

# EPA's Proposed Clean Power Plan and Multi-State Cooperation

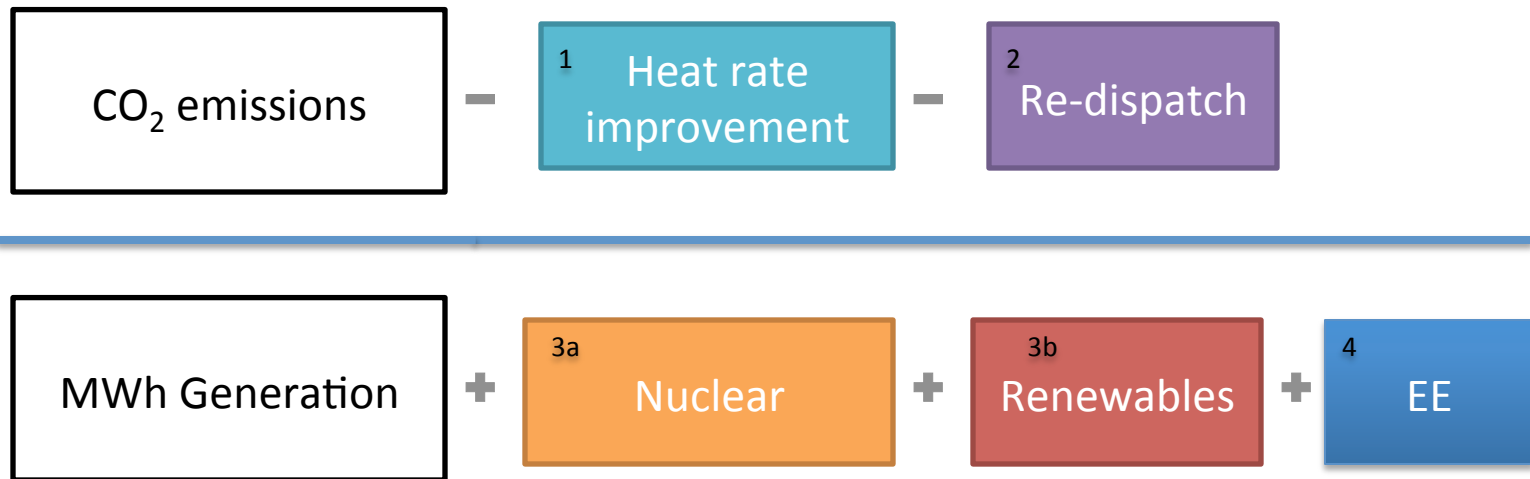
Jeremy M. Tarr

Shaping the Southeast's Energy Future:  
Regional Electricity Trends and the EPA's Clean Power Plan

September 26, 2014 | Atlanta, GA

# Building Blocks

2012 Fossil Units



# State Emission Goals

Heat Rate Improvement	Re-dispatch Natural Gas	Nuclear	Renewables	Energy Efficiency
<ul style="list-style-type: none"> <li>• 6% HRI</li> <li>• Existing coal units</li> <li>• Reduce CO<sub>2</sub></li> </ul>	<ul style="list-style-type: none"> <li>• Re-dispatch from coal to existing NGCC.</li> <li>• Increase utilization up to 70% of capacity.</li> <li>• Reduce CO<sub>2</sub></li> </ul>	<p><u>At-Risk Capacity</u></p> <ul style="list-style-type: none"> <li>• 6% of 2012 nuclear capacity</li> <li>• Add MWh</li> </ul> <p><u>Units Under Construction</u></p> <ul style="list-style-type: none"> <li>• Not operating in 2012.</li> <li>• Add MWh.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply regional, annual RE growth rate to state 2012 RE levels.</li> <li>• RE grows until state hits RE MWh equal to 10% of 2012 generation or reaches 2029.</li> </ul>	<ul style="list-style-type: none"> <li>• Assumes annual increases in EE savings based on EE growth in top-performing states.</li> </ul>

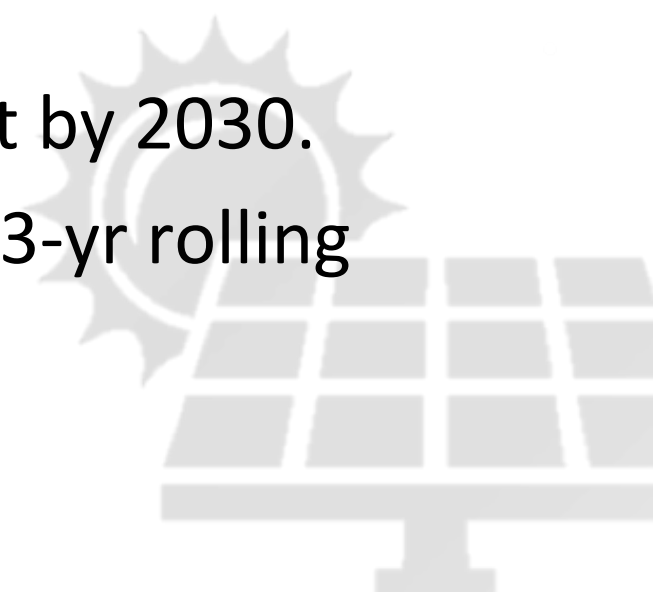
# State Emission Goals

## Interim Goal

- 10-year ave. adjusted emission rates (2020–2029)
- Compliance measured in 2030

## Final Goal

- 2029 adjusted rate.
- Plan must show 1-yr achievement by 2030.
- Measure ongoing compliance on 3-yr rolling average starting in 2033.

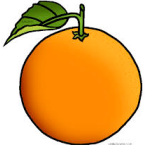


# State Emission Goals

Goals in Context

**44% Reduction!!!**

2012 Affected Fossil	EPA Building Blocks	Final Goal	Projected Adjusted Rate
1600 lbs. MWh	$\begin{array}{c} - \text{Heat rate improvement} - \text{Dispatch shifts} \\ + \text{Nuclear} + \text{RE} + \text{EE} \end{array}$	900 lbs. MWh	? lbs. MWh



# State Emission Goals

## Goals in Context

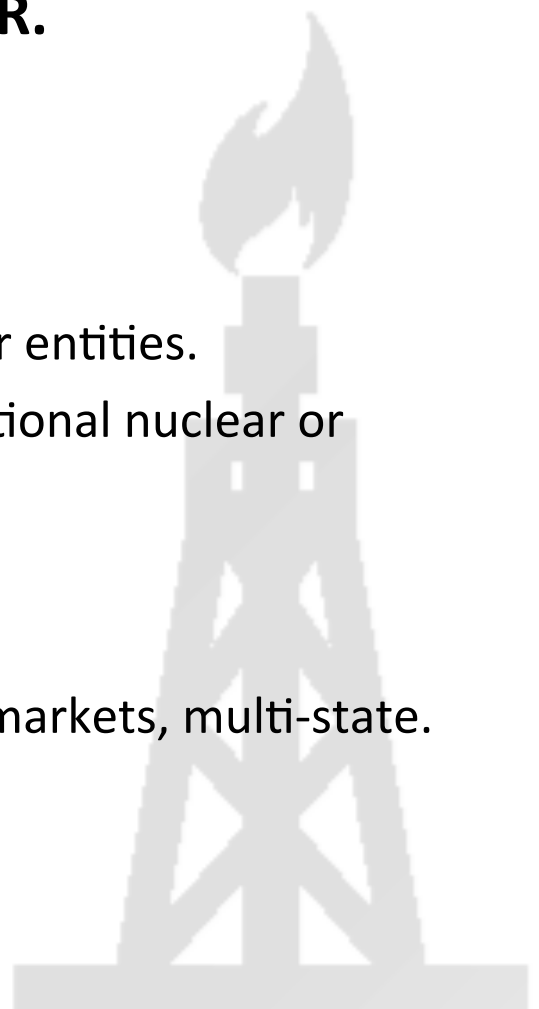
Final Goal	Projected Adjusted Rate
$\frac{900 \text{ lbs.}}{\text{MWh}}$	$\frac{? \text{ lbs.}}{\text{MWh}}$



- 6% of existing 2012 nuclear capacity.
- Nuclear under construction
- MATS retirements
- RE generation, plans
- Energy Efficiency

# State 111(d) Plan

- **State Plan:** projects achievement of emission goals.
- **Rules for compliance are different than BSER.**
  - Not confined to BB methods or assumptions.
  - Get credit for extended impacts.
- **State Flexibility**
  - **Compliance obligation:** power plants, state, other entities.
  - **Measures:** Building blocks, new NGCC units, additional nuclear or uprated units, biomass, etc.
  - **Timing:** When measures implemented.
  - **Form:** Rate- or mass-based standard.
  - **Implementation tools:** State policy, PUC orders, markets, multi-state.



# State 111(d) Plan

- **Limits on Flexibility**
- **State choices matter**
  - Economic development
  - Electricity prices
  - Reliability
  - Fleet diversity
  - Dispatch
  - Vulnerable populations
  - Political realities
  - State energy resources
  - Current state policies
- **Multi-state cooperation**



# State 111(d) Plan

## Spectrum of Multi-state Cooperation

Individual-  
State Plan

Multi-state:  
Joint Demonstration

Middle-Ground Options



# State 111(d) Plan

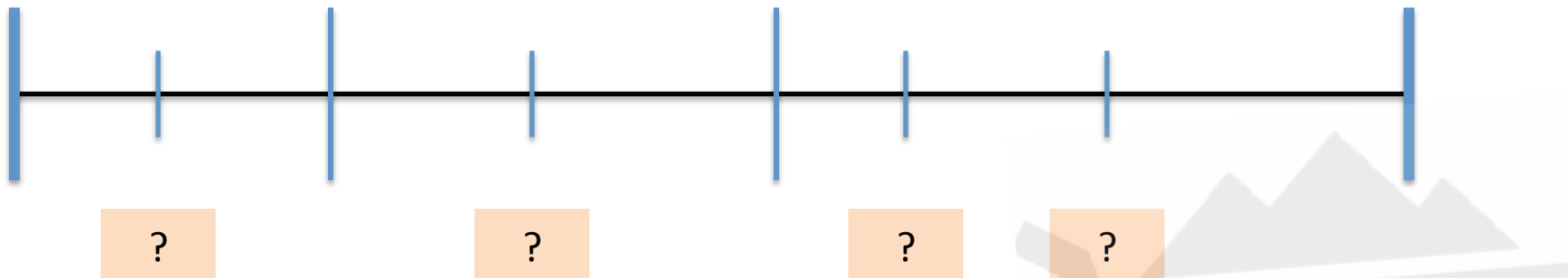
## Spectrum of Multi-state Cooperation

**Individual-  
State Plan**

**Indiv.-State Plan:**  
Agmt on cross-state  
impacts

**Partial-State Plan:**  
Balancing Area

**Multi-state:  
Joint Demonstration**



# Contact Information

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