

CAA and Energy Efficiency  
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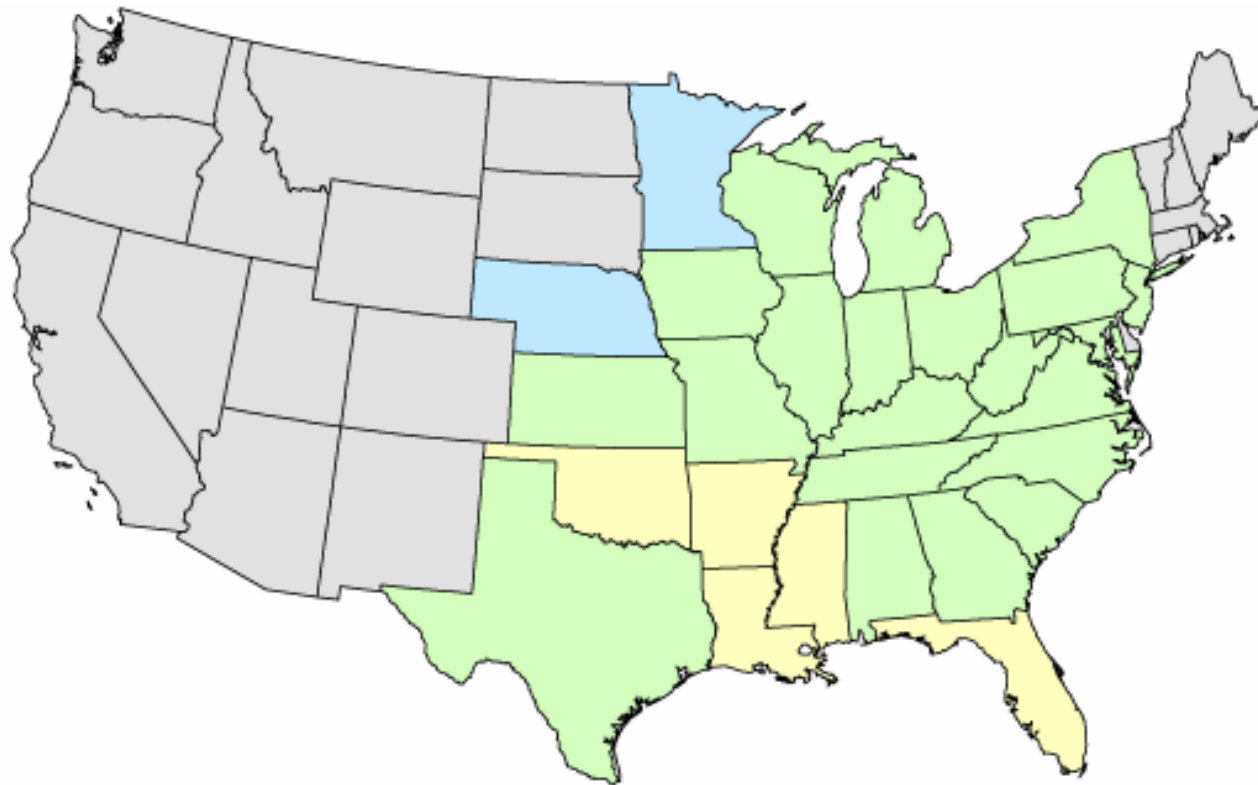
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# CSPAR

## Cross State Air Pollution Rule

- Addresses: Criteria pollutants (SO<sub>2</sub>, Nox and ozone)
- Affects: 27 eastern states
- Standard:
  - Reduces SO<sub>2</sub> 73% from 2005 by 2014
  - Reduces NO<sub>x</sub> by 54%
- Opportunity to make public case for EE and RE

# CSPAR



- States controlled for both fine particles (annual  $\text{SO}_2$  and  $\text{NO}_x$ ) and ozone (ozone season  $\text{NO}_x$ ) (21 States)
- States controlled for fine particles only (annual  $\text{SO}_2$  and  $\text{NO}_x$ ) (2 States)
- States controlled for ozone only (ozone season  $\text{NO}_x$ ) (5 States)
- States not covered by the Cross-State Air Pollution Rule

# SET-ASIDES UNDER CSPAR

- EPA final rule: states MAY do EE & RE set-asides
- SIP submittals [to replace FIP] for 2014 are due to EPA by the end of 2012.
- Need to act fast: Ask **the state** to set aside allowances for EE and RE

# CSPAR

- Total allowance value for NO<sub>x</sub> and SO<sub>2</sub> is estimated to be ~\$3.7 B in 2015 and ~\$4.7 B in 2020.
- Provides a sense of scale as to potential value of EE set asides
- If all states set-aside 10% on average it would = about \$400 million per year

# EPA Set-Aside Guidance

- U.S. EPA. 2004. Guidance on State Implementation Plan (SIP) Credits for Emission Reductions from Electric-Sector Energy Efficiency & Renewable Energy Measures.  
[http://www.epa.gov/ttn/oarpg/t1/memoranda/e\\_reseerem\\_gd.pdf](http://www.epa.gov/ttn/oarpg/t1/memoranda/e_reseerem_gd.pdf)
- US EPA, “Roadmap for Incorporating Energy Efficiency/Renewable Energy Policies into State Implementation Plans/Tribal Implementation Plans,” March , 2011,  
[http://www.epa.gov/airquality/pdfs/20110418eere\\_manual.pdf](http://www.epa.gov/airquality/pdfs/20110418eere_manual.pdf)

# What's It Worth

- Generalized Driver for EE and RE in Resource planning
- Implication: there is more yet to come
  - NAAQS
  - NSPS
  - Ratcheted CSPAR

# What is it worth?

If a set aside system was established, what value could EE & RE derive from participation?

- Depends on how the set aside is structured, and how many allowances will be available from non-set-aside sources
- Value should, however, over time, mimic cost of compliance through retrofit:
  - SO<sub>2</sub> = \$20/mWh [2¢/kWh]
  - NO<sub>x</sub> = \$ 6.50/mWh [.627¢/kWh]



# What's it Worth?

- EPA prediction on SO<sub>2</sub> allowance cost
  - \$600-1000/tonSO<sub>2</sub>
  - \$500-600 annual NO<sub>x</sub>
  - \$1300-1500 for seasonal NO<sub>x</sub>
- Total cost for NO<sub>x</sub> = combination of annual and seasonal NO<sub>x</sub> numbers
- UBS report: \$2000-3000/ton for all pollutants says