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October 30, 2018

The Honorable Andrew Wheeler, Acting Administrator
U.S. Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: Comments relating to *Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program Proposed Rule*¹ (83 FR 44746) Docket ID: EPA-HQ-OAR-2017-0355

Dear Administrator Wheeler,

On behalf of the Commonwealth of Kentucky, the Energy and Environment Cabinet (Cabinet) respectfully submits the following comments of support relating to the United States Environmental Protection Agency's (EPA) proposed *Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units*, also known as the "Affordable Clean Energy" (ACE) rule. The Cabinet finds the ACE rule consistent with the statutory framework of Section 111(d) of the Clean Air Act (CAA). To provide better regulatory certainty and appropriately reduce carbon dioxide (CO₂) emissions from existing electric generating units (EGUs), the Cabinet recommends that EPA finalize the ACE rule as proposed, including necessary revisions to New Source Review (NSR) and implementing regulations.

It should be noted that these comments compliment previous comments submitted by the Cabinet relative to the repeal of the Clean Power Plan.² The Cabinet appreciates EPA's consideration of those comments. The Cabinet finds that EPA's proposed ACE rule addresses many, if not all, of the legal and technical concerns previously raised. The Cabinet also applauds EPA for utilizing an Advanced Notice of Proposed Rulemaking to solicit and gather information relative to potential emission reduction control technologies for greenhouse gases (GHGs) emitted from electric generating units and the appropriate legal implementation of such a rule.³ EPA's pragmatic regulatory approach results in more appropriate requirements and outcomes.

¹ 83 FR 44746

² EPA-HQ-OAR-2017-0355-12184

³ 82 FR 61507

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Additionally, the Cabinet commends EPA's efforts to re-establish the proper role of states to develop and implement a state plan under Section 111(d) of the CAA. In accordance with the statute, EPA sets forth emission guidelines and states are tasked with establishing achievable emission limitations for their existing sources. Under EPA's proposed ACE rule, states are able to consider source-specific factors, including the remaining useful life of a unit. The Cabinet supports EPA's proposed ACE rule with respect to establishing standards of performance for the existing EGU sources.

Legally and technically, the Cabinet agrees with EPA's interpretation of the Best System of Emission Reduction (BSER) under Section 111(d) of the CAA. BSER must be determined to be adequately demonstrated control technologies and applied at the source of emissions ("inside the fence"). The Cabinet finds that EPA's application of the BSER through the proposed ACE rule is in a manner consistent with Section 111(d) of the CAA.

The Cabinet is also providing comments of support on the implementing regulations for emissions guidelines relative to state plans required under Section 111(d) of the CAA. EPA's ACE rule clarifies the process and timing of the implementation of state plans under 40 CFR 60, Subpart Ba. The Cabinet finds that EPA's proposed ACE rule provides better regulatory certainty to states with an adequate amount of time for plan development and submittal.

Finally, the Cabinet supports the strategic NSR amendments proposed in the ACE rule. The NSR amendments provide better regulatory certainty when utilities invest significant capital to improve operating efficiency of existing EGUs. The Cabinet recommends that EPA codify the NSR amendments at the same time as promulgation of the ACE rule.

In closing, the Cabinet appreciates EPA's consideration of previous Kentucky comments, as well as the comments in this cover letter and enclosed attachment. The proposed ACE rule is consistent with the statutory text, intent, and historical application. Furthermore, the ACE rule provides better regulatory certainty and serves as an example of cooperative federalism between EPA and state regulators. The Cabinet recommends that EPA finalize the ACE rule after appropriate review and response to public comments. If you have questions or comments concerning these comments, please do not hesitate to contact me at your earliest convenience.

Sincerely,


Charles G. Snively
Secretary

Kentucky Energy and Environment Cabinet
Comments relating to EPA's proposed rule:
Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations; Revisions to New Source Review Program
Docket ID: EPA-HQ-OAR-2017-0355

Executive Summary

On behalf of the Commonwealth of Kentucky, the Energy and Environment Cabinet (Cabinet) respectfully submits the following comments of support relating to the United States Environmental Protection Agency's (EPA) proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units, also known as the "Affordable Clean Energy" (ACE) rule. The Cabinet finds the ACE rule consistent with the statutory framework of Section 111(d) of the Clean Air Act (CAA).

The Cabinet appreciates EPA's consideration of previous comments submitted by the Cabinet relative to the repeal of the Clean Power Plan (CPP). The Cabinet concludes that EPA's proposed ACE rule addresses many of the legal and technical concerns, if not all, previously raised.

The Cabinet applauds EPA for utilizing an Advanced Notice of Proposed Rulemaking (ANPR) to solicit information relative to potential emission reduction control technologies for greenhouse gases (GHGs) emitted from electric generating units and the appropriate legal implementation of such a rule. EPA's pragmatic regulatory approach results in more appropriate requirements and outcomes.

Additionally, the Cabinet commends EPA's efforts to re-establish the proper role of states to develop and implement a state plan under Section 111(d) of the CAA. Under EPA's proposed ACE rule, states are able to consider source-specific factors, including the remaining useful life of a unit. Thus, the Cabinet supports EPA's proposed ACE rule with respect to establishing standards of performance for the existing EGU sources.

Legally and technically, the Cabinet agrees with EPA's interpretation of the Best System of Emission Reduction (BSER) under Section 111(d) of the CAA. BSER must be determined to be adequately demonstrated control technologies and applied at the source of emissions ("inside the fence"). The Cabinet finds that EPA's application of the BSER through the proposed ACE rule is consistent with Section 111(d) of the Clean Air Act.

The Cabinet is also providing comments of support on the implementing regulations for emissions guidelines relative to State Plans required under Section 111(d) of the Clean Air Act (CAA). EPA's ACE rule clarifies the process and timing of the implementation of state plans under 40 CFR 60, Subpart B. The Cabinet finds that EPA's proposed ACE rule provides better regulatory certainty to states with an adequate amount of time for plan development and submittal.

To provide better regulatory certainty and appropriately reduce carbon dioxide (CO₂) emissions from existing electric generating units (EGUs), the Cabinet recommends EPA finalize the ACE rule as proposed, including necessary revisions to New Source Review (NSR) and implementing regulations. Although EPA indicates that the NSR reforms will be severable during judicial review, the Cabinet recommends that EPA codify the NSR amendments at the same time of promulgation of the ACE rule.

In summary, the Cabinet finds the proposed ACE rule to be consistent with the statutory text, intent, and historical application. Furthermore, the ACE rule provides better regulatory certainty and serves as an example of cooperative federalism between EPA and state regulators. The Cabinet recommends that EPA finalize the ACE rule after appropriate review and response to public comments.

The Kentucky Energy and Environment Cabinet submits the following comments on specific elements identified by EPA in its proposed rule:

Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations; Revisions to New Source Review Program

Comment C-1 [83 FR 44751]

It is worth noting that the emissions of CO₂ from Kentucky's electric generating units are declining significantly in the absence of promulgated and CO₂ regulations. Since 2005, CO₂ emissions from Kentucky EGUs has declined by 31%.¹ With the proposed and announced retirements, the Cabinet predicts a further decline of 8% in CO₂ emissions relative to the levels emitted in 2017 from existing sources potentially subject to a state plan under 111(d). Although EIA AEO may predict possible increases in CO₂ emissions from particular emissions units, the overall decline in CO₂ emissions from existing EGUs will continue until those units reach the end of their useful lives.

Comment C-2 [83 FR 44752]

In response to EPA's proposed repeal of the Clean Power Plan², the Cabinet agrees with EPA's current legal interpretation of the statutory language of Section 111(d) of the Clean Air Act. Specifically, the Cabinet supports EPA's interpretation "that is consistent with the CAA's text, context, structure, purpose, and legislative history."³ The Cabinet supports ACE's application of the Best System of Emissions Reduction (BSER) in a manner consistent with Section 111(d) of the Clean Air Act.

Further, EPA's concern regarding "redefining the source" is valid. During a response to an Administrator's Order, the Cabinet expressed that the BACT selection process should not "redefine the source."⁴ The Cabinet agrees with EPA that a new source performance standard or an evaluation of BACT should not define a source's primary function.

Comment C-3 [83 FR 44755]

The Cabinet finds EPA's approach of setting the BSER by using applicability criteria specific for fossil fuel-fired electric utility steam generating units is appropriate. The Heat Rate Improvement (HRI) projects detailed in the proposed ACE rule constitute an emissions reductions strategy consistent with previous 111(d) rulemakings. Those HRI projects adequately demonstrate increased efficiencies and consequently, reduce emissions from the source.

Regarding existing stationary combustion turbines and integrated gasification combined cycle (IGCC) units, historic data of the unit's efficiency serve as a baseline to determine appropriate emissions rates. When the efficiency of the unit declines by more than 3%, maintenance and repairs to critical components of the units should be performed in accordance with manufacturer's specifications.

¹ Clean Air Markets Division

² 82 FR 48035

³ 82 FR 48036

⁴ Petition IV-2010-4, https://www.epa.gov/sites/production/files/2015-08/documents/cashcreek_response2010.pdf

Comment C-4 [83 FR 44755]

To provide better regulatory certainty, the Cabinet concurs with EPA's assessment to exclude EGUs from requirements of 111(d) if those units do not meet the regulatory applicability set forth in the rule. Specifically, the Cabinet agrees that a unit subject to 40 CFR 60 Subpart TTTT should not also be subject to the 111(d) plan for existing units. Also, a unit subject to federally-enforceable permit limitations that preclude applicability should not be obligated to meet the Section 111(d) requirements.

The Cabinet requests that EPA maintain established applicability for these units that are subject to similar Section 111 (ie 40 CFR 60, Subpart D, Da, NOx SIP Call, CAIR, CSAPR, etc) and the Acid Rain Program requirements.

Comment C-5 [83 FR 44755]

Considering that EPA determines a national average HRI potential of 3.4 percent for stationary combustion turbines and NGCC units, the Cabinet supports EPA intentions to establish emission guidelines for those sources. Emission guidelines that detail work practice standards and maintenance activities may provide the most cost-effective and only technologically available emission reductions for these units.

Comment C-6 [83 FR 44756]

The Cabinet appreciates EPA's proposed list of "candidate technologies" of HRI measures for the states' consideration in establishing BSER. The Cabinet determines that the list of candidate technologies are the measures that will provide the most cost-effective environmental benefits. The Cabinet does not find it necessary to expand the list of candidate technologies; however, EPA should not limit the states' evaluations to the list of candidate technologies during the development of the state plan.

Comment C-7 [83 FR 44756]

The Cabinet finds that the list of candidate technologies is appropriate and adequately demonstrated. To reduce the burden on states, the Cabinet recommends implementation of the HRI measures as a compliance option.

Comment C-8 [83 FR 44760]

The studies and reports listed in Table 3 provide valuable information related to HRI activities that can potentially be applied at existing EGUs in the U.S. EPA should evaluate the studies thoroughly to determine which technologies have been adequately demonstrated to the Administrator's satisfaction. EPA should not apply those control technologies in determining BSER if a technology has not been adequately demonstrated and is not commercially available.

Comment C-9 [83 FR 44761]

Market forces are leading to reductions from the electric generation sector in the absence of a CO₂ regulation. The Cabinet agrees with EPA's conclusion and analysis that "indicates that the system-wide emission decreases due to reduced heat rate are likely to be larger than any system-wide increases due to increased operation."⁵

⁵ 83 FR 44761

Comment C-10 [83 FR 44761]

Although HRI projects may increase capacity, the increased capacity most likely will not be greater than the capacity of the existing unit as originally constructed. Increasing the efficiency of a unit, will positively affect the emission rate of the unit and reduce emissions of CO₂ per megawatt generated. The estimates provided by EPA suggested a national average HRI potential of 3.4 percent.

Comment C-11 [83 FR 44761]

Considering that EPA determines a national average HRI potential of 3.4 percent for stationary combustion turbines and NGCC units, the Cabinet agrees with EPA's intention to establish emission guidelines for those sources. Furthermore, if EPA determines that there are HRI projects that are cost-effective, the Cabinet finds it appropriate to reconsider its BSER determination as it relates to NGCC units.

Comment C-12 [83 FR 44762]

EPA's determination of BSER must be based upon emission reduction control technologies that have been adequately demonstrated. The Cabinet agrees with EPA's assessment that Carbon Capture and Sequestration (CCS) has not been adequately demonstrated and should not be considered in BSER.

Comment C-13 [83 FR 44763]

The Cabinet requests EPA provide maximum flexibility in developing and implementing a state plan under the ACE rule. Due to source-specific characteristics, the state plan will evaluate each affected facility independently. To accommodate for the "remaining useful life" of a source, a state plan may necessitate a compliance schedule that extends beyond 24 months from the time of submittal.

The Cabinet agrees with EPA that the plan include legally enforceable increments of progress for compliance schedules beyond 24 months. This is necessary to accommodate the ability to have multiple HRI projects. EPA and the public will be provided the opportunity to evaluate and comment on a state plan, including any associated compliance schedule. To reiterate, EPA should provide maximum flexibility to a state in developing its 111(d) plan.

Comment C-14 [83 FR 44764]

Whenever possible, the Cabinet requests EPA to provide better regulatory certainty and a clear path for an approvable state plan. The Cabinet finds it appropriate for EPA to establish a methodology to establish a baseline of emissions that a state can utilize in a consistent manner. The emissions reductions and limitations would be dependent on source-specific characteristics. The Cabinet supports a similar method in establishing "baseline" emissions that is used in determining baseline emissions under the current NSR program.

Comment C-15 [83 FR 44764]

The Cabinet supports EPA proposing an allowable emission rate in the form of a rate-based standard for states to include in their 111(d) plans. However, EPA should also consider other

forms of the standard if a state chooses to include that form in its state plan, such as heat rate expressed in units of Btu/MWh.

Comment C-16 [83 FR 44675]

The Cabinet requests that EPA differentiate between gross and net heat rate. As noted by EPA, the net heat rate would factor in the parasitic load of add-on air pollution control devices and auxiliary power demand. Further, the Cabinet recommends allowing a state plan to include varying emission limitations dependent upon operating factors such as load and startup conditions.

Comment C-17 [83 FR 44765]

The Cabinet finds that the two criteria established by EPA to demonstrate compliance are appropriate in the application of the Best System of Emission Reduction (BSER). The Cabinet agrees that the emission reductions must be implemented at the source of emissions and that the emission reduction should be quantifiable, enforceable, and permanent.

Comment C-18 [83 FR 44765]

The Cabinet supports EPA providing compliance flexibility in state plans where appropriate. However, the Cabinet does not support compliance options that “redefine” a source or do not reduce emissions at the source.

Comment C-19 [83 FR 44765]

The Cabinet concurs with EPA’s assessment that state plans must include measures to provide for the implementation and enforcement of standards of performance. The Cabinet agrees with EPA’s historic and consistent application of requirements that obligate sources to quantify emission rates and reductions should be non-duplicative, permanent, verifiable, and enforceable.

Comment C-20 [83 FR 44766]

The Cabinet supports inclusion of forest-derived biomass as a compliance option for affected units to meet state plan requirements if the change does not constitute a modification or “redefines” the source.

Comment C-21 [83 FR 44766]

The Cabinet supports inclusion of non-forest biomass as a compliance option for affected units to meet state plan requirements if the change does not constitute a modification or “redefines” the source.

Comment C-22 [83 FR 44766]

The Cabinet agrees with EPA’s proposal to allow states to consider other factors, including remaining useful life, as it establishes source-specific emission limitations. The Cabinet requests EPA to allow states the flexibility to consider other factors that are source-specific as stated in the preamble: Unreasonable cost of control resulting from plant age, location, or basic process design; Physical impossibility of installing necessary control equipment; or other factors specific to the facility (or class of facilities).

Comment C-23 [83 FR 44766]

The Cabinet requests that EPA allow a state plan to include source-specific attributes and factors as proposed under 40 CFR 60.24a(e)(3). Other factors may be determined during the evaluation of the sources subject to the 111(d) plan and EPA should allow those factors to be considered as a state develops, submits, and implements a state plan.

Comment C-24 [83 FR 44766]

In a situation where the remaining useful life of a unit is limited, the state plan should include a standard of performance and a compliance date to cease operations of that unit. The state plan should also be flexible to allow a revision to the standard of performance if the source decides to continue operation. Any deviation from the state plan should follow the same public notice and participation requirements and require EPA's review and approval.

Comment C-25 [83 FR 44767]

The compliance measures should be limited to the source of emissions and not extend into an emissions trading program as a compliance mechanism. The proposed revisions of 40 CFR 60.24a(e)3 should be applied in determining the standard of performance and not the compliance method.

Comment C-26 [83 FR 44767]

The Cabinet does not recommend emissions trading as a compliance option for standards of performance established under Section 111(d) of the CAA. Allowing trading will move compliance to "outside of the fence" and contradict the legal rationale for the regulatory approach of the ACE rule.

That said, averaging of emissions from combined stacks or averaging emissions at a source may be appropriate on a case-by-case basis. The state plan should account for common stacks and emissions averaging.

Comment C-27 [83 FR 44767]

The Cabinet appreciates EPA's consideration of potential NSR implications with energy efficiency projects. Unlike add-on air pollution controls, energy efficiency projects may provide incentive to increase annual operating hours and thus triggering NSR by increasing annual emissions greater than significant emission rate thresholds. However, EPA's proposed options to determine emissions increases relative HRI projects provides environmental benefits without burdensome NSR permitting. The Cabinet recommends that EPA finalize all three options for the NSR applicability tests.

Comment C-28 [83 FR 44767]

The Cabinet does not advocate emissions trading as a compliance option for the ACE rule. However, emissions averaging is appropriate for emissions released from a common stack. Additionally, emissions averaging among units located at a source may be appropriate due to shared auxiliary equipment and air pollution control devices.

Comment C-29 [83 FR 44767]

If facility averaging is necessary, the averaging should only apply to units subject to the state plan and not include units subject to other regulatory requirements such as 40 CFR 60, Subpart TTTT. As noted previously, facility-wide averaging may be appropriate when multiple units share a common stack, control devices, or auxiliary equipment.

Comment C-30 [83 FR 44767]

The Cabinet does not support averaging affected EGUs with non-affected EGUs for setting the emission limitation or as a compliance option. If non-affected EGUs, such as integrated solar, are installed and operated to reduce the auxiliary power or preheat water and gas streams, those emission reductions will be realized by the affected EGUs and the emission reductions will be accounted for in the compliance demonstration.

Comment C-31 [83 FR 44768]

The Cabinet supports limiting the state plan to only existing units meeting the applicability criteria established by the ACE rule. Allowing trading will move compliance to “outside of the fence” and contradict the legal rationale for the regulatory approach of the ACE rule.

Comment C-32 [83 FR 44768]

The Cabinet does not recommend emissions trading as a compliance option for standards of performance established under Section 111(d) of the CAA. Averaging of emissions from combined stacks or averaging emissions at a source may be appropriate on a case-by-case basis. Facility-wide averaging may be appropriate when multiple units share a common stack, control devices, or auxiliary equipment. The state plan should account for common stacks and emissions averaging.

Comment C-33 [83 FR 44768]

If emissions are exhausted through a common stack, the standard of performance should account for the emission units, emission rates, flow rates, temperatures, and other engineering measurements to reduce the burden of demonstrating compliance. A source should not be forced to shut down individual units to demonstrate compliance independently. Rather, the standard of performance should be established in such a manner as to replicate normal operations of the facility.

Comment C-34 [83 FR 44768]

A state plan would need to include proper documentation relating to emissions averaging across multiple units. Justification and a technical demonstration would be necessary for a state to include to demonstrate that the BSER determination is appropriate in its plan. Ultimately, EPA would be required to review the demonstration and determine if the emissions averaging is consistent with the BSER determination.

Comment C-35 [83 FR 44768]

The Cabinet does not support emissions trading for the ACE rule or a Section 111(d) state plan. Emissions averaging at a facility will require the same or similar emissions monitoring as an affected unit applies to demonstrate compliance.

Comment C-36 [83 FR 44768]

The Cabinet does not support emissions trading for the ACE rule or a Section 111(d) state plan. Thus, the Cabinet does not find that banking of allowances or compliance amounts is appropriate.

Comment C-37 [83 FR 44768]

Emissions averaging at a facility will require the same or similar emissions monitoring as an affected unit applies to demonstrate compliance. If emissions are exhausted through a common stack, the standard of performance should account for the emission units, emission rates, flow rates, temperatures, and other engineering measurements to reduce the burden of demonstrating compliance. A source should not be forced to shut down individual units to demonstrate compliance independently. Rather, the standard of performance should be established in such a manner as to replicate normal operations of the facility.

A state plan would need to include proper documentation relating to emissions averaging across multiple units. Justification and a technical demonstration would be necessary for a state to include to demonstrate that the BSER determination is appropriate in its plan. Ultimately, EPA would be required to review the demonstration and determine if the emissions averaging is consistent with the BSER determination.

Comment C-38 [83 FR 44768]

Emissions averaging at a facility will require the same or similar emissions monitoring as an affected unit applies to demonstrate compliance. If emissions are exhausted through a common stack, the standard of performance should account for the emission units, emission rates, flow rates, temperatures, and other engineering measurements to reduce the burden of demonstrating compliance. Continuous emissions monitors must meet the regulatory requirements, including 40 CFR Part 75 and 40 CFR Part 60, Appendix A.

Comment C-39 [83 FR 44768]

The Cabinet does not support emissions averaging beyond the fence of a source of emissions units. Emissions averaging should not be allowed across state boundaries, unless a particular source is located in multiple states.

Comment C-40 [83 FR 44768] and Comment C-41 [83 FR 44768]

The Cabinet finds that EPA's "inside the fence" approach in establishing standards of performance under Section 111(d) of the CAA to be appropriate. If EPA decides to expand the compliance options, including an emissions trading program, the Cabinet suggests that EPA apply the statutory authority provided in Section 111(h) of the CAA.

Comment C-42 [83 FR 44768]

The Cabinet determines the implementation provisions EPA proposes are appropriate and necessary for states to meet its obligations under Section 111(d) of the CAA for purposes of the ACE rule. The case-by-case, unit-by-unit, analysis will require sufficient time necessary to fully evaluate appropriate emission reduction strategies. Additionally, compliance schedules may be required to provide adequate time for implementation.

Comment C-43 [83 FR 44769]

The Cabinet requests that EPA establish a compliance demonstration program for the ACE rule similar to the compliance strategies employed by the Acid Rain Program, the NO_x SIP Call, the Clean Air Interstate Rule, and the Cross-State Air Pollution Rule. The Cabinet suggests that the Clean Air Markets Division of EPA handle the compliance administration of the ACE rule.

For consistency and certainty, the Cabinet requests that EPA suggest bounds and considerations of averaging times for states to consider. However, a state plan should not be limited to any particular averaging period. The state plans will require EPA's review, determination, and public review. During those activities, an evaluation of the time averaging periods is appropriate.

Comment C-44 and Comment C-45 [FR 83 44769]

The Cabinet supports EPA's new implementing regulations. EPA should at every opportunity look to reduce the regulatory burden for states adopting and implementing Section 111(d) plans. The Cabinet encourages EPA to allow the electronic submittal of the CAA Section 111(d) plans. Electronic submittal should be the sole means of submitting the state plan if the database is available and operational.

Comment C-46 [83 FR44769]

The Cabinet finds the list provided in the proposed 40 CFR 60.5740a to be comprehensive and inclusive of the requirements necessary for an approvable state plan.

Comment C-47 [83 FR 44769]

The Cabinet determines EPA's revisions to 40 CFR 60 Subpart Ba is appropriate and necessary for Section 111(d) plans. The proposed amendments more closely align with the current state obligations under Section 110 of the CAA, as well as the Section 111(d) requirements after the 1977 CAA amendments.

The Cabinet also finds it important for better regulatory certainty to apply the new 40 CFR 60, Subpart Ba requirements prospectively and to retain the existing regulations for any new requirements established under Section 129 of the CAA for solid waste combustion.

Comment C-48 [83 FR 44769]

To provide better regulatory certainty, the Cabinet requests that EPA apply the proposed 40 CFR 60, Subpart Ba to any new promulgated emission guidelines or revised emission guidelines after adequate public participation. Furthermore, the Cabinet finds that a revised emission guideline must consider the construction date when determining applicability.

Comment C-49 [83 FR 44770]

The proposed applicability of 40 CFR 60, Subpart Ba provides regulatory certainty only by applying prospectively and not retroactively. The Cabinet supports EPA's proposed applicability of the new implementing regulations.

Comment C-50 [83 FR 44770]

The Cabinet finds that the specific proposed amendments better align the regulations with the statute. The Cabinet supports the regulatory provisions that allow an explicit emission guideline to supersede the requirements of the new implementing regulations, amendment to the definition of emission guideline, timing requirements for the submission of state plans, EPA actions, and promulgation of a federal plan. The Cabinet also agrees with EPA's proposal to allow more cost-effective public notification processes, replacing the definition of "emission standard" with "standard of performance" and updating the variance provision to be consistent with Section 111(d)(1)(B) of the CAA.

Comment C-51 [83 FR 44770]

The Cabinet finds that the specific proposed amendments better align the regulations with the statute. The Cabinet supports the regulatory provisions that allow an explicit emission guideline to supersede the requirements of the new implementing regulations similar to 40 CFR Part 63 general provisions implementing Section 112 requirements of the CAA.

Comment C-52 [83 FR 44771]

The Cabinet supports EPA's proposal to allow a state three (3) years after an emission guideline to adopt and submit a state plan under Section 111(d) of the CAA. Currently, the regulatory requirement requires a state to adopt and submit a plan within nine months after publication of final emission guideline.

Comment C-53 [83 FR 44771]

The Cabinet supports EPA extending their statutory obligation to determine whether a state plan is satisfactory from the current proposed 4 months to the proposed 12-month deadline.

Comment C-54 [83 FR 44771] and Comment C-55 [83 FR 44771]

The Cabinet agrees with EPA's proposed deadline for issuing a federal plan if a state fails to submit a satisfactory plan.

Comment C-56 [83 FR 44773]

The Cabinet requests that EPA use its existing resources in their Clean Air Markets Division to track and verify emissions subject to the ACE rule requirements.

Comment C-57 [83 FR 44773]

The Cabinet determines that the new variance provision will allow states to consider remaining useful life and other factors as prescribed in Section 111(d)(1)(B) of the CAA. The Cabinet finds additional add-on air pollution control devices is a factor to consider when establishing the standard of performance. Degradation of heat rate over time is another consideration that will be factored in determining the standard of performance and the appropriate averaging time.

Comment C-58 [83 FR 44773]

The Cabinet finds that the factors outlined in the existing variance provision of 40 CFR 60.24(f) are appropriate to carry over into the new provision in 40 CFR 60.24a(e). The variance provisions are consistent with Section 111(d)(1)(B).

Comment C-59 [83 FR 44778]

To fully evaluate the total cost of compliance, the Cabinet considers all of the costs triggered by the applicable requirement imposed under Section 111(d) of the CAA.

Comment C-60 [83 FR 44778]

For compliance cost estimates, the Cabinet suggests that a cost analysis be conducted as currently required under NSR. To account for permitting delays, the Cabinet suggests that those timing issues be addressed in the compliance schedule for the facility.

Comment C-61 [83 FR 44778]

The Cabinet requests that EPA finalize the three NSR hourly emissions tests to allow the energy efficiency projects to be implemented effectively. The finalization of the NSR hourly emissions tests will provide regulatory certainty to the affected facilities and will significantly reduce the permitting burden for EPA, state, local and tribal air pollution control agencies.

Comment C-62 [83 FR 44781]

Narrowing the scope of the NSR hourly test to those affected units subject to Section 111(d) requirements will reduce the litigation risks and regulatory uncertainty for EPA, state, local, and tribal air pollution control agencies when permitting other source categories under NSR. Considering the nature of CO₂ and the necessary emission reduction strategies, the strategic NSR reforms are necessary to avoid absurd results.

Comment C-63 [83 FR 44781]

The Cabinet agrees with EPA's assessment that the "for most, if not all EGUs, the hourly rate at which the unit is actually able to emit is substantively equivalent to that unit's historical maximum hourly emissions."⁶ On an hourly basis, the maximum hourly emission rate is equivalent to the maximum hourly emission rate. The only substantial change is the number of hours operated in a year.

Comment C-64 [83 FR 44781]

Through proper rulemaking, the Cabinet finds that EPA has the authority under the CAA to establish and implement an hourly achievable emissions test for NSR. The hourly emissions test for NSR is more consistent with the CAA than EPA's NSR significant emission rate of CO₂. EPA set the significant emission rate for CO₂ as 75,000 tons per year, whereas other regulated air pollutants are set at 40 tons per year or less. EPA applied the CO₂ significant emission rate to avoid absurd results and the proposed NSR hourly emissions test will avoid absurd results in implementing energy efficiency projects under ACE.

Comment C-65 [83 FR 44781]

⁶ 72 FR 26219 (May 8, 2007)

The Cabinet does not predict an increase in emissions due to ACE. Increasing the efficiency of a unit, will positively affect the emission rate of the unit and reduce emissions of CO₂ per megawatt generated.

Comment C-70 [83 FR 44783]

To provide better regulatory certainty and avoid absurd results, the Cabinet requests EPA to promulgate the NSR reforms at the same time as the ACE rule. For NSR programs adopted into State Implementation Plans, the Cabinet suggests EPA to allow the hourly emissions tests to be used under 40 CFR 52.25 until the State Implementation Plan revision with the NSR hourly emissions tests is approved by EPA.

Comment C-71 [83 FR 44783]

Regardless of whether the NSR revisions are finalized in a separate action, the Cabinet requests EPA to promulgate the NSR reforms at the same time as the ACE rule.

Comments on the Regulatory Impact Analysis

Flexibility of the Plan Reinforced by Significant Power Sector Changes

The Cabinet appreciates the RIA's discussion on the "significant structural changes"—in both generating capacity and the resource mix—in the power sector over just the last decade. These power sector shifts have reduced emissions and therefore make a burdensome and costly regulatory scheme unnecessary. The proposed ACE rule is a pragmatic approach that reflects not only the shifts that have occurred, but also recognizes the ongoing evolution of the nation's electric power system toward lower carbon resources.

“Due to a number of changes in the electricity sector since the CPP was finalized, as documented in the October 2017 RIA proposing to repeal the CPP and Chapter 2 of this RIA, the sector has become less carbon intensive over the past several years, and this trend is projected to continue in the future. These changes and trends are reflected in the modeling used for this analysis. As a result of these changes, the projected compliance costs of achieving the emissions levels required under CPP is now projected to be significantly lower than the estimates presented in the final CPP RIA (U.S. EPA, 2015a).”

Power sector changes include normal replacements of older generating units with new units, a reduction in the electricity intensity of the national economy, regional changes in the U.S. population, technological advancements, and growth in electricity generation by renewable resources. The most significant structural shift is the result of the increased natural gas supply and subsequent low natural gas prices resulting in more natural gas units being utilized as baseload power in addition to supplying electricity during peak load (Page 2-1). EPA has proposed carbon emission guidelines that reflect not only a sound interpretation of their authority under the CAA to regulate GHGs from EGUs, but also reflect the dynamic nature of the electric power system. For example, in Kentucky, projected CO₂ emissions will be 65.8 million tons in 2019 and 65.5 million in 2022 as a result of announced retirements of coal units, as compared with 2012 emissions of 91.3 million tons, and a CPP 2030 emissions target of 63 million tons. In fact, Kentucky has already achieved emissions reductions below the interim period reductions required in the CPP which was established at 71.3 million tons. As the RIA notes, nationwide, there has been a 19% reduction in the percentage of GHG emissions from the power sector between 2006 and 2015. In addition, as the EPA states, “the ACE Rule continues downward CO₂ trend, pushing power sector CO₂ emissions to around 34% below 2005 levels (similar to CPP).”

With power sector changes, many coal units have been operating differently from how they were designed to operate—with units that were designed to operate at annual average capacity factors of 80 to 85 percent now functioning at lower capacity factors in recent years, regardless of the age of the plant (2-7). According to a 2009 Sargent & Lundy report, coal units that operate at different capacity factors than they were designed to do, operate at higher heat rates and are thus less efficient.¹ The report noted how CPP Building Block 2 (dispatching coal units less in favor of lower emitting sources) would have had a countervailing effect of the CPP's Building Block 1 (improved heat rate)—“Dispatching units at lower loads or in cycling regimes more than they have historically will increase NUHR [average annual net heat rate], thus negating much, if not all, of

the potential benefits achieved with heat rate improvement methods at full load.” Thus the proposed ACE rule, in focusing on heat rate improvements without requiring plants to reduce a unit’s capacity, can lead to improved emissions of coal units because the units will not be forced into inefficient operational patterns (as they would have been per the CPP requirements). Furthermore, by not limiting the manner in which a coal unit can be dispatched, the ACE rule will not prohibit dispatch that is necessary to address market conditions.

Costs and Benefits Reflect Uncertainties, Domestic Social Cost of Carbon

The Cabinet appreciates the measured approach EPA has taken in calculating the market impacts of the proposed ACE because of a host of uncertainties, including the “flexibilities afforded states in complying with the emission guidelines under 111(d) ... make establishing firm quantitative impacts problematic.” As states and utilities will be assessing unit-by-unit HRI possibilities, “the implementation approaches adopted by the states, and the strategies adopted by affected EGUs, will ultimately drive the magnitude and timing of secondary impacts from changes in the price of electricity, and the demand for inputs by the electricity sector, on other markets that use and produce these inputs.” Because Kentucky, with the exception of TVA and municipalities, is a traditionally regulated cost of service state, the flexibility provided states in determining emission performance standards, partly based on the costs of HRIs, will mean that utilities will have to file an application for Public Convenience and Necessity to recoup any costs associated with proposed HRIs at EGUs (Note: Kentucky’s allowed environmental compliance recovery through a surcharge is narrow, <http://www.lrc.ky.gov/Statutes/statute.aspx?id=14070>).

To the extent that EPA intends to apply a social cost of carbon (SC-CO₂), the Cabinet reiterates the more appropriate use of the domestic SC-CO₂, as we stated in our comments on the EPA’s proposed repeal of the Clean Power Plan. The global social cost of carbon calculation presented in the CPP overly stated the benefits of the rule, especially given the inherent uncertainties in calculations used to derive global impacts of the GHG emissions on ecosystems and human health and welfare. The SC-CO₂ in the proposed ACE RIA is an interim value developed per the requirements of the E.O. 13783 until a better estimate of climate change impacts to the U.S. can be developed (in January 2017, the National Academies of Sciences recommended specific criteria for updates to the SC-CO₂ estimates; 4-3).

We recognize that revisions to the figure, based on scientific input and updated modeling, could lead to a higher dollar amount than currently presented. Additionally, an average dollar amount for the domestic SC-CO₂ does not account for potential disparate regional impacts within the U.S. Nonetheless, the uncertainty that is inherent in determining the global SC-CO₂ applies as well to the determination of a domestic SC-CO₂ and therefore the Cabinet finds EPA’s approach in the RIA more amenable in that it does not attempt to over-estimate the SC-CO₂ to support its rulemaking.

Impacts on Kentucky’s Electricity Profile and Coal Production

As stated in our comments to the RIA of the “Review of the Clean Power Plan: Proposal,” a primary objection to the CPP was the potential for stranded coal unit assets, given the billions of dollars in investments utilities in Kentucky have made to comply with other federal environmental

regulations. The “flexibility” supposedly provided to states under the CPP did not allow states to determine standards that would account for the unique characteristics (including remaining useful life) of EGUs within their borders—as the proposed ACE rule allows. States’ choices were bound by the emissions standards required by the EPA. The Cabinet therefore appreciates that the ACE proposal affords genuine flexibility for states in setting emissions standards.

The RIA notes, among the changes occurring nationally in the electricity sector, that between 2006 and 2016 total net generation increased by less than 1 percent, and demand growth for generation has been lower than both the population growth (8.4 percent) and real GDP growth (14 percent) (P 2-18). As is the situation in many other states, Kentucky currently has excess generation capacity, with declining load growth in some utility territories. Remaining customers are therefore paying more for their electricity as fixed costs. A potential remedy to this problem is to encourage load growth through expanded economic development (notably manufacturing) and/or through expanding electrification—for example, through development of electric vehicle charging infrastructure. The ACE rule will allow the Commonwealth to pursue such goals in such a way that ratepayers and Kentucky’s manufacturing economy can benefit, while at the same time improving the emissions profile of existing EGUs as appropriate and cost-effective.

The analysis in the RIA is described as being “illustrative” because the rule does not establish a particular standard of performance and the technology options that states might consider in establishing a standard of performance for individual affected sources are unknown. As the RIA states, “The analysis is not meant to reflect what EPA believes can be undertaken at each affected source, but rather to estimate potential national impacts by applying controls measures that EPA believes are reasonable, on an average basis”. . . .and therefore “EPA believes that this illustrative modeling approach is suitable to inform the potential impacts of the rule from a national perspective.”

Decisions in other states regarding their coal units might have an impact on the market competitiveness of in-state units of utilities that participate in wholesale markets. The Cabinet suggests a modeling scenario that would assume less than uniform potential HRI availability for all affected EGUs for comparison purposes. As EPA states, its own analyses, while highly illustrative, were done in hopes of informing the public on a range of potential outcomes. EPA speaks to this to some extent in the proposed rule itself, “These [power sector] trends have driven down GHG emissions from power plants, which were also key components to the BSER as defined in the CPP. In fact, the analysis that EPA has done for ACE (see RIA), as well as analysis by many others (including EIA), show that these trends have already well outpaced the projections that went into the CPP for many states. For this reason, establishing a BSER on assumptions for generation by various sources that accounts for the continuation of these trends into the future would create significant work for both states and sources that may or may not result in emission reductions from ACE if the actual trends once again prove to be stronger than projected (44754).” However, the Cabinet suggests a further analysis that attempts to capture less uniform application of HRI, which would be helpful in informing the public and policy makers.

EPA estimates the ACE rule could increase coal production nationally by 7 to 9 percent relative to the base case (which includes the CPP) in 2030, with most of the increase occurring in the

production of western subbituminous coals. Relative to the no CPP scenario, coal production is projected to decrease in 2030—reflecting the improved HRIs at coal units requiring less coal per kWh. At the same time, if coal units are more competitive and are able to operate at higher capacity factors, coal production could increase relative to a no CPP scenario. EPA’s analysis estimates that at a 4.5\$ HRI at \$50/kW, coal production would increase in 2035—but only for interior coal production. Appalachian coal production shows a decline, relative to both the CPP and no CPP case in 2035. Again, these scenarios are not based on robust modeling of the ACE given the uncertainty over how states and utilities will approach HRIs on a unit by unit basis.

Decisions on coal unit retirements will have the larger impact on coal production. In 2016, Kentucky’s coal shipments were concentrated in 18 states—the number for 2017 is 13 states. With 50 percent of the coal mined in Kentucky consumed within the state, coal unit retirements clearly have an impact on Kentucky’s coal production. Thus, determining the rule’s impact on coal production is difficult given the uncertainty over how individual units might be treated in other states’ plans. For example, in its modeling, the EPA states, “sources may adopt the assumed HRI level or may retire ...based on prevailing economics. However, it is possible that states may use opportunities afforded to them in the proposed rule when applying BSER to avoid retirement of affected sources, and the scenarios do not capture this possibility.” However, as the RIA notes, there are relatively few retirements modeled in these scenarios. Despite the important market signal the proposed rule is sending, coal unit retirements will likely continue for a number of reasons, including electric utilities’ responding to growing customer interest in access to sources of renewable energy.

Compliance Costs

EPA states in the RIA that it is “making implementation as efficient as possible for both the states and the affected EGUs by allowing state plans to utilize the current monitoring and recordkeeping requirements and pathways that have already been well established in other EPA rulemakings.” And, “In calculating the cost for states to comply, EPA estimates that each state will rely on the equivalent of two full time staff to oversee program implementation, assess progress, develop possible contingency measures, perform state plan revisions and host the subsequent public meetings if revisions are indeed needed, download data from the ECMPS for their annual reporting and develop their annual EPA report.” While states will certainly need fewer staff resources under the ACE as compared to the CPP, two additional full time staff positions is probably not a realistic number. Where EPA is unable to perform more robust modeling given the unit by unit uncertainties, states will have to do their own determinations, in coordination with the utilities with affected EGUs. While EPA used the Regional Haze program in arriving at its two-full time staff person estimate, regulations governing GHG emissions garner much greater public interest and scrutiny. Stakeholders within the states will expect a deeper level of analysis for a better understanding of impacts on costs, human health, and the environment. Additionally, state public utilities commissions will have a role in evaluating costs for certain HRIs and whether those costs will be prudent investments.

It is important to note, given the significant power sector changes since the CPP was finalized, that EPA has also reduced its projected compliance costs of the CPP. The Cabinet supports these

revised compliance cost estimates. Also, EPA's analyses compared to the CPP case assume a mass-based implementation of the CPP for existing affected sources, and with no interstate trading.

Impact on Electricity Prices

As with other estimates on the impact of the proposed rule, impacts on electricity prices are based on illustrative modeling scenarios—not on assumptions of real world implementation of the rule. EPA acknowledges uncertainties regarding such factors as fuel costs, costs to operate existing power plants, new construction and operating costs, electricity demand, and policies that have an impact on the power sector. EPA includes these variables in its modeling, with the caveat that its projections are an analysis of plausible scenarios. Relative to the base case (CPP), the EPA projects average retail prices to remain essentially unchanged to a slight decrease of one-half of one percent. Relative to a scenario without the CPP (the repeal scenario), the EPA estimates similarly small impacts on average retail prices—with a slight increase of one-half of one percent to one-tenth of one percent decrease (3-34). The Cabinet supports these assumptions because costs analyses will be key determinations of the types of HRIs applied at individual EGUs and thus impacts on electricity prices relative a no CPP scenario should be minor. EPA's base case (CPP) electricity prices assume no allowance value from the CPP, thus the price differences are slightly higher.

Conclusions

The Cabinet overall supports EPA's analyses in the RIA, recognizing the enormous challenge of modeling impacts with so many variables. EPA states at least two times: "To avoid the impression that EPA can sufficiently distinguish likely standards of performance across individual affected units [~600] and their compliance strategies, this analysis assumes different HRI levels and costs are applied uniformly to affected coal-fired EGUs under each of three illustrative policy scenarios." Added to the uncertainty will be the outcome of the proposed changes to NSR. Given these cumulative uncertainties, combined with the dynamic changes occurring in the power sector, it would not be wise to either overstate or understate impacts—and EPA has taken a prudent approach in its analyses.

¹ <https://sargentlundy.com/wp-content/uploads/2016/02/Heat-Rate-Improvements-Limitations-Based-on-EPAs-Block-Strategies.pdf>