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February 26, 2018

Mr. Scott Pruitt
Administrator
U.S. Environmental Protection Agency
Attention: Docket ID No. EPA-HQ-OAR-2017-0545
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Subject: Comments on EPA's Advance Notice of Proposed Rulemaking for State Guidelines for Greenhouse Gas Emission from Existing Electric Utility Generating Units, Docket ID No. EPA-HQ-OAR-2017-0545

Dear Administrator Pruitt:

The Wisconsin Department of Natural Resources (DNR), joined by the Public Service Commission of Wisconsin (PSC) under separate cover, is submitting these comments on the U.S. Environmental Protection Agency's (EPA's) advance notice of proposed rulemaking (ANPRM) for "State Guidelines for Greenhouse Gas Emission from Existing Electric Utility Generating Units," published in the Federal Register on December 28, 2017 (82 FR 61507). In this ANPRM, EPA is considering proposing emission guidelines to limit greenhouse gas (GHG) emissions from existing electric utility generating units (EGUs) and is soliciting information on the proper respective roles of the state and federal government in that process, as well as information on systems of emission reduction that are applicable at or to an existing EGU, information on compliance measures, and information on state planning requirements under the Clean Air Act (CAA). This ANPRM does not itself propose any regulatory requirements.

As EPA notes in the ANPRM, the final CPP is currently the subject of litigation by several parties, including the State of Wisconsin. Submittal of these comments do not constitute Wisconsin's acceptance of EPA's current CPP or any potential future rulemaking regulating GHG emissions from existing EGUs.

DNR offers the enclosed comments to guide EPA's development of such a rule, should EPA proceed with this rulemaking. Overall, it is important for EPA to provide states the maximum flexibility to address, implement, and comply with any rule, in order that state-specific and unit-specific situations can be fully respected. DNR suggests that a unit-by-unit approach to best system of emissions reduction (BSER) determinations may be the best way to ensure that emission standards are achievable for each unit. EPA should facilitate such a bottom-up approach in its emission guidelines. Specifically, EPA should allow states to determine any necessary emission limits or reductions achievable at individual units. EPA should also give states and affected units maximum flexibility when it comes to developing state plans and determining compliance.

These comments are consistent with those provided by Wisconsin on aspects of EPA's June 2014 Clean Power Plan (CPP) proposal (79 FR 34830) and EPA's September 2013 list of questions to states regarding development of carbon dioxide regulations for existing power plants under section 111(d).^{1,2}

Wisconsin utilities are regulated by the PSC, which means they have been and continue to be incentivized to improve and maintain efficient fleets. As a result, over the past two decades our utilities have decommissioned many older coal-burning plants, improved the efficiency of the remaining existing plants, and constructed several of the newest, most efficient coal-fired plants in the nation.³ EPA should ensure any replacement rule fully credits the early actions the state and its regulated utilities have taken to reduce GHG emissions.

To reiterate, the final CPP is currently the subject of litigation by several parties, including the State of Wisconsin. Submittal of these comments do not constitute Wisconsin's acceptance of EPA's current CPP or any potential future rulemaking regulating GHG emissions from existing EGUs.

Thank you for the opportunity to comment on this ANPRM.

Sincerely,



Daniel L. Meyer
Secretary

cc: Ellen Nowak, Chair, Public Service Commission of Wisconsin
Pat Stevens, Administrator, Environmental Management Division

Enclosure

¹ "Wisconsin's Comments on Clean Power Plan - Attachment". Submitted jointly by DNR and Public Service Commission of Wisconsin (PSCW) to Docket ID No. EPA-HQ-OAR-2013-0602 on Nov. 30, 2014.

² "Comments regarding development of carbon dioxide regulations for existing power plants". Submitted jointly by DNR and PSCW on Dec. 13, 2013.

³ See Part 2 – Comments 6.A and 6.B, and Part 4 – Comment 1 from Wisconsin's Nov. 30, 2014 CPP comments.

**WISCONSIN'S COMMENTS ON EPA'S ADVANCE NOTICE OF PROPOSED
RULEMAKING FOR STATE GUIDELINES FOR GREENHOUSE GAS EMISSIONS
FROM EXISTING ELECTRIC UTILITY GENERATING UNITS**

These comments are being submitted in response to U.S. Environmental Protection Agency's (EPA's) advance notice of proposed rulemaking (ANPRM) for "State Guidelines for Greenhouse Gas Emission from Existing Electric Utility Generating Units," published in the Federal Register on December 28, 2017 (82 FR 61507). The final Clean Power Plan (CPP) is currently the subject of litigation by several parties, including the State of Wisconsin. Submittal of these comments does not constitute Wisconsin's acceptance of EPA's current CPP or any potential future rulemaking regulating greenhouse gas (GHG) emissions from existing electric utility generating units (EGUs).

COMMENTS ON STATE AND EPA ROLES AND RESPONSIBILITIES

EPA is taking comment on the roles, responsibilities and limitations of both the states and EPA in regulating GHGs from existing EGUs under Clean Air Act (CAA) Section 111(d).

EPA's emission guidelines

- 1. EPA should develop a list of presumptively approvable systems that could qualify as the best system of emission reduction (BSER) without defining presumptive emission limits.**

EPA is taking comment on an approach in which EPA determines what systems may constitute BSER without defining presumptive emission limits, and the states set unit-by-unit or broader emission standards based on the identified BSER and their own unique circumstances. EPA is also requesting comment on the role subcategorization can play in the emission standard setting process (ANPRM Section III.B.2, "Application of Standards to Sources").

Given the wide variability in the EGU fleets around the country, EPA should not define presumptively approvable emission limits as part of its emission guidelines. The exact level of cost-effective, achievable emissions is likely to vary dramatically from state to state and from unit to unit within states. Instead, EPA should develop a list of presumptively approvable systems limited to within the fenceline that would qualify as BSER and let states set emission standards based on these systems. States are better equipped to define emission standards based on the application of appropriate BSER at individual units. The list of presumptively approvable systems should account for differences between the various categories of units, as discussed in comment 14, to facilitate a unit-by-unit approach to BSER determinations.

If EPA does establish presumptive emission limits, the emission guidelines should not be expressed as a relative emission reduction requirement for a broad category of sources. For example, under the final CPP, EPA set a region-specific heat rate percentage improvement for each of the three major U.S. electrical interconnections, which applied to every affected coal-fired unit in that region. This type of relative emission reduction requirement penalizes units that have made early efficiency improvements. In addition, if EPA establishes presumptive limits, the limits should not affect EPA's approval of state plans that depart from EPA's emission guidelines, as discussed in comment 5.

2. EPA should provide sample state plan text as part of the emission guidelines.

EPA is taking comment on whether it would be beneficial to states for EPA to provide sample state plan text as part of the development of emission guidelines (ANPRM Section III.B.2, "Application of Standards to Sources").

Providing sample state plans would help states as they develop their own plans. EPA should draft sample text, which states could duplicate, modify, or ignore when crafting their own plans.

State plan requirements for sources

3. EPA should allow states to set either unit-by-unit or broader emission standards as each state determines is appropriate.

EPA is taking comment on the role of a state in setting unit-by-unit or broader emission standards for EGUs within its borders, including potential advantages and challenges of such an approach. EPA is also requesting information on how burdensome it would be for states to develop unit-by-unit emission standards (ANPRM Section III.B.2, "Application of Standards to Sources").

States should have the flexibility to determine whether unit-by-unit or broader emission standards are appropriate for the affected units located in their states. States must have the option to set unit-by-unit emission standards in order to fully consider the unique situation of each emission unit. At a minimum, states must be allowed to consider factors applicable to the generating unit and supporting facilities such as the type of generation unit, fuel types, size, age and remaining useful life (RUL), cost-effectiveness and remaining debt. Such a bottom-up approach would best reflect actual emission reduction potential, as discussed in greater detail in comment 12.

The Wisconsin Department of Natural Resources (DNR) notes that it would take more than the 60 days provided for comment to fully evaluate how burdensome it would be to develop unit-by-unit emission standards (North Carolina's draft rule and supporting documents in

response to the CPP, which is referenced in the ANPRM, likewise describes the significant level of information states would need to collect and analyze for such a unit-by-unit approach). At the same time, states must have the option to do so. EPA's provision of a list of presumptively approvable systems grouped by subcategory, as recommended in comment 1, would help reduce the burden on states.

4. States should be able to set emissions standards expressed as either emission rate limits or equipment specification requirements, as the state deems appropriate.

EPA is taking comment on whether changes are needed to the 111(d) implementing regulations (ANPRM Section III.B.1, "Designing State Plans").

States should have the flexibility to determine whether emissions standards should be expressed as emission rate limits or equipment specification requirements. The language in the implementing regulations suggests that emission rate limits are required "except when it is clearly impracticable" (40 CFR 60.24(b)(1)). EPA should update the rule language to allow states greater latitude in determining the type of standard appropriate for units in the state.

5. EPA should defer to a state's assessment of BSER that is tailored to the state's individual units.

EPA solicits comments on how much discretion states should have to depart from EPA's emission guidelines (ANPRM Section III.D., "The EPA's Role and Responsibilities Under CAA Section 111(d)").

EPA's role is to provide guidelines and it is the role of the states to develop and implement plans. EPA should provide states maximum flexibility to depart from EPA's emission guidelines to account for state-specific and unit-specific circumstances. For example, EPA should defer to state assessments of BSER that differ from the emission guidelines if the state demonstrates that such a deviation is appropriate for a particular unit based on cost, physical limitations or other facility-specific factors. This is consistent with the text of the implementing regulations, which allow states to "provide for the application of less stringent emission standards or longer compliance schedules" based on "factors specific to [a] facility (or class of facilities)" (40 CFR 60.24(f)). As stated in comment 1, states are well equipped to assess the unique characteristics of their sources and make accurate BSER determinations at the unit level. See comment 12 for more information on a bottom-up approach to BSER determinations.

6. An approach to BSER that uses an affected EGU's own best performance should allow for the use of a range of years to establish best performance rather than the "best one year."

EPA seeks comment on an approach to evaluate unit-specific HRI opportunities that uses an affected EGU's own best potential performance. (ANPRM Section III.B.2, "Application of Standards to Sources").

If EPA uses an approach to BSER that relies on an affected EGU's own best potential performance, states should be allowed to use a range of years to establish the best historical annual emission rate, instead of the "best one year." As DNR stated in its comments on EPA's June 2014 proposed GHG standards for new and modified EGUs, the BSER standard for this type of approach should be the best three to five consecutive year average emission rate, in order to account for variables that can affect a unit's performance and CO₂ emissions such as load, fuel quality, and temperature.¹ EPA should also ensure that the BSER emission limit reflects cases of higher heat rates due to recent physical or operational changes at a source, such as the addition of air pollution control equipment.

Source compliance

Compliance costs are an important concern for the State of Wisconsin. EPA must ensure that costs incurred under any BSER requirement are minimized by allowing maximum flexibility in compliance options. Specific areas of compliance flexibility are discussed below.

7. EPA should allow states to structure any BSER emission standards in terms of either an emission rate or mass-based limit.

EPA requests comments on whether emission guidelines for emission rate standards would be sufficient, or whether EPA should also consider guidelines for mass-based emission standards (ANPRM Section III.B.2.a, "Rate-Based and Mass-Based Compliance Options and Other Potential Compliance Flexibilities").

If states are required to develop emission standards in terms of emission rate limits (rather than equipment specification requirements, as discussed in comment 4), EPA should allow states to structure the standards as either mass or emission rate requirements. An emission rate approach may be necessary to allow power plants to utilize full unit capacity in response to independent system operator (ISO) dispatch orders. An emission rate approach may also

¹ "State of Wisconsin Comments Regarding EPA's Proposed Carbon Pollution Standards for Modified and Reconstructed EGUs". Submitted by Wisconsin DNR to Docket ID EPA-HQ-OAR-2013-0603 on October 16, 2014. See Comment 2.

be necessary to allow full use of the newer, more efficient coal capacity recently built in Wisconsin. However, a mass-based approach may more readily facilitate emissions trading (which is discussed in comment 8).

8. EPA should allow emissions averaging and trading and develop and support a framework to facilitate these activities.

EPA requests comments on whether states should be able to develop plans that allow emissions averaging. In addition, EPA asks whether any special requirements would be needed to facilitate emissions trading. EPA also asks whether mass-based trading should be considered, and whether rate-based trading programs should be able to interact with mass-based trading programs (ANPRM Section III.B.2.a, "Rate-Based and Mass-Based Compliance Options and Other Potential Compliance Flexibilities").

EPA should allow states to structure compliance so that emissions can be averaged beyond individual states and operating companies. In addition, EPA should allow for emissions trading and facilitate trading by establishing trading frameworks for state plans.

EPA should also develop a mechanism to allow trading between rate- and mass-based programs. This would avoid a scenario in which a state becomes isolated and can only trade in-state or with a few other states. Allowing all states to trade with each other, regardless of program type, would permit states to choose the type of plan that is most appropriate for their circumstances without fear of being denied access to a market. In addition, allowing trading between rate- and mass-based programs would facilitate a broader trading region, which would increase compliance options for all states, improve electric reliability, and reduce compliance costs.

9. EPA should allow states to set timeframes for compliance that are appropriate for the unique characteristics of each state's affected units, and to use emission averaging over multiple years for compliance.

EPA solicits comment on the considerations states and EPA should take into account when determining appropriate implementing and enforcing measures for emission standards (ANPRM Section III.B.2.a, "Rate-Based and Mass-Based Compliance Options and Other Potential Compliance Flexibilities").

First, EPA should consider allowing emission averaging over multiple years for compliance. This will help address the variability that might result due to EGUs that are offline for maintenance or installation of operating or pollution control equipment, as well as other variations in loads and fuel use.

States should be allowed to set timeframes for compliance that are appropriate for the specific units in the state. If EPA establishes a specific timeline, EPA must consider that the types of facility additions or upgrades that may be needed to comply with these guidelines can take five or more years to complete. In addition, compliance dates must also consider any time needed to address remaining plant life or investments or to ensure electric reliability.

In particular, states must be able to set compliance deadlines that allow utilities to pay off existing debt on their power plants and pollution control equipment. Setting fixed compliance dates could strand existing debt and make the installation of new, cleaner replacement generation more costly.

EPA has the authority to allow flexible compliance timeframes based on achievability and need. Section 111(d) directs EPA to establish a SIP process similar to CAA Section 110. Section 110 does not set compliance timeframes for non-NAAQS pollutants such as CO₂. Section 111(d) also directs EPA to allow methodologies that account for the remaining lifetime of power plants. These factors indicate that states should be able to set different compliance timeframes or requirements based on achievability and the remaining useful life of each power plant.

State plan development and approval

10. EPA should allow states sufficient time to develop and submit their plans to EPA.

EPA is taking comment on the provisions in the 111(d) implementing regulations establishing the time frames for states to submit their plans to EPA (ANPRM Section III.B.1, "Designing State Plans").

EPA must ensure states have sufficient time to develop and submit required plans under any revised rule. States must have time to evaluate affected sources and consider all the variables appropriate to determining BSER. States also need time to engage stakeholders and complete any administrative rulemaking processes (which can be a multiyear process in many states). EPA should also provide states with the flexibility to extend any EPA-established timeframe, if needed, and to adjust and resubmit plans if circumstances warrant.

11. EPA should adopt and utilize full, partial and conditional approvals of state plans.

EPA is taking comment on which CAA Section 110 mechanisms for SIP approvals EPA should adopt for state plans under CAA Section 111(d) (ANPRM Section III.B.1, "Designing State Plans").

CAA Section 110(k)(3) allows for full approvals and partial approvals/disapprovals of SIPs, and Section 110(k)(4) allows for conditional approvals of SIPs. EPA should adopt and utilize all of these mechanisms in approving any state plans required under Section 111(d).

COMMENTS ON AVAILABLE SYSTEMS OF GHG REDUCTIONS

EPA is specifically interested in identifying the BSER that can be implemented at the level of an affected source, including aspects related to efficiency (heat rate) improvement technologies and practices as well as other systems of emission reduction. EPA lists a series of questions on this topic that appear in Section IV, "Available Systems of GHG Emission Reductions" of the ANPRM.

12. If EPA determines BSER for coal boilers and gas turbines should be based on heat rate improvement (HRI) technologies, states should be allowed to use a state-specific, bottom-up methodology based on actual achievability in each state.

EPA notes that the final CPP is based on a fleet-wide average HRI. EPA solicits comment on the statistical approach used to determine potential fleet-wide HRI and its applicability in identifying HRI opportunities at the unit level. EPA also seeks comment on various aspects of all technologies and practices that may be implemented to improve heat rates at EGUs. EPA further solicits comment on how to evaluate unit level HRI opportunities while properly accounting for the effects of changes in the historical operation of such units (ANPRM Section IV.A.1, "Heat Rate Improvement").

In EPA's June 2014 CPP proposal, EPA proposed that every coal-fired EGU improve its heat rate by 6 percent, based on a generic, nationwide analysis of available measures and not on the actual technical HRI potential of individual EGUs. An initial assessment provided in DNR's comments on the proposed CPP indicates that HRI is likely limited to less than 2.3 percent, on average, for Wisconsin's coal-fired EGU fleet.² As stated in those comments, EPA should allow states to perform a unit-by-unit analysis to determine the HRI potential of the EGUs in each state.³ In addition, EPA should allow states to set either unit-by-unit or broader standards that are expressed as either emission rate limits or equipment specification requirements, as discussed in comments 3 and 4. This bottom-up approach would reflect actual emission reduction potential and better account for the different ages, sizes, configurations and other characteristics among individual EGUs. This approach would also not penalize utilities that have already taken HRI actions.

² "Wisconsin's Comments on Clean Power Plan - Attachment". Submitted by Wisconsin DNR and Wisconsin PSC to Docket ID No. EPA-HQ-OAR-2013-0602 on Nov. 30, 2014. See Part 2 – Comment 6.B.

³ See Part 2 – Comments 4, 5 and 6 from CPP Comments.

Regarding information on HRI technologies and practices, DNR provided a list of HRI actions taken by Wisconsin utilities for coal-fired EGUs as part of its comments on EPA's proposed CPP.⁴ Many of these actions are listed as options in Tables 1 and 2 of EPA's ANPRM. Additional time beyond the 60-day comment period for the ANPRM would be needed to provide more detailed information on HRI options related to the above solicitation for comment.

Finally, regarding changes in historical operation of units, DNR presented data in its comments on EPA's proposed CPP that showed a strong relationship between a lower capacity factor and decreased heat rate for Wisconsin coal-fired EGUs. The data showed an approximate 5 percent degradation in heat rate fleet-wide when operating at a 41 percent capacity factor versus a 60 percent capacity factor.⁵ Therefore, EPA should consider accounting for variable loads in any BSER emission guidelines. For example, an adjustment factor or scale could be applied for operating at a lower capacity factor that would ensure EGUs are not negatively impacted by operating at these lower capacities.

13. Carbon capture and sequestration (CCS) technology should not be considered for BSER, but should be allowed for compliance along with other available systems of GHG reductions.

EPA believes that CCS technology cannot be considered as the BSER for existing fossil fuel-fired EGUs, but solicits any new information regarding CCS and how affected EGUs may utilize retrofit CCS technology as a compliance option. EPA also solicits information on other available systems of emission reduction that may be considered as compliance options for individual units (ANPRM Section IV.C, "Other Available Systems of GHG Emission Reduction").

CCS should not be considered as BSER for existing fossil-fueled EGUs. In DNR's comments on EPA's January 2014 proposed CO₂ new source performance standards (NSPS) for power plants, DNR noted that there are no installations of CCS that have been determined to be feasible or cost-effective under best available control technology (BACT) or have been required under any other regulation for fossil fuel power plants, and that there are few installations of CCS operating to provide CO₂ capture for industrial purposes.⁶ DNR specifically noted in its comments that carbon storage capacity is not proven and available for

⁴ See Part 2 – Comment 6 (Table 1) from CPP Comments.

⁵ See Part 2 – Comments 6 (Figure 1) and 8 from CPP Comments.

⁶ "Technical Comments Regarding New Source Performance Standards (NSPS) for Greenhouse Gas Emissions from Stationary Sources: Electric Utility Generating Units". Submitted by Wisconsin DNR to EPA Docket ID No. EPA-HQ-OAR-213-0495 on May 4, 2014. See Comment 1.

all EGUs, and that there are significant costs and issues related to transporting CO₂ to proven carbon storage sites.⁷ DNR is unaware of any new information regarding the availability, applicability, or technical feasibility of CCS technologies that would alter this previous assessment.

While CCS should not be considered for BSER because it has not been proven feasible or cost-effective, EPA could still consider allowing CCS and other inside-the-fence GHG reduction systems (e.g., co-firing natural gas or biomass with coal) as a compliance option for EGUs to reduce CO₂ emissions.

14. EPA should establish specific applicability criteria and exemptions and also consider the differences inherent between different categories of units.

EPA solicits comment on applicability criteria in a potential new rule, and whether potentially affected EGU sources should be grouped into categories and subcategories for purposes of identifying the BSER (ANPRM Section IV.D, "EGU Source Categories and Subcategories).

Any EPA rule should specifically define applicability criteria and exemptions. Any rule should not apply to units beyond those meeting the criteria described by EPA in the ANPRM (that is, any steam generating or stationary combustion turbine units over 25 MW and having a base load heat input greater than 250 mmBtu/hr). The exemption of certain categories of EGUs, including simple cycle turbines, certain non-fossil units, and certain combined heat and power units, is also appropriate.

In addition, any proposed emission guidelines need to consider the differences inherent between the various categories of affected units. For example, DNR has previously commented that EPA should adequately account for differences in HRI potential due to firing different fuels such as subbituminous, bituminous, biomass or other fuels, as well as differences between new and older EGUs and different sizes and configurations of units.⁸ Accounting for these differences in the emission guidelines is needed to ensure units can be considered on a case-by-case basis and to facilitate a bottom up-approach to BSER determinations (see comment 12).

⁷ See Comment 3 from NSPS Comments.

⁸ See Part 2 – Comment 5 from CPP Comments.

COMMENTS ON POTENTIAL INTERACTIONS WITH OTHER REGULATORY PROGRAMS

15. EPA must ensure that sources will not trigger new source review (NSR) requirements when making modifications to comply with 111(d).

EPA solicits comment on how the NSR program would interact with emission guidelines established under CAA section 111(d). EPA is interested in actions that can be taken to harmonize and streamline the NSR applicability and/or the NSR permitting process with a potential new rule (ANPRM Section V.A, "New Source Review").

Any physical change or change in the method of operation of a stationary source – as may be required as part of EPA's strategy for regulating existing sources under 111(d) – may be subject to the applicable NSR program if the change results in a major modification as defined under the prevention of significant deterioration (PSD) and nonattainment area (NAA) permitting requirements at 40 CFR 51.165(a)(1)(v)(A) and 40 CFR 51.166(b)(2)(i). There is no exemption listed under these permitting requirements that would exempt such physical or operations changes from NSR program requirements. Therefore, EPA should either specify in any new rule that certain modification projects to show compliance with 111(d) are exempt from the NSR program, or else revise the PSD and NAA permitting requirements to specifically exempt these projects from the NSR program.