Selected Slides on Competition and Electricity Markets

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Competition Policy

- Competition policy involves mixture of competition and regulation – seek best possible mixture
- Competition and regulation have different strengths and weaknesses
  - Costs: profit level regulation vs. cost control
  - Rules of the road
  - Investment: regulatory risk vs. contract certainty and reliance on market rules
  - Technology
  - Efficiency
  - Risk allocation: consumers vs. market participants
- Competition policy not an event – it is a process
Competition Policy

- How FERC introduced competition into wholesale power and gas markets
  - Open access to the networks
  - Functional unbundling
  - Deregulation of most wholesale gas sales
  - Market based pricing for wholesale power sales
  - Encourage greater infrastructure investment
  - Encourage new entry by power generators and gas producers
  - Increased transparency
  - RTOs/ISOs
Cumulative Increase in Capacity Resources over First Five RPM Auctions (2007 – 2011)

Total Increase = 9986.1 MW
Cumulative Increases in Capacity Committed to PJM In RPM Auctions

Andrew Ott, "Reliability Pricing Model (RPM) Overview", MACRUC Annual Education Conference; June 2, 2008
Recognizing “Best Practices” –
Core Criteria for Competitive Procurements

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<th>Procurements should be:</th>
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<td>Fair and Objective</td>
<td>Affects the selection of best offers and thereby the quality of participation, thus a competitive response</td>
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<td>Designed to encourage robust competition</td>
<td>Is supported through provision of adequate information to bidders, and reliance on appropriate safeguards and protections</td>
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<td>Built on relevant and accurate price and non-price factors</td>
<td>Depends upon identification of sound evaluation criteria and methods, and reliance on them in practice</td>
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<td>Administered in an efficient and timely manner</td>
<td>Depends on avoiding unnecessary administrative delays and burdens</td>
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<td>Supported by PUC processes aligned with competitive response and outcomes</td>
<td>Relies on having PUC practices and decisions that encourage competitive response and attractive results for consumers</td>
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Factors Which Have Led to Rising Power Plant Construction Costs

- Cost increases are due, in large part, to significant increase in worldwide demand for power plants. Demand for plants is straining supply of design and construction resources.
- Increased demand from China and India.
- Despite recent cancellations, there is strong U.S. demand for new power plants and pollution control projects for older plants.
- Limited capacity of EPC (Engineering, Procurement and Construction) firms and manufacturers.
- Fewer bidders for work, higher prices, earlier payment schedules and longer delivery times.
Factors Which Have Led to Rising Power Plant Construction Costs (2)

- Significant cost increases for critical power plant commodities.

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<th>Commodity</th>
<th>Average Annual Escalation Dec. 2003 – April 2007</th>
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<tr>
<td>Nickel</td>
<td>60%</td>
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<tr>
<td>Copper</td>
<td>69%</td>
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<td>Cement</td>
<td>12%</td>
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<td>Iron &amp; Steel</td>
<td>20%</td>
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- Wall St. Journal – Steel prices up 40% to 50% in 2008.

- Worldwide competition for resources and supply and manufacturing bottlenecks unlikely to clear in the foreseeable future.
Other Significant Coal Plant Cost Increases Announced in 2008

• Estimated cost of the Iatan 2 project in Missouri increased by 15% in April 2008. Project already under construction with completion due in 2010 - shows that even projects under construction are susceptible to increasing costs. (April 2008)

• Estimated cost of Duke Energy Indiana’s Edwardsport IGCC Project increased by 18 percent from spring 2007 to spring 2008. Company says costs increased when it went out for actual project contracts and procurement. (May 2008)

• Wisconsin Power & Light announced that estimated cost of proposed circulating fluid bed coal plant had increased to about $3,500/kW and that cost of an alternate supercritical coal plant also had risen to above $3,500/kW. These represented increases of approximately 38% since late 2006. In support, the company submitted testimony to the Public Service Commission which said that the EPC (Engineering, Procurement and Construction) costs of many coal-fired projects were in the range of $2,500/kW to $3,800/kW – that means a single 600 MW unit may cost between $2 billion to $3 billion, or more.