



Summary of Key Energy Efficiency Provisions in the Clean Power Plan

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General

In establishing the final Clean Power Plan (CPP),² the EPA excluded energy efficiency (EE) as a building block for setting the state CO₂ emissions targets due to concerns about the legality of doing so.

States have the choice of adopting either:

1. federally enforceable emissions standards (either rate- or mass-based) on their affected electric generating units (EGUs: fossil-fired steam units and combined cycle power plants), or
2. a “state measures approach” which can include state-enforceable measures, including EE and renewable energy (RE), either alone or in combination with federally enforceable emissions standards on affected EGUs.

EE measures and programs will help a state meet its CO₂ emissions reduction requirements regardless of the plan type selected:

- If a state measures approach is used, the state must adopt mass-based targets and must include “backstop” federally enforceable emissions standards on affected EGUs in case the state measures do not result in achievement of the mass-based goals.
- If a rate-based approach is used, EE measures and programs can generate Emissions Rate Credits (ERCs) which can help a state meet its emissions rate targets.
- If a state chooses mass-based targets, no credits are provided since energy savings will directly assist states in meeting their targets.

States that contain affected EGUs are required to meet either rate-based or mass-based CO₂ emissions performance goals in both an interim period and by the final year which is 2030. The interim period is now 2022-2029, with three steps (2022-24, 2025-27, and 2028-29) for which reporting is required during the interim period. No CO₂ emissions reductions are required prior to 2022.

¹ This document benefitted from comments provided by Joe Bryson and Nikolaas Dietsch from the U.S. EPA and by Steve Nadel and Cassandra Kubes from ACEEE. Changes to the document may be made as additional details regarding the Clean Power Plan are uncovered or clarified.

² The Clean Power Plan final rule and supporting documents are available at <http://www2.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants#federal-plan>.

Emissions Rate Credits (ERCs)

ERCs can be issued for energy savings resulting from a variety of strategies, including:

- utility demand-side management (DSM) programs;
- transmission and delivery (T&D) system efficiency upgrades;
- combined heat and power (CHP) projects/programs;
- waste heat-to-power (WHP) projects/programs;
- building codes;
- state appliance standards;
- energy savings performance contracts; and
- other types of EE policies/programs or measures, as long as they are consistent with CPP requirements including performing robust evaluation, measurement and verification (EM&V).³

ERCs will be issued in the unit of MWhs, which get added to the denominator in the determination of the emissions rate of an EGU (or group of EGUs). There is no need to estimate the avoided CO₂ emissions from EE policies/programs and measures, only the energy savings. In order to be eligible for ERCs or be included as state measures, EE policies/programs or measures must be quantifiable, verifiable, enforceable, non-duplicative and permanent.

States can get ERCs for energy savings starting in 2022 from EE measures installed after 2012 (i.e., beginning 1/1/13) as long as the measures are still operating in 2022. For example, measures installed in 2015 with an estimated 10-year useful life would be eligible for ERCs in 2022-24. States that choose mass-based targets will also benefit from EE measures and programs implemented prior to 2022 due to the energy savings and resulting emissions reductions occurring during the compliance period.

Individual projects can qualify for ERCs, as can state policies or programs including programs that focus on behavior change. Policies/programs or measures can be implemented by utilities, state entities, local governments or private entities.

ERCs can be banked and traded under certain conditions. ERCs cannot be issued based on energy savings achieved in states with mass-based goals. States with rate-based goals can receive and trade ERCs as long as both states have rate-based goals, with goals based either on the emissions performance rates established by the EPA for the two types of EGUs or on uniform rate-based goals established as part of a multistate plan. In addition, states must adopt ERC registries with compatible functionality and ensure double counting of credits is avoided.

States or tribal territories within the contiguous U.S. without affected EGUs (e.g. Vermont and the District of Columbia) can obtain and trade ERCs as long as they meet all the requirements regarding EM&V, installation dates, etc.

³ The EPA has provided a useful Technical Support Document on Demand-Side Energy Efficiency on the Clean Power Plan web site. <http://epa.gov/airquality/cpp/tsd-cpp-demand-side-ee.pdf>

ERCs can be provided to CHP systems that are non-affected facilities. State plans must include an accounting method whereby the total MWh output of the CHP system is adjusted to account for any increased consumption of fossil fuels due to the operation of the CHP system.

Regarding WHP, the full MWh output is eligible for ERCs as long as there is no additional fossil fuel use due to the operation of the WHP system. If there is some additional fossil fuel use, the MWh output should be adjusted to factor this in.

Clean Energy Incentive Program (CEIP)

The CEIP includes credits or allowances for energy savings achieved in 2020 and 2021 from EE programs and measures implemented in low-income communities after a state submits its final plan (or as of September 2018 for states in which EPA implements a federal plan). The CEIP provides bonus credits to states, with the EPA providing a 2-for-1 match for eligible energy savings occurring in 2020 and 2021.

States are also encouraged to develop EE programs targeted to low-income communities, outside the scope of the CEIP. In developing their compliance plans, states must engage “vulnerable communities” (low-income and communities of color) during the planning process and respond to their concerns in state plans.

State Plans

Initial state plans are due in Sept. 2016. States can submit preliminary plans by then and request an extension for a final plan to as late as Sept. 2018.

The state measures approach allows states to include measures such as energy efficiency resource standard (EERS) policies or building codes in a state plan as long as the policies are enforceable at the state level (in which case they will not be enforceable by EPA). If the state measures approach is selected, state plans must include backstop enforceable emissions standards on EGUs in case implementation of the state measures is not adequate to meet the mass-based goals. With a state measures approach, state plans must document expected carbon reductions from different policies in order to show that the plan will achieve the state’s emission goal.

If a state chooses mass-based goals, there is no need to do EM&V during implementation. EE measures are complementary and will help the state meet its mass-based goals; i.e., the emission benefits of EE will “show up” in the reduced stack emissions from affected EGUs. Mass-based state plans can also include energy efficiency set-asides in order to encourage and reward energy efficiency savings during plan implementation.

States that develop rate-based emissions standards plans may include EE policies/programs and measures that will generate ERCs in their state plans. States are not required to include EE in

rate-based state plans; however, if EE is included, EE savings must be measured, verified and documented following EPA's guidelines. For states with rate-based compliance obligations on EGUs, states do not need to identify specific EE policies/programs or measures in their state plan in order to receive ERCs from energy savings measures as long as proper EM&V protocols are followed.

States are allowed to modify plans after they are submitted and approved, which is one way for a state to deal with the uncertainty about future level of energy savings from EE policies and programs.

States are encouraged to include "skill certification provisions" related to EE policies/programs and measures in state plans in order to encourage third-party certification of EE contractors and other EE workers.

In addition to the CPP Final Rule, the EPA issued a draft Federal Plan on August 3, 2015 that includes both emissions rate-based plans and mass-based plans for states to use as models in creating their own plans. The Federal Plan will be implemented in states that do not submit their own federally approvable plans to the EPA.⁴ Comments are being taken on the draft Federal Plan for 90 days following its publication in the Federal Register.

The EPA also issued a Technical Support Document available on the CPP web site regarding incorporation the EE and RE impacts into "State Plan Demonstrations" of compliance with CO₂ emissions targets.⁵ The recommended approach includes adjusting a base case forecast of electricity demand for the effects of EE policies/programs or measures included in a State Measures Plan.

Implementation

ERCs will be issued by the administrator of each state's CPP. Applications for ERCs for EE policies/programs or measures must include an EM&V plan among other requirements. In order to receive ERCs, EE programs or measures must be subject to independent verification following implementation and a monitoring and verification report must be submitted.

EM&V must be done on an ex-post basis, not on an ex-ante basis (i.e., after EE programs and measures are implemented). EM&V must be done periodically but not necessarily on an annual basis.

In conducting EM&V for EE programs and measures, a baseline of what would have happened in the absence of the EE program or measure should be used. This is called the "common practice baseline." EPA is proposing in the model Federal Plan that there is no further net-to-gross adjustment in determining energy savings that are eligible for ERCs.

⁴ <http://www.epa.gov/airquality/cpp/cpp-proposed-federal-plan.pdf>

⁵ <http://epa.gov/airquality/cpp/tsd-cpp-incorporating-re-ee.pdf>

EM&V should include normalization where appropriate for variations in weather, building occupation, etc. and should provide estimates of measure lifetime.

The EPA also issued draft EM&V guidance on August 3, with a 90-day comment period following its publication in the Federal Register.⁶ The draft guidance addresses issues such as acceptable EM&V methods, determination of baselines, accuracy and reliability of savings quantification, appropriate use of deemed savings values, the effective useful life of EE measures, and T&D system energy savings adders.

The guidance is intended to help EE providers implement the regulatory requirements outlined in the final emission guidelines and proposed in the model plan. For state plans that implement ERC trading, adoption of the EM&V provisions in the model plan will be treated by the EPA as presumptively approvable.

The Southwest Energy Efficiency Project is a public interest organization dedicated to advancing energy efficiency in Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming. For more information, visit www.swenergy.org.

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⁶ <http://www2.epa.gov/cleanpowerplanttoolbox/evaluation-measurement-and-verification-emv-guidance-demand-side-energy>

