

Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units

Page 1 of 43

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[EPA-HQ-OAR-XXXX: FRL-XXXX-XX-XXX]

RIN 2060-AT55

Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed Rule.

SUMMARY: In this action, the U.S. Environmental Protection Agency (EPA) is proposing to repeal the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (EGUs), commonly referred to as the Clean Power Plan, as promulgated October 23, 2015.

DATES: Comments. Comments must be received on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Public Hearing. If anyone contacts us requesting a public hearing on or before **[INSERT DATE 15 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, we will hold a hearing. Additional information about the hearing, if requested, will be published in a subsequent **Federal Register** document.

ADDRESSES: Comments. Submit your comments, identified by Docket ID No. EPA-HQ-OAR-XXXX, at <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. The EPA may publish any comment received to its public docket. Do not submit electronically any information

you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the Web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

Instructions. Direct your comments on the proposed rule to Docket ID No. EPA-HQ-OAR-XXXX-XXXX. The EPA's policy is that all comments received will be included in the public docket and may be made available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <http://www.regulations.gov> or email. The <http://www.regulations.gov> Web site is an "anonymous access" system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through <http://www.regulations.gov>, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for

clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket. The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-XXXX-XXXX. The EPA has previously established a docket for the October 23, 2015, Clean Power Plan under Docket ID No. EPA-HQ-OAR-2013-0602. All documents in the docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy form. Publicly available docket materials are available either electronically at <http://www.regulations.gov> or in hard copy at the EPA Docket Center (EPA/DC), EPA WJC West Building, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

Submitting CBI. Do not submit information that you consider to be CBI electronically through <http://www.regulations.gov> or email. Send or deliver information identified as CBI to only the following address: OAQPS Document Control Officer (Room C404-02), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; Attn: Docket ID No. EPA-HQ-OAR-XXXX-XXXX.

Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD-ROM that you mail to the EPA, mark the outside of the disk or CD-ROM as CBI and then identify electronically within the disk or CD-ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. If you submit a CD-ROM or disk that does not contain CBI, mark the outside of the disk or CD-ROM clearly that it does not contain CBI. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations part 2.

Acronyms and Abbreviations. A number of acronyms and abbreviations are used in this preamble. While this may not be an exhaustive list, to ease the reading of this preamble and for reference purposes, the following terms and acronyms are defined:

BACT	Best available control technology
BDT	Best demonstrated technology
BSER	Best system of emission reduction
CAA	Clean Air Act
CBI	Confidential Business Information
CFR	Code of Federal Regulations
CO ₂	carbon dioxide
CPP	Clean Power Plan
EGU	Electric utility generating unit
EPA	U.S. Environmental Protection Agency
GHGs	Greenhouse Gases
MACT	Maximum achievable control technology
NTTAA	National Technology Transfer and Advancement Act
NESHAP	National emission standards for hazardous air pollutants
OMB	Office of Management and Budget
PRA	Paperwork Reduction Act
RFA	Regulatory Flexibility Act
RIA	Regulatory Impact Analysis
UMRA	Unfunded Mandates Reform Act

Organization of This Document. The following outline is provided to aid in locating information in this preamble.

- I. Executive Summary
- II. Background
 - A. The CPP
 - B. Judicial Challenge to the CPP
 - C. Executive Order 13783 and EPA Review of the CPP
- III. Basis for Proposed Repeal of the CPP
 - A. Statutory Text
 - B. Legislative History
 - C. Prior Agency Practice
 - D. Statutory Context
 - E. Broader Policy Concerns
 - F. Proposed Rescission of Legal Memorandum
 - G. Conclusion
- IV. Statutory and Executive Order Reviews
 - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review
 - B. Paperwork Reduction Act (PRA)
 - C. Regulatory Flexibility Act (RFA)
 - D. Unfunded Mandates Reform Act (UMRA)
 - E. Executive Order 13132: Federalism
 - F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
 - G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
 - H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
 - I. National Technology Transfer and Advancement Act (NTTAA)
 - J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
 - V. Statutory Authority

I. Executive Summary

By this notice, the EPA is proposing to repeal the Clean Power Plan (CPP). *See* 80 FR 64,662 (Oct. 23, 2015). In accordance with Executive Order 13783, 82 FR 16,093 (Mar. 31, 2017), the EPA has reviewed the CPP and is initiating this action based on the outcome of that review. Specifically, the EPA proposes a change in the legal interpretation as applied to section 111(d) of the Clean Air Act (CAA), on which the CPP was based, to an interpretation that the Agency proposes is consistent with the Act's text, context, structure, purpose, and legislative

history, as well as with the Agency's historical understanding and exercise of its statutory authority. Under the interpretation proposed in this notice, the CPP exceeds the EPA's statutory authority and would be repealed. The EPA welcomes comment on the legal interpretation addressed in this proposed rulemaking.

The EPA has not determined whether it will promulgate a rule under section 111(d) to regulate greenhouse gas (GHG) emissions from existing EGUs, and, if it will do so, when it will do so and what form that rule will take. The EPA is considering whether it is appropriate to propose such a rule and is intending to issue an Advance Notice of Proposed Rulemaking (ANPRM) in the near future. That ANPRM will solicit information on systems of emission reduction that are in accord with the legal interpretation proposed in this notice (i.e., those that are applicable at and to an individual source). The ANPRM will also solicit information on compliance measures and state-planning requirements. However, the EPA is not soliciting comments on such information with this proposal.

CAA section 111(d) requires the EPA to promulgate emission guidelines for existing sources that reflect the "best system of emission reduction" (BSER) under certain circumstances. Notwithstanding the CPP, all of the EPA's other CAA section 111 regulations are based on a BSER consisting of technological or operational measures that can be applied to or at a single source.¹ The CPP departed from this practice by instead setting carbon dioxide (CO₂) emission guidelines for existing power plants that can only realistically be effected by measures that cannot be employed to, for, or at a particular source. Instead, the CPP encompassed measures that would generally require power generators to change their energy portfolios through

¹ This is true not only for all of the handful of existing 111(d) regulations issued prior to the CPP, but also of the much larger set of new-source performance standards issued under CAA section 111(b), which are predicated on the same key statutory term "best system of emission reduction."

generation-shifting (rather than better equipping or operating their existing plants), including through the creation or subsidization of significant amounts of generation from power sources entirely outside the regulated source categories, such as solar and wind energy. This raised substantial concerns that the CPP would necessitate changes to a State’s energy policy, such as a grid-wide shift from coal-fired to natural gas-fired generation, and from fossil fuel-fired generation to renewable generation.

The Executive Order directs the EPA to determine whether the CPP exceeds the bounds of the authority delegated to the Agency by Congress. *See* Executive Order 13783, Sections 1(e) and 4(c). In the course of this review, the EPA is reconsidering the legal interpretation underlying the CPP and is proposing to interpret the phrase “best system of emission reduction” in a way that is consistent with the Agency’s historical practice of determining a BSER by considering only measures that can be applied to or at the source. As discussed in more detail below, under the interpretation proposed here the CPP exceeds the bounds of the statute. Consistent with this proposed interpretation, we propose to repeal the CPP and rescind the accompanying legal memoranda.

II. Background

A. The CPP

The EPA promulgated the CPP under section 111 of the CAA. 42 U.S.C. § 7411. CAA section 111(b) authorizes the EPA to issue nationally applicable new source performance standards limiting air pollution from “new sources” in source categories that cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. *Id.* § 7411(b)(1). In 2015, the EPA issued such a rule for CO₂ emissions from certain new fossil fuel-

fired power plants² in light of the Agency’s assessment “that [greenhouse gases] endanger public health, now and in the future.” Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Generating Units, 80 FR 64,510, 64,518 (Oct. 23, 2015) (New Source Rule); *see also* Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 FR 66,496 (Dec. 15, 2009).³ Under certain circumstances, when the EPA issues a CAA section 111(b) standard, the EPA must then prescribe CAA section 111(d) regulations under which each State must submit a plan to establish standards for existing sources in the same category. 42 U.S.C. § 7411(d)(1). The EPA relied on that authority to issue the CPP, which, for the first time, required States to submit plans specifically designed to limit CO₂ emissions from certain fossil fuel-fired power plants.

The CPP established emission guidelines for States to follow in limiting CO₂ emissions from those plants. These emission guidelines included nationally uniform CO₂ emission performance rates for two subcategories of existing fossil fuel-fired power plants: electric utility steam generating units and stationary combustion turbines. *See* 80 FR at 64,707.

In the CPP, the EPA determined that the BSER for CO₂ emissions from existing fossil fuel-fired power plants was the combination of emission rate improvements and limitations on overall emissions by affected power plants that can be accomplished through a combination of three sets of measures, which the EPA called “building blocks”:

² The rule identified “[f]ossil fuel-fired EGUs” as “by far the largest emitters of [greenhouse gases] among stationary sources in the U.S., primarily in the form of CO₂.” 80 FR 64,510, 64,522 (Oct. 23, 2015).

³ The substance of the 2009 Endangerment Finding is not at issue in this proposed rulemaking, and we are not soliciting comment on the EPA’s assessment of the impacts of greenhouse gases with this proposal.

1. Improving heat rate at affected coal-fired steam generating units;
2. Substituting increased generation from lower-emitting existing natural gas combined cycle units for decreased generation from higher-emitting affected steam generating units; and
3. Substituting increased generation from new zero-emitting renewable energy generating capacity for decreased generation from affected fossil fuel-fired generating units. *Id.* at 64,707.

While building block 1 constituted measures that could be applied directly to a source—that is, integrated into its design or operation—building blocks 2 and 3 employed measures that departed from this traditional, source-specific approach to regulation and that were expressly designed to shift the balance of coal-, gas-, and renewable-generated power at the grid-wide level, subjecting these building blocks to claims that they constituted energy, rather than environmental, policy.

That the CPP depends on the employment of measures that cannot be applied at and to an individual source is evident from its treatment of coal-fired power plants. The rule established performance standards for coal-fired plants assuming a uniform emissions rate well below that which could be met by existing units through any retrofit technology of reasonable cost available at the time. This means that, in order to comply, many owners or operators of existing coal-fired units were expected to shift generation from such units to gas-fired units or to renewable generation. Similarly, the rule contemplated that gas-fired units would shift generation to renewable generation. The rule therefore is formulated in reliance on and anticipation of actions taken across the electric grid, rather than actions taken at and applied to individual units.

B. Judicial Challenge to the CPP

Due to concerns about the EPA's legal authority and record, 27 States and a number of other parties sought judicial review of the CPP in the United States Court of Appeals for the District of Columbia Circuit. *West Virginia v. EPA*, No. 15-1363 (and consolidated cases) (D.C. Cir.). On February 9, 2016, the Supreme Court stayed implementation of the CPP pending judicial review. Order in Pending Case, *West Virginia v. EPA*, No. 15A773 (U.S. Feb. 9, 2016). The cases were argued before the D.C. Circuit, sitting *en banc*, on September 27, 2016. Following oral argument, the EPA moved to hold the cases in abeyance, and, on April 28, 2017, the court granted motions to hold the cases in abeyance for 60 days and directed the parties to file briefs addressing whether the cases should be remanded to the Agency rather than held in abeyance. Order, Docket Entry No. 1673071. On August 8, 2017, the court issued an order holding the cases in abeyance for a further 60-day period and directed the EPA to file status reports at 30-day intervals. Order, Docket Entry No. 1687838.

C. Executive Order 13783 and the EPA's Review of the CPP

On March 28, 2017, President Trump issued Executive Order 13783, which affirms the “national interest to promote clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation.” *See* Executive Order 13783, Section 1(a). The Executive Order directs all executive departments and agencies, including the EPA, to “immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law.” *Id.* Section 1(c). And the Executive Order further affirms that it is “the policy of the United States that necessary and appropriate environmental regulations comply with the law.” Moreover, the Executive Order

specifically directs the EPA to review and initiate reconsideration proceedings to “suspend, revise, or rescind” the CPP, “as appropriate and consistent with law.” *Id.* Section 4(a)-(c). (The Executive Order also directs the EPA to undertake this process of review and reconsideration with regard to the New Source Rule issued under CAA section 111(b), which was a condition precedent to the promulgation of the CPP.)

In a document signed the same day as Executive Order 13783, and published in the **Federal Register** at 82 FR 16,329 (Apr. 4, 2017), the EPA announced that, consistent with the Executive Order, it was initiating its review of the CPP and providing notice of forthcoming proposed rulemakings consistent with the Executive Order.⁴

The EPA has concluded its initial review of the CPP, as directed by Executive Order 13783. That review raised substantial concerns that the CPP is not consistent with the policy articulated in Section 1 of the Executive Order. *See* Executive Order 13783, Section 4(a). For example, numerous States, regulated entities and other stakeholders warned that the CPP threatened to impose massive costs on the power sector and consumers; invaded traditional areas of state regulation over the mix of energy generation within their borders, departed radically from prior regulatory practice and longstanding reading of the statute; and did not adequately ensure the national interest in affordable, reliable electricity, including from coal generation. *See id.* Section 1(b).

In the course of the EPA’s review of the CPP, the Agency also reconsidered its interpretation of CAA section 111, and it is on that basis that the Agency now proposes to repeal

⁴ The EPA also withdrew the proposed federal implementation plan, model trading rules, proposed amendments to certain regulations under 40 CFR subpart B implementing CAA section 111(d), and proposed rule regarding the Clean Energy Incentive Plan. 82 FR 16,144 (Apr. 3, 2017).

the CPP. Section 1 of the Executive Order recognizes that the EPA should, “to the extent permitted by law, . . . take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of Congress and the States concerning these matters in our constitutional republic.” *Id.* Section 1(d). As discussed below, the EPA proposes to determine that the CPP is not within Congress’s grant of authority to the Agency under the governing statute. It is not in the interests of the EPA, or in accord with its mission of environmental protection consistent with the rule of law, to expend its resources along the path of implementing a rule, receiving and passing judgment on state plans, or promulgating Federal plans in furtherance of a policy that is not within the bounds of our statutory authority.

The EPA is proposing to repeal the CPP in its entirety. The EPA proposes to take this action because it proposes to determine that the rule exceeds its authority under the statute, that those portions of the rule which arguably do not exceed its authority are not severable and separately implementable, and that it is not appropriate for a rule that exceeds statutory authority—especially a rule of this magnitude and with this level of impact on areas of traditional state regulatory authority—to remain in existence pending a potential, successive rulemaking process. Specifically, the performance standards that the CPP established for existing sources were predicated on a combined use of the three “building blocks” described above. Because, under the interpretation proposed today, the second and third “building blocks” exceed the EPA’s authority under CAA section 111, and because, as the EPA determined when it issued the CPP, the first “building block” as designed could not stand on its own if the other “building blocks” were repealed, any potential future rule that regulates GHG emissions from existing EGUs under CAA section 111(d) must begin with a fundamental reevaluation of appropriate and authorized control measures and recalculation of performance standards.

The EPA’s mission is to “protect and enhance the quality of the Nation’s air resources,” 42 U.S.C. § 7401(b)(1), but the Agency must do so within the authority delegated to it by Congress. To that end, “[a] primary goal” of the CAA “is to encourage or otherwise promote *reasonable* Federal, State, and local governmental actions, *consistent with the provisions* of [the CAA]” 42 U.S.C. § 7401(c) (emphases added). Where the EPA’s regulations exceed the Agency’s statutory authority, it is appropriate for the Agency to correct that error and consider what statutory tools are duly available to it, to ensure that its regulations are effective, enforceable, administrable, and grounded in valid authority. Accordingly, the EPA continues to consider whether it should issue another CAA section 111(d) rule addressing GHG emissions from existing EGUs and, if so, what would be the appropriate form and scope of that rule. *See, e.g., API v. EPA*, 52 F.3d 1113, 1119 (D.C. Cir. 1995) (“It is axiomatic that an administrative agency’s power to promulgate legislative regulations is limited to the authority delegated by Congress”) (internal citations omitted); *see also Michigan v. EPA*, 268 F.3d 1075 (D.C. Cir. 2001) (same). The EPA is engaged in the process of considering whether it is appropriate to propose such a rule, and is intending to issue an ANPRM in the near future to solicit information on systems of emission reduction that are in accord with the legal interpretation proposed in this notice (i.e., those that are applicable to and at an individual source), as well as information on compliance measures and state-planning requirements. This notice does not solicit comment on such issues, which will be open for comment in the ANPRM.

III. Basis for Proposed Repeal of the CPP

The basis for the proposed repeal of the CPP is the EPA’s proposed interpretation of CAA section 111, which is discussed in this notice. The EPA proposes to determine that this interpretation is the most appropriate reading of the statute in light of the text, its legislative

history, prior practice under CAA section 111, statutory context, and in consideration of broader policy implications. If the proposed interpretation is finalized, the CPP would be repealed.⁵

The EPA’s ability to revisit existing regulations is well-grounded in the law. Specifically, the EPA has inherent authority to reconsider, repeal, or revise past decisions to the extent permitted by law so long as the Agency provides a reasoned explanation. The CAA complements the EPA’s inherent authority to reconsider prior rulemakings by providing the Agency with broad authority to prescribe regulations as necessary. 42 U.S.C. § 7601(a). The authority to reconsider prior decisions exists in part because the EPA’s interpretations of statutes it administers “[are not] instantly carved in stone,” but must be evaluated “on a continuing basis.” *Chevron U.S.A. Inc. v. NRDC, Inc.*, 467 U.S. 837, 863-64 (1984). This is true when, as is the case here, review is undertaken “in response to . . . a change in administrations.” *National Cable & Telecommunications Ass’n v. Brand X Internet Services*, 545 U.S. 967, 981 (2005). Indeed, “[a]gencies obviously have broad discretion to reconsider a regulation at any time.” *Clean Air Council v. Pruitt*, 862 F.3d 1, 8-9 (D.C. Cir. 2017).

After reconsidering the statutory text, context, and legislative history, and in consideration of the EPA’s historical practice under CAA section 111 as reflected in its other existing CAA section 111 regulations, the Agency proposes to return to a reading of CAA section 111(a)(1) (and its constituent term, “best system of emission reduction”) as being limited to emission-reduction measures that can be *applied to or at* an individual stationary source. That

⁵ Under the EPA’s proposal, the Agency lacks authority to consider measures other than those that apply at, to, and for a particular source when determining the BSER. Because the CPP is in large part premised on such measures, if the proposed interpretation is finalized, the CPP would be repealed. Although on-site efficiency measures may be considered in a future CAA section 111 standard, as explained in the CPP, building block 1, as analyzed, cannot stand on its own. 80 FR 64,758 n.444; *see also id.* at 64,658 (discussing severability of the building blocks). As noted above, the EPA is not taking comment on on-site efficiency measures with this proposal.

is, such measures must be based on a physical or operational change to a building, structure, facility, or installation at that source, rather than measures that the source's owner or operator *can implement on behalf of* the source at another location. The EPA believes that this is the best construction of CAA section 111(a)(1), as explained in detail below, for several reasons. First, it accords with the meaning and application of relevant terms and phrases in CAA section 111 as they are used in other, related sections of the CAA. Second, it aligns with the Congressional intent underlying CAA section 111 as informed by relevant legislative history. Third, it aligns with the EPA's prior understanding of CAA section 111 as reflected in the Agency's prior regulatory actions.⁶ Fourth, it avoids illogical results when considered in light of other provisions of the statute. Finally, it avoids a policy shift of great significance for the relationship between the federal government and the States and avoids conflict with other federal legislation and interference with the separate role and jurisdiction of another federal agency, where there is inadequate indication that Congress intended to authorize the EPA to take actions leading to those results.

A. Statutory Text

The phrase "system of emission reduction" provides the starting point for developing performance standards under CAA section 111. An expansive interpretation of the phrase "system of emission reduction" would yield a greater universe of measures that could be considered to establish emission limits; conversely, a narrower reading would have the opposite effect. *See* 80 FR at 64,720 (explaining that the "first step" is to "identify 'system[s] of emission

⁶ As noted above, EPA's prior understanding of this statutory section and its key term "best system of emission reduction" is reflected not only in the handful of existing CAA section 111(d) rules that predated the CPP, but also in the much larger set of new-source rules under CAA section 111(b).

reduction’ that have been ‘adequately demonstrated’ for a particular category.”⁷ Thus, the phrase’s scope correlates directly with the breadth of the Administrator’s discretion in determining what system is the best for purposes of establishing the degree of emission limitation to be reflected in a standard of performance. *See* 42 U.S.C. § 7411(a)(1) (“[t]he term ‘standard of performance’ means a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the [BSER]”).

Though not further defined in the Act, the phrase “system of emission reduction” cannot be read in isolation. In promulgating the CPP, the EPA explained that the phrase carries important limitations. *Id.* at 64,762. Specifically, the EPA reasoned that “because the ‘degree of emission limitation’ must be ‘*achievable* through the *application* of the best system of emission reduction,’ (emphasis added), the ‘system of emission reduction’ must be limited to a set of measures that work together to reduce emissions that are implementable by the sources themselves.” *Id.* “As a practical matter,” the EPA continued, “the ‘source’ includes the ‘owner or operator’ of any building, structure, facility, or installation for which a standard of performance is applicable.” *Id.* “Thus, a ‘system of emission reduction’ for purposes of CAA section 111(d) means a set of measures that source owners or operators can implement to achieve an emission limitation applicable to their existing source.” *Id.* In reaching this conclusion, the EPA noted that “the terms ‘implement’ and ‘apply’ are used interchangeably.” *See* Legal Memorandum at 84 n.175. Here, contrary to the conclusion in the CPP, the EPA is proposing to interpret the phrase “through the application of the best system of emission reduction” as requiring that the BSER be

⁷ Historically, this step is referred to as a “technology review,” and leads to a level of control “commonly referred to as best demonstrated technology (BDT).” *See* Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Review, 76 FR 52738, 52741 (Aug. 23, 2011); Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 FR 44354, 44486 (July 30, 2008).

something that can be *applied to* or *at* the source and not something that the source’s owner or operator can implement *on behalf of* the source at another location. Interpreting the statute as carrying this additional limiting principle ensures conformity with the statutory context and congressional intent.

The EPA’s proposed interpretation is also guided by CAA section 111(d)’s direction that standards be established “*for any existing source,*” and not for other sources or entities. *See also* 42 U.S.C. § 7401(a)(3) (finding that “air pollution control *at its source* is the primary responsibility of States and local governments”) (emphasis added). Further, the “for any existing source” phrasing in CAA section 111(d) mirrors the “for new sources” phrasing in the first sentence of section 111(b)(1)(B). In other words, as applied to both new source standards and existing source standards promulgated under CAA section 111, if standards must be set *for* individual sources, it is reasonable to expect that such standards would be predicated on measures that can be applied to or at those same individual sources.

Adopting a source-oriented reading of “through the application of the best system of emission reduction” also keeps CAA section 111 in line with other CAA standard-setting provisions. The term “application” is used throughout the statute in many different contexts. But under the CAA’s standard-setting provisions, it signals a physical or operational change to a source—for example, maximum achievable control technology (MACT) is developed “through application of measures, processes, methods, systems or techniques including, but not limited to, measures which—(A) reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications, (B) enclose systems or processes to eliminate emissions, (C) collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point, (D) are design, equipment, work practice, or

operational standards . . . , or (E) are a combination of the above;”⁸ best available control technology (BACT) is developed “through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control;”⁹ and motor vehicle and engine standards reflect the “application of technology,”¹⁰ and the “application of the requisite control measures” to specific sources.¹¹ In short, the term suggests that—while a source’s owner or operator indeed implements each of these measures—the measures should be *applied to* the source itself (*i.e.*, from the perspective of the source and not its owner or operator).

B. Legislative History

Even if the term “application” did not denote a source-oriented “system of emission reduction,” the term “system” too is historically rooted in a physical or operational change to the source itself. As discussed in the CPP, CAA section 111(a)(1)—particularly the phrase “system of emission reduction”—evolved from a joint conference between committees of the House and Senate during the 1970 CAA Amendments. 80 FR at 64,763–64. The underlying House bill provided that new sources must be “designed and equipped” to control emissions using “available technology.” H.R. Rep. No. 91-1146 (June 3, 1970), 1970 CAA Legis. Hist. at 900; see also H.R. 17255, § 5, 1970 CAA Legis. Hist. at 922. The Senate bill provided that standards of performance reflect achievable limits “through application of the latest available control technology, processes, operating methods, or other alternatives.” S. 4358, § 6, 1970 CAA Legis. Hist. at 555. Though the Senate’s formulation is broader than the House bill, “other alternatives”

⁸ 42 U.S.C. § 7412(d)(2).

⁹ 42 U.S.C. § 7479(e).

¹⁰ 42 U.S.C. § 7521(a)(3)(A)(i) (applying technology available by model year for mobile sources).

¹¹ 42 U.S.C. § 7521(a)(3)(D) (concerning rebuilding practices of heavy-duty engines).

should be interpreted *ejusdem generis* (of the same kind, class, or nature) with the preceding control techniques. “Control technology,” “processes,” and “operating methods” are properly read to denote measures applied at or to, and implementable at the level of, the individual source—and “other alternatives” should be read in the same fashion. Thus, the emission-reduction measures contemplated by the Senate also targeted a physical or operational change to the source itself. In short, both bills were premised on physical or operational changes that would be applied to a source, and there is no indication that the enacted phrase “system of emission reduction” was intended to expand the scope of CAA section 111 to authorize the EPA to determine that the BSER encompasses measures that extend beyond the source itself.¹²

The 1977 CAA Amendments do not undermine this understanding. Congress added the word “technological” to “system of emission reduction” in order to “upgrade” standards of performance “to require the use of the best technological system” and “preclude the use of low-

¹² “System” appears in a few places in the 1970 CAA Amendments. Most notably, Congress used the term throughout Title II, which sheds light on what Congress may have understood “system” to mean at the time. Specifically, section 202 of the CAA provided that “[s]uch standards shall be applicable to such vehicles and engines for their useful life . . . whether such vehicles and engines are designed as complete systems or incorporate devices to prevent or control such pollution.” H.R. Rep. No. 91-1783 (Dec. 17, 1970), 1970 CAA Legis. Hist. at 166. *See also, e.g.*, section 203, *id.* at 170 (“for the purpose of permitting modifications to the emission control device or system of such vehicle”); section 206, *id.* (“The Administrator shall test any emission control system incorporated in a motor vehicle or motor vehicle engine” and “the Administrator shall issue a verification of compliance with emission standards for such system when incorporated in vehicles”). In each of these instances, the word “system” appears to be more expansive than a discrete emission-control device, but is nonetheless a vital part of the source: the vehicle or vehicle engine. It is evident, therefore, that Congress associated the word “system” with phrases that correspond with a source-specific scope. In CAA section 111, the word “system” as used within the phrase “best system of emission reduction” and its relevance in setting standards of performance, which are themselves established “for new sources” and “for any existing source,” similarly suggest that a “system of emission reduction” is applied to or at the source.

sulfur coal alone as a means of compliance.”¹³ H.R. Rep. No. 95-654 (Aug. 3, 1977), 1977 CAA Legis. Hist. at 510. Thus, as explained in the House report, the addition of the word “technological” was intended to prohibit sole reliance on a particular control technique from being considered the BSER. It was not an indication that CAA section 111 previously authorized beyond-the-source controls. The question of whether a control technique or emission reduction system is or is not “technological” is a distinct question from whether it applies at and is limited to the level of the individual source.

Though the 1990 CAA Amendments removed the term “technological” from CAA section 111(a)(1), there is no indication that Congress intended to expand the phrase “system of emission reduction” beyond a physical or operational change to the source. With the newly enacted Acid Rain provisions under Title IV (which instituted a SO₂ cap-and-trade program for fossil fuel-fired power plants), Congress no longer required the use of technological controls under CAA section 111, but provided that if the SO₂ cap for new sources was abolished, then CAA section 111 would again impose a technological standard. 1990 CAA Amendments, Pub.

¹³ In the CPP, the EPA explained that Congress added “precombustion cleaning or treatment of fuels” to CAA section 111 because it recognized that even technological “systems of emission reduction” could involve actions that were implemented on behalf of the source and not merely applied to the source. 80 FR 64,765; Legal Memorandum at 87, 129. First, Congress added “precombustion cleaning or treatment of fuels” to the definition of “technological system of continuous emission reduction” in CAA section 111(a)(7) because Congress also redefined “standard of performance” to require fossil fuel-fired power plants to achieve “a percentage reduction in the emissions . . . which would have resulted from the use of fuels which are not subject to treatment prior to combustion.” 1977 CAA Amendments, Pub. L. 95-95, § 109, 91 Stat. 685, 700 (Aug. 7, 1977). Second, precombustion cleaning or treatment of fuels is integral to the operation of a regulated source and does not necessarily occur off-site of an existing source. And regardless of where these preparatory measures are conducted, the *use* of the fuels is a measure applicable to and performed at the level of, and at or within, the bounds of an individual source. Finally, to the extent that fuel cleaning does occur off-site, this demonstrates that Congress understood CAA section 111 to be limited to source-specific measures unless specific authorization was otherwise provided.

L. 101-549, § 403, 104 Stat. at 2631 (Nov. 15, 1990). In effect, this authorized the EPA to consider revising standards to once again allow new sources to use low-sulfur coal in lieu of installing the latest technological control. But there is nothing in the statutory text or its legislative history to suggest that CAA section 111 standards may be based on something other than a physical or operational change to the source itself.

C. Prior Agency Practice

Associating a “system of emission reduction” with a physical or operational change to the source itself reflects the EPA’s historical understanding of this statutory provision as reflected in its prior regulatory actions under this statutory provision. Indeed, the EPA has issued numerous rules under CAA section 111 (both the limited set of existing-source rules under CAA section 111(d) and the much larger set of new-source rules under CAA section 111(b)). All those rules limited their BSER to physical or operational measures taken at and applicable to individual sources, with only one exception—a rule that was vacated by the D.C. Circuit on other grounds¹⁴.

The EPA first interpreted the phrase “system of emission reduction” as it relates to CAA section 111(d) when the Agency promulgated procedures and requirements for the submittal of state plans in 1975. At the time of the 1970 CAA Amendments, CAA section 111(d) required States to submit plans that established “emission standards” for existing sources, a term that the statute did not define. In its 1974 notice of proposed rulemaking, the EPA interpreted that term by explaining that CAA “section 111(d) permits [the Administrator] to approve State emission standards only if they reflect application of the best *systems of emission reduction* (considering

¹⁴ The Clean Air Mercury Rule, 70 FR 28, 606 (May 18, 2005), as discussed in footnote 21, was still ultimately predicated on measures taken at the level of individual sources, an approach fundamentally different than the CPP’s second and third “building blocks.”

the cost of such reduction) that are available for designated facilities.” 39 FR 36,102, 36,102 (Oct. 7, 1974) (emphasis added). By interpreting “emission standards” as requiring application of the BSER, however, many commenters were confused and assumed that the degree of control required would be the same as that required by a “standard of performance” for new sources under CAA section 111(b), which Congress had explicitly defined in that way.¹⁵ To clear up this confusion, the EPA explained that, “[a]lthough the general principle (application of best adequately demonstrated *technology*, considering costs) will be the same in both cases, the degrees of control represented by the Agency’s emission guidelines will ordinarily be less stringent than those required by standards of performance for new sources because the costs of *controlling existing facilities* will ordinarily be greater than those for control of new sources.”¹⁶

¹⁵ Currently, the same statutory definition in CAA section 111(a)(1) applies to new and existing sources, and we can identify no legislative history to suggest that Congress had a different scope in mind for existing sources. We think it unlikely that Congress would have intended a significantly broader scope without indicating some intent to do so. Indeed, the opposite may be true. In 1977, Congress expressly declined to apply the term “technological” to existing source performance standards. But after the 1990 CAA Amendments, the same definition applies to new *and* existing source performance standards.

¹⁶ The EPA’s historical view that emission guidelines for existing sources would be less stringent than standards of performance for new sources also weighs against the expansive interpretation of “system of emission reduction” adopted in the CPP. As many commenters on that rule pointed out, the EPA’s approach in the CPP, relying on measures beyond those that can be applied to and at an individual source, resulted in the uniform performance rates prescribed by the 111(d) emission guidelines being more stringent than the standards of performance the Agency promulgated for new sources under CAA section 111(b). 80 FR at 64,785-87. We justified this result in two primary ways. First, we pointed out the timing differences between the two rules’ requirements, noting that the CAA section 111(b) standards of performance were applicable as of the date of the proposed rule, whereas the CPP’s requirements were not applicable until seven years after promulgation, with final compliance due in 2030. *Id.* at 64,785. Thus, we concluded that the proper “point of comparison” was the year 2023, right after the first obligations under the CPP were due and the Agency’s eight-year review of the CAA section 111(b) standards would be complete. *Id.* Second, we argued that the CPP contained sufficient flexibilities, both for sources and for States, that any comparison between the two rules was inapt. *Id.* at 64,785-86. The EPA has reconsidered these arguments and now considers them insufficient justification for abandoning the Agency’s historical view of the appropriate relative stringency of CAA section 111(b) and 111(d) requirements. With respect to timing, it is entirely speculative that some *future*

40 FR 53,340, 53,341 (Nov. 17, 1975) (emphases added). The EPA also described the legislative history of CAA section 111, explaining that Congress “intended the *technology-based approach* of that section to extend (making allowances for the costs of *controlling existing sources*) to action under section 111(d). In this view, it was unnecessary . . . to specify explicit substantive criteria in section 111(d) because the intent to require a *technology-based approach* could be inferred from placement of the provision in section 111.” *Id.* at 53,342 (emphases added); *see also id.* at 53,343 (“[T]he approach taken in section 111(d) may be viewed as . . . [a] decision[] . . . [t]o adopt a technology-based approach similar to that for new sources.”). Thus, in 1975, the EPA clearly interpreted the phrase “system of emission reduction” to be technology-based and source-focused for both CAA section 111(b) standards of performance and CAA section 111(d) emission standards.¹⁷ The EPA believes that the Agency’s historical interpretation of CAA section 111(d) and the phrase “system of emission reduction,” expressed at the point in time closest to when Congress enacted those provisions, is the most appropriate reading of the statute.

D. Statutory Context

standard of performance promulgated under CAA section 111(b) might be more stringent than the *current* CAA section 111(d) emission guidelines. And while the CPP does contain certain flexibilities to ease the burdens of compliance, such as phased-in compliance deadlines, those flexibilities were only necessary because actual affected sources could not meet the overly stringent uniform performance rates (or the equivalent rate- or mass-based goals) without them.¹⁷ Additionally, the EPA historically equated the phrase “system of emission reduction” with the CAA’s “best available retrofit technology” (BART) requirement. *See* 45 FR 80,084, 80,090 (Dec. 2, 1980) (*codified* at 40 CFR § 51.301) (defining BART as an “emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by an existing stationary facility”). While the EPA’s BART regulations permit States, subject to certain conditions, to implement trading programs and other “alternative” measures in lieu of BART, *see* 40 CFR § 51.308(e)(2), these measures are not considered to be BART. Instead, States may adopt them “rather than requiring sources to *install, operate, and maintain BART,*” but only if they will achieve “greater reasonable progress” toward Congress’s national visibility goal. *Id.* (emphasis added).

The EPA’s proposed interpretation of CAA section 111 is reinforced by the section’s broader statutory context. Indeed, interpreting CAA section 111(a)(1) to extend beyond-the-source could have the unintended consequence of imposing greater emissions reductions under CAA section 111 than could be established as the “best available control technology” (“BACT”) under CAA section 165, which relies on CAA section 111 standards as a floor.¹⁸ *See* 40 CFR § 52.21(b)(12); *see also* 40 C.F.R. § 51.165(a)(1)(xiii) (defining “lowest achievable emission rate, *i.e.*, LAER, as in no event authorizing emissions “in excess of the amount allowable under an applicable new source performance standard”). BACT requires certain major emitting sources¹⁹ to achieve an emission limitation “through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control.” 42 U.S.C. § 7479(3). Traditionally, the EPA has recommended that permitting authorities “conduct a separate BACT analysis *for each emissions unit* at a facility,” but more recently has interpreted CAA section 169 to include control methods that can be used facility-wide. *EPA, PSD and Title V Permitting Guidance for Greenhouse Gases*, 22-23 (Mar. 2011). Nonetheless, the EPA has consistently held that BACT encompasses “all ‘available’ control options . . . that have the potential for practical *application to the emissions unit* and the regulated pollutant under evaluation.” *Id.* at 24.

¹⁸ Although BACT applies to new and modified sources, like CAA section 111(b), the EPA can discern no textual basis in CAA section 111(a)(1) to interpret the BSER differently for purposes of CAA section 111(d). Indeed, the EPA ruled out generation-shifting measures for new sources based on practicability rather than legal grounds. *See* Legal Memorandum at 1-5. Accordingly, interpretative constraints applicable to CAA section 111(a)(1) for purposes of CAA section 111(b) should also apply for purposes of CAA section 111(d).

¹⁹ 42 U.S.C. § 7479(1) (defining “major emitting facility” as sources within certain source categories “which emit, or have the potential to emit, one hundred tons per year or more of any air pollutant” or “any other source with the potential to emit two hundred and fifty tons per year or more of any air pollutant.”).

In other words, BACT must be applied to the source itself (on a unit-specific or facility-wide basis) and does not include control options that are beyond-the-source, such as generation-shifting measures.²⁰ Accordingly, the EPA proposes to determine that the statutory scheme is appropriately read to harmonize these provisions. Under this interpretation, the BSER should be interpreted as a source-specific measure, in light of the fact that BACT standards, for which the BSER is expressly linked by statutory text, are unambiguously intended to be source-specific.

Neither Title IV nor the interstate-transport rulemakings (*e.g.*, the Cross-State Air Pollution Rule) supports a different interpretation of CAA section 111. In the CPP, the EPA identified the Acid Rain program under Title IV and the various interstate-transport rulemakings as evidence of the viability of cap-and-trade programs for the utility power sector. 80 FR 64,696–97. But recognizing “the long history of trading” under Title IV and CAA section 110(a)(2)(D)(i)(I) to demonstrate the “achievability” of the “performance rates” in the CPP does not clarify the interpretive question the Agency faces under CAA section 111(a)(1)—*i.e.*, what is the “best system of emission reduction” that can be applied to an affected source? To the contrary, Congress expressly established the cap-and-trade program under Title IV, 42 U.S.C. §§ 7651-7651o, and expressly authorized the use of “marketable permits” to implement ambient air quality standards under CAA section 110, *id.* at § 7410(a)(2)(A). We think it unlikely that Congress would have silently authorized the Agency to point to trading in order to justify generation-shifting as a “system of emission reduction.”²¹

²⁰ See U.S. EPA, *PSD and Title V Permitting Guidance for Greenhouse Gases*, 24 (Mar. 2011) (BACT encompasses “all ‘available’ control options . . . that have the potential for practical application to the emissions unit”).

²¹ Even the cap-and-trade program promulgated in the since-vacated Clean Air Mercury Rule, was “based on control technology available” for installation at individual existing sources. 70 FR 28,617. It was not predicated on a BSER that encompassed measures that could not be applied at or to a particular source.

Therefore, the EPA proposes that the BSER be limited to measures that physically or operationally can be applied to or at the source itself to reduce its emissions. Generation shifting—which accounts for a significant percentage of the emissions reductions projected in the CPP and without which individual sources could not meet the CPP’s requirements—fails to comply with this limitation. Accordingly, the EPA proposes to repeal the CPP.

E. Broader Policy Concerns

Finally, the EPA’s proposed interpretation is more consistent with certain broader policy concerns of the Agency and stakeholders. Those policy concerns are discussed below, and the EPA invites comment generally on the policy implications of the legal interpretation proposed in this action. The EPA notes that States, the regulated community, and other commenters identified potentially serious economic and political implications arising from the CPP’s reliance on measures that extend beyond those that can be applied at and to a particular, individual source, such as generation shifting, which in turn raised questions as to whether the interpretations underlying the CPP violated the “clear statement” rule. *See Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2444 (2014) (quoting *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 160 (2000)) (holding that, under certain circumstances, an interpretation that would have “vast ‘economic and political significance’” requires a clear statement from Congress assigning the agency that authority). The EPA seeks comment on whether the interpretation proposed today, by substantially diminishing the potential economic and political consequences of any future regulation of CO₂ emissions from existing fossil fuel-fired EGUs, has the advantage of not implicating this doctrine, in that it would avoid potentially transformative economic, policy, and political significance in the absence of a clear Congressional statement of intent to confer such authority on the Agency.

F. Proposed Rescission of Legal Memorandum

In addition, while the EPA is authorized to regulate emissions from sources in the power sector and to consider the impact of its standards on the generation mix in setting standards to avoid negative energy impacts, regulation of the nation's generation mix itself is not within the Agency's authority. Regulation of the energy sector *qua* energy sector is generally undertaken by the Federal Energy Regulatory Commission (FERC) and States, depending on which markets are being regulated. The EPA recognizes that Part II of the Federal Power Act (sections 201-223 (16 U.S.C. §§ 824-824w)) establishes long-recognized regulatory authority for the FERC over electric utilities engaged in interstate commerce, including wholesale sales, transmission of electric energy in interstate commerce, and reliability. Moreover, CAA section 310 of the CAA, 42 U.S.C. § 7610(a), states that the Act "shall not be construed as superseding or limiting the authorities and responsibilities, under any other provision of law, of the Administrator or any other Federal officer, department, or agency." The EPA solicits comment on whether the CPP exceeded the EPA's proper role and authority in this regard and whether the Agency's proposed reading in this notice, which limits the BSER to measures that can be applied to or at individual sources, would ensure that CAA section 111 has not been construed in a way that supersedes or limits the authorities and responsibilities of the FERC or that infringes upon the roles of the States.

As part of this action, the EPA is also proposing to rescind the documents in the CPP docket titled "Legal Memorandum for Proposed Carbon Pollution Emission Guidelines for Existing Electric Utility Generating Units" (in the docket for the proposed rule) and "Legal Memorandum Accompanying Clean Power Plan for Certain Issues" (a supplementary document in the docket for the final rule), to the extent those memoranda are inconsistent with the statutory

interpretation that the EPA has proposed in this notice. The EPA is proposing to rescind these documents because, as is evident from the discussion above, they are in large part and in fundamental premise inconsistent with the statutory interpretation proposed here.

Specifically, significant portions of the documents are devoted to arguing that the BSER on which performance standards under CAA section 111(d) is based can encompass measures other than physical or operational changes taken at the level of and applicable to an individual source. The point of departure for this interpretation is a perceived ambiguity in the word “system” within the phrase “best system of emissions reduction.” For the reasons stated above, the EPA is proposing to determine that, in full consideration of the statutory text and context, the legislative history, the Agency’s historical practice under CAA section 111(d), and certain policy consequences of the statutory interpretation underlying the CPP, the best reading off the statute is that the BSER does not encompass the types of measures that constitute the second and third “building block” of the CPP. To the extent that the statutory interpretation embodied in the legal memoranda contradicts or is otherwise inconsistent with the interpretation proposed in this notice, the EPA intends that the interpretation proposed here, to the extent it is finalized, shall supersede the interpretation in the memoranda. The EPA welcomes comment on this proposed interpretation.

Further, other significant portions of the memoranda, especially the supplemental one, are concerned with defending particular aspects of the CPP’s constituent “building blocks.” For the reasons stated above, the EPA is proposing to determine that the second and third “building blocks” exceed the Agency’s authority under the statute, and, in accord with the Agency’s position when it issued the CPP, that the first “building block” cannot stand on its own in the

form in which it was issued. The two legal memoranda are therefore in material part either inconsistent with this proposal or rendered moot by it.

Accordingly, to the extent that the EPA finalizes its statutory interpretation as proposed in this notice, the Agency proposes to rescind the documents to the extent they are inconsistent with the finalized positions. The EPA is intending to issue an ANPRM in the near future to solicit comment on the scope of a potential rulemaking to regulate GHG emissions from existing EGUs. Other issues discussed in the memoranda may be relevant to such a potential rulemaking, and the EPA's position with regard to those issues can be determined in the course of any such rulemaking, as required and appropriate.

G. Conclusion

For these reasons discussed above, the EPA is proposing that the BSER must be something that physically or operationally changes the source itself, and that is taken at or applied to individual, particular sources. Generation shifting—which accounts for a significant percentage of the emissions reductions projected in the CPP and without which sources could not meet the CPP's requirements and State plans could not be approved—fails to comply with this limitation. As explained in the CPP and the accompanying Legal Memorandum, generation shifting is accomplished through actions that owners or operators take on behalf of an affected source that might lead only indirectly to emissions reductions from the source. For example, owners or operators were expected to purchase power from qualifying lower-emitting generators or invest in lower-emitting generation, or purchase emissions credits. *See* 80 FR at 64,796-97 (building block 2); *id.* at 64,804-06 (building block 3); and Legal Memorandum, 137-48. But none of these options involves a physical or operational change applicable to the source itself. Accordingly, the EPA proposes to repeal the CPP and supersede the legal interpretations presented in it and the accompanying Legal Memorandum.

IV. STATUTORY AND EXECUTIVE ORDER REVIEWS

Additional information about these statutes and Executive Orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This proposed action is an economically significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review. Any changes made in response to OMB recommendations have been documented in the docket. The EPA prepared an analysis of the avoided compliance costs and forgone benefits associated with this action in the analysis years of 2020, 2025, and 2030. This analysis, which is contained in the Regulatory Impact Analysis (RIA) for this rulemaking is consistent with Executive Order 12866 and is available in the docket.

In addition to presenting results from the 2015 CPP RIA, this RIA uses two additional quantitative approaches to analyze the effects of the CPP in order to present information on the potential effects of the proposed repeal of the CPP. The first approach involves a modest reworking of the 2015 CPP RIA to increase transparency and illuminate the uncertainties associated with assessing benefits and costs of the CPP, as reflected in the 2015 analysis, as well as analyzing the potential effects of the CPP repeal. More specifically, this analysis increases transparency of the 2015 CPP analysis by presenting the energy efficiency cost savings as a benefit rather than a cost reduction and provides a bridge to future analyses that the agency is committed to performing. The current analysis also provides alternative approaches for examining the foregone benefits, including more clearly distinguishing the direct benefits from the co-benefits and exploring alternative ways to illustrate the impacts on the total net benefits of

the uncertainty in health co-benefits at various PM_{2.5} cutpoints. This approach shifts the focus to the domestic (rather than global) social cost of carbon, and employs both 3 percent and 7 percent discount rates. Finally, we consider that how changing market conditions and technologies may have affected future actions that may have been undertaken by states to comply with the CPP and how these changes may affect the potential benefits and costs of the CPP repeal.

The second approach uses the U.S. Energy Information Administration's (EIA) 2017 Annual Energy Outlook (AEO) projections to presents a series of observations on recent power sector trends and produce alternative estimates of the forgone benefits and avoided compliance costs arising from the proposed repeal of the CPP. We also provide a review of recent studies of the CPP's projected costs and CO₂ emission reductions performed by non-governmental institutions in order to provide a broader understanding of the uncertainties associated with the proposed repeal of the CPP.

The RIA presents several different estimates of avoided compliance costs using various accounting frameworks. A first set of avoided compliance costs is based upon estimates presented in the 2015 Final CPP RIA, and counts savings from energy efficiency programs as a benefit of the rule, not as a cost-savings. A second set of avoided compliance costs is based upon a comparison of the AEO2017 Reference Case (CPP) and the AEO2017 No CPP Case. Here, the accounting framework treats the value of reduced electricity demand from demand-side energy efficiency programs as a cost credit (or negative cost). However, the EPA was unable to approximate the value of energy cost savings attributable to the demand-side energy efficiency measures using the AEO2017-based information. Because the EPA could not make this adjustment to the benefits and costs estimates using the AEO2017 information, the 2015 CPP

RIA-based and AEO2017-based benefit and cost estimates cannot be directly compared with each other.

We estimate the forgone climate benefits from this proposed rulemaking using a measure of the domestic social cost of carbon (SC-CO₂), using estimates of forgone CO₂ emission reductions from both the 2015 RIA and the AEO2017 cases. The SC-CO₂ is a metric that estimates the monetary value of impacts associated with marginal changes in CO₂ emissions in a given year. The SC-CO₂ estimates used in this RIA focus on the direct impacts of climate change that are anticipated to occur within U.S. borders. As mentioned earlier, the EPA approximated the value of energy cost savings from the reduced demand attributable to the demand-side energy efficiency measures and this value is counted as a forgone benefit. Also, under this proposed repeal, the CPP would no longer reduce emissions of certain precursor pollutants (e.g., SO₂, NO_x, and directly emitted particles), which in turn would no longer lower ambient concentrations of PM_{2.5} and ozone. The RIA presents the estimated forgone health co-benefits associated with the projected changes in ambient air quality under the CPP. We estimate the forgone benefits using three alternative assumptions regarding the risk of PM-related premature death.²² The co-benefit analysis draws upon estimates of forgone SO₂ and NO_x emission reductions from both the 2015 RIA and the AEO2017 cases.

²² We first assume that populations are at risk of PM-related premature death at all levels of PM_{2.5}. This first approach is generally consistent with historical EPA practice. We next assume that the risk of PM-related premature death falls to zero at concentrations at or below the level of the two long-term epidemiological studies used to quantify risk (5.8 µg/m³ and 8 µg/m³, respectively). Finally, we assume that the risk of PM_{2.5}-related death falls to zero below the annual NAAQS (12µg/m³). To calculate the forgone co-benefits for this proposed rule, we applied a benefit-per-ton estimate corresponding to broad regions of the U.S. and that is based upon an emissions reduction scenario from the 2014 CPP proposal to the corresponding forgone emission reductions. As the benefit-per-ton estimates are based on a scenario that does not match the forgone emission reductions in this rulemaking, the estimates may over- or under-state the value of the forgone PM_{2.5} and ozone-related benefits. To the extent feasible, the EPA intends to perform full-scale photochemical air quality modeling to inform subsequent CPP-related regulatory analyses. Additionally, as part of a project now underway, the EPA is systematically evaluating the uncertainty associated with its technique for generating and applying this reduced-form technique for quantifying benefits, with the goal of better understanding the suitability of this and comparable approaches to estimating the health impacts of criteria pollutant emissions changes.

As the RIA analyzes costs and benefits applying a variety of different methods and discount rates, there is a relatively large number of results. We present the full suite of avoided compliance cost, forgone benefit, and net benefit results discussed in the RIA in Tables 1 through 3. Table 1 presents results for the rate-based illustrative plan scenario from the 2015 CPP RIA. Table 2 presents results for the mass-based illustrative plan scenario from the 2015 CPP RIA. Table 3 presents results based upon the EPA's analysis of the AEO2017 Reference Case (CPP) and the AEO2017 No CPP Case. The tables report both low and high estimates of foregone benefits. The low value represents the sum of the foregone CO₂, energy efficiency, PM_{2.5} co-benefits calculated using the Krewski et al. (2009) risk coefficient and ozone co-benefits calculated using the Bell et al. (2004) risk coefficient. The high value represents the sum of the foregone CO₂, energy efficiency, PM_{2.5} co-benefits calculated using the Lepeule et al. (2012) risk coefficient and ozone co-benefits calculated using the Levy et al. (2005) risk coefficient. Note again that, due to different accounting frameworks, benefits and costs presented in the EPA 2015 CPP RIA-based Tables 1 and 2 are not directly comparable to the AEO2017-based benefits and costs presented in Table 3.

Table 1 - Monetized Forgone Benefits, Avoided Compliance Costs, and Net Benefits based on Rate-Based Approach from 2015 CPP RIA (billions of 2011\$)

Year	Discount Rate	Benefit of Repeal: Avoided Costs	Cost of Repeal: Forgone Benefits		Net Benefits of Repeal	
			Low	High	Low	High
Forgone Health Co-Benefits (Full Range of Ambient PM_{2.5} Concentrations)						
2020	3%	\$3.7	\$2.3	\$3.4	\$0.3	\$1.4
	7%	\$4.2	\$1.9	\$3.0	\$1.2	\$2.3
2025	3%	\$10.2	\$18.0	\$28.4	(\$18.1)	(\$7.8)
	7%	\$14.1	\$16.2	\$25.6	(\$11.5)	(\$2.0)
2030	3%	\$27.2	\$35.8	\$55.5	(\$28.3)	(\$8.6)
	7%	\$33.3	\$32.2	\$50.2	(\$16.9)	\$1.1
Forgone Health Co-Benefits (PM_{2.5} Benefits Fall to Zero Below LML)						
2020	3%	\$3.7	\$2.2	\$2.8	\$0.9	\$1.5
	7%	\$4.2	\$1.9	\$2.4	\$1.8	\$2.3
2025	3%	\$10.2	\$17.5	\$20.7	(\$10.5)	(\$7.3)
	7%	\$14.1	\$15.7	\$18.7	(\$4.6)	(\$1.6)
2030	3%	\$27.2	\$34.8	\$40.7	(\$13.5)	(\$7.6)
	7%	\$33.3	\$31.3	\$36.9	(\$3.6)	\$2.0
Forgone Health Co-Benefits (PM_{2.5} Benefits Fall to Zero Below NAAQS)						
2020	3%	\$3.7	\$1.7	\$2.1	\$1.5	\$2.0
	7%	\$4.2	\$1.4	\$1.8	\$2.4	\$2.8
2025	3%	\$10.2	\$11.4	\$13.3	(\$3.1)	(\$1.1)
	7%	\$14.1	\$10.2	\$12.1	\$2.1	\$4.0
2030	3%	\$27.2	\$23.0	\$26.5	\$0.7	\$4.2
	7%	\$33.3	\$20.7	\$24.1	\$9.2	\$12.7

Note: Forgone benefits include forgone climate, energy efficiency, and air quality benefits. The range of benefits presented here reflects several alternative assumptions regarding the risk of PM-related premature death, ranging from the assumption that populations are at risk of PM-related premature death at all levels of PM_{2.5} to the assumption that the risk of PM_{2.5}-related death falls to zero below the annual NAAQS (12µg/m³).

Table 2 - Monetized Forgone Benefits, Avoided Compliance Costs, and Net Benefits based on Mass-Based Approach from 2015 CPP RIA (billions of 2011\$)

Year	Discount Rate	Benefit of Repeal: Avoided Costs	Cost of Repeal: Forgone Benefits		Net Benefits of Repeal	
			Low	High	Low	High
Forgone Health Co-Benefits (Full Range of Ambient PM_{2.5} Concentrations)						
2020	3%	\$2.6	\$3.6	\$6.4	(\$3.8)	(\$1.0)
	7%	\$3.1	\$3.1	\$5.6	(\$2.5)	\$0.0
2025	3%	\$13.0	\$18.7	\$28.8	(\$15.8)	(\$5.7)
	7%	\$16.9	\$16.7	\$26.0	(\$9.1)	\$0.2
2030	3%	\$24.5	\$33.8	\$50.1	(\$25.7)	(\$9.3)
	7%	\$30.6	\$30.4	\$45.5	(\$14.8)	\$0.2
Forgone Health Co-Benefits (PM_{2.5} Benefits Fall to Zero Below LML)						
2020	3%	\$2.6	\$3.5	\$4.4	(\$1.8)	(\$0.9)
	7%	\$3.1	\$2.9	\$3.8	(\$0.7)	\$0.2
2025	3%	\$13.0	\$18.2	\$21.6	(\$8.5)	(\$5.2)
	7%	\$16.9	\$16.3	\$19.5	(\$2.5)	\$0.7
2030	3%	\$24.5	\$32.9	\$38.1	(\$13.7)	(\$8.4)
	7%	\$30.6	\$29.7	\$34.7	(\$4.0)	\$0.9
Forgone Health Co-Benefits (PM_{2.5} Benefits Fall to Zero Below NAAQS)						
2020	3%	\$2.6	\$1.8	\$2.4	\$0.2	\$0.8
	7%	\$3.1	\$1.5	\$2.0	\$1.1	\$1.7
2025	3%	\$13.0	\$12.4	\$14.6	(\$1.6)	\$0.6
	7%	\$16.9	\$11.1	\$13.2	\$3.7	\$5.9
2030	3%	\$24.5	\$23.3	\$26.6	(\$2.1)	\$1.2
	7%	\$30.6	\$21.0	\$24.2	\$6.4	\$9.6

Note: Forgone benefits include forgone climate, energy efficiency, and air quality benefits. The range of benefits presented here reflects several alternative assumptions regarding the risk of PM-related premature death, ranging from the assumption that populations are at risk of PM-related premature death at all levels of PM_{2.5} to the assumption that the risk of PM_{2.5}-related death falls to zero below the annual NAAQS (12µg/m³).

Table 3 - Monetized Forgone Benefits, Avoided Compliance Costs, and Net Benefits, based on EPA Analysis of AEO2017 (billions of 2011\$)

Year	Discount Rate	Benefit of Repeal: Avoided Costs	Cost of Repeal: Forgone Benefits		Net Benefit Of Repeal	
			Low	High	Low	High
Forgone Health Co-Benefits (Full Range of Ambient PM_{2.5} Concentrations)						
2020	3%	(\$0.3)	(\$0.5)	(\$0.2)	(\$0.2)	\$0.1
	7%		(\$0.5)	(\$0.2)	(\$0.1)	\$0.1
2025	3%	\$14.5	\$9.0	\$19.6	(\$5.0)	\$5.5
	7%		\$7.2	\$16.9	(\$2.3)	\$7.3
2030	3%	\$14.4	\$20.6	\$44.9	(\$30.6)	(\$6.3)
	7%		\$16.8	\$39.0	(\$24.6)	(\$2.5)
Forgone Health Co-Benefits (PM_{2.5} Benefits Fall to Zero Below LML)						
2020	3%	(\$0.3)	(\$0.2)	(\$0.1)	(\$0.2)	(\$0.2)
	7%		(\$0.2)	(\$0.2)	(\$0.2)	(\$0.1)
2025	3%	\$14.5	\$8.4	\$11.5	\$3.1	\$6.1
	7%		\$6.7	\$9.6	\$5.0	\$7.8
2030	3%	\$14.4	\$19.3	\$25.8	(\$11.4)	(\$4.9)
	7%		\$15.6	\$21.7	(\$7.3)	(\$1.3)
Forgone Health Co-Benefits (PM_{2.5} Benefits Fall to Zero Below NAAQS)						
2020	3%	(\$0.3)	\$0.1	\$0.2	(\$0.5)	(\$0.5)
	7%		\$0.0	\$0.1	(\$0.5)	(\$0.4)
2025	3%	\$14.5	\$2.0	\$3.6	\$10.9	\$12.6
	7%		\$0.9	\$2.5	\$12.0	\$13.7
2030	3%	\$14.4	\$4.0	\$7.3	\$7.1	\$10.4
	7%		\$1.8	\$5.0	\$9.4	\$12.6

Note: Forgone benefits include forgone climate and air quality benefits. The range of benefits presented here reflects several alternative assumptions regarding the risk of PM-related premature death, ranging from the assumption that populations are at risk of PM-related premature death at all levels of PM_{2.5} to the assumption that the risk of PM_{2.5}-related death falls to zero below the annual NAAQS (12µg/m³).

Regulating pollutants jointly can promote a more efficient outcome in pollution control management. However, in practice regulations are promulgated sequentially and therefore, the

benefit-cost analyses supporting those regulations are also performed sequentially. The potential for interaction between regulations suggests that their sequencing may affect the realized efficiency of their design and the estimated net benefits for each regulation. When considering whether a regulatory action is a potential welfare improvement it is necessary to consider all impacts of the action. However, in the decision-making process, because of the aforementioned interactions, it is useful to consider the benefits due to reductions in the target pollutant relative to the costs, and whether alternative regulatory designs can achieve reductions in the targeted pollutants and/or the other affected pollutants more cost effectively. Therefore, in Tables 4 and 5 we offer another perspective on the costs and benefits of this rule by presenting a comparison of the forgone benefits from the targeted pollutant – CO₂ – (the costs of this proposed rule) with the avoided compliance cost (the benefits of this proposed rule). Excluded from this comparison are the forgone benefits from the SO₂ and NO_x emission reductions that were also projected to accompany the CO₂ reductions. However, had those SO₂ and NO_x reductions been achieved through other means, then they would have been represented in the baseline for this proposed repeal (as well as for the 2015 Final CPP), which would have affected the estimated costs and benefits of controlling CO₂ emissions alone.

Table 4. Avoided Compliance Costs, Forgone Domestic Climate Benefits, Forgone Demand-Side Energy Efficiency Benefits, and Total Forgone Targeted Pollutant Benefits (billions of 2011\$)

Year	Discount Rate	Avoided Compliance Costs	Forgone Domestic Climate Benefits	Forgone Demand-Side Energy Efficiency Benefits	Total Forgone Targeted Pollutant Benefits
Rate-Based					
2020	3%	\$3.7	\$0.4	\$1.2	\$1.6
	7%	\$4.2	\$0.1	\$1.2	\$1.3
2025	3%	\$10.2	\$1.4	\$9.2	\$10.6
	7%	\$14.1	\$0.2	\$9.2	\$9.4
2030	3%	\$27.2	\$2.7	\$18.8	\$21.5
	7%	\$33.3	\$0.5	\$18.8	\$19.3
Mass-Based					
2020	3%	\$2.6	\$0.4	\$1.2	\$1.6
	7%	\$3.1	\$0.1	\$1.2	\$1.3
2025	3%	\$13.0	\$1.6	\$10.0	\$11.6
	7%	\$16.9	\$0.3	\$10.0	\$10.3
2030	3%	\$24.5	\$2.7	\$19.3	\$22.0
	7%	\$30.6	\$0.5	\$19.3	\$19.8

Note: Total forgone target pollutant benefits are the sum of forgone domestic climate benefits and forgone demand-side energy efficiency benefits.

Table 5. Avoided Compliance Costs and Forgone Domestic Climate Benefits, based on the 2017 Annual Energy Outlook (billions of 2011\$)

Year	Discount Rate	Avoided Compliance Costs	Forgone Domestic Climate Benefits
2020	3%		\$0.1
	7%	(\$0.3)	\$0.0
2025	3%	\$14.5	\$1.3
	7%		\$0.2
2030	3%	\$14.4	\$2.5
	7%		\$0.4

In evaluating the impacts of the proposed action, the RIA discusses a number of uncertainties. The RIA quantitatively examines uncertainties in the approaches that states and affected EGUs may have taken under the final CPP to accomplish state emission performance

goals, in estimates of the avoided compliance costs, and in estimates of forgone climate, energy efficiency, and air quality benefits. Other types of uncertainties are acknowledged but remain unquantified. In addition, the EPA plans to perform updated modeling and analysis of avoided compliance costs, forgone benefits, and other impacts, which will be made available for public comment before any action that relates to the CPP is finalized. To the extent feasible, the EPA intends to perform full-scale gridded photochemical air quality modeling to support the air quality benefits assessment informing subsequent regulatory analyses of CPP-related actions. Such model predictions would supply the model-predicted changes in air quality needed to: (1) quantify the PM_{2.5} and ozone-related impacts of the policy case; (2) perform a full suite of sensitivity analyses. The EPA further commits to characterizing the uncertainty associated with applying benefit-per-ton estimates by evaluating the reliability of such estimates and comparing the EPA's approach with other reduced-form techniques in the peer-reviewed literature. This report would be available for peer review within six months.

B. Paperwork Reduction Act (PRA)

This proposed rule does not impose any recordkeeping or reporting requirements on any entities.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. Emission guidelines established under CAA section 111(d) do not impose any requirements on regulated entities and, thus, will not have a significant economic impact upon a substantial number of small entities. After emission guidelines are promulgated, states establish emission standards on existing sources, and it is those requirements that could potentially impact small entities. This proposed action will not impose any

requirements on small entities. As a result, this action will not have a significant economic impact on a substantial number of small entities under the RFA.

Our analysis in the accompanying RIA is consistent with the analysis of the analogous situation arising when the EPA establishes NAAQS, which do not impose any requirements on regulated entities. As with the description in the RIA, any impact of a NAAQS on small entities would only arise when states take subsequent action to maintain and/or achieve the NAAQS through their state implementation plans. *See American Trucking Assoc. v. EPA*, 175 F.3d 1029, 1043-45 (D.C. Cir. 1999) (NAAQS do not have significant impacts upon small entities because NAAQS themselves impose no regulations upon small entities).

D. Unfunded Mandates Reform Act (UMRA)

This proposed action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531-1538, and does not significantly or uniquely affect small governments. This action imposes no enforceable duty on any State, local, or tribal governments or the private sector.

E. Executive Order 13132: Federalism

The EPA proposes to conclude that the CPP would have negative federalism implications and that this proposed repeal of the CPP would restore the *status quo ante*. The EPA has concluded that this proposed action does not have negative federalism implications. It will not have substantial negative direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes, as specified in Executive Order 13175.

Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA will engage in consultation with tribal officials during the development of this action.

G. Executive Order 13045: Protection of Children from Environmental Risks and Health Risks

This section is currently being revised to make consistent with comments received from OMB on the RIA.

H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply Distribution or Use

This action, which is a significant regulatory action under Executive Order 12866, is likely to have a significant effect on the supply, distribution, or use of energy. In the RIA for the CPP, we estimated that the CPP could have a 1 to 2 percent impact on retail electricity prices on average across the U.S. in 2025 and a 22- to 23-percent reduction in coal-fired electricity generation. The EPA also estimated that the utility power sector delivered natural gas prices would increase by up to 2.5 percent in 2030. A repeal of the CPP would directionally have the opposite impact.

The energy impacts the EPA estimates from the proposed rule may be under- or over-estimates of the true energy impacts associated with the proposed repeal of the CPP. Some States are likely to pursue emissions reduction strategies independent of EPA action. Additionally, the compliance cost estimates were based upon information available in 2015, so important economic and technical factors that influence the estimates may have changed since 2015 or may

change in the future. However, these estimates of energy impacts associated with the proposed action are currently the best estimates available.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

J. Executive Order 12898 Federal Actions to Address Environmental Justice in Minority Populations

The EPA believes that this proposed action is unlikely to have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). The CPP anticipated reductions in CO₂ emissions, as well as lower concentrations of PM_{2.5} and ozone due to changes in EGU emissions. The EPA conducted a proximity analysis for the CPP and identified that low-income and minority communities located in proximity to EGUs may have experienced an improvement in air quality as a result of the emissions reductions. However, the EPA did not address the potential distribution of compliance costs associated with the CPP.

This section is currently being revised to make consistent with comments received from OMB on the RIA.

V. STATUTORY AUTHORITY

The statutory authority for this action is provided by sections 111, 301, 302, and 307(d)(1)(V) of the CAA, as amended (42 U.S.C. §§ 7411, 7601, 7602, 7607(d)(1)(V)). This action is also subject to section 307(d) of the CAA (42 U.S.C. § 7607(d)).

Dated: _____.

E. Scott Pruitt,
Administrator.