Resource Adequacy in MISO Zone 4

December 7th ICC Workshop
MISO is an independent, non-profit organization in 15 U.S. States and one Canadian province

MISO by-the-numbers

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<tbody>
<tr>
<td>High Voltage Transmission</td>
<td>66,000 miles</td>
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<tr>
<td>Installed Generation</td>
<td>180,000 MW</td>
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<tr>
<td>Installed Generation</td>
<td>1,600 Units</td>
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<tr>
<td>Peak System Demand</td>
<td>127,000 MW</td>
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Mission

Drive value creation through efficient reliability / market operations, planning and innovation

or restated

Enable the reliable delivery of least cost electricity to end-use consumers.
MISO’s Resource Adequacy Construct

• Annual Obligation for LSE’s
  – Planning Year period is from June 1st to May 31st
  – Multiple methods of achieving and demonstrating resource adequacy, including self-supply, bilateral contracting and market-based acquisition via the Planning Resource Auction.

• Overview of Planning Resource Auction
  – Occurs two months ahead of Planning Year
  – Residual Auction - allows buyers and sellers to balance resource portfolio prior to Planning Year
  – Includes a locational requirement indicating the amount of capacity that must be secured from resources within each zone to meet reliability standards
  – If there are insufficient resources to meet demand in the auction, Resource Adequacy may not be achieved.
Why Do We Need to Re-Evaluate Zone 4 Resource Adequacy?

- A market that solely delivers price signals reflecting short-term excess may be insufficient to signal the need to make long-term resource investments.
- Longer term, relatively stable price signals that reflect the true value of the resources are best suited to deliver lower costs to customers over time.

In 2022 a significant portion the Zone 4 requirement is met by price-sensitive and other higher risk resources

1. Resources owned or controlled by regulated utilities, munis, and co-ops, as well as nuclear units
2. Non utility owned generation and price responsive demand response
3. 35% of summer rated generation projects in the active in MISO generation interconnection queue
Questions