



Integrating Energy Efficiency & Renewable Energy with Air Quality Standards

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State and Local
Climate and Energy Program



Today's Presentation



- Utilizing EE/RE policies and programs to improve air quality
- Overview of EPA's State Climate and Energy program
- Analytical resources to incorporate EE/RE in State Implementation Plans (SIPs)
 - ◆ Estimate energy impacts of EE/RE policies
 - ◆ Baseline emissions projections through 2030
- Link to the EE/RE manual
- Outreach efforts

EE/RE Policies and Programs as a Strategy for Air Quality Improvement



Many states are aggressively pursuing EE policies

- EE can deliver multiple benefits
 - ◆ Lower electricity costs
 - ◆ Improved electricity reliability
 - ◆ Lower ratepayer bills **AND**
 - ◆ ***Cleaner air***
- EE increasing credibility as a reliable energy resource

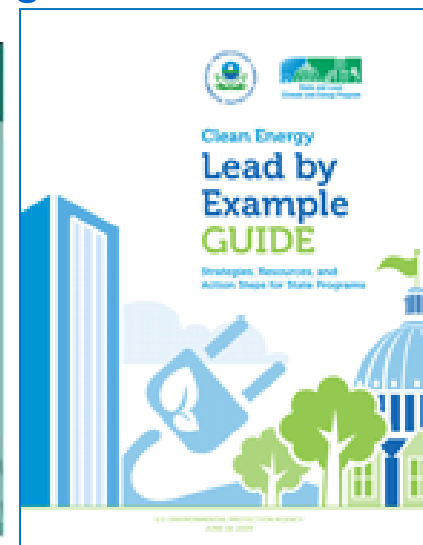
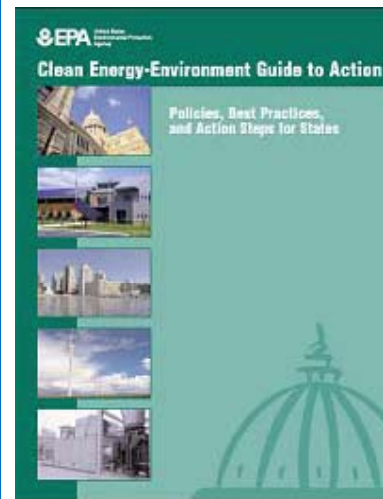
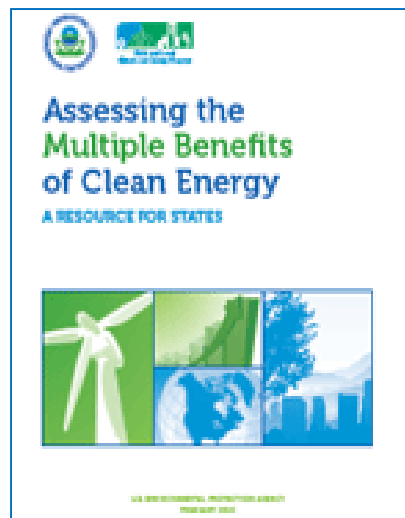
EPA is taking steps to help

- Including EE/RE in the compliance toolbox for air regulators
- Developing resources and analyses that helps states link air/energy goals
- Advancing a training/outreach program to further cross-agency collaboration, understanding and action

U.S. EPA's State and Local Climate & Energy Program

We provide tools, resources and case studies:

- ◆ EE/RE policy best practices and action steps
- ◆ Measuring energy impacts of EE/RE policies as well as emissions, climate, and economic co-benefits
- ◆ State-to-state peer exchanges
- ◆ Direct assistance through trainings



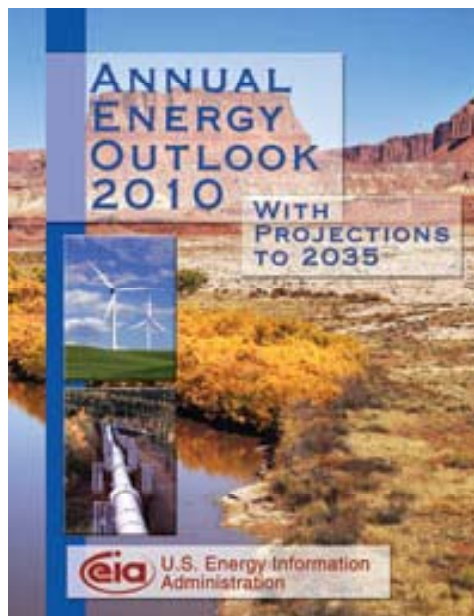
<http://www.epa.gov/statelocalclimate>

Analysis of Projected Emissions Impacts of EE/RE Policies, State-by-State

Background

- Recognized missed opportunities to reflect state policies not currently in Energy Information Administration's (EIA) Annual Energy Outlook (AEO) projections
 - ◆ Investigated: What EE/RE policies are currently accounted for in the AEO 2010 forecast
 - ◆ Found that: Some EE/RE policies are already accounted for some are not reflected, but could be added.
- Established straightforward approach to capture EE/RE impacts
- Plan to analyze electric power sector emissions using Integrated Planning Model (IPM)
- Ultimate goal: Help states incorporate on-the-books EE/RE policies in SIP baseline emissions projections

Applicable EE/RE Policy Assumptions Explicitly Included and Not Included in AEO 2010



Criteria for analyzing policies:

- They are not already accounted for in forecast
- The policy was adopted in state legislation or Public Utility Commission Order (on-the-books)

EE/RE Policies Explicitly Accounted for in AEO 2010

- American Recovery and Reinvestment Act (ARRA) funded EE programs
- Federal appliance standards
- State building codes
- Renewable portfolio standards for 30 states and DC as of Sep. 2009

Existing State EE/RE Policies NOT Explicitly Accounted for in AEO 2010

- Energy Efficiency Resource Standards (25 states)
- Other Ratepayer funded EE programs (3 states*)
- EE/RE programs funded through RGGI (3 states*)
- Newly adopted State RPS after Sep. 2009 (5 states)

* Only includes states without EERS



States Included in Analysis with EE/RE Policies Not Explicitly Accounted for in AEO 2010



- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- Florida
- Hawaii
- Illinois
- Indiana
- Iowa
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Montana
- New Hampshire
- New Jersey
- New Mexico
- New York
- Ohio
- Oregon
- Pennsylvania
- Rhode Island
- Texas
- Vermont
- Washington
- Wisconsin

Analysis of Projected Energy Impacts of EE/RE Policies, State-by-State



Process completed:

- Screened 50 States to collect details of EE/RE policies
- Developed methodology to quantify energy impacts from selected policies
- Projected energy impacts through 2030 based on what the law requires

Findings:

- Existing state EE policies reduce demand ~ 3% by 2020
- Comment period yielded important feedback from states and energy experts

Draft Documents - Analysis of Projected Energy Impacts of EE/RE Policies, State-by-State

- 1) **Background and EPA's draft methodology for estimating energy impacts**
- 2) **State policy characterizations and annual energy savings and generation estimates**
- 3) **Peak energy savings summaries**
- 4) **State-by-state summary pages**

Available at:

<http://epa.gov/statelocalclimate/state/statepolicies.html>

Analysis of Projected Emissions Impacts of EE/RE Policies, State-by-State

Baseline Emissions Projections through 2030

EPA will translate energy impacts of State EE/RE policies not included in AEO 2010 forecast

Emission projections* using the Integrated Planning Model (IPM)

- ◆ Emission results can be used for SIP baseline emission projections and Air Quality modeling
- ◆ States can use this information for their own analysis when conducting their SIP baseline forecasts.

* Emissions include carbon dioxide (CO₂), nitrogen oxides (NO_x), sulfur dioxide (SO₂) and mercury (Hg)

Link to “Roadmap for Incorporating EE/RE Policies and Programs into State Implementation Plans/Tribal Implementation Plans”



■ Added Value to the EE/RE SIP Roadmap:

- ◆ Illuminate EE/RE policy opportunities for States interested in the SIP baseline emissions projection pathway
- ◆ Provide a methodology for estimating energy impacts of EE/RE policies
- ◆ Understand the magnitude of emission reductions of existing state EE/RE policies
- ◆ Save state air agencies resources

Outreach Efforts



Goal: Increase state air regulators' capacity by helping them:

- ◆ Understand options, address barriers and bridge information gaps between air and energy terminology
- ◆ Bolster implementation – to account for EE/RE policies and program in SIPs.
- ◆ Collaborate with state energy agencies to explore common goals and data sharing needs

Coming Soon!

- ◆ Clean Energy – Air Quality web page
- ◆ Workshops for State Energy and Air Regulators with States in interested Regions

Thank you!



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