



MISO Interconnection Updates

DOE Interconnection Workshop

Sept 4, 2024

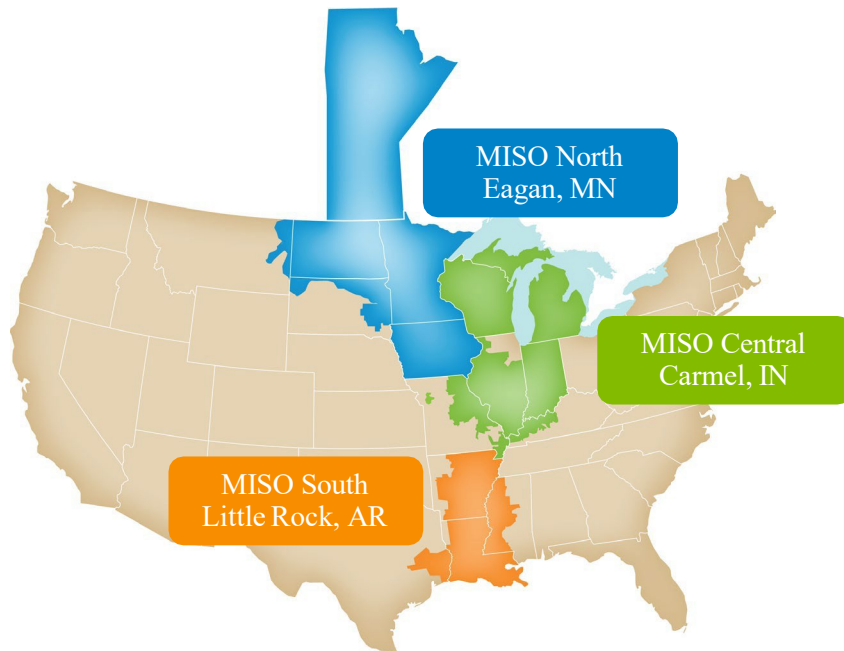
Executive Summary



Update on current activities in the MISO Interconnection team

- Implementing technology improvements to MISO's Phase 1 Queue studies
 - Faster Phase 1 studies
 - More automation and testing on technical application data
- Refiling of queue volume cap by end of 2024
 - Address the technical power flow problem. Generation being studied is larger the load
 - Take smaller “bites” of generation and study them faster

MISO Overview



MISO is an independent, not-for-profit, member-based organization responsible for keeping the power flowing across the region reliably and cost-effectively.

VISION

To be the most *reliable, value-creating* Regional Transmission Operator

MISSION

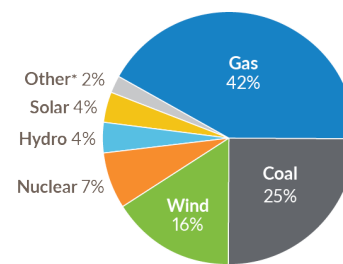
Work collaboratively and transparently with our stakeholders to enable reliable delivery of low-cost energy through efficient, innovative operations and planning

MISO Key Facts

Area Served	15 U.S. States and Manitoba, Canada
Population Served	45 Million
Transmission Line	75,000 Miles
Generating Units*	> 2,900
Record Demand	127.1 GW 7/20/2011
Wind Peak	25.6 GW 1/12/2024
Solar Peak	4.5 GW 2/19/2024
Members	54 Transmission Owners
	143 Non-transmission Owners
Market Participants	> 500
Market Transactions	> \$40 billion
Carbon Reduction	Approximately 32% since 2014

INSTALLED CAPACITY

December 2023

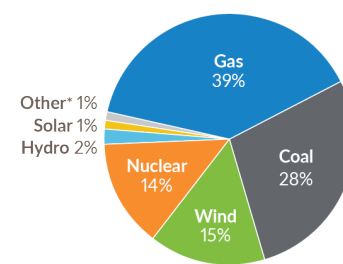


191 GW

*Other: Diesel, Biomass, Storage, Demand Response Resources

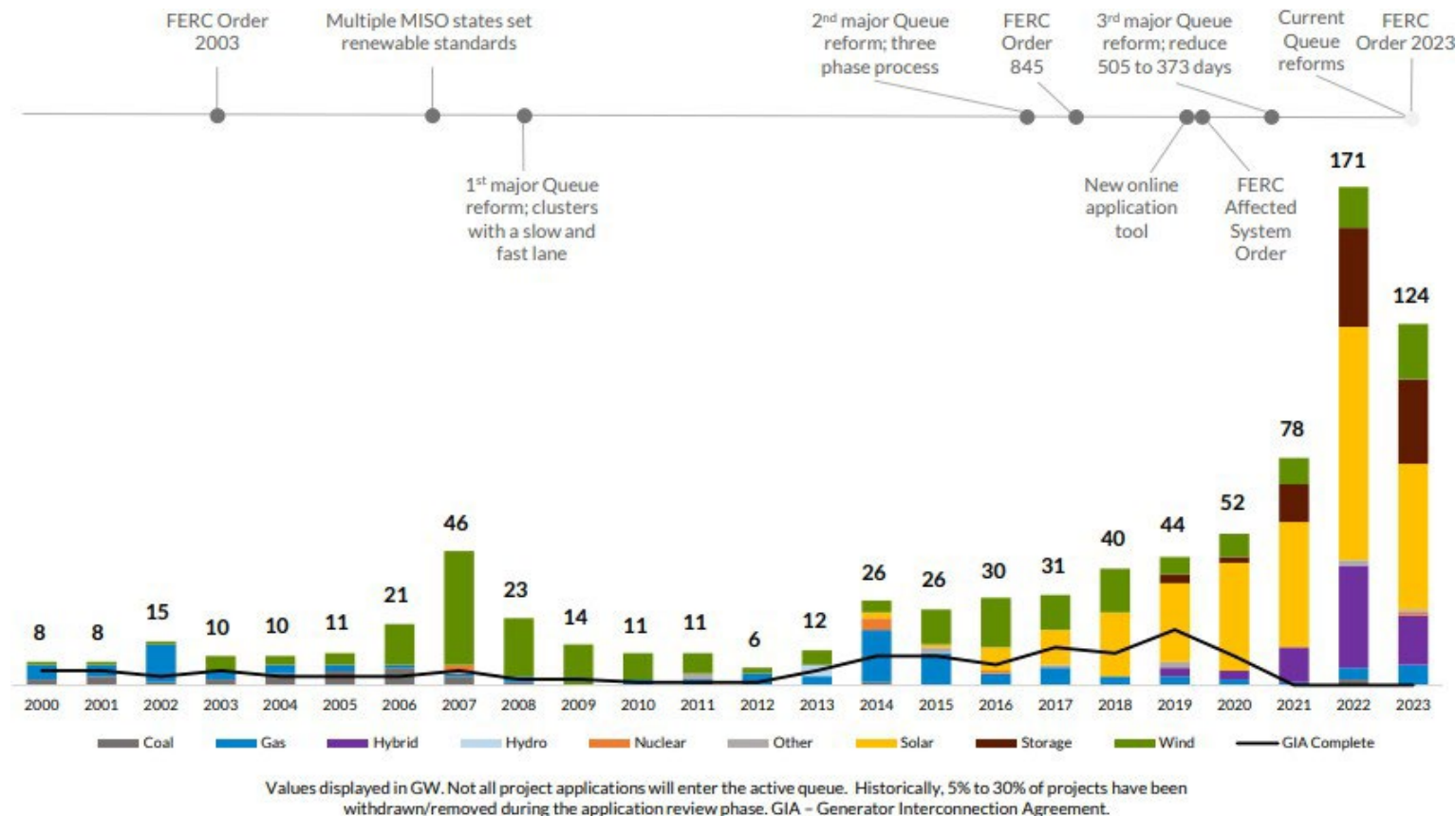
ENERGY PRODUCTION

January-December 2023



614 Million MWh

Significant new resources continue to be planned and approved, but few possess the required reliability attributes of retiring assets



Implementing a Queue Cap; Leveraging technology to eliminate the backlog will provide MISO the best opportunity to address load growth and resource adequacy

- File tariff changes by end of year; FERC approval
 - 50% of historical peak load per study region
 - Keep exemptions for PGIAs, Conversion to NRIS, Generator replacement
 - 3 exemptions per cycle (each RERRA) for State mandated resource adequacy concerns
 - Sliding fee scale (pay more depending on company applications)
- Implement in the next queue cycle

Implement volume cap to enable MISO to meet tariff timelines



- Create data exchange and implement SUGAR application (*Suite of Unified Grid Analyses with Renewables*)
 - Live data Quality Assurance
 - Perform Power flow analysis
 - Determine, validate and cost allocate Network Upgrades
- Implement to make available for next queue cycle

Implement Phase 1 automated studies





Questions?