

# CRS Issue Brief for Congress

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## Clean Air Act Issues in the 109<sup>th</sup> Congress

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## Clean Air Act Issues in the 109<sup>th</sup> Congress

### SUMMARY

Major amendments to the Clean Air Act could be among the first items on the agenda of the 109<sup>th</sup> Congress. Many of these issues are holdovers from the 108<sup>th</sup> Congress, but they have gained new impetus as a result of the election and looming judicial and legislative deadlines. Specific issues include what to do about emissions of mercury and other pollutants from coal-fired electric power plants; whether to prohibit use of the gasoline additive MTBE; and how to insure the conformity of local plans for transportation and clean air. Underlying the specific issues are broad questions regarding the role of federal versus state governments and the appropriateness of economic versus regulatory approaches.

The regulation of mercury is the most immediate issue. The Environmental Protection Agency faces a judicial deadline of March 15, 2005, to promulgate standards for mercury emissions from electric power plants. The agency has also proposed what it calls the Clean Air Interstate Rule, which would cap emissions of sulfur dioxide and nitrogen oxides from power plants in 29 eastern states. Rather than promulgate these rules, the Administration would prefer that Congress pass the Clear Skies Act, which would replace the mercury requirement and half a dozen other Clean Air Act regulatory programs with a market-based approach to controlling power plant pollution. Under Clear Skies, there would be national caps on emissions of three pollutants (mercury, sulfur dioxide, and nitrogen oxides); utilities would receive allowances based on a formula provided in the bill; and a trading regime would permit compliance through installation of pollution controls or the purchase and use of excess allowances. As in the successful program for acid rain, units that control pollution more or sooner than

required would have excess allowances to sell to others or to bank for future use. The costs and benefits of various levels of control, the availability of control technology, and legal issues related to the mercury standard are among the issues Congress and EPA face.

Besides Clear Skies, several other bills were introduced on these issues in the 108<sup>th</sup> Congress: all of these had more stringent deadlines than Clear Skies and many set a cap on emissions of carbon dioxide in addition to the other three pollutants.

A second set of issues Congress may face involves the regulation of motor fuels, particularly the additives used in reformulated gasoline. One particular additive, MTBE, has contaminated groundwater in numerous states, leading 19 states (notably California and New York) to ban or limit its use. In the last three years, both the House and the Senate have passed bills to ban MTBE nationwide, but final passage of these provisions has proven elusive. Remaining issues include whether to grant MTBE producers a safe harbor from product liability lawsuits; how much stimulus to provide for the potential MTBE replacement, ethanol; and whether to address the proliferation of what are called boutique fuels — fuel requirements unique to individual states or metropolitan areas.

A third set of issues that may see early action is whether to modify the requirement that state and local transportation planners demonstrate conformity between their transportation plans and the timely achievement of air quality standards. Failure to do so can lead to a temporary suspension of federal highway funds. This issue brief will be updated on a regular basis.

## **MOST RECENT DEVELOPMENTS**

The 108<sup>th</sup> Congress adjourned December 8, 2004, without taking final action on pending amendments to the Clean Air Act. Both the House and the Senate had passed amendments addressing reformulated gasoline, renewable fuels, and use of the gasoline additive MTBE as part of a comprehensive energy bill, H.R. 6. The Senate could not muster sufficient votes to terminate debate on the conference version of the bill, however, and the bill died.

The House and Senate also passed versions of surface transportation legislation that were not ultimately enacted. The bills would have modified Clean Air Act requirements that transportation projects funded by the federal government “conform” to clean air implementation plans. A House-Senate conference did not report an agreed version of the bill.

On December 17, 2004, EPA designated 224 counties in 20 states and the District of Columbia as “nonattainment areas” for a new fine particle (PM<sub>2.5</sub>) air quality standard. On April 15, 2004, the agency had designated 474 counties in 32 states and D.C. as nonattainment areas for a new 8-hour ozone standard. Amendments that would have modified some of the implementation procedures for areas affected by upwind pollution were attached to the energy bill (H.R. 6), which was not enacted.

## **BACKGROUND AND ANALYSIS**

Despite steady improvements in air quality in many of the United States’ most polluted cities, the goal of clean air continues to elude the nation. The most widespread problems involve ozone and fine particles. As of December 2004, 159 million people lived in areas classified “nonattainment” for the ozone National Ambient Air Quality Standard; 95 million lived in areas that were nonattainment for fine particles (PM<sub>2.5</sub>).

Air quality has improved substantially since the passage of the Clean Air Act in 1970: annual emissions of the six most widespread (“criteria”) air pollutants have declined almost 154 million tons (51%), despite major increases in population, motor vehicle miles traveled, and economic activity. Meanwhile, however, scientific understanding of the health effects of air pollution has caused EPA to tighten standards for ozone and fine particles. The agency attributes 15,000 premature deaths and millions of lost work days annually to exceedance of the PM<sub>2.5</sub> standard alone. Recent research has begun to tie ozone pollution to premature mortality as well. Thus, there is continuing pressure to tighten air quality standards, and attention has focused on major sources of pollution, such as coal-fired power plants and mobile sources.

With this background in mind, the remainder of this issue brief provides an overview of five prominent air issues that may be of interest in the 109th Congress: multi-pollutant (or Clear Skies) legislation for electric power plants; mercury from power plants; the gasoline additives MTBE and ethanol; EPA’s regulatory program for large stationary sources of pollution, known as New Source Review; and the “conformity” of transportation and clean air planning. The issue brief provides an overview: most of these issues are addressed at

greater length in separate CRS reports, which contain more information and detailed sources. These other CRS reports are referenced in the appropriate sections.

**Clear Skies / Multi-Pollutant Legislation.** Coal-fired power plants are among the largest sources of air pollution in the United States. Under the current version of the Clean Air Act, they are not necessarily subject to stringent requirements. Emissions and the required control equipment can vary depending on the location of the plant, when it was constructed, whether it has undergone major modifications, the specific type of coal it burns, and, to some extent, the vagaries of EPA enforcement policies. There are more than half a dozen separate Clean Air Act programs that could potentially be used to control emissions, which makes compliance strategy complicated for utilities and difficult for regulators. And, since the cost of the most stringent available controls, for the entire industry, could range into the tens of billions of dollars, utilities have fought hard and rather successfully to limit or delay regulation.

As a result, emissions from power plants have not been reduced as much as those from some other sources. Many plants built in the 1950s or 1960s (generally referred to as “grandfathered” plants) have little emission control equipment. Collectively, these plants are large sources of pollution. In 2003, power plants accounted for nearly 11 million tons of sulfur dioxide (SO<sub>2</sub>) emissions (69% of the U.S. total), about 45 tons of mercury emissions (at least one-third of the U.S. total), and nearly 4.5 million tons of nitrogen oxides (21.5% of the U.S. total). Power plants are also considered major sources of fine particles (PM<sub>2.5</sub>) and account for nearly 40% of U.S. anthropogenic emissions of the greenhouse gas carbon dioxide.

An example of their importance was seen in the August 2003 Northeast blackout. With about 100 power plants (most of them coal-fired) shut down, researchers found that ambient levels of SO<sub>2</sub> and ozone were 90% and 50% lower, respectively, in blacked-out areas.

With new ambient air quality standards for ozone and fine particles taking effect, emissions of NO<sub>x</sub> (which contributes to the formation of ozone) and SO<sub>2</sub> (which is among the sources of fine particles) need to be reduced. Mercury emissions have also been a focus of concern: 45 states have issued fish consumption advisories for mercury, covering 12 million acres of lakes, 473,000 river miles, and the coastal waters of 10 entire states. The continuing controversy over the interpretation of New Source Review requirements for existing power plants (described in a separate section below) is also exerting pressure for a more predictable regulatory structure.

Thus, many in industry, environmental groups, Congress, and the Administration agree that the time is ripe for legislation that addresses power plant pollution in a comprehensive (multi-pollutant) fashion. Such legislation (dubbed “Clear Skies” by the Administration) would address the major pollutants on a coordinated schedule, and would rely, to a large extent, on 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 key questions have been how stringent the caps should be, and whether carbon dioxide (CO<sub>2</sub>) will be among the emissions subject to a cap.

Regarding the stringency issue, Clear Skies and the other bills introduced in the 108<sup>th</sup> Congress would have required reduction of NO<sub>x</sub> 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 have either required EPA to determine the level of reductions, or required 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 S. 366 and Representative Waxman's H.R. 2042), these reductions would have taken place by 2008 or 2009. Four of the bills (Senator Jeffords's, Representative Waxman's, Senator Carper's S. 843, and Representative Bass's H.R. 3093) would also have set caps on CO<sub>2</sub> 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 108<sup>th</sup> 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 in the 108<sup>th</sup> Congress) and a variant of it introduced later by Senator Inhofe (S. 1844) envisioned less stringent standards than those in the other bills, phased in over a much longer period of time. For NO<sub>x</sub>, the Administration would have reduced emissions to 1.7 million tons per year, but not until 2018; an intermediate limit of 2.1 million tons would have been imposed in 2008. For sulfur dioxide, the limit would have been 3.0 million tons annually, also in 2018, with an intermediate limit of 4.5 million tons in 2010. For mercury, the limit would have been 26 tons per year in 2010, declining to 15 tons in 2018. (The Inhofe bill changed the interim mercury limit to 34 tons.)

Because the deadlines are far in the future, the Administration's analysis shows that utilities would be likely to "overcomply" in the early years of the program. The Administration uses this as a selling point for its approach, arguing that it will achieve reductions sooner than would a traditional regulatory approach with the same deadlines. To reverse the common saying, every silver lining has its cloud, however. Overcompliance in the early years would lead to "banked" emission allowances; these could be used in later years to delay achievement of required reductions. In its analysis of the bill, EPA does not expect to see the full 70% emission reductions until 2026 or later, a point seized upon by its opponents to support a more aggressive approach.

In return for establishing its new cap and trade program, Clear Skies would also eliminate or restrict numerous existing Clean Air Act requirements with respect to electric generating units, including New Source Review, 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. It also would remove deadlines for local areas to achieve ozone and particulate standards under certain conditions. The other bills generally would leave these existing controls in place.

Clear Skies includes no cap on CO<sub>2</sub> emissions. It is a three-pollutant (SO<sub>2</sub>, NO<sub>x</sub>, mercury) bill, whereas most competing bills have addressed four pollutants (the three plus CO<sub>2</sub>). The Administration views controls on CO<sub>2</sub> as a step toward implementing the Kyoto Protocol to the United Nations Framework Convention on Climate Change, which it opposes for a variety of reasons, principally the potential economic impacts on U.S. industries.

The absence of CO<sub>2</sub> 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. In its opposition to CO<sub>2</sub> controls, the Administration is supported by most in the utility and coal industries. Others, mostly outside these industries but including some utilities, view CO<sub>2</sub> controls as inevitable, if not desirable, and support simultaneous implementation of cap and trade programs for CO<sub>2</sub> and the other pollutants.

Although stalled for the past three years, Clear Skies is said to be set for early consideration in the 109<sup>th</sup> Congress — particularly in the Senate, where gains by Republicans may have provided some of the additional votes it appears to need for passage. How quickly (or whether) the bill moves toward passage may be viewed as an early test of the Administration's clout in the new Congress.

**Mercury from Power Plants.** In addition to sending the Clear Skies bill to Congress, EPA has proposed regulations addressing mercury, SO<sub>2</sub>, and NO<sub>x</sub> 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. As in Clear Skies, 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. EPA did not specify this cap, except to say that it would be the level of reductions achieved under its Interstate Air Quality (or Clean Air Interstate) 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 was required. As with Clear Skies, 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<sub>2</sub> and NO<sub>x</sub> 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, CAIR) is designed to reduce interstate transport of fine particulates (PM<sub>2.5</sub>) and ozone in order to facilitate attainment of EPA's new PM<sub>2.5</sub> and ozone standards. 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. To a large extent, these arguments and EPA's counterarguments rest on assumptions concerning the availability of control technologies. Controlling SO<sub>2</sub>, NO<sub>x</sub>, 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<sub>2</sub> and particulates, have the side effect (or co-benefit) of reducing mercury emissions to some extent. EPA has attempted to calibrate the required SO<sub>2</sub> 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 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, but this assertion is 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 (from longer lives and less illness) of more than \$15 billion (a 16 to 1 advantage). The CAIR rule 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 2004 to request that he withdraw the mercury proposal and begin over. In June, 178 House members wrote Leavitt that they hoped further review “will lead to a stronger final rule.” 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*.)

**New Source Review (NSR).** A related issue that has driven some of the debate over the regulation of power plant emissions is whether EPA has adequately enforced existing regulations, using a process called New Source Review. EPA took a more aggressive stance on New Source Review under the Clinton Administration, filing lawsuits against 13 utilities for violations at 51 plants in 13 states. The Bush Administration has made little headway in settling the suits or bringing the cases to trial, and has proposed major changes that critics argue will gut New Source Review as it pertains to modifications of existing plants. 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 or settled with 17 electric utilities that EPA claims 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 four years ago to spend more than \$1 billion to resolve NSR violations, but final settlement negotiations have not been concluded. The company recently announced that it would voluntarily spend between \$1.65 billion and \$2.15 billion over the next decade to reduce emissions of SO<sub>2</sub>, NO<sub>x</sub>, and mercury. 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. Since July 25, 2000, the agency also reached 12 agreements with petroleum refiners representing more than 40% of industry capacity. The refiners agreed to settle potential charges of NSR violations by paying fines and installing equipment to eliminate 200,000 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. They contend that a strict interpretation of what constitutes routine maintenance 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 are to be determined in a separate trial that has been delayed, pending settlement negotiations.

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* on October 27, 2003. The new regulations would 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 streamlining or improving 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 on December 24, 2003.

Implementation of the changes also raises questions about EPA's ongoing NSR enforcement actions. While the agency stated 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 afterward. 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 that 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*.)

At Congress's direction, the National Academy of Sciences began a review of the NSR program in May 2004, with an expected completion date of December 2005. Besides the 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 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.

**MTBE and Ethanol.** Another set of issues that awaits the 109<sup>th</sup> Congress, regulation of the gasoline additives MTBE and ethanol, has also been considered by several previous Congresses. In the 108<sup>th</sup> Congress, the issues had a prominent place in H.R. 6, the comprehensive energy bill that passed the House and Senate and emerged from conference, before failing in the Senate on a cloture vote.

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, New York, and Connecticut) 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. About 12% 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. 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 will MTBE use decline, but likely, so would demand for ethanol. Thus, Members of Congress and Senators from corn states have taken a keen interest in MTBE legislation.

H.R. 6 contained numerous MTBE and ethanol provisions in Title XV. They would have banned the use of MTBE as a fuel additive, except in states that specifically authorized its use, after December 31, 2014, unless the President determined not to ban it. The Clean Air Act requirement to use MTBE or other oxygenates in RFG would have been repealed, 270 days after enactment. In place of this requirement, the bill would have provided a major stimulus to the use of ethanol: under a renewable fuels standard (RFS), annual production of gasoline would have been 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 bill required that the reductions in emissions of toxic substances achieved by RFG be maintained; it authorized \$2 billion in grants to assist merchant MTBE production facilities in converting to the production of other fuel additives. The bill also authorized funds for MTBE cleanup, and perhaps most controversially, would have provided a “safe harbor” from defective 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. (For a detailed comparison of the House, Senate, and conference provisions of H.R. 6, 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*.)

**Conformity of Transportation Plans and SIPs.** A fifth clean air issue considered virtually certain to return in the 109<sup>th</sup> 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; court decisions have tightened the conformity rules; and the implementation of

more stringent air quality standards for both ozone and fine particulates in 2004 means that additional areas are subject to conformity. Thus, numerous metropolitan areas could face a temporary suspension of highway and transit funds unless they impose sufficient reductions in vehicle, industrial, or other emissions. In a 2003 report, the Government Accountability Office (GAO) found that, over the preceding six years, only five metropolitan areas 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 108<sup>th</sup> Congress, conformity provisions were 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, 2004. The Senate bill would have required less frequent conformity demonstrations (at least every four years instead of every two years as in current law), and would have shortened 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 was similar, but it would have required that the local air pollution control agency agree if the planning horizon were to be shortened. The House bill also would have established 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, 2004, but did not report a bill. (For additional information, see CRS Report RL32106, *Transportation Conformity Under the Clean Air Act: In Need of Reform?*)