Happy Anniversary HEPG

Where have we been?
Where are we going?

Introductory Remarks
Betsy Moler
September 26, 2013
20 Years for Dummies

<table>
<thead>
<tr>
<th>Then (Circa 1993)</th>
<th>Now</th>
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<tbody>
<tr>
<td>• No Transmission Open Access</td>
<td>• Robust transmission open access</td>
</tr>
<tr>
<td>• Limited competition among generators</td>
<td>• Robust competition among generators</td>
</tr>
<tr>
<td>• Cost based power prices</td>
<td>• Competitive power prices</td>
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<tr>
<td>• No RTOs/ISOs; ltd. power pools</td>
<td>• RTOs/ISOs serve most of the US population; “seams” persist</td>
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<td>• Wholesale sales required FERC approved individual contractual authorization</td>
<td>• FERC provides blanket authority for commercial transactions</td>
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<tr>
<td>• No internet transactions</td>
<td>• Internet based commercial world</td>
</tr>
<tr>
<td>• No Federal reliability authority</td>
<td>• Mandatory reliability standards</td>
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<tr>
<td>• Incumbent utilities owned/governed the wires</td>
<td>• Transmission is a separate business; new entrants</td>
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<tr>
<td>• No Federal transmission siting authority</td>
<td>• Ineffective Federal transmission siting authority</td>
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Today’s Challenges

• Capacity Markets – The new competitive battlefield
  – What’s working?
  – What’s not?
  – Where do we go from here?
• Minimum Offer Pricing Rules
  – How should we deal with subsidized generation?
• Demand Side Management
  – How dependable is DSM?
  – How do we measure the baseline?
  – Is there such a thing as “too much” DSM?
Today’s Challenges (cont’d)

• Integrating “green” resources
  – Pricing subsidized resources in competitive markets (i.e., wind with a PTC)
  – Are subsidized resources killing competitive markets?
  – Variability, dispatch challenges
• Impact of Clean Air Act rules on the generation mix
  – Will there be massive coal plant and nuclear retirements?
  – Can anyone compete with natural gas?
  – Should economic regulators “care” about the generation mix?
• Transmission siting, especially multi-state
• What else?
Role of HEPG

• HEPG has played a vital role in the ongoing transformation of the electric sector
  – As a convener of thought leaders
  – Providing intellectual leadership and academic heft

• There are plenty of issues for another two – or twenty – years