



Overview of **Order No. 2222**

Participation of Distributed Energy Resource Aggregations in Markets Operated by RTOs and ISOs

**Indiana Utility Regulatory Commission
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Views expressed do not necessarily represent the views of the Commission or any Commissioner.

Procedural Background

The Commission issued a NOPR in November 2016 proposing to require each RTO and ISO to revise its tariff to:

1. Establish a participation model consisting of market rules that, recognizing the physical and operational characteristics of electric storage resources, accommodates their participation in the organized wholesale electric markets and
2. Allow distributed energy resource aggregators, including electric storage resources, to participate directly in the organized wholesale electric markets.

Procedural Background -- Timeline

Date	Milestone
November 2016	FERC issued a Notice of Proposed Rulemaking (NOPR) that included Electric Storage Resources and DER Aggregations
February 2018	Order No. 841 issued on Electric Storage Resources DER Aggregations moved into a new proceeding
April 2018	Technical Conference on DER Aggregations
June 2018	Post-Technical Conference comments filed
September 2019	Data Requests sent to RTOs/ISOs on interconnection of DERs
September 17, 2020	FERC Order No. 2222 issued on DER Aggregations
March 18, 2021	Rehearing Order No. 2222-A issued
June 17, 2021	Rehearing Order No. 2222-B issued
July 19, 2021	CAISO and NYISO compliance filings filed
February 1 and 2, 2022	PJM and ISO-NE compliance filed, respectively
April 14 and 28, 2022	MISO and SPP compliance filed, respectively

Order No. 2222 Summary

- Existing RTO/ISO market rules are unjust and unreasonable in light of barriers that they present to the participation of DER aggregations in the RTO/ISO markets.
 - Such barriers can emerge when the rules governing participation in those markets are designed for traditional resources and in effect limit the services that emerging technologies can provide.
 - For example, DERs tend to be too small to meet the minimum size requirements to participate in the RTO/ISO markets on a stand-alone basis, and may be unable to meet certain qualification and performance requirements.
 - Existing participation models for aggregated resources, including DERs, often require those resources to participate in the RTO/ISO markets as demand response, which limits their operations and the services that they are eligible to provide.
- By removing barriers to the participation of DER aggregations in the RTO/ISO markets, Order No. 2222 enhances competition and, in turn, helps to ensure that the RTO/ISO markets produce just and reasonable rates.
- RTOs/ISOs must amend their tariffs to allow DER aggregators to participate in their markets.

Definition of DERs

- Defines a DER as “any resource located on the distribution system, any subsystem thereof or behind a customer meter.”
 - These resources may include, but are not limited to, resources that are in front of and behind the customer meter, electric storage resources, intermittent generation, distributed generation, demand response, energy efficiency, thermal storage, and electric vehicles and their supply equipment.
 - Definition is technology-neutral, thereby ensuring that any resource that is technically capable of providing wholesale services through aggregation is eligible to do so
- Defines a DER aggregator as “the entity that aggregates one or more DERs for purposes of participation in the capacity, energy and/or ancillary service markets of the RTOs and/or ISOs.”
 - The DER aggregator is the RTO/ISO market participant, not the DER

Commission Jurisdiction

- Commission exercises jurisdiction over the sales by DER aggregators into the RTO/ISO markets.
- The Final Rule declines to include a mechanism for all state and local regulators to prohibit all DERs from participating in the RTO/ISO markets through DER aggregations, otherwise known as an opt-out.
- Nothing in this final rule preempts the right of states and local authorities to regulate the safety and reliability of the distribution system.
- The Final Rule establishes an opt-in mechanism for small utilities (4 million MWh or less).

DER Interconnection Jurisdiction

- The Commission established “first use” or “dual use” test in Order Nos. 2003 and 2006,
 - The first interconnection to a distribution facility for the purpose of making wholesale sales is not required to utilize the transmission provider’s Commission-jurisdictional GIP or obtain a Commission-jurisdictional GIA. Such interconnections are governed by applicable state or local law.
 - The interconnection of a second generator to the same distribution facility for the purpose of engaging in wholesale sales is jurisdictional and must utilize the Commission-jurisdictional GIP and GIA pursuant to Order Nos. 2003 and 2006.
- In Order No. 2222, Commission declines to apply the first use policy to exercise jurisdiction over the interconnection of a DER to a distribution facility when that resource interconnects for the purpose of participating in RTO/ISO markets exclusively through a DER aggregation.

Required RTO/ISO Tariff Provisions

- For each RTO/ISO, the tariff provisions addressing distributed energy resource aggregations must:
 - Allow **DER aggregations to participate directly** in RTO/ISO markets and establish DER aggregators as a type of market participant;
 - Allow DER aggregators to register DER aggregations under one or more **participation models** that accommodate the physical and operational characteristics of the DER aggregations;
 - Establish a **minimum size requirement** for DER aggregations that does not exceed 100 kW;
 - Address **locational requirements** for DER aggregations;

Required RTO/ISO Tariff Provisions (Cont.)

RTOs/ISOs must address:

- **Distribution factors and bidding parameters** for DER aggregations;
- **Information and data requirements** for DER aggregations;
- **Metering and telemetry requirements** for DER aggregations;
- **Coordination**;
- **Modifications** to the list of resources in a DER aggregation; and
- **Market participation agreements** for DER aggregators.

Details of Key Order No. 2222 Provisions

- DER aggregator is single point of RTO/ISO contact: responsible for managing, dispatching, metering and settling the individual resources.
 - If a DER aggregator makes sales of energy to RTO/ISO, it is a public utility (subject to MBR, EQR, and other requirements).
 - While the DER aggregator will be the entity primarily responsible for providing required metering and telemetry information to an RTO/ISO, RTOs/ISOs are given flexibility on whether to require metering and telemetry of individual DERs.
- Heterogenous aggregations (different resource types) must be allowed.
 - Order No. 2222-A determined that demand response resources within an aggregation are not subject to an opt-out.
- Minimum size requirement for DER aggregations can be no more than 100 kW. Rule does not adopt a maximum size for a DER aggregation.

Details of Key Order No. 2222 Provisions

- Rule does not adopt a minimum or maximum size of resources that can participate in an aggregation, but each RTO/ISO must propose a maximum size for individual DERs.
- Each RTO/ISO must propose locational requirements that are "as geographically broad as technically feasible," which may include multi-node aggregations.
- RTOs/ISOs must allow dual participation in retail programs and allow DERs to provide multiple wholesale services; they may create accounting/operational rules to avoid double payment.
 - RERRAs are able to condition a DER's participation in a retail DER program on that resource not also participating in the RTO/ISO markets

Details of Key Order No. 2222 Provisions

- **Coordination Requirements for RTOs/ISOs:**
 - Must revise its tariff to establish market rules that address coordination between the RTO/ISO, the DER aggregator, the distribution utility, and RERRAs.
 - Must incorporate a comprehensive and non-discriminatory process for timely review by a distribution utility of the individual DERs that comprise a DER aggregation
 - Must establish a process for ongoing coordination, including operational coordination, that addresses data flows and communication among itself, the DER aggregator, and the distribution utility.
 - Must identify how it will accommodate and incorporate voluntary RERRA involvement in coordinating the participation of aggregated DERs in RTO/ISO markets.

Status of Compliance Filings

- CAISO (ER21-2455) and NYISO (ER21-2460) filings
 - Orders issued on June 17, 2022
 - CAISO (179 FERC ¶ 61,197)
 - NYISO (179 FERC ¶ 61,198)
- PJM (ER22-962) and ISO-NE (ER22-983) filings
 - Comments received
 - Data requests issued and responses received
- MISO (ER22-1640) and SPP (ER22-1697) filings
 - Comments received
 - Data requests issued and responses received



QUESTIONS?

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