


ISO Market Simulation Plan

FERC 2222 - Distributed Curtailment Resources

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Revision History

Date	Version	Description	Author
09/24/2024	1.0	Initial Release	Trang Vo



 California ISO	PMO	Version:	1.0
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Table of Contents

1. INTRODUCTION	4
1.1 SCOPE OF INITIATIVES.....	4
1.2 MARKET SIMULATION.....	5
2. MARKET SIMULATION APPROACH.....	6
2.1 HIGH LEVEL OVERVIEW	6
2.2 MARKET SIMULATION ACTIVITIES.....	6
2.3 SCENARIOS.....	6
2.4 MARKET SIMULATION SUPPORT	7
2.4.1 Routine Functions.....	7
2.4.2 Market Simulation-Specific Support.....	7
2.5 MARKET SIMULATION COMMUNICATION	7
3. CONTACTS.....	8

 California ISO	PMO	Version:	1.0
ISO Market Simulation Plan		Date Created:	09/24/2024

1. Introduction

The objective of this document is to provide the information needed by market participants in order to engage in the FERC 2222 initiative, thereby enabling them to smoothly embrace and utilize the new features and functionality that will be available when it goes into Production.

1.1 Scope of Initiatives

FERC 2222 – Distributed Curtailment Resources


FERC Order 2222 seeks to remove barriers for DCR (Distributed Curtailment Resources) participation in RTO/ISO markets. Through its prior initiatives, CAISO already supports DER (Distributed Energy Resource) market participation. In this implementation, the CAISO will amend its existing DER policy to accommodate FERC Order 2222, which will include reducing the maximum capacity requirement and introducing a new DERA resource type with underlying DCR. In total, FERC Order 2222 requires RTOs/ISOs to revise the Tariff to establish a DERA participation model, which will:

- 1) Allow DERAs to participate in markets and establish DERAs as a type of market participant,
- 2) allow aggregators to register operational characteristics of a DERA,
- 3) establish maximum capacity requirements for DERAs,
- 4) address locational requirements,
- 5) address distribution and bidding,
- 6) address data and information,
- 7) allow for coordination between necessary entities,
- 8) address metering and telemetry,
- 9) address modifications to the list of resources in DERA, and
- 10) address market participation agreements.

The CAISO and its participating transmission owners have already gone to great lengths to ensure that DERs can easily access the wholesale markets for energy and ancillary services. These include ensuring that the CAISO does not prohibit any particular DER from participating in DERAs. This implementation now builds on this work by adding the DCR as an underlying resource type for the Distributed Energy Resource Aggregate (DERA). DERAs with any underlying DCR will be considered HDERA (given its capability to support both DER and DCR types) as opposed to the existing DERA (which only allows underlying DER). Demand response is considered a type of DCR in this context. Similarly, as with demand response, the metering performance of DCRs will be reflected as supply (or metering channel 4).

The existing CAISO Tariff already complies with most of FERC Order 2222; however, a few changes will be needed to align the tariff with the order by including a new resource classification, reducing the minimum allowable DER energy nameplate capacity limit (i.e. Pmax), and the creation of DCRs. Some of these changes will include:

- 1) Adapt small utility opt-in provision in its pro forma Demand Response Provider agreement for the CAISO's pro forma DERP Agreement, replacing Demand Response references with DER references.
- 2) Change definition of DER to align with the Commission's definition as found in section III B of the Order No. 2222 DERAs Compliance Filing.
- 3) CAISO proposes to implement a heterogeneous DERA model such that:

 California ISO	PMO	Version:	1.0
ISO Market Simulation Plan		Date Created:	09/24/2024


- "Heterogeneous" DERAs must consist of at least one curtailment resource, and may comprise of the aggregate's underlying capacity in part or total.
 - Heterogeneous DERAs will provide a net response of energy, demand curtailment or both at its PNode(s). Settlements for heterogeneous DERAs will be based on the net service provided to the CAISO. This will be a sum of the net energy and the demand curtailment provided by the aggregate.
- 4) Define "Distributed Curtailment Resource" as a DER providing demand curtailment in a heterogeneous DERA.
 - 5) Settle heterogeneous DERAs as a single supply resource, as a sum of net energy provided by DERs and the demand curtailed from DCRs.
 - 6) The CAISO will apply a net benefits test to determine a threshold Market Clearing Price for Demand Response Providers and the new HDERA resource type.
 - 7) Provision against double counting for any possible future scenarios, prevents a DER from participating in a DERA where the DER already participates in a retail net energy metering program that does not expressly permit wholesale market participation, requiring the distribution company to confer regarding any double-counting concerns
 - 8) Reduce the minimum aggregate capacity limit of DERs from 500kW to 100kW for a DERA.
 - 9) Revise Tariff to require DERPs to notify the CAISO whenever DERA information changes due to the removal, addition or modification of a DER within a DERA.

Additional information pertaining to FERC 2222 – Distributed Curtailment Resources can be found on the Release Planning page at: <https://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

1.2 Market Simulation

The FERC 2222 Market Simulation includes a scenario for customers to validate

- Interface changes: Changes that impact templates (e.g., the Resource Data Template (RDT), user interface (UI), and application programming interface (API)
- New system process: Modification of data flow in systems, especially if the new process requires the market participant to demonstrate proficiency prior to Production
- New/Modified model data: Addition or substantial modification of model data as a market solution or export provided by the ISO.

 California ISO	PMO	Version:	1.0
ISO Market Simulation Plan		Date Created:	09/24/2024

2. Market Simulation Approach

2.1 High Level Overview

The timeline for the FERC 2222 Market Simulation overview is as follows:


- Pre-Simulation Activities
- Weeks 1-2: Market Simulation Connectivity
- Weeks 3-4: Market Simulation Scenario Execution

2.2 Market Simulation Activities

Activity	Description	Timeframe
Publication of Market Simulation Scenarios	CAISO publish FERC 2222 Market Simulation Scenarios on Release Planning page	07/22/2024
Market Simulation Kick-Off Teleconference	CAISO to conduct a teleconference to provide Market Participants with a Market Simulation briefing	09/12/2024
Market Simulation Registration Deadline	Market Participants to notify CAISO of intent to engage in Market Simulation	09/13/2024
Connectivity Testing	Market Participants begin connectivity to MAP Stage environment for MF, SIBR, MRI-S	09/16/2024
Market Simulation Execution	Market Participants begin to execute Market Simulation	10/01/2024

2.3 Scenarios

<https://www.caiso.com/documents/market-simulation-scenarios-ferc-order-2222.pdf>

 California ISO	PMO	Version:	1.0
ISO Market Simulation Plan		Date Created:	09/24/2024

2.4 Market Simulation Support

2.4.1 Routine Functions

Submit questions to CIDI with 'Functional Environment' = "Market Simulation"
marketsim@caiso.com

2.4.2 Market Simulation-Specific Support

Submit questions to CIDI with 'Functional Environment' = "Market Simulation"
marketsim@caiso.com


2.5 Market Simulation Communication

	Monday	Tuesday	Wednesday	Thursday	Friday
September	✓ 2	✓ 3	✓ 4	✓ 5	✓ 6
	✓ 9	✓ 10	✓ 11	✓ 12	✓ 13
	✓ 16	✓ 17*	✓ 18	✓ 19*	✓ 20
	✓ 23	✓ 24*	✓ 25	26*	27
	✓ 30				
October		1*	2	3*	4
	7	8*	9	10*	11
	14	15	16	17	18
	21	22	23	24	25
	28	29	30	31	

ISO Closure

**Market
Simulation
Forum**

***Settlements Trade
Date**

 California ISO	PMO	Version:	1.0
ISO Market Simulation Plan		Date Created:	09/24/2024

3. Contacts

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