



# EPA's Clean Power Plan and potential benefits for affordable housing

May 12, 2015

**Presented by the Green Affordable Housing Coalition**

**<http://greenaffordablehousingcoalition.org/>**

# Who Is NHC?

Since 1931, the National Housing Conference (NHC) has been dedicated to helping **ensure safe, decent and affordable housing for all in America.**

NHC actively **engages and convenes** its membership in nonpartisan advocacy for **effective housing policy solutions** at the local, state and national levels. Our **Center for Housing Policy** provides policy-relevant **research**, and we offer **communications** tools for using values-based messaging.

NHC draws its **membership** from **every housing industry segment**: developers, advocates, investors, managers, lenders, nonprofits, realtors, state and local housing agencies, associations, and more.



## About GAHC

The Green Affordable Housing Coalition is a national action network that fosters collaboration and advocates for the development and preservation of green affordable housing.



<http://greenaffordablehousingcoalition.org/>

# Agenda

- Introduction
- Overview of the Clean Power Plan
- Potential impacts for multifamily affordable housing
- Who's involved with the Clean Power Plan at the state level?
- Discussion
- Next steps and resources
- Q&A

# Questions and technical details

- A link to view the presentation and download slides will be emailed to everyone who registered
- Ask us questions via the Questions box in your GoToWebinar module
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# **Affordable Multifamily Housing and the EPA's Clean Power Plan**

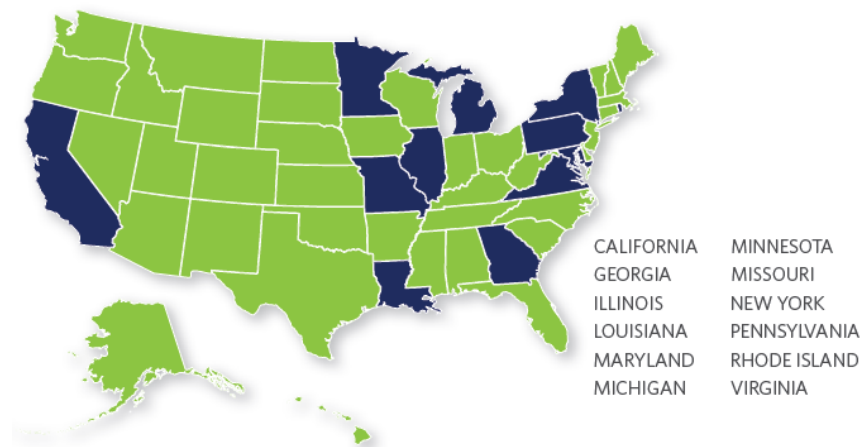
Todd Nedwick – National Housing Trust

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# About EEFA

**EEFA is making multifamily homes healthy and affordable through energy efficiency by:**

- Building an effective national network among energy efficiency and affordable housing professionals.
- Supporting the work of state and local stakeholders in 12 states to expand energy efficiency programs.
- Improving utility energy efficiency programs so they provide the necessary tools, financial incentives, and administrative ease to drive investments in affordable multifamily buildings.
- Supporting building owners and operators looking for opportunities for energy efficiency upgrades or navigating the retrofit process.



**WORKING TO REACH 5 MILLION  
HOMES IN TWELVE STATES**



# EPA's Proposal

- National target: estimated CO<sub>2</sub> emissions reduction of 26% below 2005 baseline by 2020, 30% by 2030
- Benefits far outweigh the costs as estimated by EPA:
  - Climate and health benefits = \$55 to \$93 billion in 2030, while costs are estimated to be between \$7.3 - \$8.8 billion that year.
  - Pollution that leads to soot and smog will be cut by over 25% in 2030; for every dollar invested, American families will see up to \$7 in health benefits
    - Avoids 2,700 to 6,600 premature deaths and 140,000-150,000 asthma attacks in children
  - Electricity bills will be about 8 percent lower from increased use of energy efficiency, saving average families \$8 on monthly residential electricity bills.

# Proposal Components

**The proposal has two main elements:**

1. State-specific CO<sub>2</sub> emission rate goals - two-part goal structure, with an “interim goal” that states must meet on average (2020-2029) and a “final goal” that must be reached by 2030.
2. Guidelines for the development, submission and implementation of state plans.

EPA sets state-specific CO<sub>2</sub> goals, but does not prescribe how a state should meet its goal.

# Calculating a State's Emissions Target

Best System of Emissions Reduction (BSER) based on a range of measures falling into four main categories, or “building blocks.” – these determine the state goal

**TABLE 1: SUMMARY OF THE BSER BUILDING BLOCKS**

BUILDING BLOCKS		DESCRIPTION	ASSUMPTIONS FOR GOAL SETTING FORMULA	NET COST ESTIMATE (\$/METRIC TON)
1	<b>Making existing coal plants more efficient</b>	Reducing the carbon intensity of generation at individual affected EGUs through heat rate improvements	Average heat rate improvement of 6% for coal steam electric generating units (EGUs)	\$6 to \$12
2	<b>Using Existing Gas Plants More Effectively</b>	Reducing emissions from the most carbon-intensive affected EGUs in the amount that results from substituting generation at those EGUs with generation from less carbon-intensive affected EGUs (including NGCC units under construction)	Dispatch to existing and under-construction natural gas combined cycle (NGCC) units to up to 70% capacity factor	\$30
3	<b>Increased Renewable and Nuclear</b>	Reducing emissions from affected EGUs in the amount that results from substituting generation at those EGUs with expanded low- or zero-carbon generation	Dispatch to new clean generation, including new nuclear generation under construction, moderate deployment of new renewable generation, and continued use of existing nuclear generation	\$10 to \$40
4	<b>Increased End-use Energy Efficiency</b>	Reducing emissions from affected EGUs in the amount that results from the use of demand-side energy efficiency that reduces the amount of generation required	Increase demand-side energy efficiency to 1.5% annually	\$16 to \$24

# NRDC's Assumptions

## Renewables

- Modest assumptions, based on existing generation and commitments.
- Scale varies by region.
- Doesn't always consider the potential for future builds.

## Nuclear

- Accounts for 6% of the existing nuclear fleet in baseline.
- States are incented to retain existing nuclear plants.
- Does not address the safety or economic status of particular nuclear plants at risk of closing.

## Energy Efficiency

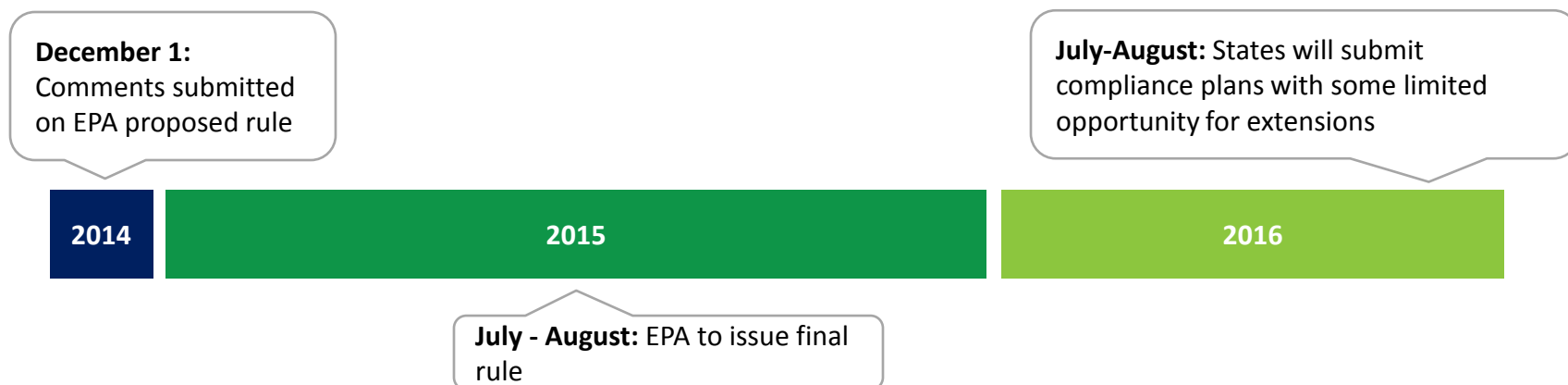
- **Assumes expansion of programs to 1.5% annual savings.**
- **Ramps-up at 0.2% per year.**
- **Assumes high program costs and short measure life, so underestimates the reductions achievable, cost-effectively, from reduced consumption.**

## Rate Based vs Mass Based Carbon Reduction Strategies

Rate Based Target	Mass Based Target
Each state has an emissions rate goal, in pounds of carbon dioxide per megawatt hour	States have an option to translate (rate) goal into a mass-based goal, measured in pounds of carbon dioxide.
Utilities receive credits for reductions in their emissions rates.	The regulating agency issues allowances (tons) equal to the emissions limit; allowances can be auctioned or allocated and fossil power plants have to hold an allowance for every ton of emissions.
Utilities that emit above the intensity (rate) standard have to buy credits from other resource types that operate below the standard.	Higher emitting generators become less competitive than low or non-emitting resources over time;
Energy Efficiency will be credited based on units of energy saved (MWh).	Energy efficiency and renewables programs and policies, which will reduce the cost of achieving the carbon goal and can be funded through the auction of allowances.
State and utility energy efficiency programs would be the essential source of efficiency credits and should be expanded by the utility regulator to meet compliance target.	Revenue generated from auctioned allowances can be leveraged and used to benefit consumers, with energy efficiency being a preferred investment, as it reduces consumers' bills and lowers the cost of the program as a whole.

**It's important to understand which strategy is being proposed in your state so you can choose the appropriate advocacy approach.**

# What's happened and Next Steps



## EPA is proposing to evaluate and approve state plans based on four general criteria:

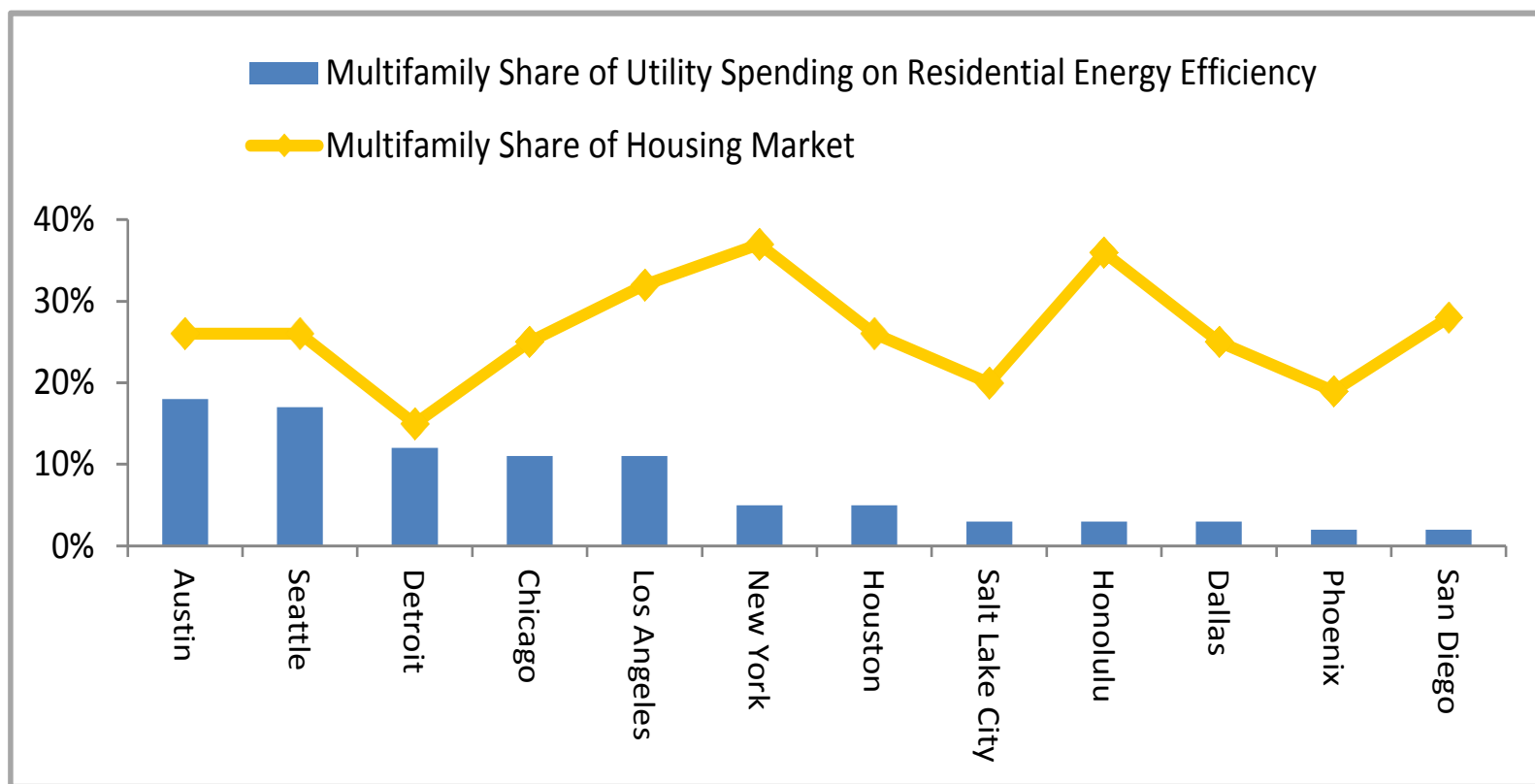
1. Enforceable measures that **reduce CO2 emissions** from existing power plants;
2. Projected achievement of EPA's state-level goals, on EPA's timeline;
3. **Quantifiable and verifiable** emission reductions; and
4. A process for biennial reporting on plan implementation, progress toward achieving CO2 goals, and implementation of corrective actions, if necessary

# How To Engage

- Once the final federal standard is released, states will have 1 year to draft **State Implementation Plans**
- Planning will most likely be led by the state Department of Environment; however, a number of state legislatures are currently considering legislation that would impact how state plans are developed and approved.
- The Federal rule will require States to demonstrate a certain level of community engagement in developing implementation plans.

**Affordable housing groups can be a powerful voice to bolster energy efficiency as a federal and state implementation priority.**

# Role of AMFH in state plans



Source: ACEEE



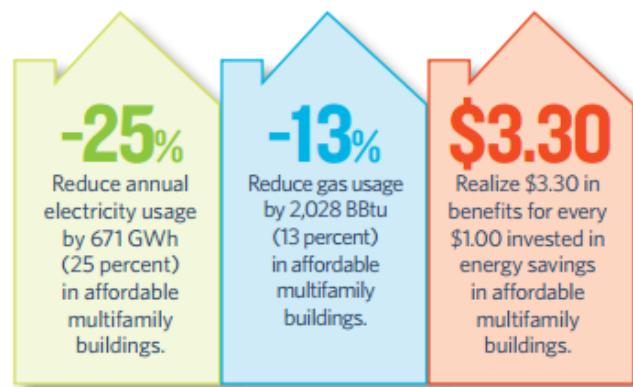
# The EE Potential In AMFH

- New study finds significant energy savings potential in AMFH in 8 states.
- States studied are GA, IL, MD, MI, MO, NY, PA, and VA.
- The total benefits to society from pursuing energy efficiency in affordable multifamily housing substantially exceed the costs.

**Read the report:  
“Potential for Energy Savings”**

<http://www.energyefficiencyforall.org/potential-energy-savings>

**THE STUDY DETERMINED THAT BY 2035,  
PENNSYLVANIA COULD COST-EFFECTIVELY:**



**CUMULATIVE MAXIMUM ACHIEVABLE ELECTRIC SAVINGS POTENTIAL BY UTILITY  
SERVICE TERRITORY, 2015-2034**



# Carbon Savings Potential in AMFH

- We converted our energy and cost savings potential study to maximum achievable carbon reduction (electricity only)
- There is significant carbon savings potential in the affordable multifamily sector in every state studied.
- Particularly if we view the below data as % of a municipality or metro region rather than a state.

Affordable Multifamily Housing, Maximum Achievable Potential by 2030 (Electricity only)				
<i>State</i>	<i>Region</i>	<i>Program Savings (GWh)</i>	<i>EPA BB4 (GWh)</i>	<i>% of BB4 met by program</i>
Georgia	Southeast	681	12,149	6%
Illinois	Great Lakes/Atlantic, Upper MW	648	17,953	4%
Maryland	Great Lakes/Atlantic	503	4,654	11%
Michigan	Great Lakes/Atlantic	467	13,263	4%
Missouri	SE, Upper MW, Lower MW	305	8,741	3%
New York	Northeast	1,742	16,848	10%
Pennsylvania	Great Lakes/Atlantic	460	18,189	3%
Virginia	SE, Great Lakes/Atlantics	526	6,269	8%

## How AMFH has benefitted from existing greenhouse gas reduction programs

- **CA Cap-and-Trade Proceeds**
  - \$37.5 M in funding for low-income multifamily weatherization
- **Regional Greenhouse Gas Initiative (RGGI)**
  - \$620 M invested in energy efficiency across participating mid-Atlantic and Northeastern states
  - A number of states have dedicated funding to low-income multifamily weatherization

# Contact

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# Opportunities for Multifamily Energy Efficiency Under the Clean Power Plan

Recognizing Utility-led Multifamily Programs in State 111(d)  
Compliance Plans

Presented by Lauren Ross  
Senior Policy Analyst, Local Policy

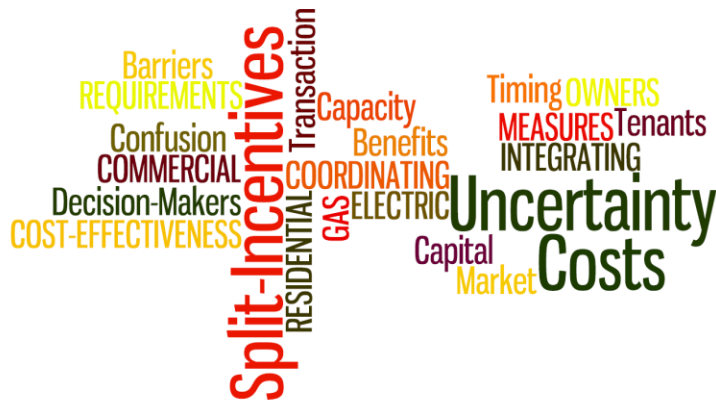
# The American Council for an Energy-Efficient Economy (ACEEE)

- 33 year old, nonprofit 501(c)(3) that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors (<http://aceee.org/>)
- Focus on end-use efficiency in
  - Industry
  - Buildings and Equipment
  - Utilities & Transportation
  - Economic Analysis
  - Behavior
  - Finance



# ACEEE's Multifamily Energy Savings Project: Ongoing and Upcoming Research

- Three-year project to improve the energy efficiency of multifamily housing nationwide
- GOAL: Expand the number of utilities offering multifamily energy efficiency programs and increase spending and savings for these programs.



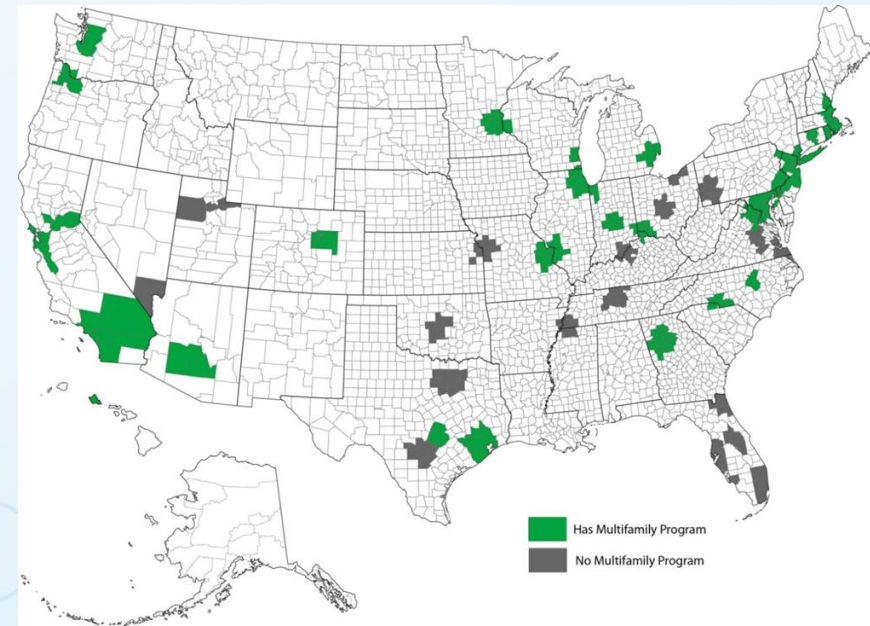
## Research:

- Financing for Multifamily Energy Efficiency: Needs Assessment (March 2015)
- The multiple benefits of energy efficiency in multifamily buildings (June 2015)
- Multifamily tenant behavior program pilot (May/June 2015)
- Series of technical assistance resources for utilities and their partners (see, <http://aceee.org/multifamily-project/resources>) (Ongoing)
- Multifamily and 111d – a policy guide (TBD)



# Making Multifamily Energy Efficiency Count Under the Clean Power Plan

- Multifamily buildings are often overlooked by traditional energy efficiency programs.
- In many metropolitan areas there is room to significantly expand or create new programs to better reach multifamily building owners and achieve greater savings.
- Successful multifamily retrofit programs can help to overcome traditional barriers by providing:
  - technical assistance
  - financing
  - qualified contractors
  - financial incentives



Source: ACEEE, *Scaling Up Multifamily Energy Efficiency Programs: A Metropolitan Area Assessment* (2013).



# Why Bother?

- Could lead to additional financial support for utility-led multifamily programs
- Helps create permanence for programs
- Could improve existing programs by increasing rigor and oversight
- Momentum could lead to new projects and programs
- Creates a link to broader state goals, such as economic development, public health, job creation, and environmental issues

# A Seat at the Table

## Question/background to consider when engaging with state officials:

- What energy efficiency policies and programs have already been adopted that serve the multifamily sector?
- What are the details of those policies and programs in terms of implementation dates, stringency, financial commitments, historic investments in energy efficiency, and important enforcement features?
- Is there any information on the energy impacts (projected and/or historical) of those energy efficiency policies in terms of energy saved and air emission impacts?
- Which organization or agency monitors and evaluates the energy impacts of those energy efficiency policies? Is there compliance or enforcement?
- What funding sources do the EE policies and programs depend upon?

**And... local partnerships are important !!**

# Thank you!

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# State- and Market-Driven Opportunities for Energy Efficiency in Affordable Housing

National Housing Conference Webinar

May 12, 2015

# + About NASEO

A national non-profit representing the 56 governor-designated energy officials from each state and territory.

State Energy Offices invest billions of dollars annually in a variety of priority areas, including:

- Efficiency in residential, commercial, industrial buildings;
- Renewable energy;
- Oil, gas, electricity production and distribution;
- New and emerging technologies and services;
- Energy emergency preparedness and resiliency; and
- Advanced transportation technologies, fuels, and infrastructure, among others.

Since 2013: Energy Foundation-funded project to promote peer-to-peer exchange among state energy and housing agencies on energy efficiency in affordable multifamily housing.

[www.naseo.org](http://www.naseo.org)

## Committees



Buildings



Government Affairs



Industrial and Advanced  
Manufacturing



Energy Security



Financing



Transportation



Fuels and Grid Integration



# Affordable Housing in CPP – Possibilities and Considerations

- Activities, conversation, and opportunities for scale-up are emerging both inside *and outside* of the investor-owned utility (IOU), ratepayer-funded arena.
- Look to market-driven, privately-delivered, state- and locally-delivered, and non-IOU (muni and coop) programs for opportunities.
  - Energy Services Company (ESCO) activity alone is a \$5 billion per year market (LBNL and NAESCO: <http://www.naesco.org/about>).
  - Property Assessed Clean Energy, Qualified Energy Conservation Bonds, Warehouse for Energy Efficiency Loans, and other types of state and local energy financing programs have brought billions more into the energy efficiency market. U.S. State Energy Program (SEP) funding through State Energy Offices has been leveraged significantly for innovative, state-supported financing. (NASEO Financing Tracker: <http://naseo.org/state-energy-financing-programs>) .
  - Federal investment from HUD, DOE Better Buildings, USDA Rural Development Multifamily Housing Energy Efficiency Initiative.
- Clean Air Agencies need confidence that energy efficiency projects will support state compliance efforts -- a strong, credible case that energy savings and resulting emissions avoidance are easy-to-understand, credible, real and dependable.



# NASEO CPP Approach

- NASEO has not taken a position on 111(d)
- Support inter- and intra- State Energy Office, Air Agency, and Utility Commission discussions before release of the proposed rule
- NASEO seeks—if the rule moves forward—to:
  - maintain electricity system reliability and affordability
  - ensure maximum compliance flexibility for states.
  - States should be able to use least cost compliance options, e.g., energy efficiency (both supply and demand side), distributed resources, demand response
- EPA should provide states the opportunity to use both state-overseen utility ratepayer efficiency programs and public and private non-ratepayer approaches (e.g., ESPC, Superior Energy Performance, building energy codes)



May 12, 2014

Gina McCarthy  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue NW  
Washington, DC 20460

Dear Administrator McCarthy:

On behalf of the National Association of Clean Air Agencies, the National Association of Regulatory Utility Commissioners and the National Association of State Energy Officials, we are pleased to submit to the U.S. Environmental Protection Agency the attached principles regarding the use of energy efficiency as a compliance measure under Section 111d of the Clean Air Act. As you know, while our associations may not all agree about other aspects of Section 111d (including whether it should go forward), we believe that state plans should allow demand side energy efficiency measures to be considered as a potential option.

Our three organizations have worked diligently over several months to accommodate the states' various interests, and we believe these principles set forth a road map that is worthy of consideration.

Please let us know if you and your staff are interested in discussing these matters in more detail.

Respectfully submitted,

Bill Becker  
Executive Director,  
National Association of  
Clean Air Agencies

Charles Gray  
Executive Director  
National Association of  
Regulatory Utility Commissioners

David Terry  
Executive Director  
National Association of  
State Energy Officials

cc: Janet McCabe  
Joe Goffman

*Energy Efficiency Principles and Joint Letter to EPA Administrator McCarthy : available at NASEO 111(d) Hub,  
<http://www.111d.naseo.org/>.*

# “3N” Discussions and Activities

- Energy Efficiency Compliance Pathways
  - NASEO-NARUC-NACAA (3N), major energy end-use and supply-side associations, and private sector/NGO partners (ACEEE, APPA, NRECA, etc).
  - Case studies and regulatory sample language for energy savings performance contracting; combined heat and power; Superior Energy Performance; building energy codes, residential ratepayer programs.
- National Energy Efficiency Registry
  - Support TN, GA, MI, MN, OR, PA collaboration proposing work with the Climate Registry and NASEO to create a national energy efficiency registry to use for existing and future state and federal air rules and energy planning (2015 – pending funding)
- Convening and Educating States
  - Two annual conferences: February 2015 (Washington, DC) and September 2015 (San Diego)
  - Spring Regional meetings







# Enforceability Considerations

- State compliance plan must
  - ✓ Identify entities responsible for compliance and other obligations
  - ✓ Include mechanisms for showing compliance; obligations met
  - ✓ Show legal mechanisms to address non-compliance
- Could have multiple compliance entities
  - Power plant owners (utility, non-utility)
  - Distribution utilities
  - Third party program administrators
  - State agencies and authorities
- Issues
  - Mass v. rate basis affects enforceability and EM&V scrutiny
  - Differing utility structures: investor-owned, co-op, public power
  - Non-ratepayer EE (e.g., energy codes, ENERGY STAR, CPACE, ESPC)
  - Multistate complexities
    - Interstate (and international) electricity trade—credit for reductions
    - Multistate collaboration: joint plan v. “common elements” approach



# Opportunities for Action on Energy Efficiency

- EE advocates (whether from the affordable housing community or elsewhere) should:
  - familiarize themselves with what air regulators need to address;
  - be able to make a strong, credible case that energy savings and resulting emissions avoidance is credible/real and dependable (and can meet criteria of being quantifiable, verifiable, “enforceable”); and
  - make it easy for air regulators to understand and include efficiency.
- Familiarize state agencies with your projects and programs by sharing information, data, and your understanding of how your efficiency work can support compliance under Section 111(d).



+ Thank you!

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National Association of State Energy Officials

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