



Overview of RTO/ISO Filing Status in Response to FERC Order 2222

Updated November 2023

The NARUC-NASEO Distributed Energy Resources Integration & Compensation Initiative convenes and supports the National Association of Regulatory Utility Commissioners (NARUC) and NASEO (National Association of State Energy Officials) state members – Public Utility Commissions and State Energy Offices – in understanding the impact of their decision making related to the connection, operation, and compensation of distributed energy resources (DERs) within the distribution grid, bulk power system, and wholesale energy markets.

**NARUC-NASEO DER-Integration & Compensation Initiative
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Through the NARUC-NASEO DER Integration & Compensation initiative, NARUC and NASEO provide information, tools, access to experts, and peer sharing opportunities that assist members with FERC Order 2222 implementation in Regional Transmission Organization/Independent System Operator (RTO/ISO) regions and state oversight of customer-distribution-transmission (TDC) coordination outside of RTO/ISO regions. The Federal Energy Regulatory Commission (FERC) passed Order 2222 ([RM18-9-000](#)) in September 2020, allowing Distributed Energy Resources (DERs) to compete alongside traditional generation resources in wholesale electricity markets through participation via DER Aggregators (DERAs). Order 2222 adds complexity to a system already in the midst of unparalleled change with current and anticipated growth of DER deployment. State and federal policy makers and regulators are evaluating and determining whether and where to establish new rules and requirements as well as enabling policies to bring both DERs and their aggregations onto the electricity system safely, fairly, and reliably.

While RTOs/ISOs are responsible for complying with Order 2222 directives, rules established by RTOs/ISOs may need to be carried out by other entities, such as distribution utilities, DERAs, and relevant electric retail regulatory authorities (RERRAs). This document was prepared to provide state energy decision makers such as Public Utility Commissions and State Energy Offices with a summary of the status of RTO/ISO filings at FERC related to Order 2222 implementation. This document will be updated regularly as new actions are taken by FERC and/or the RTOs/ISOs.

To share updates or request additional information related to this document, please contact [Elliott Nethercutt](#).

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| California ISO (CAISO) | <p>Accepted on June 16, 2022, with additional guidance</p> <p>Approved May 18, 2023</p> | <p>ER21-2455-000</p> <p>ER21-2455-001</p> <p>ER21-2455-003</p> <p>ER21-2455-004</p> | Q3, 2022 | <ul style="list-style-type: none"> • FERC accepted CAISO’s compliance filing, subject to a further compliance filing to be submitted within 60 days of the date of issuance of this order. FERC directs CAISO to file a further compliance filing that either revises its Distributed Energy Resource Aggregation model or demonstrates that its existing demand response models are compliant with Order No. 2222. FERC also directs further compliance associated with coordination requirements of Order No. 2222, such as the distribution utility review process. • CAISO filed proposed changes to amend their tariff to comply with FERC Order 2222. FERC Order 2222 requires that all RTOs/ISOs allow for Distributed Energy Resources (DERs) that can provide a maximum of at least 100kW to participate in all markets. The CAISO already allows for DER participation but will have to make some adjustments to ensure compliance with FERC 2222. Key Notes: Reduces Distributed Energy Resource Aggregators (DERA) participation capacity to 100kW; Settlements for heterogeneous DERAs; Distributed Curtailment Resources (DCR) in heterogeneous DERAs;¹ Same Net Benefits testing as PDR for heterogeneous DERA. • On May 18, 2023, FERC approved CAISO’s second filing to demonstrate compliance with Order 2222 as a follow-up to FERC’s June 2022 ruling, which had identified the following areas that needed to be modified: 1) specify the criteria utilities must use to determine whether each DER is capable of participating in an aggregation; 2) develop a process through which utilities will determine that a specific DER’s participation in an aggregation | <p>CAISO Business Requirements Specification for FERC Order 2222</p> |

¹ Heterogeneous DER aggregations would allow a single aggregation to leverage both battery and distributed generation resources in order to meet minimum qualifications, such as run time requirements, that each resource type may not be able to meet individually.

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| | | | | <p>“will not pose significant risks to the reliable and safe operation of the distribution system;” and 3) share with utilities any “necessary information” and data collected about the individual DERs’ participating in an aggregation.</p> | |
| ISO New England (ISO-NE) | <p>Filed on February 2, 2022; ISO-NE issued a status update letter on December 1, 2022; FERC responded on March 1, 2023</p> <p>FERC accepted ISO-NE request for rehearing on October 6, 2023</p> <p>On November 2, 2023, FERC accepted ISO-NE’s third compliance filing</p> | ER22-983-000 ER22-983-001 ER22-983-002 ER22-983-004 | Initially Q4, 2026 per March 1, 2023 order; Currently TBD; implementation suspended by ISO-NE as of October 6, 2023 | <ul style="list-style-type: none"> • ISO-NE proposed FCM-related changes will go into effect in Q4 2022, in order to allow the ISO to complete changes necessary for DERAs to participate in Forward Capacity Auction (FCA). The energy and ancillary services market changes would be effective in Q4 2026, such that resources can be commercial and integrated ahead of the FCA Capacity Commitment Period that begins on June 1, 2027 • ISO-NE has been pursuing the DECR Tariff Update effort to align the DECR rules proposed in the Order No. 2222 Compliance Proposal with changes to the buyer-side mitigation rules, which the Commission accepted in May 2022, and must be implemented for FCA 18. ISO-NE continued to pursue DECR implementation through the month of November in anticipation of a Commission order on the ISO’s Order No. 2222 Compliance Proposal. • On December 1, 2022, ISO-NE recognized that FERC had not issued an order accepting the original Compliance Proposal. In the absence of the order, ISO-NE notified FERC that they will suspend implementation activities. • On March 1, 2023, FERC partially accepted the ISO-NE proposal. FERC rejected portions of the proposal, claiming that “ISO-NE has failed to demonstrate that its proposed energy and ancillary services market participation models for DERAs accommodate the physical and operational characteristics of behind-the-meter DERs, because behind-the-meter DERs participating under those participation models may be unable to provide all services that | <p>ISO-NE Key Project Page - Order 2222</p> |

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| | | | | <p>they are technically capable of providing through aggregation, as required by Order No. 2222.”²</p> <ul style="list-style-type: none"> • FERC also challenged ISO-NE’s requirement that limits storage participation to load-serving entities, excluding behind-the-meter DERs from participation in their wholesale market. • FERC asked ISO-NE for several follow-up compliance documents with various deadlines between 30 and 180 days. • On April 25, 2023, the NEPOOL Markets Committee voted in support of the ISO-NE’s proposed response to FERC’s March 1, 2023, order requiring modifications for DER aggregations and participation in their markets. • On October 6, 2023, FERC responded to ISO-NE’s request for rehearing, agreeing to delay the required timing of implementation. FERC also provided clarification about the responsibility and role of DER aggregators and utilities in providing ISO-NE with related metering information and data. • On November 2, 2023, FERC accepted ISO-NE’s third compliance filing for Order 2222, recognizing the proposal does not pose prohibitive barriers to market participation for DER aggregations. For DER metering, ISO-NE provided three options: retail delivery point metering, submetering with reconstitution, or parallel metering. FERC directed ISO-NE to make an additional filing within 90 days to resolve issues related to its metering proposal. | |
| Midcontinent ISO (MISO) | Filed on April 14, 2022; FERC ruled on October 10, 2023 | ER22-1640 | TBD (Q4, 2029 proposed by MISO but rejected by FERC) | <ul style="list-style-type: none"> • MISO identified 18 different tariff revisions and market enhancements to comply with the order and to allow DERAs to participate in its market (see section IV). • MISO must first complete two ongoing projects: 1.) major upgrades to its Market Systems Enhancement (MSE), as well as related updates to its Demand Response Tool (DRT) and Unified | MISO Order 2222 Dashboard MISO DERTF |

² FERC Docket Nos. ER22-983-000 and ER22-983-001. Pp.27-28. <https://www.iso-ne.com/static-assets/documents/2023/03/er22-983-000.pdf>.

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| | | | | <p>Enrollment System for registering DERs; 2.) updates to its multiple configuration resources (MCR), to allow for improved scheduling and management of gas, wind, and solar resources.</p> <ul style="list-style-type: none"> • MISO also noted the need to create a new market participation model for aggregated DER. • Additional reasons for the longer compliance target are related to a need for communications with distribution utilities from MISO’s control room. Currently, MISO only communicates with transmission owners and asset owners interconnected to the transmission system, while order 2222 would require communication with utilities and aggregators. • On October 10, 2023, FERC ruled that MISO must submit a revised date for their proposed Order 2222 implementation. FERC noted insufficient explanation for the additional 5-year gap needed between MISO’s proposed new market platform (2024) and the first DER aggregation registrations in late 2029. FERC also requested that MISO must reexamine plans to aggregate DERs to a single pricing node (rather than across multiple nodes). FERC also ruled that MISO must add tariff language to require DERs to prove aggregation methods align with operating procedures of distribution companies and rules established by the regulatory authority. FERC encouraged MISO to coordinate with their respective distribution utilities, allowing an additional 60 days to address the identified problems in its compliance plan. | |
| New York ISO (NYISO) | Filed on July 19, 2021, accepted the initial compliance filing on June 17, 2022. | ER21-2460-000 ER21-2460-001 ER21-2460-003 | Q4, 2026 | <ul style="list-style-type: none"> • NYISO also had to file a proposed effective date by which it will allow DERs in heterogeneous Aggregations to provide all ancillary services that they are technically capable of providing through aggregation, which was subsequently accepted by FERC. • FERC also directed further compliance with respect to interconnection, participation, and coordination requirements of Order No. 2222, such as the distribution utility review process. | NYISO Presentation on Compliance |

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| | FERC partially accepted the second compliance filing on April 20, 2023 | | | <ul style="list-style-type: none"> • FERC issued an Order on June 17, 2022, accepting the Compliance Filing (June 2022 Order), and directing the NYISO to make over thirty additional tariff modifications to achieve compliance with Order No. 2222, addressing: Small Utility Opt-in Requirements; Eligibility to Participate in NYISO Markets through a DER Aggregator; Market Participation Agreements; and Coordination between the ISO, Aggregator, and Distribution Utility. • On April 20, 2023, FERC issued a second order directing the ISO to submit a filing within 30 days to address inconsistencies in recent tariff revisions to allow DER aggregations to fully participate in its markets. FERC also directed NYISO to submit informational filings every six months with information on its stakeholder process in developing updates to their ancillary service market rules related to the participation of DER aggregations. FERC requested that these biannual filings continue until December 31, 2024, at which point NYISO must submit a formal compliance filing with their final proposal for compliance. FERC granted NYISO an extension until Q4, 2026 for NYSIO to fully comply with Order 2222. | |
| PJM Interconnection | Filed on April 26, 2022; FERC responded on March 1, 2023 PJM filed updated compliance details and confirmed implementation timeline with FERC on | ER22-962-000 ER22-962-001 | Q2, 2023 (limited subset of revisions) Q1, 2026 | <ul style="list-style-type: none"> • PJM filed a comprehensive proposal February 1, 2022, outlining how it will comply with Order 2222. DER aggregation participation in PJM charters new territory in several areas, including interactions between distribution and transmission systems, emerging technology integration, grid modernization, and operational flexibility. • On March 1, 2023, FERC directed the PJM to revise many components of its compliance proposal. The commission approved the allowance of aggregations spread across system pricing nodes (for capacity and ancillary service markets only). FERC rejected the proposal to limit aggregations to a single pricing node when participating in PJM’s energy market. | PJM Order 2222 Filing Furthers DER Market Participation September 1 Filing |

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| | September 1, 2023 | | | <ul style="list-style-type: none"> On September 1, 2023, PJM formally submitted a tariff filing to be effective under ER22-962 docket. | |
| Southwest Power Pool (SPP) | Filed on April 28, 2022; FERC has not responded to filing | ER22-____-000 | Q3, 2025 | <ul style="list-style-type: none"> SPP has no need to add a new market participation model for aggregated DERs, as DERs consist of multiple existing technologies (e.g., demand response and renewable energy), which fit into the existing resource types. Added response capacity limitation of 1 hour, based on a justification that the NERC MOD Standards require a synchronous generator to demonstrate real power and lagging reactive power for an hour. SPP currently treats DERs like generators without reducing barriers for non-synchronous DER technologies that are inverter-based (solar and storage). Proposed market requirements: an aggregator must gather positive affirmation from a retail provider who could be an EDC or an LSE at SPP. The aggregator then contacts the retail electricity authority to gain affirmation that the retail program can participate in wholesale markets. Before registering the DER aggregation, an aggregator must gather affirmations from a minimum of 3 and a maximum of 550 entities. Finally, the aggregator must attest that they received positive affirmations and include the contact information of individuals they contacted at each of these entities. SPP provided four instances where the market operator “lacks the jurisdictional authority” over its EDCs. Specifically, SPP cannot 1) force EDCs to communicate to the aggregator about retail program eligibility to participate in the wholesale market, 2) force EDCs to provide meter data on behalf of an aggregator, 3) require distribution utilities to set up an ICCP connection with SPP, and 4) force entities to establish a uniform standard for safety & | SPP Order 2222 Task Force |

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| | | | | <p>reliability criteria that its 550 distribution utilities must perform on DER aggregations.</p> <ul style="list-style-type: none"> • Software milestones required to achieve compliance: 9 months for EMS design, 6-12 months for ICCP changes, and 9 months each for operator displays and market registration testing before the go-live date. | |