



Large Load Interconnection Reliability Requirements (PAC-2024-1)

Updated 2/27/26

Slide 8

- Extended feedback due date
- Added slide 7 to feedback

Planning Advisory Committee

February 25, 2026

Purpose & Key Takeaway

Purpose

Establish a clear and consistent starting point for defining large load to support the development of MISO's interconnection reliability requirements.

Key Takeaways

- Large, concentrated loads can significantly impact transmission planning and operational reliability, making clear standards essential.
- MISO is developing its approach to ensure consistency across regions and RTOs while addressing the unique needs of the MISO footprint.
- Defining large load is the first step in developing interconnection reliability requirements through a collaborative stakeholder process.
- Requirements will ensure system reliability as large loads, often submitted through the Expedited Project Review process in MTEP, are evaluated and tied to issue identification, or considered in any applicable load study process.

The January 30 workshop addressed challenges to reliably enabling large loads, with a focus on defining reliability requirements and improving the speed of integration while maintaining reliability to support member plans and goals

Key takeaways:

- MISO is experiencing an unprecedented surge in large load interconnection requests — primarily from data centers
- Recognizing urgent needs, MISO established Expedited Resource Addition Study (ERAS) process to accelerate the generator interconnection process and improved MTEP's Expedited Project Review (EPR) process to quickly approve transmission for large loads
- While existing processes effectively integrate new large loads, MISO needs to evolve its approach and develop long-term solutions to maintain reliability while enabling fast-paced load growth
- Stakeholder feedback closed February 23, 2026

MISO is working towards three desired outcomes that warrant stakeholder consideration



Interconnection reliability requirements

A set of guidelines and requirements needed to support reliability are defined for large load at the time of interconnection.



Speed to reliable power

Large load can secure service quickly and without compromising reliability, accounting for the unique characteristics and commitments of the facility.



Reliable operations

The grid is operated reliably and efficiently with substantial levels of large load.

Large loads have a disproportionate impact on system reliability due to their size and unique characteristics; various definitions of *large* have recently come into focus across the industry

	Scale / Load Size	Unique Characteristics
Draft NERC Guidelines	<ul style="list-style-type: none"> Has not adopted a uniform definition, but administered a survey suggesting a 50 or 75 MW threshold 	<ul style="list-style-type: none"> Pointed to characteristics such as interconnection voltage, size relative to local interconnection, and local system strength that affect reliability impacts
Large Load ANOPR	<ul style="list-style-type: none"> 20 MW threshold 	<ul style="list-style-type: none"> MW size appears to be the sole determinant
PJM	<ul style="list-style-type: none"> 50 MW threshold in load forecast adjustment process and proposed by board of directors in their decisional letter 	<ul style="list-style-type: none"> MW size appears to be the sole determinant
SPP	<ul style="list-style-type: none"> Differentiates by voltage level: ≥ 10 MW at distribution or ≥ 50 MW at transmission level, with accelerated study tracks 	<ul style="list-style-type: none"> Lower MW threshold at lower voltage reflects difference in system impact at different voltage levels and is consistent with a NERC survey
ERCOT	<ul style="list-style-type: none"> 75 MW threshold, supported by detailed modeling and telemetry protocols 	<ul style="list-style-type: none"> MW size appears to be the sole determinant, though large loads are subsequently studied to identify facility upgrades or operational limits needed to avoid violations of operating standards

A definition for large load that considers SPP and PJM approaches will guide interconnection reliability requirements and ensure clarity and consistency in applying reliability standards to significant new load additions

Draft Large Load Definition: Any new commercial or industrial facility or aggregation greater than 50 MW at a single site behind one or more points of interconnection.

1 Any new commercial or industrial facility or aggregation

- Includes individual facilities (e.g., manufacturing plants, data centers).
- Covers aggregated loads under common ownership or operational control.
- Applies to new additions, not existing facilities unless significantly expanded.

2 Greater than 50 MW

- Threshold based on industry precedent.
- Represents the gross peak demand.
- May require verification of expected peak demand during planning.

3 At a single site behind one or more points of interconnection

- Defines geographic scope as a single contiguous property or campus.
- Allows for multiple interconnection points serving the same site.
- Ensures coordination of reliability requirements across all interconnections.

In addition to establishing the definition, MISO is working to develop detailed requirements that large loads must follow—these will be outlined at the next stakeholder touchpoint

Themes	Examples (Initial Focus)
Performance & Ride-Through Ensure large loads remain connected and operate reliably during system disturbances	<ul style="list-style-type: none">• Voltage ride-through• Frequency ride-through• Power consumption performance
Flexibility & Reliability Limits Prevent sudden large changes that could destabilize the system	<ul style="list-style-type: none">• Ramp limit• Block load limit• Controlled energization and load pickup
Operational Readiness Ensure large loads provide real-time data and coordination for forecasting, outage planning, and system protection	<ul style="list-style-type: none">• Telemetry and metering standards• Forecasting (short-term and long-term)• Modeling• Outage coordination protocols
System Stability Avoid adverse impacts on system dynamics and maintain system strength	<ul style="list-style-type: none">• Rotor angle stability• Voltage Stability• Converter-driven stability
Resilience & Security Ensure large loads withstand disruptions and maintain secure operations	<ul style="list-style-type: none">• Cyber and physical security compliance• Restoration coordination• Block loading for recovery

Stakeholder Feedback Request

- MISO requests feedback on the **Large Load Definition (PAC-2024-1)** by Wednesday, March 18, 2026.
 - Please provide feedback on the definition of large load strawman proposal (slide 6) and interconnection reliability requirements (slide 7)
- Feedback requests and responses are managed through the Feedback Tool on the MISO website: <https://www.misoenergy.org/engage/stakeholder-feedback/>

Next Steps

MISO is finalizing a plan for developing and formalizing this framework with the other impacted Main Parent Entities. Next steps will be confirmed and communicated through the Steering Committee.



Provide Feedback

Due: Wednesday, March 18, 2026



Interconnection Process
Discussion

PAC: April 22, 2026



File Tariff Language

June 2026

Contact

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Appendix

Approved Projects Supporting Spot Loads



Target MTEP Cycle

All

Submitting TO

All

State(s)

All

Planning Status

All

MTEP Project ID

All

Expected ISD

7/15/2018

12/31/2030

Spot Load Value (MW)

50.00

1,800.00

Approved Project Supporting Spot Loads

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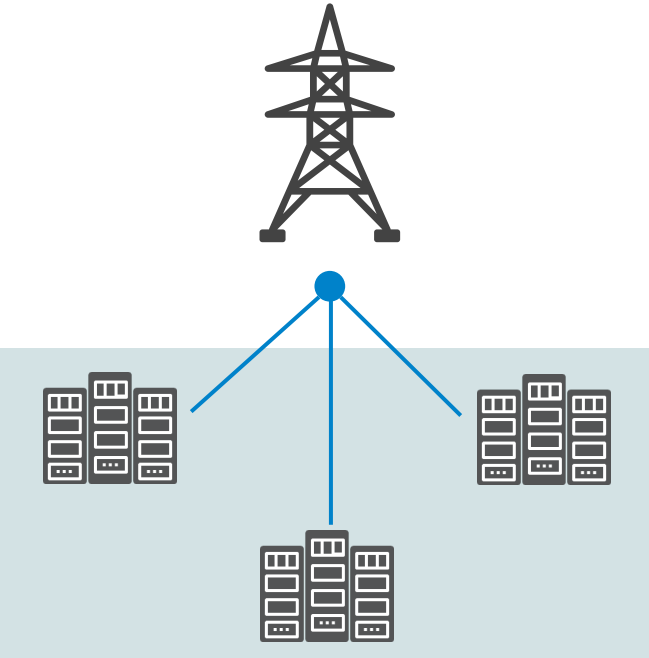
79
Total Projects

26,587
Total Load (MW)

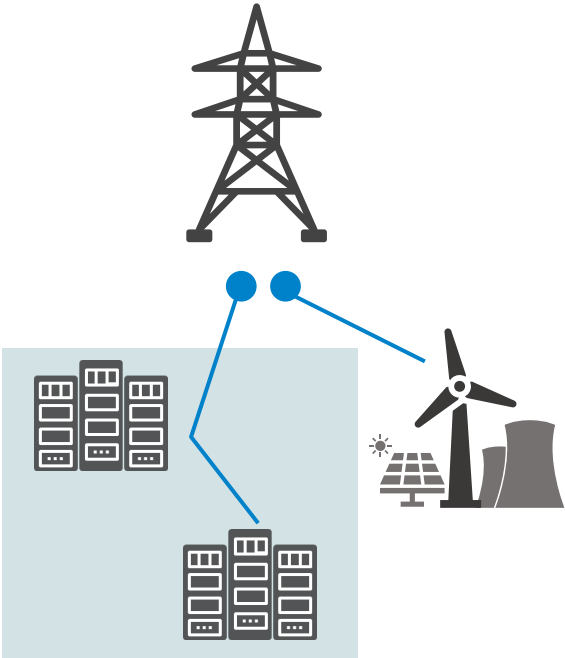
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A single contiguous property or campus allows for multiple interconnection points serving the same site and ensures coordination of reliability requirements across all interconnections



Single Point



Multiple Points

