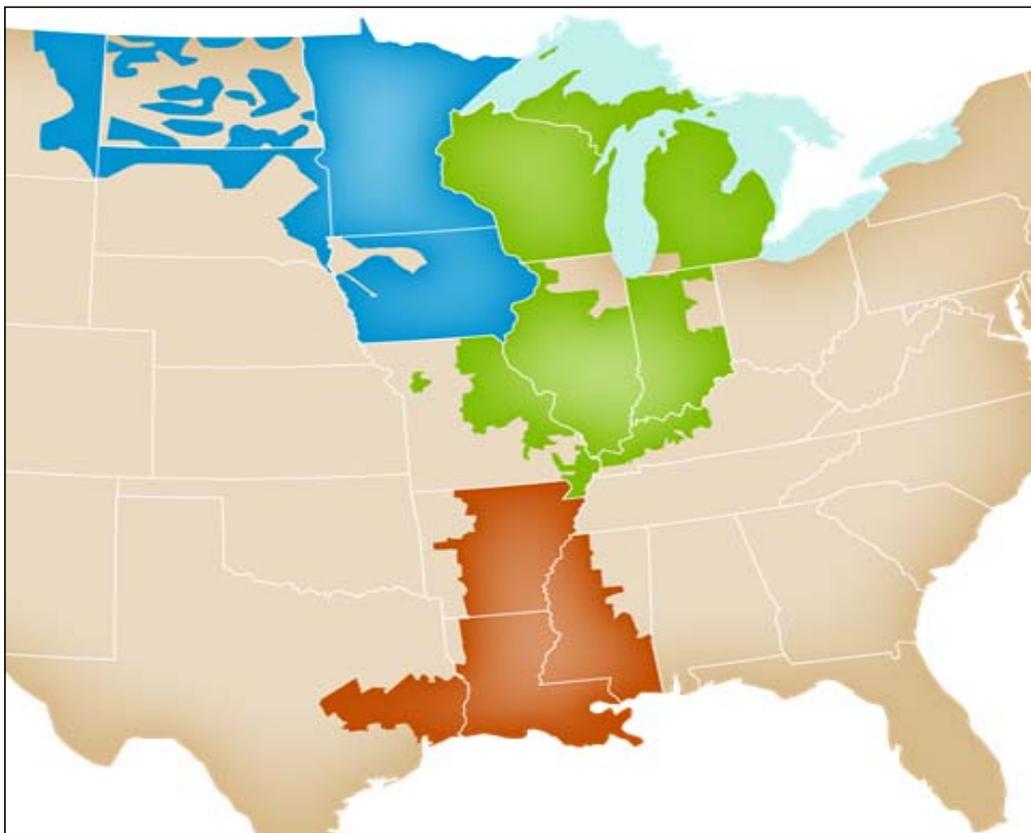




Resource Adequacy in MISO Zone 4

December 7th ICC Workshop

MISO is an independent, non-profit organization in 15 U.S. States and one Canadian province



MISO by-the-numbers

High Voltage Transmission	66,000 miles
Installed Generation	180,000 MW
Installed Generation	1,600 Units
Peak System Demand	127,000 MW

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.

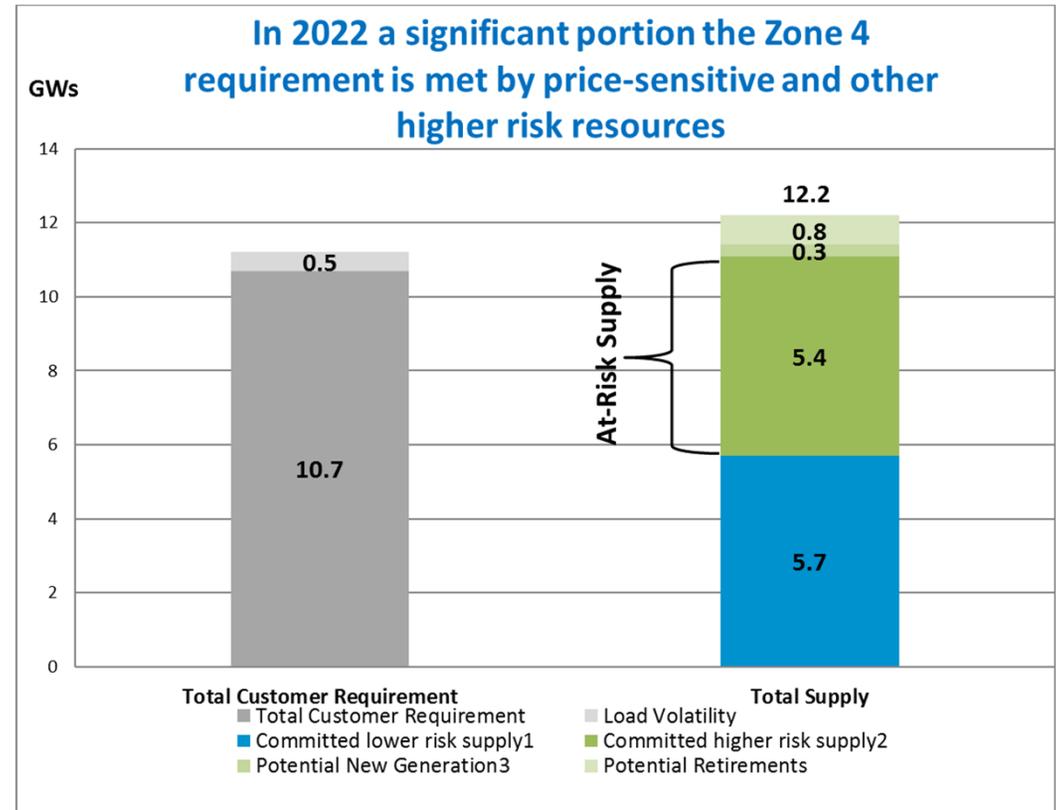
MISO's Resource Adequacy Construct

- 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.



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