

Integrating Energy Efficiency and Renewable Energy Measures in the Air Quality Planning Process

Guidance for State and Local Officials



Overview

In August 2004, the U.S. Environmental Protection Agency (EPA) issued “Guidance on State Implementation Plan (SIP) Credits for Emissions Reductions from Electric-Sector Energy Efficiency or Renewable Energy Measures.” This guidance provides state and local air quality officials with valuable information on how to incorporate energy efficiency and renewable energy (EE/RE) measures into their air quality plan, also known as the State Implementation Plan (SIP). The guidance provides:

- General information and background on incorporating EE/RE measures in the SIP.
- A step-by-step procedure for estimating emission reductions from EE/RE measures.
- A list of tools and resources for more information.
- Examples of proposed SIP submissions.

What Are the Benefits of Energy Efficiency and Renewable Energy?

EE/RE measures have multiple environmental, energy, and economic benefits. Energy efficiency measures reduce electricity consumption, and renewable energy can supply energy from non-polluting or less polluting sources, thus reducing air emissions. In addition, these measures can:

- Save money, reduce the need to build new fossil-fuel fired generation facilities, and create economic development opportunities.
- Reduce peak demand for electricity during periods of poor air quality.
- Reduce dependence on foreign sources of fuel and enhance energy security.
- Increase the reliability of the electricity grid.

Integrating Energy and Air Quality Goals

EPA encourages and supports state and local efforts to reduce air pollution through EE/RE measures. The Agency is working with state and local air and energy officials to adopt and implement EE/RE measures. EPA is partnering with the U.S. Department of Energy and other organizations to develop information resources and technical assistance for state and local governments that wish to integrate their energy and air quality programs.

How Can States Incorporate EE/RE into the Air Quality Planning Process?

EE/RE measures may be incorporated into the SIP process either implicitly in the projected emission inventory estimates (baseline) or explicitly as discrete measures that achieve emission reductions (SIP Credit) from the projected baseline.

What Requirements Should EE/RE Measures Meet to Obtain SIP Credit?

Under EPA policy and guidance, states can incorporate EE/RE measures into their SIPs, provided certain criteria are met. EPA's guidance describes the criteria for EE/RE measures and how states can meet them. Proposed measures should be:

- **Quantifiable**—reasonable assumptions about how the electricity system will respond to the EE/RE measures, where the reductions are expected to take place, and current and future air emission limitations on electricity generators need to be considered.
- **Surplus**—emission reductions are surplus as long as they are not otherwise relied on to meet air quality attainment requirements in air quality programs related to the SIP. In areas subject to a cap and trade program, this requirement could be met by retiring emission allowances.
- **Enforceable**—the measure must either be enforceable against a responsible party or the state/local government submitting the SIP takes responsibility for the emission reductions as a “voluntary” measure.
- **Permanent**—the EE/RE measures need to be in place throughout the SIP timeframe.

Examples of EE/RE Measures

There are many policies, programs, and projects that could potentially be included in the air quality planning process. Here are a few examples:

Energy Efficiency:

- System benefit funds that install energy efficient technologies.
- Improved energy codes.
- Appliance standards.
- Government equipment purchasing standards.
- Utility-run demand side management programs.
- Required or voluntary government energy performance improvement projects.

Renewable Energy:

- Renewable portfolio standards.
- Government purchase of green power.
- System benefit funds that install renewable energy technologies.

Contacts

EE/RE SIP Guidance

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How Can I Get More Information?

Resources and Web sites

- Guidance on State Implementation Plan (SIP) Credits for Emissions Reductions from Electric-Sector Energy Efficiency or Renewable Energy Measures, August 2004. www.epa.gov/ttn/oarpg/t1/memoranda/ere-seerem_gd.pdf
- Incorporating Emerging and Voluntary Measures in a State Implementation Plan, October 2004. http://www.epa.gov/ttn/oarpg/t1/memoranda/evm_ievm_g.pdf
- EPA Air Innovations Web site. www.cleanairinfo.com/airinnovations