

Advanced Energy Economy's Comments on the Clean Power Plan to the Arizona Department of Environmental Quality

Introduction

Advanced Energy Economy (AEE) appreciates this opportunity to provide information and input to the Arizona Department of Environmental Quality regarding EPA's rule for reducing carbon pollution from electric power plants under Section 111(d) of the Clean Air Act, otherwise known as the "Clean Power Plan." Specifically, the following comments focus on the Clean Energy Incentive Program (CEIP) released by EPA in August 2015. This information is designed to maximize the benefit of state participation in the program, and can be used in developing Arizona's comments to EPA on the CEIP.

AEE is a national association of businesses making the energy we use secure, clean, and affordable. AEE also leads a State Coalition consisting of 15 partner organizations active in 26 states across the country and representing more than 1,000 companies and organizations. Nationwide, the advanced energy industry AEE represents generates \$200 billion in revenue, on par with the pharmaceutical industry.¹

In addition to these comments, AEE will be publishing a document that provides guidance for states on best practices for incorporating advanced energy technologies into implementation plans.

Background

On October 21, 2015, EPA issued a document on "Clean Energy Incentive Program Next Steps" and requested comment on that document in non-regulatory Docket No. EPA-HQ-OAR-2015-0734.² Through this CEIP docket and the regulatory Federal Plan docket, EPA is soliciting feedback on specific aspects of both the CEIP and the Federal Plan, including the model trading rules. EPA is seeking written comment on the CEIP by December 15, 2015, while comments on the Federal Plan are due January 21, 2016. AEE will provide input on the Federal Plan at a later date. AEE encourages Arizona to submit feedback to EPA on both the CEIP and the proposed Federal Plan.

The CEIP was created with the intention of allowing renewable energy (specifically wind and solar) and energy efficiency resources to earn compliance credits in the years between final

¹ "Advanced Energy Now Market Report 2015," <http://info.aee.net/aen-2015-market-report>

² Clean Energy Incentive Program (CEIP) Design and Implementation, <http://www.regulations.gov/#!docketDetail;D=EPA-HQ-OAR-2015-0734>.

implementation plan submission and the start of the Clean Power Plan compliance period (2022). Importantly, the CEIP provides projects the opportunity to earn additional matching credits, in the form of either emission rate credits (ERCs) or allowances, from EPA. The CEIP provides Arizona with an opportunity to capture these free matching credits that will help keep compliance costs low and build up a bank of credits early, thus effectively easing any transition to the compliance period.

AEE sees the creation of the CEIP as a positive development for industry and for states, but believes the degree of benefit is dependent on the specific design of the program. Although certain aspects of the CEIP are already set in regulation, much of the program design is still open to adjustment based on public comment. Below, AEE provides a series of suggestions for improvement of the CEIP that AEE believes will help states maximize outcomes from the program. AEE will be submitting similar formal comments directly to EPA.

AEE's comments on the CEIP are guided by three core principles that will together ensure the program brings maximum benefit to states:

1. Recognize the value of advanced energy technologies for achieving emission reductions;
2. Provide business certainty to encourage investment; and
3. Encourage technology-neutral solutions to allow for competition in the marketplace.

Specifically, AEE's comments discuss the following issues:

- **Developing a revised timeline for the CEIP that accelerates the benefits of the program** (page 4);
- **Defining “commence construction” and “commence operation” for the purposes of determining project eligibility under the CEIP** (page 5);
- **Expanding and broadly defining the resources that are eligible for the CEIP, as well suggestions for an inclusive definition of “low-income community” for the purposes of the CEIP** (page 5);
- **Defining how an out-of-state project “benefits” a state broadly, providing flexibility for units in procuring credits** (page 6); and
- **Supporting a fair and straightforward mechanism for the retirement of state-issued ERCs in rate-based states under the CEIP** (page 7)

To be clear, AEE believes the proposed CEIP will already benefit states, and encourages states to participate in the CEIP. Even without the suggested improvements outlined below, the CEIP offers opportunities to states and industry, that would otherwise not be available between now and the start of CPP compliance in 2022. Participating in the CEIP will give Arizona a head start towards compliance with its interim goal under the CPP. AEE simply believes that these benefits would be magnified through the design changes discussed below.



How Advanced Energy Can Help

As the state examines its compliance options under the Clean Power Plan, Arizona has the opportunity to design a state implementation plan that will accelerate a transition to a higher performing grid that is reliable, resilient, and affordable — all while reducing carbon emissions. To achieve these goals, Arizona must continue to invest in 21st century electricity generation and grid technologies. Luckily, these same technologies will also lower the state’s carbon emissions. Forty such technologies are detailed in an AEE report, *Advanced Energy Technologies for Greenhouse Gas Reduction*.³ These technologies include, among others, energy efficiency, demand response, natural gas electricity generation, solar, wind, hydropower, nuclear power, smart grid technologies, and energy storage. EPA has referenced many of these advanced energy technologies by name in the final rule, with solar, wind, and energy efficiency projects in low-income communities being singled out for early action credit through the CEIP.

There are numerous reasons for Arizona to support renewable energy and energy efficiency. These technologies are competitive resources in today’s marketplace that will not only be cost-effective mechanisms for compliance with EPA’s Clean Power Plan (CPP) but should also be expected to grow strictly on the basis of cost. Based on data from Lazard, a financial advisory and asset management firm, the levelized cost of electricity (LCOE) for utility-scale wind and solar power has declined by 58 percent and 78 percent, respectively, from 2009 to 2014, such that these technologies are increasingly competitive. In 2013, the average wind power purchase agreement (PPA) price was \$24/MWh. Similarly, solar PPAs, which provide utilities with peaking power, have declined from \$125-\$150/MWh in 2008 to \$50-\$75/MWh in 2014.⁴ These prices are continuing to decline rapidly. Just this June, Austin Energy in Texas announced it was procuring PV projects at a record of \$0.04/kWh, only to be outdone the next month by NV Energy, which agreed to a PPA at \$0.0387/kWh in July 2015.^{5, 6} Utility renewable energy purchases that were once driven primarily by state policies (e.g., renewable portfolio standards) are now increasingly made based on economics.

Importantly, these advanced energy technologies can ensure that the changes required by Arizona’s emission reduction targets will have no significant adverse impacts on grid reliability and cost. A recent report, *EPA’s Clean Power Plan and Reliability: Assessing NERC’s Initial Reliability Review*, prepared by The Brattle Group, concluded that “compliance with the Clean Power Plan is unlikely to materially affect reliability” given the options currently available for mitigating reliability issues.⁷ The Brattle Group published an additional report on reliability, *Integrating*

³ <http://info.aee.net/epa-advanced-energy-tech-report>

⁴ Lazard’s Levelized Cost of Energy Analysis, Versions 8.0 (2014)

⁵ <http://www.greentechmedia.com/articles/read/cheapest-solar-ever-austin-energy-gets-1.2-gigawatts-of-solar-bids-for-less>

⁶ <http://www.utilitydive.com/news/nv-energy-buys-utility-scale-solar-at-record-low-price-under-4-centskwh/401989/>

⁷ <http://info.aee.net/brattle-reliability-report>



Renewable Energy into the Electricity Grid: Case Studies Showing How Technologies and Operations are Maintaining Reliability, analyzing how variable renewable generation is being managed by grid operators today.⁸ The Brattle Group found that “ongoing technological progress and ongoing learning about how to manage the operations of the electric system will likely allow the integration not only of the levels of variable renewable capacity now in places like Texas and Colorado but even significantly larger amounts in the future.”

Clean Energy Incentive Program Comments

Alter the CEIP Timeline to Provide a Clear Market Signal Today that will Maximize Benefit Under the Program

The concept of awarding early credit through the CEIP is welcomed by our industry. However, the brief period of the program will limit the amount of credit generation possible in the states. With changes to the proposed eligibility and crediting dates, and a change to the definition of commence construction/operation this period can be lengthened to ensure maximum benefit to states under the program.

Currently, project eligibility is tied to final state plan submission, which will be September 2018 for states seeking an extension and all states subject to the Federal Plan. Such a timeframe means that most CEIP-eligible projects will be aiming to complete installation in just 16 months to take full advantage of the program. While a 16-month turnaround is not unheard of in the industry, it would challenge certain project types and create bottlenecks in project development. AEE recommends that EPA move the CEIP project eligibility start date forward to September 6, 2016, the deadline for initial state plans. This earlier date will allow more projects to qualify for the program and provide developers a longer period of certainty to plan projects

In addition to moving up the start date for CEIP project eligibility, AEE also urges EPA to move up the start date for CEIP *generation* eligibility.⁹ Under EPA’s proposal, only MWh generated or demand reductions achieved during 2020 and/or 2021 would be eligible for CEIP credit.¹⁰ A two-year period is a very short time over which projects can generate credit. AEE therefore strongly supports allowing eligible projects to start earning credits for their generation beginning on the date that states submit their final state plan to EPA, or September 6, 2018 for states subject to a Federal Plan. Thus, under AEE’s proposal, eligible projects would be able to earn CEIP credits for generation or energy savings starting in September 2018 at the latest. This revised timeline would allow states to capture more benefit from these projects while helping to relieve some of the

⁸ <http://info.aee.net/integrating-renewable-energy-into-the-electricity-grid>

⁹ References to “generation eligibility” in these comments refer to eligibility to earn allowances or ERCs through generation of renewable energy or through energy savings – which allowances or ERCs can be sold or banked for use in the compliance period.

¹⁰ Proposed Federal Plan at 65,000, 65,025.



bottleneck created by the 16-month installation window by providing projects with a longer period in which to generate credits.

The combined result of these proposed changes to the timeline for the CEIP is that the advanced energy industry in Arizona will be better able to capture the full pool of EPA matching credits, putting the state at an advantage as it enters the compliance period.

Adopt Definitions for Commence Construction/Operation that Maximize Credit for Eligible Measures

In the CEIP Next Steps document, EPA seeks stakeholder input on “[d]efinitions for ‘commence construction’ of an eligible RE [renewable energy] project[.]”¹¹ AEE supports definitions that do not include elements of project planning.

For renewable energy, AEE suggests and supports a definition of “commence construction” that (1) is based on *actual* construction of a significant physical nature, rather than contractual activity; and (2) clearly excludes preliminary activities that precede actual construction of the project. We see no reason why the definition of “commence operation” for energy efficiency should differ in scope and intent.

AEE alternately supports using the term “commence operation” to determine project eligibility for both renewable energy and energy efficiency, particularly in the event that the timeline for the CEIP remains as currently described by EPA. Allowing projects to do the maximum amount of project work prior to the date when states submit final plans to EPA would help allow more projects to qualify for the CEIP, again helping to ensure that Arizona is able to take full advantage of the program.

EPA Should Expand and Broadly Define the Scope of Eligibility for the CEIP Program in Order to Harness More Advanced Energy Opportunities in the Six Years Leading Up to 2022

EPA proposes that metered MWh from any type of wind and solar resource, and demand-side energy efficiency programs and measures implemented in low-income communities that result in quantified and verified electricity savings, will be eligible to generate CEIP credits.¹² AEE strongly supports expanding and broadly defining the scope of eligibility for the CEIP. Specifically, AEE supports (1) a broad definition of metered wind and solar that includes all types of wind and solar resources, including distributed generation and offshore wind, along with the addition of other renewable resources being considered eligible for the CEIP; (2) expanding the scope of eligibility for demand-side energy efficiency measures beyond those implemented in low-income communities; (3) an inclusive definition of low-income community; and (4) a broad definition of “demand-side EE [energy efficiency].”

¹¹ CEIP Next Steps at 3.

¹² Proposed Federal Plan at 65,000, 65,025.



- 1) The regulations finalized by the CPP state that projects are eligible for the CEIP if they “[g]enerate metered MWh from *any* type of wind or solar resources.”¹³ Under the broad language of the Final CPP, AEE urges EPA to clarify that *all* types of wind and solar resources are eligible for the CEIP, including offshore wind and distributed generation projects. AEE would also support the inclusion of other renewable resources beyond wind and solar.
- 2) AEE supports expanding eligibility to allow all energy efficiency to participate in CEIP, while reserving the double credit just for low-income communities. This change would mean that eligible energy efficiency projects in Arizona outside of low-income communities would also earn matching credits from EPA. Inclusion of all energy efficiency measures in the CEIP would help Arizona take full advantage of its allotted pool of EPA matching credits specifically apportioned for energy efficiency.
- 3) In order to support low-income communities, AEE believes the CEIP program should maximizing deployment of this cost-effective resource. As such, AEE supports a broad, inclusive definition of “low-income community,” and encourages Arizona to ask EPA to develop a definition that does not introduce undue administrative burdens for providers or program administrators. Specifically, AEE believes that the term “low-income community” should capture demand-side energy efficiency projects and measures in: (a) all residences, businesses, and infrastructure located in low-income communities; and (b) low-income households, even if they do not fall within the technical boundary of a low-income community as defined by the CEIP.
- 4) The CPP provides that “demand-side EE” “projects” implemented in low-income communities can generate CEIP credits.¹⁴ EPA’s use of the term “demand-side EE” should encompass the full range of demand-side energy efficiency measures recognized in the CPP. AEE supports allowing the full range of demand-side energy efficiency projects, including demand response, to qualify for the CEIP, as long as the demand-side energy efficiency project in question *reduces* demand for electricity off the grid.

Broadly Defining “Benefit a State”

In order to ensure a competitive and open marketplace during the CEIP period and provide more opportunities for states, AEE supports a broad definition of “benefit a state.” The CPP limits the eligibility of renewable resources and energy efficiency for CEIP allowances/ERCs to measures that are “located in or benefit a state that has submitted a final state plan that includes requirements establishing its participation in the CEIP.” Under this provision, it is clear that any renewable energy resource or energy efficiency measure physically located in a state opting in to the CEIP would be eligible to receive an allowance or ERC from that state; however, neither the CPP nor the Proposed Federal Plan define “benefit a state.”

¹³ Final CPP at 64,943 (emphasis added).

¹⁴ Final CPP at 64,943 (to be codified at 40 C.F.R. § 60.5737).



AEE supports a broad interpretation of “benefit a state” that assigns benefit to whichever state supplies the project with a credit from its state CEIP credit pool, provided that the project has not been issued an allowance or ERC by any other state for the same MWh. Under this approach, this benefiting state could issue allowances or ERCs to the project, and EPA would issue corresponding matching allowances or ERCs from the pool of matching credits set aside for that state.

Support a fair and straightforward mechanism for the retirement of state-issued ERCs

EPA requests comment on how states could account for state-issued ERCs under the CEIP during the first step period.¹⁵This would only apply to state-issued credits, and not to EPA matching credits. EPA provides two examples of how this might be done: (1) during the interim performance period, a number of ERCs could be retired in an amount equivalent to the number of early action ERCs that were awarded through the CEIP; or (2) EPA, or a state under the model trading rule, could adjust their targets to achieve the same stringency, taking into account the additional borrowed ERCs.¹⁶

AEE supports the first approach and strongly opposes the second approach. AEE believes that the second approach will not only prove to be more complicated, leading to increased administrative work, but that it could seriously restrict the ability of states to engage in interstate trading. This is because adjusting the state’s targets would change the required performance rates and, as a result, there would no longer be uniform sub-category specific performance rates applicable to EGUs in different states. Importantly, states that do not use the sub-category specific performance rates are not considered to be “ready-for-interstate-trading” and would thus not be able to trade with states subject to the Federal Plan and would be limited in their ability to trade with other states unless they enter into a formal multistate plan.¹⁷

AEE supports the first approach and encourages Arizona to also support this approach, which would require the retirement of ERCs in an amount equivalent to the number of early action ERCs that were awarded through the CEIP. AEE believes that this approach is far more straightforward than the other approaches and can be implemented in an equitable manner without disrupting the ability of states to trade ERCs with one another.

¹⁵ Proposed Federal Plan at 65,000.

¹⁶ Proposed Federal Plan at 65,000-65,001; *see also* CEIP Next Steps at 4.

¹⁷ Proposed Federal Plan at 64,977; Final CPP at 64,946 (to be codified at 40 C.F.R. § 60.5750(d)(2)).

