

EPA State and Local Clean Energy- Environment Programs

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CSG, CESA, Solar Peer Network: Integrating Clean Energy in
State Air Quality and Climate Change Policies and Programs

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State and Local Governments Matter

- Every day, governments make decisions that impact:
 - energy security and reliability,
 - air quality,
 - greenhouse gas emissions
 - economic development,
 - public health,
 - quality of life
- Rapidly increasing numbers of State and Local Governments are addressing climate, air quality and clean energy



Clean Energy-Environment Programs



Clean EnergyEnvironment
STATE PARTNERSHIP



Clean EnergyEnvironment
MUNICIPAL NETWORK

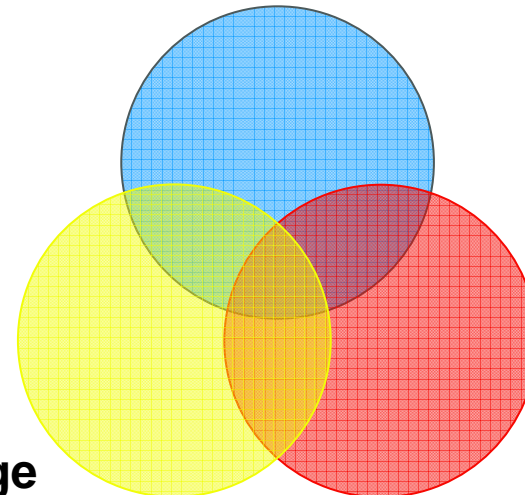
Learn From Best
Practices

Emphasize Co-
Benefits

Integrated
Planning

Efficiency as a
Resource

Clean Energy

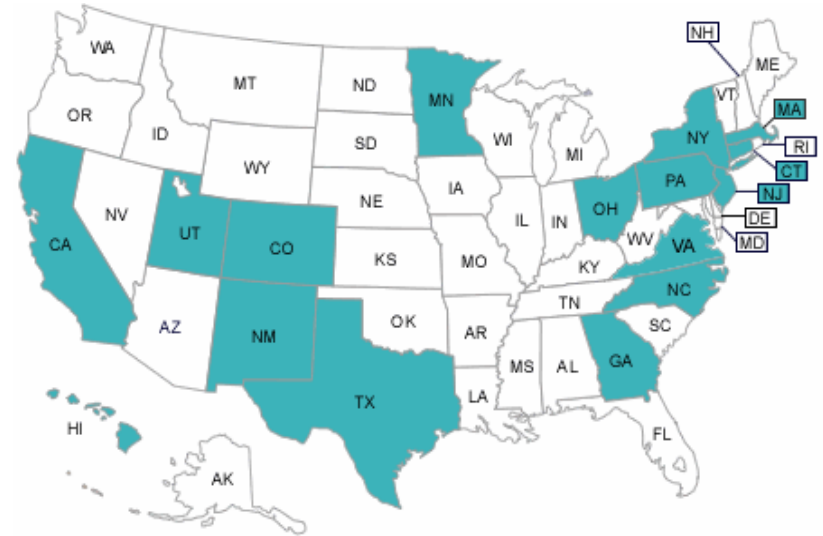


Climate Change

Air Quality

Clean Energy-Environment State Partnership

- Helps states review and adopt policies and programs that effectively integrate clean energy into a low-cost, clean, and reliable energy system.
- The program provides tools and analyses to advance state efforts that:
 - improve air quality and public health;
 - increase cost-effective energy efficiency and renewable energy;
 - reap economic benefits;
 - and lower greenhouse gases.
- EPA launched the program in 2005 with 11 partner states, a number which has now reached 16. These 16 states represent about half the population, energy use and greenhouse gas emissions in the United States.



Clean Energy-Environment Municipal Network



- The Clean Energy-Environment Municipal Network is an informational resource network that supports local governments' efforts to use clean energy strategies to advance a number of community priorities.

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Clean Energy-Environment Program Offerings

- Expert Advice
- Peer Exchange
- Technical Support
- Tools and Guidance
- www.epa.gov/cleanenergy/stateandlocal



State Inventory Tool

Welcome to the State Greenhouse Gas Inventory Tool:
Carbon Dioxide Emissions from Combustion of Fossil Fuels
Draft 3/12/07

http://epa.gov - EPA - Clean Energy - EPA's State and Local Clean Ene...

**State Energy Efficiency Actions:
Building Codes for Energy Efficiency – Residential**

Information current as of 01/01/07

Completed 2 – Goes Beyond ECPA (22)
AK, AR, CA, CT, ID, IA, KS, LA, MD, MT, NE, NV, NM, OH, OR, PA, RI, SC, UT, VA, WA, WV

Completed 1 – Meets ECPA (12)
DE, DC, FL, GA, KY, NH, NY, NC, OK, TX, VT, WI

Some states have laws that limit their ability to impose building requirements on municipalities. In these "home rule" states, local governments can adopt their own codes. This is the case in AZ, CO, HI, IL (home rule for residential only), MO, NV, OK (home rule for commercial only), TX, SD, and WY.

The Energy Conservation and Production Act (ECPA) of 1975 requires states to adopt commercial building codes and to consider adopting residential codes. To meet ECPA, states must either adopt the US DOE-determined "model code" as written, modify it to meet their needs, or develop their own equal or better code. DOE has determined that the 2000 Supplement to the IECC and 1999 version of ASHRAE Standard 90.1 improve energy efficiency in residential and commercial buildings, respectively.

Sources: Building Codes Assistance Project.

EPA United States Environmental Protection Agency

Clean Energy-Environment Guide to Action

Policies, Best Practices, and Action Steps for States

STAPPA/ALAPCO and ICLEI's

Clean Air and Climate Protection Software

State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials
International Council for Local Environmental Initiatives

Revised May 2004

eGRID



Technical Forum Calls

- State Clean Energy-Environment Technical Forum:
http://www.keystone.org/Public_Policy/StateTechForum.html
- Monthly conference calls for **State and Local Governments**
- Materials on past topics:
 - Using co-benefits to advance clean energy programs;
 - Urban heat islands, clean energy, and air quality;
 - Energy efficiency and peak electricity demand;
 - Plug-in hybrid electric vehicles;
 - Energy efficiency as a resource in forward capacity markets;
 - Helping localities advance state energy goals;
 - Energy efficiency in affordable housing; and
 - Integrated gasification and combined cycle plants and carbon sequestration.
- Tentative upcoming topics:
 - State emerging technology programs;
 - Utility incentives to advance clean energy;
 - Paths to zero load growth;
 - The Regional Greenhouse Gas Initiative and clean energy;
 - Energy efficiency portfolio standards design and implementation; and
 - Advanced metering.

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EPA Guidance on Clean Energy in Air Quality Plans

- **Incorporating Emerging and Voluntary Measures in a SIP – ‘Umbrella Policy’** (September 2004)
 - Supercedes voluntary measures policy for stationary/area sources
- **Guidance on SIP Credits from Energy Efficiency and Renewable Energy Measures** (August 2004)
 - Flexible framework for quantifying AQ benefits
- **Bundled Measures Policy** (August 2005)
 - Allows performance verification of entire bundle, rather than each individual measure.
- **Ozone and PM Potential Measures List**
- ***Several EPA Offices are currently working together to make these options more clear and administratively easier (forthcoming)***

State Experience with Clean Energy in Air Quality Plans

- State Air Quality Officials are including EE/RE in their State Implementation Plans
 - NOx Set-asides for EE/RE
 - SIPs:
 - Dallas TX – EE Programs (proposed 1 hr O3)
 - DC – MD Wind Purchase (approved 1 hr O3)
 - Shreveport LA – EE retrofits in Municipal Buildings (approved O3 Early Action Compact)
 - DC – LED Traffic Lights & other EE (proposed 8hr O3)
 - OTC High Electric Demand Day (CT DE MD NJ NY PA) (in progress)
 - Dallas TX – more EE & Wind (in progress)

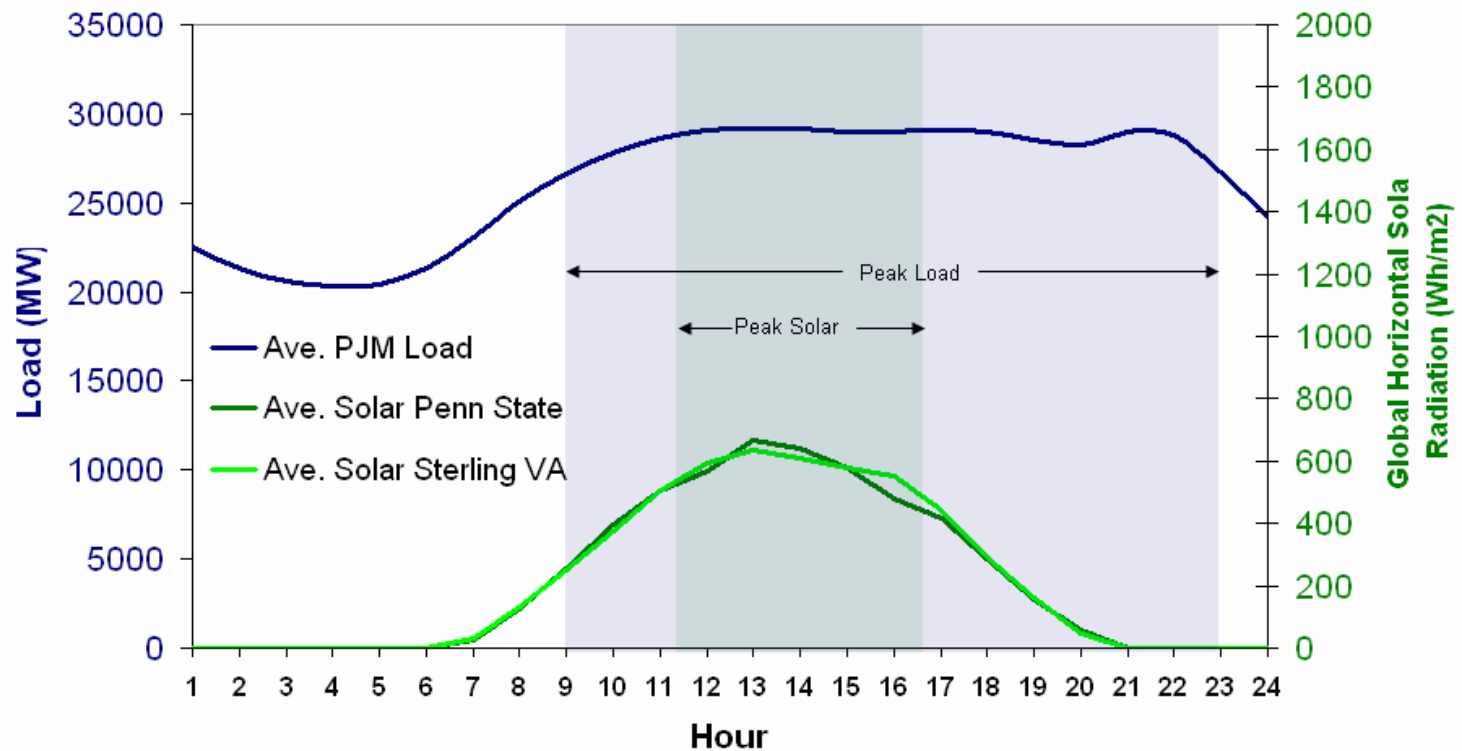
High Electric Demand Day

- Initiated by the Ozone Transport Commission
 - High correlation between:
 - hot, sunny summer days
 - high electric demand
 - high emissions from electric generators
 - poor air quality
 - EPA provided some analysis:
 - Energy Efficiency
 - Combined Heat and power
 - Demand Response
 - Solar PV
 - MOU 3/2007 committing to emission reduction targets on HEDD - CT DE MD NJ NY PA



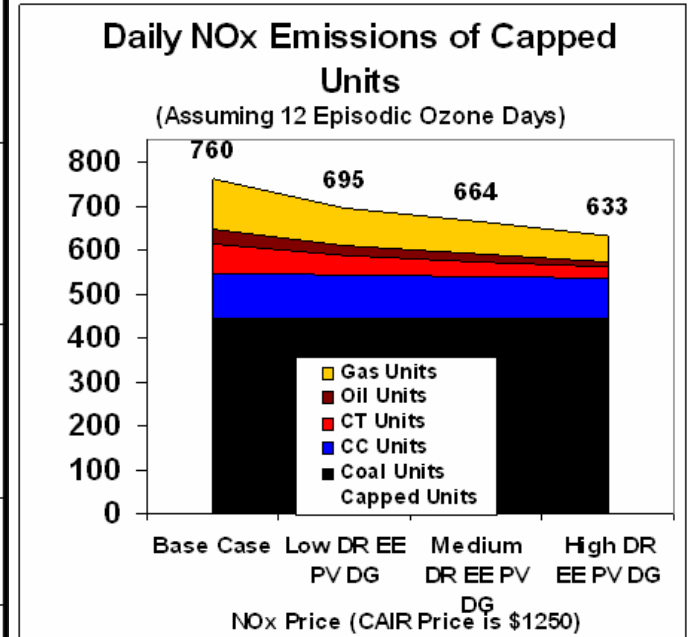
High Electric Demand Day

Average PJM Load Curve and Corresponding Solar Radiation
at Two Locations
During the Top 30 Daily Loads in the 2000 Ozone Season



High Electric Demand Day

2010 <i>Measures beginning in 2008</i>	Low	Medium	High
Energy Efficiency (EE)	1% cumulative reduction in load (1,083 MW at peak)	1.5% cumulative reduction in load (1,624 MW at peak)	2.0% cumulative reduction in load (2,166 MW at peak)
Demand Response (DR)	3% reduction at peak hours (3,216 MW at peak)	4% reduction at peak hours (4,266 MW at peak)	5% reduction at peak hours (5,306 MW at peak)
Solar PV, installed capacity	56 MW	112 MW	168 MW
Clean Distributed Generation (DG) in CHP mode, installed capacity	771 MW	1,884 MW	2,975 MW



Conclusion

- State and Local Governments are doing a lot to achieve the multiple benefits of Clean Energy:
 - Economic Benefits
 - Air quality and public health improvements
 - GHG emission reductions
- EPA is providing technical analysis and informational resources to assist State and Local Governments in implementing effective programs.

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- Website:
www.epa.gov/cleanenergy/stateandlocal

Question



What do you need?

Where are the informational gaps?

Can EPA help?