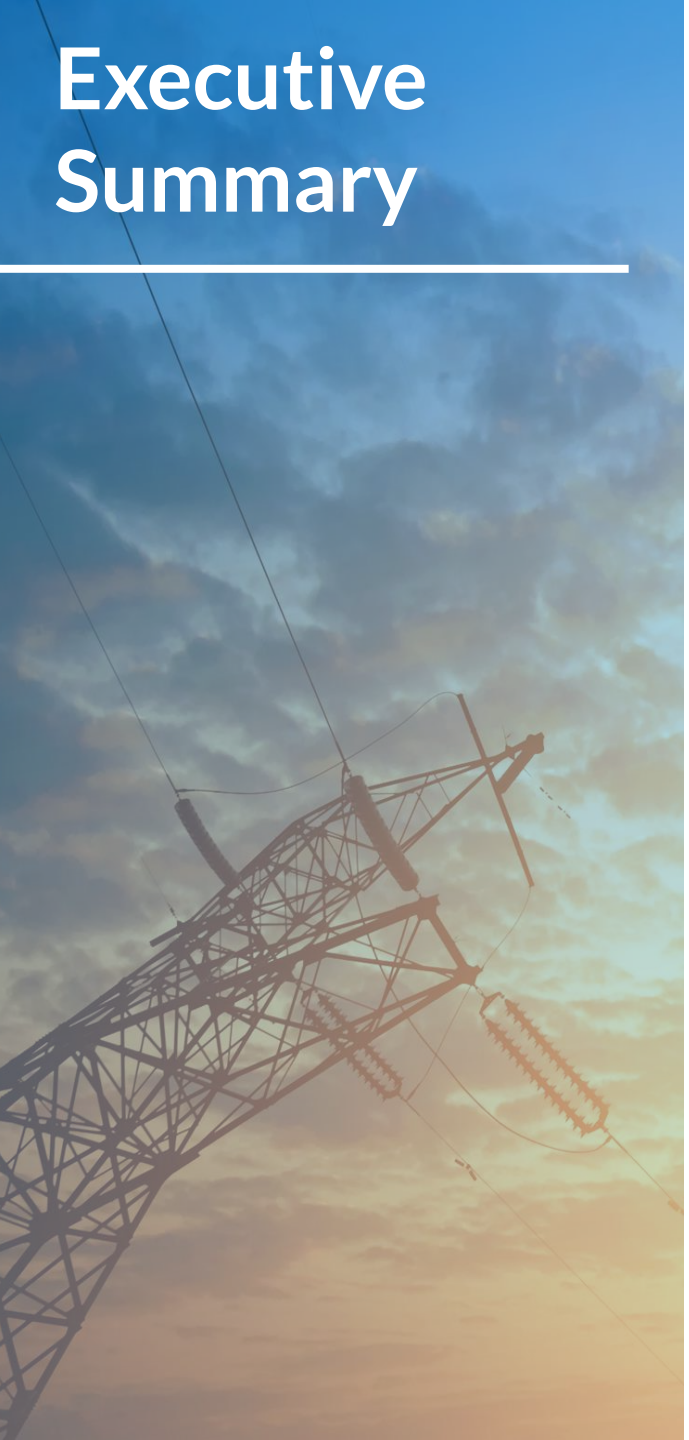
MISO

Missouri Public Service Commission Quarterly Update

August 19, 2026

Executive Summary

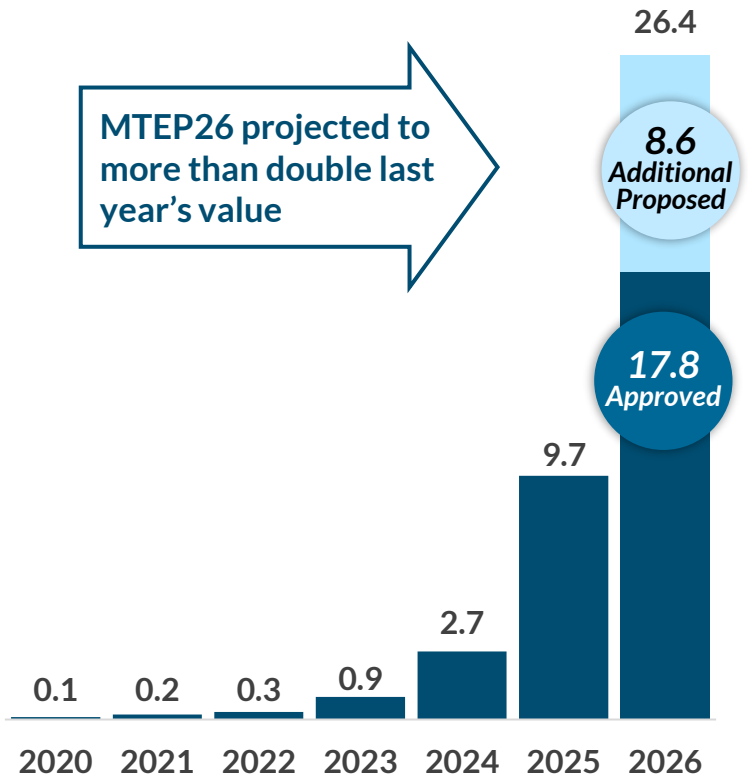


- Load Forecast & GIA Queue…….(Bob Kuzman)
- System Operations Update……..(JT Smith)
- Transmission Planning Update…... (Laura Rauch)
- FERC Show-Cause Order……(Mike Kessler)

Load additions and forecasts continue to accelerate rapidly, driving unprecedented increases in near-term and long-term system needs

Large loads are increasing

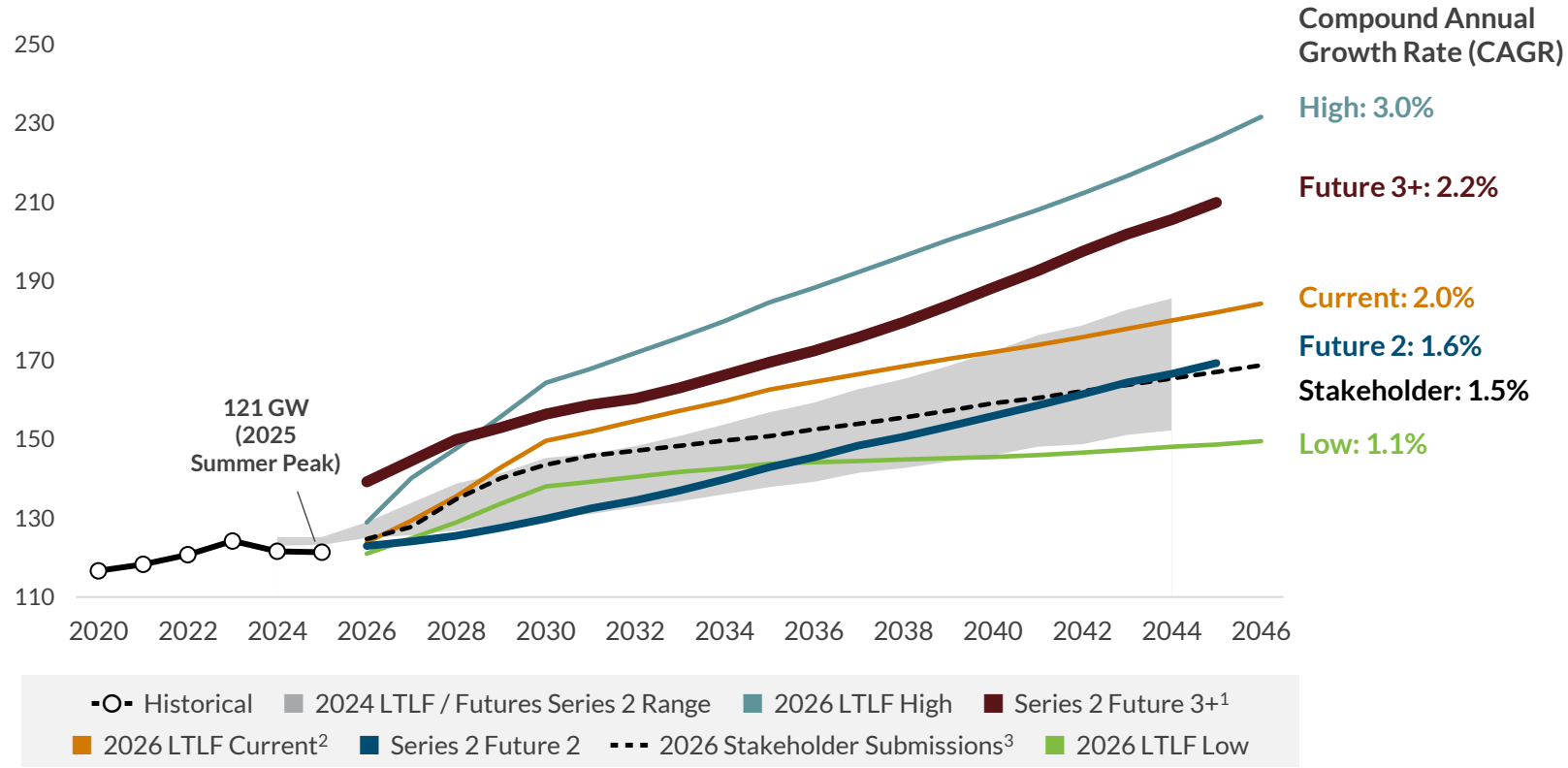
Expedited Project Reviews (EPR) (GW)*



Load forecasts reflect higher growth expectations

Recent Member and MISO Load Forecasts

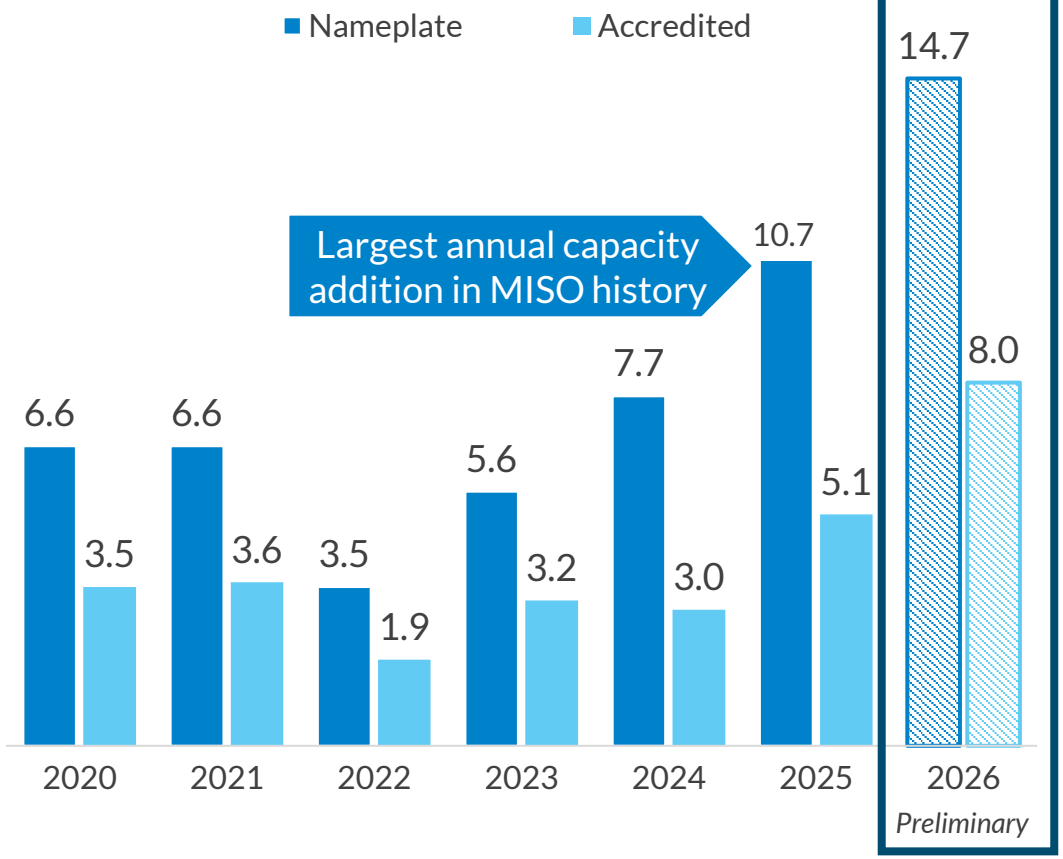
Net Coincident Peak (GW)



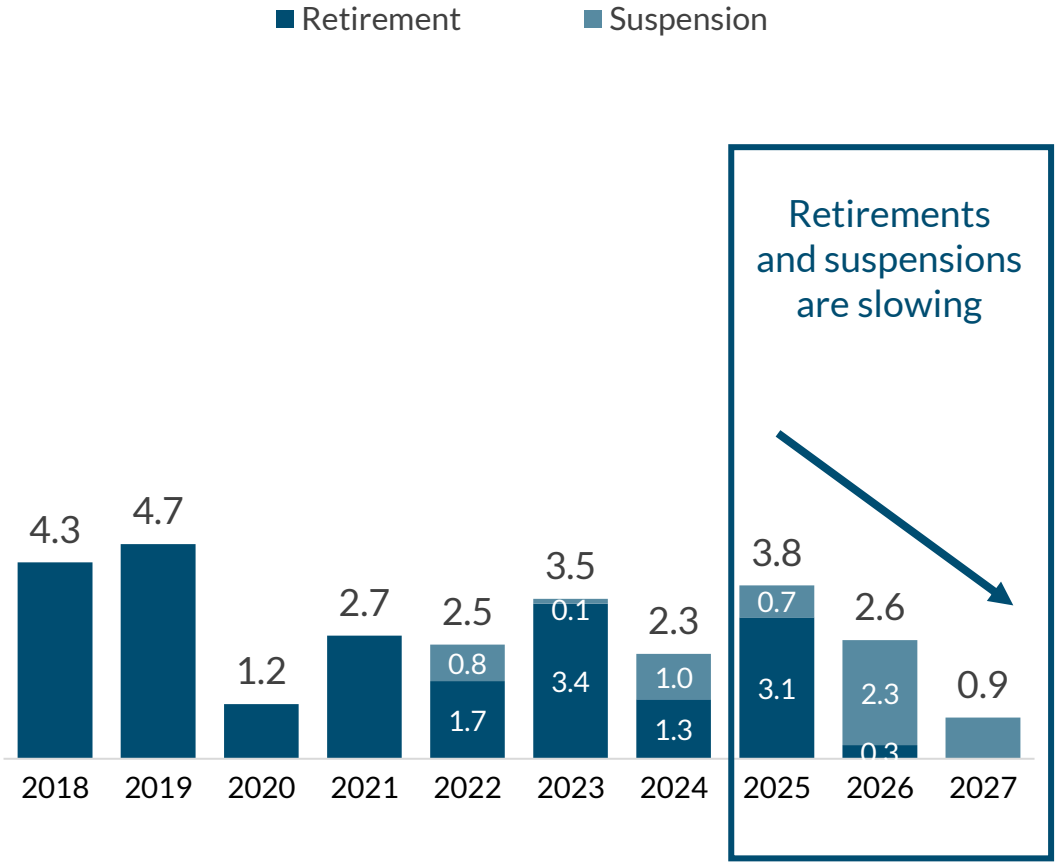
*As of 7/8/26 [1]Future 3+ reflects the increased load growth assumptions from sensitivity analysis. [2]Annual data center CAGR is 103% through 2030
[3]2026 Preliminary Module-E Capacity Tool (MECT) stakeholder submissions; extrapolated post-2036 based on LTLF Pilot Survey submission rate of growth. LTLF: Long-Term Load Forecast

In response to load prospects and market signals, members and states plan to add a record amount of capacity in 2026 to offset 2.6 GW of retirements

RECORD GENERATION ADDED TO SYSTEM (GW)



RETIREMENTS & SUSPENSIONS SLOWING

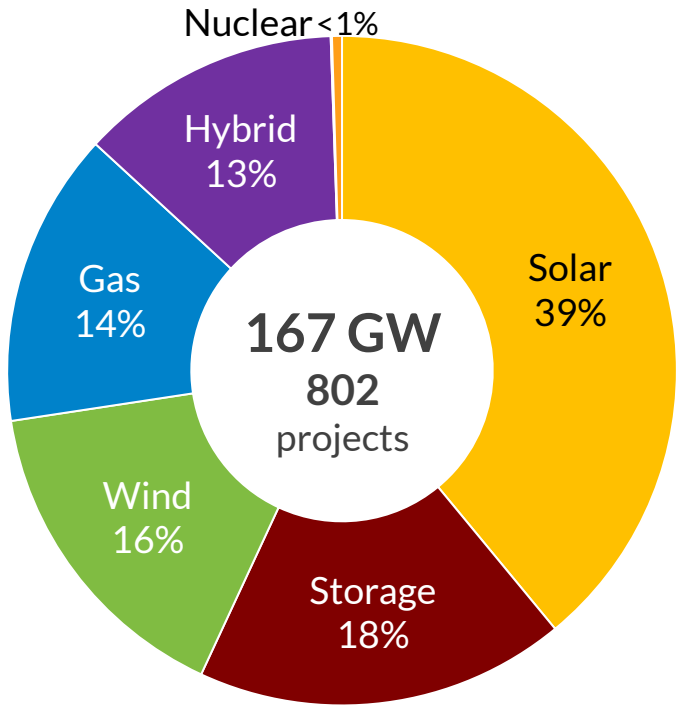


As of 5/5/2026

MISO continues to improve the processing of the "regular" queue through expanded automation, but project delays persist

PROJECTS AWAITING GIAs

ACTIVE QUEUE (Nameplate GW)

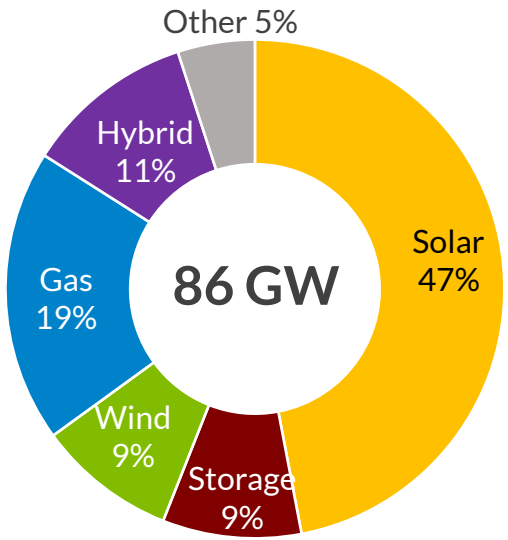


Down 46% since December 2024 (308 GW) and down 13% since last quarter (192 GW)

PROJECTS WITH GIAs

WAITING (Nameplate GW)

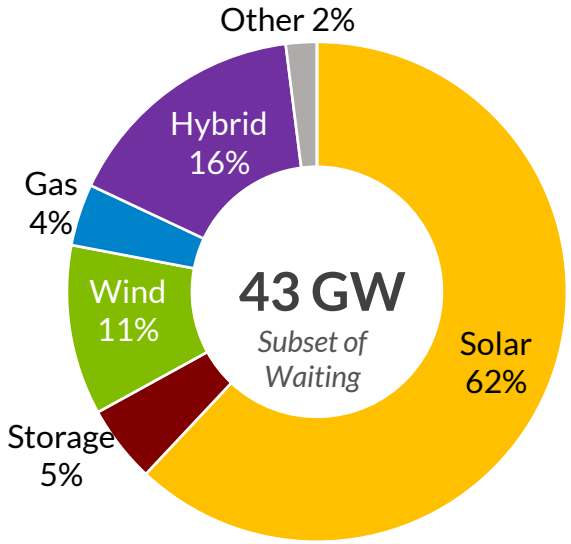
Generation with approved GIAs that **has not been built**



Up 13% since last quarter (76 GW)

DELAYED (Nameplate GW)

Generation with approved GIAs **reporting an expected delay** in commercial operations date



Up 2% since last quarter (42 GW)

As of 5/18/2026

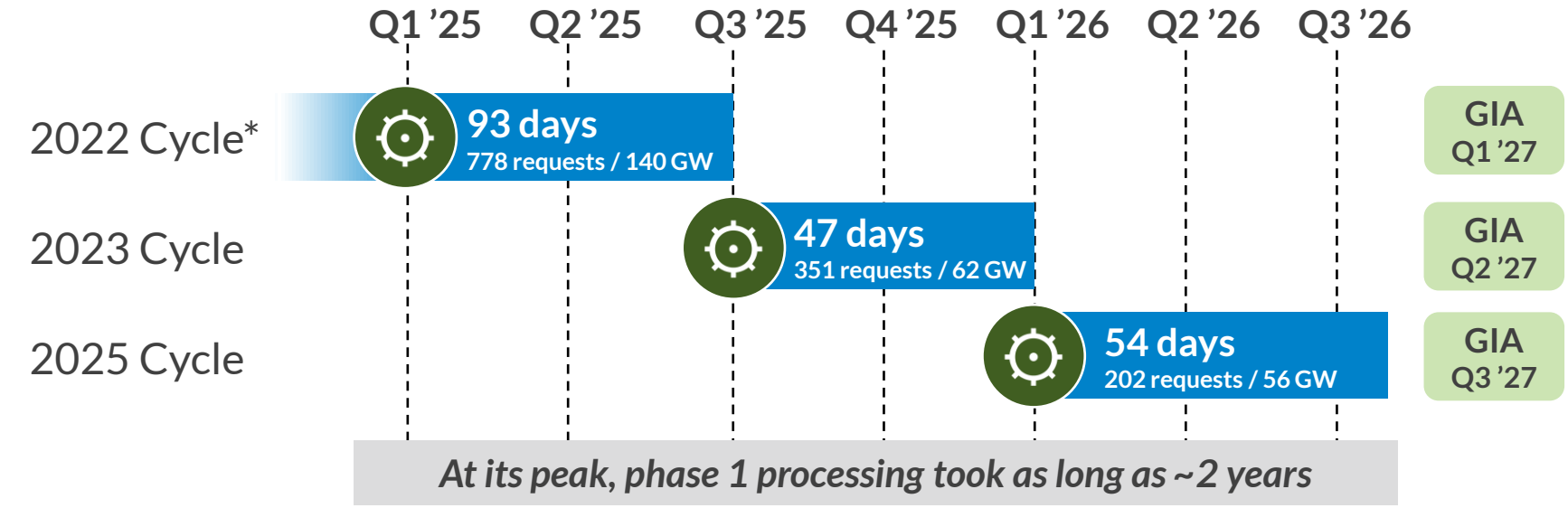
GIA: Generator Interconnection Agreement

SUGAR automation results are significantly accelerating phase 1 queue timelines; now MISO is working on expanding SUGAR into later phases of the queue process

PHASE 1 STUDY TIMES

SUGAR implemented for phase 1

Business days



The Next Stage

- Automation of MISO's power flow study process for future queue phases 2 and 3
- All phases anticipated to be at or less than 54 business days

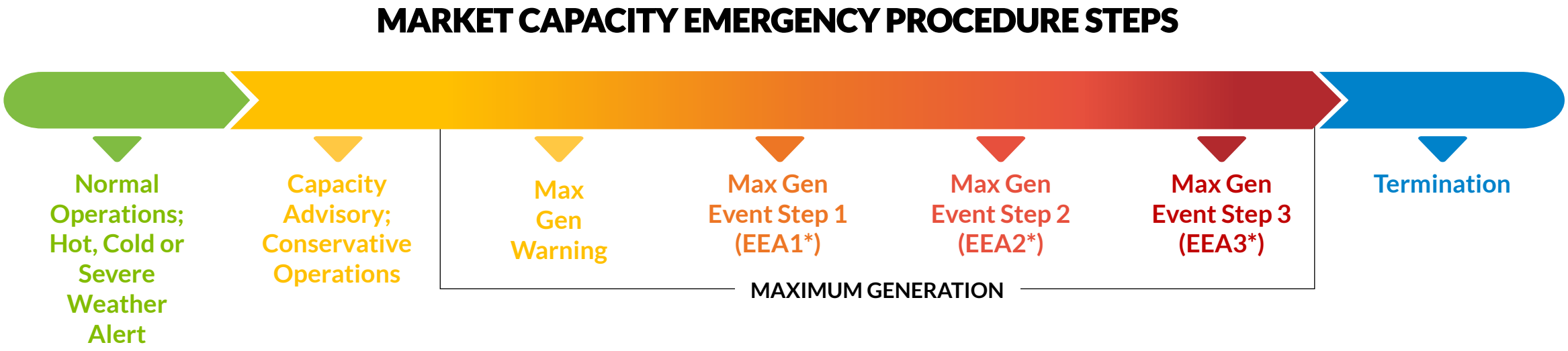
*2022 Cycle phase 1 kicked off in March 2023, but SUGAR was not implemented until February 2025

GIA: Generator Interconnection Agreement

System Operations Update

J.T. Smith – Executive Director, System Wide Operations

Market Capacity Emergency Procedure Steps



Emergency procedures escalate as capacity conditions tighten; associated actions are designed to balance the real-time supply of energy with demand on the system

*See appendix for definitions

Transmission Planning Update

Laura Rauch – Executive Director, Transmission Planning

MTEP26 focuses on enabling members' local and load growth plans through core reliability studies, continue the journey on interregional planning with SPP and PJM, and begin investigating long-term needs through LRTP South and LRTP Midwest efforts

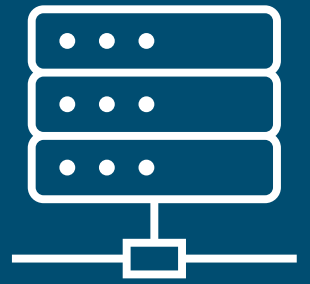
MTEP26 Scope

Core Reliability Studies

Long Range Transmission Planning (LRTP)

Interregional Coordination

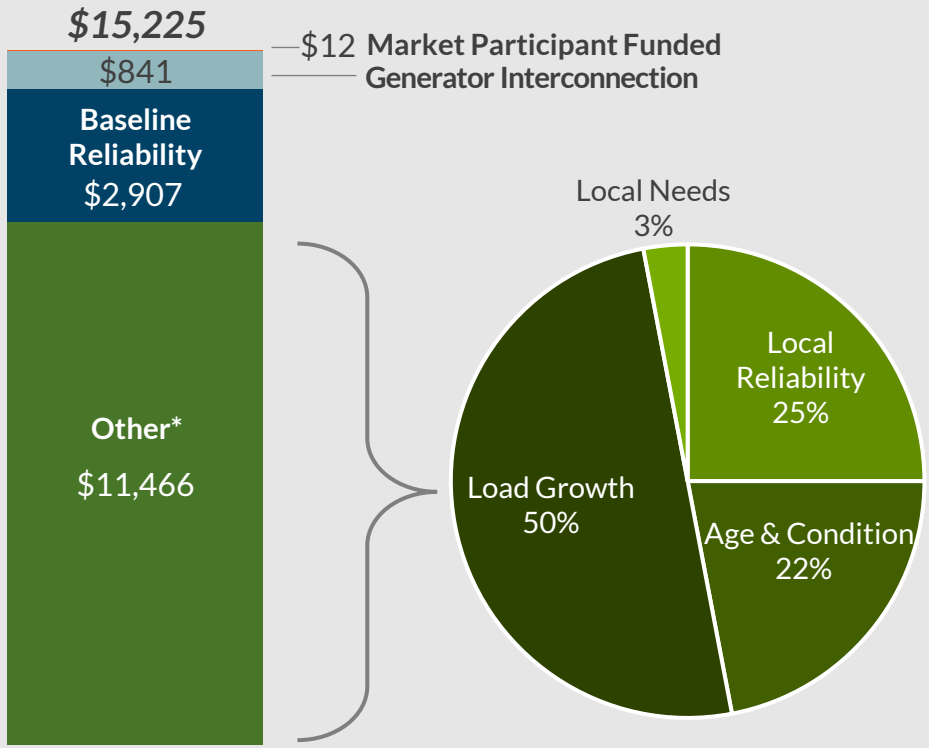
Large Load Enablement



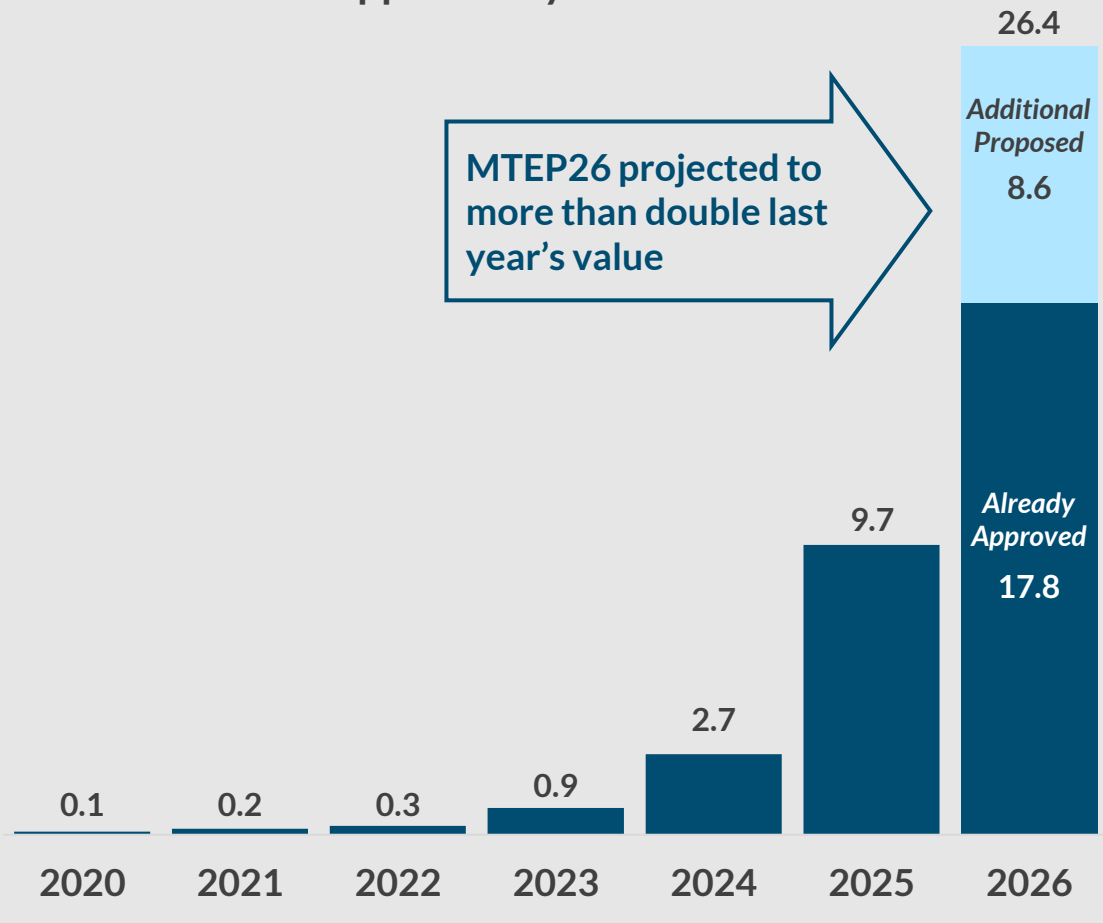
MISO continues to partner with members and stakeholders to transparently and reliably support their near-term plans

Preliminary MTEP26 (millions)

Projects	Line miles	Large load additions	Expedited projects
546	2,403	26.4 GW	104



Large Load Additions (GW)
Supported by MTEP EPRs



Data as of 6/2/26 *Other: Projects based on load growth and local needs, including reliability, economics, equipment age and condition, environmental, etc.
MTEP: MISO Transmission Expansion Plan EPR: Expedited Project Review

MISO plans to begin its next set of LRTP studies in 2026

South LRTP

Begins the subregional journey with a collaborative, investigative approach

Needs Support reliability and load growth

Process Evaluate system reliability and load-serving needs using models defined by the updated Futures; develop detailed scope with stakeholders, beginning with Louisiana and Texas

Outcome Options to guide next steps, which could include transmission and/or generation solutions for further study

LOAD POCKET Supporting Work
Developing enhanced simulation capabilities to assess risk

Midwest LRTP

Builds on an extensive foundation of prior studies and stakeholder engagement

Needs Support subregional transfers, state and member goals, and load growth

Process Evaluate system reliability and economics using models defined by the updated Futures

Outcome Solutions for identified issues (subsequent MTEP cycles)

LRTP: Long Range Transmission Plan MTEP: MISO Transmission Expansion Plan

LRTP solutions development will take a broad lens, with hypotheses being driven through our 7-step process

LRTP PROCESS

A robust set of Future scenarios were completed this spring to forecast conditions for 2045

1. Determine Futures resource forecast / Siting

Create models to recognize potential scenarios and sensitivities

2. Develop planning models using Futures

Analyze reliability, economic, and broader issues, considering both MISO and our RTO neighbors

3. Identify potential issues

Focus for 2026

Hypotheses based on identified issues, timing in 2027

4. Develop proposals for solutions to issues

Consider a broad range of potential solutions — reliability, economic, multi-benefit, transmission and non-transmission

5. Evaluate effectiveness of various solutions

6. Justify and recommend preferred solutions (if applicable)

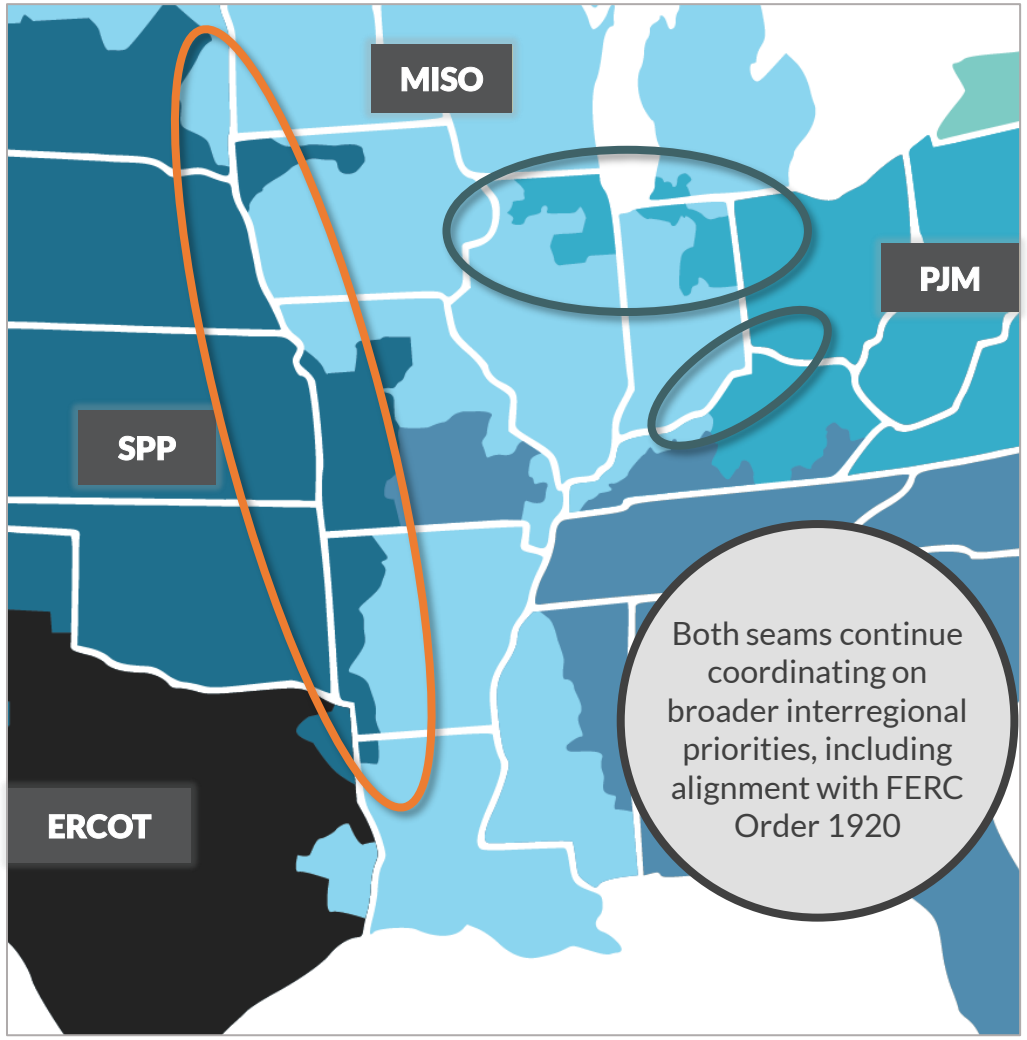
7. Apply appropriate cost allocation

Scope and timing depend on hypotheses for each subregion

Stakeholder discussions are occurring in the Planning Advisory Committee

LRTP: Long Range Transmission Plan RTO: Regional Transmission Organization

MISO will continue coordination with our seams neighbors to maintain partnerships and look for opportunities across planning horizons



PJM – MISO

- ✓ **2026 Targeted Market Efficiency Project (TMEP) study announced:** The RTOs announced a study to evaluate congestion along the seam
  - ✓ **Next step:** Draft TMEP scope with stakeholders
- ✓ **Continued discussions** on project type criteria and benefit frameworks to support future interregional project identification

SPP – MISO

- ✓ **2024-25 Coordinated System Plan (CSP) success:** For the first time ever, the study resulted in potential projects, a significant step forward in interregional coordination; the resulting two portfolio options improve reliability, reduce congestion, and enhance transfer capability
  - ✓ **Next step:** Business case analysis, paving the way for approval
- ✓ **2026-27 Coordinated System Plan announced:** The RTOs announced they would launch the 2026-27 CSP later this year
  - ✓ **Next step:** Draft CSP scope with stakeholders

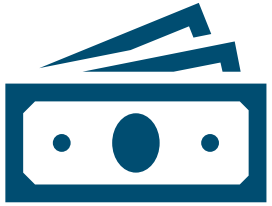
RTO: Regional Transmission Organization

FERC Show-Cause Order

Mike Kessler – Assistant General Counsel

To enable fast and reliable large load additions, FERC issued a show-cause order focused on four pillars

FERC'S FOUR SHOW-CAUSE PILLARS



Protecting Consumers

Ensure large loads don't shift costs onto residential or existing customers

Safeguarding Reliability

Set clear reliability and operational requirements so large loads integrate without stressing the system

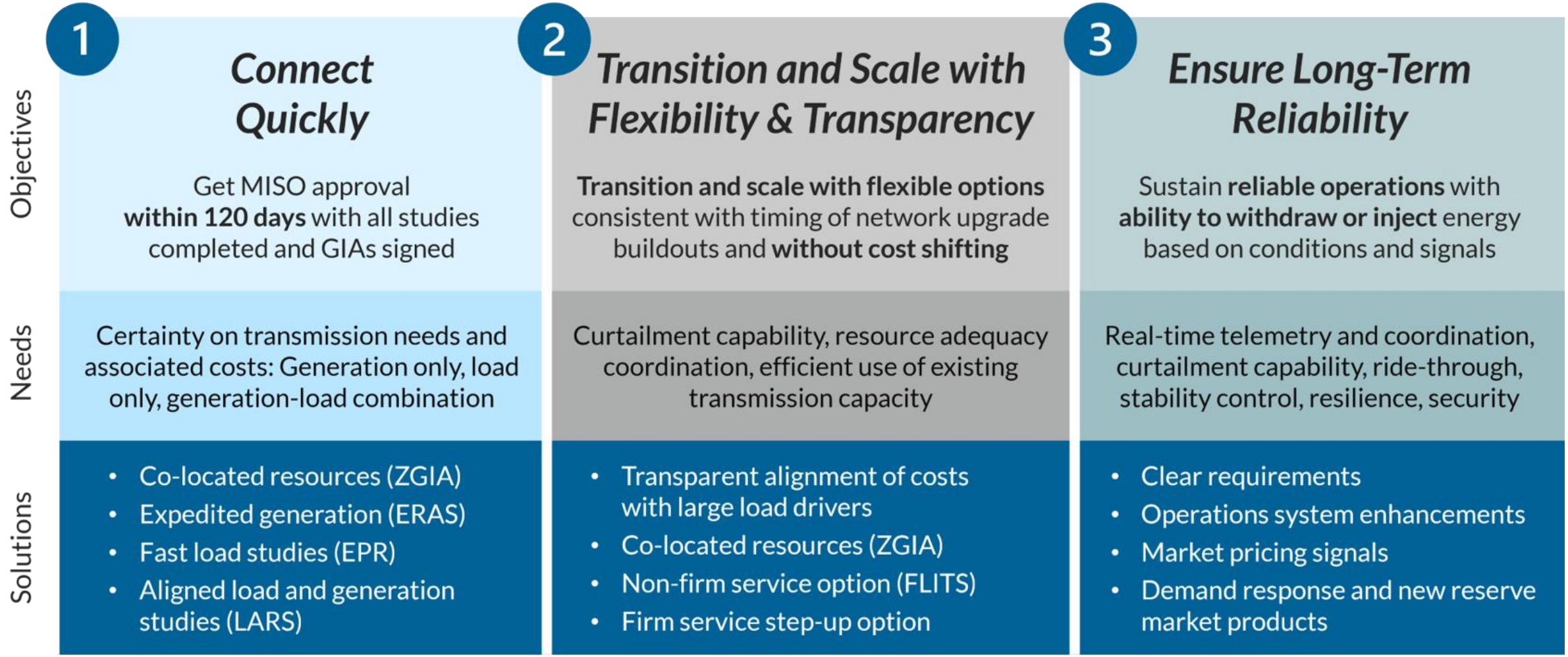
Enhancing Transparency

Make processes and costs for serving large loads clearer, more predictable, and easier for states to evaluate

Fostering Innovation

Encourage new service options and flexible approaches that speed interconnection while maintaining reliability

MISO continues developing a three-part framework that will enable members to integrate large loads quickly and reliably while delivering lasting value for the region



ZGIA: Zero Injection Generator Interconnection Agreement. ERAS: Expedited Resource Addition Study. EPR: Expedited Project Review (an MTEP process). LARS: Large Load Addition Resource Study. FLITS: Flexible Large Load Interconnection and Transmission Service.

For members seeking the fastest route to interconnect new load and corresponding generation, a new process offers approval and certainty within 120 days

Large Load Addition Resource Study (LARS)

Proposed Process	
CURRENT PROCESS	**LARS**
1. Transmission study ▼ **2. Generation study**	**Studies for load and its corresponding generation run in parallel, using aligned assumptions**
180+ days	**120 days**

Outcomes

- ✓ MTEP-approved transmission for reliable load withdrawal
- ✓ Allocation of generation injection rights
- ✓ Optimized network upgrades

Proposed Requirements

- ✓ Load-serving entity (LSE) submits the applications; IPPs can participate in conjunction with LSEs
- ✓ Firm offtake agreement between generation and load
- ✓ Generation and load are located in the same local resource zone
- ✓ Load is 250+ MW
- ✓ Generation nameplate capacity is no more than 150% of load need
- ✓ Ability for generation to reach commercial operation within 3 years
- ✓ Full site control, including point-of-interconnection (POI) confirmation from the transmission owner
- ✓ Electromagnetic Transient (EMT) analysis required for load and inverter-based resource (IBR) generation, as appropriate

The LLWG workplan was largely consistent with FERC's show cause order; MISO and MISO Transmission Owners submitted an abeyance motion for more time to address additional requirements not included in original workplan

Show cause order seeks: Clarity and consistency in rates, terms and conditions of service that apply to flexible large loads, co-location arrangements, load with behind the meter generation, and generating facilities with electrically proximate large load or co-located load

FERC Concerns:

Application & Study Processes; Operational requirements	Cost shifting & transparency	Co-location: rates, terms, conditions of service	Transmission services for co-located and flexible loads	ICs serving co-located or proximate loads: rates, terms, conditions

MISO Solution Elements:

	Large Load Definition	ZGIA	Interconnection Reliability Requirements	Firm Service Step Up	LARS	FLITS	Application Study Process Cost Transparency
	Defines large load as a starting point for participation for participation in other solution elements	Allows co-located generation to serve specific load with zero grid injection	Defines data, modeling, telemetry, ramp, and stability needs for reliable interconnection and long- term operations	Provides phased firm service that increases as system upgrades are completed	Aligns generation and load studies for faster approval and optimized network upgrades	Allows interim use of available transmission capacity, subject to curtailment	Provides clear milestone-based application and study process tailored to large loads including cost-shifting prevention measures
Planned Filings	*August*	*August*	*August*	*September*	*September*	*November*	*November*

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MISO is the electric grid operator for the central United States. We ensure power flows reliably and efficiently across 15 states and the Canadian province of Manitoba. Additionally, MISO facilitates the buying and selling of electricity in its region and partners with its stakeholders to plan the grid of the future.

45 million people depend upon the work we do and the service we provide 24/7/365.

Learn more and follow MISO at:

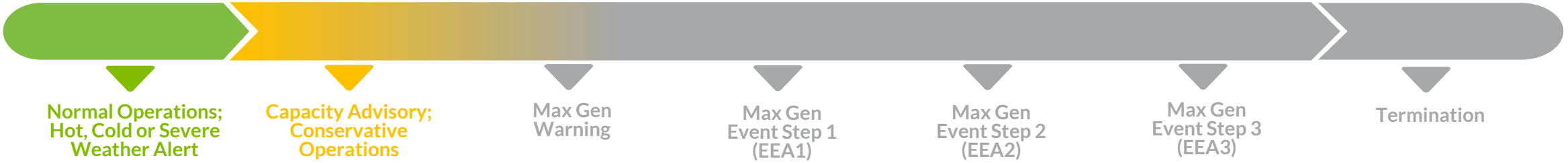
misoenergy.org

LinkedIn: Midcontinent ISO

Appendix

MARKET CAPACITY EMERGENCY PROCEDURE STEPS

(1 of 3)



STATUS	TRIGGER	COMMUNICATION	AVAILABLE MISO ACTIONS*	REGULATORY	STAKEHOLDER/MEDIA
Normal Operations	None	None	Normal operating procedures	None	None
Hot, Cold, or Severe Weather Alert	Could be approaching tight supply due to weather-related circumstances, like extreme heat or cold, or severe wind, storms, and tornados	**Alert for situational awareness**	• Review outage plans for deferral or cancellation • *Normal pricing*	MISO alerts FERC, NERC, DOE, State Commissions, and Regional Entities	• Message to members and neighboring RCs through Operator Interface and RCIS • Notification posted to MISO website • Email sent to Real-Time Market Mailing List
Capacity Advisory	Capacity shortage is forecast within the next few days	**Advisory for situational awareness**	• Request market participants update offer data • Allows MISO to line up LMRs that are unavailable under normal operating conditions • Increase STR requirements • *Normal pricing*	Same as above	Same as above
Conservative Operations	Reliability issue possible for defined area (may be capacity-driven or caused by other abnormal circumstances)	**Alert for situational awareness**	• Potentially suspend transmission maintenance • Review outage plans for deferral or cancellation • Define boundaries • Suspend maintenance • *Normal pricing*	Same as above	Same as above

*MISO's Shift Manager determines which actions are needed and that is shared through Operator Interface.
See appendix for definitions

MARKET CAPACITY EMERGENCY PROCEDURE STEPS

(2 of 3)

STATUS	TRIGGER	COMMUNICATION	AVAILABLE MISO ACTIONS*	REGULATORY	STAKEHOLDER/MEDIA
Maximum Generation Warning	Reserve margin shortage is forecast	**Warning to prepare for possible event**	• Declare *Conservative System Operations* • Prepare for potential Maximum Generation event • Schedule all available economic resources • Curtail non-firm exports • Reconfiguration • Commit emergency-only resources • Request environmental waivers • *Emergency Tier 1 Offer Floor*	MISO alerts FERC, NERC, DOE, State Commissions, and Regional Entities	• Message to members and neighboring RCs through Operator Interface and RCIS • Notification posted to MISO website • Email sent to Real-Time Market Mailing List
Maximum Generation Event Step 1 (EEA1)	Reserve margin requirements cannot be met through normal economic resources; all available resources in use	**Declare EEA1**	• Activate emergency operating ranges • *Emergency Tier 1 Offer Floor*	• MISO alerts FERC, NERC, DOE, State Commissions, and Regional Entities • EEA Notification • MISO NERC Alert • MISO contacts state/local leaders	• Message to members and neighboring RCs through Operator Interface and RCIS • Notification posted to MISO website • Email sent to Real-Time Market Mailing List • MISO corporate communications initiates contact with impacted member communicators

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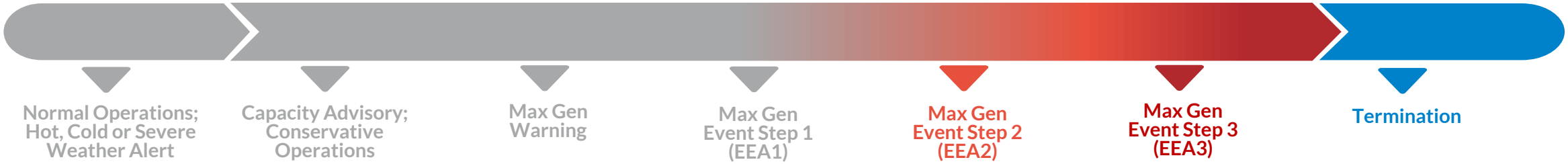
MARKET CAPACITY EMERGENCY PROCEDURE STEPS

(3 of 3)

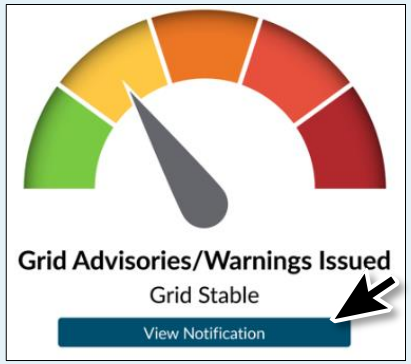


STATUS	TRIGGER	COMMUNICATION	AVAILABLE MISO ACTIONS*	REGULATORY	STAKEHOLDER/MEDIA
Maximum Generation Event Step 2 (EEA2)	Demand cannot be met; actions needed to reduce demand and/or acquire additional supply Attempting to maintain minimum Contingency Reserves All available MISO resources used	**Declare EEA2**	• Instruct load to be reduced via LMMs-Stage 1 or Stage 2 and LMRs or EDRs • Implement emergency energy purchases • Instruct LBAs if public appeals needed** • Implement spinning and supplemental reserves • Request and implement environmental waivers • Initiate external emergency energy purchases • *Emergency Tier 2 Offer Floor*	• MISO alerts FERC, NERC, DOE, State Commissions, and Regional Entities • EEA Notification • MISO NERC Alert • MISO contacts state/local leaders	• Message to members and neighboring RCs through Operator Interface and RCIS • Notification posted to MISO website • Email sent to Real-Time Market Mailing List • MISO corporate communications initiates contact with impacted member communicators
Maximum Generation Event Step 3 (EEA3)	Unable to maintain minimum Contingency Reserves	**Declare EEA3**	• Coordinated load shed • *VOLL pricing*	Same as above	Same as above
Termination	Max Gen and, possibly, Capacity Advisory termination	**Event terminated**	• Update stakeholder market data • *Normal pricing*	Same as above	Same as above

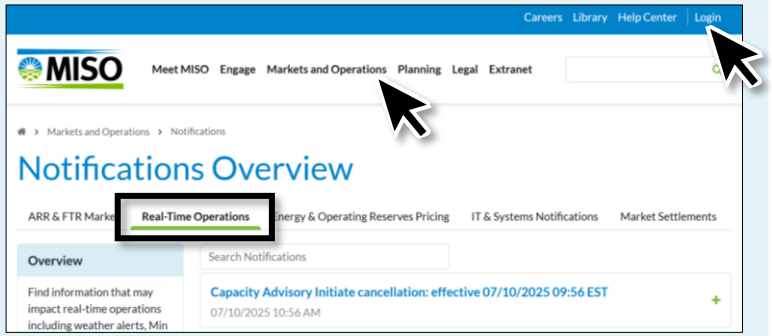
*MISO's Shift Manager determines which actions are needed and that is shared through Operator Interface.
**Public appeals to reduce demand is based on internal LBA procedures, system conditions and Event projections provided by MISO. A standalone notification will be shared publicly on the website, app and via email.
See appendix for definitions

View MISO's real-time grid status and subscribe to notifications

Website



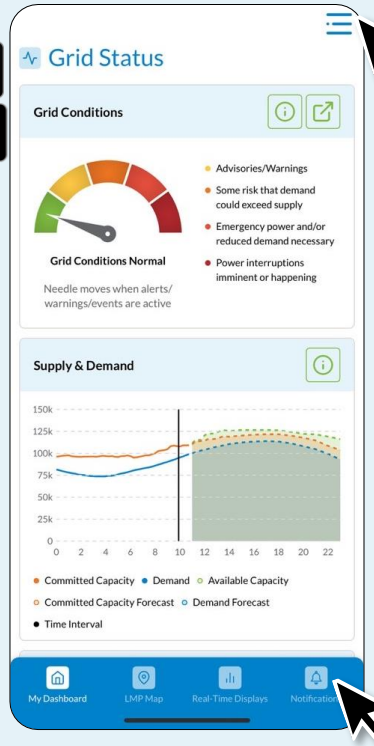
Grid Conditions Gauge
(Homepage)



Real-Time Operations Notifications
(Markets and Operations > Notifications > Real-Time Operations)
Login to subscribe to email notifications

MISO App

Download on the App Store
GET IT ON Google Play



Enable notifications

View notifications

Grid Conditions Gauge
(My Dashboard)

Real-Time Operations Notifications
(Notifications > Real-Time Operations)

Social Media

@MISO_energy

Midcontinent Independent System Operator (MISO)

Definitions

Contingency Reserves	A type of operating reserve that is held to address the loss of a significant generating unit or transmission line. At MISO, this is the sum of supplemental and spinning reserves.
Emergency Demand Response (EDR)	Load reductions, behind the meter generation, and other demand resources that are available to reduce demand or increase generation in exchange for guaranteed recovery of costs associated with the response in accordance with Schedule 30 (EDR Provisions) of the Tariff. EDRs are operated outside the Operator Interface (OI) by the shift manager by using the EDR Tool.
Energy Emergency Alert Level 1 (EEA1)	A NERC-mandated alert when all available generation resources are in use. It means MISO is experiencing conditions where all available generation resources are committed to meet firm load, firm transactions, and reserve commitments and is concerned about sustaining its required contingency reserves. Non-firm wholesale energy sales (other than those that are recallable to meet reserve requirements) have been curtailed.
Energy Emergency Alert Level 2 (EEA2)	A NERC-mandated alert when load management procedures are in effect. It means MISO is no longer able to provide its expected energy requirements and is an energy deficient. MISO has implemented its operating plans to mitigate emergencies and is still able to maintain minimum contingency reserve requirements.
Energy Emergency Alert Level 3 (EEA3)	A NERC-mandated alert when firm load interruption is imminent or in progress. It means MISO is unable to meet minimum contingency reserve requirements.
Interconnection Reliability Operation Limit (IROL)	A NERC System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the Bulk Electric System.
Load Management Measures (LMM) Stage 1	Load management actions that can be taken to reduce demand to preserve or maintain operating reserves that are NOT included in EDRs or LMRs.
Load Management Measures (LMM) Stage 2	Load management actions that can be taken to reduce demand including voltage reductions and reducing loads that, by contract, cannot be interrupted until reserves are being or are expected to be depleted and energy from emergency offers by market participants are being or are expected to be depleted. These do NOT include EDRs or LMRs.
Load Modifying Resource (LMR)	These are either demand resources or behind-the-meter generation that have an obligation to reduce demand or increase generation during declared system emergencies
Maximum Generation Capacity Warning (Max Gen)	MISO foresees or is experiencing conditions where all available economic Resources are committed to meeting Load, firm transactions, and reserve requirements, and is concerned about sustaining required Operating Reserves.
Reserve Margin	The difference between total operating reserves and the operating reserve requirement. MISO is required to keep a certain reserve margin to ensure there is enough capacity to meet peak demand, plus a buffer.
Short-Term Reserve (STR)	A 30-minute rampable generation capacity product. It's designed to address short-term needs for managing system reliability.
Spinning Reserves	Reserves held that are synchronized to the system and available immediately.
Supplemental Reserves	Reserves for abnormal supply deficiencies that must be ready within 10 minutes.
System Operating Limit (SOL)	The NERC value (such as MW, Mvar, amperes, frequency or volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria. System Operating Limits are based upon certain operating criteria.
Value of Lost Load (VOLL) Pricing	The price at which MISO values the cost of unserved energy; essentially, what customers would be willing to pay to avoid an outage.