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WJC West Building, Room 3334
1301 Constitution Ave., NW
Washington, D.C. 20460

**Comments of the Large Public Power Counsel in response to EPA's
Advanced Notice of Proposed Rulemaking on State Guidelines for
Greenhouse Gas Emissions from Existing Electric Utility Generating
Units, 82 Fed. Reg. 61,507 (December 28, 2017)**

The Large Public Power Counsel ("LPPC") respectfully submits the following comments in response to the Advanced Notice of Proposed Rulemaking on *State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units* ("ANPR").¹ In this ANPR, the Environmental Protection Agency ("EPA") indicates that it is developing an entirely new regulatory program that would replace the Clean Power Plan ("CPP" or "Clean Power Plan")² and is seeking legal, policy and technical input on a wide range of issues related to the design and implementation of a possible CPP replacement rule.

Founded in 1987, the LPPC is comprised of 26 of the nation's largest public power systems, providing power to 30 million Americans. A list of LPPC members is attached hereto for your reference. LPPC has been deeply involved in the recent major EPA rulemakings affecting the power generation sector, and remains focused on working with the Agency to ensure the continued delivery of reliable, low-cost electricity while ensuring the protection of the environment. LPPC member utilities own and operate more than 71,000 MW of diverse generation capacity and will be greatly affected by EPA's efforts to develop federal regulations to regulate carbon dioxide ("CO₂")

¹ See 82 Fed. Reg. 61,507 (December 28, 2017).

² See Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,662 (Oct. 23, 2015) ("final CPP rule" or "CPP rule").

emissions from existing fossil-fueled electric generating units (“EGUs”) under section 111(d) of the Clean Air Act (“CAA” or “Act”).

OBJECTIVE AND SCOPE OF COMMENTS. LPPC is committed to working together with EPA to ensure the “workability” of any CO₂ regulatory program that the Agency may adopt to replace the Clean Power Plan. In so doing, LPPC is not taking a position on threshold legal and policy issues that are outside the scope of the ANPR. Notable examples of threshold issues on which LPPC is not providing comments include whether EPA should repeal the current CPP regulations or whether CAA section 111(d) gives EPA the authority to set CO₂ performance standards based on “beyond the fence” control measures, such as shifting generation from coal-fired to gas-fired EGUs, or fossil-fueled generation to renewable energy resources.³ Rather, our comments are focused on only those design and implementation issues for ensuring the development of a workable CPP replacement rule that is cost-effective for customers, relies on demonstrated technology, does not undermine reliability of electrical service, accounts for regional differences including the diversity of generation sources, and provides a workable implementation framework and compliance schedule for achieving the requisite CO₂ emission reduction obligations.

The ANPR raises a wide range of policy and technical issues for which EPA is requesting comment from interested stakeholders. Of these issues, LPPC is providing high-level policy input on a limited subset of those policy and technical issues relating to following matters:

- The federal-state relationship for the setting CO₂ performance standards for affected existing EGUs under section 111(d) of the CAA;
- The available control measures for setting such performance standards that can be applied to, for, and at individual EGUs;

³ Although LPPC is focusing its comments on workability issues related to the topics identified in the ANPR and the potential impacts of a CPP replacement rule on the cost and reliability of electric service, LPPC members take different positions on these threshold legal and policy issues. A number of LPPC members do not support the repeal of the Clean Power Plan and believe that EPA should move forward with the implementation of either the Clean Power Plan or a similar replacement rule that achieves comparable CO₂ emission reductions from the electric power sector. [These LPPC members include the following: Provide a list of LPPC members].

- The methodology that states should follow in setting CO₂ performance standards for existing EGUs based on federal emissions guidelines established by EPA;
- The interaction and coordination of any federal CPP replacement rule with current or future state regulatory programs for controlling CO₂ and other greenhouse gases from EGUs and other source categories of greenhouse gas emissions;
- The compliance flexibility that EPA and states may develop to ensure the efficient and cost-effective implementation of the CO₂ performance standards applicable to EGUs under section 111(d) of the Act;
- Potential interactions of a CPP replacement rule with the “new source review” (“NSR”) permit program; and
- The potential customer and reliability impacts that EPA should consider in developing any CPP replacement rule.

For each of these issues, LPPC is providing general guiding principles that EPA should consider in the development of a workable and efficient regulatory framework for the regulation of CO₂ emissions from existing affected EGUs under a replacement rule.

GUIDING PRINCIPLES FOR SETTING CO₂ PERFORMANCE STANDARDS UNDER CPP REPLACEMENT RULE

The following general principles should guide EPA in the development of federal emissions guidelines that set forth the procedures for states to follow when establishing CO₂ performance standards for existing EGUs under section 111(d) of the CAA.

Federal-State Relationship. The regulatory framework should respect the primacy of the states. As required by the CAA, states have the primary responsibility of developing CO₂ standards for existing EGUs under section 111(d) of the Act. Each state should therefore have the lead role in setting performance standards for individual units within its jurisdiction. By contrast, EPA’s role is to identify the “best systems of emission reductions” (“BSER”) that has been shown to be “adequately demonstrated” for existing sources in the regulated source category and that will result in “emission limitations” that are “achievable” by existing sources.⁴

⁴ Section 111(a)(1) of the CAA.

Under this federal-state framework, states should be responsible for establishing standards of performance for individual units within their jurisdiction that reflect “emission limitation[s] achievable” by individual sources “appl[ying]” the “BSER” control measures (as identified by EPA) to the individual source.⁵ In addition, states should be allowed to set standards of performance that account for the “remaining useful life” of existing sources, cost, and other appropriate factors, as authorized by statute.⁶ States also should be allowed to adjust, on a case-by-case basis, the stringency of CO₂ performance standards applicable to each affected source under EPA’s emissions guidelines based on other such factors that have traditionally be authorized by EPA’s implementing regulations.⁷

Finally, the state planning procedure provided in EPA’s emission guidelines should not be overly burdensome or time-consuming for states and regulated sources to adopt and implement. The longer and more complex the process is, the greater the uncertainty and attendant regulatory and litigation risks.

Appropriate BSER Control Measures for Setting Performance Standards. The ANPR generally requested input on the BSER emission control measures that EPA should consider in the development of emission guidelines to be used by states in setting the performance standards. In so doing, the Agency asks for input on how to define BSER and identify specific BSER control measures that can be applied to or at individual generating units, such as efficiency (heat rate) improvements technologies and practices. Without getting into the many technical details raised by the ANPR on this topic, LPPC recommends that EPA’s determination on BSER control measures should reflect the following principles.

First, the BSER must be “adequately demonstrated” (accounting for “cost, health and environmental impact, and energy requirements”) for existing sources in the category, not something novel or extraordinarily costly, as authorized by section 111 of the CAA.

Second, the BSER must be capable of “limiting” the “quantity, rate, or concentration” of each source’s emissions “on a continuous basis” and may include requirements relating

⁵ Section 111(a)(1), (d)(1) of the CAA.

⁶ See Section 111(d)(1) of the CAA.

⁷ [Cite.]

to the operation or maintenance of a source as well as any design, equipment or operational standard to limit emissions from the source, as provided in CAA section 302(k).

Third, and most importantly, a replacement rule must account for the great diversity in operating characteristics and performance levels within the EGU source category. In the case of electric steam generating units, for example, existing sources vary extensively by the following factors:

- Design of the boiler;
- Fuel burned;
- Size of the unit;
- Age and remaining useful life of the unit;
- Load level and duty cycle of the unit;
- Type of cooling system used by the unit (*e.g.*, cooling towers vs. once-through cooling systems);
- Types of emissions control systems used by the unit (*e.g.*, scrubber, SCR, baghouse); and
- Location of the unit (specifically, elevation and ambient temperatures at the facility).

Attempts to standardize CO₂ emissions “performance” within the diverse fleet by using a “one-size-fits-all” subcategorization approach should be avoided when making the BSER determination.

The Methodology that States Should Follow in Setting Performance Standards. The ANPR raises a number of important technical implementation issues regarding how states should set the CO₂ performance standards for affected EGUs under a CPP replacement rule. One key issue relates to whether the EPA guidelines should require or authorize states to set unit-specific performance standards on a case-by-case basis, or general performance standards that apply to each EGU subcategory. Another important issue raised by EPA in the ANPR is how degradation of heat rate over time and the effects of changing operating conditions (*e.g.*, changing from baseload load to variable load-following operations) be accounted for in the standard. A third important question pertains to whether states should have the authority to adjust the stringency of

the performance standards based on plant-specific factors on a case-by-case basis. LPPC offers the following guiding principles that the Agency consider in addressing these important technical implementation issues.

First, a replacement rule should not dictate or interfere with the source's operating duty profile. Many steam generating are operating at lower load levels in recent years. The main driver for the declining load profiles of coal-fired units is the relative change in the cost of fuel, with natural gas becoming substantially less expensive than coal with the increased supplies of natural gas. If the relative price of natural gas versus coal changes substantially in the future, steam units could be anticipated to increase their output. It is impossible to predict how much a given unit may be called upon to operate in the future given uncertainties in fuel prices. In light of these important considerations, a replacement rule should not constrain a unit's ability to meet market demand for electricity in order to ensure reliable and affordable electricity.

Second, a replacement rule should recognize and account for the fact that a power plant's efficiency and heat rate deteriorates over time and CO₂ emissions steadily increase on a lbs/megawatt-hour basis, all other things held constant.

Third, a replacement rule should recognize that there are many often-unnoticed, difficult-to-measure factors that can adversely affected the efficiency levels of EGUs. These site-specific factors include, as noted above, the moisture content of coal, ambient conditions, ramping frequency, operation of pollution control equipment, and calibrations of emissions monitoring equipment. The performance standards also should account for the fact that CO₂ emissions can greatly increase or decrease by a change in operating duty of the unit or other unit-specific circumstances.

And finally, states should be allowed to adjust, on a case-by-case basis, the stringency of CO₂ performance standards applicable under EPA's emissions guidelines based on such factors as the remaining useful life of the affected EGU, physical impossibility of controls, or other relevant factors, as expressly authorized by the CAA and EPA's implementing regulations.⁸

⁸ [Cites.]

Interaction and Coordination with State Greenhouse Gas Regulatory Programs. With respect to those states that have already developed comprehensive greenhouse gas regulatory programs or plan to do so in future, the ANPR requests comment on how those state programs could interact with, and possibly satisfy the states' implementation obligations under a replacement rule. The following are several guiding principles that LPPC keep in mind to ensure maximum federal coordination with state regulatory programs to the maximum extent permissible by law.

First, each state should be allowed to develop any flexible implementation measures and market-based requirements it so chooses so long as the state regulatory program achieves CO₂ emissions reductions that are at least equivalent to the reductions that would otherwise be achieved by the application of EPA's emissions guidelines on a unit-by-unit basis.

Second, EPA should allow those states to adopt state regulatory programs that achieve CO₂ emission reductions that are more stringent than the federal guidelines if they choose to do so.

Compliance Flexibilities to Ensure Efficient and Cost-Effective Implementation. In any replacement rule, EPA should confirm states' broad authority to implement the CO₂ control requirements through flexible, emission averaging or market-based mechanisms that can achieve required CO₂ reductions in the most cost-effective and efficient manner.

Both the statute and implementing regulations already provide states with broad authority to adopt plans for the flexible implementation of the federal emissions guidelines. In light of this authority, the Agency should confirm in the federal emissions guidelines that states may develop plans that allow emissions averaging among affected EGUs. Affected EGUs, at a minimum, should be allowed to comply with the applicable CO₂ performance standards through emissions averaging with any other affected EGUs within the same state. In addition, states should have the option to expand the geographic scope of the emissions averaging compliance alternative so that the averaging of CO₂ emissions is permissible between affected EGUs in different states.

Since states have the primary role of implementing EPA's emissions guidelines under CAA section 111(d), the EPA emissions guidelines should leave to the state's discretion

the compliance measures and market-based requirements that the state wants to implement within the state. Among other things, each state should be allowed to develop any flexible implementation measures and market-based requirements it so chooses so long as the state regulatory program achieves CO₂ emissions reductions that are at least equivalent to the reductions that would otherwise be achieved by the application of EPA's emissions guidelines on a unit-by-unit basis.

Potential Interactions of a CPP Replacement Rule with NSR. The ANPR seeks input on actions that EPA can take to “harmonize and streamline” the NSR modification rules with any future CPP replacement rule. The following are several suggestions on how EPA should approach harmonizing and streamlining the NSR program with a future replacement rule.

First, EPA should issue federal guidance or regulatory reforms clarifying that the NSR permitting requirements will not be triggered as a result of efficiency upgrade measures implemented at affected EGUs in order to comply with applicable CO₂ performance standards. Many efficiency improvements, such as turbine replacements and overhauls, are expensive, require long outages, and may enable extended unit life, all of which are bases that EPA has used to argue power plant projects trigger NSR permitting.

A replacement rule should exclude from its BSER determination any efficiency measures that would trigger onerous and costly NSR obligations.

Customer Impacts and Reliability. Another important issue for LPPC that was not specifically raised in the ANPR is how and to what extent should utility customer cost impacts and reliability be taken into account in prescribing EPA guidelines and approving state plans. The following are several key considerations that that LPPC could advance in comments to EPA on the ANPR.

First, EPA, in setting emission guidelines and approving state plans, should ensure that the CAA section 111(d) program does not threaten the adequacy or reliability of the electric power, or have significant cost impacts on electric consumers.

Second, in order to minimize significant adverse impacts on affordability and reliability of electricity, the federal emissions guidelines should provide sufficient time for —

- States to develop their plans for implementing the CO₂ performance standards required by the federal emissions guidelines; and
- Affected EGUs to comply with those CO₂ performance standards.

And third, the EPA emissions guidelines should avoid stranded investments to the maximum extent practicable. The electric power sector has made substantial capital investments in its existing electric generating fleet to comply with the new EPA rules adopted in recent years. These investments will be lost or stranded if EPA adopts emissions guidelines that cause premature shutdown of these EGUs. For this reason, the EPA emissions guidelines should require the adoption of performance standards that set achievable emissions control levels and that will not force the shutdown of existing EGUs.

CONCLUSION

LPPC appreciates the opportunity to submit comments in response to the ANPR on the replacement of the Clean Power Plan. If EPA elects to move forward with a rulemaking to establish a CPP replacement rule, we urge that the Agency give careful consideration to the general guiding principles described above in these comments to ensure the development of a workable and efficient regulatory framework for the regulation of CO₂ emissions from existing affected EGUs under that replacement rule.

Sincerely,

John Di Stasio
President
Large Public Power Council