

**NASEO**



*National Association of  
State Energy Officials*

*NASEO Perspective on Energy  
Efficiency, Codes and the CPP*

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**Building Codes Advocates Meeting**  
*December 1, 2015*

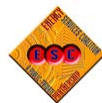


# ***About NASEO and State Energy Offices***

- **NASEO represents the 56 governor-designated energy offices from each state and territory. *State Energy Directors:***
  - Advise governors, legislatures, and regulators
  - Advance practical energy policies and support energy technology research, demonstration, and deployment
  - Partner with the private sector to accelerate energy-related economic development and enhance environmental quality
  - Engage in the development of state energy policies and the oversight of billions of dollars in state-based energy funding
  - Lead state energy policy planning in most states

# +NASEO's Affiliates

A robust and engaged network of +60 private-sector partners, including representatives from business, trade associations, nonprofit organizations, educational institutions, laboratories, and government.





# CPP Challenge

- New frontier for Clean Air Act
  - Modest CAA §111(d) experience; little CO<sub>2</sub> regulatory experience
- Complexity of electricity system
  - Interstate flows, changing technologies, reliability and affordability, environmental rules, varied utility regulation and governance (IOUs, co-ops, public power; integrated and deregulated)
- Multi-agency/jurisdiction relevance and responsibilities
  - State Energy Offices, Air Quality Agencies, Public Utility Commissions...and others—code officials
  - Relative unfamiliarity with each others' jobs and challenges
- Complexity of the rule
  - Just plain complex!
  - Flexibility and multiple state pathways good but comes with uncertainty
- ...did I mention a bit of political contention?

# + NASEO CPP Approach

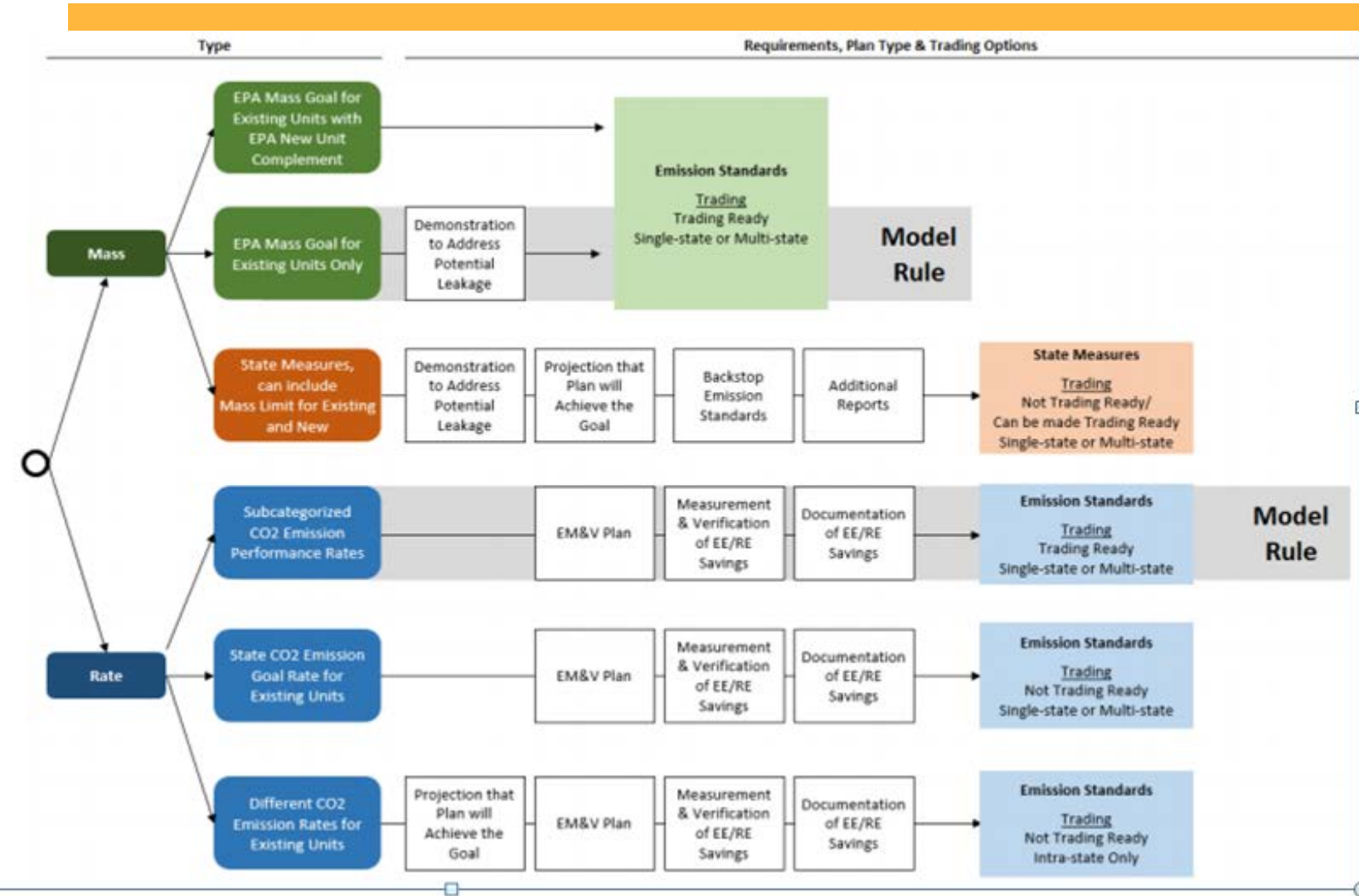
- NASEO has not taken a position on the CPP
- Supports inter- and intra-state discussion
  - State Energy Offices, Air Quality Agencies, PUCs
  - NASEO, NACAA, NARUC “3Ns” process
  - ...and wider stakeholder engagement
- Recognizes electricity system’s rapidly changing technological, regulatory, economic environment
- As CPP proceeds NASEO seeks:
  - electricity system reliability and affordability
  - compliance flexibility for states
  - least-cost and “no regrets” compliance opportunities
    - energy efficiency (supply and demand sides), distributed resources, voluntary actions
    - EE multiple benefits (\$, emissions, reliability, jobs) but challenges (awareness, rate structures, split incentives, first cost, quantification)



# CPP State Choices

- States will need to make basic compliance pathway decisions
  - Rate-based v. mass-based targets
  - Electrical generating unit (EGU)-only compliance v. state measures
  - Single-state compliance, multi-state trading of credits or allowances, or multistate plans
- Implications for compliance plan development
  - Who will have compliance obligations?
  - Federal v. state enforceability
  - Role of evaluation, measurement & verification (EM&V)
  - Tracking and trading of credits or allowances—intra-, inter-state
  - State policies—energy efficiency resource standards (EERS), renewable portfolio standards (RPS), trading or allocation of credits/allowances, rate design, energy planning, energy codes, etc.
  - What happens in case of underperformance?
- Many states have many questions

# + CPP State Pathway Options



[EPA graphic]



# + Energy Efficiency in CPP

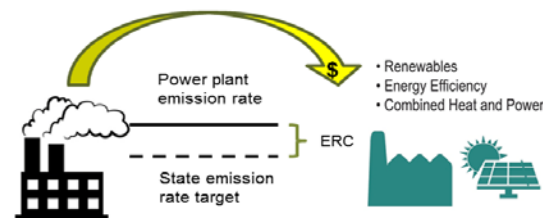
- EE “building block” removed but not relevant to compliance
- EPA encourages EE
  - Supports, recognizes ratepayer and non-ratepayer EE
  - Can work in both rate- and mass-based systems
  - Can be part of state measures approach
  - Simplified accounting—don’t need marginal emission impact nor interstate adjustment
  - Model rule, EM&V guidance, trading-ready
  - Clean Energy Incentive Program—low-income EE
- But
  - EM&V guidance complex—don’t let perfect be enemy of the good
  - EE won’t “happen automatically” under mass
  - EE omitted from proposed federal plan (rate-based)



# + Mass v. Rate-Based Approach:

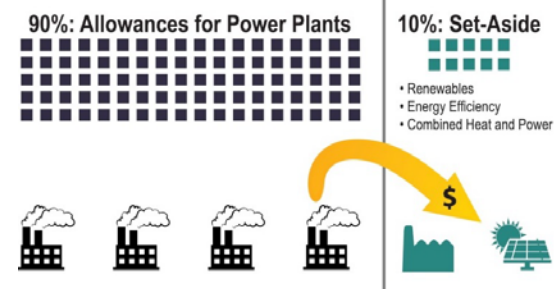
## ■ Rate-Based Approach

- Set emissions-rate target (lbs CO<sub>2</sub>/MWh)
- EE reduces demand from affected EGUs, so lowers emissions
- Earn emission rate credits (ERCs) to sell to EGUs
- Need EM&V, ERC tracking system



## ■ Mass-Based Approach

- Set mass target (tons CO<sub>2</sub>)
- EE should reduce emissions—automatically “counts”
- No EE “credit” but could have “set-aside” or other allowances allocation approach
- May need underlying EE drivers: EERS, codes, perf. contracting, etc.



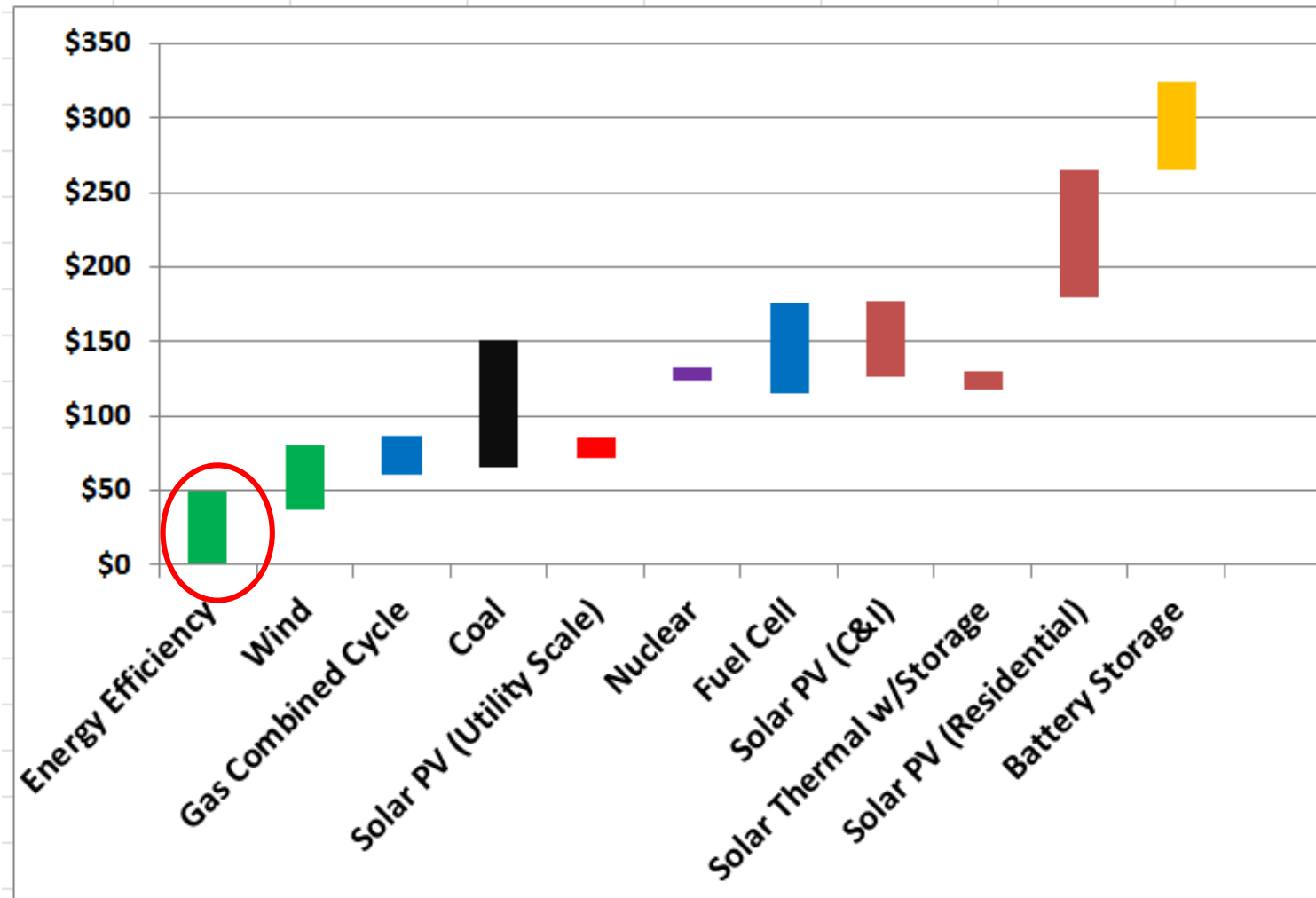
*Can't trade between rate and mass.*

# + Energy Efficiency Opportunities

- Electric utility ratepayer programs
  - Investor-owned, public power, and cooperative utilities
  - Avg. 4.6¢/kWh (LBNL); ~\$7B per year (CEE)
  
- Non-ratepayer policies and programs
  - **Codes** (more later)
  - Energy Savings Performance Contracts (ESPC)
  - Industrial efficiency (e.g., Superior Energy Performance)
  - Combined heat and power (CHP)
  - Energy financing programs (e.g., WHEEL, C-PACE)
  - Weatherization
  - Above-code construction, renovation, retrofit
  - Benchmarking, disclosure, retrocommissioning  
(...)



# Energy Efficiency Opportunities



[Levelized Cost of Electricity (\$/MWh), Lazard, Version 8, 2014]

# + NASEO CPP Activities and Next Steps

## ■ The 3Ns:

- NASEO, National Association of Clean Air Agencies (NACAA), National Association of Regulatory Utility Commissioners (NARUC) cooperation
- Discussions among SEOs, air regulators, PUCs
- Wider engagement with public, private, and NGO stakeholders
- 3N consensus Energy Efficiency Principles--reliability, national energy efficiency registry, early action
- 3N Efficiency Case Studies and Plan Language Meetings

## ■ Collateral and related products and efforts:

- NASEO EE Strategies for CPP Compliance Report, example plan language
- Energy Efficient Codes Coalition *CPP Energy Code Emissions Calculator*
- ACEEE templates and calculator
- CHP, ESCO/ESPC, Industrial EE papers and templates



# NASEO CPP Activities and Next Steps

- Continued 3N collaboration and events
- Broader engagement; state engagement
- NASEO-EPA National Call (August 2015)
- NASEO Annual Meeting and CPP Workshop (Sept. 2015)
  
- **CPP Resource Hub:** [cpp.naseo.org/](http://cpp.naseo.org/)
  - “Answers to State Questions” (“ASQ”) for SEOs and other state officials—with ACEEE, RAP, E4The Future
  
- DOE residential codes study: TX with SPEER
- EE Registry concept: Collaboration with The Climate Registry, E4TheFuture, states (DOE SEP award—TN lead)
- Others’ workshops, events
- Comments, engagement on proposed federal plan, EM&V guidance, Clean Energy Incentive Program



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