



RENEWABLE ENERGY IN THE CLEAN POWER PLAN

The EPA recognizes the role renewable energy is already playing in reducing emissions in the power sector and encourages renewable energy development to meet the Clean Power Plan goals.

Renewable energy played an important role in setting the Clean Power Plan goals.

The Clean Power Plan's goals* are based in part on the proven potential for new renewable energy to produce power with fewer carbon emissions, and reduce the utilization of existing sources of carbon pollution.

States and utilities already invest in renewable energy to produce power while cost-effectively lowering carbon dioxide (CO₂) emissions. Over time, as states' demand for clean generation increased, renewables like solar and wind rapidly became cost-effective and more widely available. Last year, the United States brought online as much solar energy every three weeks as it did in all of 2008. The U.S. now uses three times more wind energy than it did in 2009. These trends are projected to continue. In fact, EPA expects clean renewable energy generation to increase under the Clean Power Plan to nearly 20% of all power supplied by 2030, up from approximately 13% in 2014.

Renewable energy is a key strategy for meeting the Clean Power Plan goals.

EPA anticipates that renewable energy will be a significant strategy for states and existing sources. The Clean Power Plan offers an array of flexible approaches through which renewable energy can be fully deployed to meet requirements in a state's plan. Here are the key ways that the Clean Power Plan supports the development of more renewable energy.

1. The Clean Power Plan helps level the playing field for investments in renewable energy.

The simple fact that the Clean Power Plan requires CO₂ emission reductions from existing sources provides a powerful incentive for renewable energy projects. With limits on carbon pollution from power plants, new renewables become even more competitive with fossil fuel-fired power generation. This is a fundamental element of the Clean Power Plan, which makes investments in renewable energy more attractive and provides a substantial incentive to deploy new renewable energy.

2. Under a mass-based emission standard approach, renewable energy has a direct incentive to produce electricity since it automatically "counts" toward compliance.

Renewable energy, regardless of when it was installed, automatically "counts" towards compliance under a mass-based approach to the extent it displaces fossil generation at existing sources that emit carbon pollution. Thus, requirements for crediting renewable energy do not need to be part of a state plan. There is no credit issuance system required, and no requirement that generation be installed on, by or before a

* The term "goals" is used in this document to cover all of the ways the emission performance rates in the Clean Power Plan are capable of being expressed. This document does not alter or supersede any legal or regulatory requirements.

specific date. Also, evaluation, measurement and verification (EM&V) is generally not required for renewable energy under mass-based approaches.

States using a mass-based approach may provide additional support for renewable energy through direct allocations of emission allowances to renewables, or through distribution of proceeds from auctions of emission allowances to renewable energy generators.

States also have the opportunity under a mass-based approach to reward early action through allowance allocation strategies, separate from, and in addition to, a state's opportunity to participate in the Clean Energy Incentive Program (see below).

3. Under a rate-based approach, newly deployed renewable energy counts toward compliance under an appropriate accounting system.

Renewable energy installed in 2013 or after that produces power in 2022 can provide credits to help existing sources meet their emission standards. In other words, a renewable energy generator installed after 2012 in a rate-based state may be issued Emission Rate Credits (ERCs) for every quantified and verified megawatt-hour (MWh) of zero-emission generation in 2022 and thereafter. To issue ERCs for renewable energy, rate-based states will need an appropriate system for issuing ERCs that meet relevant requirements described in the Clean Power Plan, such as the EM&V requirements. After the ERC is issued, generators may transfer or sell the ERCs freely on the market, and existing sources may use them for compliance.

4. Under a state measures approach, states' renewable energy policies can be used to meet a state's mass-based goal.

This particular approach allows states the flexibility to use renewable energy policies and programs, such as renewable portfolio standards (RPS), without making them federally enforceable. These renewable energy measures can be included because they help reduce emissions at existing sources.

5. Renewable energy located outside a state's borders can help meet goals.

The Clean Power Plan facilitates the trading of renewable energy for compliance across state lines.

In mass-based states, out-of-state renewable energy may automatically "count" to the extent it displaces fossil generation at in-state existing sources that emit carbon pollution. When this occurs, the decrease in emissions frees up allowances for use elsewhere in the mass-based states participating in a common trading program.

In a rate-based state, renewable generators may provide their ERCs to existing sources in any state with a compatible rate-based emission trading program, regardless of where the emission reductions occur. With "trading-ready" mechanisms, individual rate-based state plans may provide for the interstate transfer of ERCs, which would enable an ERC issued for renewable energy by one state to be used for compliance in another state. These state plans could recognize ERCs issued by any state that also uses a specified EPA-approved or EPA-administered tracking system.

6. International renewable energy projects may also help meet goals.

States using the rate-based approach may credit the generation from new renewable energy projects in Canada or Mexico, if the projects meet state requirements, are connected to the U.S. grid and have a power purchase agreement (or other contract for delivery of the power) with an entity in the U.S.

7. Renewable portfolio standards (RPS) are an important complement to state plans.

The 37 states with RPS requirements or goals are better positioned to help existing sources comply with their states' goals. RPS policies, in many cases, continue to incentivize new developments of renewable energy.

Renewable energy development as a result of RPS requirements may reduce emissions from existing sources (although a rate-based plan cannot explicitly credit generation from renewable energy installed prior to 2013).

8. EPA proposed two model rules – rate and mass-based – with provisions that offer states streamlined approaches for supporting renewable energy.

The proposed mass-based model rule includes presumptively approvable provisions to incentivize renewable energy through an emission allowance set-aside, which allocates a certain number of emission allowances for eligible renewable energy generators.

The proposed rate-based model rule includes presumptively approvable provisions for issuing ERCs to eligible renewable energy generators under a rate-based trading program.

9. The Clean Energy Incentive Program (CEIP) encourages early investment in wind and solar.

States can choose to participate, on a voluntary basis, in the CEIP and receive credit for MWh generated by solar and wind projects that commence construction any time after the final state plan has been submitted and that generate electricity in 2020 and/or 2021. For each MWh generated through the CEIP, EPA will provide matching allowances or ERCs to states that participate; wind and solar projects will receive one ERC (rate-based state) or allowance equivalent (mass-based state) for every MWh of generation (i.e., half early action credit from the state and half matching credit from the EPA). The entire CEIP federal match – which also is available for energy efficiency projects in low-income communities – is capped at the equivalent of 300 million short tons of CO₂ emissions.

10. The Clean Power Plan Toolbox offers resources to help states implement proven, cost-effective renewable energy strategies.

The Clean Power Plan Toolbox includes a variety of resources from EPA and DOE that can help states learn about, design and implement proven, cost-effective renewable energy strategies, including best practices implemented by other states.