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SUMMARY

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Clean Air Act Issues in the 117th Congress

Congress may examine wide-ranging air pollution issues as it deliberates legislation and conducts oversight of the U.S. Environmental Protection Agency (EPA). Oversight of EPA's air pollution work has historically received significant attention in Congress. Such oversight has often examined whether EPA's programs meet the statutory objective to protect human health and the environment from air pollution, how evolving scientific understanding informs Clean Air Act (CAA) decisionmaking, and the degree to which potential tradeoffs exist between public health benefits and compliance costs. Some Members of Congress have also raised concerns about potential disproportionate impacts on communities located near sources of emissions, and related concerns about whether CAA standards are protective of vulnerable individuals (e.g., children, pregnant women, the elderly, and persons with preexisting health conditions).

Congress may also consider legislation to address air pollution issues and EPA's CAA authority. Recent Administrations have interpreted CAA authority in different, and sometimes conflicting, ways. Historically, many of EPA's CAA regulations have been challenged in court, both by industry and by public health and environmental groups, with various states supporting each side.

Some prominent air topics of potential interest in the 117th Congress are air quality standards, wildfire smoke, hazardous air pollutant standards, and permits. Related issues, such as greenhouse gas (GHG) emissions or other climate change topics relevant to the CAA, are not addressed herein.

Air Quality Standards

The CAA requires EPA to review national ambient air quality standards (NAAQS) for common pollutants every five years. The NAAQS review process has evolved over time. In recent years, EPA restructured the NAAQS review process by compressing the schedule and disbanding a pollutant-specific scientific review panel that has historically advised agency staff during their reviews. In December 2020, EPA completed its particulate matter and ozone reviews, and finalized rules to retain the current PM and ozone standards. While some supported EPA's efforts to streamline NAAQS reviews, others voiced concerns that procedural changes compromised the agency's review of the latest science. Congress may consider whether EPA's review process meets the CAA objectives to review in a timely manner the NAAQS and the science upon which they are based.

Wildfire Smoke

Wildfire smoke can temporarily increase ambient levels of particulate matter and other air pollutants. These increases may be measured by the national network of stationary air monitors. Given the need for real-time air quality information during wildfire events, monitoring strategies may include some combination of stationary monitors, mobile sensors, or computer modeling to estimate pollution levels. Congress may consider which monitoring strategies effectively inform smoke management and public health responses. Congress may also examine how CAA requirements factor into forest management and fire prevention strategies.

Hazardous Air Pollutants

The CAA requires EPA to set and periodically review standards limiting hazardous air pollutants (HAPs). Congress may conduct oversight of EPA's statutorily mandated reviews of regulations to limit HAPs such as ethylene oxide. Another CAA issue involves the potential tension between incentivizing pollution prevention and limiting cumulative emissions. Under a 2020 EPA rulemaking, major sources of HAPs can reclassify as "area sources," which are typically subject to lesser controls, after meeting conditions to limit emissions below major source thresholds. Congress may consider the health and environmental implications of this rule, including how potential HAP increases may contribute to cumulative exposures in communities with relatively high environmental burdens.

CAA Permitting

Congress may conduct oversight of New Source Review (NSR), a CAA preconstruction permitting program intended to ensure that new and modified stationary sources of air pollution do not significantly degrade air quality. The NSR program generally requires emission limits based on modern pollution controls when new facilities are built or when existing facilities make a change that increases emissions above specified thresholds. Historically, NSR applicability determinations have been contentious and extensively litigated. Congress may consider legislative proposals addressing questions about NSR applicability and enforcement.

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Introduction

The 117th Congress is likely to face wide-ranging air pollution issues as it conducts oversight and deliberates on legislation related to air quality standards, smoke from wildfires, air quality monitoring, air toxics, and permitting requirements. Congress may factor multiple issues into these deliberations, including environmental and public health objectives, economic impacts, and how the U.S. Environmental Protection Agency (EPA) accounts for *distributional effects*[1] in benefit-cost analysis for Clean Air Act (CAA) rulemakings.

Diverse sources of air emissions—including power plants, industrial facilities, small commercial facilities, motor vehicles, and wildfires—contribute to the various gaseous and particle pollutants in ambient, or outdoor, air, which is the purview of the Clean Air Act. Air quality has improved substantially since Congress enacted the CAA in 1970. Annual emissions of the six "criteria" air pollutants for which the EPA has set air quality standards—ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, and lead—have since declined by more than 70%, despite increases in population, motor vehicle miles traveled, and economic activity.[2]

At the same time, EPA has tightened air quality standards as the scientific understanding of the health effects of air pollution has evolved. The goal of clean air continues to elude many areas.[3] For example, approximately 122 million people live in 50 areas of the United States that do not meet the ozone standards issued by EPA in 2015.[4] Additionally, some Members of Congress have expressed concern about wildfire smoke and air quality, including potential interactions with the Coronavirus Disease 2019 (COVID-19).[5] Exposure to smoke can increase the risk and severity of respiratory infections such as COVID-19.[6]

This report begins with background about the CAA framework, including federal and state roles, and summarizes congressional actions related to the CAA in the 116th and earlier Congresses. The report also discusses some prominent air topics of potential interest in the 117th Congress: EPA's review of particulate matter and ozone standards; management of wildfire smoke; EPA's review of hazardous air pollutant standards; classification of hazardous air pollutant sources; and revisions to applicability determinations under the preconstruction permitting program, known as New Source Review (NSR). This report does not discuss greenhouse gas (GHG) emissions or other climate change topics relevant to the CAA, which are addressed in other CRS reports.[7]

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[1] The Office of Management and Budget refers to *distributional effects* as "the impact of a regulatory action across the population and economy, divided up in various ways (e.g., income groups, race, sex, industrial sector, geography)." See OMB Circular A-4, "Regulatory Analysis," September 17, 2003, p. 14.

[2] EPA, *Our Nation's Air*, https://gispub.epa.gov/air/trendsreport/2020/#home.

[3] For example, see EPA's Green Book for a list of areas that do not meet one or more of the NAAQS. EPA, *Green Book National Area and County-Level Multi-Pollutant Information*, https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information.

[4] Data reported by EPA as of December 31, 2020, based on 2010 population. EPA, *8-Hour Ozone (2015) Nonattainment Area Summary*, December 31, 2020, https://www3.epa.gov/airquality/greenbook/jnsum.html.

[5] Letter from Jeffrey A. Merkley, U.S. Senator, et al. to Alex M. Azar II, Secretary, U.S. Department of Health and Human Services, September 14, 2020.

[6] Centers for Disease Control and Prevention, *FAQs for Wildland Firefighters*, https://www.cdc.gov/coronavirus/2019-ncov/community/wildland-firefighters-faq.html.

[7] For example, see (1) CRS In Focus IF11696, *Aviation and Climate Change*, by Richard K. Lattanzio; (2) CRS In Focus IF10752, *Methane Emissions: A Primer*, by Richard K. Lattanzio; (3) CRS In Focus IF10871, *Vehicle Fuel Economy and Greenhouse Gas Standards*, by Richard K. Lattanzio, Linda Tsang, and Bill Canis; (4) CRS Report R46568, *EPA's Affordable Clean Energy Rule: In Brief*, coordinated by Kate C. Shouse; and (5) CRS In Focus

Overview of the Clean Air Act

The CAA, codified as 42 U.S.C. 7401 et seq., seeks to protect human health and the environment from emissions that pollute ambient, or outdoor, air.[8] It establishes roles for federal and state agencies and "expressly delegates a large number and variety of regulatory and policymaking functions."[9] For example, the act requires EPA to establish minimum national standards for air quality, known as national ambient air quality standards (NAAQS). States have primary responsibility for assuring compliance with these standards, and for establishing and incorporating procedures in state implementation plans to attain and maintain the NAAQS. The CAA also requires that areas not meeting the standards, referred to as "nonattainment areas," implement specified air pollution control measures.

Under the CAA, Congress mandated that EPA establish two types of NAAQS for each criteria pollutant—a primary NAAQS, which must protect public health with an "adequate margin of safety," and a secondary NAAQS, which must "protect public welfare from any known or anticipated adverse effects."[10] Public welfare includes damage to crops, vegetation, property, building materials, and climate.[11]

The CAA also requires EPA to review the NAAQS and the science upon which they are based every five years and then revise the NAAQS if necessary. In addition, the CAA requires EPA to appoint an independent scientific review committee composed of seven members, which has become the Clean Air Scientific Advisory Committee (CASAC). The act directs CASAC to review the NAAQS every five years and recommend to the EPA Administrator "any new national ambient air quality standards and revisions … as may be appropriate."[12] In practice, CASAC has evaluated the agency's work during NAAQS-setting and NAAQS-revision, rather than conducting its own independent review of the standards. Beyond these CAA requirements, procedural aspects of the NAAQS review are generally at the discretion of the EPA Administrator.

The CAA also includes provisions related to ambient air quality monitoring. The act requires EPA to develop standards for the design and operation of an air quality monitoring network. It also requires state implementation plans to "provide for establishment and operation" of the monitors.[13] States, local agencies, and tribes typically design and operate air quality monitoring networks based on federal standards.

The CAA contains air pollution provisions beyond the NAAQS requirements. The act establishes federal standards for certain new and modified stationary sources of air pollution, for mobile sources of air pollution and their fuels, and for sources of 187 hazardous air pollutants. It establishes a cap-and-trade program for the emissions that contribute to acid rain. It also addresses protection of the stratospheric ozone layer.

IF11541, *Hydrofluorocarbons (HFCs): EPA and State Actions*, by Kate C. Shouse.

[8] For example, one of the stated purposes of Title I of the CAA is to "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population" (42 U.S.C. §7401(b)(1)).

[9] Michael R. Barr, "Introduction to the Clean Air Act," in *The Clean Air Act Handbook*, ed. Julie R. Domike and Alec C. Zacaroli, 4th ed. (Chicago: American Bar Association, 2016).

[10] 42 U.S.C. §7409(b).

[11] 42 U.S.C. §7602(h).

[12] 42 U.S.C. §7409(d)(2).

[13] 42 U.S.C. §§7410(a)(2)(B) and 7619.

In addition, the CAA establishes two types of permits. One is New Source Review (NSR), a preconstruction permit issued before construction of a new facility or major modification to an existing facility. The NSR program generally requires emission limits based on modern pollution controls when new facilities are built or when existing facilities make a change that increases emissions above specified thresholds. Historically, NSR applicability determinations have been contentious and extensively litigated.[14]

The second type of CAA permit is an operating permit required under Title V. The operating permit is federally enforceable and specifies each source's emission limits, compliance schedule, reporting requirements, and other conditions. States typically administer operating permit programs and issue the permits. Sources subject to the permit requirements include major sources that emit or have the potential to emit 100 tons per year of any regulated pollutant, as well as sources that emit or have potential to emit lesser specified amounts of hazardous air pollutants.[15]

For more information about the CAA's major requirements, see CRS Report RL30853, *Clean Air Act: A Summary of the Act and Its Major Requirements*, by Kate C. Shouse and Richard K. Lattanzio.

Air Pollution Issues in Prior Sessions of Congress

Oversight of EPA's air pollution work has historically received significant attention from Congress. Such oversight has often examined whether EPA's programs meet the statutory objective to protect human health and the environment from air pollution, whether EPA regulatory efforts are consistent with, or exceed, the agency's statutory authority, how evolving scientific understanding informs CAA decisionmaking, and potential tradeoffs between public health benefits and compliance costs. Some Members of Congress have also raised concerns about distributional impacts—for example, whether CAA permitting accounts for potential disproportionate impacts on air quality in communities located closer to sources of emissions, and relatedly, whether CAA standard-setting accounts for greater health risks among vulnerable individuals (e.g., children, pregnant women, the elderly, and persons with preexisting health conditions).

Historical Context: Congressional Oversight of EPA's CAA Rules

Over the past decade, Congress has deliberated on EPA's authority to promulgate or implement new emission control requirements under the CAA. Often under court order, the Obama Administration's EPA used authorities Congress gave EPA in the CAA amendments of 1970, 1977, and 1990 to address long-standing issues posed by emissions from various sources. During that time, EPA's regulations on greenhouse gas emissions from both mobile and stationary sources and on a variety of emissions from electric power plants were of particular interest to Congress, as were the agency's efforts to revise the ozone and particulate matter NAAQS. Some

[14] For discussion of key legal decisions on NSR, see CRS Report R43699, *Key Historical Court Decisions Shaping EPA's Program Under the Clean Air Act*, by Linda Tsang.

[15] 42 U.S.C. §7661a and 40 CFR §70.3. Permit applicability depends on the type of air pollutant, whether the source is located in a nonattainment area, and other criteria. For example, some nonmajor sources of hazardous air pollutants, such as hazardous waste combusters, may be subject to operating permits. Regardless of size, some sources subject to the CAA Acid Rain requirements as well as certain solid waste incineration units may be subject to operating permits. In nonattainment areas, the permit requirements include sources that emit as little as 50, 25, or 10 tons per year of VOCs, depending on the severity of the region's ozone nonattainment status (serious, severe, or extreme). See also EPA, "Who Has to Obtain a Title V Permit?" https://www.epa.gov/title-v-operating-permits/who-has-obtain-title-v-permit.

Members of Congress raised concerns that some of EPA's regulatory activities exceeded the authority that Congress had provided through the CAA, that the agency ignored or underestimated the costs and economic impacts, and that EPA overestimated the benefits of proposed and promulgated rules. Other Members of Congress disagreed that EPA exceeded its CAA authority, concluding that the agency had a statutory obligation to take action on significant air pollution issues, such as limiting mercury emissions from power plants, and emphasized the health and environmental benefits of CAA regulations.

Deliberations on air pollution issues continued in the 115th and 116th Congresses through oversight hearings and the introduction of some CAA-related bills. At the same time, the Trump Administration reviewed many CAA regulations. The CAA mandated some of these reviews, such as the NAAQS reviews and residual risk and technology reviews of hazardous air pollutant standards. Judicial actions, such as the remand of a 2016 rule addressing interstate transport of ground-level ozone, prompted other reviews.[16] The Trump Administration's regulatory reform initiative also led EPA to evaluate existing regulations and some of the accompanying benefit-cost analyses, and to identify those regulations that should be considered for replacement, repeal, or modification.[17] Examples of rules evaluated under this initiative include those for NSR and the EPA findings from 2000, 2012, and 2016 that limits on hazardous air pollutants from coal- and oil-fired power plants are "appropriate and necessary" under CAA Section 112(n)(1).

EPA's reviews resulted in some regulatory revisions. Some Members of Congress and stakeholders disagreed with EPA's rationale—e.g., statutory interpretations and revised benefit-cost analyses—for various regulatory decisions and maintained that EPA's decisions would worsen air quality.[18] Other Members of Congress and stakeholders agreed with EPA's revised statutory interpretations and updated accounting of benefits and costs.[19]

Legislative Proposals in the 116th Congress

At least 47 CAA-related bills were introduced in the 116th Congress. Many of the bills addressed either renewable fuel standards or hazardous air emissions. For example, some bills would have revised CAA provisions for renewable fuel standards, and others would have authorized EPA to take various actions with respect to hazardous air pollutants. Additional proposals would have modified CAA permitting provisions: some would have modified NSR provisions, and others

[16] On September 13, 2019, the U.S. Court of Appeals for the District of Columbia Circuit remanded EPA's 2016 Cross-State Air Pollution Rule Update in *Wisconsin v. EPA*. For more information, see EPA, "Revised Cross-State Air Pollution Rule Update," https://www.epa.gov/csapr/revised-cross-state-air-pollution-rule-update.

[17] Executive Order 13777 of February 24, 2017, "Enforcing the Regulatory Reform Agenda," 82 *Federal Register* 12285, March 1, 2017, https://www.federalregister.gov/documents/2017/03/01/2017-04107/enforcing-the-regulatory-reform-agenda. In addition, E.O. 13771 directed agencies, among other actions, to eliminate two regulations for each new regulatory action. Executive Order 13771, "Reducing Regulation and Controlling Regulatory Costs," 82 *Federal Register* 9339, January 30, 2017, https://www.federalregister.gov/documents/2017/02/03/2017-02451/reducing-regulation-and-controlling-regulatory-costs. E.O. 13771 and E.O. 13777 were revoked by Executive Order 13992 of January 20, 2021, "Revocation of Certain Executive Orders Concerning Federal Regulation," 86 *Federal Register* 7049, January 25, 2021, https://www.federalregister.gov/documents/2021/01/25/2021-01767/revocation-of-certain-executive-orders-concerning-federal-regulation.

[18] For example, see Senator Tom Carper, *A Pandemic of Pollution*, U.S. Senate Environment and Public Works Committee, Staff Report, May 2020, https://www.epw.senate.gov/public/index.cfm/2020/5/carper-releases-new-staff-report-on-epa-s-pandemic-of-pollution.

[19] For example, see quotes from Members of Congress reported in EPA, "EPA Finalizes MATS Supplemental Cost Finding and 'Risk and Technology Review,'" press release, April 16, 2020, https://www.epa.gov/newsreleases/epa-finalizes-mats-supplemental-cost-finding-and-risk-and-technology-review.

would have restricted issuance of CAA operating permits for new sources based on environmental justice considerations[20] among multiple other criteria.

Two additional air quality topics of interest in the 116th Congress were (1) wildfire smoke and (2) potential interactions between air pollution and the COVID-19 pandemic. The 116th Congress considered options for federal support and assistance to address wildfires and introduced legislation centered on wildfire smoke.[21] For example, S. 1812 and H.R. 4924 would have authorized EPA to research and mitigate the impacts of smoke emissions from wildfires.

Some Members of Congress raised concerns about whether poor air quality makes individuals more vulnerable to COVID-19. For many years, scientific studies found links between air pollution, illness, and premature mortality.[22] For example, research has linked exposure to fine particles with a range of health effects, including aggravated asthma, chronic bronchitis, and increased premature mortality. More recently, researchers have begun to examine whether there is a link between long-term exposure to fine particles and COVID-19 mortality.[23]

Air Pollution Issues in the 117th Congress

Congress may continue to debate questions about air quality and emissions control through its EPA oversight or legislation. Congressional oversight also may consider how the Biden Administration could shape CAA implementation through various administrative tools, such as executive orders and policy memoranda. In particular, the Biden Administration has directed federal agencies to review regulations and other agency actions issued by the Trump Administration, and to consider taking actions based on the review. For example, a White House memorandum directed EPA and other agencies to, among other things, consider postponing for 60 days (from January 20, 2021) the effective dates of regulations that had been published in the *Federal Register* but had not yet taken effect.[24] A second example is Executive Order (E.O.) 13990.[25] E.O. 13990 requires federal agencies to review "all existing regulations, orders, guidance documents, policies, and any other similar agency actions" taken during the Trump Administration and to consider "suspending, revising, or rescinding" agency actions that are deemed inconsistent with the order's stated policy concerning protection of public health and the environment and addressing climate change.[26] E.O. 13990 also specifies timelines for agency heads to consider taking action—suspend, revise, or rescind—on certain rulemakings through a notice-and-comment proposed rulemaking. One of these rules is EPA's 2020 review of the

[20] For more on environmental justice, see CRS In Focus IF10529, *Role of the U.S. Environmental Protection Agency in Environmental Justice*, by David M. Bearden and Angela C. Jones.

[21] CRS In Focus IF10732, *Federal Assistance for Wildfire Response and Recovery*, by Katie Hoover.

[22] For example, see EPA, *Integrated Science Assessment (ISA) for Particulate Matter*, December 2019, https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=347534.

[23] X. Wu et al., "Air Pollution and COVID-19 Mortality in the United States: Strengths and Limitations of an Ecological Regression Analysis," *Science Advances*, vol. 6, no. 45 (November 4, 2020), https://advances.sciencemag.org/content/6/45/eabd4049.

[24] Presidential Actions, Memorandum for the Heads of Executive Departments and Agencies, "Regulatory Freeze Pending Review," January 20, 2021, https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/regulatory-freeze-pending-review/. See also CRS Legal Sidebar LSB10566, *Responses to Midnight Rulemaking: Legal Issues*, by Daniel J. Sheffner and Kate R. Bowers.

[25] Executive Order 13990 of January 20, 2021, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis," 86 *Federal Register* 7037, January 25, 2021.

[26] The policy is presented in E.O. 13990, Section 1.

benefits and costs of reducing mercury and other hazardous air pollutants from coal- and oil-fired power plants.[27] EPA is to consider taking action on this rule by August 2021.[28]

Congress may consider legislation to address continued concerns about air pollution and disagreements about EPA's CAA authority. Recent Administrations have interpreted CAA authority in different, and sometimes conflicting, ways. Historically, many of EPA's CAA regulations have been challenged in court, both by industry and by public health and environmental groups, with various states supporting each side. Industry stakeholders have maintained that under some Administrations, EPA has overreached its CAA authority. Environmental and public health groups have often asserted that EPA standards are not sufficiently protective of public health or do not meet statutory requirements, or that the agency has disregarded its science advisors.

The remainder of this report discusses CAA topics that will likely garner attention in the 117th Congress.

Congressional Review

Congress may also use the Congressional Review Act (CRA) to review some rules that were promulgated by the Trump Administration and submitted late in the 116th Congress.[29] The most likely timing for using the CRA is at the outset of the 117th Congress.

The CRA provides one special legislative mechanism through which Congress may review and disapprove of an agency rule through a joint resolution, which cannot be filibustered in the Senate, provided it meets certain conditions.[30] Under the CRA, if Congress passes a joint resolution disapproving a rule and the resolution becomes law, the rule cannot take effect or continue in effect.[31] The agency may not reissue either that rule or any substantially similar one, except under authority of a subsequently enacted law. For a CRA resolution to become law, however, the President must sign it or allow it to become law without signature, or Congress overrides a presidential veto.

The CRA specifies deadlines that determine which final rules could be considered using this legislative mechanism. If Congress adjourns before the period authorized by the CRA to introduce and act on a disapproval resolution for a rule, the CRA's "lookback" provision allows the next Congress to consider doing so. The lookback provision is intended to ensure that Congress will have the full periods contemplated by the act to disapprove a rule regardless of when it is received.[32] Under Section 801(d) of the CRA, final rules submitted to Congress on or after the 60th meeting day before adjournment in either the Senate or the House are subject to

[27] EPA, "National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units—Subcategory of Certain Existing Electric Utility Steam Generating Units Firing Eastern Bituminous Coal Refuse for Emissions of Acid Gas Hazardous Air Pollutants," 85 *Federal Register* 20838, April 15, 2020.

[28] E.O. 13990, Section 2(iv). The 2020 rule is discussed later in this report; see "Mercury from Power Plants: EPA's Consideration of Co-Benefits."

[29] Title II, Subtitle E, P.L. 104-121, 5 U.S.C. §§801-808.

[30] CRS Report R43992, *The Congressional Review Act (CRA): Frequently Asked Questions*, by Maeve P. Carey and Christopher M. Davis. For questions about the CRA, congressional clients may contact Maeve Carey, Specialist in Government Organization and Management.

[31] The CRA adopts a broad definition of *rule*; for more information, see CRS Report R43992, *The Congressional Review Act (CRA): Frequently Asked Questions*, by Maeve P. Carey and Christopher M. Davis.

[32] CRS In Focus IF10023, *The Congressional Review Act (CRA)*, by Maeve P. Carey and Christopher M. Davis.

renewed periods for congressional review.[33] That is, for regulations submitted to the 116th Congress within 60 meeting days before adjournment in either chamber, the 117th Congress may consider a joint resolution of disapproval of such regulations using the special CRA procedures.

CRS unofficially estimates that final rules received during the 116th Congress on or after August 21, 2020, are potentially eligible for additional periods of CRA review in the 117th Congress. The Senate and House Parliamentarians are the sole definitive arbiters of the CRA mechanism, however, and should be consulted for guidance on any specific question.

EPA has finalized numerous rules that may be considered under the CRA, and at least 90 of these rules were promulgated in the last six months of the Trump Administration. The vast majority of the rules promulgated in the last six months of the Trump Administration were actions on state implementation plans, based on EPA's review of the plans. Of the remaining CAA rules promulgated during this period, the following four are discussed in greater detail in this report:

1. Air Quality Standards: EPA, "Review of the National Ambient Air Quality Standards for Ozone," final rule, 85 *Federal Register* 87256, December 31, 2020. (See "Particulate Matter and Ozone NAAQS Reviews.")
2. Air Quality Standards: EPA, "Review of the National Ambient Air Quality Standards for Particulate Matter," final rule, 85 *Federal Register* 82684, December 18, 2020. (See "Particulate Matter and Ozone NAAQS Reviews.")
3. Preconstruction Permits: EPA, "Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR): Project Emissions Accounting," 85 *Federal Register* 74890, November 24, 2020. (See "New Source Review Permits.")
4. Hazardous Air Pollutants: EPA, "Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act," final rule, 85 *Federal Register* 73854, November 19, 2020. (See "Source Classification: 2018 EPA Withdrawal of "Once In, Always In" Policy.")

In addition to considering rules pursuant to the CRA, the 117th Congress may also address rules through other types of legislation or through the appropriations process. The courts will continue to play an important role, and the 117th Congress and EPA itself may act to make important revisions to CAA regulations.

[33] §801(d) of the CRA provides that, if a final rule is submitted to Congress less than 60 session days in the Senate or less than 60 legislative days in the House of Representatives before Congress adjourns a session *sine die*, a new period for congressional review of that rule becomes available in the next session of Congress. For more information about this "lookback" period and other CRA elements, see CRS Report R43992, *The Congressional Review Act (CRA): Frequently Asked Questions*, by Maeve P. Carey and Christopher M. Davis.

Particulate Matter and Ozone NAAQS Reviews

In December 2020, EPA completed its statutorily mandated reviews of the particulate matter NAAQS and the ozone NAAQS. EPA finalized two rules, one to retain the current particulate matter standards[34] and another to retain the current ozone standards.[35]

Stakeholder opinion regarding whether EPA should revise the particulate matter and ozone standards varies. For example, some Members of Congress concurred with EPA's rulemaking to retain particulate matter standards, describing the current standards as "among the strictest safeguards" globally and observing that U.S. air quality has improved over time.[36] Other Members of Congress have urged EPA to tighten the particulate matter standards. For example, in a letter to the EPA Administrator dated June 29, 2020, some Members noted concerns about how air quality may disproportionately affect certain communities—such as low-income communities, communities of color, and Tribal and indigenous communities—and potentially interact with COVID-19.[37]

NAAQS Review Process

The NAAQS review process has evolved over time, with multiple Administrations introducing procedural modifications intended to streamline the process, improve transparency, or strengthen the scientific basis. Beyond the CAA requirements discussed earlier in this report, the procedural aspects of the NAAQS review are generally at the discretion of the EPA Administrator.[38] Most recently, the Trump Administration has sought to streamline NAAQS reviews by restructuring the review process.[39] For example, EPA structured the most recent ozone review to last roughly two-and-a-half years. The previous ozone review lasted about seven years. EPA compressed the ozone NAAQS review schedule by releasing two draft analyses—the Integrated Science Assessment and the Policy Assessment—nearly concurrently for simultaneous review by CASAC. This approach differed from previously completed reviews in which EPA considered CASAC input and public comments on the Integrated Science Assessment as EPA developed the Policy Assessment.

[34] EPA, "Review of the National Ambient Air Quality Standards for Particulate Matter," Final action, 85 *Federal Register* 82684, December 18, 2020. EPA completed its prior review of the particulate matter NAAQS in late 2012 and promulgated revisions to strengthen the standards. EPA published the final rule in the *Federal Register* in 2013; see EPA, "National Ambient Air Quality Standards for Particulate Matter, Final Rule," 78 *Federal Register* 3086, January 15, 2013.

[35] EPA, "Review of the Ozone National Ambient Air Quality Standards," Final action, 85 *Federal Register* 87256, December 31, 2020. EPA completed its prior review of the ozone NAAQS in 2015, at which time it strengthened the ozone standards. See EPA, "National Ambient Air Quality Standards for Ozone, Final Rule," 80 *Federal Register* 65292, October 26, 2015.

[36] EPA, "What They Are Saying: EPA Proposes to Retain NAAQS for Particulate Matter," press release, April 14, 2020, https://www.epa.gov/newsreleases/what-they-are-saying-epa-proposes-retain-naaqs-particulate-matter.

[37] Some Members of Congress stated that such communities are disproportionately affected by particulate matter air pollution and that studies show that "Americans living in areas with higher levels of particulate matter pollution are more likely to die from COVID-19 than those living in areas with cleaner air." Letter from Thomas R. Carper, U.S. Senator, et al. to Andrew Wheeler, EPA Administrator, June 29, 2020.

[38] For summary of relevant statutory requirements, see the "Overview of the Clean Air Act" section of this report.

[39] Letter from the Honorable E. Scott Pruitt, EPA Administrator, to EPA Assistant Administrators, May 9, 2018, https://www.epa.gov/criteria-air-pollutants/back-basics-process-reviewing-national-ambient-air-quality-standards.

Historically, pollutant-specific scientific review panels have advised agency staff during their reviews. EPA took a different approach in the multiyear NAAQS reviews it completed in 2020.[40] For example, in 2018, EPA disbanded the CASAC Particulate Matter Review Panel formed in 2015. The agency did not convene an ozone panel to review the 2015 ozone NAAQS. Instead, EPA directed the seven-member CASAC to assist EPA with reviews for the particulate matter and ozone NAAQS on an expedited timeline. CASAC and others have expressed concerns about the lack of pollutant-specific panels. In 2019, CASAC recommended EPA either reappoint the CASAC particulate matter panel or appoint a new panel with similar expertise. CASAC stated that the "breadth and diversity of evidence to be considered exceeds the expertise of the statutory CASAC members."[41] EPA subsequently announced the availability of 12 subject matter experts to assist CASAC with technical questions.[42] CASAC continued to urge EPA to "consider restoring a traditional interactive discussion process in which the CASAC can interact directly with external expert panels, while also keeping the option of obtaining written responses from external experts to specific questions."[43]

In its oversight role, Congress may consider if EPA's revised approach meets the CAA objectives to review the NAAQS and the science upon which they are based in a timely manner. EPA's modifications to the NAAQS review process underscore the tension between competing concerns. Some stakeholders, interest groups, and Members of Congress have criticized the timeliness of past NAAQS reviews, noting that delayed reviews contribute to regulatory uncertainty. Others question whether expedited NAAQS decisions are able to reflect the latest science and if the scientific basis is sufficiently rigorous.

Wildfire Smoke

Congress may continue to deliberate legislation related to wildfires and smoke management in the 117th Congress. Wildfire smoke is a complex mixture of air pollutants that can temporarily degrade air quality and harm human health. The chemical composition of smoke depends on various factors including burn conditions (e.g., fire temperature), type of biomass burned (e.g., vegetation), and weather-related influences (e.g., wind).[44]

Wildfire smoke can temporarily increase ambient levels of particulate matter and other criteria pollutants regulated under the CAA.[45] These increases may be measured by air monitoring stations comprising a national network, which informs determinations about NAAQS compliance.

[40] EPA initiated this particulate matter NAAQS review in December 2014 and initiated this ozone NAAQS review in May 2018. EPA, "Review of the National Ambient Air Quality Standards for Particulate Matter," Final action, 85 *Federal Register* 87261, December 18, 2020.

[41] Letter from Dr. Louis Anthony Cox, Jr., Chair, CASAC, to the Honorable Andrew R. Wheeler, EPA Administrator, April 11, 2019.

[42] EPA, "Administrator Wheeler Announces New CASAC Member, Pool of NAAQS Subject Matter Experts," press release, September 13, 2019, https://www.epa.gov/newsreleases/administrator-wheeler-announces-new-casac-member-pool-naaqs-subject-matter-experts.

[43] Letter from Dr. Louis Anthony Cox, Jr., Chair, CASAC, to the Honorable Andrew R. Wheeler, EPA Administrator, February 19, 2020.

[44] EPA, U.S. Forest Service, U.S. Centers for Disease Control and Prevention, and California Air Resources Board, California Office of Environmental Health Hazard Assessment, *Wildfire Smoke: A Guide for Public Health Officials*, Revised 2019, https://www.airnow.gov/publications/wildfire-smoke-guide/wildfire-smoke-a-guide-for-public-health-officials/.

[45] For more information, see CRS Insight IN11528, *Wildfire Smoke: Air Quality Concerns and Management*, by Kate C. Shouse.

Congress authorized EPA to treat emissions from certain natural events differently than those from anthropogenic sources. The CAA allows EPA to exclude air quality data from regulatory decisions if such data were demonstratively influenced by "exceptional events" such as certain natural events (42 U.S.C. §7619(b)). EPA regulations specify conditions under which states and tribes can demonstrate that air quality impacts from wildfires should be excluded from NAAQS compliance determinations.[46] Such exclusions are neither required nor guaranteed. That is, air quality data influenced by exceptional events are not excluded unless a state, tribe, federal land manager, or other federal agency submits a demonstration to EPA and the agency approves the demonstration.[47] EPA's review may qualitatively weigh the evidence presented in the exceptional events demonstration "based on its relevance to the Exceptional Events Rule criterion being addressed, the degree of certainty, its persuasiveness, and other considerations appropriate to the individual pollutant and the nature and type of event."[48]

Wildfire response strategies rely on air quality monitoring, smoke forecasting, and timely communication of air quality conditions and related health risks to the public.[49] Various federal, tribal, state, and local agencies contribute to these tasks.[50] To measure ambient air pollutant levels, they rely on established monitors from the national network and deploy temporary monitors. Specialists also use computer modeling to estimate pollution levels. In addition, EPA manages AirNow, a multiagency website that reports air quality based on monitoring data received on a regular basis from state, local, and federal agencies.[51] AirNow compiles the data in a consistent format and displays it through interactive maps, such as the Fire and Smoke Map.[52] The need for real-time air quality information is critical during wildfire events.

EPA, the U.S. Forest Service, other agencies, and stakeholders are exploring emerging technologies to improve air quality monitoring during wildfire events. For example, the AirNow Sensor Data Pilot adds air pollution data from "low-cost sensors" to the Fire and Smoke Map. Federal agencies caution that such data should be considered supplemental to existing resources, given uncertainties about the "precision, accuracy, and reliability" of sensors.[53]

[46] For example, states and tribes may submit a demonstration that addresses the technical criterion that "the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation." 40 C.F.R. §50.14(c)(3)(iv)(B)-(C). See also EPA, "Treatment of Air Quality Data Influenced by Exceptional Events," https://www.epa.gov/air-quality-analysis/treatment-air-quality-data-influenced-exceptional-events-homepage-exceptional.

[47] 42 U.S.C. §7619(b)(1). See also 40 C.F.R. §50.14 and EPA, "2016 Revisions to the Exceptional Events Rule: Update to Frequently Asked Questions," February 2020, https://www.epa.gov/air-quality-analysis/updated-exceptional-events-rule-faqs.

[48] EPA, "Exceptional Events Guidance: Prescribed Fire on Wildland that May Influence Ozone and Particulate Matter Concentrations," August 19, 2019, https://www.epa.gov/air-quality-analysis/exceptional-events-guidance-prescribed-fire-wildland-may-influence-ozone-and.

[49] For example, see California Air Resources Board, California Office of Environmental Health Hazard Assessment, EPA, U.S. Centers for Disease Control and Prevention, and U.S. Forest Service, *Wildfire Smoke: A Guide for Public Health Officials*, Revised 2019, https://www.airnow.gov/publications/wildfire-smoke-guide/wildfire-smoke-a-guide-for-public-health-officials/. Hereinafter, "2019 Wildfire Smoke Guide."

[50] For example, see (1) Interagency Wildland Fire Air Quality Response Program, "Air Resource Advisors," https://sites.google.com/firenet.gov/wfaqrp-external/air-resource-advisors; and (2) AirNow, "Smoke Advisories," https://www.airnow.gov/air-quality-and-health/fires/smoke-advisories/.

[51] AirNow, About AirNow, https://www.airnow.gov/about-airnow/.

[52] AirNow, Fire and Smoke Map, https://fire.airnow.gov/.

[53] 2019 Wildfire Smoke Guide, p. 3.

CAA requirements may also factor into forest management and fire prevention strategies, specifically the use of prescribed fires. Prescribed fires—the deliberate use of fire in specific areas within prescribed fuel and weather conditions—are one option often considered to reduce fuel levels (e.g., dead wood) and thereby reduce risk of larger wildfires.[54] Various factors influence the use of prescribed fires, including available capacity and funding, air quality and other health and safety concerns, compliance with air quality requirements, and landscape conditions and conservation priorities.[55] Many states have developed programs to manage and control smoke from prescribed fires.[56] Smoke management plans seek to minimize smoke entering populated areas, prevent public safety hazards, and maintain CAA compliance.

Notwithstanding the potential for longer-term air quality and fire protection benefits, prescribed fires may have near-term implications for compliance with federal air quality standards. EPA's exceptional events guidance describes conditions under which states and tribes can demonstrate that air quality impacts from prescribed fires[57] should be excluded from NAAQS compliance determinations.[58] In particular, the guidance discusses how to demonstrate that a prescribed fire "caused the event-related exceedance(s) or violation(s), was not reasonably controllable or preventable, and is unlikely to recur at a particular location."[59]

As Congress deliberates on wildfire legislation, it may consider which monitoring strategies effectively inform smoke management and public health responses. Monitoring strategies may include some combination of stationary monitors, mobile sensors, or models. Congress may also consider monitoring costs, which may vary by location, along with public health benefits.

In addition, Congress may continue to consider legislation related to prescribed fires. In the 116th Congress, some Members introduced legislation to increase the frequency and scale of prescribed burns as part of a broader strategy to mitigate future wildfire risk.[60] Deliberations around such proposals may consider the potential barriers to prescribed burns. Some have expressed concern that resource limitations and, in some cases, regulatory requirements, may deter the use of prescribed fires.[61] Among other things, Congress may consider whether exceptional event demonstrations—which are determined on a case-by-case basis and may be resource intensive—balance air quality objectives with regulatory certainty and resource constraints.

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[54] Prescribed fuel and weather conditions may include fuel moisture content, relative humidity, and wind speed. For more information about prescribed burning and other measures to reduce fuel levels (e.g., dead wood) for fire protection, see CRS Report R40811, *Wildfire Fuels and Fuel Reduction*, by Katie Hoover.

[55] Courtney A. Schultz, Sarah M. McCaffrey, and Heidi R. Huber-Stearns, "Policy Barriers and Opportunities for Prescribed Fire Application in the Western United States," *International Journal of Wildland Fire*, vol. 28 (2019).

[56] National Wildlife Coordinating Group, *NWCG Smoke Management Guide for Prescribed Fire*, PMS 420-3, November 2020, https://www.nwcg.gov/sites/default/files/publications/pms420-3.pdf.

[57] For purposes of exceptional event demonstrations, EPA has defined *prescribed fire* as "any fire intentionally ignited by management actions in accordance with applicable laws, policies, and regulations to meet specific land or resource management objectives" (40 C.F.R. §50.1).

[58] EPA, "Exceptional Events Guidance: Prescribed Fire on Wildland that May Influence Ozone and Particulate Matter Concentrations," August 19, 2019, https://www.epa.gov/air-quality-analysis/exceptional-events-guidance-prescribed-fire-wildland-may-influence-ozone-and. Hereinafter, "2019 Exceptional Events Guidance."

[59] 2019 Exceptional Events Guidance. See also EPA, "EPA Releases Additional Resource on Prescribed Fires to Support Air Agencies," press release, August 14, 2019, https://www.epa.gov/newsreleases/epa-releases-additional-resource-prescribed-fires-support-air-agencies.

[60] S. 4626, National Prescribed Fire Act of 2020. Examples of proposed legislation related to prescribed fires from the 115th Congress include H.R. 7042, H.R. 4208, S. 1991, and S. 2068.

[61] Courtney A. Schultz, Sarah M. McCaffrey, and Heidi R. Huber-Stearns, "Policy Barriers and Opportunities for Prescribed Fire Application in the Western United States," *International Journal of Wildland Fire*, vol. 28 (2019).

For more information about air quality requirements related to wildfires, see CRS Insight IN11528, *Wildfire Smoke: Air Quality Concerns and Management*, by Kate C. Shouse.

Review of Air Toxics Standards

The CAA directs EPA to promulgate emission standards for sources of the 187 hazardous air pollutants (HAPs), informally referred to as "air toxics," that are listed in Section 112(b).[62] In general, these standards, known as National Emission Standards for Hazardous Air Pollutants (NESHAPs), require major sources[63] to meet numeric emission limits that have been achieved in practice by the best-performing similar sources. These standards are generally referred to as Maximum Achievable Control Technology (MACT) standards. The CAA also requires EPA to conduct certain reviews of the MACT standards.[64]

The remainder of this section highlights some of the air toxics issues that may garner interest in the 117th Congress.

Mercury from Power Plants: EPA's Consideration of Co-Benefits

In 2020, EPA promulgated the latest in a series of rulemakings on mercury from power plants based on its review of the benefits and costs of reducing mercury and other HAPs from coal- and oil-fired power plants. As explained below, the 2020 rulemaking revealed a change in EPA's interpretation of a statutory provision—Section 112(n)(1)—that was expected to set a precedent for EPA's consideration of benefits under other CAA authorities. It remains uncertain whether the Biden Administration will retain that interpretation. Congress may conduct oversight and consider how the agency factors benefits and costs into regulatory decisions.

EPA concluded in 2020 that limits on HAPs from coal- and oil-fired power plants are not "appropriate and necessary" (A&N) under CAA Section 112(n)(1).[65] The 2020 A&N rule reversed prior A&N determinations that led to the 2000 listing of coal- and oil-fired power plants as a major source of HAPs and the 2012 Mercury and Air Toxics Standards (MATS) limiting those HAPs. EPA's accompanying analysis, published in 2011, projected annual benefits between $37 billion and $90 billion in 2016. Nearly all of the monetized benefits were from the rule's particulate matter co-benefits. EPA monetized one of the expected mercury impacts—intelligence quotient loss to children exposed to mercury from recreationally caught freshwater fish—but could not monetize other mercury impacts. Such nonmonetized impacts may include other neurologic effects (e.g., memory and behavior), cardiovascular effects, and effects on wildlife. Factors that precluded comprehensively monetizing mercury and other HAP benefits from the MATS rule included gaps in toxicological data, uncertainties in estimating human effects based

[62] 42 U.S.C. §7412. The 1990 CAA amendments specified 189 pollutants, but P.L. 102-187, enacted on December 4, 1991, deleted hydrogen sulfide from the list of toxic pollutants, leaving only 188. On December 19, 2005, EPA removed methyl ethyl ketone (MEK) from the list of toxic air pollutants. The total number of listed air toxics is now 187.

[63] CAA §112(a) defines a *major source* as "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants" 42 U.S.C. §7412(a)(1).

[64] CAA §112(f)(2), codified at 42 U.S.C. §7412(f)(2).

[65] EPA, "National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units—Reconsideration of Supplemental Finding and Residual Risk and Technology Review," 85 *Federal Register* 31286, May 22, 2020.

on animal experiments, and insufficient economic research to translate the health and environmental effects to dollar value terms.

EPA stated that the 2020 A&N rule corrects errors in the agency's consideration of benefits in a prior A&N finding. In its determination for the 2020 A&N rule, EPA excluded from consideration any co-benefits to human health from reductions in pollutants *not* targeted by MATS. While EPA acknowledged that estimation of all benefits and costs, including ancillary impacts, is consistent with federal guidance, the agency concluded that it had erred when it gave equal consideration to benefits (HAP reductions) and co-benefits (non-HAP reductions) when making its prior A&N finding under Section 112(n).[66] The 2020 A&N rule concluded that an A&N finding under Section 112(n)(1) must instead be justified "overwhelmingly" by HAP reduction benefits.

Notwithstanding the 2020 A&N rule, the 2012 MATS limits remain in effect for power plants because EPA determined that it could not meet the criteria under CAA Section 112(c)(9) to delist them. Furthermore, the A&N finding does not change the regulatory status of other pollution sources because CAA Section 112(n)(1) applies only to power plants.

Some have raised questions about why EPA reversed the A&N finding and how it might affect regulated entities. For example, some power plant owners are concerned the A&N reversal may compromise their ability to recover from ratepayers the costs of installing MATS pollution controls. Others find this unlikely, but legal challenges to the 2020 A&N rule are under way. For more information about the legal issues, see CRS In Focus IF11622, *Judicial Review of Mercury and Air Toxics Regulations*, by Kate R. Bowers and Linda Tsang.

The May 2020 A&N rule was a final action. The Biden Administration has the option to modify or repeal the 2020 A&N rule, but it would need to follow the same process used to promulgate new rules. The Biden Administration has directed the EPA Administrator to review the 2020 A&N rule in accordance with E.O. 13990.[67] Specifically, EPA is to consider taking action—suspending, revising, or rescinding—on the 2020 A&N rule through a notice-and-comment proposed rulemaking by August 2021.[68]

Congress may consider development of legislation that addresses how EPA and other federal agencies factor benefits and costs into rulemaking decisions. For example, Congress may explore opportunities to clarify how much weight an agency gives to benefits and ancillary impacts. Such legislation may involve consideration of the tension between providing more specific direction to the agencies and allowing an agency sufficient discretion to tailor its approach as warranted. While legislative direction may provide greater consistency across Administrations, it may also limit an agency's discretion to consider case-specific factors and apply its evolving understanding of the science and economics.

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[66] In 2012, EPA reaffirmed the 2000 A&N finding and promulgated the Mercury and Air Toxics Standards Rule. Numerous parties petitioned the courts to review MATS. Among other things, some petitioners disagreed with EPA's conclusion that it was not appropriate to consider costs when making an A&N finding under CAA §112. In 2015, the Supreme Court agreed with the petitioners and remanded the rule for further consideration, but it did not address whether EPA has authority to consider monetized co-benefits in evaluating the cost of MATS (*Michigan v. EPA*, 135 S. Ct. 2699 (2015)). In 2016, EPA finalized a supplemental A&N finding based on its review of the 2012 rule's estimated costs. EPA concluded that it was appropriate and necessary to regulate mercury and other HAPs from power plants after considering regulatory costs.

[67] E.O. 13990 requires federal agencies to review "all existing regulations, orders, guidance documents, policies, and any other similar agency actions" taken during the Trump Administration and to consider "suspending, revising, or rescinding" agency actions that are deemed inconsistent with the order's stated policy concerning protection of public health and the environment and addressing climate change.

[68] E.O. 13990, §2(iv).

Ethylene Oxide: EPA's Review of Emission Standards

Ethylene oxide is a flammable, colorless gas used to sterilize medical equipment, fumigate spices, and make products such as antifreeze, textiles, and plastics. It has also long been considered mutagenic[69] and has been associated with certain risks to human health.[70] Congress listed ethylene oxide as a hazardous air pollutant under the 1990 CAA amendments.[71] EPA has promulgated various regulations under CAA Section 112 to limit ethylene oxide emissions from the following sources: chemical manufacturers (synthetic organic chemical manufacturing, miscellaneous organic chemical manufacturers, polyether polyols production) and sterilizers (commercial sterilizers and hospital ethylene oxide sterilizers).[72]

2018 National Air Toxics Assessment

EPA's 2018 National Air Toxics Assessment (NATA) estimated that ethylene oxide significantly contributes to potential elevated cancer risks in some areas.[73] The 2018 NATA was based on emissions data from 2014 and computer modeling as well as information about health effects, including the ethylene oxide carcinogenicity assessment that EPA had updated in 2016.[74] EPA's 2016 carcinogenicity assessment for ethylene oxide concluded that it is carcinogenic to humans.[75] As noted by EPA, NATA is intended as a screening tool designed to help identify which pollutants, emission sources, and geographic areas to focus further evaluation of risks and determine whether additional regulatory action may be warranted.

Stakeholders have expressed varying concerns. Some, such as the American Chemistry Council and the Texas Commission on Environmental Quality, disagree with the NATA findings for ethylene oxide, and recommend that EPA withdraw the ethylene oxide risk estimates.[76] Others, including environmental groups and some states and local communities, have expressed concerns about exposure to ethylene oxide emissions based on NATA findings and other relevant

[69] A mutagen can change the genetic code in a cell. Chronic exposure to elevated levels of ethylene oxide has been associated with the development of certain cancers based on animal studies. EPA, *Evaluation of the Inhalation Carcinogenicity of Ethylene Oxide (CASRN 75-21-8) in Support of Summary Information on the Integrated Risk Information System (IRIS)*, EPA/635/R-16/350Fa, December 2016, https://cfpub.epa.gov/ncea/iris/iris_documents/documents/toxreviews/1025tr.pdf. Hereinafter, "2016 IRIS EtO".

[70] For example, acute exposures to ethylene oxide are associated with respiratory irritation and effects to the nervous system.

[71] Additional statutes apply to various uses of ethylene oxide. For example, the distribution, sale, and use of ethylene oxide as a sterilant is regulated by EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); see 7 U.S.C. §136 et seq. This report focuses on CAA requirements.

[72] For more information about the source categories, see EPA, *Strategy for Reviewing Ethylene Oxide Emissions*, https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/agency-actions-ethylene-oxide#regulations.

[73] EPA, "2014 National Air Toxics Assessment," https://www.epa.gov/national-air-toxics-assessment/2014-national-air-toxics-assessment.

[74] EPA, "NATA Frequent Questions," https://www.epa.gov/national-air-toxics-assessment/nata-frequent-questions.

[75] EPA's prior assessment, completed in 1985, concluded that ethylene oxide is "probably carcinogenic to humans"; see EPA, "Ethylene Oxide Emissions Standards for Sterilization Facilities," 67 *Federal Register* 17715, April 7, 2006. In 2016, EPA changed the classification to "carcinogenic to humans" based on occupational epidemiological studies; see 2016 IRIS EtO.

[76] The American Chemistry Council, which represents producers and consumers of ethylene oxide, submitted a Request for Correction under the Information Quality Act asking that the "NATA risk estimates for [ethylene oxide] be withdrawn and corrected to reflect scientifically supportable risk values." See EPA, "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing Residual Risk and Technology Review," proposed rule, 84 *Federal Register* 69218, December 17, 2019.

information, and have urged EPA to strengthen the emission standards. Some Members of Congress have questioned whether the current standards for sources of ethylene oxide afford adequate protection of human health and have introduced legislation in prior sessions of Congress.[77]

Residual Risk and Technology Review

The CAA requires EPA to conduct two kinds of reviews of the MACT standards—the residual risk review and the technology review. For the residual risk review, the CAA requires EPA to evaluate MACT standards within eight years of promulgation to determine whether revisions are needed to address any remaining risk associated with HAP emissions from the source category.[78] EPA's residual risk review considers whether revisions to the MACT standards are required to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect, taking into consideration factors such as costs.[79] For the technology review, the CAA requires EPA to review the MACT standards and revise as needed, after considering "developments in practices, processes, and control technologies" every eight years.[80] EPA often combines the two reviews into one, known as the *residual risk and technology review*.

In 2020, EPA completed the statutorily required residual risk and technology review of the miscellaneous organic chemical manufacturing (MON) NESHAP, which includes limits on ethylene oxide and other HAPs.[81] EPA revised the MON NESHAP based on this review and published the final rule on August 12, 2020.[82] Among other things, EPA promulgated additional requirements to limit ethylene oxide from process vents, storage tanks, and equipment leaks at major sources. The revised requirements to limit ethylene oxide were based on the residual risk review. EPA used the updated risk values for ethylene oxide in its residual risk review and concluded that, absent revisions to the MON standards, the "risks are unacceptable."[83]

EPA's review of the standards limiting ethylene oxide from commercial sterilizers is under way. This source category includes medical equipment suppliers, pharmaceutical suppliers, other health-related industries, spice manufacturers, and contract sterilizers.[84] Some Members of Congress have urged EPA to "exercise its full authority to regulate" ethylene oxide under the CAA and to conduct a residual risk review along with the statutorily mandated technology review for the source category.[85] EPA published an advanced notice of proposed rulemaking (ANPR) in late 2019 that requested information "on potential control measures for reducing ethylene oxide emissions from commercial sterilization and fumigation operations."[86] The ANPR also discussed

[77] Examples of legislative proposals from the 116th Congress include H.R. 1152/S. 458 and H.R. 7822/S. 4369.

[78] CAA §112(f)(2), codified at 42 U.S.C. §7412(f)(2).

[79] 42 U.S.C. §7412(f)(2).

[80] CAA §112(d)(6), codified at 42 U.S.C. §7412(d)(6).

[81] EPA was under court order to complete the CAA §112 risk and technology review of the MON NESHAP and 32 other NESHAPs. Order, Cal. Communities Against Toxics, et al. v. Pruitt, No. 1:15-cv-00512-TSC, Doc. No. 49 (D.D.C. Mar. 13, 2017).

[82] EPA, "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing Residual Risk and Technology Review," final rule, 85 *Federal Register* 49084, August 12, 2020. Hereinafter, "MON Final Rule."

[83] MON Final Rule, p. 49097.

[84] EPA, *Strategy for Reviewing Ethylene Oxide Emissions*, https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/agency-actions-ethylene-oxide#regulations.

[85] Letter from Senator Tammy Duckworth et al. to Honorable Andrew Wheeler, EPA Administrator, July 8, 2020.

[86] EPA, "National Emission Standards for Hazardous Air Pollutants: Ethylene Oxide Commercial Sterilization and

small business considerations, noting that EPA has identified about 35 facilities owned by small businesses within the commercial sterilizer source category.[87] According to the ANPR, EPA intends to convene a Small Business Advocacy Review Panel before it takes "any significant regulatory action."[88] The Trump Administration published a regulatory agenda in fall 2020, which estimated that EPA will propose a decision about whether and how to revise the commercial sterilizer NESHAP in March 2021.[89]

Congress may conduct oversight as EPA reviews the commercial sterilizer standards and seek clarity from EPA on its plans for the remaining industrial categories that emit ethylene oxide.[90] Beyond oversight, Congress may consider whether the CAA provides adequate authority for EPA to evaluate or revise NESHAPs based on updated risk information. The U.S. District Court for the Northern District of California recently ruled on the required frequency of residual risk review, and specifically on whether the CAA requires EPA to conduct the residual risk review each time it revises the MACT standards for a source, or only after the initial promulgation of MACT standards. The court concluded that the CAA does not impose "a mandatory duty on EPA to revisit its risk-based standards for hazardous pollution sources whenever the agency revises" the MACT standards.[91]

Congress may consider the implications of the court's finding, in particular when updated risk information would alter the conclusions of EPA's residual risk reviews. EPA completed a residual risk review for commercial sterilizers in 2006—a decade before EPA revised the risk value for ethylene oxide.[92] It is unknown whether the updated risk value for ethylene oxide would lead EPA to a different decision about the stringency of the standard. While CAA Section 112(f)(2) identifies factors to inform EPA's consideration of whether revisions are required, the act does not specify the stringency of the standards that EPA must set. CAA Section 112(f)(2) allows EPA to base revisions on both health-based and non-health-based factors.[93]

Fumigation Operations," advance notice of proposed rulemaking, 84 *Federal Register* 67889, December 12, 2019. Hereinafter, "Sterilizer ANPR."

[87] Sterilizer ANPR, p. 67893. EPA identified a total of 135 facilities in the commercial sterilizer source category. The Regulatory Flexibility Act (RFA) of 1980, 5. U.S.C. §§601-612, requires federal agencies to assess the impact of their forthcoming regulations on small entities. The RFA also requires agencies to ensure that small entities have an opportunity to participate in the rulemaking process, and it has special requirements for proposed rules issued by EPA, the Occupational Safety and Health Administration, and the Consumer Financial Protection Bureau. See CRS Report RL32240, *The Federal Rulemaking Process: An Overview*, coordinated by Maeve P. Carey.

[88] Sterilizer ANPR, p. 67894.

[89] Office of Management and Budget, "Fall 2020 Unified Agenda of Regulatory and Deregulatory Actions," EPA/OAR, RIN 2060-AU37, https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202010&RIN=2060-AU37.

[90] EPA reported plans to "take a closer look at air toxics emissions standards for other industries that emit ethylene oxide to determine whether a review of those rules is needed. EPA will start this closer look with its air toxics emissions standards for commercial sterilizers." See EPA, "Strategy for Reviewing Ethylene Oxide Emissions," https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/agency-actions-ethylene-oxide#regulations, website last updated on August 19, 2020.

[91] Citizens for Pennsylvania's Future v. Wheeler, 469 F. Supp. 3d 920, 922 (N.D. Cal. 2020). For more information, congressional clients may contact CRS Legislative Attorney Kate Bowers.

[92] In 2006, EPA determined no additional control requirements were warranted and therefore did not revise the ethylene oxide sterilization NESHAP. EPA, "Ethylene Oxide Emissions Standards for Sterilization Facilities," 71 *Federal Register* 17712, April 7, 2006.

[93] 42 U.S.C. §7412(f)(2).

Source Classification: 2018 EPA Withdrawal of "Once In, Always In" Policy

Congress may conduct oversight related to a 2020 EPA rulemaking pertaining to the two kinds of sources of HAPs defined in CAA Section 112(a)—major sources and area sources. The 2020 rulemaking allows major sources of HAPs to reclassify as an area source after meeting conditions to limit emissions below major source thresholds.[94] *Major source* refers to

> any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.[95]

Area source refers to "any stationary source of hazardous air pollutants that is not a major source."[96] Classification as a major or area source has implications for which emission standards apply to the source. Major sources are subject to the technology-based emission standards—MACT standards—as well as monitoring, recordkeeping, and reporting requirements. Area sources are typically subject to lesser controls than major sources. Under the CAA, EPA may elect to establish more lenient standards for area sources, known as generally available control technologies, or GACT.[97] In some cases, EPA has promulgated requirements for major sources but not for area sources in some source categories, which means that HAPs from some area sources are not regulated under the NESHAPs.[98]

An EPA 1995 guidance memorandum first explained when a major source of HAPs could be reclassified as an area source.[99] At the time, EPA was implementing the 1990 CAA amendments and various MACT standards were going into effect. EPA's 1995 memorandum stated that major sources of HAPs could "switch to area source status at any time until the 'first compliance date' of the standard."[100] EPA also discussed its "Once In, Always In" (OIAI) interpretation of the CAA.[101] Specifically, EPA determined that facilities that are major sources for HAPs on the "first compliance date" would be "required to comply permanently with the MACT standard," even if the facility subsequently reduced emissions below the major source threshold.[102] The 1995 memorandum concluded that the OIAI policy would ensure that emissions reductions were maintained over time.[103]

EPA's OIAI interpretation remained in effect until 2018, though EPA had previously considered proposals that would have modified OIAI.[104] In 2018, EPA withdrew the 1995 memorandum—

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[94] EPA, "Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act," final rule, 85 *Federal Register* 73854, November 19, 2020. Hereinafter, "2020 Reclassification Rule."

[95] 42 U.S.C. §7412(a)(1).

[96] 42 U.S.C. §7412(a)(1).

[97] 42 U.S.C. §7412(d)(5). See also CRS Report R43699, *Key Historical Court Decisions Shaping EPA's Program Under the Clean Air Act*, by Linda Tsang.

[98] 2020 Reclassification Rule, p. 73859.

[99] Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, to EPA Regional Directors, May 16, 1995, https://www.epa.gov/stationary-sources-air-pollution/guidance-reclassification-major-sources-area-sources-under-section. Hereinafter, "1995 Memorandum."

[100] 1995 Memorandum.

[101] 1995 Memorandum.

[102] 1995 Memorandum.

[103] 1995 Memorandum.

[104] See (1) EPA, "National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions," proposed rule, 68 *Federal Register* 26249, May 15, 2003; and (2) EPA, "National Emission Standards for

and the OIAI interpretation—and issued a different CAA interpretation in a new guidance memorandum. EPA's 2018 memorandum concluded that "Congress placed no temporal limitations on the determination of whether a source emits or has the [potential to emit] HAP in sufficient quantity to qualify as a major source," and described conditions under which major sources could be reclassified to area sources.[105] The 2020 final rulemaking (2020 Reclassification Rule) codified the agency's withdrawal of its 1995 guidance on source classification under Section 112. Under the 2020 Reclassification Rule, a major source can be reclassified to area source status at any time upon reducing its potential to emit HAP to below the major source thresholds—10 tons per year of any single HAP and 25 tons per year of any combination of HAP, upon approval of the source's request.[106]

Members of Congress have expressed varying opinions about the change, with some Members supporting the rescission of the OIAI policy[107] and others urging EPA to retain it.[108] Much of the debate about the 2020 Reclassification Rule has centered on whether and how it will affect HAP emissions. Supporters of the 2020 Reclassification Rule expect it will incentivize sources to reduce emissions below major source thresholds.[109] For example, facilities may be more likely to pursue pollution reduction opportunities in exchange for the reduced regulatory obligations associated with area sources. Others have raised concerns that it could nonetheless lead to an increase in emissions from sources that stop complying with MACT standards, even if those sources remain below major source thresholds. For example, if a major source elects to reclassify as an area source, it would switch to area source standards, which may allow the facility to use less effective controls or use the pollution controls less often compared to the MACT standards.[110] EPA Region 9 raised this concern in 2004, when the agency considered a different proposal to allow reclassification. At the time, EPA Region 9 commented that in "many instances, the MACT requirements could lead to greater reductions when compared to sources accepting" enforceable limits of 24 tons per year for a combination of HAPs and 9 tons per year for a single HAP.[111]

More recently, EPA reviewed permits and other information for 69 sources that reclassified to area sources under the 2018 memorandum. EPA found that emissions increased at 1 of the 69 sources, and that 68 of the 69 sources "achieved and maintain area source status by operating the

Hazardous Air Pollutants for Source Categories: General Provisions," proposed rule, 72 *Federal Register* 69, January 3, 2007. EPA did not finalize the OIAI-related provisions from either of these proposals.

[105] Memorandum from William L. Wehrum, EPA Assistant Administrator, to Regional Air Division Directors, January 25, 2018, https://www.epa.gov/stationary-sources-air-pollution/guidance-reclassification-major-sources-area-sources-under-section.

[106] 2020 Reclassification Rule, p. 73865.

[107] For example, see U.S. Senate Environment and Public Works Committee, "Senators Call on EPA to Remove Burdensome 'Once-In-Always-In' Policy," press release, January 9, 2018, https://www.epw.senate.gov/public/index.cfm/2018/1/senators-call-on-epa-to-remove-burdensome-once-in-always-in-policy.

[108] For example, see Letter from Senator Carper et al. to EPA Administrator Pruitt, March 14, 2018, https://www.epw.senate.gov/public/_cache/files/1/3/131714ba-f373-4b43-bfb8-a3820ac63a50/6DCFBCE44BF189136EE1F2CC17E66B54.carper-markey-lead-democrats-in-urging-pruitt-to-reinstate-strict-air-toxics-standards-for-the-country-s-dirtiest-industrial-sources.pdf.

[109] For example, see Letter from API to the EPA Docket, September 24, 2019, Docket ID EPA-HQ-OAR-2019-0282-0298, https://www.regulations.gov/document?D=EPA-HQ-OAR-2019-0282-0298.

[110] For example, see Harvard Environmental & Energy Law Program, "Once In Always In Guidance for Major Sources Under the Clean Air Act," https://eelp.law.harvard.edu/2018/02/once-in-always-in-guidance-for-major-sources-under-the-clean-air-act/.

[111] Letter from Michael S. Bandrowski, Air Toxics Chief, EPA Region IX, to David Cozzie, Group Leader, EPA Office of Air Quality Planning and Standards, December 13, 2005, p. 3, see EPA Docket ID EPA-HQ-OAR-2004-0094-0151.

emission controls or continuing to implement the practices they used to comply with the major source NESHAP requirements."[112]

EPA also identified source categories likely to be affected by the 2020 Reclassification Rule and estimated potential changes in emissions. EPA concluded that while HAP emissions from 65 source categories would not change as a result of the 2020 Reclassification Rule, "approximately 130 facilities in seven source categories could increase emissions if they were to reclassify and were allowed to reduce operation of adjustable add-on controls."[113] EPA estimated that nationwide, the potential HAPs emissions increase could range from about 900 tons per year to 1,260 tons per year.[114] EPA considered alternative scenarios, one of which estimated that emissions could decrease nationwide by about 180 tons per year.[115]

Congress may consider whether CAA Section 112 provides EPA adequate authority to incentivize pollution prevention while also limiting cumulative HAP emissions. The act requires EPA to establish technology-based emission limits (MACT) for major sources of HAPs. Under EPA's current interpretation of CAA Section 112, sources may change their classification after meeting conditions to limit HAPs below major source thresholds. While the 2020 Reclassification Rule may provide sources an incentive to reduce HAPs below the major source thresholds, it is unclear whether actual emissions will decrease at each source that reclassifies as an area source. It is difficult to ascertain how the 2020 Reclassification Rule may affect emissions because the reclassification is voluntary and due to the structure of MACT emission standards. MACT standards generally do not limit emissions to a fixed level, which makes it challenging to determine how emissions from a particular source may change under a different standard.[116] Notwithstanding the various uncertainties, EPA estimated that, under certain assumptions, HAP emissions could increase from about 130 facilities as a result of the 2020 Reclassification Rule. Congress may consider the health and environmental implications of this potential outcome.[117] Among other things, Congress may consider how these potential HAP increases contribute to cumulative exposures in communities with disproportionate environmental burdens.

In addition, Congress may consider other impacts of the rule, such as the potential compliance cost savings. EPA considered three categories of potential costs: (1) costs for major sources to apply for reclassification, (2) costs for air pollution control agencies to process these applications, and (3) compliance cost savings for a facility to meet area source standards compared to major source standards. EPA's illustrative analysis estimated a net annual cost savings across these three cost categories when compared to a world with the OIAI policy.[118] For example, EPA's primary

[112] 2020 Reclassification Rule, p. 73880.

[113] EPA, "Final Rule: Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act," fact sheet, updated October 7, 2020, https://www.epa.gov/stationary-sources-air-pollution/documentation-reclassification-major-sources-area-sources-under. Hereinafter, "Reclassification Fact Sheet."

[114] Reclassification Fact Sheet.

[115] Reclassification Fact Sheet.

[116] MACT standards are generally expressed in terms of percent reduction, mass of emissions per mass production, or other similar format. Emissions from major sources may change over time based on various factors, such as changes in production levels. See Letter from William L. Wehrum, Acting Assistant Administrator, to the Honorable John D. Dingell, Chairman, House Committee on Energy and Commerce, March 30, 2007; see EPA Docket ID EPA-HQ-OAR-2004-0094-0106.

[117] EPA assessed rulemaking's potential impact on tribal and environmental justice communities. See 2020 Reclassification Rule, p. 73882.

[118] Memorandum from Eastern Research Group, Inc., to EPA, "Documentation of the Compliance Cost Savings Analysis for the Rule 'Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act,'" August 2020, https://www.epa.gov/sites/production/files/2020-10/documents/mm2a_final_cost_analysis_tsm.pdf.

analytical scenario estimated $16.1 million in compliance costs in the first year and $90.6 million in compliance cost savings in subsequent years.[119]

New Source Review Permits

Congress may continue to conduct oversight of New Source Review, a CAA preconstruction permitting program intended to ensure that new and modified stationary sources of air pollution do not significantly degrade air quality. The NSR program generally requires emission limits based on modern pollution controls when new facilities are built or when existing facilities make a change that increases emissions above specified thresholds. Owners or operators must obtain an NSR permit before the construction or modification begins.[120] Historically, NSR applicability determinations have been contentious and extensively litigated.[121]

Stakeholder views on NSR are often long-standing and divergent. Some stakeholders view NSR as essential to maintaining air quality, noting that because of its requirements for pollution control strategies, the program "yields overall reductions in pollution even as facilities expand production."[122] Other stakeholders have described NSR as outdated and an impediment to economic growth, stating that the complexities and costs of the NSR permitting process discourage pollution-control projects.[123]

Over time, EPA has issued guidance and explored rulemakings meant to improve or clarify program implementation. In 2017, EPA announced an NSR reform initiative, which included revisiting some NSR proposals from prior Administrations that were not finalized.[124] Since 2017, EPA has issued various guidance memoranda and taken regulatory actions under this initiative.[125] These actions have centered on NSR applicability and enforcement. For example, EPA guidance has discussed how to determine what counts as a source for NSR purposes;[126] how to account for

Hereinafter, "EPA Reclassification Cost Analysis."

[119] EPA's primary illustrative scenario estimated the compliance costs and compliance cost savings for 2,567 facilities to reclassify. The 2,567 facilities represent roughly one-third of the 7,183 sources with emissions that are already below the major source threshold. See both EPA Reclassification Cost Analysis and Reclassification Fact Sheet.

[120] The NSR permit is a legal document that establishes site-specific requirements for the source, detailing approved types of construction, emission limits during operation, monitoring and reporting requirements, and other construction and operating conditions. State and local permitting agencies generally implement NSR and issue the permits. EPA generally oversees the state's implementation.

[121] For discussion of key legal decisions on NSR, see CRS Report R43699, *Key Historical Court Decisions Shaping EPA's Program Under the Clean Air Act*, by Linda Tsang.

[122] Harvard Environmental and Energy Law Program, *EPA's Attack on New Source Review and Other Air Quality Protection Tools*, November 1, 2019, http://eelp.law.harvard.edu/wp-content/uploads/NSR-paper-EELP.pdf.

[123] Art Fraas, John Graham, and Jeff Holmstead, "EPA's New Source Review Program: Time for Reform?" *Environmental Law Reporter*, vol. 47, no. 1, (2017). Also available at https://www.rff.org/publications/journal-articles/epas-new-source-review-program-time-for-reform/.

[124] U.S. Environmental Protection Agency, *Final Report on Review of Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources Under Executive Order 13783*, October 2017, https://www.epa.gov/sites/production/files/2017-10/documents/eo-13783-final-report-10-25-2017.pdf. EPA has previously explored rulemakings intended to improve or clarify NSR; see selection of rulemakings that EPA identifies under "NRS Reform" at https://www.epa.gov/nsr/nsr-regulatory-actions#nsrreform.

[125] For a list of EPA guidance memoranda related to NSR, see U.S. Environmental Protection Agency, *New Source Review Policy and Guidance Document Index*, https://www.epa.gov/nsr/new-source-review-policy-and-guidance-document-index. For regulatory actions that EPA identifies as part of "NSR Reform," see https://www.epa.gov/nsr/nsr-regulatory-actions#nsrreform.

[126] For example, EPA published a guidance memorandum to clarify when it considers industrial facilities to be under "common control" and therefore count as one source for NSR purposes. See Memorandum from William L. Wehrum,

air emissions in determining whether NSR applies;[127] and circumstances under which EPA will not "second-guess" a facility's projections of emissions that will result from a modification.[128] The Biden Administration may review the Trump Administration's NSR actions if EPA determines that those actions fall within the scope of its reviews under E.O. 13990.[129] In addition, at least one NSR action may be eligible for review by Congress under the CRA. Known as the "project emissions accounting" rule, EPA revised the NSR applicability regulations in November 2020.[130]

Stakeholders that view NSR as essential to maintaining air quality have voiced concern that these NSR actions would be expected to reduce EPA's oversight and create a more lenient NSR regime, thereby allowing increased emissions of harmful pollutants from U.S. industrial facilities.[131] Stakeholders critical of NSR generally have expressed support for some of EPA's recent NSR actions, citing, for example, greater regulatory certainty and incentives for projects that emit less pollution.[132]

Assistant Administrator, EPA, to Patrick McDonnell, Secretary of the Pennsylvania Department of Environmental Protection, April 30, 2018, https://www.epa.gov/sites/production/files/2018-05/documents/meadowbrook_2018.pdf. EPA's 2019 guidance regarding the term *adjacent* is another example; it discusses whether sources located on "adjacent" properties should be combined for purposes of NSR; see Memorandum from Anne L. Idsal, Acting Assistant Administrator, EPA, to EPA Regional Administrators, November 26, 2019, https://www.epa.gov/sites/production/files/2019-11/documents/adjacent_guidance.pdf.

[127] For example, EPA's March 2018 "Project Emissions Accounting" memorandum states that a facility owner would consider both emission increases and emission decreases, provided they are from a single project, in the first step of a multistep process to determine whether emissions from the proposed project would trigger NSR; see Memorandum from Honorable E. Scott Pruitt, EPA Administrator, to EPA Regional Administrators, March 13, 2018, https://www.epa.gov/sites/production/files/2018-03/documents/nsr_memo_03-13-2018.pdf. In 2020, EPA finalized a rule to revise the NSR applicability regulations to "make it clear that both emissions increases and emissions decreases that result from a given proposed project are to be considered at Step 1 of the NSR major modification applicability test." See EPA, "Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR): Project Emissions Accounting," 85 *Federal Register* 74890, November 24, 2020.

[128] Letter from Honorable E. Scott Pruitt, EPA Administrator, to EPA Regional Administrators, December 7, 2017, https://www.epa.gov/sites/production/files/2017-12/documents/policy_memo.12.7.17.pdf.

[129] E.O. 13990 requires federal agencies to review "all existing regulations, orders, guidance documents, policies, and any other similar agency actions" taken during the Trump Administration and to consider "suspending, revising, or rescinding" agency actions that are deemed inconsistent with the order's stated policy concerning protection of public health and the environment and addressing climate change.

[130] EPA sought to "make it clear that both emissions increases and emissions decreases that result from a given proposed project are to be considered at Step 1 of the NSR major modification applicability test." See EPA, "Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR): Project Emissions Accounting," 85 *Federal Register* 74890, November 24, 2020.

[131] Harvard Environmental and Energy Law Program, *Regulatory Rollback: New Source Review*, December 11, 2018 (updated February 2020), https://eelp.law.harvard.edu/2018/12/new-source-review/.

[132] For example, a letter signed by 12 industry associations stated that EPA's Project Emissions Accounting (PEA) proposal (84 *Federal Register* 39244, August 9, 2019) to "codify the PEA interpretation is reasonable, consistent with the Clean Air Act and sound policy, and important to provide regulatory certainty to enable and even incentivize projects to reduce emissions and drive productive capacity"; see https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0048-0081.

Congress may conduct oversight of the NSR program or consider legislative proposals to modify it. Congress may also use the appropriations process to support or limit EPA spending on specific activities. Congress has previously considered legislative proposals to modify NSR.[133] For example, in the 116th Congress, S. 2662 and H.R. 172 would have amended the CAA definition of *modification*, a key term in determining NSR applicability. The CAA broadly defines *modification* as "any" physical or operational change in a stationary source "that increases the emissions of any air pollutant or results in the emission of any air pollutant not previously emitted."[134] S. 2662 and H.R. 172 would have, among other things, allowed emissions increases from modifications to be calculated on an hourly basis rather than an annual basis. The bills would also have excluded certain projects, such as those designed to reduce the amount of any air pollutant emitted or "to restore, maintain, or improve the reliability of operations at, or the safety of, the source" from the definition of a modification.

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[133] See U.S. Congress, Senate Committee on Environment and Public Works, *Hearing on S. 2662, The Growing American Innovation (GAIN) Act*, 116th Cong., 1st sess., November 6, 2019, https://www.epw.senate.gov/public/index.cfm/hearings?ID=9D9A2920-4591-4532-9D64-AE9F98437707. See also (1) U.S. Congress, House Committee on Energy and Commerce, Subcommittee on Environment, *New Source Review Permitting Challenges for Manufacturing and Infrastructure*, 115th Cong., 2nd sess., February 14, 2018, https://energycommerce.house.gov/hearings/new-source-review-permitting-challenges-manufacturing-infrastructure/; and (2) U.S. Congress, House Committee on Energy and Commerce, Subcommittee on Environment, *Legislation Addressing New Source Review Permitting Reform*, 115th Cong., 2nd sess., May 16, 2018, https://energycommerce.house.gov/committee-activity/hearings/hearing-on-legislation-addressing-new-source-review-permitting-reform.

[134] CAA §111(a)(4), 42 U.S.C. §7411(a)(4), defines *modification* for purposes of the NSPS section of the CAA. CAA §169(2)(C), 42 U.S.C. §7479(2)(C), specifies that that definition applies as well within the Prevention of Significant Deterioration portion of the statute. EPA and state air pollution control agencies have interpreted this definition to implement NSR through regulations and policy guidance. EPA's interpretation of *modification* under the NSR program has been subject to various legal challenges.