

December 4th, 2025

ERSCWG

FERC Order 2222

Order 2222 - Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators



We power life.™

Agenda

FERC Order 2222 Background

Entergy's Involvement in MISOs Compliance Filings

**FERC Order 2222 - Proposed High-Level Approach
(MISO)**

Other DER-Related Resources



We power life.™

FERC Order 2222 Background



We power life.SM

FERC Order No. 2222: Fact Sheet

FERC Order No. 2222: A New Day for Distributed Energy Resources

FERC Order No. 2222 will help usher in the electric grid of the future and promote competition in electric markets by removing the barriers preventing distributed energy resources (DERs) from competing on a level playing field in the organized capacity, energy and ancillary services markets run by regional grid operators.

What are distributed energy resources?

DERs are small-scale power generation or storage technologies (typically from 1 kW to 10,000 kW) that can provide an alternative or an enhancement of the traditional electric power system. These can be located on an electric utility's distribution system, a subsystem of the utility's distribution system or behind a customer meter. They may include electric storage, intermittent generation, distributed generation, demand response, energy efficiency, thermal storage or electric vehicles and their charging equipment.

What does Order No. 2222 do?

This rule enables DERs to participate alongside traditional resources in the regional organized wholesale markets through aggregations, opening U.S. organized wholesale markets to new sources of energy and grid services. It will help provide a variety of benefits including lower costs for consumers through enhanced competition, more grid flexibility and resilience, and more innovation within the electric power industry.

FERC Order No. 2222: Fact Sheet

Is this under FERC Jurisdiction?

Yes, the final rule builds off the DC Circuit Court's recent ruling on Order No. 841, in which the court affirmed the Commission's exclusive jurisdiction over the regional wholesale power markets and the criteria for participation in those markets.

- **The rule does not allow retail regulatory authorities to broadly prohibit DERs from participating in the regional markets.** But it does allow retail regulators to continue prohibitions against distributed energy aggregators bidding the demand response of retail customers into the regional markets.
- **Takeaway - Entergy has a current prohibitions on Demand Response in all of our OpCOs except for ENO.**
- **The rule also establishes a small utility opt-in.** Specifically, it prohibits grid operators from accepting bids from the aggregation of customers of small utilities whose electric output was 4 million megawatt-hours or less in the preceding fiscal year, unless the relevant retail regulatory authority for a small utility allows such participation. The rule explains that state and local authorities remain responsible for the interconnection of individual DERs for the purpose of participating in wholesale markets through a DER aggregation.

When will this rule take effect?

- Order No. 2222 takes effect 60 days after publication in the *Federal Register*.
- Grid operators must make compliance filings FERC within 270 days of publication

Utilities in the MISO Footprint

Utilities over 4M MWh*



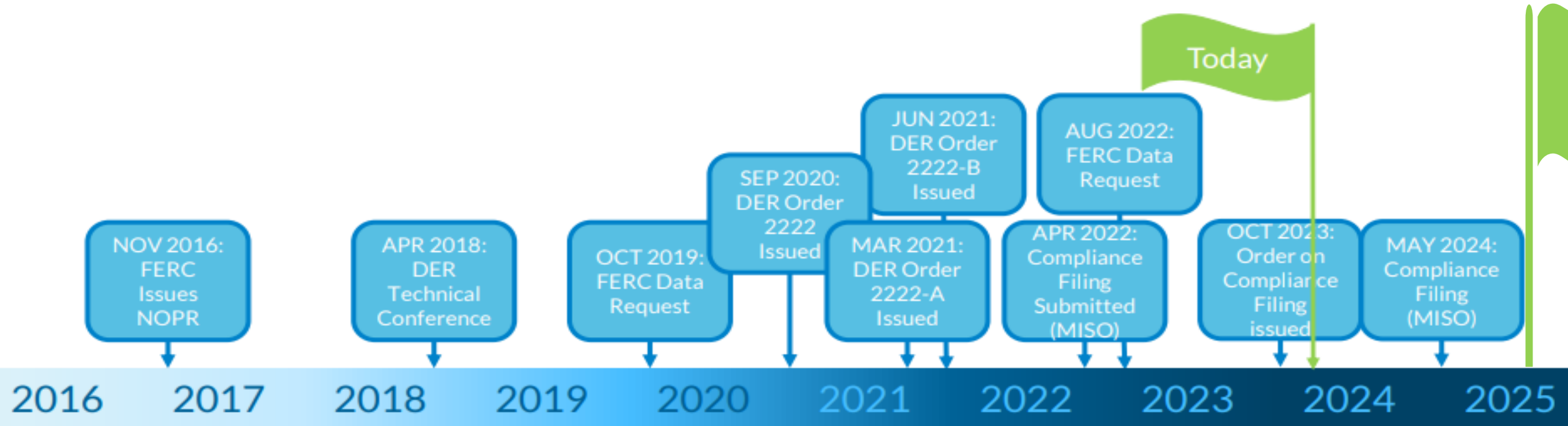
| | |
|------|--|
| ALTM | ALLIANT ENERGY CORPORATE SERVICES, INC. |
| AMCP | AMEREN ILLINOIS COMPANY |
| AMUE | UNION ELECTRIC COMPANY - AMEREN MISSOURI |
| CCJN | CLECO CAJUN LLC |
| CETR | CONSUMERS ENERGY COMPANY |
| CPWR | CLECO POWER LLC |
| DEMO | DTE ELECTRIC COMPANY |
| DMT1 | DYNEGY MARKETING AND TRADE, LLC |
| EAMP | ENERGY ARKANSAS, LLC |
| ELMP | ENERGY LOUISIANA, LLC |
| EMMP | ENERGY MISSISSIPPI, LLC |
| ENMP | ENERGY NEW ORLEANS, LLC |
| ETMP | ENERGY TEXAS, INC. |

| | |
|------|---|
| IPLM | INDIANAPOLIS POWER AND LIGHT CO. |
| MECB | MIDAMERICAN ENERGY COMPANY MECB |
| MPM | MINNESOTA POWER |
| NEVI | CONSTELLATION NEWENERGY, INC |
| NIP | NORTHERN INDIANA PUBLIC SERVICE COMPANY LLC |
| NSPP | NSP ENERGY MARKETING |
| OTPW | OTTER TAIL POWER COMPANY |
| PSI | DUKE ENERGY INDIANA, LLC |
| SIGW | SOUTHERN INDIANA GAS AND ELECTRIC CO |
| WEPM | WISCONSIN ELECTRIC POWER COMPANY |
| WPSM | WISCONSIN PUBLIC SERVICE CORPORATION |

“Each RTO/ ISO must accept bids from a distributed energy resource aggregator if its aggregation includes distributed energy resources that are customers of utilities that distributed more than 4 million megawatt-hours in the previous fiscal year.” -O2222 P8

* MISO pulled Energy Information Administration (EIA) data from 2019 to create an estimate of the number of utilities in MISO with over 4M MWh in sales; verification of this data, available only in arrears, will be a topic for discussion when assessing eligibility to participate in MISO markets.

FERC Order on DER has seen a long development



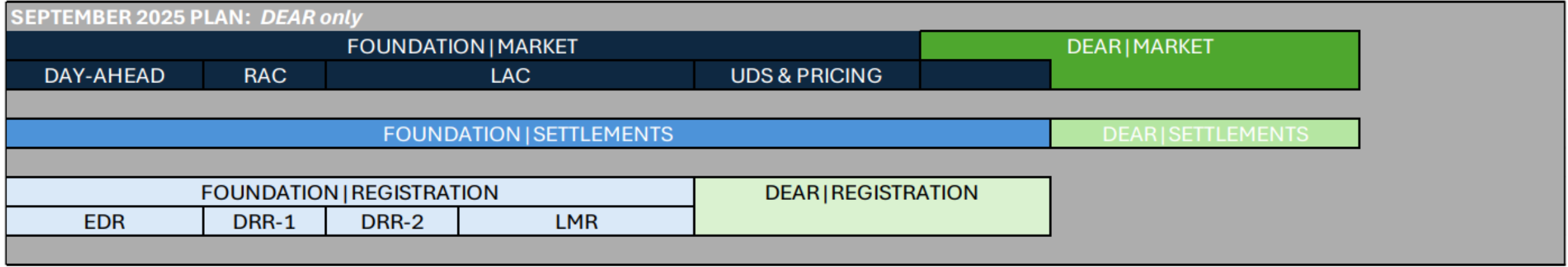
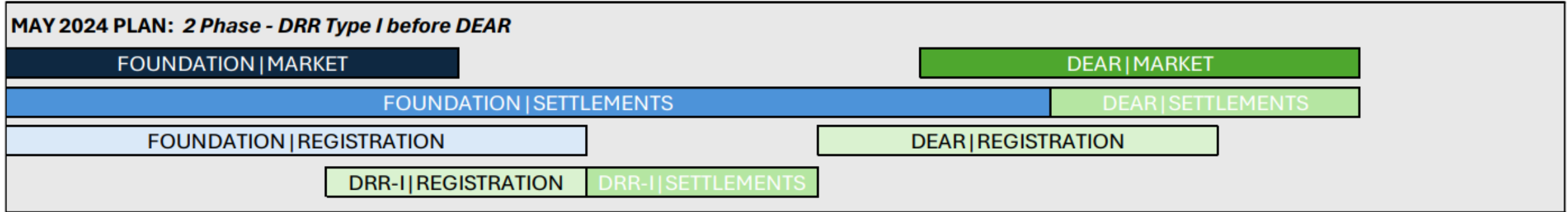
Subsequent Compliance Activities

- MISO submitted its 60-day compliance filing on March 17, 2025.
- The Commission has accepted this filing
- MISO submitted its 180-day compliance filing on May 16, 2025, addressing the DRR – Type I participation option. MISO is awaiting Commission action on this filing.
- On July 10, 2025, the Commission issued an order addressing arguments raised and denying rehearing.



Latest Order 2222 Implementation Plan

| | | | | | | |
|------|------|------|------|------|------|------|
| 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|------|------|------|------|------|------|------|



DEAR Enrollment

1-Jun-29

DEAR Energy & Ancillary Services Market Participation

1-Jan-30

DEAR Capacity Market Participation

1-Jun-30

Entergy's Involvement in MISOs Compliance Filings



We power life.™

Entergy's Efforts to Date (FERC Order 2222)

Entergy's Participation related to DERs associated with (FERC Order 2222)

- **MISO Initial Compliance Filing (04/22)**
 - Lots of Stakeholder Interaction
 - Various Feedback Requests
- **FERC Response to MISOs Compliance Filing (08/23)**
 - Identified a list of deficiencies
 - Initiated a second stakeholder process
 - Participated in 11 Feedback Requests
 - Feedback was centered around (5) Key Issues
 - **Operational Coordination; Reliability Reviews; Dispute Resolution; Data Sharing and Multi-Node Aggregation**
- **MISOs Second Compliance Filing (05/24)**
- **Entergy filed a joint protest with Xcel (07/24)**
 - **Operational Coordination and Dispute Resolution**
 - Joined with other TOs on a support for the proposed phased approach

Entergy's High-Level Concerns

Operational Coordination

- The LBA should not be the conduit for the entire process
- Communication coordination related to system limitations in both D-A and R-T
- Lack of a DER Registry or a universal Distribution Outage Management System

Dispute Resolution

- The financial thresholds and overall process for disputes relating to meter data is too high, cumbersome and time consuming
- Onus is on the LSE/EDC to disprove previously submitted meter data (DERA) even though the LSE has obligations that DERAs do not
- The dispute tracking process is unclear relative to the triggers for MISO to review DERAs eligibility for Market Participation.

Reliability Reviews :

- Potentially multiple EDCs involved in both the eligibility & reliability review process
- Lack of a DER Registry
- Issues that arise when transmission impacts are identified during the reliability review process

Information & Data Exchange

- Data Privacy - A platform like a DER Registry would help with data security related to transmittal of critical information being entities.
- Cost - Both utilities and regulatory authorities need to address who will bear these costs and how they impact ratepayers.
- Burden - As the level of interest leads to a significant number of DERAs entering the market and operating as MPs could lead to a significant challenge on current MDMA providers to add additional resources to support this activity.

Multi-Node Aggregation proposals (Eliminated Under MISOs latest 2nd Compliance Filing)

- When multi node is allowed, it should only be within one EDC due to Performance & Validation concerns.
- From a settlement perspective, multi-node aggregation will be more complex than single node aggregations.

FERC Order 2222 Proposed High-Level Approach (MISO)



We power life.™

Overall Strategy (MISO)



Internal Efforts:

- MISO Quarterly DERTF Meetings
- OMS-MISO Order 2222 Coordination Conference
- Development of LES Tool

External Efforts:

- NAESB (DER Registry)

Other Stakeholder Efforts:

- DERTF Discussing conversion to a WG
- LSEs – Subscribing to EPRI Flexit Project
- MISO TOs – Limited discussions

Best Practices (FERC Order 2222)

- Other RTOs – NYISO & ISO New England



We power life.™

MISO DERTF Meetings



We power life.™

DERTF

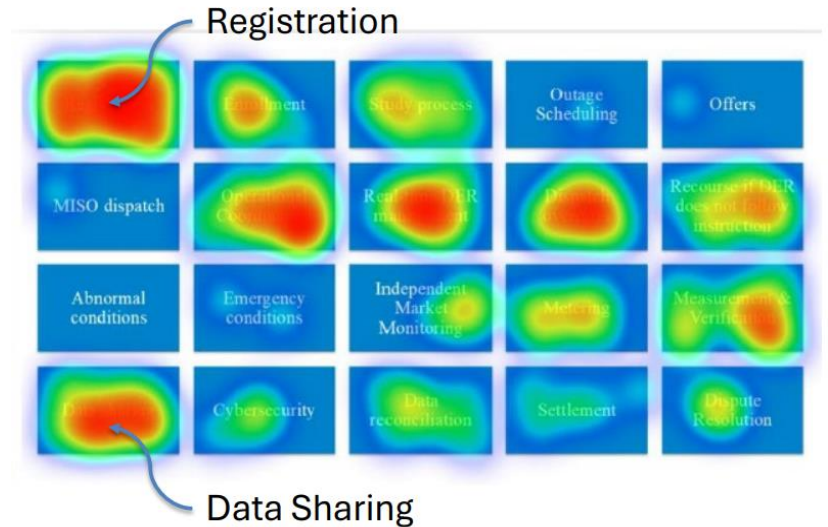
OMS DER Work Group's Top-Four Near-Term Issues

- **Registration and Enrollment**
- **Data Sharing and Data Reconciliation**

Near-Term (Register & Enroll.) vs. Medium-Term Prioritization (Operational Coordination) – Stakeholders agreed that the four issues selected are near-term priorities – Many respondents recommended a parallel path to work on operational issues concurrent with foundational registration items.



These heatmap results summarize stakeholder issue prioritization gathered at the Feb. 18 Coordination Conference



Enrollment & Registration Feedback Follow Up & Discussion*

- **Preparing for Distributed Energy Aggregated Resource (DEAR) participation in MISO**
- **DEAR enrollment tool**
- **Are there other tools/systems MISO should build?**

DERTF

Other Recent Discussions:

Distribution System Operators (DSOs) & MISO Market Interactions (CAMUS - November 2024)

- Communicate operating envelopes to aggregators and execute overrides when/where necessary
- The way the DSO interacts with the ISO must be consistent across the ISO. This can't be something that each DSO picks individually.
- What standards are most useful for DSO-ISO coordination?
- Data Format: CIM
- Messaging Protocol: 20230.5

DERMS & Operational Coordination – (OATI - July 2025)

Operational Coordination • Registration • Data Sharing • Measurement & Verification • Real-Time DR Management • Resources of DR does not Follow • Dispatch Overrides • Metering • Study Process • Enrollment • Data Reconciliation • Dispute Resolution

EP Node Requirements for DRR Enrollments (Voltus - 09/25)

MPs are currently hamstrung in DRR enrollments as there is not presently a way to efficiently obtain EPNode information for enrolled DRR Locations.

MOD-032 Modeling Requirements

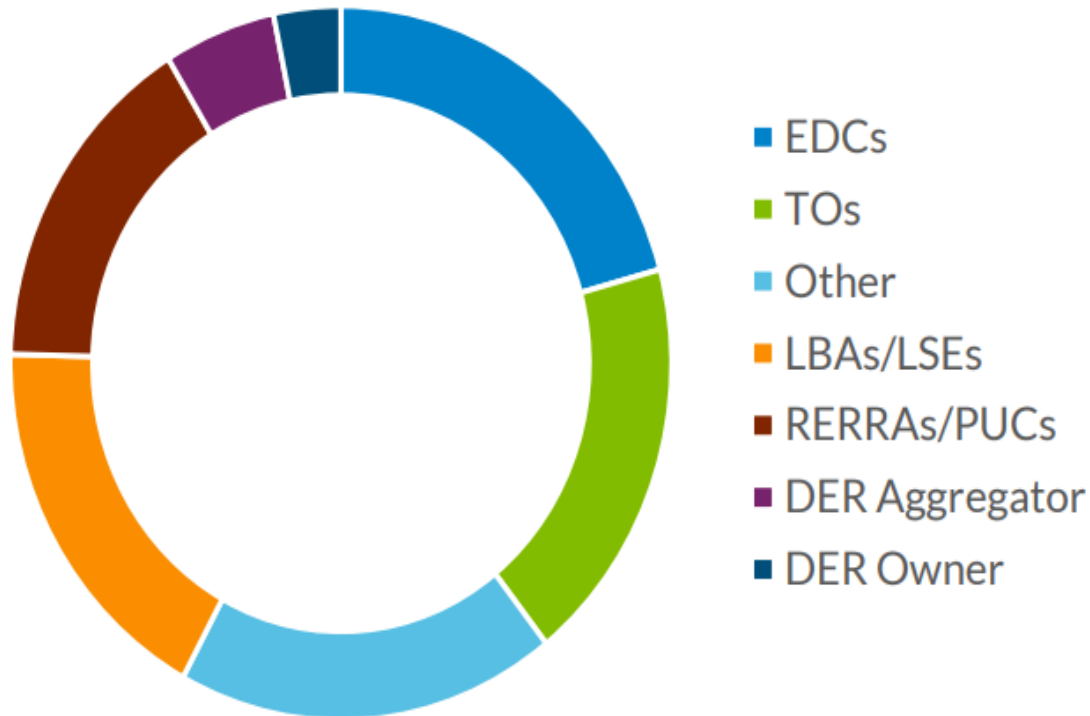
OMS-MISO Order 2222 Coordination Conference



We power life.™

Upcoming DER-Related Meetings at MISO

O2222 Coordination Conference
Attendance



137 Online attendants

46 In-person attendants

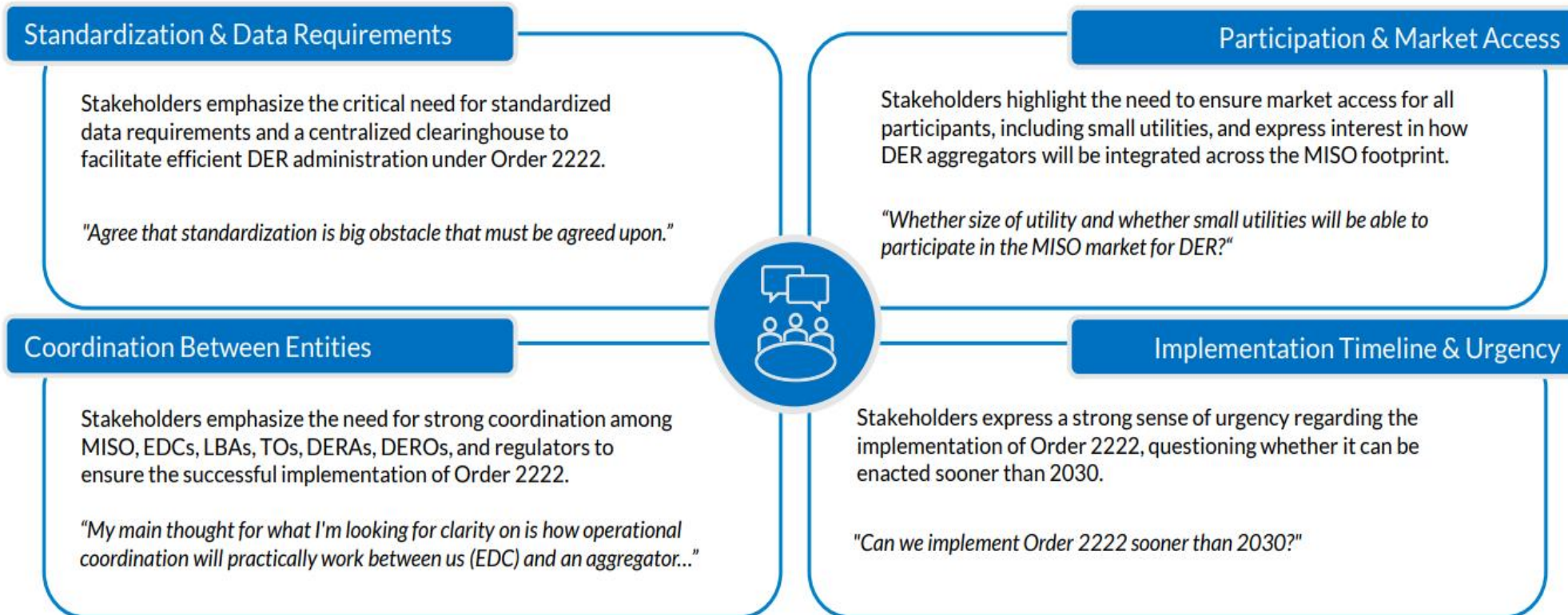
183 Total attendants

OMS-MISO Order 2222 Coordination Conference

Key Takeaways:

- Centralized Info Sharing
- Defining Roles & Responsibilities
- Operational Needs

Follow-Up: Stakeholder Insights



Upcoming DER-Related Meetings at MISO

OMS-MISO Order 2222 Coordination Conference – 2/18/2025

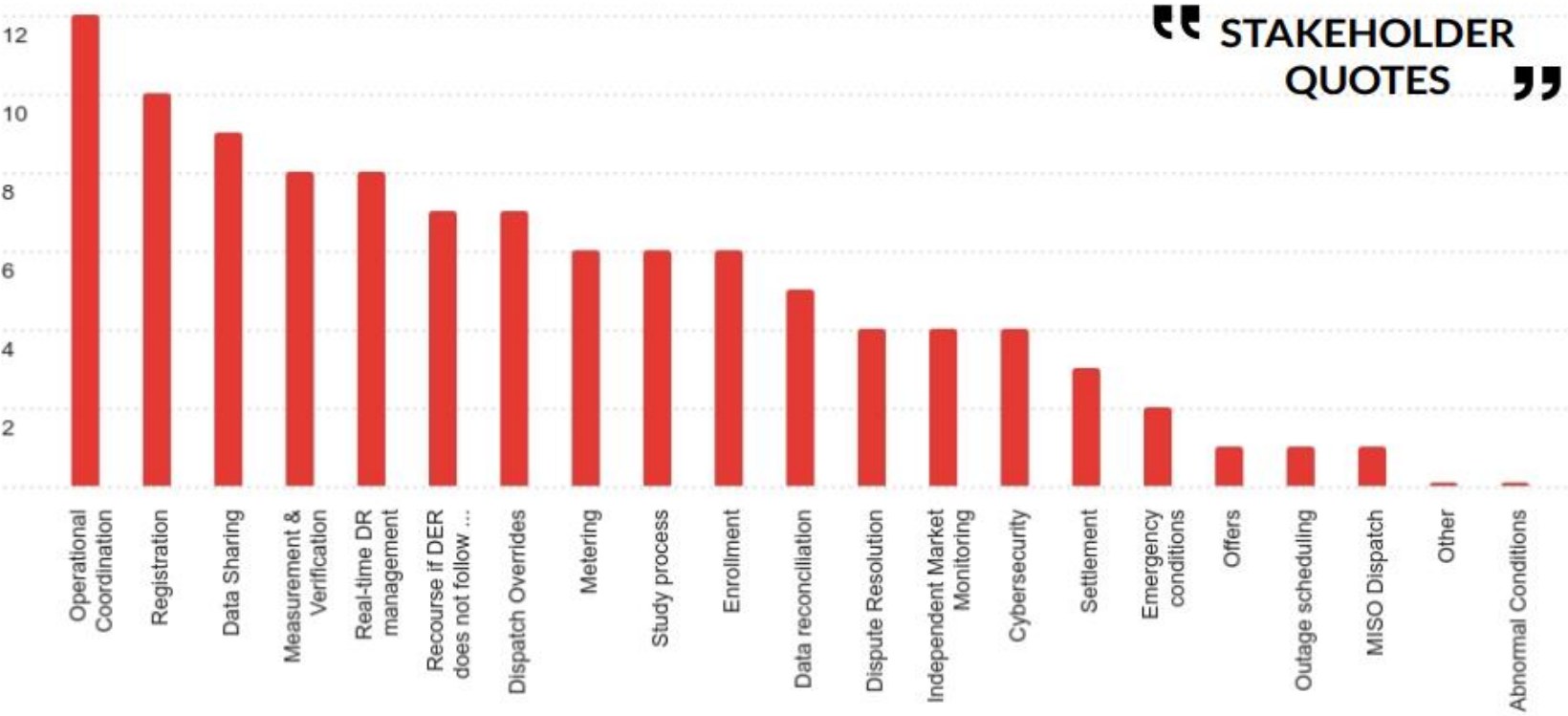
| | | | | |
|---------------------|--------------------------|-------------------------------|--------------------|---|
| Registration | Enrollment | Study process | Outage Scheduling | Offers |
| MISO dispatch | Operational Coordination | Real-time DER management | Dispatch overrides | Recourse if DER does not follow instruction |
| Abnormal conditions | Emergency conditions | Independent Market Monitoring | Metering | Measurement & Verification |
| Data sharing | Cybersecurity | Data reconciliation | Settlement | Dispute Resolution |

Items in green boxes are the highest priority.

From MISO's stakeholder perspective, the top three key focus areas for implementing Order 2222 are Operational Coordination, Registration, and Data Sharing.

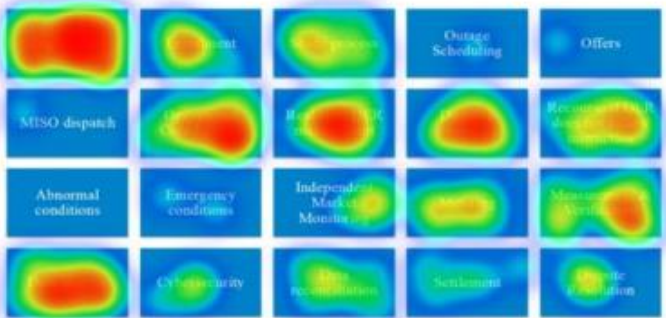
Operational Coordination: "...concern of whether these facilities can meet what they claim to meet. This poses concerns both operationally and in terms of independent monitoring to ensure proper behavior."

Registration: "Coordination at the beginning of the process is key to having continuing coordination throughout the process. You need to get started on the right foot."



STAKEHOLDER QUOTES

Data Sharing: "Data about the DER needs to be shared and operations coordinated; if not, then dispute resolution will become essential."



Heatmap Results

MISOs LES Tool

- The Locational Enrollment Service work is a multi-phased effort to simplify the demand response experience for customers and employees
- The phase 1 launch was completed on January 31, 2025, with functionality to support enrollment of Emergency Demand Response resources for the 2024/2025 Planning Year
- Phase 1 establishes the foundational components needed to speed development for Demand Response Resources and Load Modifying Resources

The screenshot displays the VOLTARCEDR web application interface. At the top, there are navigation tabs for 'Dashboard' and 'Enrollments'. Below the header, there are three status cards: 'LSE Tasks Complete' with a green checkmark, 'LBA Tasks Incomplete' with a red X, and 'Auto Approval in 5 business days!' with a calendar icon. The main section is titled 'Enrollment Details' and contains a table with the following data:

| Enrollment Type | ARC-EGR | ARC | VOLT | Total MW | 150 |
|-----------------|------------|-----|------|----------------------------|----------|
| Start Date | 02/03/2024 | LSE | ALTM | Approved MW | 80 |
| End Date | 02/03/2025 | LBA | NOP | Curtailment | BTMG |
| L2 CP Node | ALT-ALT | AD | ALQT | Measurement & Verification | 30 in 30 |

Below the table, there is a '24 Hour Contact' section with fields for Name (Joshua Weissman), Email (rweiss@ignil.com), and Phone (317-667-5309). A section titled 'Please review the X locations below:' contains a table with columns for Location Name, Address, MW, and Status. The table shows one location with MW 2 and Status 'LSE'.

| Location Name * | Address | MW | Status |
|-----------------|---|----|--------|
| Location Name | 1234 Main St, City, State Zip Code, USA | 2 | LSE |

- Load Zone
- CP Node
- Physical location
- Meter number
- Account Number
- Load Serving Entity
- Local Balancing Authority
- Relevant Electric Retail Regulatory Authority
- Asset Owner
- Measurement and Verification
- Curtailment Method

Locational Enrollment Service Timelines

- Demand Response Resources Type I – Q4 2025
- Demand Response Resources Type II – Q4 2025
- Load Modifying Resources – Late 2026
- Distributed Energy Resources – Late 2027

Other FERC Order 2222 Resources



We power life.™

FERC Order 2222 and the DER Policy Tracking Initiative

NAESB (DER Registry)

EPRI – DER Resources (P174)



We power life.™

FERC Order No. 2222

Relevant Website: <https://ferc2222.org/>

FERC Order 2222 and the DER Policy Tracking Initiative “Newly Launched”

- **Bi-Monthly Reports**
 - FERC Order 2222 & DER Policy and Implementation Report (September 2025)
 - Regulatory actions (states and RTOs) to integrate distributed energy resources (DERs) into wholesale markets (July 2025)
- **Bi-Monthly Webinars**
 - Customer Protection & CIM (August 2025)
 - Coordination (October 2025)
- **Policy Tracker**
 - Aggregates policy related to FERC Order 2222 and ‘tagged’ by state, ISO, and issue.
 - Key DOE, NARUC, NERC or other papers relevant for policy makers.

Other Industry Efforts – DERs

NAESB

- During these meetings participants have been presenting on several related case studies & examples. Have begun development of information and reporting requirements to support distributed energy resources (DERs), and the development of business practice standards to support the integration of DER/DER aggregation registries.

EPRI

Supplemental Project “Flexit”

WS1: Universal Registry for Aggregated DER

- Technical universal registry specifications that are documented and implementation ready.
- Public guide to VPP/aggregation, outlining and categorizing service types and limitations, and identifying challenges.

WS2: Framework for Aggregator Integration Interface

- Technical specification for standardized utility-to VPP/aggregator integration interface
- Supporting reference server and client code (e.g., IEEE 2030.5) with specifications



My DER Integration Profile

Thomas Chamberlain
Entergy Services Inc.
tchamb2@entergy.com

[Edit](#)

[Your METT](#)

Andrew Brignac

[Your Assigned P174 Primary Advisor\(s\)](#)

Lookup
Colleagues

Last
Year's
Deliverables

This
Year's
Deliverables

Interest
Group
Description

Contact
DER
Integration
Team

DER Forum Usage

0 New Topics Created
0 Replies Provided

Base Research Program [How to join?](#)

| Topic area | My utility is participating |
|--|-----------------------------|
| Grid Impact Analysis of DER (PSET A) | ✓ |
| Smart Inverters and Grid Support Technologies (PSET B) | ✓ |
| DERMS and Microgrid Integration (PSET C) | ✓ |
| Practices, Programs and Economics (PSET D) | ✓ |
| Technology Transfer and Industry Engagement (PSET E) | ✓ |

Interest/Working Groups

| Group Name | My utility has access |
|---|-----------------------|
| COFFEE! Common File Format Engagement and Engineering Working Group | ✓ |
| DER Field Experience Interest Group | ✓ |
| DER Model User Group (DERMUG) | ✓ |
| Distribution Grid-Forming Inverter (DiGFI) Working Group | ✓ |
| Distribution Services Working Group (DSWG) | ✓ |
| EMT DER Modeling and Analysis Industry (EMERGE) Interest Group | ✓ |

Supplemental Projects [How to join a supplemental?](#)

| Project | My utility is participating | Add me to this project team | Participating utilities | Status |
|--|-----------------------------|-----------------------------|-------------------------|------------|
| Centralized Dynamic Reactive Power Support for High DER Feeders | ✗ | <input type="checkbox"/> | 1 | Underway |
| CO-LOCATED: Customer Options Landscape Opportunities for Co-Adoption and Technology Evolution of Distributed Energy Resources (DERs) | ✗ | <input type="checkbox"/> | 7 | In Process |
| DER Commissioning Procedure and Toolkit | ✓ | <input type="checkbox"/> | 14 | Underway |
| Distribution Training and Development: Preparing the Next Generation of Distribution Engineers | ✗ | <input type="checkbox"/> | 11 | Underway |
| Evaluation and Economic Feasibility Analysis of Commercial DER Gateways | ✗ | <input type="checkbox"/> | 10 | Underway |
| Evolving DER Interconnection Practices, Processes, and Standards | ✗ | <input type="checkbox"/> | 0 | Underway |
| Inverter-Based DER Dynamic Response Characterization for Protection, Planning, and Power Quality | ✗ | <input type="checkbox"/> | 9 | Underway |
| Model-Based Analysis of DER Functions and Settings: Phase II | ✗ | <input type="checkbox"/> | 3 | Underway |

Key Take-Aways

Coordination and/or Communication Priorities

DERTF

OMS

ERSCWG

MISO TOs & EDCs

Other RTOs: **ISO New England & NYISO**

Priority Focus Areas

Near-Term: Registration: (Data Sharing & Reconciliation)

Operational Coordination

Future: Performance Validation; Settlements & Dispute Resolution

Priority Focus Items

DER Registry

Double Compensation

DERMS (Future)



We power life.™



Restricted Use Legend and Disclaimer: The distribution of this material is limited to members of the [Board of Directors, Office of the Chief Executive, Entergy management, Corporate Risk Committee] and their designees. The information included herein is prepared solely for internal use. It may include information based on assumptions and hypothetical scenarios not representative of current business plans. These hypothetical scenarios do not represent any or all current or future Entergy business plans but are merely estimates, projections, and discussion points. As a result, actual outcomes may differ. This information may also include commercially sensitive proprietary information, legal advice from counsel, and/or other confidential non-public information not appropriate for general distribution.