ADEQ
ARKANSAS
Department of Environmental Quality

October 31, 2018

Andrew Wheeler
Acting Administrator
Environmental Protection Agency
EPA Docket Center (EP/DC)
Mail Code 28221T
1200 Pennsylvania Ave. NW
Washington, DC 20460
Attention: Docket ID No. EPA–HQ–OAR–2017–0355

RE: 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.

Dear Acting Administrator Wheeler:

The Arkansas Department of Environmental Quality (ADEQ) thanks the United States Environmental Protection Agency (EPA) for the opportunity to comment on "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," otherwise referred to as the Affordable Clean Energy Rule (ACE).

ADEQ applauds the strides that EPA has made in its relationship with the states as well as in pursuing a reasoned and restrained interpretation of the Best System of Emission Reduction. ADEQ submits these comments in the hope of enhancing that cooperative relationship with EPA by providing greater flexibility and practicality to the states in the finalized version of the ACE rule. Similarly, ADEQ hopes that these comments will further enable EPA to achieve the goals of section 111(d) of the Clean Air Act while providing states with the opportunity to pursue a least-cost approach to achieving those goals in implementing a greenhouse gas emissions plan.

Sincerely,

Becky W. Keogh
Director

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTHSHORE DRIVE / NORTH LITTLE ROCK / ARKANSAS 72118-5317
TELEPHONE 501-682-0744 / FAX 501-682-0880 / www.adeq.state.ar.us

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I. Introduction

The Arkansas Department of Environmental Quality (ADEQ) thanks the United States Environmental Protection Agency (EPA) for the opportunity to comment on "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" (Proposed Rule) otherwise referred to as the Affordable Clean Energy Rule (ACE).

The Clean Power Plan (CPP), EPA's previous emission guidelines for greenhouse gas emissions from existing electric generating units (EGUs), relied upon "beyond-the-fenceline" measures, such as fuel switching to natural gas and renewable energy, in setting the best system of emission reductions (BSER). EPA's revised interpretation as presented in the Proposed Rule is consistent with past EPA practice in setting standards of performance and emission guidelines under section 111 of the Clean Air Act (CAA). ADEQ also appreciates the changes to timing requirements under the 111(d) framework regulations. Such changes more appropriately recognize the duration of the states' administrative processes necessary to develop and adopt 111(d) state plans.

In addition, the Proposed Rule acknowledges the role of states as defined under CAA Section 111(d). ADEQ has several recommendations to allow greater flexibility for states in the implementation of the Proposed Rule consistent with section 111 of the CAA and in recognition of the substantial expertise in both the environmental and energy sector that states possess. In addition, ADEQ has attached comments submitted on the Advanced Notice of Proposed Rulemaking (ANPRM) (Docket Id. No. EPA HQ-OAR-2017-0545) for EPA's consideration regarding the Proposed Rule. These ANPRM comments[1], as well as ADEQ's comments on EPA's proposed repeal of the CPP[2], are attached as an exhibit and are hereby incorporated by reference.

II. ACE Background, Legal Authority, and Affected Sources

A. Comment C-1 [83 FR 44751]

In the Proposed Rule, EPA solicits comment on whether and how to consider in its development of emission guidelines for EGUs ongoing and projected power sector trends and a resulting decline in power sector carbon dioxide (CO_2) emissions. The United States Energy Information Administration (EIA) recently projected that CO_2 emission reductions are anticipated to occur at a faster rate than projected when the CPP was promulgated.[3] EPA also notes in the Proposed Rule that CO_2 emissions are projected to increase over time in some EIA side cases and therefore solicits comment on the applicability of those side cases and the alternative results.

[1] Exhibit 1
[2] Exhibit 2
[3] U.S. EIA, Annual Energy Outlook 2018 with projections to 2050 (February 6, 2018), at 102, available at https://www.eia.gov/outlooks/aeo/pdf/AEO2018.pdf

The Proposed Rule's approach to allowing states to take into account remaining useful life and other factors including those discussed at 83 FR 44766 in setting standards of performance for EGUs is an appropriate way to consider the projected power sector trends.

B. Comment C-2 [83 FR 44752]

In the Proposed Rule, EPA solicits comment on the additional legal rationale for its determination that heat-rate improvements constitute BSER. EPA then references two legal bases. First, EPA states that reduced utilization "does not fit within our historical and current interpretation of the BSER."[4] Second, EPA states that "interpretative constraints that may apply to interpreting CAA section 111(a)(1) (i.e., determining what types of measures that may be considered as the BSER) for purposes of setting a new source performance standard under section 111(b) reasonably may be applied to interpreting the BSER for the purposes of setting existing source standards under section 111(d) as well."[5]

Generally, ADEQ agrees with the additional legal rationale for EPA's determination that heat-rate improvements constitute BSER. ADEQ also agrees that reduced utilization does not fit with EPA's historical interpretation of BSER and that the interpretation of BSER affects which measures fall within the scope of BSER. However, this limited interpretation by EPA need not be an impediment to providing states and affected EGUs with the greatest amount of flexibility possible in terms of compliance to ensure that states have the ability to implement the Proposed Rule in a cost effective manner. It is common among CAA programs for facilities to comply with certain requirements through reduced utilization. This is sometimes done voluntarily and in cooperation with states to meet federal requirements. Allowing states, which have both expertise and familiarity with regulating the energy sector, to develop state plans that may have an effect on utilization affected EGUs is consistent with the CAA.

ADEQ also agrees that it is reasonable to interpret constraints that apply to setting a new source performance may also apply to section 111(d) for the purposes of setting BSER. However, this should not constrain the flexibility inherent in the definition of "standard of performance," which is defined as a standard for emission of air pollutants "which reflects the degree of emission limitation achievable through the application of [BSER]." As more fully explained later, this can reasonably be interpreted to allow greater flexibility than simply requiring states to apply BSER directly so long as the applied methodology reflects the degree of emissions limitation that would be achieved through BSER.

C. Comment C-3 [83 FR 44754] and C-4 [83 FR 44755]

In the proposed rule, EPA defines an affected EGU as any fossil fuel-fired electric utility steam generating unit (steam EGU) that is not an integrated gasification combined cycle unit that **was in operation or had commenced construction as of August 31, 2018** (emphasis added), and that meets the following criteria:

[4] 83 FR 44746-01 (citing 80 FR 64780; see also *id*. at 64762).
[5] *Id.*

- Serves a generator capable of selling greater than 25 MW to a utility distribution system; and
- Has a base load rating greater than 250 MMBTU/hr heat input of fossil fuel.

EPA proposed to exclude those units subject to 40 CFR 60 subpart TTTT as a result of commencing modification or construction, steam EGUs subject to a federally enforceable permit limiting net-electric sales to one-third or less of their potential electric output or 219,000 MWh or less on an annual basis, and non –fossil units, units where the effective generation capacity is 25 MW or less, municipal waste combustor units subject to 40 CFR part 60, subpart Eb, or commercial or industrial solid waste incineration units subject to 40 CFR part 60, subpart CCCC. EPA's proposal for the definition of an affected source is inconsistent with how existing sources under 111(d) have been defined in the past and with the proposed regulatory text for the Proposed Rule.

First, EPA's proposed applicability date discussed in the preamble and set forth in the proposed regulatory language at 40 CFR 60.5775a for considering an EGU as an existing EGU—in operation or commenced construction as of August 31, 2018—is inconsistent with how existing sources have historically been defined. Under the CPP, an existing source was a source that was in operation or had commenced construction as of the proposed date for the new source performance standard for that source category that would apply if the existing source were a new source. EPA proposed new source performance standards for CO_2 emissions from EGUs on January 8, 2014. Those new source performance standards were finalized on October 23, 2015, and remain in effect. EPA should clarify its rationale and the legal basis for proposing to expand the scope of those sources considered to be existing sources under the definition of affected sources to sources that were in operation or commenced construction between January 8, 2014, and August 31, 2018.

In addition, EPA's proposed applicability date for EGUs that a state must address in a state rule is inconsistent with what EPA proposes must be addressed through a federal plan if the state fails to submit an approvable plan. The proposed regulatory text for 40 CFR § 60.5770a(b) reads as follows:

> If a State does not submit a plan to implement and enforce the emission guidelines contained in this subpart by [date three years after the notice of availability of a final emission guideline is published in the Federal Register], or the date that EPA disapproves a final plan, the EPA will implement and enforce a Federal plan, as provided in § 60.27a(c), applicable to each affected EGU within the State that commenced construction **on or before January 8, 2014**. (Emphasis added)

Why would the applicability date for affected sources for a federal plan differ from the applicability date for affected sources for a state plan? In the final rule, the definition of affected

sources should be based on an applicability date of January 8, 2014 for both state and federal plans.

Second, EPA's definition of affected sources could apply to types of steam EGUs other than those for which emission guidelines for the BSER have been included in Proposed Rule. For instance, natural gas or oil-fired steam EGUs that are not combined cycle or combined heat and power combustion turbines could be affected units according to the proposed language for 40 CFR 60.5780a. However, EPA has not proposed emission guidelines for such units. EPA should exclude any affected EGU from this rule for which it does not set emission guidelines for BSER. If EPA intends to set emission guidelines for natural gas or oil-fired steam EGUs in response to comments on the Proposed Rule, EPA should offer an opportunity for comment on those guidelines.

III. State Plan Development

A. Comment C-13 [83 FR 444763] and C-14 [83 FR 44764]

EPA is proposing that states develop source-specific standards of performance consistent with EPA's determination of BSER with source-specific compliance schedules. Although EPA did not propose any presumptive methodology or presumptive standards, EPA solicits comment on whether such an approach based on the use of historical heat rate or emissions data for an existing source should be considered. EPA also solicits comment on whether a uniform compliance schedule is appropriate.

In comments on the ANPR for these emission guidelines,[6] ADEQ advocated for non-binding presumptive limits and methods as an alternative method available to the states in place of a source-by-source determination of standards of performance. If such presumptive limits and methods were non-binding and the language well-crafted, the presumptive limits and methods would be helpful for states in their development of plans to comply with the emission guidelines. No additional funds are being provided to states to acquire additional resources to comply with this rule. Non-binding presumptive limits and methods would provide a more streamlined approach available to states for development of their plans with existing resources. Although ADEQ advocates for presumptive approaches, states should not have to demonstrate that a more stringent limit is not achievable. Similarly, any demonstration required in support of a presumptive limit should be straightforward and based on publically available data. With regards to EPA's concern that presumptive limits may be limiting, the variance provisions included in the Proposed Rule could be relied upon by states to set less stringent limits if necessary for a specific facility if the states demonstrate that such a deviation is warranted given the variance factors specified in the Proposed Rule.[7]

[6] Docket Id. No. EPA –HQ-OAR-2017-0545

[7] The variance factors specified in the Proposed Rule are: unreasonable cost of control resulting from plant age, location, or basic process design; physical impossibility of installing necessary control equipment; or other factors

ADEQ supports EPA's proposal to allow states to set source-specific compliance schedules for standards of performance. Source-specific compliance schedule determinations are particularly necessary if EPA finalizes their source-specific approach that EPA proposes to require for states to comply with the Proposed Rule. EPA should issue guidance on typical timeframes for installation of the candidate technologies that EPA proposes states to consider in setting standards of performance. EPA should also provide states with the ability to provide additional time for compliance if multiple candidate technologies must be installed to achieve the standard of performance for a given facility or if a longer time frame is necessary due to unit-specific circumstances.

B. Comment C-15 [83 FR 44764]

EPA is proposing that an allowable emission rate be the form of the standard of performance that states must include in their state plans. EPA argues that such an approach most closely aligns to EPA's BSER determination for these emission guidelines. EPA also asserts that such an approach would create continuity across states, prevent ambiguity, and ensure as much simplicity as possible. EPA solicits comment on whether other forms of standards of performance should be allowed in state plans.

EPA should not be so restrictive in terms of the form of compliance with the emission guidelines that states use in their state plans. EPA should allow states to establish the level of emission reductions that would be achieved based on installation of the candidate BSER technologies at the affected units in the state and demonstrate that the program established in the state plan provides an equivalent amount of CO_2 emission reductions. The basis for this flexibility is contained within the definition of standards of performance.[8] The benefits of alternative forms of compliance are further discussed in other comments below.

C. Comment C-16 [83 FR 44675]

In the Proposed Rule, EPA requests input on the merits of differentiating between gross and net heat rates. Gross heat rate is the total heat input while net heat rate is the gross heat rate minus all internal auxiliary power demands (often referred to as "parasitic load") that reduce the amount of power delivered to the transmission grid.

Most coal-fired EGUs already continuously monitor heat input and report the information to the EPA under 40 CFR part 75. Measuring net heat rate is often more difficult than calculating gross heat rate at a plant with a considerable amount of auxiliary electrical equipment whose individual demands may not be consistent or constant. In addition, any future federal or state environmental rules that could require new control devices or impose changes to existing control devices would have an effect on net heat rate but not gross heat rate. For these reasons, ADEQ supports the use of gross heat rate as a metric where appropriate.

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specific to the facility (or class of facilities) that make application of a less stringent standard or final compliance time significantly more reasonable.

[8] Clean Air Act Section 111(a)(1) states that a "standard of performance" is a standard for emission of air pollutants "which reflects the degree of emission limitation achievable through the application of [BSER]."

D. Comment C-17 [83 FR 44765]

EPA solicits comment on whether the following criteria for demonstrating that measures taken to meet compliance obligations for a source actually reduce its emission rate are appropriate or not and why, and whether there may be compliance flexibilities that might meet the two proposed criteria:" (1) They are implemented at the source itself, and (2) they are measurable at the source of emissions using data, emissions monitoring equipment or other methods to demonstrate compliance, such that they can be easily monitored, reported, and verified at a unit.

The two criteria proposed by EPA are not appropriate for demonstrating that measures takenmeet compliance obligations because they preclude a substantial amount of flexibility afforded to states by the definition of the standards of performance and the process for implementing such standards. Consistent with ADEQ's response to Comment C-15, ADEQ supports less restrictive factors for demonstrating that measures actually reduce a facility's emissions rate. As more fully explained later, a demonstration that HRIs are actually made does not necessarily indicate that the pollutant in question is reduced. A more effective "backstop" might be to include factors to ensure that emissions are actually reduced rather than that HRIs are, in fact, made.

EPA's two factors to ensure HRIs are actually made preclude the flexibility inherent in the definition of standard of performance. This flexibility should be preserved. The current definition of "standard of performance" is "a standard for emissions of air pollutants, which *reflects the degree of emission limitation achievable* through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.[9] Under this definition, a state could have wide flexibility in setting a standard of performance so long as the reductions "reflect the degree of emission limitation achievable" through BSER. The requirement contained in the definition is that it achieves the same degree of emission limitation as BSER and not that the state directly apply BSER itself.

This flexibility is limited by the Proposed Rule. EPA's proposed requirements would preclude trading and averaging across sources. While ADEQ agrees that BSER should be applied at the source, ADEQ counters that it is permissible for states to implement flexible performance standard options in developing their plans. Therefore, EPA should finalize the Proposed Rule in such a way that allows states flexibility in promulgating a standard of performance in its state plan so long as they require a standard sufficient to "reflect" the same "degree of emission limitation" as BSER. States should be afforded the widest latitude afforded by law in the development of state plans including trading and averaging. The two proposed criteria would be appropriate for application of BSER directly, but are not appropriate for the application of a state-set standard that reflects the same degree of emissions reductions as BSER, as required by the CAA.

E. Comment C-20 and Comment C-21 [83 FR 44766]

EPA is soliciting input on the inclusion of forest-derived and agricultural-derived biomass as a compliance option for energy production. Historically, EPA's policy is to treat biogenic CO_2 emissions resulting from the combustion of biomass from managed forests at stationary sources for energy production as carbon neutral. This same approach may be appropriate for agricultural-derived biomass.

[9] 42 U.S.C.A. § 7411(a)(1) (emphasis added)

Coal is the primary fuel of electricity generation in Arkansas that accounted for thirty-nine percent of the state's power supply in 2016.[10] Coal combustion emitted 36.2% of state's energy-related CO_2 in 2015 and electricity generation facilities emitted 45.7% of the energy-related CO_2 emission in the same year. For the electricity generation sector, biomass co-firing in conjunction with coal is an alternative that can reduce pollutant emissions. Also, biomass co-firing offers fuel source flexibility in situations of price volatility or temporary loss of fuel supply. Biomass combustion has a zero net greenhouse effect as plants take in CO_2 during growth. Coal can be replaced by fifteen percent biomass in an existing power plant with only minor modifications and without a significant impact on the heat release characteristics for most boilers.[11] A recent life cycle assessment on an existing coal-fired power plant in Texas realized a 13.45% reduction in CO_2 emission when co-firing with fifteen percent forest residue.[12]

Biomass is an abundant resource in Arkansas and represents a potential feedstock of more than eleven million tons per year including 4.6 million dry tons of forest residue and 2.66 million dry tons of rice residue that together can generate almost twenty-eight million MWh of electricity.[13] Biomass harvesting and transportation are the primary issues when determining the cost-effectiveness of electricity generation from biomass co-firing. Research has shown that Arkansas could provide sufficient feedstock to each Arkansas coal plant if long-term biomass co-firing was adopted state-wide and the study also found that the biomass co-firing technique is a relatively low cost and expeditious method to increase near-term renewable electricity generation in Arkansas.[6] It has been estimated that, if ten percent of the state's existing coal-fired electricity generation capacity were replaced by biomass, about 2.9 million tons of biomass could be utilized and more than 700 long-term jobs could be created.[6]

Similarly, the use of biomass as a compliance option would be consistent with the President's Executive Order 13783.[14] This Executive Order sets forth the intent to promote energy independence and economic growth. As a domestic energy resource, the inclusion of biomass as a compliance option would help achieve both goals.

F. Comment C-22 [83 FR 44766]

In the Proposed Rule, EPA solicits comment on permitting states to take into account remaining useful life, among other factors, in establishing a standard of performance for a particular affected source, consistent with section 111(d)(1)(B). In addition, EPA also is seeking comment on what ''other factors'' may also need to be considered.

ADEQ supports allowing states to take into account remaining useful life in establishing a standard of performance for a particular affected source. A source's remaining useful life impacts costs analyses because a shortened remaining useful life can shorten the time to amortize

[10] Arkansas Profile Overview: Available at: https://www.eia.gov/state/?sid=AR

[11] Kline, D.; Hargrave, T.; Vanderlan, C. The Treatment of Biomass Fuels in Carbon Emissions Trading Systems; Center for Clean Air Policy: Washington, DC, USA, 1998.
Tillman, D.A. Biomass co-firing: The technology, the experience, the combustion consequences. Biomass Bioenergy 2000, 19, 365–384.

[12] Kommalapati, R.R.; Hossan, I.; Botlaguduru, V.S.V.; Du, H.; Huque, Z. Life Cycle Environmental Impact of Biomass Co-Firing with Coal at a Power Plant in the Greater Houston Area. Sustainability, 2018, 10, 2193.

[13] Cohen, M.R., 2009. A clean Energy Economy for Arkansas. Available at: https://www.nrdc.org/sites/default/files/cleanar.pdf

[14] 82 FR 16093

capital costs and therefore affects whether it is cost effective to pursue a particular heat rate improvement project. *111(d) Standards of Performance for Existing Sources; Remaining Useful Life of Sources* states the following:

> "Regulations of the Administrator under this paragraph shall permit the State in applying a standard of performance to any particular source under a plan submitted under this paragraph to take into consideration, among other factors, the remaining useful life of the existing source to which such standard applies."

Because each effected source has unique attributes, a number of other factors may need to be considered including, but not limited to, physical equipment configuration or space constraints, timing of this proposed rule and other rules, existing heat rate improvements or other existing improvements, or control technologies and other factors. Therefore, an unconstrained unit-by-unit determination by states utilizing the aforementioned factors is the most reasonable means of determining accurate and executable assessments.

G. Comment C-28 [83 FR 44767] and Comment C-29 [83 FR 44767]

EPA proposes limited emissions averaging and no emissions trading be allowed under the Proposed Rule. EPA proposes to allow states to incorporate emissions averaging among affected EGUs across a single facility, but not beyond the fence line or with non-emitting EGUs at the same facility. EPA proposes not to allow emissions averaging or trading of compliance instruments at different facilities with affected EGUs or among EGUs, including non-fossil and non-emitting EGUs. However, EPA does solicit comment on whether further averaging or trading should be allowed.

Because CO_2 is a pollutant of global concern, rather than local concern, ADEQ finds that averaging and trading programs for EGUs are an appropriate mechanism for achieving emission reductions. Based on multiple studies, broad trading programs have the potential to lower the cost of compliance, the cost to electricity ratepayers, and provide benefits to the electricity grid that would not be realized in implementation of unit-by-unit requirements.[15] By restricting trading and averaging, EPA could be unnecessarily increasing the cost of compliance with the Proposed Rule. EPA's province is in setting the scope of the emission guidelines based on BSER, not in prescribing the specifics of state energy and environmental policy. EPA should allow states to implement any program that can be demonstrated to achieve similar or greater

[15] Studies performed by various groups around the country examined the implications for state policies under 111(d) for EGUs for various trading and non-trading scenarios. Examples are given below:

- Ross, Martin T., Brian C. Murray, and David Hoppock (May 2015). "The Clean Power Plan: Implications of Three Compliance Decisions for U.S. States." Duke Nicholas Institute for Environmental Policy Solutions. https://nicholasinstitute.duke.edu/sites/default/files/publications/ni_wp_15-02_full_pdf.pdf
- Macedonia, Jennifer, Blair Beasley, and Erin Smith (June 2016). "Modeling the Evolving Power Sector and Impacts of the Final Clean Power Plan." Bipartisan Policy Center. http://cdn.bipartisanpolicy.org/wp-content/uploads/2016/06/BPC-Energy-Clean-Power-Plan-Modeling.pdf
- Litz, Franz and Jennifer Macedonia (April 14, 2015). "Choosing a Policy Pathway for State 111(d) Plans to Meet State Objectives." Great Plains Institute and Bipartisan Policy Center. https://bipartisanpolicy.org/wp-content/uploads/2015/05/Policy-Pathways-Paper.pdf

CO_2 emission reductions than the source-specific standard of performance determinations contemplated by the Proposed Rule.

In addition, EPA should revise regulatory impact analysis (RIA) to include trading scenarios. In the RIA released with the Proposed Rule, EPA improperly compared costs for the base case, CPP, and the Proposed Rule without contemplating that trading was allowed under the CPP and that trading could reduce the cost of compliance under the Proposed Rule. Therefore, EPA's regulatory analysis should include trading scenarios in their cost of compliance evaluations.

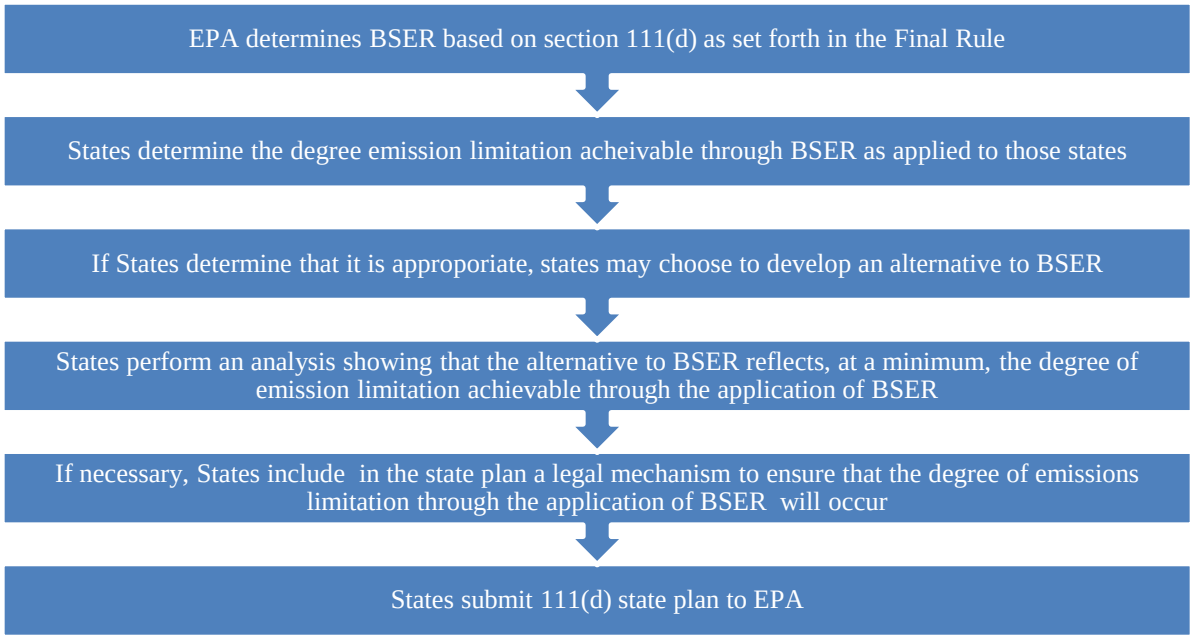
H. Comment C-31, Comment C-32, Comment C-33, Comment C-34; Comment C-36 and Comment C-37; C-40 Comment [83 FR 44768]

EPA is soliciting comment on whether there is a way to allow trading between affected EGUs across affected sources while not encouraging generation shifting. EPA is also interested in comments pertaining to whether averaging could and should be allowed for trading and to what degree (i.e. averaging across a state, or trading). In addition, EPA requests comment on how an averaging system should conceptually work and on how allowing averaging across multiple affected sources would or would not undermine the BSER determination. EPA solicits comment on whether the banking of compliance instruments and averaging across multiple affected sources should be allowed as part of a state's plan. EPA further requests comment on the issues of statutory interpretation set forth above, whether they are appropriate interpretations of section 111(d) specifically and section 111 generally, in terms of the provision's text, structure, and purpose.

As previously noted, ADEQ urges EPA to allow any approach to a state plan that a state can demonstrate would result in a similar or greater reduction of CO_2 emissions as would be achieved by application of source-specific standards of performance based on EPA's BSER. Banking compliance instruments and averaging among affected EGUs would provide for greater flexibility to accommodate future changes in demand and to mitigate potential reliability issues. Therefore, EPA should allow states, which have the primary role in applying environmental and energy policy within their respective states, to include averaging and/or trading in their plans if states choose to provide that a demonstration of equivalency in terms of CO_2 emission reductions to a source-specific approach.

EPA should allow states to determine whether averaging or trading between affected sources is appropriate. As previously discussed, the definition of standard of performance could be used as a starting point for a conceptual framework that is both consistent with the proposed BSER and trading/averaging. The current definition of "standard of performance" is "a standard for emissions of air pollutants, which *reflects the degree of emission limitation achievable* through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.[16] Under this definition, a state could have wide flexibility in setting a standard of performance so long as the reductions "reflect the degree of emission limitation achievable" through BSER. So long as it achieves the same degree of emission limitation as BSER. This framework could be structured in the following manner:

[16] 42 U.S.C.A. § 7411(a)(1) (emphasis added)



States are better suited to determine whether or not generation shifting in a manner consistent with current law should be permissible as states have a traditional responsibility in the field of regulating electrical utilities for determining questions including those of need, reliability, costs, and other related state concerns.[17] For example, a state should be able to determine that it is permissible to set a standard of performance that "reflects the degree of emissions limitation achievable" through what EPA has determined to be BSER even if the that degree of emissions limitation is achieved through means that include trading, averaging, or other non-BSER means.

EPA should recognize states' experience and judgment in the regulation of EGUs as well as the flexibility inherent in the current definition of standards of performance. If a state wishes to incentivize certain types of lower emitting sources, non-emitting sources, or energy efficiency in place of requiring installation of controls at a particular facility, they should be allowed the flexibility to do so if such policies are determined to have an equivalent outcome in terms of emissions reductions. Whether or not trading is allowed is a key consideration in determining what compliance mechanisms may be the most cost-effective in achieving the goals of the Proposed Rule. If trading would result in lower electricity costs for customers and businesses while effective reducing emissions, then those should be considered viable options for states to consider.

Similarly, EPA should permit states to utilize averaging across multiple affected sources in the same manner as trading for the same reasons as those stated above in reference to trading. Conceptually, any structure should be allowed so long as it is reflective of the same degree of emissions reduction as BSER. Neither averaging, nor trading would undermine the BSER determination so long as state's implement 111(d) plans that result in equivalent reductions.

[17] *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 205, 103 S. Ct. 1713, 1723, 75 L. Ed. 2d 752 (1983).

Banking compliance instruments and averaging among affected EGUs would provide for greater flexibility to accommodate future changes in demand and to mitigate potential reliability issues. Therefore, EPA should allow states to include averaging and/or trading in their plans if the state so chooses provided that a demonstration of equivalency in terms of CO_2 emission reductions to a source-specific standards of performance approach is submitted with the state plan.

I. Comment C-41 [83 FR 44768]

EPA is soliciting comment on whether averaging, trading, or ''bubbling'' compliance flexibilities as are available under other sections of title I of the CAA suggest that such flexibilities should be afforded under state plans under section 111(d).

Generally, the range of different programs that are implemented under Title I of the CAA, which pertains broadly to "program and activities," suggests that EPA may take a broader view of what states may choose to design and implement in their 111(d) state plans so long as flexibilities are consistent with relevant statutory authority. For example, under CAA Section 110, EPA promulgated the Cross State Air Pollution Rule (CSAPR) and subsequent updates including the recent CSAPR Update Rule, which is an interstate trading program that is intended to reduce summertime nitrogen oxides emissions from power plants.[18] The CSAPR Update Rule, like CSAPR itself, was intended to address pollution that crosses state borders and is non-localized in a manner similar to air pollution issues resulting from greenhouse gas emissions that are regulated in the Proposed Rule.

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

EPA is soliciting comment on whether electronic submittals are appropriate and less burdensome to states and whether electronic submittal should be the sole means of submitting state plans.

ADEQ has recently begun using EPA's SPeCS for SIPs online submittal platform. While this platform results in less resource expenditures in terms of staff time, printing, and postage on the part of the State, the platform is still in the early stages. There are still enhancements that are being added to the SPeCS platform. In addition, there are file size issues, file number issues, and other issues still being worked out for the platform. ADEQ has experienced some of these issues firsthand and recommends that EPA allow states to submit state plans pursuant to 111(d) via online submission platforms, such as SPeCS, but that EPA should not require it. This would be consistent with what is allowed for submission of SIPs. ADEQ disagrees with the proposed regulatory text at 40 CFR 60.5740a(b) that requires states to submit plans electronically.

K. Comment C-46 [83 FR 44769]

At 40 CFR 60.5740a of the proposed regulatory text, EPA provides a description and list of what a state plan must include. EPA solicits comment on whether this list is comprehensive of what should be included in a state plan submission. EPA's proposed required state plan elements are as follows:

- Identification of affected EGUs;

[18] 80 FR 75706

- Standards of performance and compliance periods;
- Identification of applicable monitoring, reporting, and recordkeeping requirements for each affected EGU;
- Plan for reporting about plan implementation and progress to EPA;
- Demonstration that requirements of subpart Ba were met;
- Summary of how each standard of performance for each affected EGU was determined including a summary of the state's evaluation of the applicability of each of technologies for each affected EGU:
    - Neural network/intelligent sootblowers;
    - Boiler feed pumps;
    - Air heater and duct leakage control;
    - Variable frequency drives;
    - Blade path upgrades for steam turbines;
    - Redesign or replacement of economizer; and
    - Improved operating and maintenance practices;
- Summary of the application of relevant factors, including remaining useful life, for an affected EGU in deriving a standard of performance, if applicable;
- A demonstration that each affected EGU's standard of performance is quantifiable, non-duplicative, permanent, verifiable and enforceable;
- A summary of each affected EGU's anticipated future operation characteristics, as applicable, including:
    - Annual generation,
    - CO_2 emissions,
    - Fuel use, fuel prices (when applicable);
    - Heat rates; and
    - Electricity generation capacity and capacity factors;
- A timeline for implementation of EGU-specific actions (if applicable);
- All wholesale electricity prices;
- A time period of analysis, which must extend through at least 2035;
- A demonstration that each standard of performance meets the requirements for standards of performance specified in the proposed regulatory text for 40 CFR §60.5775a;
- A timeline with all programmatic milestone steps the state intends to take ensure that the plan is effective as of the date required by the final emission guidelines;
- A demonstration that the state has the legal authority and funding to implement and enforce the plan, including federally enforceability of the standards of performance;
- Certification that a hearing on the plan was held, a list of witnesses, their affiliations, and a brief written summary of each presentation or written submission; and
- Materials demonstrating the State's legal authority to implement and enforce each component of the plan, supporting calculations for EGU standards of performance, and any other materials necessary to support evaluation of the plan by the EPA.

ADEQ urges that the requirements for state plans be revised to provide greater flexibility to and reduce the burden for states. Specifically, ADEQ asserts that EPA should allow states to comply with the emission guidelines through any approach that the State can demonstrate results in equivalent or greater CO_2 emission reductions as EPA's source-specific framework for setting standards of performance.

In addition, certain of the information that EPA proposes to require is based on projected electricity market trends that may be unnecessary for state plans and burdensome for states. For instance, future anticipated operation characteristics, such as fuel, wholesale prices, etc., are not typically tracked by State air quality regulators and may not be necessary to setting source-specific standard of performance at each affected EGU. Such information may be a necessary component of a state plan if a State chooses to adopt an alternative approach to compliance with the guidelines other than implementation of source-specific standards. Whether or not this information is needed for an alternative approach should be worked out in consultation between states and their respective EPA regions.

EPA's requirements under 40 CFR §60.5775a do not afford states the flexibility to take advantage of potential least-cost approaches like energy efficiency or trading programs that may achieve equivalent or greater CO_2 emission reductions at a lower cost than the implementation framework that EPA is proposing to allow states to include in their plans. ADEQ suggests the following framework for requirements for state plans for compliance with emission guidelines for EGUs under 111(d) to provide greater flexibility to the states and to better align with the framework for SIPs.

- A list of affected EGUs in the State;
- Description of the plan approach (source-specific emission rate standards, mass or rate-based trading, averaging, etc.);
- A summary of how the state determined the emission rate associated with implementation of applicable BSER candidate technologies for each affected EGU;
- A summary of the application of relevant factors, including remaining useful life, for an affected EGU in deriving a standard of performance, if applicable;
- Quantification of the anticipated CO_2 emission reductions that would be anticipated from source-specific standards of performance at affected EGUs in the State over the anticipated time horizon for these emission guidelines;
- If a state adopts an alternative approach to compliance with the emission guidelines in place of source-specific standards, the state must demonstrate that the aggregate CO_2 emission reductions anticipated as a result of the plan would be equivalent to or greater than the emission reductions anticipated from implementation of source-specific standards based on the applicable BSER candidate technologies;
- A demonstration that control measures, whether source-specific standards of performance or an alternative approach, are quantifiable, non-duplicative, permanent, verifiable and enforceable;
- Schedules of compliance for control measures included in the state plan;

- Control measures and compliance schedules applicable to affected EGUs should be incorporated into federally-enforceable permits within eighteen months of approval of the state plan;
- For states that elect to adopt source-specific standards of performance, no subsequent reporting by the state to EPA on the plan should be required because EPA will be provided notice of permit amendments to incorporate the standards of performance;
- A demonstration that notice requirements for state plans have been met including records of the following:
    - Publication of notice of availability of the proposed plan for public inspection and the opportunity for public hearing—a hearing must be scheduled, but it may be canceled by the state if no request for hearing is received by the method and time specified in the public notice;
    - Record of each public hearing, including, at minimum, a list of witnesses appearing at the hearing and any written submissions received;
    - Record of all written comments received on the state plan during the public comment period;
    - A summary of all oral comments received at each public hearing, if held, and all written comments received during the public comment period; and
- Materials documenting the State's legal authority to implement and enforce each component of the plan, technical supporting information for the demonstrations specified above, and any other materials necessary to support evaluation of the plan by the EPA.

In addition, EPA should revise the notice requirements under Subpart Ba to better align with notice requirements for SIPs as suggested in the state plan elements framework above.

IV. 111d Implementing Regulations

A. Comment C-47, Comment C-48, Comment C-49 [83 FR 44769 – 83 FR 44770]

EPA is requesting comment on the proposed applicability of the existing and new implementing regulations. EPA is proposing to apply the changes to timing requirements to both emission guidelines published after the new implementing regulations are finalized, and to all ongoing emission guidelines already published under section 111(d). EPA is soliciting comment on the proposed timing requirements for prospective emission guidelines under the new implementing regulations and the alignment of ongoing emission guidelines by amending their respective regulatory text to incorporate the new timing requirements. EPA is proposing that the new implementing regulations would be applicable only to emission guidelines and associated plans developed after promulgation of this regulation, including the emission guideline being proposed as part of this action for GHGs and existing affected EGUs, and solicits comment on this proposed applicability of the new implementing regulations.

ADEQ supports EPA's proposed changes to timing requirements and their applicability to both emissions guidelines already published under section 111(d) and future emissions guidelines. The changes to timing requirements are more conducive to the timely submission of 111(d) state

plans by states, which are frequently constrained by state law in the speed with which those are developed. ADEQ supports the applicability of non-timing requirements being applied prospectively. The retroactive application of substantive provisions in the implementing regulations to state plans developed prior to the adoption of the Proposed Rule would be inequitable to states that have relied on the previous version.

B. Comment C-50 [83 FR 44769]

EPA is proposing specific changes to better align the regulations with the statute. These changes are reflected in the proposed regulatory text for this action, and EPA solicits comments on both the substance of these changes and the proposed regulatory text. These changes include:

- An explicit provision allowing a specific emission guideline to supersede the requirements of the new implementing regulations;
- Changes to the definition of ''emission guideline;''
- Updated timing requirements for the submission of state plans;
- Updated timing requirements for EPA's action on state plans;
- Updated timing requirements for EPA's promulgation of a federal plan;
- Updated timing requirement for when increments of progress must be included as part of a state plan;
- Completeness criteria and a process for determining completeness of state plan submissions similar to CAA section 110(k)(1) and (2);
- Updated definition replacing ''emission standard'' with ''standard of performance;''
- Usage of the internet to satisfy certain public hearing requirements;
- No longer making a distinction between public health-based and welfare-based pollutants in an emission guideline; and,
- Updating the variance provision to be consistent with CAA section 111(d)(1)(B).

ADEQ supports these changes. In particular, ADEQ supports replacing the definition of "emission standard" with "standard of performance" for the reasons that EPA presented as the well as the flexibility provided by defining it as a guideline, which "reflects the degree of emissions reduction achievable" through BSER. As previously stated, ADEQ also supports the revised timing requirements, which better align with state rulemaking processes.

C. Comment C-52 [83 FR 44771]

EPA proposes to revise the 111(d) framework regulations timing requirements for state submissions to better align with requirements under section 110 of the CAA, as amended in the 1990. Specifically, EPA is proposing to provide states with three years after notice of the availability of the final emission guidelines to adopt and submit a state plan to EPA rather than the nine months currently provided for under the 111(d) framework regulations.

ADEQ supports a three year deadline for submission of state plans. The nine-month period for submission of state plans after promulgation of an emission guidelines as is currently required under 40 CFR part 60 subpart B is insufficient for Arkansas to complete its administrative rulemaking process and other statutorily required procedures for state plans and certainly does not provide enough time to engage with the stakeholders and the public and to perform the necessary analyses to develop a well-reasoned and adequately supported plan.

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

EPA proposes to revise the 111(d) framework regulations timing requirements for promulgation of federal plans in the event states fail to submit an approvable plan. Specifically, EPA proposes to extend the timing for issuance of a federal plan from six months to two years after finding that a state has failed to submit an approvable plan within three years of notice of availability of the final emission guidelines. This change is consistent with the deadlines for federal implementation plans under Clean Air Act §110(c).

ADEQ supports EPA's proposed extension of the timing for issuance of a federal plan. This extension would provide the state with the time necessary to remedy any deficiency in a disapproved or partially disapproved state plan. Six months would likely not be adequate for a state to revise the plan, especially if revisions to control measures that must be adopted by the state are necessary to address the disapproval.

V. New Source Review

ADEQ appreciates EPA's effort to update and simplify the New Source Review (NSR) regulations.[19] The complexity of current NSR rules has sometimes had a chilling effect on projects that could otherwise improve a facility's efficiency and emission rates.

ADEQ is pleased that EPA is proposing to reconsider use of the term "project netting" at Step 1 of the NSR applicability analysis, and to instead use the term "project emissions accounting." This approach will allow for a more complete picture of net emissions changes resulting from projects undertaken at large facilities. ADEQ agrees with EPA's position, outlined in EPA's March 13, 2018 memorandum,[20] "Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program" that its prior interpretation of "project netting" sometimes had the unintended effect of blocking or significantly delaying certain projects, even though the projects would not have resulted in a significant emissions increase. This effect could be reduced or eliminated if EPA allows facilities to consider both emission increases and decreases at Step 1 of the NSR applicability analysis. ADEQ encourages EPA to allow this change.

ADEQ encourages EPA to clarify the terms "modification" and "routine maintenance, repair and replacement" (RMRR). Clarification of these terms would be especially helpful to power plants. Under the NSPS the decision about whether project constitutes a modification is based on whether the maximum hourly emission rate at the facility is higher after the project is completed. If not, then the project does not constitute a modification. Clarifying that a project not considered a modification under the NSPS would not be considered a major modification under NSR would help simplify NSR rules. The definition of RMRR also needs clarification. ADEQ encourages

[19] Stuart Spencer, Associate Director of the ADEQ Office of Air Quality, testified before the House of Representatives' Committee on Energy and Commerce's Subcommittee on Environment at a hearing entitled "New Source Review Permitting Challenges for Manufacturing and Infrastructure." Stuart Spencer's responses to additional questions from the Subcommittee Chairman, the Honorable John Shimkus, have been included with these comments as Exhibit 3.

[20] https://www.epa.gov/sites/production/files/2018-03/documents/nsr_memo_03-13-2018.pdf

EPA to clarify this issue in a future memorandum and to engage the states in the discussion when it sets meetings associated with its announced NSR Task Force.

VI. The Rebound Effect

The "rebound effect" is a phenomenon in which the increased efficiency of an EGU may result in greater, rather than fewer, emissions due to increased utilization. EPA states that it modeled a range of potential HRIs for ACE, and "the [EPA's] analysis indicates that system-wide emissions decreases from heat rate improvements will likely outweigh any potential system-wide increases."[21]

While ADEQ does not have any reason to disagree that the net effect at a system-wide level will be reductions of CO_2 emissions, ADEQ does acknowledge that there is some uncertainty inherent in that analysis. EPA states that the rebound effect is "unlikely" to occur. Whatever the likelihood, EPA should take certain steps to ensure that a possible outcome with a system wide rebound effect does not occur. EPA should develop an accounting framework that ensures that there are no increases beyond currently projected emissions of CO_2 from EGUs as a result of potential rebound effects of facilitating HRI installation at EGUs by requiring such technology as BSER and reducing barriers to installation of the technology through NSR reform. For any emission guidelines promulgated by EPA in which a rebound effect could occur, EPA should develop procedures by which a state may demonstrate that its state plan would not result in an overall increase in emissions of the pollutant being addressed above projected baseline emissions from all affected units addressed in the state plan.

VII. Conclusions

ADEQ urges EPA to make the changes recommended in our comments to provide states the flexibilities necessary to develop and implement cost-effective and common sense plans for achieving the emission reductions pursuant to the emission guidelines in their respective states. Adopting such changes would reflect the significant positive developments that have recently occurred in the interactions between states and EPA. Once again, ADEQ appreciates the opportunity to provide comments and help ensure the most efficient and effective method of achieving positive air quality outcomes under section 111(d).

[21] 83 FR 44746 at p. 44756, fn. 17.

ADEQ
ARKANSAS
Department of Environmental Quality

February 26, 2018

Scott Pruitt
Administrator
Environmental Protection Agency
EPA Docket Center (EPA/DC)
Attention: Docket ID NO. EPA–HQ–OAR–2017–0545
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Advanced Notice of Proposed Rulemaking on State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units

Administrator Pruitt:

The Arkansas Department of Environmental Quality (ADEQ) thanks the United States Environmental Protection Agency (EPA) for the opportunity to comment on the "Advanced Notice of Proposed Rulemaking on State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units" (ANPR). Allowing states to provide input into the development of any potential replacement to the Clean Power Plan is critical to successful implementation if EPA should pursue such a replacement rule.

Submission of these comments should not be construed as support by ADEQ for the promulgation of emission guidelines for electric generating units (EGUs) under Section 111(d) of the Clean Air Act. If EPA determines that it is lawful, necessary, and appropriate to promulgate emission guidelines to limit greenhouse gas (GHG) emissions from existing EGUs under Section 111(d) (Potential Replacement) of the Clean Air Act, then ADEQ recommends that EPA observe the following principles in the development of such guidelines.

First, any Potential Replacement should be based on controls that can be implemented at the subject source. EPA's previous interpretation in the Clean Power Plan, that the best system of emission reductions (BSER) could encompass "beyond-the-fenceline" measures such as fuel switching to natural gas and renewable energy, was not consistent with the statutory history of the Clean Air Act, as well as past EPA practice in establishing standards of performance and emission guidelines under Section 111 of the Clean Air Act. Prior to the Clean Power Plan, EPA had consistently interpreted Section 111 standards of performance as solely encompassing emissions control systems that could be installed at the sources. This consistent interpretation is

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTHSHORE DRIVE / NORTH LITTLE ROCK / ARKANSAS 72118-5317
TELEPHONE 501-682-0744 / FAX 501-682-0880 / www.adeq.state.ar.us

evident in the five instances in which EPA has addressed existing sources and the more than one-hundred rulemakings in which EPA has adopted new source performance standards under Section 111. Therefore, if EPA determines that a Potential Replacement is lawful, necessary, and appropriate, BSER should be based on within-the-fenceline measures.

Second, any Potential Replacement should rely on a subcategory-specific BSER. Coal-fired steam turbines, natural-gas-fired combined cycle systems, and natural gas combustion turbines are designed differently, may have some differences in feasible retrofit control systems, and have different emission profiles based on the design and fuel. Therefore, any Potential Replacement should determine a subcategory-specific BSER for each of those three types of EGUs.

Third, any Potential Replacement should be accompanied by a concurrently-released, non-binding model state plan, as well as non-binding guidance. Any such guidance or model plan should be informational, but should not be construed as the sole interpretation of the final rule. In the implementation of the any final rule, states should not be required to adhere to the approach set forth in any guidance or model state plan if a state's plan complies with the requirements of the final rule.

Fourth, the role of states in a Potential Replacement should be to develop and implement specific emissions standards taking into consideration each state's unique circumstances, including the composition of the state's fleet of EGUs. The states are best positioned to determine and implement emissions standards under Clean Air Act Section 111. These state plans should demonstrate how the standard meets the final regulatory requirements of the Potential Replacement.

Fifth, any Potential Replacement should provide flexibility with regards to compliance with the rule by deferring to states on the form of the standard to implement in their state, facilitating emissions trading, providing a multi-year averaging period for compliance, and allowing states to comply using existing programs if equivalency to the emission guidelines is demonstrated. States should be allowed to determine whether rate-based or mass-based emission standards are suitable for their state rather the EPA pre-selecting one of these two options. EPA should provide guidance for converting between rate-based and mass-based standards. In addition, EPA should allow states to implement the standards with an emissions trading program using an EPA-facilitated platform similar to the platform used by EPA for the Cross-State Air Pollution Rule. A two to three year averaging period should be used for determining compliance. EPA should also allow states to use existing programs that demonstrate equivalency with the emission guidelines. Flexibility in the development and implementation of state plans to comply with any Potential Replacement is critical to ensuring reliability, facilitating prudent investment in new or existing generation assets, and minimizing costs to ratepayers.

Sixth, any compliance schedules established pursuant to any Potential Replacement should allow enough time for installation of BSER technology across the fleet of EGUs so as not to create reliability risks. Rapid implementation of a potential replacement may induce outages at multiple units simultaneously, which could thereby temporarily remove a substantial amount of generating capacity and thus risk reliability. ADEQ also recommends that EPA take into

consideration the time needed for long-term planning requirements of state utility regulators and regulated utilities.

Seventh, any Potential Replacement should allow sufficient time for the development and submission of state plans. ADEQ recommends at least two years for states to submit plans to comply with any Potential Replacement, with the possibility of a one-year extension. This suggested timeframe is necessary for states to fully engage in public and stakeholder consultations, perform required technical and economic analyses, and to comply with state statutory requirements and administrative rulemaking processes. The nine month period for submission of state plans after promulgation of an emission guidelines as required by the 40 CFR part 60 subpart B implementing regulations is insufficient for Arkansas to complete its statutorily-mandated and administrative rulemaking processes and certainly does not provide enough time to engage with stakeholders and the public and perform the necessary analyses to develop a well-reasoned plan. EPA should amend the implementing regulations to provide states with additional time, as suggested above, to comply with any Potential Replacement.

Eighth, EPA should develop presumptive limits—both rate based and mass-based—based on subcategory specific rates. Separate and distinct rates should be developed for natural gas-fired combustion turbines, natural gas-fired combined cycles, and coal-fired steam turbines. In addition, states should be able to rely on the presumptive limits. States should not have to demonstrate that a more stringent limit is not achievable. Similarly, any demonstration required in support a presumptive limit should be straightforward and rely on publically available data. If a state determines that a less stringent limit is necessary for a specific facility, states should be allowed to demonstrate that is appropriate based on unit-specific conditions including the remaining useful life of the unit.

ADEQ requests that EPA take these comments into consideration if EPA should determine that it is lawful, necessary, and appropriate to promulgate a Potential Replacement. Please direct any questions regarding these comments to Stuart L. Spencer, Associate Director for the Office of Air Quality.

Sincerely,

Stuart L. Spencer
Associate Director, Office of Air Quality

ADEQ
ARKANSAS
Department of Environmental Quality

January 16, 2018

Scott Pruitt
Administrator
Environmental Protection Agency
EPA Docket Center (EPA/DC)
Attention: Docket ID NO. EPA-HQ-OAR-2017-0355
1200 Pennsylvania Avenue, NW
Washington, DC 20460

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

Administrator Pruitt:

The attached document is submitted on behalf of the Arkansas Department of Environmental Quality (ADEQ).

ADEQ applauds the United States Environmental Protection Agency's (EPA's) proposed repeal of the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Clean Power Plan). This repeal marks the first step toward a sensible return of power to the states and a restoration of the cooperative framework envisioned by the drafters of the Clean Air Act. By undoing the complex and overreaching regulations that would have been codified by the Clean Power Plan, EPA is supporting the appropriate state role regarding energy policy.

The legal vision outlined in the proposed repeal places any replacement under section 111(d) squarely within the boundaries of past precedent and would prevent future actions from leading to the same overreach that would have occurred under the Clean Power Plan. This is a move toward a relationship with EPA in which the states can become true partners and not pawns.

Sincerely,

Becky W. Keogh

EXHIBIT
2

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTHSHORE DRIVE / NORTH LITTLE ROCK / ARKANSAS 72118-5317
TELEPHONE 501-682-0744 / FAX 501-682-0880 / www.adeq.state.ar.us

In 2015, the United States Environmental Protection Agency (EPA) promulgated the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units ("Clean Power Plan"). A number of states and affected entities, including Arkansas, challenged the Clean Power Plan. On March 31, 2017, the President of the United States signed Executive Order 13783—entitled "Promoting Energy Independence and Economic Growth"—that directs EPA to review existing regulations, order, guidance, and polices that potentially burden the development or use of domestic energy resources. Consistent with Executive Order 13783, EPA reviewed the Clean Power Plan and initiated an action to repeal it, which is entitled "Repeal of Carbon Pollution Emissions Guidelines for Existing Stationary Sources: Electric Utility Generating Units" ("Proposed Repeal"). The Arkansas Department of Environmental Quality provides the following comments on the Proposed Repeal.

In the Proposed Repeal, EPA is proposing a new legal interpretation that the Clean Power Plan exceeds the statutory authority of the EPA and should be repealed. Specifically, EPA is returning to an interpretation of the Best System of Emission Reduction (BSER) as being limited to emission reduction measures that can be applied to or at an individual stationary source. ADEQ supports this approach and agrees that it is consistent with the Clean Air Act's text, context, structure, purpose, and legislative history as elaborated in the basis for the Proposed Repeal. The proposed interpretation avoids a number of the serious and detrimental consequences inherent in the Clean Power Plan's approach. ADEQ agrees with EPA's broader policy concerns outlined in the Proposed Repeal as specified below.

ADEQ concurs with EPA's interpretation of section 111(d) that BSER does not encompass "beyond-the-fenceline." "Beyond-the-fenceline" controls are inconsistent with the statutory history of the Clean Air Act as well as past EPA practice. EPA has consistently interpreted section 111 standards of performance as solely encompassing emissions control systems that could be installed at the sources in the five instances in which EPA has addressed existing sources and the more than one-hundred rulemakings in which EPA has adopted new source performance standards.

ADEQ also agrees with EPA that its earlier interpretation of BSER violates what is referred to as the "clear statement rule" in which an agency interpretation of vast economic and political significance requires a clear statement by Congress. *Util. Air Regulatory Grp. v. E.P.A.*, 134 S. Ct. 2427, 2444 (2014). The proposed approach avoids the vast economic and political implications that would exist as a result of the concept of "generation shifting" included as part of the calculation of BSER in the Clean Power Plan. This concept of "generation shifting" as a component of BSER would effectively expand the regulatory authority of EPA to encompass the ability to determine the composition of the energy sector itself.

As envisioned in the Clean Air Act, BSER as defined in the Clean Power Plan would have exceeded EPA's authority and constituted a significant intrusion by EPA into the states' traditional authority to regulate the energy sector, as well as the authority of the Federal Energy Regulatory Commission (FERC), which regulates the transmission and wholesale exchange of

electricity in interstate commerce under Part II of the Federal Power Act. This would have effectively transformed section 111(d) into the most powerful part of the Clean Air Act, and states would have been compelled to create significant market distortions in their attempts to adhere to such an interpretation.

In *Utility Air Regulatory Group*, the Supreme Court also found a compelling reason to reject EPA's previous interpretation of BSER in the Clean Power Plan because that reading would have placed "plainly excessive demands on limited governmental resources." *Id.* The Supreme Court was so persuaded that it found this reason "alone to be a good reason for rejecting it." *Id.* Here, the same concern is present. The EPA's previous interpretation of BSER would have placed a tremendous burden on state agencies, including ADEQ, to develop a complex system of carbon regulations on the U.S. energy sector—an area in which environmental agencies are not traditionally familiar. The process of familiarization would have been costly, time-consuming, and resulted in stringent regulations that would have been burdensome to not only subject facilities, but also electricity ratepayers.

In addition, EPA's Proposed Repeal also presents an interpretation that is consistent with section 112 of the Clean Air Act, which explicitly prohibits EPA's use of that section to require states to regulate "any air pollutant . . . emitted from a source category which is regulated under section [1]12." 42 USC § 7411(d)(1)(A). Congress presumably chose this language to prevent redundant regulation, which many of the affected facilities would have faced under the Clean Power Plan. EPA's previous interpretation should have been precluded by the language of 42 USC § 7411(d)(1)(A).

Furthermore, the interpretation of section 111(d) in the Proposed Repeal provides consistency and predictability in methods of addressing Clean Air Act requirements in the future. This consistency is appreciated both by states, which must dedicate resources in order to comply with requirements promulgated by EPA under the authority of the Clean Air Act, and the regulated community, which must make business decisions regarding how to comply with those requirements—including long-term capital investments. A predictable regulatory environment is needed to facilitate compliance with Clean Air Act requirements, success in addressing long-term environmental issues, and a business environment conducive to economic growth.

Also, ADEQ supports the rescission of "Legal Memorandum for Proposed Carbon Pollution Emission Guidelines for Existing Electric Utility Generating Units" and "Legal Memorandum Accompanying Clean Power Plan for Certain Issues" for purposes of consistency with EPA's new interpretation of its authority under section 111(d). ADEQ supports consistent and clear statements of EPA policy that allow states like Arkansas to make effective policy and planning decisions.

For the reasons stated above, ADEQ supports the Proposed Repeal and finds that the proposed interpretation is consistent with past precedent and legally defensible.

ADEQ

ARKANSAS
Department of Environmental Quality

March 23, 2018

Kelly Collins
Legislative Clerk
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

RE: Responses to Additional Questions for the Record

Dear Ms. Collins:

On February 14, 2018, I testified before the House of Representative's Committee on Energy and Commerce's Subcommittee on Environment at the hearing entitled "New Source Review Permitting Challenges for Manufacturing and Infrastructure." On March 9, 2018, the Subcommittee Chairman, the Honorable John Shimkus, caused to be delivered to me additional questions for the record. I have enclosed herewith my responses to the questions tendered to me.

Thank you again for the opportunity to present testimony before the Subcommittee and for the opportunity to supplement my testimony with the enclosed answers to the Subcommittee Members' questions.

Sincerely,

Stuart Spencer
Associate Director, Office of Air Quality

Enc.

EXHIBIT 3

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTHSHORE DRIVE / NORTH LITTLE ROCK / ARKANSAS 72118-5317
TELEPHONE 501-682-0744 / FAX 501-682-0880 / www.adeq.state.ar.us

Witness Stuart Spencer's Responses to Additional Questions for the Record

The Honorable John Shimkus

1.a. As an environmental regulator, I can tell you that complexity can breed uncertainty. Uncertainty can in turn have a chilling effect on projects that could otherwise improve a facility's efficiency and emission rates. We need guidance documents, rules, and - where appropriate - targeted legislation, that is clear and precise enough to encourage the facilities in our regulated communities to invest in modernization projects without fear of tripping or triggering cumbersome New Source Review (NSR). I am pleased that the U.S. Environmental Protection Agency (EPA) has recently taken steps to clarify its positions on key NSR issues. On December 7, 2017, the EPA Administrator Scott Pruitt (Administrator Pruitt) released a memorandum in which he relayed that the EPA would no longer "second guess" a company's estimate of future pollution levels under its NSR regulations before retrofitting a plant. Administrator Pruitt indicated this move would diminish regulatory uncertainty. I agree. It is a positive step.

On March 13, 2018, Administrator Pruitt issued another memorandum on NSR reform, this one re-interpreting "project netting". This latest memorandum marks an important shift in the EPA's methodology for calculating whether a project will result in a significant emissions increase at Step 1 of the NSR applicability analysis. Relying on certain rule language and regulatory and legislative history, the EPA found that under its current NSR regulations, both emissions increases and decreases resulting from a proposed project may be considered in Step 1 of the NSR analysis, in what the agency now calls "project emissions accounting"— "i.e., taking account of the true emissions impacts of the project itself." The effect of both of these EPA-

issued memoranda is positive, in that it helps provide needed guidance, clarity, and certainty to the application of the NSR program.

2. As I referenced in my answer number 1.a. above, Administrator Pruitt issued a memorandum on NSR project emissions accounting on March 13, 2018. This memorandum is a positive step in addressing the statement I made in my testimony that the NSR rules often times discourage rather than encourage pollution control and efficiency projects. In the March memorandum, the EPA stated that its prior interpretation of "project netting" had the effect of blocking certain projects and significantly delaying others, "even though those projects would not have resulted in a significant emissions increase" if considering both emissions increase and decreases at Step 1 of the analysis (underline added). Within the memorandum, Administrator Pruitt stated, " The EPA recognizes that because of the complexities associated with doing multi-year contemporaneous netting under Step 2 at a large facility, some companies may have been dissuaded from undertaking some projects," even if those projects may have resulted in increased efficiency and reduced emissions. I am encouraged that the EPA is taking steps to address this issue. Hopefully this will help promote additional pollution control and efficiency projects.

3.a. The term "cooperative federalism" has been referenced often in the past several years in regard to the relationship between the EPA and state environmental protection agencies. ADEQ Director Becky Keogh testified before the U.S Senate Environment and Public Works Committee that the prior administration of the EPA was demonstrably more coercive that cooperative in nature, where states were being made to be more pawns than partners. The states have supported a shift to cooperative federalism, a priority of the current administration, from a "coercive" federal role to one which supports the states' proper role. I'm happy to report that the dynamic is changing. The EPA/state relationship is becoming more collaborative. That is the

key to improving the interaction between the federal government and the states: meaningful and early engagement and input in a truly collaborative fashion. The states are, in most instances, delegated to implement nearly all Clean Air Act programs. The EPA should recognize that the states have on-the-ground experience with regulating the facilities within their borders and defer to them and their expertise in appropriate instances on important permitting and planning issues.

4. As I suggested in my testimony, the terms "modification" and "routine maintenance, repair, and replacement" (RMRR) need to be clarified in order to allow regulated facilities to proceed with plant improvement and maintenance projects with more certainty. This proposed certainty is called into question when rules are muddy and open to interpretation. This in turn leads to a host of unanswered questions, including on issues such as how long a plant may operate under its existing air permit without having to renew and/or update its emissions control systems to current state-of-the-art technology. These questions are especially pertinent in regard to power plants. That particular industry sector wrestles with the question of when an upgrade or maintenance project at a power plant is significant enough to require a retrofit.

I have been encouraged by the memoranda the EPA issued in December 2017 and March 2018. I hope the EPA takes up the issue of clarifying what constitutes a RMRR project in a future memorandum and that the EPA engages the states on this issue when it sets meetings associated with its announced NSR Task Force.

5. Yes it would. In responding to this question, I defer largely to my fellow witness, Mr. Jeff Holmstead, because I agree wholeheartedly with his assessment. As he stated in page 5 of his witness statement, "Under the NSPS, EPA determines whether a project at a plant is a 'modification' by looking at the maximum hourly emission rate of the plant before the project

and comparing it to the maximum hourly emission rate of the plant after it. If a project does not increase this rate – that is, if the plant has not been changed in a way that would increase its maximum hourly emissions rate – then the project is not a modification. There is rarely any controversy about this issue because the maximum hourly emission rate is a readily available number that is based on the design of the facility."

Mr. Holmstead goes on to say on page 6 of his witness statement, "Because of all the uncertainty and controversy caused by the "emission increase test," [under NSR] it would be helpful for Congress to clarify this issue. In my view, the best approach would be to make clear that there is not a "major modification" under NSR if there is not a "modification" as defined under NSPS. Thus, companies (and EPA) would evaluate a project to determine whether it would increase the maximum hourly emission rate at the plant. If not, then the project does not trigger NSR. If so, then the project would be a modification and would then be evaluated under the current NSR test to determine whether it would be a "major modification" that would trigger NSR. There are at least two important reasons for Congress to consider such an approach. First, it would provide much more certainty to EPA, states, and the regulated industry. As opposed to the current NSR approach, the maximum hourly emission rate is an objective measure based on the design of the facility and is easily ascertainable. As recent experience has shown, there is much subjectivity under the current approach and many different ways to project future annual emissions and then determine the amount of those emissions that are unrelated to the project being evaluated. Second, from an environmental perspective, a one-hour test is much more meaningful because the most stringent EPA standards are based on maximum concentrations of a pollutant averaged over one hour (for SO2 and NO2), eight hours (for ozone and CO), and 24 hours (for PM2.5). The only pollutant for which a longer "averaging time" is meaningful is lead, for which the air-

quality standard is based on a 3-month average (and which has rarely, if ever, been addressed by NSR.) Simply put, in terms of protecting human health, the maximum amount of a pollutant that a facility emits in one hour is much more important than the amount it emits in a year."

I could not agree more with the points Mr. Holmstead makes. The following fix is simple and protective of the environment:

1. Evaluate a project to determine whether it would increase the maximum hourly emission rate at the plant.
    a. If not, then the project does not trigger NSR.
    b. If so, then the project would be a modification and would then be evaluated under the current NSR test to determine whether it would be a "major modification" that would trigger NSR.

6. Yes it has. Moreover, there has been relatively little controversy associated with the NSPS program, because, as Mr. Holmstead stated in his written statement, the maximum hourly emission rate is a readily available number that is based on the design of the facility. If a project does not increase this rate – that is, if the plant has not been changed in a way that would increase its maximum hourly emissions rate – then the project is not a modification.

6.a. Yes it would. Please see response number 6 above.

7. No I do not. First, I believe the NSPS hourly emissions rate test would be protective, because, as stated by Mr. Holmstead on page 6 of his witness statement, "in terms of protecting human health, the maximum amount of a pollutant that a facility emits in one hour is much more important than the amount it emits in a year." Second, states are required to maintain a robust ambient air monitoring network to ascertain the design value of criteria pollutants throughout

their geographical boundaries. If, in spite of the safeguards present in facility permits, a monitor in an area or areas of a state were to violate a particular National Ambient Air Quality Standard (NAAQS) value, then steps could be taken in a State Implementation Plan (SIP) to address control of that pollutant. In order for this to occur, the state regulator would first need to determine if point sources were the primary contributors to the NAAQS violation, as opposed to non-anthropogenic sources or exempt categories (i.e., post-crop agricultural activities). If that was determined to be the case, a SIP addressing specific pollutant-emitting activities at regulated sources within a certain segment of the state would then be appropriate

The Honorable David B. McKinley

1. Yes I do. Please see response number 4 to the Honorable Shimkus's question above.

2. Please see response number 4 to the Honorable Shimkus's question above. Additionally, RMRR was not explicitly defined until the proposed Equipment Replacement Provision (ERP) of the final RMRR rule promulgated on August 27, 2003. The ERP was ultimately struck down. Thus, the need still exists to create a viable exemption, either through rulemaking or via an amendment to the Clean Air Act, to define the circumstances when RMRR activities will not trip or trigger NSR requirements.

Review for a new source is fairly clear. The "modification" definition is where the issue gets muddy. A modification is any physical change or change in the method of operation. Regulated facilities look to EPA's RMRR exclusion for guidance. Although RMRR is a listed NSR exclusion, the courts will generally assess five factors when determining whether or not a project is routine or non-routine. These factors are:

a. The nature of the project;

b. The extent of the project;

c. The purpose of the project;

d. The frequency of the project; and

e. The cost of the project.

These factors are open to disparate judicial interpretation, as has been demonstrated in the outcome of court cases around the country on the RMRR issue. The EPA should endeavor to create industry-specific RMRR exemptions that account for criteria like those listed in a. – e. above. An amendment to the Clean Air Act to that effect would be an even stronger step to take to clarify the issue.

The Honorable H. Morgan Griffith

1. Yes it would. Please see response numbers 5, 6, 6.a., and 7 to the Honorable Shimkus's questions above.

2. Yes it would. Please see response numbers 5, 6, 6.a., and 7 to the Honorable Shimkus's questions above.

3. The EPA has already undertaken efforts to clarify and re-interpret issues of NSR applicability and implementation via the issuance of recent memoranda. Please see response numbers 1.a. and 2 to the Honorable Shimkus's questions above. While these memoranda are valuable to the regulated community and to the states in that they provide additional certainty as to how the EPA intends to implement components of the NSR program, they do not provide the durability and enforceability of a rule or regulation. I believe that the EPA does have the authority to undertake rulemaking to memorialize its latest efforts at clarifications to NSR.

4. Yes it would. As stated in my response directly above, I do believe that the EPA has the authority to promulgate regulatory revisions to the NSR program. That being said, Congressional action would be more impactful and longstanding in its effect.

The Honorable Frank Pallone, Jr.

1. For your review, I am providing the following link to the Arkansas Pollution Control and Ecology Commission's website:

https://www.adeq.state.ar.us/commission/agenda.aspx

Once you click on the link above, you will be able to access Commission meeting agendas with attachments. The attachments include the Arkansas Department of Environmental Quality's monthly permits report. The report includes a description of permits issued by the Office of Air Quality. The list includes all types of permit actions, including initial permits, major modifications, minor modifications, registrations, and administrative amendment. Each action includes a permit number and permit issuance date. Specific information regarding each permitted facility may also be located at the following on the following ADEQ website page:

https://www.adeq.state.ar.us/home/pdssql/pds.aspx

2. The definition of "modification" is the same under the NSR and NSPS programs. The analysis under the NSPS program is simple: the EPA determines whether a facility's project is a "modification" by looking at the maximum hourly emission rate of the plant before the project and comparing it to the maximum hourly emission rate of the plant after it. If a project does not increase this rate, then the project is not a modification. The analysis under the NSR program is much more cumbersome and complex. Fortunately, the EPA recently released a guidance

memorandum on March 13, 2018 regarding "project emissions accounting". This memorandum memorializes the EPA interpretation that current NSR regulations provide that emissions decreases as well as increases are to be considered in Step 1 of the NSR applicability process, provided they are part of a single project. Thus, although there have historically been frequent instances where a "modification" under the NSPS program has not translated to a "modification" under the NSR program and vice versa, the EPA's March 2018 memorandum will help true-up the initial accounting of "increases" so that only those true major modification projects will trip NSR review. Any increase in emissions should be offset and balanced with decreases, if they are part of the same project, in order to produce a true accounting for a particular project.

3. As stated in my response directly above, any increase in emissions should be offset and balanced with decreases, if they are part of the same project, in order to produce a true accounting for a particular project. Only after that accounting is done can the actual emissions impact be appropriately characterized.

4. As stated in my response number 3 directly above, any increase in emissions should be offset and balanced with decreases, if they are part of the same project, in order to produce a true accounting for a particular project. Only after that accounting is done can the actual emissions impact be appropriately characterized.