111(D) REQUIREMENTS FOR EXISTING FOSSIL-FUEL EGUs

NARUC Winter Committee Meetings

February 9, 2014

Paul Bailey
American Coalition for Clean Coal Electricity
NUMBERS

• Coal responsible for 39% of electricity generated during 2013.

• SO$_2$, NO$_x$, PM reduced by almost 90% per kWh.

• $118$ billion invested through 2013 to reduce emissions. Additional $27$ billion expected for emission controls between 2014 and 2016.

• 62,000 MW of coal have announced retirement by 2025 .... 51,000 MW linked to EPA policies.
COAL RETIREMENTS IN 33 STATES LINKED TO EPA POLICIES

Retirements
• U.S. electric sector has reduced CO₂ emissions by 16 percent below 2005 levels.

• Coal fleet CO₂ emissions have declined by almost 24 percent.

• EIA projects CO₂ emissions from coal fleet will be 19 percent below 2005 levels in 2020.
GHG EMISSIONS (billion tonnes/yr)

- Global GHG: 49
- China & India CO2: 11.4
- U.S. GHG: 6.7
- U.S. Coal CO2: 1.5
ACCE PRINCIPLES FOR CARBON REGULATION UNDER 111(D)

• Keep electricity affordable and reliable

• Base requirements on what is economically achievable at each generating unit

• Respect state primacy

• Avoid additional premature coal retirements and stranded investments

• Provide compliance flexibility and allow time for compliance

• Remove barriers to efficiency improvements
✓ Set inside-the-fence standards based on what is achievable at each coal-fired and gas-fired unit. Standards should not be based on fuel switching or reduced utilization.

✓ Once inside-the-fence standards are set, allow outside-the-fence flexibility measures to comply.
## Some Impacts of a System-Based Proposal

<table>
<thead>
<tr>
<th>Consumer costs</th>
<th>$116 Billion to $151 Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal retirements</td>
<td>35,000 MW to 83,000 MW</td>
</tr>
<tr>
<td>Cost of natural gas for non-electric sectors</td>
<td>$8 Billion to $54 Billion</td>
</tr>
<tr>
<td>Job losses</td>
<td>Less than 1,000/yr to 178,000/yr</td>
</tr>
<tr>
<td>Electric sector CO₂ reduction</td>
<td>12% to 23%</td>
</tr>
</tbody>
</table>
A FEW MAJOR POLICY CONSIDERATIONS

78 Republicans

✓ Fuel diversity
✓ Reliability/deliverability
✓ Compliance costs
✓ Energy price increases
✓ Stranded investments
✓ Climate change benefits