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Clean Air Act Issues in the 109th Congress

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SUMMARY

Congress acted on several Clean Air Act issues in legislation that it passed and sent to the President before the August recess. The most significant of these amendments dealt with ethanol and reformulated gasoline (RFG), and were included in the comprehensive energy bill, H.R. 6 (P.L. 109-58). The bill eliminates a requirement that RFG, used in the nation's most polluted areas, contain at least 2% oxygen. In its place, the bill requires that gasoline of all types contain increasing amounts of a specific oxygenate, ethanol, which is generally made from corn. Under the bill, use of ethanol will more than double by 2012.

Congress also amended the Clean Air Act in H.R. 3 (P.L. 109-59), the transportation bill that the President signed August 10. H.R. 3 addresses the requirement that state and local transportation planners demonstrate conformity between their transportation plans and the timely achievement of air quality standards. Under the bill, the frequency of conformity determinations and the time horizon over which conformity must be demonstrated will both be reduced, making the requirement less burdensome. Failure to demonstrate conformity can lead to a temporary suspension of federal highway funds.

Other Clean Air Act amendments appear to have stalled. Major amendments that would have established a cap-and-trade program for emissions from coal-fired electric power plants were among the first items on the agenda of the 109th Congress: S. 131 (the Clear Skies Act) was scheduled for markup by the Senate Environment and Public Works Committee March 9. But the committee failed to approve the bill, on a 9-9 tie vote, in large part because of complaints that the bill would weaken existing Clean Air Act requirements.

A deadline for mercury regulations helped drive the Clear Skies debate: EPA faced a judicial deadline of March 15, 2005, to promulgate standards for power plant mercury emissions. The agency met this deadline, but the specifics of its chosen regulation have been widely criticized and are now being challenged by at least 15 states. The regulations could have been overturned if Congress disapproved them under the Congressional Review Act. Resolutions to do so (S.J.Res.20/ H.J.Res. 56) were introduced June 29. The Senate resolution was discharged from the Committee on Environment and Public Works July 18, but was defeated on a vote of 51-47, September 13. EPA also finalized, on March10, the Clean Air Interstate Rule (CAIR), which will cap emissions of sulfur dioxide and nitrogen oxides from power plants in 28 eastern states and the District of Columbia.

Rather than promulgate the mercury and CAIR rules, the Administration would have preferred that Congress pass the Clear Skies Act. Under Clear Skies (as under the promulgated mercury and CAIR regulations), there would be national or regional caps on emissions of mercury, sulfur dioxide, and nitrogen oxides, with utilities allowed to trade or bank emission allowances. But Clear Skies would also remove or modify many existing Clean Air Act requirements. Whether to modify such requirements as New Source Review, deadlines for nonattainment areas, and provisions dealing with interstate air pollution are among the key issues in the Clear Skies debate. Other issues that Congress and EPA face include whether to cap power plant emissions of carbon dioxide (CO_2) in addition to the other three pollutants.

This issue brief will be updated regularly.

MOST RECENT DEVELOPMENTS

On September 13, the Senate rejected S.J.Res. 20, a resolution that would have disapproved EPA's cap-and-trade regulations on emissions of mercury from power plants. The cap-and-trade regulations, promulgated March 29 and May 18, 2005, are also being challenged in court by 15 states that believe EPA is obligated to impose stronger, plant-specific Maximum Achievable Control Technology standards.

On July 29, the Senate passed the conference report on H.R. 6, the comprehensive energy bill. The House passed it the previous day, and the bill was signed by the President (P.L. 109-58), August 8. Among many other provisions, the new law amends the Clean Air Act to require that motor fuels contain at least 7.5 billion gallons of ethanol or other renewable fuels by 2012 (more than double the amount used in 2004). It also amends the Clean Air Act provisions on reformulated gasoline, removing the requirement that RFG contain at least 2% oxygen.

The new law also gives the EPA Administrator authority to waive Clean Air Act controls on fuels or fuel additives if there are extreme and unusual supply conditions that result from a natural disaster. This new authority was used, starting August 30, to ease potential fuel distribution problems resulting from Hurricane Katrina.

Both the House and Senate passed the conference version of H.R. 3, the surface transportation bill, July 29. The President signed it (P.L. 109-59), August 10. Among its provisions, the bill would amend Clean Air Act requirements on the conformity of transportation and air quality planning.

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 May 2005, 159 million people lived in areas classified "nonattainment" for the ozone National Ambient Air Quality Standard; 90 million lived in areas that were nonattainment for fine particles ($PM_{2.5}$).

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 17,000 premature deaths and millions of lost work days annually to exceedance of the $PM_{2.5}$ 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 — another tightening for fine particles is apparently on the way, with a final decision expected in 2006. And attention has focused on major sources of ozone and particulate pollution, such as coal-fired power plants and mobile sources.

With this background in mind, the bulk of this issue brief provides an overview of five prominent air issues 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; ozone nonattainment area deadlines; and the "conformity" of transportation and clean air planning. Following these issues, a short section discusses the waiver of Clean Air Act regulations in response to Hurricane Katrina. 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. The Senate Environment and Public Works Committee blocked S. 131, the Clear Skies Act, from advancing to the Senate floor, on a tie vote, March 9. The committee's 9-9 vote brought an end, possibly for the remainder of the Congress, to further attempts to find a compromise on Clear Skies amendments. Earlier markups of Clear Skies, scheduled for February 16, March 2, and March 3, had been postponed so that Senators could undertake discussions aimed at crafting a compromise. The bill would have significantly amended the Clean Air Act to establish a cap-and-trade system for emissions from electric power plants and other sources of air pollution, while eliminating or deferring numerous existing regulations affecting those sources.

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. More than half a dozen separate Clean Air Act programs 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_2) emissions (69% of the U.S. total), about 45 tons of mercury emissions (more than 40% 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 ($PM_{2.5}$) 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_2 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 NOx (which contributes to the formation of ozone) and SO_2 (which is among the sources of fine particles) need to be reduced. Mercury emissions have also been a focus of concern: 44 states have issued fish consumption advisories for mercury, covering 13 million acres of lakes, 765,000 river miles, and the coastal waters of 12 entire states. The

continuing controversy over the interpretation of New Source Review requirements for existing power plants 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_2) will be among the emissions subject to a cap.

Regarding the stringency issue, Clear Skies and other bills introduced over the last two Congresses would require reduction of NOx emissions to 1.5 or 1.8 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. 150 and Representative Waxman's H.R. 1451), these reductions would take place by 2009 or 2010 (depending on the pollutant). The Jeffords and Waxman bills would also set caps on CO_2 emissions. (For additional information and a detailed comparison of the legislative proposals, see CRS Report RL32755, *Air Quality: Multi-Pollutant Legislation in the 109th Congress*.)

The Clear Skies bill (S. 131) envisions less stringent standards than those in most other bills, phased in over a much longer period of time. For NOx, the bill would reduce emissions to 1.79 million tons per year, but not until 2018; an intermediate limit of 2.19 million tons would be imposed in 2008. For sulfur dioxide, the limit would be 3.0 million tons annually, also in 2018, with an intermediate limit of 4.5 million tons in 2010. For mercury, the limit would be 34 tons per year in 2010, declining to 15 tons in 2018. (In negotiations over S. 131, Senators Voinovich and Inhofe offered to change the Phase 2 deadlines under Clear Skies to 2016, and to implement a Phase 3 SO_2 cap of 2.5 million tons in 2018.)

Because the deadlines are far in the future, the Administration's analysis of Clear Skies 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. But 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 Maximum Achievable Control Technology regulations

for mercury. It would allow sources in other industries to opt into the cap-and-trade program, and escape existing Clean Air Act controls. It would remove deadlines for local areas to achieve ozone and particulate standards under certain conditions, and make it more difficult for nonattainment areas to challenge interstate sources of air pollution. The other bills generally would leave these existing controls in place. (For a more thorough discussion of how Clear Skies would change the Clean Air Act, see CRS Report RL32782, *Clear Skies and the Clean Air Act: What's the Difference?*)

Clear Skies includes no cap on CO_2 emissions. It is a three-pollutant (SO_2, NOx, mercury) bill, whereas most competing bills have addressed four pollutants (the three plus CO_2). The Administration views controls on CO_2 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_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. In its opposition to CO_2 controls, the Administration is supported by most in the utility and coal industries. Others, mostly outside these industries but including some utilities, view CO_2 controls as inevitable, if not desirable, and support simultaneous implementation of cap-and-trade programs for CO_2 and the other pollutants.

Although stalled for the past three years, Clear Skies was set for early consideration this year in the Senate Environment and Public Works Committee; but the opposing sides were not able to reach a consensus and the bill failed on a tie vote on March 9. The House has taken no action, other than an Energy and Commerce subcommittee hearing, May 26.

In negotiations preceding the Senate committee vote, there was some movement toward a compromise. On the Republican side, there were offers to move the deadlines for Phase 2 caps forward two years (from 2018 to 2016) and to add a third phase for SO_2; a mechanism for addressing mercury hot spots was added; and adjustments to the provisions on interstate transport of pollution were offered. The opponents of the bill (who included all the committee Democrats, plus Senators Jeffords and Chafee) conceded that a bill with hard CO_2 caps would not pass, and were willing to accept some less stringent provisions on that score. These compromises proved insufficient to bridge the gap. Whether they might serve as a basis for further discussions and action later in the Congress remains to be seen.

Immediately following the vote, on March 10, EPA announced that it would promulgate final regulations for utility emissions of SO_2 and NOx in 28 eastern states and the District of Columbia through its Clean Air Interstate Rule (CAIR). (The rule appeared in the Federal Register on May 12, 2005.) The cap-and-trade provisions of CAIR mimic those of Clear Skies, but CAIR does not allow EPA to remove existing Clean Air Act requirements, as Clear Skies would. Under CAIR, EPA projects that nationwide emissions of SO_2 will decline 53% by 2015, and NOx emissions will decline 48%. The agency also projects that the rule will result in $85-$100 billion in health benefits annually by 2015, including the prevention of 17,000 premature deaths annually. CAIR's health and environmental benefits are more than 25 times greater than its costs, according to EPA. (For additional information on the CAIR rule, see CRS Report RL32927, *Clean Air Interstate Rule: Review and Analysis*.)

Mercury from Power Plants. On March 15, 2005, EPA also finalized through regulation a cap-and-trade program for mercury emissions from electric utilities. (These rules appeared in the Federal Register March 29, 2005 and May 18, 2005.) The mercury regulations (which, like CAIR, mimic the requirements of Clear Skies) rely almost entirely on co-benefits of the CAIR rule. The agency's analysis of the mercury rule finds that less than 1% of coal-fired power plant capacity would install pollution control equipment specifically designed to control mercury within 10 years as a result of the mercury rule. By 2020, only 4% of capacity would have such equipment.

EPA reversed course several times before choosing its final approach to mercury regulation. The agency was required by the terms of the 1990 Clean Air Act Amendments and a 1998 consent agreement to determine whether regulation of mercury from power plants under Section 112 of the Clean Air Act was appropriate and necessary. It concluded that it was so, in a December 2000 regulatory finding. The finding triggered other provisions of the consent agreement: that the agency propose Maximum Achievable Control Technology (MACT) standards for electric power plants by December 15, 2003, and finalize them by March 15, 2005.

The December 2003 proposal offered two alternatives. The first met the agency's requirement under the consent agreement by proposing MACT standards. The standards would have applied on a facility-by-facility basis, and would have resulted in emissions of 34 tons of mercury annually, a reduction of about 30% from the 1999 level. The standards would have taken effect in 2008, three years after promulgation, with possible one-year extensions.

The second mercury alternative, a variant of which the agency chose to promulgate March 15, 2005, uses Section 111(d) of the act. To avoid having to promulgate MACT standards, the agency proposed reversing its December 2000 regulatory finding, arguing that while MACT standards were "appropriate," they were not "necessary," since the emissions could be controlled under Section 111(d) instead. Section 111(d) has rarely been used before — and never for hazardous air pollutants. In the final rule, the agency went a step further, concluding that MACT regulations are neither appropriate nor necessary, and so revises its December 2000 regulatory finding.

Instead, the final regulations establish a national cap-and-trade system for power plant emissions of mercury. As in Clear Skies, the cap will be 15 tons of emissions nationwide in 2018 (about a 70% reduction from 1999 levels, if achieved). There will also be an intermediate cap of 38 tons in 2010. The caps will be implemented through an allowance system similar to that used in the acid rain program, through which utilities can either control the pollutant directly or purchase excess allowances from other plants that have controlled more stringently or sooner than required. As with Clear Skies, early reductions could be banked for later use, which the agency says would result in emissions of 31.3 tons in 2010, nearly 7 tons less than the cap. If this happens, it would allow utilities to delay compliance with the full 70% reduction until well beyond 2018, as they use up banked allowances rather than installing further controls. The agency's analysis projects actual emissions to be 24.3 tons (less than a 50% reduction) as late as 2020. Full compliance with the 70% reduction might be delayed until after 2030.

Besides the stretched out implementation schedule, 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 in the most contaminated areas. By contrast, a MACT standard would have required reductions at all plants, and would therefore be expected to improve conditions at hot spots.

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_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 of reducing mercury emissions to some extent. Under EPA's cap-and-trade regulations, both the 2010 and 2018 mercury emission standards are set to maximize use of these co-benefits. Thus, hardly any controls would be required to specifically address mercury emissions before the 2020s, and the costs specific to controlling mercury would be minimal.

Besides citing the cost advantage of relying on co-benefits, EPA has claimed 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 in at least 16 full-scale tests at coal-fired power plants, for periods as long as a year. 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 near future.

The agency can take cost into consideration under the MACT or cap-and-trade rules, and cost to electric utilities appears to have been a determining factor in EPA's analysis. In its proposal, however, calculations of the overall societal costs and benefits seemed to support the imposition of a more stringent standard. The agency projected 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 final rule completely changes this analysis. It concludes that the benefits of mercury control are at most $43 million per year, with annual costs as high as $896 million. The new analysis did not include several peer-reviewed studies that indicated stricter utility mercury rules would have yielded large benefits.

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, 2004, 178 House members wrote Leavitt that they hoped further review "will lead to a stronger final rule." On

February 3, 2005, the EPA Inspector General echoed these comments, concluding that EPA senior management instructed the staff to develop a standard that would result in emissions of 34 tons annually, instead of basing the standard on unbiased analysis. Nevertheless, the agency weakened the final rule rather than strengthening it. Thus, opponents, including at least 15 states, have filed suit to overturn the mercury rule.

Congress could also have played a role in reversing the rule, under the provisions of the Congressional Review Act (5 U.S.C. Sections 801-808). On June 29, 2005, Senator Leahy and 31 cosponsors introduced S.J.Res. 20; on the same day, a similar resolution (H.J.Res. 56) was introduced in the House by Representative Meehan. If enacted into law, these resolutions would have disapproved the rule EPA promulgated on March 29, in which the agency determined not to regulate mercury from fossil-fueled electric utility units under Section 112. The net effect of disapproval would have been that EPA would be forced to issue MACT standards for coal- and oil-fired electric power plants. On September 13, however, the Senate rejected S.J.Res. 20, 51-47, thus allowing the EPA rule to go forward. The Senate action has no effect on judicial challenges, which are still pending.

(For additional information on the mercury rule, see CRS Report RL32868, *Mercury Emissions from Electric Power Plants: An Analysis of EPA's Cap-and-Trade Regulations* and CRS Report RL32744, *Mercury Emissions from Electric Generating Units: A Review of EPA Analysis and MACT Determination*. For discussion of the Congressional Review Act and how it applied to the mercury rule, see CRS Report RS22207, *Congressional Review of EPA's Mercury Rule*.)

MTBE and Ethanol. Congress acted on several Clean Air Act issues in H.R. 6, the comprehensive energy bill that it passed and sent to the President July 29. The most significant of these issues dealt with ethanol and reformulated gasoline (RFG). The final version of the bill stripped most provisions dealing with the related issue of MTBE, a gasoline additive that competes with ethanol and has been the subject of much controversy.

MTBE and ethanol have been 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 (124 counties with a combined population of 73.6 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.

Implemented in 1995, the law required that RFG contain at least 2% oxygen by weight. Refiners could 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 46% by 2004. 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, 25 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 has been 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 came from a number of agricultural interests. Nearly 13% of the nation's corn crop is used to produce the competing oxygenate, ethanol. If MTBE use were reduced or phased out, but the oxygen requirement remained in effect, ethanol use would soar, increasing demand for corn. Ethanol use has already grown substantially as MTBE begins to be phased out. Conversely, if the oxygen requirement were waived by EPA or by legislation, not only would 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 and RFG legislation.

As passed by the House on April 21, H.R. 6 contained numerous MTBE and ethanol provisions. With some potential exceptions, it would have banned the use of MTBE as a fuel additive, except in states that specifically authorized its use, after December 31, 2014. The Clean Air Act requirement to use MTBE or other oxygenates in RFG would have been repealed — 270 days after enactment in most states, immediately in California. In place of this requirement, the bill substituted 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 (an increase from 3.4 billion gallons in 2004) 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 Senate version of H.R. 6, passed June 28, contained MTBE and ethanol provisions as well, but they were different from the House bill in several respects. The Senate bill would have increased the renewable fuels standard to 8 billion gallons by 2012. It would have phased out the use of MTBE sooner (within four years of enactment, rather than at the end of 2014), and it omitted a potential nationwide presidential exception to the MTBE ban that the House version would have provided. The Senate version also omitted the safe harbor for MTBE producers. In the 108th Congress, the safe harbor provision had been among the most controversial provisions in a similar bill, cited by numerous opponents in Senate debate on the conference report. (The opponents prevailed on a cloture motion, and the bill died.) The 109th Congress Senate bill also differed in how much it would authorize for cleanup of MTBE releases and for transition assistance to MTBE producers.

In the end, unable to reach a compromise addressing MTBE, House and Senate conferees stripped most of the MTBE provisions from the conference report on H.R. 6. The final version, approved by the House July 28 and the Senate July 29, and signed into law (P.L. 109-58) by the President August 8, neither bans MTBE use nor provides a safe harbor for its producers, nor does it provide transition assistance for MTBE producers. It does, however, repeal the RFG program's oxygen requirement and, in place, requires that motor fuels contain 7.5 billion gallons of ethanol or other renewable fuels by 2012 — more than double the amount of 2004 consumption. When this requirement is fully implemented, as much as 30% of the nation's corn crop could be dedicated to ethanol production. (For additional discussion of the House and Senate bills, see CRS Report RL32865, *Renewable Fuels and MTBE: A Comparison of Selected Legislative Initiatives*. For background on the MTBE issue, see CRS Report RL32787, *MTBE in Gasoline: Clean Air and Drinking Water Issues*. For information on ethanol, see CRS Report RL30369, *Fuel Ethanol: Background and Public Policy Issues*.)

Ozone Nonattainment Area Deadlines. Another Clean Air Act provision that was in the House-passed version of H.R. 6 dealt with the deadlines for attaining air quality standards. Section 1443 of the bill would have extended deadlines for areas that have not attained the ozone air quality standard if upwind areas "significantly contribute" to their nonattainment.

Under the 1990 Clean Air Act Amendments, ozone nonattainment areas with higher concentrations of the pollutant were given more time to reach attainment, but in return for the additional time, they were required to implement more stringent controls on emissions. Failure to reach attainment by the specified deadline was to result in reclassification of an area to a higher category and the imposition of more stringent controls. Section 1443 would have amended this system to extend deadlines (without requiring more stringent controls) in areas affected by upwind sources of pollution. There was no comparable provision in the Senate bill, and the conferees did not include the House provision in the enacted law.

The enacted version does establish a demonstration project, however, to address the issue of upwind pollution. In Section 996, the enacted law requires EPA to work with State and local officials in a multi-county Western Michigan project area to determine the extent of ozone and ozone precursor transport, to assess alternatives to achieve compliance with the 8-hour ozone standard apart from local controls, and to determine the timeframe in which such compliance could take place. (Western Michigan is believed to be affected by pollution originating in the Chicago and Milwaukee metropolitan areas.) EPA is prohibited from imposing requirements or sanctions that might otherwise apply during the demonstration project.

Conformity of Transportation Plans and SIPs. A fifth clean air issue considered by the 109th 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. A total of 126 areas (474 counties) with a combined population in excess of 159 million are subject to the SIP requirements for ozone, and 225 counties with a combined population of 95 million are subject to SIP requirements for fine particulates. 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 beginning this year. 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 that has been 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 were 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 109th Congress, conformity provisions were included in H.R. 3 (P.L. 109-59), the transportation bill that the President signed August 10. As enacted, P.L. 109-59 requires less frequent conformity demonstrations (at least every four years instead of every two years), and will shorten the planning horizon over which conformity must be demonstrated to 10 years in many cases, instead of the former requirement of 20 years. The local air pollution control agency will need to be consulted and public comments solicited if the planning horizon is to be shortened. The law also establishes a 12-month grace period following a failure to demonstrate conformity before a lapse would be declared. (For additional information, see CRS Report RL32106, *Transportation Conformity Under the Clean Air Act: In Need of Reform?)*

Hurricane Katrina. As state, local, and federal officials have responded to Hurricane Katrina, there has been discussion regarding whether environmental regulations (including those under the Clean Air Act) might slow or impede response efforts and whether regulation of fuels and fuel additives should be waived in order to facilitate distribution of fuels in a system in which several refineries and pipelines were damaged or shut down. In response

to these concerns, various provisions of the Clean Air Act have been waived by EPA. These waivers have addressed concerns regarding the impact of the hurricane and subsequent flooding on energy supplies within the four states that suffered major damage, as well as impacts in other states. Because of the importance of the Gulf area as both a producer of oil and gas and a refiner of petroleum products, EPA has temporarily waived regulations regarding gasoline and diesel fuel in all 50 states.

All of the fuel waivers were granted under the authority of Section 211(c)(4)(C) of the Clean Air Act, as amended by P.L. 109-58, the Energy Policy Act of 2005. As amended, this section allows EPA to temporarily waive a control or prohibition respecting the use of a fuel or fuel additive if: (1) the Administrator determines that "extreme and unusual fuel or fuel additive supply circumstances exist in a State or region of the Nation which prevent the distribution of an adequate supply of the fuel or fuel additive to consumers"; (2) these circumstances are the result of a natural disaster, an Act of God, a pipeline or refinery equipment failure, or another event that could not reasonably have been foreseen or prevented, and not the lack of prudent planning; and (3) it is in the public interest to grant the waiver.

Four types of waiver have been issued. First, the Agency waived the volatility requirements that apply to gasoline sold during the summer driving season. Lower volatility gasoline is less prone to evaporation, thereby lowering emissions of the volatile organic compounds that contribute to the formation of ground-level ozone. The volatility requirements vary depending on region of the country, making the supply of gasoline available in Northern states unusable in the South during summer months. The summer volatility requirements expire on September 15 of the year in most states. In order to prevent supply disruptions that might otherwise have occurred, EPA waived these requirements beginning August 30 in Alabama, Florida, Louisiana, and Mississippi, and, on August 31 extended the waiver to all 50 states and the District of Columbia. This waiver has now expired in most states, but on September 13, the agency extended the waiver in California, Texas, and Phoenix, Arizona, all of which require low volatility gasoline after September 15.

Second, to prevent supply disruptions, the agency waived the requirement that diesel fuel sold for use in on-road vehicles contain no more than 500 parts per million sulfur. This waiver permitted higher sulfur diesel fuel, which is allowed in construction equipment, farm machinery, and other off-road vehicles, to be used in highway vehicles such as trucks and buses. Sulfur content is normally limited because sulfur dioxide is a pollutant that affects human health and the environment, and because sulfur in exhaust gases interferes with the effective operation of pollution control devices. The agency decided, however, that the potential for shortages of compliant fuel outweighed the health and environmental impacts of continued compliance, and waived the sulfur limit on August 31. The sulfur waiver applied in all 50 states and D.C., through September 15, 2005. It was subsequently extended through October 5 in 24 mostly Eastern and Southern states and the District of Columbia.

Third, beginning September 2, the agency waived the requirement that Richmond, Virginia, use cleaner burning reformulated gasoline (RFG) — also because of fears of inadequate supply. This waiver was later extended through September 23.

Fourth, on September 1, EPA waived until September 15 certain low sulfur gasoline requirements that apply to the Atlanta area. Atlanta has special gasoline sulfur requirements

as part of its State Implementation Plan for compliance with the ozone air quality standard. This waiver was subsequently extended through October 5.

EPA has also used enforcement discretion to allow on a temporary basis actions that would otherwise violate the Clean Air Act or other statutes and regulations. Examples cited in the press have included rules regarding vapor recovery at gasoline pumps and certification and registration procedures for tank truck carriers. As of September 21, EPA had identified 12 cases in which enforcement discretion or "no action assurances" had been granted. Several of these instances affect multiple facilities. In addition, EPA or the Department of Justice has extended consent decree compliance deadlines due to force majeure in some cases.