Edison Electric
INSTITUTE

Power by Association

January 21, 2016

Janet McCabe
Acting Assistant Administrator
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Administrator McCabe:

The Edison Electric Institute (EEI) appreciates the opportunity to submit comments on the proposed *Federal Plan Requirements for Greenhouse Gas Emissions from Electric Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations*, issued by the Environmental Protection Agency (EPA or Agency) in Docket No. EPA-HQ-OAR-2015-0199. 80 *Fed. Reg*. 64,966 (Oct. 23, 2015). The proposed federal plan also serves as model trading rules that states could choose to adopt. Along with the proposed federal plan, EPA also proposed amendments to the framework regulations implementing section 111(d) and an interpretation regarding existing sources that modify or reconstruct. And EPA is taking comment on how to implement the Clean Energy Incentive Program (CEIP) in the context of both the proposed federal plan and state plans. The enclosed comments address all of these proposed actions.

EEI is the association that represents all U.S. investor-owned electric companies, international members and industry associates worldwide. Our members provide electricity for 220 million Americans, operate in all 50 states and the District of Columbia, and support more than 1 million American jobs. Investor-owned electric utilities are investing more than \$100 billion per year, on average, to transition to a cleaner generating fleet and enhance the electric grid, with a record \$108.6 billion in investments estimated in 2015 alone. Reliable, affordable and increasingly clean electricity powers the economy and enhances the lives of all Americans. As the owners and operators of the affected units that are responsible for achieving the required GHG emission reductions, EEI members have a substantial interest in the proposed federal plan and model trading rules, any amendments to the section 111(d) implementing regulations, the treatment of existing units that modify or reconstruct and the implementation of the CEIP.

Consistent with our earlier comments on the proposed emission guidelines for existing electric utility generating units, the proposed federal plans and the model trading rules should be designed to foster the creation of broad, competitive trading markets and, at the same time, preserve the flexibility for states to design their own approvable compliance plans. As a result, the enclosed comments identify areas in which the model trading rules, if implemented as a federal plan for a state, may need to be strengthened. The comments also identify areas in which the proposed model trading rules need to be clarified and, potentially, modified to ensure that they do not constrain state flexibility to submit compliance plans that address state-specific concerns and objectives.

Please do not hesitate to contact either of us if you or a member of your team has any questions. EEI looks forward to continuing our dialog with the Agency on this important rulemaking.

Sincerely,

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cc: Joseph Goffman, Senior Counsel
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COMMENTS OF THE EDISON ELECTRIC INSTITUTE
ON
FEDERAL PLAN REQUIREMENTS FOR GREENHOUSE GAS EMISSIONS FROM ELECTRIC GENERATING UNITS CONSTRUCTED ON OR BEFORE JANUARY 8, 2014;
MODEL TRADING RULES;
AMENDMENTS TO FRAMEWORK REGULATIONS

Docket No. EPA-HQ-OAR-2015-0199

January 21, 2016

The Edison Electric Institute (EEI) appreciates the opportunity to comment on the proposed federal plan to implement the greenhouse gas (GHG) emission guidelines for existing fossil-based electric generating units (EGUs) under section 111(d) of the Clean Air Act (CAA or Act). The proposed federal plan also serves as model trading rules that states could choose to adopt. Along with the proposed federal plan and model trading rules, the Environmental Protection Agency (EPA or Agency) also proposed amendments to the framework regulations implementing section 111(d) and an interpretation regarding existing sources that modify or reconstruct. EPA also is taking comment on how to implement the Clean Energy Incentive Program (CEIP) in the context of both the proposed federal plan and state plans.[1] *Federal Plan Requirements for Greenhouse Gas Emissions from Electric Generating Units Constructed on or*

[1] The CEIP was included in the final emission guidelines. While some stakeholders suggested that EPA create an incentive program for early action in comments on the proposed guidelines, stakeholders did not have an opportunity to comment on the CEIP. In a memorandum dated October 21, 2015, and included in this docket, EPA notes that it is taking comment on a number of issues related to the implementation of the CEIP in the context of the proposed federal plan and model trading rules, as well as through other avenues that are not part of this docket. EPA, *Clean Energy Incentive Program Next Steps*, Docket No. EPA-HQ-OAR-2015-0199 (Oct. 21, 2015) (CEIP Memo). Consistent with this memorandum, EEI has chosen to provide comment on the implementation of the CEIP in this docket. Because members were not able to comment on the CEIP in the context of the proposed guidelines, these comments touch on many aspects of the incentive program.

Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations, 80 *Fed. Reg*. 64,966 (Oct. 23, 2015).

On the same day that these actions were proposed, EPA finalized the emission guidelines for existing EGUs under section 111(d). *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units,* 80 Fed. Reg. 64,662 (Oct. 23, 2015). While states will develop plans to implement these guidelines, the final guidelines make clear that the responsibility for compliance ultimately—and only—rests on affected EGUs, regardless of what types of plans the states file or what compliance flexibilities the states choose to incorporate into these plans. *See id*. at 64,832-33. If a state does not file an approvable plan, EPA is required to implement a federal plan for that state, but this does not alter existing EGUs' ultimate responsibility for making the reductions that EPA has mandated in the final 111(d) emission guidelines.

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I. Introduction and Executive Summary

In the final emission guidelines, EPA set emission performance standards for two categories of affected EGUs: steam electric generating units and combustion turbines. *See* 80 *Fed. Reg*. at 64,718. These standards are based on EPA's determination that the "best system of emission reduction" (BSER) for these units must consider the interconnected nature of the power system. EPA explicitly considered the fact that power is traded across state lines, along with changes in dispatch between affected units and lower- or zero-emitting units, when the Agency developed the emission performance standards. *See id*. at 64,725, 64,733-34.[2] The ability to trade emissions reductions across state lines is equally integral to EPA's BSER determination and the standards that flow from that determination. *See id*. at 64,734. Indeed, EPA states that "it is entirely feasible for states to establish standards of performance that incorporate emissions trading, and it is reasonable to expect that states will do so." *Id*. at 64,726. EPA also notes that trading lowers overall costs, adds flexibility and facilitates compliance by affected EGUs. *See id*. However, full attainment of these benefits is dependent on the development of a broad, transparent and competitive emissions trading market. These comments are intended to facilitate this development.

Once EPA has established BSER, CAA section 111(d) requires states to develop compliance plans that establish emission performance standards for affected units. States are required to

[2] EPA's approach to BSER has been challenged in the D.C. Circuit. *See West Virginia v. EPA*, Nos. 15-1363, *et al*. (D.C. Oct. 23, 2015).

submit plans outlining how the state (or more specifically, the affected units in the state) will meet the interim and final emission standards. *See* 80 *Fed. Reg*. at 64,826. If states do not file an approvable compliance plan, the Act requires EPA to regulate affected units in that state under a federal plan. EPA has proposed two federal plans, one mass-based and one rate-based, that also serve as a set of model trading rules, which could be adopted by states as part of their compliance plans. The proposed federal plans and the model trading rules are identical in all key aspects. *See id*. at 64,974. It is within EPA's CAA authority to propose two forms of emissions trading programs as the method by which EPA would implement the final guidelines in the context of any federal plan. EPA indicates that the adoption of the model trading rules makes a state's plan "presumptively approvable" and "strongly encourages states to consider adopting one of the model trading rules…which is useful for the potential operation of a broad trading program that spans multi-state regions or operates on a national scale." *Id*. at 64,973. However, consistent with the authority and flexibility granted to the states under section 111(d), "states of course remain free to develop a plan of their own choosing to submit to EPA following the criteria set out in the [final emission guidelines]." *Id*. States are in the best position to assess the potential local effects of the various options for implementing the emission guidelines and can design plans to address state-specific concerns and issues.

The proposed federal plan and model trading rules, therefore, are attempting to satisfy two important objectives: promote the development of a broad, competitive emissions trading market for affected EGUs that are subject to either a federal or a state compliance plan; and recognize and respect the state authority and flexibility provided by CAA section 111(d). These goals are not in tension with each other, but EPA must ensure that the potential benefits of achieving the former do not undermine the latter. The provision of model trading rules that serve as guidance for the states as they undertake the process of developing compliance plans is important. This guidance, however, cannot serve to limit state discretion.

Executive Summary

A key theme in EEI's 2014 comments on the proposed guidelines was the importance of protecting and promoting state flexibility to address state-specific concerns and issues in the context of a compliance plan. EEI's comments also focused on ensuring that affected EGUs had compliance flexibility, which is necessary to minimize the costs to electricity customers. Consistent with those themes, these comments seek to ensure that the proposed federal plans and the model trading rules are designed to foster the creation of broad, competitive trading markets, while, at the same time, preserve state flexibility to design their own approvable compliance plans.

Trading, if included in state plans, has the potential to increase EGU compliance flexibility and minimize compliance costs and costs to electricity customers. Similarly, trading is a key element of the proposed federal rate- and mass-based plans, which would benefit any affected EGUs that may become subject to such a plan. The model trading rules take many steps that are needed to facilitate the creation of broad, transparent and competitive markets. These comments identify areas in which the model trading rules, if implemented as a federal plan for a state, may need to be strengthened in order to fully realize competitive markets for compliance instruments. However, these comments also identify areas in which the proposed model trading rules need to be clarified and, potentially, modified to ensure that they do not constrain state flexibility to submit compliance plans that address state-specific concerns and objectives.

1. **EPA Should Be Prepared to Finalize Both Rate- and Mass-Based Federal Plans and Should Take Comment on the Type of Plan Most Appropriate for a Particular State Before Finalizing any Federal Plan for that State**

These comments encourage EPA to **finalize model trading rules that address both rate- and mass-based plans** in recognition of the fact that states have the discretion to choose which plan type best addresses their needs and objectives. In addition, **EPA should not use a one-size-fits-all approach to federal plans**, if required to implement one for a state. Instead, EPA should carefully assess the totality of the circumstances when deciding whether to impose a rate- or mass-based plan. In particular, in the case of partially approvable plans, EPA should recognize and respect the compliance approach taken by the state. To ensure that EPA makes the most reasonable choice for a state that becomes subject to a federal plan, **the Agency should take comment on the type of federal plan to impose**.

2. **Affected Units Subject to a Federal Plan Should Have the Broadest Options for Trading; EPA Should Allow Banking and Borrowing: EPA Should Include a Reliability Safety Valve in a Federal Plan and Allow Its Inclusion in All State Plans**

These comments also address issues common to both a rate- and mass-based approach to compliance to ensure that these plans facilitate least-cost compliance. To further this objective, **EPA should allow affected EGUs that are subject to a federal plan to trade** with units in other federal plan states and those in states that have taken a similar trading-ready approach, as proposed. EPA also should ensure sufficient market monitoring and oversight to prevent market manipulation, which may require a future rulemaking. In addition, **EPA should allow affected**

units to both bank and borrow compliance instruments and should not impose two-for-one administrative penalties in addition to the host of other compliance and enforcement tools provided to EPA, states and other stakeholders under the CAA. Finally, **EPA should include the reliability safety valve provided in the final emission guidelines in any federal plan and should allow states to include it in their own plans**. Trading alone may not be able to adequately address reliability concerns, and a set-aside of allowances to address reliability will drive up compliance costs.

3. If implemented, the Federal Rate-Based Plan Should Be Designed to Minimize Compliance Costs for Affected Units and Electricity Customers

As a general matter, EPA should design any federal rate-based plan to provide affected EGUs access to the broadest possible trading markets and ensure the availability of a sufficient supply of emission rate credits (ERCs). This will reduce the costs of compliance for affected EGUs and electricity customers. In addition, **EPA should not limit the compliance options that could generate ERCs under a federal plan**. EPA also should **allow individual existing natural gas combined cycle (NGCC) units to earn gas-shift ERCs based on their increased utilization**. The Agency should finalize guidance that would allow states to develop plans that utilize qualified biomass feedstocks as a compliance option and minimize the burden on states that may pursue biomass.

EPA's evaluation, monitoring and verification (EM&V) requirements should be designed to encourage end-use efficiency as a compliance option, build off of existing state protocols and encourage confidence in the ERC trading market. ERCs that have been verified and issued should not be retroactively revoked as a result in changes to EM&V requirements.

4. If Implemented, the Federal Mass-Based Plan Should Be Designed to Minimize Compliance Costs and Maximize Compliance Flexibility for States and Affected EGUs

Under a mass-based plan, how allowances are allocated will determine compliance costs and could limit state and EGU flexibility. As proposed, **EPA should allow states that become subject to a federal plan to re-allocate allowances to address states specific concerns and issues**. EPA should affirm that **states, whether implementing their own compliance plans or re-allocating allowances under a federal plan, have the authority to allocate allowances as they see fit to address state specific issues and concerns**, consistent with the requirements of the CAA. If implementing a federal mass-based plan, EPA proposes to allocate the bulk of the allowances to affected EGUs based on historic data. This approach is reasonable and can help minimize compliance costs and costs to electricity customers. **Under a federal plan**, **EPA should not allocate allowances via auction if the revenue must be deposited in the U.S. Treasury**.

Allowance allocations to affected units should continue after units retire. Under a federal plan, EPA should continue allocations to retired units for the life of the program because this incentivizes reductions, reduces compliance costs and is consistent with EPA's approach to BSER, which focuses on reductions that can be achieved by units and by their owners and operators. **EPA's final model trading rules should affirm that states have the authority to allocate allowances to retired units, regardless of when they are closed**.

EPA's approach to leakage raises significant legal and policy concerns, and the proposed allowance set-asides to address leakage in a federal plan limit state flexibility to allocate allowances and may increase compliance costs. If EPA includes these set-asides in any federal plan, the Agency must demonstrate that they are needed to address leakage in a state and contain the minimum number of allowances needed to address the possibility of leakage. States should have the maximum flexibility to address leakage.

5. Limited Changes to Clean Energy Incentive Program Would Help Ensure that Early Reductions are Achieved

EPA's CEIP is intended to encourage early investment in certain renewable energy projects and low-income demand-side energy efficiency programs before the start of the interim compliance period in 2022. Limited changes to EPA's proposed approach to implementing the CEIP could increase its utility and ensure that the greatest possible early reductions are achieved. **EPA should tie eligibility to earn early action credits or allowances to the date that initial state plans are due and should lengthen the crediting period.** This will help ensure that all of the possible early action reductions may be awarded credits/allowances. **For states that file compliance plans and choose to participate in the CEIP, EPA should consider allowing them to establish their own eligibility requirements**. EPA should not require that states pursuing a mass-based plan set aside CEIP allowances in order for eligible projects to earn CEIP allowances. To be a true incentive, the federal matching credit should be available to these projects without states sacrificing the flexibility to allocate allowances to affected units or for other purposes.

6. Any Changes to the Section 111(d) Implementing Regulations Should Promote Regulatory Certainty; EPA Should Finalize the Proposed Interpretation for Treatment of Modified and Reconstructed Units

It is appropriate for EPA to modify the generic implementing regulations for section 111(d) to the extent that these modifications are aimed at streamlining the process for state plan submittal, review and approval. However, EPA should not import tools from CAA section 110 that do not recognize the very different regulatory structure of section 111(d) and that could be used to undermine the regulatory certainty provided by the final emission guidelines. Finally, EPA should finalize the proposed interpretation that an affected unit cannot be subject to regulation under section 111(b) and (d) simultaneously.

II. EPA Should Finalize Both Rate- and Mass-Based Model Trading Rules; EPA Should Take Comment on What Type of Federal Plan to Impose on Affected EGUs in a Particular State Before Finalizing a Federal Plan for that State

Under the final 111(d) guidelines, states are required to submit plans outlining how the affected units in the state will meet the interim and final reduction standards. *See* 80 *Fed. Reg.* at 64,826. States that do not file approvable plans by the 2016 deadline (or 2018 if an extension is granted), will have a federal compliance plan imposed on affected units. Among other things, state plans must identify whether compliance will be measured on a rate or mass basis. *See id.* at 64,826-27.

EPA proposes both a mass- and rate-based federal plan, each of which also serves as draft model rules that, once final, a state could adopt as part of its compliance plan. *See id.* at 64,970, 64,973. However, EPA proposes to finalize only one type of federal plan—either rate- or mass-based—for each state that did not file an approvable plan. *See id.* at 64,969, 64,970. EPA is taking comment on which type of plan to finalize, as well as on whether to finalize both types of plans and both types of model trading rules. *See id.* at 64,974.

EPA should finalize both sets of model trading rules and EPA should be prepared to finalize both types of federal plans, if necessary. In addition, EPA should provide notice and take comment not only on the decision to implement a federal plan for any state, but also on what type of plan EPA should implement for that state.

A. EPA Expeditiously Should Finalize Model Trading Rules for Both Rate- and Mass-Based Plans

As a preliminary matter, it is important that EPA finalize *both* the rate- and mass-based model trading rules, which serve as guidance for the states as they develop and finalize their compliance plans. The final guidelines permit states to choose rate or mass for compliance. *See id.* at 64,832. State discretion and flexibility have long been recognized as hallmarks of the section 111(d) program. *See id*. at 64,665 (noting that "these guidelines offer states and owners and operators of EGUs broad flexibility and latitude in complying with their obligations").[3] The model trading rules for both rate- and mass-based programs will serve to help states as they move forward with compliance plans. It would be appropriate to issue the final model trading rules as expeditiously as possible to provide guidance to states.[4] The final model trading rules

[3] *See also* Gregory Wannier, *et al*., *Prevailing Academic View on Compliance Flexibility under § 111 of the Clean Air Act, Resources for the Future*, Discussion Paper RF DP 11-29 (July 2011), http://www.law.columbia.edu/null/download?&exclusive=filemgr.download&file_id=60994.

[4] EPA notes that the finalization of the model trading rules will not constitute final action with respect to a federal plan for any affected EGUs in any state. *See* 80 *Fed. Reg.* at 64,975. The model trading rules are guidance. A request to issue the final guidance is not a request to take

can and should be issued in advance of the September 6, 2016, deadline to file state plans and well in advance of any imposition of a federal plan on any state.

A. EPA Should Seek Input Before Finalizing a Federal Plan for Any State

In addition, EPA should not prejudge whether a rate- or mass-based plan is most appropriate for any state that may become subject to a federal plan. Instead, EPA should remain open to finalizing the approach that would work best for each state. There are two circumstances in which a state would become subject to a federal plan: 1) the plan submitted by the state is not deemed approvable by EPA; or 2) the state fails to submit any plan at all. Each of these scenarios requires careful consideration as to which type of federal plan is most likely to provide least-cost compliance for the affected units and the state's electricity customers. Accordingly, EPA should not take a one-size-fits-all approach to federal plans, particularly in situations in which states have made good faith efforts to submit approvable plans.

In the first scenario—when a state submits a plan, but EPA disapproves or partially disapproves the plan—EPA should finalize a federal plan that uses the same approach as the disapproved or partially disapproved plan. States are currently undertaking significant, good faith planning and analysis to determine which approach makes the most sense for each individual state. Once states have arrived at a decision as to which type of approach to use, they will need to begin modeling and other preparations, including enacting new state legislation where needed, as soon as possible in order to take the necessary steps to meet the submission deadlines. The

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final action on any state plan or failure to submit a plan. As discussed in more detail, *infra*, EPA should undertake a rulemaking not only in support of a finding that a state has failed to file an approvable plan, but also on what type of federal plan to impose on a state.

requirements for state plans are rigorous, especially for those states that do not adopt large portions of the model trading rules. *See*, *e.g*., 40 C.F.R. § 60.5745(a)(5)(ii) (outlining the significant modeling and analysis that a state must submit if a plan applies rate-based standards that differ from the subcategorized rates finalized in the emission guidelines). Therefore, regardless of EPA's concerns about the sufficiency of the submitted compliance plan, the state will have made significant preparations both to develop and implement that plan. Finalizing a federal plan when a state has developed a different plan could result in unnecessary increases in compliance costs, increased burdens on the states and affected EGUs and could delay implementation as states and affected units scramble to modify compliance strategies.

EPA should be particularly cautious about upending a state's efforts to develop a plan in the event of a partial disapproval. If EPA finalizes the proposed amendments to the section 111(d) implementing regulations, the Agency will gain the authority to partially approve and disapprove state plans. *See proposed* 40 C.F.R. § 60.27(h), 80 *Fed. Reg*. at 65,060. While partial approvals/disapprovals are important to obviate wholesale disapproval of state plans and to provide states an opportunity to address concerns that EPA may have with a state plan, EPA should not use this mechanism to force a state to adopt an entirely different approach than the one submitted for approval and prepared for the state and affected EGUs.

For a state that does not submit a plan, EPA should finalize the federal plan that will work best for the affected units in that state after consideration of relevant factors, which could include the approaches taken by neighboring states or states that participate in the same wholesale markets and the overall compliance markets trends, among other things. While EPA notes that creation of a single, broad trading program would be the most advantageous, *see id.* at 64,970, it is not clear that a single market covering all states is likely to be in place at the time the interim compliance period starts. Instead, it is more likely that several regional trading blocs will be developed. In the likely event that different approaches are chosen by the states, at least initially, EPA should be prepared to assist in the creation of the broadest program possible by maintaining the option to finalize either plan approach. EPA should not render compliance by EGUs more difficult by imposing a federal plan by rote, without consideration of the possible impact that the form of the plan would have on affected units.[5]

Accordingly, to help determine which type of federal plan is most appropriate for each state that may become subject to one, EPA should subject the decision to implement a federal plan and the type of federal plan to impose on a state to notice and comment rulemaking. In the proposed federal plan/model trading rules, EPA states that it will subject any decision to approve a state plan to notice and comment. *See id*. at 64,975. EPA also notes that it will promulgate a final federal plan for a state only after making a finding on a state's failure to submit a plan. *See id*. EPA implies that, while it will take comment on the finding of failure, the Agency will not take comment on the actual content of any federal plan that it may impose as a result of the finding of failure. In fact, EPA appears to believe that taking comment on the proposed federal plan in this docket is sufficient: "Because we are proposing a federal plan that would apply emission standards to affected EGUs in all states that the agency determines not to have an approvable

[5] One way to ensure a broad trading market would be to allow trading between states that choose to implement rate- and mass-based compliance plans. EEI does not propose a methodology for converting compliance instruments to allow for such trading, but encourages EPA to evaluate and consider methodologies proposed by other stakeholders.

plan, the EPA invites comment from all persons with concerns about or comments on the proposed federal plan as it may apply in any state…" *Id*.

Given that any decision to impose a federal plan is inherently a state-specific determination, the current generic rulemaking on the federal plan does not substitute for providing the state, affected units and other stakeholders adequate notice and opportunity to comment on a federal plan for a particular state. EPA has not explained why the minimum requirements of a notice on a proposed rulemaking under the Act are satisfied without providing an opportunity to comment on the type of plan. At this time, before any state has filed even an initial submittal, stakeholders do not have sufficient information to comment meaningfully on whether a rate- or mass-based federal plan would be most appropriate for affected units in any state. Consistent with EPA's approach to BSER in the final guidelines, this determination will be inextricably tied to what types of federal plans are filed by other states, particularly those in the same RTO/ISO, NERC region or Interconnection. The plans for affected EGUs with common upstream ownership also may be an important consideration.

While EPA need not reopen the content of this proposed, generic federal plan in the context of each state-specific federal plan rulemaking, EPA should include in any rulemaking on a finding of failure or disapproval for a specific state an opportunity to address which type of plan the Agency should implement This process need not be lengthy.

III. Comments Addressing Issues Raised by the Proposed Federal Plan and Model Trading Rules Common to Both Rate- and Mass-Based Compliance Options

The following comments address issues common to both the proposed federal rate- and mass-based plans and related model trading rules. These comments generally address technical and other issues with the goal of creating competitive trading regimes that result in least-cost compliance for affected EGUs and the electricity customers they serve.

A. Affected Units Subject to a Federal Plan Should Be Able to Trade with Those Subject to State Plans

As discussed, trading has the potential to be an important compliance option to reduce costs to affected units and electricity customers. EPA believes that many states will engage in trading and encourages states to allow trading by providing model trading rules. *See id*. at 64,973. Moreover, EPA's BSER determination is predicated on the ability to trade both electricity and emissions reductions across state lines. *See id*. at 64,734. Consistent with the general support for trading, EPA proposes to allow all affected units subject to a federal plan to trade with each other. *See id*. at 65,011. EPA also proposes to allow units that are subject to a federal plan to trade compliance instruments with affected EGUs in any other state subject to a federal plan or any state that meets the requirements for "linkage," which generally require comparability of programs and instruments. *See id*. at 64,976-77 and 65,011. Providing as broad a market for trading as possible for affected units subject to a federal plan will help reduce compliance costs for utilities and customers. EPA's approach to linking state and federal plans for trading would facilitate trading and is, therefore, reasonable.

In general, EPA proposes to allow trading between affected units in states that are subject to a rate-based federal plan and those units subject to rate-based state plans, assuming that the state plans are "trading ready" and use common instruments, as well as the EPA's compliance instrument tracking and monitoring system. EPA makes a similar proposal for mass-based programs. *See id*. at 64,977. This is an important flexibility provided to units in states that become subject to a federal plan. Affected units in such states should not be barred from taking advantage of trading to reduce costs, nor should they be required to participate in a more limited, and thus more expensive, trading regime. As EPA itself notes, "a broad trading region provides greater opportunities for cost-effective implementation of reductions compared to trading limited to a smaller region." *Id*. Linking state plans and federal plans—and allowing the affected units that are responsible for compliance, regardless of which entity administers the plan, to trade reductions—provides important compliance flexibility.

EPA requests comment on allowing trading between units subject to the federal plan and those in states that use a different tracking system, as long as it is interoperable with the EPA system and the system is registered with EPA. *See id*. Tracking emission rate credits (ERCs) and allowances is a key element of trading within and across state lines and requiring interoperability and registration are reasonable requirements to facilitate the development of the broadest trading regime for both instruments. Requiring common, or interoperable, tracking systems promotes the development of broad markets while ensuring the integrity of the linked programs.

EPA also seeks comment on linking state plans that issue allowances in metric, instead of short, tons and linking states that do not have any affected units. *See id*. Linking programs that use different compliance instruments could be problematic, but the conversion from metric to short tons is a simple mathematical procedure. If an EGU in a state that has chosen to use metric tons would like to trade with EGUs in states using short tons, consistent with the proposed model trading rules, that state should be allowed to do so, so long as it provides a conversion methodology and demonstrates how to track converted allowances. Similarly, states without affected units should be allowed to link to other states. This could be important in the development of liquid ERC markets, in particular. States without affected EGUs may be home to cost-effective ERC-eligible projects. If that state wishes to take on the responsibility of issuing ERCs, consistent with the requirements set forth in the final emission guidelines, it should be allowed to do so.

Finally, while EPA currently requires the use of a common instrument in order to facilitate trading between states, see 80 *Fed. Reg*. at 64,976-77 and 65,011, EPA should consider allowing trading among all states regardless of the choice of compliance instrument. Broad trading markets facilitate least cost compliance, to the benefit of electricity customers. EEI does not propose a methodology for converting compliance instruments to facilitate trading between rate- and mass-based states, but encourages EPA to evaluate and consider such methodologies proposed by other stakeholders.

B. EPA Should Provide for Market Oversight to Ensure the Development of Transparent, Competitive Trading Regimes

EPA proposes to allow third parties to participate in the federal trading market, *see, e.g.*, proposed 40 C.F.R. § 62.16320(c), 80 *Fed. Reg*. at 65,078, and 80 *Fed. Reg*. at 65,012. The proposal would establish separate and distinct "compliance accounts"—which would be established for “each facility with an affected EGU”—and “general accounts,” which “any person may apply to open…for the purpose of holding and transferring [carbon dioxide (CO_2)] allowances.” *See id.* at 65,030. EPA states that that the ERC and allowance markets would be competitive and that “[t]he opportunities for interstate trading…would reduce any potential for firms to exercise market power” in either of those markets. *Id.* at 64,977. However, EPA seeks comment on the likely development of transparent, competitive markets and notes that the Agency is evaluating options for providing appropriate market oversight. In particular, EPA requests comment on appropriate market monitoring activities, including tracking ownership of compliance instruments and tracking market activity (e.g., transaction volumes and pricing). *See id*.

Appropriate market oversight is critical to the development of competitive, transparent markets and promotes least-cost compliance. Other trading programs, including RGGI and California’s A.B. 32, allow third parties with no compliance obligations to participate in emissions trading markets, but both have extensive market oversight requirements to ensure that no participant manipulates prices or otherwise games the market. For example, California requires that third parties disclose their upstream ownership and takes other steps to prevent participants from cornering the market or otherwise manipulating allowance prices. *See* CAL. CODE REGS. tit. 17, § 95833 (2011). Market oversight requirements need not be onerous, but are necessary to the development and functioning of trading systems.

Any final federal plan and the final model trading rules should contain sufficient mechanisms and protections to ensure the fair and effective functioning of the markets that EPA expects to develop in response to the final section 111(d) guidelines. The proposed model trading rules would require that any person that opens a general account identify the names of all persons with an ownership interest with respect to the allowances held in any general account. *See id*. at 64,998 and 65,030-31. This identification is critical, but does not go far enough. The federal plan and model trading rules should require the identification of all upstream owners of any entity that has an ownership interest in any allowances held in a general account. This will prevent the proliferation of subsidiaries all owned by a single third party market participant.

Given that there are several years until the start of any trading programs, EPA could engage in a separate rulemaking or provide separate guidance to address tools and requirements to ensure transparent, fair, nondiscriminatory market oversight for any and all markets that develop in response to the final emission guidelines (e.g., establishment of a market monitor). Among other things, this rulemaking should address the type, nature and frequency of reports on the volume of trading and the price of compliance instruments. These reports should identify all parties that hold allowances in all types of accounts, their upstream owners, the number of allowances in their accounts and the disposition of these allowances, including via retirement.[6] These reports also should identify the number of allowances that have been retired, or remain unallocated, by any state and the aggregate number of allowances in all general and compliance accounts. In addition, the final model trading rules should address how states can demonstrate that they have taken steps to provide for market oversight to prevent fraud, manipulation or the accretion of market power, particularly in states that elect not to trade broadly.

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[6] There may be legitimate reasons to limit disclosure of such information *if* formal market monitoring is conducted. Otherwise, this should be public information.

C. EPA Should Allow Affected Units to Bank and Borrow Compliance Instruments; EPA Has Not Demonstrated that Borrowing is Too Administratively Complex to Undertake

Under both the proposed federal rate- and mass-based plans, EPA would allow affected units to bank compliance instruments for use in any future period. *See* 80 *Fed. Reg*. at 65,010 and 65,014. EPA does not propose to allow units to borrow compliance instruments from future period due to concerns about administrative complexity. *See id*. EPA does not raise any environmental concerns about either banking or borrowing. *See id*. EPA should allow unlimited banking and borrowing in the model trading rules so that states can take advantage of this flexibility. In addition, EPA can structure the federal rate- and mass-based plans to allow for borrowing and minimize concerns about complexity.

Banking compliance instruments for use in future periods is an important compliance flexibility and is permitted in many mass-based emission trading programs, including RGGI and California's trading program under A.B. 32, as well as emission trading programs under the CAA. *See, e.g.*, CAL. CODE REGS. tit. 17, § 95922. As EPA noted in the final emission guidelines, this is because "banking reduces the costs of attaining the requirements [of these programs]." 80 *Fed. Reg*. at 64,890. EPA noted that banking will reduce costs under a rate-based approach and found that banking encourages additional near-term economic reductions, which has environmental benefits, particularly in the context of CO_2 emissions, which are long-lived in the atmosphere. *See id*. EPA appropriately proposes to allow affected units to bank allowances and ERCs without restriction for use in future periods.

EPA does not propose to allow borrowing under either a federal rate- or mass-based plan, both of which also serve as model trading rules for state plans, outside of the borrowing inherent in the multi-year interim step periods. *See id.* at 65,010 and 65,014. As a general matter, borrowing is an important compliance flexibility that could help reduce costs to consumers, particularly in the early years of the interim period. In addition, allowing borrowing would restore some of the glide path flexibility that was lost between the proposed and final emission guidelines. Under the proposed guidelines, emissions could be averaged over a 10-year period, which functionally allowed for borrowing future reductions in the early years of the program.[7] The creation of the interim step periods, with preset reductions requirements, limits the ability to average over the entire interim compliance period in the final guidelines. In addition, under a rate-based plan, a state cannot provide unique emission reduction glide paths for particular affected EGUs without foregoing the opportunity to allow affected EGUs to trade. *See id*. at 65,011 (noting that state plans must use the subcategorized uniform emission rates in order to be "ready-for-interstate-trading").[8] Borrowing restores many of these flexibilities and may provide an opportunity for states to address the remaining useful life of affected units, consistent with the requirements of section 111(d). Even if EPA does not permit borrowing for those units that become subject to a

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[7] In comments filed on the proposed section 111(d) guidelines, EEI raised significant concerns that other elements of the program undercut the ability to average emissions across the entire 10-year period, but recognized the important compliance flexibility inherently provided by the longer averaging period.

[8] A state could address unit-specific glide path concerns in the context of a mass-based plan through allowance allocations without causing all units to forego trading to achieve compliance.

federal plan, the final model trading rules should make it clear that states retain the ability to grant affected units the flexibility to borrow.[9]

With respect to a rate-based plan, EPA notes concerns about how to allow units to borrow ERCs from future periods that have not yet been generated. *See id*. at 65,010. EPA requests comment on how to allow ERC borrowing "while maintaining the integrity of the compliance obligations." *Id*. EPA's own approach to allocating allowances to renewable projects in the context of the proposed renewable energy (RE) set-aside provides a framework for ERC borrowing, demonstrating that borrowing based on projected ERC generation is feasible, not unduly complicated and does not undermine compliance.

EPA proposes to allocate allowances to RE generators based on projections of generation that are subsequently subject to a true up. *See id*. at 65,024, If projections exceed actual generation, allowances are subtracted from future allocations. *See id*. Similarly, in the context of a rate-based plan, EPA could allow affected units to borrow ERCs based on projected generation or avoided generation. The generator of the borrowed ERCs would be required to demonstrate eligibility and meet all other ERC requirements. Unlike the proposed RE set-aside, however, there would be penalties for affected units if the borrowed ERCs did not materialize because the

[9] In the proposed Alternative Compliance Option Technical Support Document (TSD), which was included in this docket, EPA proposes to allow a unit effectively to borrow its entire future allocation of allowances. However, this option is restricted to those units that undertake a legally binding commitment to retire once the allocation is consumed. EPA should remove any restrictions on borrowing, including a retirement commitment, and allow all EGUs to gain access to their future allocations so that these allowances can be managed like any other asset. This would provide greater liquidity and could serve as a source of funds for EGUs to invest in lower emitting technologies so as to meet future emission limits without harming the environmental integrity of the final guidelines.

buyer of an ERC is liable for its validity. *See id*. at 64,991. Therefore, an affected unit that borrows ERCs would face significant liabilities—discussed in more detail below—if the ERC was subsequently invalidated. If EPA can issue allowances to RE projects based on projected generation, the Agency can permit the borrowing of ERCs premised on projected generation, particularly in light of existing liabilities that will ensure that affected units are judicious in their borrowing and rigorously ensure the validity of any borrowed ERCs. Even if EPA does not allow borrowing under a federal rate-based plan, EPA should make it clear in the final model trading rules that states using rate-based approaches can allow affected units to borrow ERCs from future time periods for compliance.

With respect to a mass-based federal plan, EPA states that borrowing complicates future allocations of allowances and would interfere with a state's ability to implement its own allowance distribution scheme. *See* 80 *Fed. Reg*. at 65,014. These concerns can be addressed such that affected units should be able to borrow allowances for compliance.

EPA proposes to allocate allowances, based on historic generation, for each step period shortly before they begin, such that only a limited pool of future allowances would be made available at the beginning of the interim period. *See id*. at 65,015. In order to allow for borrowing, EPA notes that the Agency would have to make allowances from future steps periods available earlier. *See id*. EPA's primary objection to making allowances from future step periods available earlier is that it could complicate a state's ability to replace EPA's allowance allocation methodology with its own. *See id*. While providing states subject to a federal plan with this flexibility is important and should be included in any federal plan, EPA's concerns are both misplaced and easily addressed. In addition, EPA's concerns about compliance integrity also are easily addressed. Accordingly, EPA should permit the borrowing of future allowances under a federal mass-based plan.

First, it is unclear why EPA believes that states will be more likely to submit their own allowance allocation methods after the start of the interim compliance period. Even if it were not determined until 2018, the final deadline for plan submissions, that a state would become subject to a federal plan, there is ample time before the start of the compliance period in 2022 (and the first recordation of allowances into general accounts on June 1, 2021 (*see id*. at 65,019)) for states to submit allowance allocations. Given that states do not have to take on any other elements of the federal plan in order to provide their own allocation methodologies, it should not take as long for a state to develop these methodologies as it would to create an entire state compliance plan.

Second, even if a state did elect to submit its own allocation methodology after a unit had borrowed allowances from a future time period, this can be addressed without undermining the state's emissions budget. EPA asserts that allowing states to re-allocate allowances would render any borrowed allowances as "excess emissions beyond the levels specified in the [emission guidelines]." *Id*. at 65,014.[10] EPA's logic is unclear. Any allowance that is allocated to an

[10] EPA takes comment on whether states should be allowed to transition from a federal to a state plan in the middle of a compliance period. *See* 80 *Fed. Reg*. at 65,011. While promoting state flexibility is important, it does not make administrative sense, particularly in the context of a mass-based plan, to allow states to transition from a federal to a state plan mid-compliance period. If such a transition is allowed, the states should not be able to change allowance allocations for the ongoing compliance period and should be able to institute changes to the distribution methodology only for the next interim step period. Owners and operators will have

affected unit from a future period would be deducted from the total allowances remaining for the state to allocate under its own methodology, ensuring that the state does not allocate more allowances than those provided in the state's budget. The allowances available for any particular unit to borrow could be limited to those that would have been allocated to the unit in the next step period. Because, as discussed in more detail below, EPA proposes to allocate allowances based on historic data, it is possible to calculate a unit's full complement of allowances for each step period in advance. Accordingly, borrowing could be limited to those allowances already reserved for that unit, which preserves environmental integrity. Moreover, any allowance that is borrowed is likely borrowed in order to be used for compliance. As a result, it likely will have been retired.[11]

Finally, EPA already has indicated that the complexities created by borrowing are not insurmountable for units that commit to retire once they consume their allocation of allowances. See Alternative Compliance Option TSD (Aug. 2015), Docket No. EPA-HQ-OAR-2015-0199-0040 (Alternative Compliance Option TSD).[12] That being the case, no greater complexity is imposed in a situation where a unit continues to run, rather than retire, and must still submit allowances to cover emissions. If a unit consumes all of its borrowed allowances, it simply must purchase allowances needed for continued operation in the market.

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made compliance decisions based on the initial allocation of allowances. Compliance decisions made in reliance on these allowances, which already will have been recorded in general accounts, should not be undermined.

[11] EPA also could limit borrowing to those instruments needed for compliance.

[12] Comments on the proposed alternative compliance option are included in section V.E., *infra*.

Accordingly, EPA has not presented any insurmountable administrative complexity that should bar affected units from being able to borrow allowances. However, if EPA chooses not to allow borrowing in the context of a federal plan, EPA's final model trading rules should make clear that states may choose to allow borrowing in approvable compliance plans.

D. EPA Should Include the Reliability Safety Valve in any Federal Plan and Allow States to Include the Reliability Safety Valve in All Compliance Plans

In the final guidelines, EPA included a limited reliability safety valve to address unanticipated and extraordinary events that pose substantial reliability and compliance issues. *See* 80 *Fed. Reg*. at 64,671. This safety valve would allow an affected EGU to run out of compliance with CO_2 emission limits for 90 days (with the opportunity for an extension) if a requirement to run to address a catastrophic, uncontrollable event conflicted with compliance obligations. *See id*. at 64,867. In the context of the proposed federal plan, however, EPA believes that a reliability safety valve is not needed. *See id*. at 64,982. EPA reasons that the long planning horizons provided in the federal plan and the ability of EGUs to trade and bank allowances or ERCs obviate any potential reliability concerns. *See id*. Accordingly, EPA does not propose to include any reliability safety valve in a federal mass-based plan. *See id*.

Despite EPA's confidence in trading to resolve reliability concerns, EPA requests comment on whether to create a reliability set-aside under the mass-based federal plan. *See id*. at 64,982. If created, allowances included in the set-aside would be made available in emergency circumstances in which an affected EGU was compelled to provide reliability critical generation and could demonstrate that the allowances necessary to cover this generation were not available. EPA requests comment on what events would trigger the use of allowances in the set-aside, the eligibility criteria to receive set-aside allowances and the timing of allowance distributions from the set-aside. *See id*. EPA also requests comment on how to implement the set-aside in a federal rate-based plan, suggesting that ERCs from the CEIP could be banked to populate a set-aside for reliability. *See id*.

As a preliminary matter, EPA's assertion that long-planning horizons and the ability to trade compliance credits (either allowances or ERCs) resolve all potential reliability issues may is not be accurate. While the additional planning time provided in the final emission guidelines is important in that it allows for states, EGUs and others to assess reliability in the context of state plans, it does not necessarily provide sufficient time to address them. The inclusion of the reliability safety valve in the final guidelines is necessary. It is not sufficient, however, to address all reliability issues that may flow from implementation of the final emission guidelines. EPA should continue to work with affected EGUs, states and other federal regulators, including the Federal Energy Regulatory Commission and its designated Electric Reliability Organization, the North American Electric Reliability Corporation, to identify and address the reliability challenges related to the implementation of state and federal plans.

Moreover, the ability to purchase compliance credits does not mean there is no reliability issue; it merely addresses potential violations of emission standards in the event of a reliability issue. Further, while trading may make allowances available to EGUs that may need to run beyond projections to support reliability, EPA may be assuming the existence of a more liquid trading market than may actually exist, particularly at the start of the interim compliance program. Trading does not help an EGU avoid potential violations if there are no allowances to buy. A reliability set-aside, however, is not necessarily the most cost-effective way to address the availability of allowances in the event of an unexpected or uncontrollable reliability event.

In the case of a mass-based plan, a reliability set-aside would decrease the pool of allowances available to be allocated for compliance. This increases the stringency of the standards for all units, increasing compliance costs. In the case of a rate-based plan, under which ERCs are awarded retroactively, there may not be a ready supply of ERCs from which to draw for reliability. EPA's proposal to use CEIP ERCs, which will already exist at the start of the interim compliance period in 2022, addresses some of the availability issues. However, it is not clear that the projects that generate the CEIP ERCs (or any ERCs, for that matter) would want to wait until a reliability event in order to be compensated for their ERCs. If the ERCs must be paid for before they are set aside, it is not clear who would pay for them. Even if an equitable process for setting aside ERCs could be developed, the same issues raised with respect to a mass-based set-aside persist: taking ERCs out of the market increases stringency and compliance costs.

A reliability safety valve can be implemented similarly in the context of both rate- and mass-based plans and does not require taking compliance instruments out of the market, which would pit reliability against cost-effective compliance. Accordingly, at a minimum, EPA should include the reliability safety valve in any federal plan. A safety valve could be particularly important in the first interim compliance period when a broad trading program may not yet be operating, but should not be limited to the first compliance period. In the final model trading rules, EPA should make clear that the Agency will approve state rate- and mass-based plans that allow for trading but also provide a reliability safety valve similar to the one included in the final guidelines.

E. Two-for-One Penalties Are Not Necessary to Incentivize Compliance and May Penalize Units that Have Complied

As part of the model trading rules, EPA proposes that affected units would have to provide two allowances for every allowance that the facility fails to produce by the true-up deadline. *See id*. at 65,031. Similarly, any unit subject to a rate-based plan would be required to provide two ERCs for every deficient ERC. *See id*. at 65,010. EPA states that this penalty "would provide a strong incentive for compliance" by "ensuring that non-compliance would be a significantly more expensive option than compliance." *See id.* at 65,031 and 65,010. Given the other enforcement provisions included in the CAA, which carry other financial penalties, EPA has not explained why this additional, double administrative penalty is necessary or fair to those units that have complied with their emission standards.[13] Moreover, EPA cannot and has not alleged any environmental harm that necessitates a two-for-one penalty. As long as the unit is required to replace any missing ERCs or allowances, on a one-for-one basis, the environmental benefits of the program are preserved. While EPA may have used the double administrative penalty for other air pollutants for which the location of the emissions dictates the environmental impacts, this is not the case for GHG emissions, which are a global pollutant, as EPA has noted. *See* 80 *Fed. Reg*. at 64,734 (noting that "it is the total amount of emissions from the source category that matters, not the specific emissions from one EGU").

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[13] If EPA determines that an administrative penalty is appropriate, a one-for-one administrative penalty would be more appropriate, especially in light of other elements of the proposed federal plan and model trading rules that require many state plans to contain corrective action measures if actual emission performance is not as projected. *See* 80 *Fed. Reg*. at 64,866-67.

EPA notes that the proposed two-for-one penalty would be in *addition* to any other recourse provided by the CAA for non-compliance, including enforcement actions, citizen suits and civil penalties. *See id*. at 65,031 and 65,010. For example, EPA notes that "each ton of unauthorized emissions and each day of the compliance period involved constitute[e] a violation of the CAA." *See id*. at 65,031. This means that, if included in a final federal plan, the failure to hold a single allowance required for compliance in the first step period could constitute 1,095 separate violations, each carrying the potential of a civil penalty of $37,500. It is not clear what additional incentives to comply a unit owner and operator would need in the face of penalties of this magnitude.

Importantly, EPA has not assessed how the two-for-one penalty may constrain other units' ability to comply. There is a limited supply of both ERCs and allowances that could be used for compliance, and, in the context of allowances, the supply diminishes with each successive interim step period. If ERCs or allowances are used to satisfy one unit's two-for-one penalty, which would require that they be retired earlier than anticipated,[14] other units that have complied may not be able to obtain the instruments needed to continue to demonstrate compliance in the future. Not only is it not fair to penalize all units for one unit's non-compliance, it is inappropriate for EPA to increase the stringency of the program, undermining its own BSER determination, via penalty provisions.

[14] EPA proposes that the two-for-one penalty be satisfied by discounting instruments as soon as they are included in a unit's compliance account. *See, e.g.*, 80 *Fed. Reg*. at 65,010. While not explicit, it is assumed that EPA would require that when new allocations are recorded, in the case of allowances, before the start of the next compliance period, these allowances be transferred immediately into a unit's compliance account if the unit had not been able to demonstrate compliance at the time of the last transfer deadline. This would result in allowances being retired before they even could be traded in the market and increases the stringency of the overall program for all participants.

F. EPA Has Already Established Interim Step Periods and Need Not Create Additional, Intervening Compliance Requirements during these Periods

Under the proposed mass-based federal plan, EPA would evaluate compliance after each multi-year compliance period (i.e., in 2025 for the 2022-2024 step period). *See 80 Fed. Reg*. at 64,513. EPA notes that some programs, such as RGGI or the California cap-and-trade program, also include intervening compliance requirements. For example, California requires covered sources to hold enough allowances to cover a certain percentage of emissions for the first two years of a three-year compliance period. *See* CAL. CODE REGS. tit. 17, § 95855. EPA is not proposing to follow these models. *See id.* at 65,013-14. EPA should not include intervening compliance requirements, as they are not necessary and would artificially limit the flexibility of states and affected EGUs.

The interim step periods themselves are intervening compliance requirements. The proposed section 111(d) guidelines included a single 10-year interim period, which provided significant compliance flexibility by allowing for averaging of emissions over a longer period. The interim step periods were added to the final guidelines to provide intervening compliance requirements to ensure that reductions were being made throughout the interim period, at the expense of some compliance flexibility. Additional intervening requirements may be needed in state programs to ensure compliance, but the CAA's significant compliance penalties and the threat of civil and citizen enforcement, discussed in more detail above, provide sufficient incentives for compliance with emission standards. Moreover, holding requirements or intervening compliance periods limit flexibility by essentially forcing banking and may impair market liquidity, especially in the first interim period by keeping allowances out of the market. This could be detrimental to the development of competitive markets.

G. The Model Trading Rules Provide Different, But Appropriate True-Up Periods for Rate-Based and Mass-Based Plans

For mass-based plans, EPA proposes that affected EGUs would have a four-month window following the end of the relevant compliance period to evaluate their emissions and obtain the allowances they need to cover their emissions for the period. *See* 80 *Fed. Reg.* at 65,031. For example, the allowance transfer deadline—the date by which allowances must be moved from holding accounts to compliance accounts—for the first interim compliance step period (2022-2024) would be May 1, 2025, following the end of the compliance period on December 31, 2024. *See id*.[15] The proposed four-month true-up window for mass-based plans is an appropriate period of time for units to evaluate the number of allowances in compliance accounts and then acquire any additional allowances that may be needed to demonstrate compliance.

For rate-based plans, EPA proposes a longer true-up window. For these plans, the ERC transfer deadline is November 1 of the year after the last year in the compliance period. For example, the deadline for the first interim step period would by November 1, 2025. *See id*. at 65,009. This additional true-up time will be needed for units subject to rate-based plans. This is because ERCs, unlike allowances, which are allocated at the start of each interim step period, only can be issued *after* zero emissions MWh have been generated or saved and verified. Time will be needed to evaluate and verify ERCs generated toward the end of the compliance period. As discussed later in these comments, given the volume of ERCs that a unit may need for compliance, even those ERCs produced toward the end of a compliance period may be needed to demonstrate compliance for that period. EPA should not create potential enforcement situations

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[15] EPA proposes to evaluate compliance at the facility level and not the unit level under a mass-based federal plan. *See* 80 *Fed. Reg*. at 65,014. This approach is appropriate, is consistent with other programs and eases administrative burdens on units and EPA.

by not providing the time necessary to evaluate and verify all validly generated ERCs in advance of the transfer date.

H. It Is Reasonable to Use an Administrative Appeals Process to Address Certain ERC and Allowance Issues

EPA proposes to create an administrative appeals process to address a limited number of issues related to the issuance of ERCs and the allocation of allowances. *See* 80 *Fed. Reg*. at 64,986. As proposed, EPA would use the administrative appeals process set forth in 40 C.F.R. part 78 to address certain Agency decisions. In the context of rate-based federal plans, these would include: eligibility applications for ERCs; decisions regarding the number of ERCs generated; decisions on ERC transfers, disallowances, deductions and surrender; the imposition of administrative penalties;[16] decisions on the accreditation of independent verifiers; error correction decisions in the context of information provided about ERCs; and the finalization of compliance period emission data, including any retroactive adjustments. *See id*. In the context of a mass-based federal plan, these would include: eligibility for set-aside allowances; decisions regarding the allocation of allowances from set-aside; decisions on the transfer, deduction or surrender of allowances; the finalization of compliance period emission data, including any retroactive adjustments; the imposition of administrative penalties;[17] and decisions on error corrections related to data about allowances. *See id*.

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[16] As discussed above, in section III.E., the two-for-one administrative penalty proposed by EPA is not necessary to ensure compliance. The use of an administrative appeals process is appropriate for the imposition of automatic administrative penalties but cannot be used in the context of other enforcement actions under other CAA provisions without risking affected units' right to due process under the law. EPA should make this clear in the finalization of any administrative appeals process.

[17] *See* discussion, *supra*, n.16.

To streamline challenges to these administrative decisions, it is appropriate to use the appeals process set forth in part 78. It also would be appropriate to provide similar treatment to any administrative actions of the Administrator under comparable state regulations approved as part of a state compliance plan.

I. EPA Appropriately Proposes to Rely on Existing Monitoring and Reporting Requirements

EPA proposes to require affected units to monitor and report CO_2 mass emissions on a quarterly basis starting on January 1, 2022, consistent with the requirements codified at 40 C.F.R. part 75. *See* 80 *Fed. Reg*. at 65,010 and 65,032. EPA notes that many EGUs that might be covered under a federal plan would experience no change to the ongoing monitoring and reporting they are conducting under existing programs. The Agency anticipates that "fewer than 50 affected EGUs" would have to purchase and install additional continuous emissions monitors (CEMs) and data handling systems. *See id*. EPA also proposes that the CEMs used to comply and report data for the Mercury and Air Toxics Standards (MATS) will be used to report CO_2 data under this rule. EPA also seeks comment on requiring monitoring and reporting of emissions and generation starting in 2021. *See id*.

EEI supports EPA's proposed approach to have affected units monitor and report CO_2 mass emissions in accordance with current requirements. This type of approach would help ensure cost effective, consistent and accurate data that could be used for multiple regulatory programs (Clean Power Plan, RGGI, MATS, etc.). If necessary, any future linkages to regional or international programs that would measure emissions in metric tons could occur via e-GGRT, where power sector and other sector emissions already are reported in metric tons.

IV. Any Federal Rate-Based Plan Should Be Designed to Minimize the Costs of Compliance for Affected EGUs and Electricity Consumers

One option for the federal plan/model trading rules would utilize rate-based emission standards for affected units. *See* 80 *Fed. Reg*. at 64,989. An affected unit subject to this type of plan that emits at a rate above the standard imposed for a particular compliance period must acquire enough ERCs to compensate for the overage in emissions. An ERC represents one zero-emission megaWatt hour (0 CO_2/MWh) of electric generation or reduced electricity use. These acquired ERCs will be applied to the measured stack emission rate to average down the reported emission rate to achieve compliance. Under the proposed federal plan, EPA would act as the state, issuing ERCs and overseeing implementation and enforcement of the emission standard. *See id.*

EPA seeks comment on a range of issues related to the design and implementation of a federal rate-based plan, including the emission rate standards to be imposed on affected EGUs; the sources that could generate ERCs for compliance; evaluation, monitoring and verification; and the creation of gas-shift ERCs (GS-ERCs). As a general matter, EPA should design any federal rate-based plan to provide affected EGUs access to the broadest possible trading markets and ensure the availability of a sufficient supply of ERCs. This will reduce the costs of compliance for affected EGUs and electricity customers.

A. Any Federal Rate-Based Plan Should be Designed to Facilitate the Participation of Affected EGUs in the Broadest Possible Trading Market

If implementing a federal rate-based plan, EPA proposes to utilize the emission rate standards, as well as the interim and final compliance periods promulgated in the final 111(d) guidelines. *See* *id*. at 64,990. Specifically, EPA proposes to use the separate emission rate standards for each subcategory of affected unit for each interim compliance period and the final compliance period. *See id*. EPA notes that the use of subcategorized emission rate standards would allow ERCs to be fungible among all affected EGUs subject to a federal plan and within the federal trading program. *See id.*[18]

Affected EGUs do not have control over whether states choose to file compliance plans. Should these units become subject to a federal plan, they should have the same ability to participate in the broadest possible trading market as units that are subject to state plans. This is especially important for units in states that may not be able to generate a sufficient number of ERCs relying on in-state eligible projects alone or only at costs that are comparatively higher than in other states. As discussed in detail above, see section III.A., the creation of a broad trading market is integral to the success of the 111(d) emission guidelines and in ensuring that costs to affected EGUs and electricity customers are minimized. Accordingly, the use of the subcategorized rates in the context of a federal rate-based plan is appropriate to facilitate the ability of affected EGUs to trade ERCs with units and ERC generators in other states.

Moreover, the use of the subcategorized rates provides a glide path for reductions from these units during the interim compliance period. *See id*. This approach to reductions was established in the final guidelines, and it is appropriate to apply the same emission trajectory to units subject

[18] In the final guidelines, EPA determined that states that do not choose to apply the subcategorized rates to all affected units could not authorize those units to trade with other "trading ready" states. *See* 80 *Fed. Reg*. 64,910.

to a federal plan. A more gradual approach to emission reductions is another tool that helps to contain compliance costs for affected EGUs and electricity customers.[19]

B. A Federal Rate-Based Plan Should Not Limit the Number of ERCs that Could Be Generated for Compliance; End-Use Efficiency Projects Should be Allowed to Generate ERCs

A key difference between a state-developed plan and the proposed federal plan relates to the issuance of ERCs. If administering a rate-based federal plan, EPA proposes to limit the issuance of ERCs. EPA only would issue ERCs to 1) affected units with emissions rates below the applicable standards; 2) affected NGCC units that achieve certain capacity factors; 3) new nuclear units and capacity uprates at existing nuclear units; and 4) eligible, verified utility-scale RE resources. States filing compliance plans have the ability to issue ERCs to certain non-BSER compliance measures, including end-use efficiency, biomass,[20] distributed generation, combined heat and power (CHP) and waste heat and power (WHP). EPA states that these measures legally need not be included as compliance options because they were not included in BSER and raise concerns about EPA's ability to administer the EM&V required to issue ERCs to these projects. EPA requests comment on whether the federal plan ERC options should be limited as proposed or expanded to include other zero-emitting reduction measures. *See id*. at 64,994-95.

EPA should not limit the projects that are eligible to generate ERCs in the context of a federal rate-based plan. Given the volume of ERCs that would be required in order for affected EGUs to

[19] As discussed above, it would be appropriate to provide additional glide path flexibility by allowing units to borrow ERCs from future periods. The purported complications associated with buying to-be-generated ERCs also are addressed above. *See* section III.C., *supra*.

[20] The role of biomass is discussed in more detail below. *See* section IV.E., *infra*.

comply with the subcategorized emission rate standards,[21] limiting the availability of ERCs could have a significant impact on compliance costs. While affected EGUs bear the responsibility for achieving the required reductions, states make the ultimate decision about whether to file a compliance plan. Affected EGUs should not face increased compliance costs as a result of decisions outside of their control. Moreover, while trading will help address compliance cost concerns to some extent, trading will not serve this purpose if there is an insufficient supply of ERCs in the market.

Further, EPA's general concerns about EM&V or streamlined processes should not trump the importance of creating a sufficient supply of ERCs. As noted in the proposed federal plan, "[t]he responsibility for the validity of [an] ERC rests with the affected EGU." *Id*. at 64,991. The generator of an ERC is the most appropriate entity to bear such liability. Liability should not be imposed on the buyer. Regardless of who bears the liability, however, an affected EGU that wants to purchase an ERC likely will require that the seller demonstrate that the ERC is valid and has been subjected to appropriate EM&V.[22] Consequently, the price of the ERC will reflect the affected EGU's confidence in the validity of the ERC. Those undertaking EE projects, therefore, will be incentivized to engage in the required EM&V.[23]

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[21] EPA itself notes that an affected unit with an emission rate of 2,000 lb CO_2/MWh would need to acquire in excess of 300,000 ERCs in order to demonstrate compliance. *See* 80 *Fed. Reg*. at 64,991.

[22] As discussed elsewhere in these comments, the imposition of double administrative penalties is not justified. *See* section II.E., *supra*. However, if EPA retains the double penalty, the Agency must recognize their impacts on other provisions of the program.

[23] While some stakeholders may call for EPA to relax the EM&V requirements included in the model trading rules, EEI notes that the market price of EE ERCs under either a state or federal rate-based plan will be based on the robustness of their EM&V. Less rigorous methods will

This buyer liability incentive should address concerns that EPA may have about invalid ERCs resulting from the inclusion of any low- or zero-emitting projects that could generate ERCs, particularly end-use efficiency (EE), in the federal plan. In the final emission guidelines, EPA provides that states can include EE measures as possible sources of ERCs as long as the avoided generation can be adequately evaluated, measured and verified and there is an adequate administrative process for tracking credits. *See* 80 *Fed. Reg.* at 64,757. EPA has not demonstrated that EE measures will not be subject to adequate EM&V in the context of a federal plan. EPA also has not explained why the proposed tracking system for all ERCs would be inadequate to track ERCs generated by EE measures in the context of a federal plan, but would serve this same function if a state plan allowed the use of these measures but opted to use EPA's tracking system.

Moreover, it would be perverse for EPA to bar the use of end-use efficiency efforts to generate ERCs, given that EPA has stated that efficiency is likely to be a cost-effective option to significantly reduce emissions that also can serve to reduce customer's electric bills. *See* 80 *Fed. Reg*. at 64,757 and EPA, *Fact Sheet: Clean Power Plan Key Changes and Improvements* (Aug. 3, 2015). Excluding these measures as potential ERC-generators, therefore, by definition, would increase compliance costs for affected units and electricity customers.

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produce more speculative—and, therefore, lower-cost—ERCs (this is akin to the different values of stock prices which are based on investors belief in the robustness of the company's projected value). This also will be true for distributed resources that produce ERCs but cannot document and verify the MWh provided to the grid. This is discussed in more detail below. *See* section III.F., *infra*.

EPA's argument that any measures not explicitly included in EPA's consideration of BSER need not be eligible to generate ERCs in a federal plan is not persuasive. *See* 80 *Fed. Reg*. at 64,994. In the final guidelines, EPA states that

> [t]his final rule does not limit the measures that affected EGUs may use for achieving standards of performance to measures that are included in BSER; thus, the existence of these non-BSER measures provides flexibility allowing individual affected EGUs and the source category to achieve emission reductions consistent with application of the BSER at the levels of stringency reflected in this final rule even if one or more of the building blocks is not implemented to the degree that EPA has determined to be reasonable…

Id. at 64,755. Given that the final guidelines do not limit affected EGUs, which have the obligation to achieve compliance, to those measures included in BSER, it is not appropriate for EPA to limit compliance options for those EGUs that become subject to a federal plan. EPA has not provided any justification for limiting compliance flexibility and potentially increasing compliance costs for units that become subject to a federal plan.

Finally, if EPA can develop processes to issue ERCs in the context of the low-income EE projects that earn CEIP ERCs in 2020-2021, there can be no logical argument that the Agency cannot continue to issue ERCs to EE and other projects in 2022 and later. Moreover, EPA's concerns about possible paperwork errors are not a sufficient justification for keeping whole classes of compliance options from generating ERCs under a federal plan. Similarly, concerns about streamlining the process of ERC issuance for the Agency cannot be sufficient justification for limiting the potential supply of ERCs that are available for compliance. In short, EPA has not provided any persuasive reasons for excluding any measures from those potentially eligible to generate ERCs from a federal plan. Accordingly, a federal rate-based plan should allow all projects identified in the final emission guidelines as eligible to generate ERCs for compliance.

C. Consistent with EPA's BSER Determination, Affected NGCC Units Should Be Able to Earn GS-ERCs to Facilitate Compliance

As noted, the volume of ERCs needed for a single affected EGU to demonstrate compliance with the emission rate standards is large and a potential federal rate-based plan must be designed to ensure that a sufficient number of ERCs can be generated and used for compliance. In the final emission guidelines, EPA provides that existing NGCC units would be allocated special ERCs that reflect increased generation from these units, consistent with EPA's determination that increased utilization of these exiting units is part of BSER. These are called gas shift ERCs (GS-ERCs). *See* 80 *Fed. Reg*. at 64,991. Existing NGCCs should be awarded ERCs to the extent that, consistent with BSER, generation from these units increases. EPA seeks comment on a range of issues related to GS-ERCs, including whether this distinct type of ERC is necessary to maintain the integrity of the rate-based trading programs. *See id*. at 64,994.

As a preliminary matter, consistent with EPA's BSER determination, it is important that EPA provide for the creation and use of GS-ERCs in order to facilitate affected units compliance under any rate-based plan. As EPA notes, under a rate-based plan, affected units must acquire ERCs in order to demonstrate compliance. Unlike mass-based plans, reductions in generation alone will not enable an affected unit to demonstrate compliance.[24] A significant portion of the reductions that EPA deemed to be achievable in the final emission guidelines—about 38 percent—are related to shifts in generation between existing coal- and natural gas-based units associated with utilizing existing NGCC units at 75 percent of their net summer capacity. *See* 80

[24] Reductions in utilization can decrease the number of ERCs needed for compliance, but the only way to use reduced generation as a complete compliance option is to retire an affected unit.

Fed. Reg. at 64,799. Without GS-ERCs, affected coal-based units[25] will not be able to acquire credits associated with these reductions. This could functionally increase the stringency of the standards for coal-based units by as much as 38 percent by limiting the supply of ERCs.

In addition to providing for the creation of GS-ERCs in general, EPA must also ensure that the requirements for generating these special ERCs do not artificially constrain their availability. Accordingly, EPA should award GS-ERCs to any individual existing NGCC unit that achieves the required increase in utilization, subject to appropriate verification.

EPA notes that, if NGCC units do not collectively achieve 75 percent capacity factors, "the lost opportunity for ERC generation simply will need to be achieved through other means (e.g., emissions performance improvements at affected EGUs or additional RE generation)." *Id*. at 64,991-91. While EPA has asserted that there will be a sufficient supply of ERCs, *see id*. at 64,732, EPA has not assessed whether this is true in light of the withholding of GS-ERCs. Further, the Agency's assumptions about ERC supply are predicated on the creation of a national trading regime. *See id*. As a result, depending on the state of the trading regime, it is possible that an ample supply of ERCs from emissions performance improvements at other affected EGUs and additional RE generation will not be available in any particular state. At this time, before states have submitted compliance plans indicating whether they will opt to allow affected units to trade, EPA cannot assert that affected units do not need GS-ERCs for compliance or that GS-ERCs are not necessary in light of the availability of other ERC generation options.

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[25] GS-ERCs can only be used by affected fossil steam electric generating units. *See* 80 *Fed. Reg*. at 64,993.

Accordingly, it is prudent to allow individual NGCC units to earn GS-ERCs that can be used for compliance.

D. Self-Generation Should Be Able To Earn ERCs, but These Must Reflect the Actual Emissions of the Replacement Generation; Self-Generation is Not Exempt from Regulation under the Final Emission Guidelines.

In the model trading rules, EPA proposes to allow other generation options to earn ERCs, provided they meet certain requirements. *See* 40 C.F.R. § 62.16434, 80 *Fed. Reg*. at 65,094. These other forms of generation include CHP and WHP. EPA recognizes that these units may have lower emissions than affected EGUs and can replace generation from affected EGUs. *See id*. at 64,901. However, while such self-generation may reduce power sector emissions, they are not zero-emitting resources themselves. The ERCs that these forms of self-generation earn should reflect that the fact that they are not emissions free and can, in some instances, replace zero-emitting EGU generation. EPA should ensure that any ERCs issued to these sources reflect their actual emissions.

Moreover, where appropriate, these forms of self-generation may be subject to regulation under section 111(b) or (d). In general, EPA prohibits units that are subject to standards for new or modified units from earning ERCs. EPA should maintain this prohibition for both state and federal plans as this ensures that emitting resources are not substituted for EGU generation to the detriment of larger emission reductions goals, potentially increasing compliance costs for affected EGUs and other customers. Further, EPA should make clear that that any 111(d)-affected forms of self-generation must comply with appropriate section 111(d) standards.

E. EPA Should Facilitate the Use of a Broad Array of Qualified Biomass Feedstocks for Compliance under both State and Federal Rate-Based Compliance Plans

In general, while EPA acknowledges that the net carbon impacts of biomass combustion may be less than fossil combustion because biomass absorbs CO_2 when grown, the Agency has concluded that not all combustion of biomass can be considered carbon neutral. *See* 80 *Fed. Reg*. at 64,884. The net CO_2 impact will vary based on numerous factors such as feedstock type, production processes and alternative, non-combustion uses of the feedstock. *See id*. EPA has convened a second Scientific Advisory Board (SAB) to review the proposed *Accounting Framework for Assessing Biogenic CO_2 Emissions from Stationary Sources*[26] (Accounting Framework), which has not issued a final statement. The SAB review and subsequent EPA action will provide more details as to how EPA will treat biogenic emissions going forward.

As part of the proposed federal plan, EPA requests comment on whether and how biomass should be treated in the rate-based model rules. As discussed below, EPA does not propose to allow biomass to generate ERCs under a rate-based federal plan, largely due to concerns about EM&V. *See id*. at 64,995. However, EPA seeks comment on whether to develop a list of pre-approved "qualified" biomass fuels that could be used for compliance under the federal rate-based plan. If qualified biomass is co-fired by affected EGUs, these emissions would not count toward the unit's reported emissions rate. If combusted by non-affected EGUs,[27] these units could generate ERCs. *See id*. at 64,995-96.

[26] *See also* EPA, *Framework for Assessing Biogenic CO_2 Emissions from Stationary Sources* (Nov. 2014), http://www3.epa.gov/climatechange/downloads/Framework-for-Assessing-Biogenic-CO2-Emissions.pdf.

[27] In general, EGUs that combust biomass and 10 percent or less of a fossil fuel are not affected EGUs for section 111(d) purposes. *See* 40 C.F.R. § 60.5850(c).

The final emission guidelines authorize states to propose co-firing with "qualified biomass" as a means of directly reducing CO_2 emission rates at affected EGUs. *See id*. at 64,886. Biomass units also could be eligible to earn ERCs under state rate-based plans. *See id*. In order to include biomass in a compliance plan, a state is required to describe the types of biomass being proposed for consideration, explain how those feedstocks or feedstock categories should be considered "qualified" and address the proposed valuation of the biogenic CO_2 emissions from the use of the biomass that would not be counted when demonstrating compliance with an emission standard. State plans must also propose EM&V practices to monitor, track and report emissions from biomass. *See id*. EPA will review a state's approach to biomass as part of its review of compliance plans. *See id*.

EPA requests comment on options for how EGUs would demonstrate that feedstocks meet the requirements to be accepted as a preapproved qualified biomass feedstock and the methods for the measurement of the associated biogenic CO_2 for qualified feedstocks. EPA also requests comment on any other requirements that should be included in the final rule regarding EM&V for qualified biomass. *See id*. These multiple requests for comment are addressed below.

1. EPA Should Develop a List of Qualified Biomass Feedstocks

EPA requests comment on the types of qualified biomass feedstocks that could be pre-approved and provides examples of feedstocks that could be included on the pre-approved list: certain waste-derived feedstocks (e.g., landfill gas); certain industrial feedstocks (e.g., black liquor, agricultural industrial byproducts without alternative markets); and feedstocks from sustainably managed forest lands that meet certain sourcing requirements. The pre-approved qualified biomass feedstocks list could be amended in the future to include other types of biomass; EPA requests comment on what that the approval process should entail. *See id*.

EEI has been actively involved in EPA's efforts to determine how to address the carbon impacts of biomass and support the development of a list of qualified biomass feedstocks that could be used as an abatement measure in states subject to a federal rate-based plan. In addition, to the extent that the federal plan serves as model trading rules, the adoption of which makes a state plan presumptively approvable, expanding the list of renewable energy options may be an important compliance tool for states that do not have significant wind or solar potential.

Importantly, the development of a list of qualified biomass feedstocks will mitigate some of the burden of proposing and analyzing potentially eligible feedstocks in the context of state plans. While EPA has provided an important flexibility by allowing states to make such demonstrations, the intense analytical effort that will likely be needed to demonstrate that feedstocks are carbon neutral might undercut the ultimate utility of EPA's flexibility.
While all of the feedstocks currently recognized by states may not satisfy the requirements of the final Accounting Framework, EPA's initial list of pre-qualified feedstocks, which identifies only two options, is too limited. *See* 80 *Fed. Reg*. at 64,886. At present, EPA proposes only to recognize waste-derived and certain industrial byproducts and sustainably-derived agricultural and forest biomass feedstocks as eligible for inclusion on the pre-qualified list.

EPA should be more expansive in its list of qualified biomass feedstocks in order to encourage the use of more zero- and low-emitting generation sources. In particular, EPA should not require that pre-qualified feedstocks both control increases in CO_2 emissions and reduce emissions, which would constitute a more rigorous requirement than carbon neutrality. *See id.* at 64,885. EPA should seek to increase opportunities to generate ERCs under both state and federal compliance plans without increasing emissions, particularly for those states that do not have abundant wind or solar potential. A sufficient supply of ERCs, which represent 0 lb CO_2/MWh, and not negative emissions per MWh, is needed to ensure that units can demonstrate compliance at the least cost.

2. EPA Should Provide Clear Guidance on EM&V Requirements

EPA should provide clear guidance on the EM&V requirements or the process that will be acceptable to demonstrate that a biomass feedstock is pre-qualified if states choose to include this option in compliance plans. This guidance should be transparent and not overly burdensome. As discussed in more detail below, to the extent appropriate, EPA should rely on other CAA programs to which units that combust biomass may be subject to streamlined administrative processes, which will reduce redundant reviews.

3. EPA Should Finalize the Review of the Accounting Framework Expeditiously

EPA should endeavor to finalize the review of the Accounting Framework as expeditiously as possible to provide guidance to states considering including biomass in compliance plans. While EPA offers states the flexibility to propose the use of particular feedstocks in their plans, for EPA review, the SAB’s conclusions and the process it endorses for demonstrating carbon neutrality likely will inform state decisions. A state will not want to expend resources defending a type of biomass that the SAB does not endorse or if doing so requires a significant outlay of additional resources.

4. EPA Should Recognize Pre-Construction PSD Permits as a Method to Qualify Biomass Feedstocks for Compliance under Federal or State Plans

In addition to supporting the development of a pre-qualified list, EPA should recognize (and allow states to recognize) as an abatement option any EGU that combusts biomass that is issued a pre-construction prevention of significant deterioration (PSD) permit. EPA originally decided to pursue the development of the Accounting Framework in response to concerns about how to permit biomass-based units in light of new requirements to address GHG emissions from anyway sources. *See Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule*, 75 *Fed. Reg*. 31,514 (June 3, 2010). If a unit receives a PSD permit that determines that the biomass feedstock used is carbon neutral, EPA or a state should be able to rely on that unit for 111(d) compliance purposes, regardless of whether the unit combusts a fuel that is on any pre-qualified list developed by EPA or included in an approved state plan.

Using the PSD permitting process as a way to vet the carbon consequences of biomass-based units would shift the burden of demonstrating carbon neutrality to the unit owner, which may be in the best position to provide the necessary assessment and documentation. Earlier versions of the Accounting Framework indicate that the required review will be very specific to the facts and circumstances of a particular type of biomass and how it was grown and harvested. Accordingly, relying on the permitting process would seem to be more appropriate and more likely to result in the ability to actually use biomass for compliance. In addition, it would streamline the process and reduce redundancy. If a PSD permit has been issued that recognizes the carbon benefits of a type of biomass, this conclusion need not be re-examined in the context of a state or federal 111(d) plan, as the conclusion of the permitting authority should be recognized across programmatic lines. Given that section 111 standards set the floor for any PSD permitting requirements, *see* 42 U.S.C. § 7479(3), it would make no sense to determine that a unit satisfied the PSD program's more stringent GHG requirements only to reach a different conclusion in the context of section 111. Moreover, because the emission limits that result from a pre-construction permitting review are incorporated into units' title V operating permits, there will be sufficient oversight and enforcement to satisfy any EM&V requirements that are necessary to ensure that ERCs generated from these units are valid.[28] This would take the burden off of EPA with respect to ERC verification, and would not require states to guess, at the time that plans are submitted, which biomass resources may be used to generate electricity in the future and whether they would be carbon neutral.

While reliance on the PSD permitting process could be useful for new biomass-based units, it would not address units that were permitted after 2012 but before the finalization of the Accounting Framework.[29] However, EPA or states could require that a unit owner that wanted to generate ERCs from a post-2012 project be responsible for demonstrating that the particular feedstock used is carbon neutral and could require that unit to use particular EM&V protocols as a condition of generating ERCs, which could take the form of modifications to the unit's title V

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[28] In the alternative, units that wanted to generate ERCs could elect to include the EM&V requirements included in a state or federal plan in their title V operating permits.

[29] ERCs can only be generated by projects that came online after 2012. *See* 40 C.F.R. § 60.5800(a)(1), 80 *Fed. Reg*. at 64,950.

operating permit. This would facilitate the use of biomass where appropriate by relying on existing CAA programs and requirements.

F. Evaluation, Measurement and Verification Requirements Should Facilitate End-Use Efficiency as a Compliance Tool, Be Flexible and Provide Certainty to the ERC Market

EE is an important compliance tool that may help states minimize compliance costs, and states should have the option to allow EE to generate ERCs for compliance in the context of rate-based plans. As noted above, see section IV.B., EE also should be a compliance option under a federal rate-based plan. For all demand-side EE used to generate ERCs, EPA proposes that the metric is MWh of electricity savings, which must be quantified on an ex-post or real-time basis and defined as a reduction in facility- or premises-level electricity consumption due to an EE program, project or measure. *See id*. at 65,005. EPA's proposed EE EM&V requirements largely build off of existing programs already in routine use for a wide range of publicly or rate-payer funded EE programs and energy service company projects. This will help EPA in its goal of balancing the accuracy and reliability of the results with the costs of EM&V. *See id*. at 65,003.

In general, EPA requests broad comment on EE EM&V criteria for each type of EE activity, project, program, or measure. *See id*. at 65,007-08. Many of these issues are addressed in these comments and the comments on the draft EM&V Guidance included as Appendix A.

The final federal plan and model trading rules should only provide a minimum framework for EE EM&V, and the guidance document should be used for detailed implementation protocols.

EPA's approach to EE EM&V requirements in the model trading trades should recognize and authorize states to use different, but equivalent, approaches and should provide certainty to affected units that purchase ERCs for compliance. EPA should measure EE savings in terms of gross, not net, MWh saved, consistent with common practice as defined in many state technical reference manuals and RTO standards (e.g., PJM). EPA should ensure that existing EE programs and measures that may result in electricity savings during the compliance periods can be eligible to generate ERCs if the savings can be quantified and verified. EPA also should make clear that differences in state EM&V approaches will not affect the fungibility of ERCs. EPA should be consistent in its approvals of state EE EM&V protocols, and should allow states to adopt EM&V approaches that EPA has approved in the context of other state plans. Finally, to avoid double counting, EPA should require that all distributed resources that may be eligible to generate ERCs, regardless of size, are tracked in a registry capable of identifying duplication. For renewable distributed generation, ERCs should be measured via meters to ensure that credit for energy savings due to EE measures can be properly attributed.

1. EE EM&V Requirements Should be Flexible to Accommodate Existing State Programs and Changes in Markets and Technologies

As part of the model trading rules, EPA includes EM&V provisions that would be presumptively approvable if included in state compliance plans and regulations that govern how EE is to be quantified by EE providers and verified by independent entities accredited by the state. *See id.*[30] States can adopt these presumptively approvable approaches to EM&V or may use alternative

[30] EPA also separately provided draft EM&V Guidance for Demand-Side EE (Guidance) to provide additional information to states and EE providers. EPA seeks comment on this draft guidance, as well as on the EM&V provisions included in the proposed federal plan. EEI's comments on the more detailed draft guidance are attached as Appendix A.

EM&V that is functionally equivalent to the industry best practices that EPA has determined are presumptively approvable. *See id*. at 65,002. States should be allowed to submit alternative, but equivalent approaches to EM&V. Many states have significant experience in administering demand-side EE programs. The EM&V requirements of the final guidelines should not interfere with successful state EE programs and should allow for state programs to be modified over time to reflect changes in the market and available technologies.

In general, to promote state flexibility in designing and implementing demand-side EE programs, EPA should not attempt to put significant EE EM&V detail into the final model trading rules. Such detail should be included in the Guidance, which should clearly indicate that it will be modified over time. In addition, EPA should recognize that different levels of rigor are needed to address new and emerging technologies so that these can be given a chance to develop and succeed without homogenous EM&V requirements creating disincentives to their development.

2. Affected Units Need Certainty that Changing EM&V Requirements Will Not Invalidate Issued and Verified ERCs

Allowing states to pursue alternative EM&V approaches is important, given that EM&V "is routinely evolving" to reflect changes in markets, technologies and data availability. EPA notes that, as a result of this continuous evolution, the Agency "expects to update its EM&V guidance over time." *Id*., n.78. While it is important that EM&V practices and requirements reflect changes in markets, technologies and data availability—to maximize the number of EE ERCs that could be generated—the affected units that buy ERCs need certainty.

ERC buyers and sellers need assurance that any evolution in EM&V will not result in retrospective revocation of ERCs. Similarly, to facilitate ERC trading, all market participants need clear EM&V guidance and confidence in the value and validity of ERCs. As discussed above, EPA proposes that ERC purchasers bear the liability for any revoked ERCs. EPA should ensure that concerns that retroactive changes to EM&V could result in the future revocation of ERCs will not fundamentally damage the confidence of the participants in the market, damage the value of ERCs and drive up overall compliance costs. EPA should state clearly in the final model trading rules that any changes to EM&V practices and requirements will be prospective and not result in retroactive review or revocation of all-ready issued and verified EE ERCs. For example, the final model trading rules should note that required updates (which should not be excessive in number) to technical resource manual (TRM) used for M&V will be prospective, provide market participants with the details of when the changes will go into force and not result in any retrospective review of ERCs issued under prior versions of the TRM.

3. EE Savings Should be Measured in Terms of Gross MWh Saved

For purposes of generating ERCs used for compliance, energy savings should be measured in terms of gross MWhs saved. Gross values represent the actual reduction in energy consumption achieved irrespective of free riders and spillover from utility or other third-party implemented energy efficiency programs. Whereas net savings may be used by some states to determine how to credit utilities or third-party administrators for success in energy efficiency program implementation, net savings is not an appropriate measure for ERCs, as it would undercount the achieved CO_2 reductions. If reductions can be measured and verified, they should be eligible for ERC generation. Energy savings are real emissions reductions no matter why or how these occur; the gross values should be applied. Any concerns about double counting should be addressed through the verification process.

4. EPA Should Allow Utilities to Use More Specific and Accurate T&D Loss Rates When Calculating EE Savings

EPA proposes that it is presumptively approvable to quantify the electricity savings that result from avoided transmission and distribution (T&D) system losses. *See* 80 *Fed. Reg*. at 65,006. The proposed model trading rules require that T&D losses be based on the lesser of six percent of the site-level electricity consumption measured at the end of a use meter or the statewide annual average T&D loss rate (expressed as a percentage) from the most recent EIA State Electricity Profile. *See id*. at 65,008. EPA should allow utility-sponsored EE programs to use their own T&D savings adders, as they routinely do for reporting EE savings to their state commissions. In addition, states and utilities should be allowed and encouraged to use different T&D savings adders for different types of EE programs, because there can be significant differences across program types (e.g., between programs targeted to residential customers and customers who are connected at a higher voltage).

5. EPA Should Clarify that States May Rely on Savings from EE Programs and Measures Implemented before the Finalization of the Model Trading Rules

Only those EE savings that occur during the interim and final compliance periods may be awarded ERCs. It is possible, however, that EE programs and measures implemented before 2022—and, indeed, before the finalization of the model trading rules, the EM&V Guidance or the approval of state plans—will generate savings that are eligible for ERCs. The EM&V requirements for these pre-existing efforts may not conform to the presumptively approvable EM&V requirements provided in the model trading rules, but may be subject to sufficiently rigorous EM&V that the MWh of savings can be quantified and verified. For a number of reasons, altering the EM&V requirements developed at the time these programs were implemented may not be possible, including the need to amend state regulations or legislation, cost and feasibility.

EPA should clarify how such programs will be treated and affirm that states can include such savings in their compliance plans as eligible to earn EE ERCs, provided the minimum eligibility requirements are met. Many existing state programs have successfully reduced demand for electricity. The model trading rules and EM&V Guidance should be designed to recognize and promote successful existing programs that result in reductions during the compliance periods.

6. EPA Should Not Create EM&V Barriers to the Trading of EE ERCs

EPA notes that "it is theoretically possible that an ERC could be issued in one state that would not have been issued in another, even if both states have rate-based programs" that satisfy the requirements of the final emission guidelines. *Id*. at 65,008. While this may be true, such differences should not trouble EPA, and should not result in any limitation on the issuance or fungibility of EE ERCs across state lines. Once EPA has approved a state's compliance plan, which includes its EM&V requirements, then any ERC issued that conforms to these requirements and that has been measured and verified is a valid ERC. Differences in state EM&V requirements should not prevent an affected unit in one state from purchasing an EE ERC generated in another state for compliance.

To facilitate ERC trading, EPA should consider creating or supporting a registry for EE ERCs to track them and avoid double counting.

7. EPA Should Be Consistent in its Approval of State EM&V Plans

The model trading rules provide presumptively approvable approaches to EE EM&V, but states are free to include different, but equivalent, approaches in state compliance plans. If EPA approves an alternate approach in one state plan, the Agency should approve the use of the alternate approach in other state plans. Some states may file compliance plans for EPA approval in 2016 or 2017, while other states may elect to take advantage of the two-year extension. If EPA approves an alternate approach to EM&V in a state plan that is submitted earlier, the Agency should allow other states to include such alternate approach in plans submitted later and should approve their use. In essence, any approved state EM&V plan should be considered part of the presumptively approvable model trading rules. This will streamline approvals and save EPA and states time.

Similarly, if states accredit a particular third-party EE verifier, EPA and other states also should be able to use that verifier without having to undertake a separate and duplicative review of the verifier's qualifications.

8. Distributed Generation Resources that May Be Eligible to Generate ERCs Must Use Meters to Measure Generation to Ensure that EE Savings Can Be Attributed Properly

EPA proposes that distributed renewable generation resources may be eligible to generate ERCs if they meet certain requirements. *See id*. at 65,004. EPA generally proposes to require distributed resources, like other eligible renewable generation, to meter their output in order to verify the number of MWh that may be awarded ERCs. *See* proposed 40 C.F.R. § 62.16260(c)(1), 80 *Fed. Reg*. at 65,070-71. However, EPA also proposes to allow some distributed resources to be eligible to generate ERCs even if their output is not metered. *See id*. at §62.1620(c)(2). EPA should not allow non-metered distributed resources to earn ERCs because it will not be possible to separate MWh (or fractions thereof) generated by distributed generation and those saved as a result of EE programs. Either the distributed resource will get all of the credit for any savings that would be more appropriately attributed to EE or there may be double counting. Requiring distributed generation to be metered will ensure that EE programs get full credit for the electricity savings they generate.

Moreover, requiring distributed resources to use meters is consistent with the requirements placed on other generation sources that may earn ERCs and addresses the variability of output due to site-specific concerns (including weather and shading). It also would address inverter issues and equipment degradation over time. Metering costs are minimal and not burdensome, particularly when compared against the opportunity for a new revenue stream.

V. EPA Should Design A Mass-Based Federal Plan to Minimize Compliance Costs and Maximize Compliance Flexibility for States and Affected Units

Under the proposed mass-based federal plan, EPA would utilize the statewide mass-based emission goals, as well as the interim and final compliance periods promulgated in the final 111(d) guidelines. *See id*. at 65,011-12. Under this approach, the statewide goals would establish an aggregate emission limit; emission allowances equal to the aggregate emission limit would be created. Each facility with affected EGUs would be required to surrender a sufficient number of allowances, each equal to one short ton of CO_2, to cover its emissions for each of the compliance periods. *See id*.

Which entities receive allowances and how those allowances are initially distributed are two of the most critical design decisions in the development of a mass-based emissions trading approach. These decisions will affect the shape and design of the trading market and, importantly, who bears the costs of compliance with the final guidelines. The Agency itself "recognizes that its choice of allocation methodology is important from the perspective of distributional effects." *See id.* at 65,015.

Under the proposed federal plan, EPA would act as the state, issuing allowances and overseeing implementation and enforcement of the emission standard. The following comments address the allowance distribution methodology that EPA has proposed in the context of a potential federal plan, should EPA be obligated to impose one on a state. While EPA's proposed approach to allowance allocations can serve as guidance for states that opt for mass-based plans, EPA has and should continue to recognize that states have the authority and discretion to allocate allowances as they deem appropriate. "The EPA recognizes that states may prefer different approaches to distribute CO_2 allowances from the EPA's approach and that there may be advantages in having states tailor and apply their own allocation approach." *Id*. at 65,015.

In the final guidelines and model trading rules, EPA should make clear that the Agency cannot and will not reject a state plan because the Agency disagrees with how the state has chosen to allocate allowances.[31] In addition, as the Agency has proposed, EPA should allow states that become subject to a federal plan to submit their own allowance distribution, consistent with the requirements of the CAA. This ensures that, even if subject to a federal plan, state-specific concern and issues can be addressed via allowance allocations.

A. As Proposed, EPA Should Permit the Reallocation of Allowances by States Subject to a Federal Plan; State Allocation Designs Will Best Reflect State-Specific Concerns and Issues

Under the proposed mass-based federal plan and model trading rules, EPA provides a proposed approach to allocating allowances. However, EPA also proposes to allow a state subject to a federal plan to submit a partial state plan in order to replace the federal plan allowance allocation method with the state's own method. *See* 80 *Fed. Reg.* at 65,027. Consistent with the discretion and flexibility afforded states under CAA section 111(d), EPA proposes to allow states taking this approach to use a variety of allowance distribution approaches. States are best positioned to address how implementation of the emission guidelines may affect local concerns.

EPA should, as it proposes, allow states to replace the federal plan allowance allocation method with the state's own method. Importantly, this would mirror the flexibility provisions in the final guidelines that allow states to use a variety of allowance distribution approaches. As EPA notes, "[s]tate allowance distribution can have important advantages, because it allows a state to design and shape allowance allocation it its specific goals and characteristics, and because states may have additional flexibility on allocation approaches…" *Id*. at 65,012. Thus, the final mass-based

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[31] EPA's proposed set-asides to address leakage and the CEIP are discussed in sections V.F. and VI, *infra*.

model trading rule should emphasize that states retain discretion to pick their own allocation approaches regardless of the general approach set forth in the final federal plan and model rules. The final model trading rule also should recognize that states have more flexibility in allowance allocations than EPA and make clear that EPA will not second guess how states choose to exercise this flexibility. *See id*. at 65,028.

For states subject to the federal plan, reallocation of allowances and the replacement of the proposed federal allocation approach would utilize the partial approval/disapproval mechanisms similar to CAA section 110(k)(3) for submitted state plans that EPA has proposed as part of the updates to the framework regulations for section 111. *See id*. at 65,027. EPA believes this approach may have "significant appeal" because it will allow a state to tailor the allocation approach to the characteristics and preferences of the state. *See id*. However, EPA also requests comment on whether, instead, to provide states with partial delegation authority so that a state could administer its own allowance distribution provisions. This delegation would be limited only to allowance distribution provisions. *See id*.

In the final federal plan, EPA should provide states with both the option to replace EPA's allocations via partial approval or partial delegation. The biggest advantage is the ability to tailor allowance distributions in such a way so as to consider state-specific issues and concerns. The form of state authority is of secondary importance, and states should not be dissuaded from taking advantage of this flexibility by the methodology.

B. EPA's Decision to Allocate Most Allowances to Affected EGUs Based on Historical Data is Reasonable, Could Help to Minimize Customer Costs, is Consistent with Other CAA Trading Programs and Supports Achievement of the Emission Reductions Goals in the Final Emission Guidelines

Under the mass-based approach, EPA proposes to allocate most allowances to affected EGUs using a historic data-based approach.[32] *See id*. at 65,016.[33] It is reasonable to allocate allowances to affected EGUs based on historic data. EPA's proposed approach also is consistent with other emissions trading programs and could help to minimize compliance and electricity customer costs.[34] Moreover, the allocation of allowances to affected units would not affect the environmental benefits of the final emission guidelines or impact the functioning of competitive electricity markets.

Allocating allowances to affected EGUs helps minimize unit-specific compliance costs by providing the affected units with the majority, though not the entirety, of the allowances they would need for compliance. As EPA has noted, allocating allowances to those entities with compliance obligations does not change the marginal cost of compliance or the environmental

[32] EPA's proposed allocation includes set-asides to address leakage and to facilitate the implementation of the CEIP. These are discussed in sections V.F. and VI, *infra*.

[33] These comments support the allocation of allowances based on historic data and do not take a position on whether allocations should be based on historic generation or emissions data. States are best positioned to determine the potential implications for compliance and compliance costs of using generation or emissions data.

[34] The ultimate impacts on customers depend on how the different states have chosen to structure their retail and wholesale electricity markets. In general, in vertically integrated states, allocating allowances to affected units will minimize costs to consumers as state public utility commissions will require that the value of the allowances be used for the benefit of electricity customers. Another benefit of allowing states to determine their own allocation methodology—even in the context of a federal plan—is that they can take into consideration market structures and potential impacts on customers.

integrity of the program nor does it impact competitive electricity markets. *See* 80 *Fed. Reg*. at 65,017.[35]

The use of historical data, as EPA has proposed for the federal plan, is a reasonable basis for allowance allocations. First, this approach uses known data, rather than future projections. As EPA notes, approaches tied to future indicators "would depend on future outcomes that EPA cannot project with perfect certainty in advance." *Id*. One of the benefits of a mass-based plan, relative to a rate-based plan, is that the total number of allowances is known in advance, which allows affected EGUs more information to plan for compliance. This increases certainty and reduces compliance costs. As EPA has noted, compliance planning is further facilitated when allowances are distributed in advance, instead of at the end, of compliance periods. *See id*. at 65,016-17. Allocations based on future, or even current, data, do not allow for this advanced allocation. Finally, the use of historic data as the basis for allocations is consistent with other successful emissions trading programs implemented under the CAA, including the NOx SIP Call, the Acid Rain Program (ARP) and the Cross-State Air Pollution Rule. *See id*.

EPA also notes that "an initial allocation approach that is based on historic data does not affect the environmental results of the program or generation patterns; regardless of the manner in which allowances are initially distributed the finite total number of allowances limits allowance

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[35] *See also* Robert Hahn and Robert Stavins, *The Effect of Allowance Allocation on Cap-and-Trade System Performance*, John F. Kennedy School of Government, Regulatory Policy Project, RPP-10-02 (Harvard 2010), http://www.hks.harvard.edu/m-rcbg/rpp/Working%20papers/Hahn%20%20Stavins%20RPP%202010.02.pdf.

emissions across all affected EGUs." *Id*. Accordingly, the allowance distribution method chosen does not undermine the reductions the final guidelines are designed to achieve.

C. EPA Should Not Auction Allowances in the Context of a Federal Plan

EPA also seeks comment on the use of auctions under the mass-based approach. *See id.* at 65,018. According to EPA, many "have highlighted the economic efficiency benefits of using auctions, which "could minimize the difference between the initial allowance allocations and the ultimate distributional pattern of allowance use for compliance." *Id*.

As a preliminary matter, initial allocations that mirror ultimate distribution patterns are not required to achieve environmental objectives.[36] EPA notes that some states (e.g., RGGI states) have used auctions to distribute allowances, with the revenues from those auctions used for a number of purposes. *See* 80 *Fed. Reg.* at 65,018. A key issue regarding the auctioning of allowances is which of these objectives to satisfy. The answer to this question will impact the efficiency and cost-effectiveness of the state program, and therefore the cost to customers.

In the proposed federal plan, EPA states its belief that any revenue raised by an auction the Agency conducts would be required legally to be deposited in the U.S. Treasury, and that as a result, states implementing their own plans may have greater flexibility in how to direct the use of auction revenues. *See id*. Accordingly, while some states may wish to pursue auctions, EPA should not auction allowances under a mass-based federal plan because the proceeds from such an auction could not be used for beneficial purposes for the state.

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[36] *See* Hahn and Stavins, *supra*, n.35.

D. Allocating Allowances to Retired Units Encourages Reductions, Minimizes Compliance Costs and is Consistent with EPA's Approach to BSER; Other CAA Trading Programs Have Allocated Allowances to Units After Retirement

The proposed federal mass-based plan also addresses allocations to units that retire during the interim compliance period. EPA proposes to discontinue allowance allocations for the next compliance period for which allowances have not yet been recorded if a unit did not operate for two full consecutive calendar years prior to the June 1 recordation deadline. *See id*. at 65,026. EPA does not propose to allocate allowances to units that were included in the 2012 baselines used to calculate the subcategorized emissions standards if these units retire before the end of 2018. *See* Allowance Allocation Proposed Rule TSD (Aug. 2015), Docket No. EPA-HQ-OAR-2015-0199, at 3-4. EPA's proposed approach to allowance allocations for modified and reconstructed unit is similar to that for retired units: if an affected EGU is modified or reconstructed such that it becomes subject to section 111(b) emission standards, the unit will not be allocated allowances for the next step compliance period for which allowances have not yet been recorded and for any subsequent compliance periods. *See id*. at 65,026.

EPA also proposes that any allowances that would have been allocated to a retired unit be reallocated to the renewable energy (RE) set-aside, allowing this set-aside to "grow over time."[37] *See id*. EPA seeks comment on whether, instead, to reallocate these allowances to the output-based allocation (OBA) set-aside or to the remaining affected EGUs on a pro rate basis, consistent with the methodology initially used to allocate allowances. *See id*. EPA also is taking comment on whether to continue to allocate allowances to retired units and allocations to units in longer-term cold storage. *See id*.

[37] EPA's proposed set-asides are discussed in more detail in section V.F., *infra*.

As a preliminary matter, it is important to note that retiring an affected unit, particularly a coal-based unit, will result in a significant reduction in emissions. This is true for coal-based units that retire before the start of the compliance period in 2022 and those that retire during the interim period. Regardless of EPA's approach to retired unit allocations, states have the discretion to recognize these reductions by continuing to allocate allowances to the owners and operators of the retired units.[38] Moreover, continued allocations to retired units are consistent with EPA's BSER determination, which focuses not only on the reductions that can be achieved at the unit but also on those reductions that the unit's owners and operators may be able to achieve through investments in lower-emitting generation, reducing generation or entering into bilateral contracts. *See id*. at 64,731. Continued allocations to retired units allow unit owners and operators to invest in the other reductions that will need to be achieved at lower cost in order to achieve the goals established in the final emission guidelines. Continued allocations, therefore, not only incentivize reductions, but also offset the costs of these reductions thereby accelerating investment in newer, lower emitting generation resources to the benefit of electricity customers. The final model trading rules should make clear that EPA will respect state decisions to allocate allowances to retired units.

EPA, however, also should extend the allowance allocation period for retired units in any federal plan that may be implemented for affected EGUs in a state. As discussed, continued allocations will drive lower cost compliance and are entirely consistent with EPA's BSER. First, as EPA notes, continued allocations incentivize retirements—and the attendant reductions in emissions—

[38] Modified and reconstructed units also have the potential to reduce emissions. Any reference to "retired units" encompasses modified and reconstructed units that leave the section 111(d) program and become subject to section 111(b). For a discussion of EPA's proposed interpretation of the status of these units, which EEI supports, *see* section VIII, *infra*.

because units do not need to keep running in order to receive allowances. *See id*. at 65,026. EPA's BSER is predicated on replacing existing fossil generation with lower or non-emitting generation. *See id*. at 64,728-29. Given the low levels of expected demand growth, retirements offer a significant opportunity to make the generation shifts that EPA envisions. However, because of the interconnected nature of the grid and power markets, the reductions associated with a unit's closure may not manifest in the state in which the unit was located. Accordingly, continued allocations provide the liquidity needed to ameliorate any impediments to unit closures that this might create. Second, as noted above, continued allocations to retired units would allow the owners and operators of those units to invest in additional reductions at lower cost. EPA asserts that "non-operating units are no longer emitting and no longer need allowances." *Id*. While this may be true, a narrow approach as to whom "needs" allowances for compliance is not consistent with EPA's approach to BSER, which places emission reduction obligations not only on affected units, but their owners and operators.[39] Finally, allocating allowances to retired units is consistent with other CAA trading programs, such as the ARP, which provided "permanent" allowances to affected units.

The emission reduction benefits of retirements are not limited to units that retire after the start of the interim compliance period. If units considered in EPA's 2012 baseline retire before the start of the interim compliance period, these units also should receive allowances. In fact, as EPA notes, these early reductions are more beneficial to the achievement of larger emissions goals than those that come later. *See id*. at 64,890. Accordingly, EPA should not arbitrarily deny allowances to units that retire before the start of the interim compliance period. Again, the final

[39] For these reasons, EPA also should continue to allocate allowances to units, if any, in long-term cold storage.

model trading rules should make clear that EPA will respect state decisions to allocate allowances to retired units, even those that retire prior to the start of the interim compliance period.

EPA proposes to re-allocate the allowances that would have been given to retired units to the RE set-aside, but, as noted, is taking comment on other alternatives, including allocating these allowances to the OBA set-aside or to remaining affected units on a pro rata basis. All three of these options would produce outcomes that make them less attractive than continued allocations to affected units. Permanent allocations are the better approach; if EPA chooses not to extend the allocation period for retired units subject to a federal plan, EPA should consider a longer allocation period, beyond the two years proposed. Once the allocation period ends, the allowances should be reallocated within the state to remaining affected units and not the RE or OBA set-asides.

Allocating these allowances to the RE set-aside may decrease the cost of renewable generation, but it will increase the cost of compliance for affected units and their owners. Allowances in the RE set-aside will have to be acquired by affected units, at the prevailing market prices, in order to be used for compliance. Moreover, RE projects that receive these allowances do not need them for compliance (and benefit from any increases in wholesale power prices related to allowances prices) and could withhold them from the market, functionally increasing the stringency of EPA's BSER and the resulting state goals. Even if they do not withhold allowances from the market, RE projects that hold allowances are not limited in their ability to trade, which means that allowances initially allocated to affected units in one state may be sold out of state by RE projects.[40] While this may decrease compliance costs for affected units in other states, it could increase costs in the state in which the retired unit is located. Finally, EPA states that one value of the proposed approach is that it "allows the RE set-asides" to grow over time, *see id*. at 65,026, but has not explained why an increasingly large RE set-aside is necessary or required given that RE projects are not affected units and many models indicate that RE already is projected to grow even without the set-aside.

Allocating allowances from retired units to the OBA set-aside also is problematic. First, output-based allocations increase compliance costs by lowering the marginal cost of production for certain units, which discourages conservation and substitution to lesser emitting alternative sources of generation. This, generally, increases compliance costs for the system as a whole.[41] Second, the recipients of the OBA set-aside allowances may have no relationship to the unit that retired. This is inequitable, as the benefits of the decision to retire would accrue to a different affected unit and its owners. In this way, the decision to limit allowances allocated to retired units is an extreme output-based set-aside, encouraging continued operation in order to retain allowances, rather than reduce emissions. This is contrary to the goals of the final emission guidelines. Similarly, allocating the allowances from retired units to other affected units could serve to incent continued operations—depending on the relationship of the retired unit to other affected units in the state—foregoing the reductions associated with retirement. Again, because it is not assured that the recipient of the allowances would have any relationship with the unit

[40] RE projects that only participate in wholesale markets are not subject to regulation by state public utility commissions and would not be required to pass the benefits of allowance allocations on to retail customers.

[41] *See* Hahn and Stavins, *supra*, n.35.

owners/operators that made the decision to retire, allocation to other affected units creates both inequities and incentives to continue to operate.

E. EPA's Proposed Alternative Compliance Option for Units that Retire Should Be an Option for Compliance

In a TSD that accompanies the proposed federal plan, EPA sets out an alternative pathway for retired units. *See* Alternative Compliance Options TSD. This alternative is available under a mass-based plan. *See* TSD at 1. However, EPA is taking comment on an approach whereby a unit in a rate-based program could utilize this alternative approach by converting to a mass-based system for compliance. *See* TSD at 4. EPA is also taking comment on whether this option should be limited to smaller units (less than 100 MW nameplate capacity). *See* TSD at 3-4.

Under this alternative pathway, a unit that expects to retire during the interim compliance period could be opted out of the state's compliance plan. The total number of allowances that would have been allocated to that unit over the course of the interim compliance period would be deducted from the state's total allowance pool and "given" to the unit. The unit would not receive actual allowances, but in exchange for an enforceable commitment to shutdown prior to 2030, the EGU could emit an amount equal to its budget for the entire interim period with no annual or step period limits on emissions. This could allow the unit to run for several years at 2012 levels before shutting down. However, the unit would not participate in any trading program and could not transfer any excess allowances to other affected EGUs. *See, generally*, TSD at 2-4.

EPA has provided no rationale for reserving this approach for smaller units, other than non-specific concerns about the potential impacts on ERC markets. If it is assumed that most of the units that would opt for this alternative pathway are coal-based units, it is not clear how much of an impact on the ERC market this would have, given that coal-based units are not likely to be large generators of ERCs.

Further, in the regional haze context, EPA has allowed and approved state implementation plans (SIP) that rely on early coal plant retirement commitments to define a state's regional haze Best Available Retrofit Technology (BART) and reasonable progress compliance glide paths, so long as the retirements occur before a benchmark date and are legally enforceable:

- In considering Washington State's regional haze SIP, EPA accepted a revised BART compliance option using a staggered decommissioning schedule that was required under unrelated state laws limiting GHG emissions.[42]

- EPA approved an Oregon regional haze SIP that set a revised BART emissions limit based on a voluntary, operator-set, enforceable retirement date.[43]

- In Colorado and Nevada, the legislatures either defined a specific goal for retiring coal-fired power plants in statute or directed their state environmental agencies and utility commissions to develop a comprehensive plan and schedule for retiring different coal units. EPA approved each state's SIP.[44]

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[42] *See Approval and Promulgation of Washington Regional Haze State Implementation Plan*, 77 *Fed. Reg*. 30,470 (May 23, 2012).

[43] *See Approval and Promulgation of Oregon Regional Haze State Implementation Plan*, 76 *Fed. Reg*. 38,997, 38,999 (July 5, 2011).

[44] *See Approval and Promulgation of Colorado Regional Haze State Implementation Plan*, 77 *Fed. Reg*. 76,871, 76,875 (Dec. 31, 2012); and *Approval and Promulgation of Air Quality Implementation Plans; Nevada; Regional Haze Federal Implementation Plan; Extension of BART Compliance Date for Reid Gardner Generating Station*, 78 *Fed. Reg*. 53,033, 53,036 (Aug. 28, 2013).

- Finally, EPA approved a Revised BART emission limit in a Wyoming regional haze SIP based on an early retirement date that corresponded with the end of the facility's depreciable life as determined by and made enforceable by the owner's economic regulator, the Wyoming Public Service Commission.[45]

Consistent with these precedents, units that want to pursue the proposed alternative pathway should be able to do so, regardless of size. Similarly, EPA also should allow a retiring unit in a rate-based program to utilize this alternative approach by converting to a mass-based system for compliance.

To increase the utility and equity of this approach, EPA should provide a description of the mechanics of how to calculate the number of allowances to which the retiring EGU may be entitled. EPA also should clarify how the retiring units would demonstrate compliance, whether emissions could be averaged over the multiple years leading up the retirement date and whether the limit could be converted into a title V operating-hours limitation. Finally, EPA should address whether these units could buy additional allowances in the market.

F. EPA's Approach to Leakage Raises Legal and Policy Concerns; EPA's Proposed Set-Asides to Address Leakage in a Federal Mass-Based Plan Limit State Flexibility and Could Increase Compliance Costs

The final emission guidelines contains provisions requiring mass-based state compliance plans to address an issue that EPA calls "leakage." *See* 80 *Fed. Reg*. at 64,822-23. EPA is concerned that, by establishing standards of performance for *existing* EGUs but not equivalent standards for *new* fossil fuel-fired EGUs, the final guidelines will encourage generation to shift from existing EGUs to new EGUs in a way that would increase total emissions from the power sector in a

[45] *See Approval and Promulgation of Wyoming Regional Haze State Implementation Plan*, 79 *Fed. Reg*. 5,032, 5,165 (Jan. 30, 2014).

state. *See id*. at 64,822. However, EPA lacks authority under section 111(d) to directly require new EGUs to be subject to the regulatory program for existing EGUs. EPA's general approach to leakage and the options for addressing leakage raise policy and legal concerns. Further, EPA has not demonstrated that the specific approach to addressing leakage in a federal mass-based plan is designed to address the actual potential for leakage in a particular state.

1. EPA's General Approach to Leakage Raises Policy and Legal Issues

As an initial policy matter, EPA's approach to leakage focuses on the fact that EPA models theoretically predict that in a handful of states—but certainly not all states—compliance may be achieved by building new NGCCs and closing existing NGCCs,[46] but ignores the fact that the final emission guidelines would allow for the replacement of a closed existing nuclear unit with new NGCC units. Given the importance of existing nuclear units to the accomplishment of the required emission reductions and the variation among state generating portfolios, states should have as much flexibility as possible to use the tools available under the final emission guidelines to preserve their existing nuclear capacity, should they choose to do s.

As noted, EPA's approach to leakage also raises legal concerns. EPA acknowledges that it does not have the authority under CAA section 111(d) to regulate new units directly, which would be one way of addressing the theoretical problem of shifts in generation between existing units and new NGCCs. *See id*. at 65,019. Because EPA does not have the statutory authority to directly regulate *new* EGUs under section 111(d), the Agency attempts to identify a legal basis for requiring states to address this new unit leakage issue in their compliance plans—a concept EPA

[46] *See* Regulatory Impacts Analysis, chapter 3.

calls "equivalence." *See id*. at 64,820. EPA does not fully explain the contours of this equivalence concept, and it is not clear that EPA ultimately has the authority to address this issue or to require states to address leakage on the theory of "equivalence."

2. EPA's Proposed Set-Asides Are Not Tailored to Address the Potential for Leakage in a Particular State

Policy and legal concerns aside, EPA's approach to addressing leakage in the context of a mass-based federal plan includes the creation of allowance set-asides. These proposed set-asides limit state discretion in the re-allocation of allowances and drive up compliance costs. EPA has not demonstrated that addressing the theoretical problem of leakages justifies these real impacts on compliance. Further, EPA has not demonstrated that these set-asides are consistent with the Agency's authority under the CAA or are designed to address the actual potential for leakage in particular state.

EPA specified three means by which a mass-based state plan can address the new unit leakage issue in mass-based plans. *See id*. at 64,888. The first two are presumptively approvable means of doing so, while the third requires a demonstration from the state. *See id*.

Leakage Option 1: Regulation of New Units. First, states can elect to regulate new EGU emissions under *state* law, by requiring new units to participate in the same cap-and-trade program as existing units. To address the extra emissions from new units, EPA has provided a "new source complement"—that is, an amount of additional CO_2 emissions that are added to the state's mass-based goal—for states that elect to regulate new units under state law. *See id*.[47]

[47] States can also provide an alternative new source complement when submitting their plans; however, this would be subject to EPA approval on a case-by-case basis. *See* 80 *Fed. Reg*. at 64,889.

Leakage Option 2: Targeted Allocation. A second presumptively approvable means of addressing the new unit leakage issue is limited to mass-based state plans using a cap-and-trade compliance program only for existing units. Under this Option 2, the state would allocate emission allowances in such a way as to limit the economic incentive to shift generation (and therefore emissions) from existing affected units to new unaffected units. *See id*. at 64,889-90.[48]

Leakage Option 3: Other Approaches. EPA also provides a state the option to meet its obligation to mitigate new unit leakage by including a demonstration that new unit leakage is unlikely to occur under its proposed plan. See id. at 64,890. This demonstration must be supported by analysis and can be based either on the unique factual circumstances of the state or on implementation of state policies other than the Option 1 and Option 2 approaches that will mitigate incentives to shift generation from existing to new EGUs. EPA has not provided guidance on what will constitute a sufficient demonstration.

In the context of the proposed federal mass-based plan, EPA has proposed a presumptively approvable allocation methodology that the Agency will use to address leakage. *See id*. at 65,019-22. Under this proposal, EPA would set aside two pools of allowances: one for generation from new (post-2012) renewable energy resources (the RE set aside); and the other for generation from existing (pre-2014) natural gas combined cycle (NGCC) units (the output-based (OBA) set-aside). *See id*. Nationwide, these new unit leakage set-asides would comprise 9-11 percent of total allowances, depending on the compliance period. However, this masks significant state-by-state variation, with a range of 5-32 percent.[49] EPA asks for comment on whether these set-asides will counteract the potential incentives in a mass-based program to retire existing NGCC units and replace them with new NGCC units and whether they would incentivize new RE generation over new NGCC generation. *See id.* at 65,019.

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[48] The specifics of this approach are the subject of comments here and individually from members.

[49] Allowance Allocation Proposed Rule TSD at 5 (Aug. 2015), Docket No. EPA-HQ-OAR-2015-0199.

As a preliminary matter, these proposed set-asides will increase the costs of compliance without providing additional emissions benefits. This is exacerbated in some states where nearly one-third of the total allowances would be devoted to the set-asides, which also limits state flexibility.

EPA proposes a five percent RE set-aside, but is taking comment on whether to increase this set-aside to as much as 10 percent of a state's total allowance pool. *See id*. at 65,022. EPA proposes that the OBA set-aside would be equal to 10 percent of the state's NGCC capacity, but does not explain how the size of the OBA set-aside relates to the potential for leakage in any particular state. *See id*. at 65,021. If EPA includes the RE set-aside in the final federal mass-based plan, this set-aside should be no larger than EPA can demonstrate is needed to address leakage in that state successfully. Similarly, given that the potential for leakage is different across the various states, the size of the OBA calculated for each state should be limited to the amount that EPA can demonstrate is necessary to address this potential.

VI. Limited Changes to the Clean Energy Incentive Program Would Make It More Useful in Incentivizing Early Reductions from Renewable Energy and Low-Income End-Use Efficiency

In the final emission guidelines, EPA introduced a proposed Clean Energy Incentive Program designed to incentivize emission reductions from certain RE and low-income EE projects before the start of the mandatory reductions period in 2022. *See* 80 *Fed. Reg.* at 64,829. To encourage this early action, EPA would distribute 300 million federal credits to certain projects that begin operation after the submission of a final state plan (or September 6, 2018) and generate zero-emissions MWh or reduce end-use energy demand. *See id*. at 65,025.[50] While participation in the CEIP is optional for states, states that choose to participate must set aside allowances from their total emissions budget to provide matching credits to eligible projects. *See id.* In a rate-based plan, states would be required to assign ERCs to the CEIP. *See id*. These allowances and ERCs would be awarded to project developers for reductions achieved or generation avoided in 2020 or 2021. *See id*.

The state credits/allowances would be matched by the federal credits at different ratios. In the case of renewable generation, for every two MWh, the state will issue one early action ERC (or allowance) to the project, and EPA will issue a matching one ERC (or allowance) to the state to give to the project. *See id.* at 64,943. In the case of EE, for every two MWh, the state will issue two ERCs (or allowances) to the project and EPA will issue a matching two ERCs (or allowances) to the state to give to the project. *See id.*

The structure of the CEIP is open for comment in the context of the proposed federal plan; EPA is seeking comment how to implement the CEIP, particularly in the context of a federal plan. *See id*. at 64,830. Limited changes to the implementation of the CEIP in the context of state and federal plans would ensure that the objectives of the incentive program are achieved.

[50] In the final guidelines, EPA notes that the eligibility date for projects in states that submit compliance plans is the date the final plan is submitted. *See* 80 *Fed. Reg*. at 64,829.

A. The Crediting Period Should Be Extended to Ensure that All 300 Million Early Action Credits/Allowances Can Be Realized

The proposed 300 million federal early action incentive credits/allowances could be an important tool to promote the deployment of RE and low-income EE projects before the start of the compliance period in 2022. However, it is not clear that all 300 million credits/allowances could be earned in the two-year period provided in the final emission guidelines. EPA notes that the pool was determined by assessing the historic maximum RE project deployment and assuming a 30 percent capacity. *See id*. at 64,830. EPA applies this 30 percent capacity factor to all RE deployment in the historic maximum period, including distributed resources, *see id*., despite the fact that many RE projects do not achieve such high capacity factors. EPA did not assess the reductions that could be achieved by deploying EE projects in low-income communities. *See id*. It is likely that EPA has overestimated how many MWh could be generated by RE and displaced by EE in the two-year creditable period from 2020-2021.[51]

If EPA's goal is to incentivize the early deployment of eligible projects, the Agency should consider allowing these projects to earn credits as soon as they come on line and not just in the period 2020-2021. This will further incentivize early deployment, as projects would start earning credits sooner, but also would ensure that the entire federal matching pool is utilized.

[51] In comments filed in Docket No. EPA-HQ-OAR-2015-0734 on December 15, 2015, the American Wind Energy Association (AWEA) noted that more than 70 GW of renewable capacity would have to qualify for the CEIP and provide full output for all of 2020 and 2021 in order to earn 150 million short ton credits/allowances (or half of the CEIP credits/allowances). This far exceeds the total installed wind and solar capacity in the U.S. today. *See* AWEA comments at 8.

B. Projects Should Be Eligible to Earn CEIP Credits/Allowances if They Commence Construction or Operations after a State Submits its Initial Plan in 2016

In general, EPA ties the eligibility of an RE or EE projects to earn CEIP credits/allowances to the date that a state submits a final compliance plan or becomes subject to a federal plan. *See id*. at 64,830. This is intended to create an incentive for states to file final plans in 2016, so as to make projects eligible as soon as possible. However, this approach is not consistent with how EPA calculated the pool of federal credits, which assumes maximum RE deployment starting in 2017, *see id*., and is likely to leave RE and EE reductions unrealized as many states face barriers unrelated to a desire to implement the CEIP in submitting final plans by 2016. This approach to eligibility also is inconsistent with the fact that CEIP ERCs and allowances are fully transferrable. *See id*. Accordingly, these early action awards could be used for compliance by any EGU, regardless of when the state in which they are located submitted a final compliance plan. For these reasons, EPA should tie eligibility to earn early action credits/allowances to the date of state's initial plan submission, September 6, 2016,[52] assuming the state opts to participate in the CEIP.

As a preliminary matter, the four years between 2016 and 2020, the start of the CEIP crediting period, may not be sufficient to bring on the RE resources and implement the EE projects necessary to earn the full pool of federal matching credits. For example, it is not clear that EPA considered the amount of time it takes to build the transmission lines needed to bring new renewables to load centers. EPA notes that wind and solar projects "often require lead times of shorter duration, which would allow them to generate MWh beginning in 2020," *id*. at 64,831,

[52] This should be the date used to determine eligibility for states that either do not submit an initial plan or later become subject to a federal plan because a state plan has been disapproved.

but does not provide any analysis in support of this conclusion. As EEI noted in the 2014 Comments on the proposed emission guidelines, the average time to construct new transmissions lines, including siting and permitting, can take anywhere from five to 15 years. See 2014 Comments at 116-17. It also is not clear that EPA factored in the time it takes to pass the new state legislation that may be needed to implement new low-income EE projects and the time needed to actually begin achieving reductions under these new programs. If states are not able to submit final plans until 2018, this will make tight timetables even tighter.

Second, while EPA requires that eligible projects be located in or benefit the state in which they located, *see id*., EPA also declares that all CEIP credits/allowances are fully transferable, meaning that they can be used by any affected EGU for compliance. *See id*. If CEIP awards are fully transferable, then they can be used in any state, including those that submitted final compliance plans in 2016 and those that were unable to do so until 2018. As a result, it does not make sense to tie project eligibility to the date a state submitted a plan. It would be more reasonable and fair to set a consistent eligibility date and tie it to the date that all states are required to file an initial submittal in 2016. It is at this time that states are obligated to indicate if they intended to participate in the CEIP, so tying eligibility to this date is reasonable.

Finally, EPA's calculation of the size of the federal pool of credits assumes deployment starting in 2017. *See id*. at 64,830. In order to be able to fully realize the potential of the early action program, EPA should ensure that projects in all states that commence construction after September 2016 are eligible. Even if EPA moves this eligibility date uniformly forward, it will still be challenging to earn all of the possible CEIP early action credits/allowances. Accordingly, the eligibility date for any project to earn CEIP credits/allowances should be September 6, 2016. Consistent with a uniform eligibility date, EPA should provide a uniform definition for "commence construction" as RE projects have to "commence construction" after the eligibility date in order to be able to be awarded allowances and credits. *See* CEIP Memo at 2. The definition for commence construction, for purposes of the CEIP, should be that the owner or operator has all necessary preconstruction approvals or permits and has begun, or caused to begun, a continuous program of actual on-site construction of the source, to be completed within a reasonable time.

C. To Maximize the Number of Early Action Credits/Allowances that Could Be Earned, EPA Should Allow for Re-Allocation between States and Project Types

In the final guidelines, EPA proposes to implement the CEIP in ways that could limit the ultimate utility of the program in incentivizing early reductions from affected EGUs through the deployment of RE and low-income EE projects before the start of the mandatory compliance period in 2022. EPA should ensure that the maximum number of CEIP credits/allowances can be earned and used by affected EGUs for compliance.

EPA proposes to redistribute any unallocated matching credits/allowances among states that opted to participate in the CEIP. *See id*. at 64,830. Given that RE resources, in particular, are not uniformly distributed across the states, EPA should ensure that unallocated credits/allowances can be generated and used for compliance. Allowing projects in other states to be awarded credits/allowances will increase the number of reductions achieved. This will ensure that the CEIP succeeds in incentivizing as much early RE investment as possible. This helps all states, not just the ones in which eligible RE projects are located. Because early action credits/allowances are fully transferable, *see id*.,[53] they can benefit states that are not able to produce sufficient credits because they could be used by in-state affected EGUs for compliance. One way to achieve the maximum amount of early action under the CEIP is to put all unused credits/allowances back into a federal pool and then distribute them to projects on a first-come, first served basis, as suggested in the proposed federal plan. *See id*. at 65,001 and 65,025. The availability of early reductions is not location specific and the environmental benefits of these reductions are not localized. Maximizing early reductions, regardless of the location of the eligible project, is most consistent with the goals of the final guidelines and the CEIP.

Similarly, EPA proposes to divide the CEIP credits/allowances between low-income EE and RE projects, but did not specify the portion allotted to each type of project. *See id*. While the goal of promoting end-use efficiency in low-income communities is laudable, if it becomes clear that low-income EE projects cannot earn the full complement of credits/allowances allotted to those projects, EPA should consider making the remainder available to RE projects. The final model trading rules should make it clear that states can allow for such transfers between EE and RE in state plans, and EPA should consider such transfers in any federal plan that the Agency implements. Again, allowing unused credits/allowances to be distributed on a first-come, first served basis would be a reasonable way to ensure that all potential credits/allowances can be awarded and subsequently used for compliance.

[53] By "fully transferable," it is assumed that EPA means that CEIP credits/allowances can be traded regardless of whether the state in which the eligible project is located is a trading-ready state. It is also assumed that any EGU in any state could use the CEIP award for compliance. If this is not what EPA intends, the Agency should clarify this. A more restricted approach to CEIP eligibility would significantly undermine the goals of the early action program.

D. To Maximize the Number of Credits/Allowances Earned, EPA Should Consider Providing the Same Amount to Both RE and Low-Income EE Projects

As noted, EPA proposes to credit eligible RE and low-income EE projects differently, awarding EE projects double credits/allowances per MWh saved, but only awarding RE projects one credit/allowance per MWh generated. *See id*. at 64,830. While not explicit, it appears that the larger credits for low-income EE, the savings from which are equal to the emissions benefits of reduced generation from affected units achieved by increased deployment of RE projects, are intended to address barriers to demand-side EE programs in low-income communities. *See id*. at 64,831. Overcoming barriers to EE in low-income communities is an important goal, but it is not clear that the differential incentive between these projects and RE projects will achieve this goal. In general, the companies and developers that bring new RE projects to market are not the same entities that invest in EE projects. A larger incentive will not, therefore, cause these entities to choose low-income EE projects over RE projects.

As noted, it may not be possible for eligible RE and EE projects to earn all 300 million tons of credits/allowances in the limited period allotted. Accordingly, EPA may want to consider offering the same double incentive for both RE and EE projects to ensure that the maximum number of credits/allowances may be earned and the maximum amount of early reductions achieved.

E. States May Be Best Positioned to Determine Eligibility for Early Action Credit/Allowances and How to Divide These Between RE and Low-Income EE Projects

EPA provides eligibility requirements for the projects that could qualify for the RE and low-income EE CEIP credits/allowances. These requirements limit eligibility to utility-scale wind and solar projects and low-income EE projects. *See id*. at 64,830. While there may be value to having consistent eligibility requirements across state projects, in terms of the ease of implementing the CEIP, the incentive program may be more likely to achieve its goals if states are allowed to define their own eligibility requirements. For states that choose to submit their own plans, EPA should consider allowing them to determine which projects could receive early action awards.

As a preliminary matter, it is important that EPA recognized the benefits of utility-scale wind and solar projects, which provide more emission reductions at lesser cost than other RE projects.[54] However, not all states have the same wind and solar potential, a fact that EPA considered when setting the final subcategorized emission performance rates when it assessed RE potential on a regional basis. *See id*. at 64,738. Some states, with lesser wind and solar potential, may want to recognize and incentivize other types of RE generation that are available in state as part of their implementation of the CEIP. Similarly, how "low-income" is defined varies across the states. A one-size-fits-all approach may render some low-income communities in some states ineligible. It may be more appropriate, therefore, to let states determine how to

[54] *See, e.g.*, Bruce Tsuchida *et al*., *Comparative Generation Costs of Utility-Scale and Residential-Scale PV in Xcel Energy Colorado's Service Area*, Brattle Group (July 2015), http://brattle.com/system/publications/pdfs/000/005/188/original/Comparative_Generation_Costs_of_Utility-Scale_and_Residential Scale_PV_in_Xcel_Energy_Colorado%27s_Service_Area.pdf?1436797265.

define "low-income" within their own borders. Providing the flexibility to determine state-specific eligibility requirements for CEIP projects would be consistent with the authority to develop and implement compliance plans under CAA section 111(d).[55] Moreover, it would be more consistent with EPA's stated goals in establishing the CEIP, which are to "drive investments in RE and low-income EE that will result in actual early emission reductions from affected EGUs." *Id*. at 64,832.

In the context of the federal plan, EPA could use the eligibility requirements provided in the final guidelines, but also could opt to allow states to submit partial plans that identify state-specific eligibility requirements. This would be consistent with EPA's proposal to allow states that are subject to a federal plan to submit partial plans to re-allocate allowances. *See id*. at 65,014.

F. Under a Rate-Based Plan, Stringency is Not Affected by the Number of CEIP ERCs Generated and Therefore Need Not Be Addressed by EPA or States

In the final emission guidelines, EPA finds that a state that chooses to implement the CEIP as part of its compliance plan must demonstrate in the plan that there is a mechanism in place to ensure that issuing early action CEIP credits would have no impact in the aggregate emission performance of affected EGUs. *See id*. at 64,830. Similarly, in a federal rate-based plan, EPA proposes to design a mechanism to issue early action ERCs and notes that it will "have no impact on the aggregate emission performance of sources required to meet rate-based emission

[55] EPA could review state-specific eligibility requirements for consistency with the final emission guidelines and the CAA in the context of the plan review and approval process. For example, EPA could allow states to determine resource eligibility for the RE credits, but still require that these resources satisfy the requirements for ERC eligibility provided in 40 C.F.R. § 60.5800, *see* 80 *Fed. Reg.* at 64,950-51, and require that projects be deployed after plan submission.

performance standards during the compliance period." *Id*. at 65,000. EPA is taking comment on this mechanism, which, the Agency notes, could include adjusting the stringency of the emission standards during the compliance periods to account for the issuance of early action ERCs or retiring a number of ERCs in an amount equivalent to the number of early action ERCs that were awarded in 2020-2021. *See id*. at 65,000-01.

EPA has not explained why a mechanism is needed to ensure that the CEIP has no impact on the aggregate emission performance required of affected EGUs by the final emission guidelines. Under a rate-based plan, the stringency of the standards for any affected unit is a function of the carbon content of the fuel that the unit combusts to produce electricity and the number of MWh of electricity that are generated. Because there is no cap on the amount of generation that a unit could produce under a rate-based plan, the number of compliance instruments available—ERCs—does not affect the stringency of the standard that a unit has to achieve. The number of ERCs only influences the ease and cost of compliance, but has no impact on what a unit has to achieve in order to be compliant.

As EPA notes, the existence of the CEIP credits could improve liquidity in the early years of the program, *see id*. at 64,832, which could be particularly important under a rate-based plan, because ERCs are awarded retrospectively. This may have the important effect of reducing price risks in the first step period when there will be the least information about the size of the ERC pool available to affected EGUs. However, these potential reductions in risk have no effect on the stringency of the standard applied to any particular affected EGU: the number of ERCs that a unit would need to acquire for compliance would remain unchanged. Accordingly, neither states, nor EPA when implementing a federal plan, need to alter the stringency of the standards applied to units during the compliance periods or retire other ERCs that are earned during the compliance periods in order to ensure the environmental integrity of the emission guidelines in light of the CEIP. It also is not necessary to retire other ERCs equal to the number of CEIP ERCs issued.

In fact, if states or EPA do alter the standards applied to affected EGUs or retire ERCs to address perceived, but unsubstantiated concerns that the CEIP impacts the stringency of the emission guidelines, this functionally will change BSER for these units, in violation of what EPA has deemed achievable. In light of this, states that adopt rate-based plans may opt not to participate in the CEIP, which would be contrary to the goals of the early action program. The final model trading rules should make it clear that no showing is required that stringency of the emission guidelines is unaffected by participation in the CEIP because, by definition, it is.

G. Under a Mass-Based Plan, Requiring States to Match the Federal CEIP Allowances Limits State Flexibility in Allocating Allowances and Could Increase Costs for Affected Units

Under a mass-based plan, states would implement the CEIP by setting aside a portion of its allowances for eligible projects that generated zero-emissions MWh or MWh savings in 2020-2021. Similarly, EPA would set aside these allowances if implementing a federal mass-based plan for any states. *See id*. at 65,025. States subject to a federal plan that later choose to submit their own re-allocation of allowances must participate in the CEIP and must set aside allowances for the program. *Id*. at 65,026.[56] Under a mass-based plan, therefore, there are two types of early action allowances: those EPA requires that the state issue and those that EPA will issue. Participation in the CEIP is optional, but no federal credits will be awarded unless a state agrees to set-aside a certain portion of its allowances for early action. *See id*. at 64,829.

The CEIP recognizes the value, both from an emission reduction perspective and from a compliance cost perspective, of early reductions. However, requiring states to set aside allowances for the CEIP limits state flexibility in the allocation of allowances and may serve to needlessly increase the direct costs of the programs for affected units. In recognition of the importance of early reductions, the importance of maintaining state flexibility to allocate allowances to address state-specific concerns and the need to respect EPA's BSER determination and the standards that flow from that determination, EPA should not require that state set aside allowances for the CEIP in order to participate in the CEIP.

In the context of a federal mass-based plan, EPA would set aside 100 million early action allowances from each of the three years in the first interim step period. *See id*. at 65,025. This reduces the pool of allowances that each state has to allocate to affected units, or for other purposes, in that first period. This reduces the number of allowances that states have to allocate as they wish, which limits state discretion under section 111(d) as recognized by EPA. Further, because these allowances are freely transferable, this forced set aside has the potential to increase the direct cost of the reductions goals with which the affected units have to comply. Any project receiving CEIP allowances could sell them to anyone in the market in any state, potentially

[56] EPA notes that states can choose the size of their CEIP set-aside and need not match the number of allowances EPA proposes to set aside for each state. *See* 80 *Fed. Reg*. at 65,026.

reducing the supply available for in-state resources and increasing the costs on electricity customers in the state losing the allowance.[57] Under the federal mass-based plan, EPA proposes to allocate the bulk of the allowances to affected units. The CEIP set-aside will serve to reduce the number of allowances initially allocated to these units for compliance. Moreover, because CEIP allowances could be freely transferred out of state—or not sold at all during certain compliance periods if recipients choose to bank allowances or otherwise withhold them from the market—this increases the direct cost of EPA's BSER for affected units in states that implement the CEIP. This would increase direct compliance costs and costs to electricity customers.[58] The CEIP should not be implemented in such a way that increases compliance costs. This is inconsistent with the overarching goals of the early action program. States, therefore, should not be required to set aside allowances in order for eligible projects to earn the federal matching credit.

VII. Proposed Changes to the Section 111(d) Implementing Regulations

EPA has proposed several amendments to the general process for state plans under CAA section 111. *See* 80 *Fed. Reg.* at 65,034. These amendments would change the framework regulations for any future CAA rules under section 111(d), not just those related to the final emission guidelines for existing EGUs. *See id*. at 65,038. EPA proposes six specific changes to the framework regulations:

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[57] Because EPA proposes to allocate CEIP federal matching allowances such that states with the greater reductions obligation will be eligible for a larger portion of the federal pool of CEIP allowances, *see* 80 *Fed. Reg*. at 65,025, the matching state set-aside has the potential to take a larger number of allowances away from affected EGUs that need them the most.

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1. Partial approval/disapproval mechanisms similar to CAA section 110(k)(3) for submitted state plans;

2. Conditional approval mechanisms similar to CAA section 110(k)(4) for submitted state plans that cannot yet be deemed complete;

3. A "SIP-call" like mechanism similar to CAA section 110(k)(5), which would allow EPA to call for revisions to state compliance plans in certain circumstances;

4. Error correction authority similar to CAA section 110(k)(6), which would allow EPA to revise its own actions with respect to state compliance plans;

5. Completeness criteria and a process for determining the completeness of state plans and submittals, and deadlines for EPA action, similar to CAA section 110(k)(1) and (2); and

6. Updates to the deadlines for EPA action on state plan submittals providing for several additional months for EPA review.

See id. at 65,034-38.

EPA states that these proposed changes introduce more flexible procedural tools borrowed from the 1990 CAA amendments to section 110 into section 111 than were available to EPA when the framework regulations were initially promulgated in 1975. *See id.* at 65,035. These tools were designed to address attainment and maintenance of National Ambient Air Quality Standards (NAAQS). EPA asserts that bringing these tools into the section 111(d) program "will streamline the state plan review and approval process, be more respectful of state processes, and generally enhance the administration of the CAA section 111(d) program." *Id*. at 65,034. To the extent that the proposed amendments to the framework regulations are designed to achieve these goals, making such changes is reasonable. All of the proposed changes to the section 111(d) framework regulations, however, do not meet this test.

A. Providing for Partial and Conditional Approvals, Including Completeness Criteria and Updating the Deadlines for EPA Action are Appropriate and Reasonable Changes to Make to the Generic Section 111(d) Implementing Regulations

Providing for partial and conditional approvals, including completeness criteria and updating the deadlines for EPA action on state plan submittals and the promulgation of a federal plan are reasonable amendments to make to the section 111(d) implementing regulations. In particular, partial and conditional approvals are appropriate because they recognize and respect the role of the states in the development and implementation of compliance plans under section 111(d). As EPA noted, partial approvals will "enable the EPA to approve a state to implement as much of its program as is consistent with a CAA section 111(d) guideline and may reduce the scope of any federal plan that would be necessary." 80 *Fed. Reg*. at 65,035.

In general, including completeness criteria is appropriate because it helps states understand what is required in order to start the review process for approvable compliance plans. However, EPA should not use the completeness criteria as a mechanism to impose federal plans. While states have an obligation to provide complete plans for review, EPA should provide states the opportunity to cure any defects within a reasonable amount of time. In the proposal, EPA notes that states that fail to meet the minimum criteria are deemed to have not made a submission. *See id*. at 65,037. EPA further notes that "the agency *may* return the plan to the state and request corrections, identifying the components that are absent or insufficient to allow the EPA to perform a review of the plan." *Id*. (emphasis added). Before determining that an incomplete plan should be treated as a failure to submit, EPA should provide the states notice of any defect and a reasonable amount of time to submit a complete plan.

Consistent with the longer timeframes provided in the final section 111(d) emissions guidelines for affected EGUs, it is appropriate to modify the EPA action deadlines in the generic implementing regulations as proposed. *See id*. at 65,038.

B. If Finalized, EPA Should Clarify that the Agency Will Not Use the Proposed SIP-Call and Error Correction Tools to Undermine the Certainty Provided to Affected Units Regulated under Section 111(d)

Some of the proposed amendments to the framework regulations may not be necessary or reasonable, particularly with respect to the final emissions guidelines for existing EGUs. CAA section 111(d)(1) provides that EPA "shall establish a procedure *similar* to that provided by CAA section [110] of this title under which each state shall submit to the Administrator a [111(d)] plan…" 42 U.S.C. § 7411(d)(1)(emphasis added). While EPA acknowledges that section 111(d) procedures need not be identical to the section 110 procedures, *see* 80 *Fed. Reg*. at 65,034-45, the Agency has proposed to import wholesale several provisions of the section 110 procedures without recognizing the differences between the two regulatory regimes.[59] Further, the potential use of these tools creates confusion and undermines regulatory certainty. Because it is not clear how some of these tools will streamline administration of the section 111(d) program or respect state processes, EPA should not include them in the generic section 111(d) implementing regulations. If EPA chooses to include these tools in the generic regulations, EPA should clarify how these tools will be used in ways that are consistent with standards for affected sources categories regulated under section 111(d). At minimum, EPA should explain how these

[59] In discussing the Agency's authority to issue a federal plan under section 111(d), EPA states that this authority "of course[] must be understood in reference to the purpose of that section (*i.e*., to achieve emission reductions for designated pollutants from designated facilities), rather than in reference to the purpose of CAA section 110 (*i.e*., to attain and maintain the NAAQS)" but then does not explain how the different purposes of section 111(d) regulations require the full suite of tools under section 111(k) in light of these differences. *Id*. at 64,986-87.

tools will be used in the context of the final guidelines for existing EGUs. In particular, EPA should clarify that the proposed section 111(d) SIP Call and error correction provisions will not be used to change the reductions goals and timetables included in the final guidelines.

The implementing tools available in CAA section 110(k) are specifically designed to help states and the Agency in the implementation of programs to attain and maintain NAAQS through a wide array of control programs and strategies tied to the attainment status of monitors in specific geographic areas. *See* 42 U.S.C. § 7410. These implementation tools are specific to a wide-ranging state implementation plan process for addressing nonattainment that necessitates control strategies from numerous separate sectors. *See id.* In general, when states promulgate plans under section 110, they are projecting that the mix of measures included in the plan, when implemented, will result in the attainment or the maintenance of the relevant NAAQS, but the exact outcome is not yet known. For this reason, tools that allow for EPA to require the revision of these state implementation plans are necessary to ensure that the reductions projected come to fruition.

In contrast, CAA section 111(d) requires states to define emission performance standards for a specific subcategory of affected sources based on the emission guidelines that reflect EPA's BSER determination. *See* 42 U.S.C. § 7411(d)(1). Compliance is measured in terms of affected unit performance, not against an air quality standard. *See id.* Indeed, in the context of the emission guidelines for existing EGUs, EPA has declared that states adopting certain plan designs need not make any additional showing that the state goals will be achieved because imposing the emission rates on the affected units will achieve the goals. *See* 80 *Fed. Reg*. at

64,833; *see also id*. at 64,845 (stating that the majority of plan designs "do not require a projection of CO_2 emission performance by affected EGUs under the state plan because they ensure that the CO_2 emission performance rates or state rate-based or mass-based CO_2 goals are achieved when affected EGUs comply with the emission standards"). Accordingly, it is not clear that it is appropriate or necessary for EPA to import the CAA section 110(k) tools designed to ensure that the projected performance of a plan is achieved in practice. Further, it is not clear hat EPA has the statutory authority to issue a SIP Call under section 111(d), as this section of the Act only describes EPA's authority to implement a federal plan in instances in which states have failed to file approvable state plans.

EPA notes that the Agency needs a tool to call for plan revisions similar to the section 111(d) state plans similar to the SIP Call authority provided by section 110(k)(5). *See* 80 *Fed. Reg*. at 65,035. However, nothing in EPA's discussion of the need to include such a tool in section 111(d) recognizes the very different regulatory structure provided under section 111(d). For example, EPA notes that "[i]t is possible that design assumptions about the effect of control measures the states incorporate into their plans could provide inaccurate in retrospect and could result over time in the plan not meeting the emission reductions required by the [emission guidelines]." *Id.*[60] EPA also notes that this tool would be needed anytime that a state is not enforcing its plan. *See id*. at 65,036.

[60] A limited number of plan designs require a projection of emission performance. *See* 80 *Fed. Reg*. at 64,845. For these plans, EPA requires annual emission reports called "performance checks." If these performance checks indicate that states are not achieving their goals or are not on track to meet these goals, states must implement corrective action measures. *See id*. at 64,866-67. Accordingly, additional tools to ensure that the state goals are achieved or that state plans are revised to address performance concerns are not required.

In the context of the emission guidelines for affected EGUs, which require that units meet a specific emission performance standard, it is not clear when "design assumptions" included in state plans would ever result in lesser emission performance when EPA has declared that the emission rates it is set will achieve the state goals. It is also unclear how plan revisions would address situations in which states were not enforcing the emission limits incorporated into affected units' title V permits. Put another way, if compliance is measured at the unit level, in the event that a plan is not performing as expected or that a state is not enforcing the emission limits imposed on affected units, the most appropriate next step is EPA enforcement of the unit-level emission standards, not plan revision. Given that unit-specific enforcement is comparatively more focused and less complicated than state plan revision, EPA has not explained why the Agency would choose to revise an entire state plan instead of seek enforcement against units that are underperforming. Accordingly, it is not clear what purpose that a SIP Call-like tool would serve in the context of a section 111(d) plan, given that section 111(d) sets unit-specific standards that can be enforced and not general air quality goals, and EPA has not explained how such tool would be used.

EPA hints, however, that this tool may be used to change plan requirements and unit-specific standards during the implementation period of any emission guidelines. EPA notes that the Agency would be able to call for plan revisions if were determined that the plan was "substantially inadequate" to achieve the reductions required under the emission guidelines or otherwise comply with the CAA. *See id*. at 65,036. EPA notes that this may be particularly important given the 15-year interim period provided in the emission guidelines for existing EGUs. *See id*. at 65,035-36. If EPA has approved a state plan under section 111(d), it is not clear how it would become “substantially inadequate” over the course of the implementation period, unless EPA is changing the goals or timetables set forth in the emission guidelines. Again, unlike a section 110 state implementation plan which projects how measures could result in attainment or maintenance of a NAAQS, a section 111(d) plan provides emission standards for units. Units either comply or do not comply with these standards. As long as these standards are being achieved, state plans would be in compliance with the emission guidelines. Accordingly, with the inclusion of a SIP Call-like tool, EPA must be signaling that it may change the requirements of the emission guidelines before 2030.

This undermines the regulatory certainty that EPA stated it wanted to provide affected EGUs by finalizing the emission guidelines, which require substantial reductions, but recognize the time and investment needed to achieve them. Well before the start of the interim period in 2022, affected EGUs and states will make significant investments in time and resources to comply with the emission guidelines. EPA should not undermine, and potentially render stranded, these substantial new investments by changing the requirements of the final emission guidelines during the interim period.

EPA has not adequately explained why a SIP Call-like mechanism is required in section 111(d) in light of the very different regulatory regime set forth in this section of the CAA than the one the section 110 SIP Call is designed to address. Therefore, EPA should not include such a tool in the 111(d) implementing regulations. If EPA chooses to include this tool in the generic implementing regulations, the Agency should clarify that it will not use this mechanism to call for a plan revision if a state is in fact meeting its targets as described in the existing source guidelines and will not use the SIP Call to change these targets. While EEI is not taking a position, at this time, as to EPA's ultimate authority to revise the section 111(d) emission guidelines, if the Agency seeks to make such revisions, it cannot be via a SIP Call. At minimum, the Agency would have to provide notice and an opportunity for interested stakeholders, especially affected EGUs, to comment on any such proposed revisions.

Further, EPA must clarify that it will not use the proposed "error correction" authority to implement changes in policy and approach embodied in the emission guidelines. EPA's error correction authority is carefully circumscribed, so that it is limited to three specific circumstances: (1) when the State is subject to a federally promulgated plan, (2) when EPA has incorrectly approved a state plan, and (3) when EPA has incorrectly disapproved a state plan. *See* 42 U.S.C. § 7410(k)(6) (giving Administrator authority to correct her "action approving, disapproving, or promulgating any plan or plan revision"). As these limits show, EPA's authority under the error correction provision is limited to correcting errors in its *own* actions. It may not use the error correction provision to revise substantive provisions of State's implementation plan by retroactively deeming an appropriate approval to have been in error. This is consistent with the cooperative federalism framework Congress established for implementing the CAA. This also would undermine the regulatory certainty provided in the final emission guidelines.

VIII. Proposed Interpretation Regarding Existing Sources that Modify or Reconstruct

In the proposed section 111(d) emission guidelines, EPA forwarded an approach to the treatment of existing EGUs that undertook modification or reconstruction: Even if these existing EGUs met the definition of "new source" provided in CAA section 111(a) and EPA's implementing regulations, EPA would continue to consider them to be subject to state plans for existing units subject to regulation under section 111(d). That is, once an EGU was subject to a 111(d) plan, it would always be subject to that plan, even if it later became subject to regulation under section 111(b). *See Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 *Fed. Reg*. 34,830, 34,903-4 (June 18, 2014).

EPA now has opted for a different approach to the treatment of units that modify or reconstruct. This new interpretation finds that "the statute prevents new, modified, or reconstructed sources…from simultaneously being subject to state plans under those particular CAA section 111(d) [emission guidelines]." *See* 80 *Fed. Reg*. at 65,039. EPA requests comment on this alternative approach in the context of the proposed federal plan. *See id*. at 65,038-39.

This new interpretation is consistent with comments that EEI filed in response to the proposed 111(b) regulations for modified and reconstructed units in 2014.[61] In the 2014 Comments, EEI noted that EPA's proposed interpretation departed from clear statutory language and congressional intent by finding that some EGUs could be subject to regulations under sections 111(b) and (d) at the same time. Specifically, the 2014 Comments noted that

> The CAA includes clear and unambiguous definitions for the types of sources subject to regulation under the different section 111 programs. A "new source" is clearly defined as "any stationary source, the construction

[61] On October 16, 2014, EEI filed comments in Docket No. EPA-HQ-OAR-2013-0603 in response to EPA's proposed *Standards of Performance for Carbon Dioxide Emissions from Modified and Reconstructed Stationary Sources: Electric Utility Generating Units*, 79 *Fed. Reg*. 34,960 (June 18, 2014) (2014 Comments).

> or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source." *See* CAA section 111(a)(2). Once an existing source is modified, it becomes a "new source" by virtue of the language in CAA section 111(a)(1) which deems modified sources to be "new sources." Under EPA's own longstanding regulations, the same would ordinarily be true of any reconstructed source. *See* 79 *Fed. Reg.*34,963 & n.8 (citing 40 C.F.R. part 60 subpart A). An "existing source" also is equally clearly defined as "any stationary source *other than a new source.*" CAA section 111(a)(6) (emphasis added). The statutory definitions make clear that a source can be either a new source or an existing source, but not both. EPA's assertion that sources subject to this regulation are both new *and* existing simultaneously for regulatory purposes is contrary to the plain terms of the statute. This is a novel and unprecedented reading of the Act. EPA does not cite—nor can it cite—any similar interpretation in support of this position despite 40 years of implementing section 111 and applying performance standards to a variety of sources.
>
> Further, EPA's approach is inconsistent with Congress' intent as embodied in the differing regulatory regimes that it created for new and modified sources under section 111(b) and the approach to existing sources under section 111(d). Under section 111(b), units are subject to EPA-determined command-and-control regulations; but under section 111(d) existing sources are subject to more flexible and state-determined regulations that can recognize and accommodate the remaining useful life of units. Thus, the reading that section 111 unambiguously requires *separate* standards for both new and existing sources by creating two distinct and mutually exclusive categories is the only possible interpretation of the definitions included by Congress

2014 Comments at 28-29.

EEI also noted that EPA's stated concern—that units would attempt to modify or reconstruct so that they would no longer be regulated under state 111(d) compliance plans—was not a sufficient basis for taking a legally tenuous position and was, in general, unlikely:

> As EPA has noted, the sources covered by this rulemaking are an undefined—but admittedly small minority—of the sources regulated under section 111. *See* 79 *Fed. Reg.* at 34,964 (noting that EPA expects "that the modification and reconstruction standards of performance…will apply to few sources"). It is not necessary or reasonable to take the position that units can be regulated under both section 111(b) and (d) simultaneously to address what is likely a theoretical problem

2014 Comments at 29.

In the proposed federal plan, EPA notes that the initial interpretation was intended to address concerns about incentivizing units to move out from the 111(d) program, but also to address concerns that units moving between the two regulatory programs "could prove disruptive to the state plan." 80 *Fed. Reg*. at 65,039. EPA now states that these concerns are being addressed in others in the final 111(d) guidelines and the proposed federal plan. *See id*. While units moving between the two regulatory programs could be "disruptive" to the extent that unit owners and operators and state regulators may have to take some action to address these changes, these changes in no way would harm affected units' and states' ability to comply with the requirements of the section 111(d) guidelines. Further, a state has the authority to choose to require the continued regulation of units that modify or reconstruct under that state's 111(d) compliance plan to address any disruption concerns, *see* 42 U.S.C. §7416, and could continue to allocate allowances to these units to facilitate implementation continuity. Given that states have ample tools to address plan disruption, should this become an actual concern after the modification or reconstruction of an affected EGU, EPA need not take a legally tenuous position on the proper interpretation of the clear statutory definitions for "new" and "existing" units provided in section 111(a). The approach articulated in the context of the proposed federal plan is appropriate and should be finalized.

Appendix A

Comments of the Edison Electric Institute on the Draft Evaluation Measure and Verification Guidance For Demand-Side Energy Efficiency

January 21, 2016

On August 15, 2015, the same day that the Administrator signed the final section 111(d) emission guidelines for greenhouse gas (GHG) emissions from the existing electric generating units, the Environmental Protection Agency (EPA or Agency) issued draft Evaluation Measurement and Verification (EM&V) Guidance for Demand-Side Energy Efficiency (EE). The purpose of this draft EM&V Guidance is to provide "supplemental information to help states and EE provides successfully implement the EM&V provisions in the emission guidelines and proposed model trading rule." Guidance at 1. EPA has solicited comment on the draft Guidance, as well as recommendations for improving the implementation of the EM&V requirements of the emission guidelines and proposed model trading rule. *See* Guidance at v.

The Edison Electric Institute (EEI) appreciates this opportunity to comment on the draft Guidance and to make suggestions to improve the Guidance. EEI is the association that represents all U.S. investor-owned electric companies, international affiliates and industry associates worldwide. Our members provide electricity for 220 million Americans, operate in all 50 states and the District of Columbia, and directly employ more than 500,000 workers. With more than $85 billion in annual capital expenditures, the electric power industry is responsible for millions of additional jobs. Reliable, affordable and sustainable electricity powers the economy and enhances the lives of all Americans. As the owners and operators of the affected units that are responsible for achieving the required GHG emission reductions, EEI members have a substantial interest in the proposed federal plan and model trading rules. EEI's member companies have long shown a commitment to EE programs and efficient use of electricity by their customers. In fact, in 2014 the electric power sector spent over $7 billion on EE programs.[62] Over the past eight years, U.S. customer-funded electric efficiency budgets nearly tripled, increasing from $2.7 billion in 2007 to $7.3 billion in 2014.

EEI members support the use of EE measures as a compliance option for states and affected units. EE measures have the potential in many states to facilitate compliance at a lesser cost. To facilitate the use of EE in compliance, EM&V guidance should be designed to help ensure the accuracy and reliability of energy savings estimates. The need to balance the accuracy of savings with the costs of evaluating EE programs or project investments is critical. EPA should not propose EM&V requirements or methodologies that are burdensome or restrictive and that do not provide additional certainty. In addition, EM&V guidance should not depart from

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[62] Edison Foundation Institute for Electric Innovation, Electric Utility Customer-Funded Energy Efficiency Savings, Expenditures, and Budgets (2014), (Dec. 2015), http://www.edisonfoundation.net/iei/Documents/IEI_2015USEnergyEfficiency_2014Exp_FINAL.pdf

industry norms, as this could undermine past successes, rendering EE as a compliance option less attractive.

EEI appreciates the opportunity to comment on the draft Guidance. In the draft Guidance, EPA seeks feedback on eight questions. *See* Guidance at v-vi. The discussion below addresses these questions. These comments are filed as part of EEI's comments on the proposed federal plan and will be separately submitted to the non-regulatory docket.

Q1) Does the guidance provide enough information to help EE providers determine what EM&V methods (i.e., project-based measurement and verification, comparison group methods, and deemed savings) to use for purposes of quantifying savings from specific EE programs, projects, and measures?

- The draft Guidance is currently written for those with previous EM&V experience and may be overly complicated for air regulators and others, who are new to or have relatively limited experience with EE EM&V, in states opting to use EE as a compliance option. EPA recently held a webinar on EE EM&V. In addition to efforts to make the Guidance more accessible to non-experts, EPA also should continue such outreach efforts. If state regulators do not understand the Guidance, they may be deterred from including EE in state compliance plans.

- Generally, the guidance needs more information and examples that address, but do not prescribe, the use of the three EM&V methods for specific EE programs, projects and measures.

Q2) Does the guidance include sufficient information about the appropriate circumstances and safeguards for the use of deemed savings values? For project-based measurement and verification and comparison group methods?

- The draft Guidance and proposed model trading rules are too prescriptive with respect to the frequency of updating deemed savings values, measure persistence studies and the level of statistical confidence and precision required for sampling.
    - Many states focus on first year savings for cost recovery and have not set aside resources, nor have received approval from relevant regulatory bodies, to engage in longitudinal research studies that may well last over a decade.
    - Large research expenditures on persistence studies and long-term measure life are infrequently done as part of program evaluation because of the high costs and inherent research challenges with long-lived measures. Program managers often make intelligent assumptions formed by experience on persistence and assign survival curves or degradation percentages to translate incremental savings into ongoing annual and cumulative savings values. While some industry standard survival rates have been published for common measures, the reality is that little empirical data exists for measure survival or savings persistence that catalogues the existence of the measure over time and whether the measure still saves energy. Requiring this step would impose cost and logistical challenges for both the state

and affected entities, along with EPA, when reviewing EM&V plans and monitoring and verification reports.

- The frequency of updating deemed savings values, effective useful lives (EULs) and related technical resource manuals (TRMs) should be based on state experiences, and EPA should defer to the states on the frequency of and methods for updates. To this end, a flow chart or other visual aids that show the connection between how studies that use M&V as a method for estimating savings may also serve as a basis for determining deemed savings values, and how these values feed into TRMs, would be helpful
- Utilities or other practitioners should not be excluded from participating in the development of deemed savings values. Section 2.4.2 advises that deemed savings values "are developed by independent, third parties and whenever possible, are based on empirical techniques such as PCTs and quasi-experimental design." Guidance at 17. The final guidance should clarify that utilities and other program administrators are encouraged to participate.
- Not all deemed values are based on previous year EM&V studies. Some are based on best available engineering data. The final guidance should recognize this and support all approaches of sufficient rigor.
- A 90/10 level of statistical confidence and precision requirement for a portfolio of programs, using a one- or two-tailed test, should be a recommended target where appropriate, not a mandate. Depending on the geographic range and sample size of a program, gathering enough data could be quite difficult and expensive in order to achieve this target. Similarly, discussion confidence and precision should include appropriate use of a one-tailed test consistent with guidance in the Uniform Methods Protocol. The final EM&V guidance should include information and case examples on how EE confidence/precision rates can be calculated at the measure, project, programs and portfolio level.

- Reporting Timeframes and Considerations
    - In section 2.3.2, EPA provides conflicting examples of industry practices for reporting annual electricity savings. In one instance, EPA suggests savings should be based pro rata on the day the efficiency measure was installed. EPA then indicates that, for state measures plans, savings should be reported as if they started accruing on January 1 of the reporting year and continued in the program for a full year (irrespective of which day the EE activity began saving energy). The latter approach best represents standard industry practices and should be accepted for both emission standards plans and state measures plans. Reporting savings in a pro rata manner is extremely difficult to track and is not common practice.
    - Rather than requiring the re-evaluation of measures that are installed and evaluated prior to the finalization of the EM&V guidance in 2016, EPA should allow the use of earlier evaluations for measures installed between December 31, 2012, and the year in which a state plan is submitted, so long as the EM&V meets these standards: ex-post evaluation, use of best practice protocols, an assessment of independent factors influence on energy use, EUL of the savings and identification of baseline electricity consumption. .

- “Look-backs” and retroactive adjustments should not be allowed, regardless of EM&V method used.
    - The “Example of Forward Adjustments to EE Savings” in Section 2.3.2 is not representative of common industry practice, nor would it be a best practice going forward. The provision to retrospectively update cumulative energy savings from prior year measures based on new information gained from routine and ongoing EM&V activities is flawed and will create confusion and market uncertainty with respect to the validity of emission rate credits (ERCs). In addition, technology is evolving. Retroactively adjusting energy savings from past measures based on more recent evaluations opens the door for adjustment errors as an “apples-to-apples” comparison of identical measures over time is highly unlikely and would present reporting burdens. Further, uncertainty regarding which savings from past measures will count places EE activities at a disadvantage during the development of state plans because it could be difficult to make such adjustments if an EE activity is disqualified after the fact, likely increasing the costs of compliance. All modifications to EM&V protocols and practices should be prospective and applicable as of a date certain in order to provide ERC market participants time to react to the new information.

Q3) Should the guidance specifically encourage greater use of comparison group approaches? Under what circumstances is the application of such empirical methods practical and cost-effective? Would additional guidance be useful on “top-down” econometric EM&V methods, and ways in which such methods can be used to verify savings at high level of aggregation?

- Final guidance should not encourage greater use of comparison group approaches. While it is a valid and useful method for estimating some EE program savings, the appropriate application of comparison group methods are limited and greater encouragement may lead to incorrect application of this method in place of a more appropriate, more accurate, and potentially less costly option. Moreover, non-participant research data can be difficult to develop or acquire due to customer privacy concerns.

- At this point in time, it is premature to recommend “top-down” econometric evaluation as a preferred approach because few studies have been done to date, indicating a lack of industry experience. In addition, data challenges abound as data needed to construct top-down models is not commonly maintained for the number of years needed to do an appropriate analysis.

Q4) Is the guidance in Section 3 on particular EE program types (consumer-funded EE programs, project-based EE, building energy codes, and appliance standards) helpful, clearly presented, and sufficient/complete? Can this guidance be reasonably implemented, considering data availability, cost-effectiveness, accuracy of results, and other factors?

- Building Energy Codes
  - The description of building energy codes in section 3.3 is both overly complicated and imprecise; clarity is needed in regards to how electricity savings related to code compliance enhancement programs and the adoption of new building energy codes are to be measured and quantified for purposes of creating ERCs.

Q 5) Is the guidance on important technical topics (e.g., common practice baseline, accuracy and reliability, verification) helpful, clearly presented, and sufficient/complete? Can this guidance be reasonably implemented, considering data availability, cost-effectiveness, accuracy of results, and other factors?

- Common Practice Baseline (CPB) Approach
  - The CPB concept will prove challenging for immediate acceptance and adoption as many states, utilities, implementers and regulators are unfamiliar with the concept.
  - Assessment of a CPB as proposed is replete with evaluation issues and challenges related to confidence, precision and systematic error that can and should be avoided.
  - While the CPB may work for single measure programs or programs with just a few measures, a CPB approach for comprehensive projects involving dozens of measures does not reflect current practices.
  - For early replacement programs, dual baseline approaches often come with complicated steps that are hard to follow by program implementation field operators. With respect to Section 2.2.2 of the draft Guidance, while the dual baseline approach does provide the opportunity to better capture all efficiency savings from the early replacement, the use of a CPB for the first block of savings (difference between equipment removed and the efficient installed equipment) for the duration of remaining useful life of the older equipment needs to be clarified. Flexibility should be provided to either base savings on what was actually removed/replaced and/or on a market assessment of commonly found equipment.

Q6) How useful and usable is the guidance, overall? Does the relationship between the component parts (i.e., section 1-3 and Appendices A-C) clear and relatively easy to follow? Is each of these sections and appendices helpful, clearly presented, and sufficient/complete? What specific examples, graphics, or other visual elements would help illustrate concepts described in the guidance?

- As written, some of the language and descriptions may be too complicated for some air regulators and others unfamiliar with EE EM&V.

- Use of evaluation jargon should be minimized and EPA should adopt, not recreate with slight modifications, language that is common to the measurement and verification industry.

- A section on roles and responsibilities for different parties (e.g., verifiers, air regulators, etc.) should be added to the draft Guidance.

- EPA should provide clarification on how it defines the terms "verification" and "requirements."

Q7) Does the guidance note cover any important EM&V topics relevant to fulfilling the EM&V related requirements of the emission guidelines? Is additional guidance needed to support the implementation of other eligible zero- and low-emitting measures that are directly metered? What topics, if any, are unnecessarily introduced?

- Sample EM&V plans for common energy efficiency measures or technologies, program delivery mechanisms and broader policies that demonstrate specific options to states would be beneficial.

Q8) How can the guidance most effectively anticipate the expected changes and evolution in quantification and verification approaches over time (given the time horizon for the emission guidelines)?

- The final guidance document should provide information on how it will be updated, including: process, management/oversight entity, timeframe and expected participants.

- Such a process should explore how M&V practices may be enhanced by data analytics tools and advance metering infrastructure (AMI) data.