Congressional Research Service
Informing the legislative debate since 1914

Clean Air Act Issues in the 115th Congress: In Brief

(name redacted)
Specialist in Environmental Policy

May 1, 2018

Congressional Research Service
7-....
www.crs.gov
R44744

CRS REPORT
Prepared for Members and
Committees of Congress

Summary

Review of regulations issued under the Obama Administration, with the possibility of their modification or repeal, has been the main focus of interest on Clean Air Act issues in the 115th Congress and in the executive and judicial branches in 2017 and 2018. Of particular interest are the ambient air quality standards for ozone promulgated by the Environmental Protection Agency (EPA) in October 2015; EPA rules to regulate greenhouse gas (GHG) emissions from power plants, cars and trucks, and the oil and gas sector; and emission standards for three groups of sources: brick kilns, wood stoves and heaters, and power plants that burn waste coal.

Reducing GHG emissions to address climate change was a major goal of President Obama, but, for a variety of reasons, many in Congress have been opposed to it. In the absence of congressional action, President Obama directed EPA to promulgate GHG emission standards using existing Clean Air Act authority. This authority has been upheld on three occasions by the Supreme Court, but the specifics remain controversial and subject to debate in Congress, the Trump Administration, and the courts.

The Clean Power Plan (CPP), which would limit GHG emissions from existing fossil-fueled power plants, has been a frequent subject of debate. Implementation of the CPP has been stayed by the Supreme Court since February 2016, pending the completion of judicial review. Prior to the stay, challenges to the rule had been filed with the U.S. Court of Appeals for the D.C. Circuit by more than 100 parties, including 27 states. The D.C. Circuit heard oral argument in the case in September 2016; as of this writing, the court has not issued a decision. The Trump Administration's EPA has proposed to repeal the CPP and has asked for public input on what should replace it. The D.C. Circuit has stayed the litigation during EPA's review of the CPP.

More broadly, on March 28, 2017, President Trump signed Executive Order 13783, to require the review of regulations and policies that burden the development or use of domestically produced energy. The E.O. directed EPA to review the Clean Power Plan and several other regulations for consistency with policies that the E.O. enumerates, and as soon as practicable, to "suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules." GHG rules for cars and trucks and for methane emissions from the oil and gas industry, in addition to the CPP, are subject to the executive order and are under review at EPA, as well as being challenged in the courts.

Congress could, of course, short-circuit the EPA and judicial processes, through legislation overturning or modifying any of these regulations. The threat of a filibuster, requiring 60 votes to proceed, might prevent Senate action, however.

An EPA rule that has been the subject of action in the 115th Congress is the National Ambient Air Quality Standard (NAAQS) for ozone, which EPA revised in October 2015. Under the revised NAAQS, EPA was to have designated areas that have not attained the standard in October 2017, setting in motion tighter emission requirements for a multitude of industrial, commercial, and mobile sources of pollution. On April 30, 2018, the agency took action, identifying 51 areas in 22 states and the District of Columbia as being in nonattainment of the revised standard.

On July 18, 2017, the House passed H.R. 806, which would have delayed designation of the nonattainment areas until 2025 and require future reviews of the NAAQS every 10 years instead of every 5, among other provisions. The House has also passed legislation to delay emission standards for brick kilns and wood heaters (both in H.R. 1917) and to exempt coal-refuse-fired electric generating units (EGUs) from certain emission standards that apply to other coal-fired EGUs (H.R. 1119). All of the House-passed bills await action in the Senate.

Contents

Figures

Contacts

Introduction

Congressional actions on air quality issues have been dominated since 2011 by efforts—particularly in the House—to change the Environmental Protection Agency's (EPA's) authority to promulgate or implement new emission control requirements.

Often under court order, the Obama Administration's EPA used authorities Congress gave EPA in the Clean Air Act amendments of 1970, 1977, and 1990 to address long-standing issues posed by emissions from various sources.

EPA's Greenhouse Gas Regulations

A continuing focus of congressional interest under the Clean Air Act (CAA) has been EPA regulatory actions to limit greenhouse gas (GHG) emissions using existing CAA authority. EPA actions have focused on six gases or groups of gases that multiple scientific studies have linked to climate change. Of the six gases, carbon dioxide (CO_2), produced by combustion of fossil fuels, is by far the most prevalent, accounting for about 80% of annual emissions of the combined group when measured as CO_2 equivalents.[1]

Members from both sides of the aisle have expressed concerns about EPA proceeding with GHG regulations that could have major economic impacts. Some have argued that the case for GHG controls has not been proven. Others maintain that EPA should delay taking such action until Congress more explicitly authorizes it.

Of the GHG emission standards promulgated by EPA, four sets of standards, which have had the broadest impacts, are discussed below: those for power plants, the oil and gas industry, trucks, and light-duty vehicles (the latter two topics are combined under the heading "Standards for Motor Vehicles"). EPA finalized GHG standards for power plants in August 2015; set GHG emission standards for oil and gas industry sources in June 2016; finalized a second round of GHG standards for trucks in August 2016; and completed a Mid-Term Evaluation (MTE) of the already promulgated 2022-2025 GHG standards for light-duty vehicles (cars and light trucks) in January 2017. Most of these rules are under review at EPA.

Standards for Motor Vehicles

Auto manufacturers and other stakeholders generally supported EPA's GHG standards for new motor vehicles during the Obama Administration, but controversy has surfaced in the last year. In May 2009, President Obama reached agreement with major U.S. and foreign auto manufacturers, the state of California (which has separate authority to set motor vehicle emission standards, if EPA grants a waiver), and other stakeholders regarding the substance of GHG emission and related fuel economy standards.[2] A second round of standards for cars and light trucks,

[1] The six are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). For a discussion of CO_2 equivalence, see CRS Report R43860, *Methane: An Introduction to Emission Sources and Reduction Strategies*.

[2] GHG emissions and fuel economy are directly related, because 94% of GHG emissions from light duty vehicles are the result of fuel combustion. The less fuel a vehicle uses, the lower will be its GHG emissions.

President Obama's announcement and related documents, including a Notice of Upcoming Joint Rulemaking to Establish Vehicle GHG Emissions and CAFE Standards, which appeared in the May 22, 2009, *Federal Register*, and both the draft and final emission standards can be found at https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-model-year-2012-2016-light-duty-vehicle.

promulgated in October 2012,[3] was also preceded by an agreement with the auto industry and key stakeholders. Under the agreements, EPA, the U.S. Department of Transportation (DOT, which has authority to set fuel economy standards), and California would establish "One National Program" for GHG emissions and fuel economy. The auto industry supported national standards, in part, to avoid having to meet standards on a state-by-state basis.

The second round of GHG standards for cars and light trucks is being phased in over model years (MY) 2017-2025. As part of the rulemaking, EPA made a commitment to conduct a Mid-Term Evaluation (MTE) for the MY2022-2025 standards by April 2018. The agency deemed an MTE appropriate given the long time frame at issue, with the final standards taking effect as long as 12 years after promulgation. Through the MTE, EPA was to determine whether the standards for MY2022-2025 were still appropriate given the latest available data and information, with the option of strengthening, weakening, or retaining the standards as promulgated.

On November 30, 2016, EPA released a proposed determination under the MTE stating that the MY2022-2025 standards remained appropriate and that a rulemaking to change them was not warranted. EPA based its findings on a Technical Support Document, a previously released Draft Technical Assessment Report (which was issued jointly by EPA, DOT, and the California Air Resources Board [CARB]), and input from the auto industry and other stakeholders. The proposed determination opened a public comment period that ran through December 30, 2016. On January 12, 2017, the EPA Administrator made a final determination to retain the MY2022-2025 standards as originally promulgated.

This action significantly accelerated the original timeline for the MTE (which called for a final determination by April 2018), and EPA announced it separately from any DOT (fuel economy) or California (GHG standard) process. (California subsequently reaffirmed its commitment to the 2022-2025 standards, on March 24, 2017.) Critics reacted to the accelerated timetable swiftly, vowing to work with the Trump Administration to revisit EPA's determination—citing a "rush to judgment" that they argued contradicted the objectives of the One National Program. Among the potential revisions suggested by critics has been better harmonization of the existing EPA/DOT/CARB standards, easing the MY2022-2025 standards, or eliminating them entirely.

The Administration reopened the MTE in mid-March 2017. On April 2, 2018, EPA released a revised final determination, stating that the MY2022-2025 standards are "not appropriate in light of the record before EPA and, therefore, should be revised." The notice states that the January 2017 final determination is based on "outdated information, and that more recent information suggests that the current standards may be too stringent."[4]

Thus, according to the revised final determination, EPA and NHTSA will initiate a new rulemaking to consider revised standards for MY2022-2025 vehicles. A new rulemaking normally would take a year or more and would be subject to judicial and congressional review upon completion. Until that new rulemaking is completed, the current standards remain in effect. (For additional information, see CRS In Focus IF10871, *Vehicle Fuel Economy and Greenhouse Gas Standards*.)

[3] For the rule and additional information, see https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-model-year-2017-and-later-light-duty-vehicle.

[4] U.S. Environmental Protection Agency, "Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles," Notice; Withdrawal, 83 *Federal Register* 16077, April 13, 2018.

EPA and DOT have also promulgated joint GHG emission and fuel economy standards for medium- and heavy-duty trucks,[5] which have generally been supported by the trucking industry and truck and engine manufacturers. This rule was finalized on August 16, 2016.[6] The new standards cover MY2018-2027 for certain trailers and model years MY2021-2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. According to EPA,

> The Phase 2 standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons, save vehicle owners fuel costs of about $170 billion, and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.[7]

In the Regulatory Impact Analysis accompanying the rule's promulgation, EPA projected the total cost of the Phase 2 standards at $29-$31 billion over the lifetime of MY2018-2029 trucks. The standards will increase the cost of a long haul tractor-trailer by as much as $13,500 in MY2027, according to the agency; but the buyer would recoup the investment in fuel-efficient technology in less than two years through fuel savings. In EPA's analysis, fuel consumption of 2027 model tractor-trailers will decline by 34% as a result of the rule.[8]

In general, the truck standards have been well-received. The American Trucking Associations, for example, described themselves as "cautiously optimistic" that the rule would achieve its targets: "We are pleased that our concerns such as adequate lead-time for technology development, national harmonization of standards, and flexibility for manufacturers have been heard and included in the final rule."[9] The Truck and Engine Manufacturers Association, while describing itself as "in the process of reviewing" the final rule, highlighted its work providing input to assure that EPA and DOT established a single national program, and concluded: "A vitally important outcome is that EPA and DOT have collaborated to issue a single final rule that includes a harmonized approach to greenhouse gas reductions and fuel efficiency improvements."[10]

Neither group filed petitions for judicial review of the rule. The only challengers were the Truck Trailer Manufacturers Association and the Racing Enthusiasts and Suppliers Coalition. Nevertheless, in April 2017, EPA took steps to review the rule. The agency asked the D.C. Circuit

---

[5] U.S. Environmental Protection Agency, U.S. Department of Transportation, "Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles; Final Rules," 76 *Federal Register* 57106, September 15, 2011.

[6] The rule appeared in the *Federal Register* on October 25, 2016: U.S. Environmental Protection Agency, U.S. Department of Transportation, "Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2; Final Rule," 81 *Federal Register* 73478, 73482, October 25, 2016. Fact sheets and links to the final rule and the Regulatory Impact Analysis are at https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-and-fuel-efficiency.

[7] U.S. Environmental Protection Agency, Office of Transportation and Air Quality, "EPA and NHTSA Adopt Standards to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond; Regulatory Announcement," August 2016, at https://nepis.epa.gov/Exe/ZyPDF.cgi/P100P7NL.PDF?Dockey=P100P7NL.PDF.

[8] Ibid.

[9] American Trucking Associations, "ATA Hopes Final Truck Efficiency Rule Will Achieve Emissions Goals," Press Release, August 16, 2016, at http://www.trucking.org/article/ATA-Hopes-Final-Truck-Efficiency-Rule-Will-Achieve-Emissions-Goals.

[10] Truck and Engine Manufacturers Association, "Truck and Engine Manufacturers Evaluating New Phase 2 Greenhouse Gas Regulations that EPA/DOT Announced Today," Press Release, August 16, 2016, at http://www.truckandenginemanufacturers.org/file.asp?A=Y&F=2016+08+16+Final++GHG+Phase+II+Press+Release.pdf&N=2016+08+16+Final++GHG+Phase+II+Press+Release.pdf&C=documents.

Court of Appeals to hold the legal challenge (*Truck Trailer Manufacturers Association v. EPA*) in abeyance while it conducts a review of the standards. The court granted EPA's request on May 8, 2017. On October 27, 2017, the D.C. Circuit Court granted the Truck Trailer Manufacturers Association's request to stay certain requirements for trailers pending the judicial review of the medium- and heavy-duty vehicles rule.[11] The rest of the rule remains in effect. The truck rule also established emission standards for vehicles manufactured from "glider kits" (truck bodies produced without a new engine, transmission, or rear axle). On November 16, 2017, EPA proposed to repeal the glider kit provisions.

Standards for Power Plants (Clean Power Plan)

Power plants are the largest individual anthropogenic sources of U.S. GHG emissions; as a group, they account for about 30% of the U.S. total. EPA finalized emission standards for new, existing, and modified fossil-fueled power plants in August 2015.[12] The standards would primarily affect coal-fired units, which emit twice the amount of carbon dioxide (CO_2) that would be emitted by an equivalent natural gas combined cycle (NGCC) electric generating unit.[13] The final rules have been hugely controversial: EPA received more than 4 million public comments as it considered the proposed standards for existing units, by far the most comments on a rulemaking in the agency's 46-year history.

The Clean Power Plan (CPP), which is the rule for existing units, would set state-specific goals for CO_2 emissions and emission rates from existing fossil-fueled power plants. EPA established different goals for each state based on three "building blocks": improved efficiency at coal-fired power plants; substitution of NGCC generation for coal-fired power; and zero-emission power generation from increased renewable energy, such as wind or solar. Two sets of goals were established by the rule: an interim set, which would apply to the average emissions rate in a state in the 2022-2029 time period; and a final state-specific average emission rate for the years 2030 and beyond. States can reach these goals through a wide array of options, including heavier reliance on renewable or nuclear power; reductions in power demand through efficiency programs; substituting natural gas-fired for coal-fired units; the use of tradeable allowances; and combining efforts with other states. In general, states that currently rely on coal-fired power to a great extent would be allowed higher emission rates, but would have to reduce average emissions by a greater percentage than other states.[14] The first step in implementation was to be the submission of implementation plans by the states in September 2016.

A separate rule for new power plants, the New Source Performance Standards (NSPS), would affect fewer plants, but it too is controversial, because of the technology it assumed could be used to reduce emissions at new coal-fired units. The NSPS would rely in part on carbon capture and sequestration (CCS) technology to reduce emissions by about 20% compared to the emissions of a state-of-the-art coal-fired plant without CCS. Critics complained that CCS is a costly and unproven technology, and because of this, the NSPS would effectively prohibit the construction of new coal-fired plants. They noted that no operating commercial U.S. power plant was

[11] Order, Truck Trailer Manufacturers Ass'n v. EPA, No. 16-1430 (October 27, 2017).

[12] Links to the Clean Power Plan, as well as extensive background materials, can be found on EPA's website at https://19january2017snapshot.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants_.html.

[13] See CRS Report R44090, *Life-Cycle Greenhouse Gas Assessment of Coal and Natural Gas in the Power Sector*.

[14] For a more detailed description of the CPP requirements, see CRS Report R44145, *EPA's Clean Power Plan: Highlights of the Final Rule,* and CRS Report R44341, *EPA's Clean Power Plan for Existing Power Plants: Frequently Asked Questions*.

capturing and storing CO_2 as of the date the rule was promulgated. (The first commercial CCS facility in the United States, the Petra Nova project at the W.A. Parish Generating Station in Texas, came on line in 2016.)

In promulgating the rule, EPA contended that the components of CCS (separation of CO_2 from emissions, pipelines to transport the CO_2 to storage sites, and equipment to pump the CO_2 underground) have been successfully operated for decades, even if no power plant had combined all of them in an operating unit. At the same time, EPA maintained that the NSPS rule "will result in negligible ... costs," because, given the low cost and abundance of natural gas, new fossil-fueled capacity will rely on natural gas (NGCC) technology for the immediate future.[15] NGCC units, which emit only half the CO_2 of uncontrolled coal-fired plants, can attain the NSPS without needing to capture any of their carbon emissions.

Following publication of the NSPS and the Clean Power Plan in the October 23, 2015, *Federal Register*, the 114th Congress considered and passed joint resolutions of disapproval of both rules in December 2015 (S.J.Res. 23 and S.J.Res. 24) under the Congressional Review Act (CRA). The CRA resolutions would have revoked the rules and prevented EPA from issuing substantially similar rules unless authorized by a subsequently enacted law. President Obama vetoed both of the joint resolutions.

The CRA resolutions were the latest in a long line of attempts by Members, primarily in the House, to limit EPA's authority to implement GHG emission requirements for power plants (referred to as electric generating units, or EGUs, in EPA parlance). For example, in June 2015, the House passed H.R. 2042, which would have delayed the compliance date of GHG emission standards for existing EGUs (including the date by which states must submit implementation plans) until after the completion of judicial review of any aspect of the rule, and would have allowed a state to opt out of compliance if the governor determined that the rule would have significant adverse effects on rate-payers or on the reliability of the state's electricity system.

Legislation was also considered in the 113th and 112th Congresses. In the 113th, the House passed H.R. 3826, which would have prohibited EPA from promulgating or implementing GHG emission standards for fossil-fueled power plants until at least six power plants representative of the operating characteristics of electric generation units at different locations across the United States had demonstrated compliance with proposed emission limits for a continuous period of 12 months on a commercial basis. Projects demonstrating the feasibility of carbon capture and storage that received government financial assistance could not have been used in setting such standards, and the standards would not have taken effect unless Congress enacted new legislation setting an effective date. The House incorporated the language of H.R. 3826 in H.R. 2, which also passed the House. The House also passed three bills in the 112th Congress. The Senate did not take up any of the House bills, however.

[15] U.S. Environmental Protection Agency, Regulatory Impact Analysis for the Final Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, August 2015, pp. ES-4 and ES-5, at https://nepis.epa.gov/Exe/ZyNET.exe/P100MWLE.txt?ZyActionD=ZyDocument&Client=EPA&Index=2011%20Thru%202015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C11THRU15%5CTXT%5C00000016%5CP100MWLE.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1.

Another frequently discussed option to prevent EPA action on GHG emissions would be an appropriations rider prohibiting EPA from finalizing or implementing the EGU standards. On July 14, 2016, the House passed H.R. 5538, the Department of the Interior, Environment, and Related Agencies Appropriations Act, 2017. Section 431 of the bill would have prevented the use of funds appropriated under the bill to implement or enforce both the NSPS and the Clean Power Plan. The House rider was not included in the continuing resolutions (P.L. 114-223 and P.L. 114-254) that funded EPA through April 2017 or in the Consolidated Appropriations Act that funded EPA through the remainder of the fiscal year (P.L. 115-31).

Action on the CPP was a frequent topic in articles discussing the 115th Congress's priorities at the beginning of 2017, but the courts and EPA have turned out to be the venues for action. Implementation of the CPP was stayed by the Supreme Court in February 2016, pending the completion of judicial review. Challenges to the rule were filed with the U.S. Court of Appeals for the D.C. Circuit by more than 100 parties, including 27 states. These challenges have been consolidated into a single case, *West Virginia v. EPA*. The D.C. Circuit heard oral argument in the case in September 2016; as of this writing, the court has not issued a decision. (For a discussion of the legal issues, see CRS Report R44480, *Clean Power Plan: Legal Background and Pending Litigation in West Virginia v. EPA*.) The NSPS have also been challenged (*North Dakota v. EPA*). EPA requested (and the court granted) a pause in the litigation to give it time to conduct a review.

Under the Trump Administration, EPA now appears the more likely venue to modify the CPP and the NSPS. On March 28, 2017, President Trump signed Executive Order 13783, to require the review of regulations and policies that burden the development or use of domestically produced energy. The E.O. directed EPA to review the Clean Power Plan, the NSPS, and other regulations for consistency with policies that the E.O. enumerates, and as soon as practicable, to "suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules." EPA proposed repeal of the CPP on October 16, 2017,[16] and has issued an Advance Notice of Proposed Rulemaking to solicit information on systems of emission reduction that it might require in a future rule to replace it.[17] Like judicial review, this route could be time-consuming. Repealing or replacing the rule will require the agency to follow the administrative steps involved in proposing and promulgating a new rule. Following promulgation, the repeal action and any replacement rule will themselves be subject to judicial review. A large group of stakeholders, including some states, will likely oppose major changes to the CPP.

The EPA and judicial processes could be short-circuited by Congress, through legislation overturning or modifying the CPP or NSPS. The threat of a filibuster, requiring 60 votes to proceed, might prevent Senate action, however.

Standards for the Oil and Gas Industry

On June 3, 2016, EPA promulgated a suite of New Source Performance Standards (NSPS) under Section 111 of the Clean Air Act to set controls for the first time on methane emissions from sources in the crude oil and natural gas production sector and the natural gas transmission and

[16] U.S. Environmental Protection Agency, *Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 82 *Federal Register* 48,035, October 16, 2017.

[17] U.S. Environmental Protection Agency, *State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units*, Advance Notice of Proposed Rulemaking, 82 *Federal Register*, 61507, December 28, 2017. A link to the document and an EPA Fact Sheet can be found at https://www.epa.gov/stationary-sources-air-pollution/electric-utility-generating-units-advance-notice-proposed.

storage sector.[18] The rule builds on the agency's 2012 NSPS for volatile organic compound (VOC) emissions[19] and would extend controls for methane and VOC emissions beyond the existing requirements to include new or modified hydraulically fractured oil wells, pneumatic pumps, compressor stations, and leak detection and repair at well sites, gathering and boosting stations, and processing plants. The Administration stated that the rule was a key component under President Obama's "Climate Action Plan," and that the plan's *Strategy to Reduce Methane Emissions*[20] was needed to set the Administration on track to achieve its goal to cut methane emissions from the oil and gas sector by 40%-45% from 2012 levels by 2025, and to reduce all domestic greenhouse gas emissions by 26%-28% from 2005 levels by 2025.

Methane—the key constituent of natural gas—is a potent greenhouse gas with a global warming potential (GWP) more than 25 times greater than that of carbon dioxide. According to EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks*, methane is the second most prevalent GHG emitted in the United States from human activities, and nearly 30% of those emissions come from oil production and the production, transmission, and distribution of natural gas.[21]

EPA projected that the standards for new, reconstructed, and modified sources will reduce methane emissions by 510,000 tons in 2025, the equivalent of reducing 11 million metric tons of carbon dioxide.[22] In conjunction with the proposal, EPA conducted a Regulatory Impact Analysis (RIA) that looked at the illustrative benefits and costs of the proposed NSPS: in 2025, EPA estimated the rule will have costs of $530 million and climate benefits of $690 million (in constant 2012 dollars). The rule will also reduce emissions of VOCs and hazardous air pollutants (HAPs). EPA was not able to quantify the benefits of the VOC/HAP reductions.

The methane rule is among the rules subject to review under E.O. 13783. Section 7 of the E.O. directed EPA to review the rule for consistency with policies that the E.O. enumerates, and, if appropriate, as soon as practicable, to "suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules." EPA has begun a review of the rule and has proposed a two-year stay of the rule during the review process. The agency also issued a 90-day administrative stay of portions of the rule on June 5, 2017. The U.S. Court of Appeals for the D.C. Circuit vacated the 90-day stay on July 3, 2017, however, concluding that EPA did not have the authority to issue it.[23] As a result, the rule is in effect while EPA conducts its review.

[18] U.S. Environmental Protection Agency, "Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources; Final Rule," 81 *Federal Register* 35824, June 3, 2016.

[19] U.S. Environmental Protection Agency, "Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews; Final Rule," 77 *Federal Register* 49489, August 16, 2012.

[20] For more information, see Executive Office of the President (EOP), *The President's Climate Action Plan*, June 2013; EOP, *Climate Action Plan: Strategy to Reduce Methane Emissions*, March 2014; EOP, "Fact Sheet: Administration Takes Steps Forward on Climate Action Plan by Announcing Actions to Cut Methane Emissions," January 14, 2015; and CRS Report R43860, *Methane: An Introduction to Emission Sources and Reduction Strategies*.

[21] GWP as calculated over 100 years. U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013*, Washington, DC, EPA 430-R-15-004, April 15, 2015.

[22] In 2014, the United States had 6.87 billion metric tons of CO_2-equivalent emissions.

[23] Clean Air Council v. Pruitt, No. 17-1145, 2017 U.S. App. LEXIS 11803, at *28 (D.C. Cir. July 3, 2017).

Air Quality Standards

Background

Air quality has improved substantially since the passage of the Clean Air Act in 1970. Annual emissions of the six air pollutants for which EPA has set national ambient air quality standards (NAAQS)—ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, and lead—have declined by more than 70%, despite major increases in population, motor vehicle miles traveled, and economic activity.[24] Nevertheless, the goal of clean air continues to elude many areas, in part because scientific understanding of the health effects of air pollution has caused EPA to tighten standards for most of these pollutants. Congress anticipated that the understanding of air pollution's effects on public health and welfare would change with time, and it required, in Section 109(d) of the act, that EPA review the NAAQS at five-year intervals and revise them, as appropriate.

The most widespread air quality problems involve ozone and fine particles. A 2013 study by researchers at the Massachusetts Institute of Technology concluded that emissions of particulate matter and ozone caused 210,000 premature deaths in the United States in 2005.[25] Many other studies have found links between air pollution, illness, and premature mortality, as well. EPA summarizes these studies in what are called Integrated Science Assessments and Risk Analyses when it reviews a NAAQS, and, with input from the states, it identifies areas where concentrations of pollution exceed the NAAQS following its promulgation. As of December 31, 2017, 107 million people lived in areas classified as "nonattainment" for the ozone NAAQS; 23 million lived in areas that were nonattainment for the fine particle ($PM_{2.5}$) NAAQS.[26]

Figure 1 identifies areas that had not attained one or more of the NAAQS as of December 2017.

2015 Revision of the Ozone NAAQS

Since 2008, review of the NAAQS for ozone has sparked recurrent controversy. A review completed in 2008 made the standards more stringent, but for the first time ever, the Administrator chose a health-based standard outside the range recommended by the independent scientific review committee established by the Clean Air Act to review the agency's work performed in the NAAQS-setting process. EPA suspended implementation of the 2008 standard in September 2009 in order to consider further strengthening it, and proposed a more stringent standard in January 2010.[27]

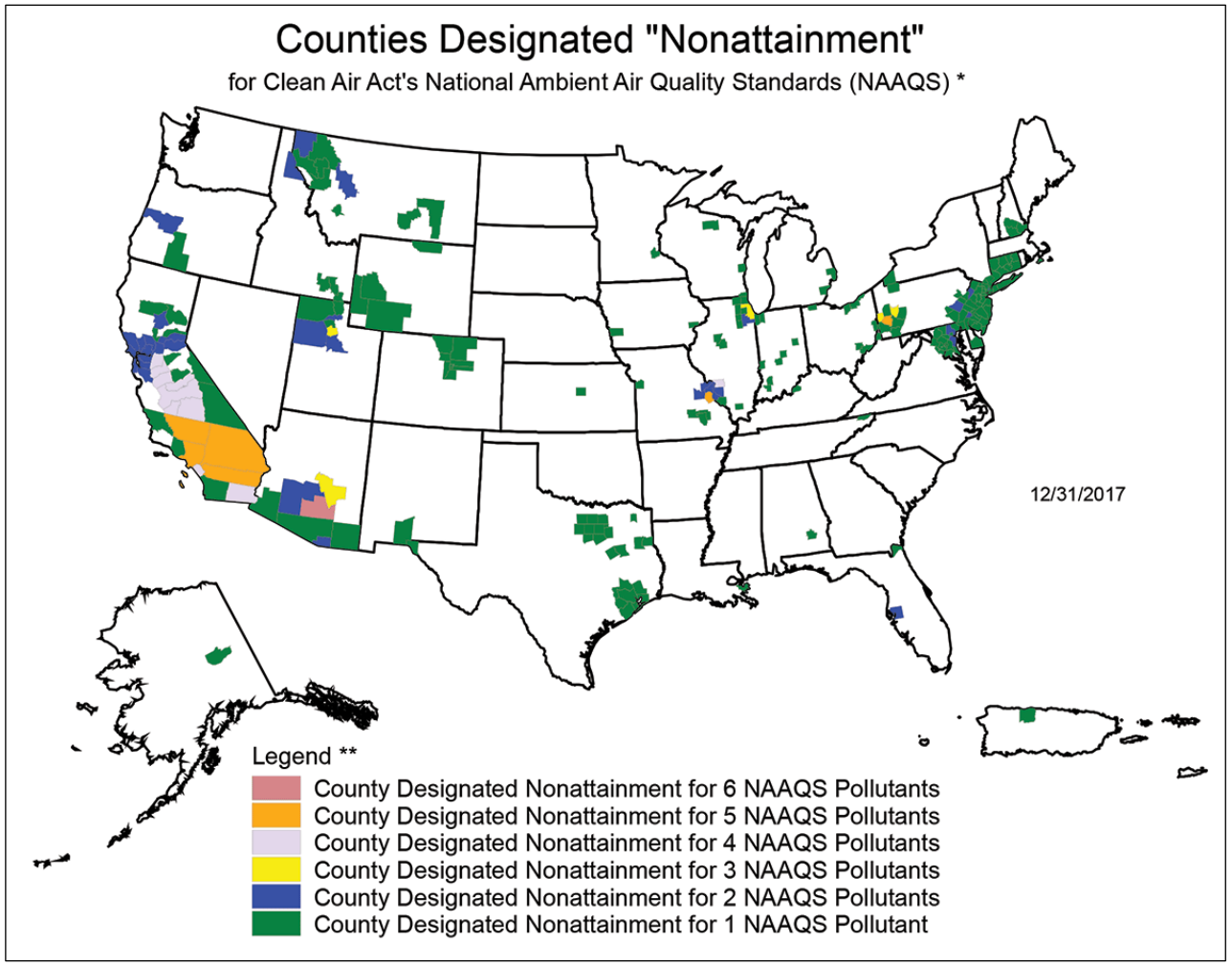
[24] For additional data on air pollution trends, see EPA's air trends website, at https://gispub.epa.gov/air/trendsreport/2016/.

[25] Fabio Caiazzo, et al., "Air Pollution and Early Deaths in the United States. Part I: Quantifying the Impact of Major Sectors in 2005," *Atmospheric Environment*, November 2013, pp. 198-208.

[26] Data are from the U.S. EPA "Green Book," at https://www3.epa.gov/airquality/greenbook/popexp.html.

[27] U.S. Environmental Protection Agency, "National Ambient Air Quality Standards for Ozone; Proposed Rule," 75 *Federal Register* 2938, January 19, 2010.

Figure 1. Counties Designated Nonattainment for One or More NAAQS



Source: U.S. EPA Green Book, https://www3.epa.gov/airquality/greenbook/mapnpoll.pdf. Map shows areas designated nonattainment as of December 31, 2017. Partial counties, those with part of the county designated nonattainment and part attainment, are shown as full counties on the map. In addition to the areas shown, two counties in Guam are designated nonattainment for the SO_2 NAAQS.

On September 2, 2011, however, with a final rule in the last steps of interagency review at the Office of Management and Budget (OMB), the White House announced that President Obama had requested that the EPA Administrator withdraw the all-but-final (more stringent) ozone standards from further consideration at that time. The President's statement noted that "work is already underway to update a 2006 review of the science that will result in the reconsideration of the ozone standard in 2013," and stated that he did not "support asking state and local governments to begin implementing a new standard that will soon be reconsidered."[28] EPA then proceeded with the required five-year review of the 2008 standard, as the President indicated it would. The agency missed the statutory deadline for completion of the review in March 2013, and a federal district court subsequently ordered the agency to release a final decision by October 1, 2015. The final standards were released on October 1, 2015, and appeared in the *Federal Register*, October 26, 2015.[29] The standards have been challenged in court; however, the court has paused the litigation while EPA conducts a review of the standards.[30]

The 2015 revision sets more stringent standards, lowering both the primary (health-based) and secondary (welfare-based) standards[31] from 75 parts per billion (ppb)—the level set in 2008—to 70 ppb. Using the latest data available in 2015, EPA identified 213 counties in 32 states outside California that had monitors showing nonattainment with the new standard.[32] These are not the data EPA is using to designate nonattainment areas under the standard: EPA's final designation decisions, announced May 1, 2018, are generally using data for 2014-2016, and have identified 200 counties and 2 tribal areas in 22 states and the District of Columbia as nonattainment. But the earlier data served as the basis of EPA's analysis of the rule's potential effects. That analysis showed all but 14 of the nonattainment counties reaching attainment with a 70 ppb standard by 2025 as a result of already promulgated standards for power plants, motor vehicles, gasoline, and other emission sources.[33]

The agency's 2015 estimates of the cost of attaining a revised ozone NAAQS were substantially lower than many other estimates, including the agency's own estimate when it proposed a 70 ppb NAAQS in 2010. EPA estimated the cost of meeting a 70 ppb standard in all states except California at $1.4 billion annually in 2025. Because most areas in California would have until the 2030s to reach attainment,[34] EPA provided separate cost estimates for California ($0.8 billion in 2038). These cost estimates are substantially less than widely circulated estimates from the National Association of Manufacturers (NAM) and other industry sources. For a discussion of the differences, see CRS Report R43092, *Implementing EPA's 2015 Ozone Air Quality Standards*.

---

[28] The White House, Office of the Press Secretary, "Statement by the President on the Ozone National Ambient Air Quality Standards," September 2, 2011. For discussion of the 2010-2011 reconsideration, see CRS Report R42895, *Clean Air Issues in the 113th Congress: An Overview*.

[29] 80 *Federal Register* 65292. For links to the rule, as well as EPA's fact sheets and technical documents, see https://www.epa.gov/ozone-pollution/2015-national-ambient-air-quality-standards-naaqs-ozone.

[30] Murray Energy Corp. v. EPA, No. 15-1385 (D.C. Cir. Oct. 29, 2015).

[31] "Welfare" is defined by the statute to include effects on soils, water, crops, vegetation, man-made materials, weather, visibility, and climate, among other variables.

[32] See U.S. EPA, "County-Level Design Values for the 2015 Ozone Standards Based on Monitored Air Quality Data from 2012-2014," at https://www.epa.gov/sites/production/files/2016-03/documents/20151001datatable20122014.pdf.

An additional 28 counties in California also have monitors showing nonattainment. EPA's analysis considered California separately, since most of the state's nonattainment areas will have until the late 2030s to reach attainment of the revised standard.

[33] See map at https://ozoneairqualitystandards.epa.gov/OAR_OAQPS/OzoneSliderApp/index.html#.

[34] Under the statute, areas with more severe ozone pollution are given additional time to reach attainment of the standard, and must impose additional emission controls.

Members of Congress have shown particular interest in whether the expected benefits of the new ozone NAAQS will justify their costs. Both nationwide and in California, the agency said it expects the benefits of attainment to exceed the costs, but there is controversy over the methods used to estimate both.

The agency prepares cost and benefit estimates at the time it proposes or promulgates a NAAQS—for information purposes and to comply with Executive Order 12866, under which the OMB requires cost-benefit analysis of economically significant rules. As the Clean Air Act is currently written, however, the agency is prohibited from weighing costs against benefits in setting the standards. The Clean Air Act's Section 109 has been interpreted to prohibit consideration of costs in the setting of NAAQS since the provision was added to the act in 1970. In 2001, this interpretation was affirmed in a unanimous Supreme Court decision, *Whitman v. American Trucking Associations*.[35] Section 109 simply states that the EPA Administrator is to set the primary standard at a level requisite to protect public health, allowing an adequate margin of safety. The Court pointed to numerous other CAA sections where Congress had explicitly allowed consideration of economic factors, concluding that if Congress had intended to allow such factors in the setting of a primary NAAQS, it would have been more forthright—particularly given the centrality of the NAAQS concept to the CAA's regulatory scheme. The court concluded that Section 109(b)(1) "unambiguously bars cost considerations from the NAAQS-setting process."[36]

This is not to say that cost considerations play no role in Clean Air Act decisions, including in *implementation* of a NAAQS. Cost-effectiveness is considered extensively by EPA and the states in selecting emission control options to meet the standards. But in deciding what level of ambient pollution poses a health threat, the statute bars consideration of costs.

Congress has taken a keen interest in the results of the 2015 ozone review. Fifteen bills were introduced in the 114th Congress to modify EPA's authority or prohibit or delay the agency's proposed strengthening of the ozone NAAQS. Two of them, H.R. 4775 and H.R. 5538, passed the House, but neither bill was enacted. In the 115th Congress, H.R. 806 and S. 263 would, among other provisions, delay designation of nonattainment areas under the 2015 ozone standard until 2025 and submission of State Implementation Plans until 2026, require future NAAQS reviews every 10 years instead of every 5, and allow consideration of technological feasibility in the setting of some primary (health-based) standards. H.R. 806 is identical to one of the bills that passed the House in the 114th Congress, H.R. 4775. The House passed H.R. 806 on July 18, 2017. In addition, the House has passed H.R. 3354; Section 432 of the bill would delay implementation of the 2015 ozone NAAQS until the mid-2020s.

For additional information on revision of the ozone NAAQS, see CRS Report R43092, *Implementing EPA's 2015 Ozone Air Quality Standards*.

Other Issues

At the outset of the 115th Congress, with a Republican President and Republican majorities in both the House and Senate, much was made of the opportunity presented to override EPA regulatory actions from the final days of the Obama Administration through use of the Congressional Review Act (CRA). The CRA provides expedited procedures that can be used during a limited period of time after promulgation of an agency rule to bring resolutions

[35] 531 U.S. 457 (2001).

[36] Ibid. at 471.

disapproving regulations to the Senate floor, where they cannot be amended or filibustered. In doing so, the CRA can remove commonly used obstacles to Senate action.

A December 15, 2016, CRS analysis concluded that joint resolutions disapproving regulations promulgated and received in Congress on or after June 13, 2016, were eligible to use these fast-track Senate procedures during the first 60 legislative days of the 115th Congress. A list of major rules promulgated on or after June 13 included six Clean Air Act rules promulgated by EPA: the Renewable Fuel Standard (RFS) Program Standards for 2017 and Biomass-Based Diesel Volume for 2018; Formaldehyde Emission Standards for Composite Wood Products; the Cross-State Air Pollution (CSAPR) Update Rule; the Phase 2 Medium- and Heavy-Duty Truck GHG Emission Rule; New Source Performance Standards for Methane Emissions from Municipal Solid Waste (MSW) Landfills; and Emission Guidelines for Existing MSW Landfills.[37] The CRA's fast track authority expired on May 11, 2017, without any of these rules being disapproved.

These and other rules—those promulgated and received in Congress before June 13, 2016—could still be addressed by Congress through targeted legislation or through the appropriations process. In the 115th Congress, the House Energy and Commerce Committee reported three bills that would overturn or delay specific EPA air regulations: H.R. 1917, the BRICK Act, which would delay implementation of hazardous air pollutant emission standards affecting brick and ceramic manufacturers until all legal challenges to the rules are settled; H.R. 1119, the SENSE Act, which would ease emission limits for electric generating units powered by coal refuse; and H.R. 453, which would delay the implementation of Phase 2 emission standards for wood heaters to 2023. The House passed H.R. 1119 and a bill that combined the other two on March 8, 2018.

These and other bills would address criticism by industry groups and others that EPA under previous Administrations has overreached its authority. Environmental and public health groups, on the other hand, generally believe that the agency has not overreached in setting Clean Air Act standards. These groups often maintain that the agency's standards are not stringent enough, do not meet statutory requirements, or disregard the findings of the agency's science advisors. The result is that EPA Clean Air Act standards generally are challenged in court both by industry and by environmental groups, with various states supporting each side. The resulting court decisions often set EPA's agenda as much as Congress or the Administration.

The courts will continue to play an important role, and the 115th Congress and EPA itself may act to make important revisions to Clean Air Act regulations. In short, the CAA's regulatory structure continues in a state of uncertainty in 2018, with possible changes emanating from the executive, legislative, and judicial branches.[38]

Author Contact Information

(name redacted)
Specialist in Environmental Policy
[redacted]@crs.loc.gov , 7-....

[37] See (name redacted) et al., *"Major" Obama Administration Rules Potentially Eligible to Be Overturned Under the Congressional Review Act in the 115th Congress*," CRS General Distribution Memorandum, January 31, 2017.

[38] For additional discussion of EPA's regulatory actions under all the environmental statutes, see CRS Report R41561, *EPA Regulations: Too Much, Too Little, or On Track?*