resources, and Science. Reported, amended, H.Rept. 108-452, March 29, 2004. Passed House 357-65, April 2, 2004.

H.R. 3555 (Moran)

Amends the Clean Air Act to prohibit stationary sources located in ozone nonattainment areas from purchasing nitrogen oxide emission credits under EPA's nitrogen oxide trading program without the consent of the State in which the source is located. Introduced November 20, 2003; referred to Committee on Energy and Commerce.

H.R. 4309 (Hill)

Amends the Clean Air Act to delay the designation of certain counties as nonattainment areas for ozone under the 8-hour ozone standard and to establish specific requirements for such counties. Introduced May 6, 2004; referred to Committee on Energy and Commerce.

H.R. 4545 (Blunt)

Amends the Clean Air Act to reduce the proliferation of boutique fuels. Introduced June 14, 2004; referred to Committee on Energy and Commerce. Considered under suspension of the rules, June 16, 2004. Passage failed, 236-194.

H.Amdt. 338 to H.R. 2861 (Allen)

Amends the VA, HUD, Independent Agencies Appropriation bill to prohibit EPA from placing a lower statistical value on the lives of older Americans than the lives of other adults when conducting statistical analyses of the costs and benefits of Clean Air Act regulations. Offered July 25, 2003; agreed to by voice vote.

S. 366 (Jeffords)

Clean Power Act of 2003. Amends the Clean Air Act to reduce emissions of sulfur dioxide, nitrogen oxides, mercury, and carbon dioxide from electric powerplants. Introduced February 12, 2003; referred to Committee on Environment and Public Works.

S. 385 (Daschle)

Fuels Security Act of 2003. Amends the Clean Air Act to ban MTBE from the U.S. fuel supply not later than four years after the date of enactment, to eliminate the oxygen content requirement for reformulated gasoline while maintaining reductions in emissions of toxic air pollutants, to increase production and use of renewable fuels such as ethanol to 5 billion gallons per year by 2012, to provide a "safe harbor" from liability resulting from the use of renewable fuels, to require federal agencies to purchase gasoline containing at least 10% ethanol and diesel fuel containing biodiesel provided they are available at a generally competitive price, to authorize $400 million from the Leaking Underground Storage Tank Fund for remediation of MTBE contamination, and to authorize $750 million in grants for conversion of merchant MTBE production facilities. Introduced February 13, 2003; referred to Committee on Environment and Public Works.

S. 484 (Leahy)

Amends the Clean Air Act to establish requirements concerning the operation of fossil fuel-fired electric utility steam generating units, commercial and industrial boiler units, solid waste incineration units, medical waste incinerators, hazardous waste combustors, chlor-alkali plants, and Portland cement plants to reduce emissions of mercury to the environment. Introduced February 27, 2003; referred to Committee on Environment and Public Works.

S. 485 (Inhofe, by request)

Clear Skies Act of 2003. The Administration's multi-pollutant legislation for electric utility emissions of sulfur dioxide, nitrogen oxides, and mercury. Introduced February 27, 2003; referred to Committee on Environment and Public Works.

S. 791 (Inhofe)

Reliable Fuels Act. Amends the Clean Air Act to remove the oxygen content requirement for RFG, to eliminate MTBE from the U.S. fuel supply except in states that specifically authorize its use, to increase production and use of renewable fuels such as ethanol, to provide a "safe harbor" from lawsuits for producers of renewable fuels, and to prevent backsliding on emissions of toxic air pollutants from RFG. Also amends the Solid Waste Disposal Act to authorize funding for cleanup of MTBE. Introduced April 3, 2003; referred to Committee on Environment and Public Works. Reported, with amendments, June 3, 2003 (S.Rept. 108-57). Similar language was added to S. 14 June 5, 2003, by S.Amdt. 850.

S. 843 (Carper)

Clean Air Planning Act of 2003. Amends the Clean Air Act to reduce emissions of sulfur dioxide, nitrogen oxides, mercury, and carbon dioxide from electric powerplants. Introduced April 9, 2003; referred to Committee on Environment and Public Works.

S. 1052 (Inhofe)

Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003. Reauthorizes highway and transit programs, including the Congestion Mitigation and Air

Quality program. Also modifies the Clean Air Act's conformity provisions. Introduced May 15, 2003; referred to Committee on Environment and Public Works. Reported, amended, January 9, 2004 (S.Rept. 108-222). Passed Senate, 76-21, February 12, 2004.

S. 1407 (Edwards)

Concentrated Livestock Existing Alongside Nature Act. Among other purposes, amends the Clean Air Act to direct EPA to promulgate national primary ambient air quality standards for hydrogen sulfide and ammonia as measured at any point on the property line of a concentrated animal feeding operation (CAFO). Introduced July 15, 2003; referred to Committee on Agriculture, Nutrition, and Forestry.

S. 1844 (Inhofe)

Clear Skies Act of 2003. Modifies the Administration's Clear Skies bill (S. 485) to raise the interim (2010) cap on mercury emissions, allow one-year extensions of the emission cap deadlines, and modify the emissions allowance system. Introduced November 10, 2003; referred to Committee on Environment and Public Works.

S. 2095 (Domenici)

Energy Policy Act of 2003. Energy bill similar to H.R. 6 in many respects, but eliminating some its most controversial provisions. Contains the same clean air provisions as H.R. 6, but eliminates the "safe harbor" provisions. Introduced February 12, 2004.

S.Amdt. 67 (Edwards)

Requires a study by the National Academy of Sciences of the effects of the final rule relating to New Source Review promulgated December 31, 2002, to determine whether it would result in any increase in air pollution or any adverse effect on human health. Delays implementation of EPA's changes to the NSR program for six months to allow completion of the study. Amendment was not agreed to, by a vote of 46-50. Record Vote Number 12.

S.Amdt. 86 (Inhofe)

Requires a study by the National Academy of Sciences of the effects of the final rule relating to New Source Review promulgated December 31, 2002, and requires an interim report to Congress no later than March 3, 2004. Amendment was agreed to, by a vote of 51-45. Record Vote Number 11. Enacted as Section 356 of H.J.Res. 2 (P.L. 108-7).

S.Amdt. 850 (Frist)

Similar to S. 791. Introduced June 4, 2003. Amendment was agreed to June 5, 2003, during debate on S. 14, by a vote of 67-29.

S.Amdt. 2156 to H.R. 2861 (Bond)

Amends Section 209 of the Clean Air Act to prohibit states from adopting or enforcing emission standards for engines smaller than 50 horsepower and to require EPA to propose national standards for small engines by December 1, 2004. Amendment was agreed to by voice vote, November 12, 2003.

S.Amdt. 2195 to H.R. 2861 (Durbin)

Similar to H.Amdt. 338. Offered November 17, 2003; agreed to by voice vote.