



California ISO

Market Simulation Structured Scenarios

FERC 841 – Requested Adjustments

Version 1.3

8/3/2020

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Location of Document

<http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>

Revision History

| Date | Version | Description | Author |
|------------|---------|---|-----------------|
| 06/12/2020 | 1.0 | Initial Posting for Market Participant Review and feedback | Tyler DuBeshter |
| 06/24/2020 | 1.1 | Updating trade date for market sim and incorporating feedback on scenarios | Tyler DuBeshter |
| 7/10/2020 | 1.2 | Feedback from Jeremy Malekos condensed scenarios and updated business cases | Tyler DuBeshter |
| 8/3/2020 | 1.3 | Updated TD to 8/12/2020 | Tyler DuBeshter |

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1. Introduction

The objective of this document is to provide information for ISO Market Participants to participate in the Structured Market Simulation activities for the FER 841 Requested Adjustments project. For the scope of this initiative and implementation, please refer to the project Business Requirements Specification (BRS) on the ISO [Release Planning](#) site.

2. Market Simulation Structured Scenarios

2.1 High Level Overview

The identified scenarios will be executed during the market simulation to demonstrate functionality for market participant understanding and validation.

2.2 Structured Scenarios Conditions and Setup

The following additional setup will be used by the ISO during the scenario execution.

Market Participant pre-Market Simulation Actions

1. Market participants will need to register their request with the ISO to participate in the FERC 841 Requested Adjustments simulation via the MarketSim@caiso.com mailbox.
2. Please identify up to three (3) Resources that will be submitted for market runs by 7/3/2020.
3. Preparations for Market Sim:
 - a. Create Registrations for NGRs with exemption for CAISO wholesale charges (BRQ001)
 - b. Register NGR resources in Master File per the following by 7/20/2020:
 - i. NGR resource at least one Resource ID must be flagged as APPLY_WHLSL_CHARGE = 'N'. (BRQ001, BRQ005, BRQ010)
 - c. Develop SQMD data sets for Resource IDs to be used in Mkt. Sim
 - i. NGR Resource ID by 7/23/2020:
 1. Set A – Data set that demonstrates compliance with a CAISO dispatch to charge (DA, FMM, RTM).
 2. Set B – Data set that reflects Exceptional Dispatch from a CAISO dispatch to charge.
 3. Set C – Data set that reflects RUC with CAISO dispatch to charge.
 4. Set D – Data set that reflects uneconomic dispatch to charge.
 5. Set E – Data set that reflects EIM dispatch to charge.

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Please submit your request and any additional information identified above.

ISO pre-Market Simulation Activities

1. The ISO will set up the Market Simulation environment and publish a market simulation schedule to support the following scenarios outlined in more detail in Section 2.3 below.
2. The ISO will ensure market runs include DA, FMM, RTM Awards & dispatches for NGR Resource IDs identified by Market Participants

MSDC

1. Masterfile will identify 1 NGR resource which will submit DA, FMM, RTM Bids
2. Market will accept NGR resources DA, FMM, RTM Bids and issue Awards
3. Settlements will run(BRQ020, BRQ025, BRQ030, BRQ035, BRQ040, BRQ045, BRQ050):
 - a. RUC Net Amount PC
 - b. RTM Net Amount PC
 - c. IFM Net Amount PC
 - d. Real Time Energy Quantity PC
 - e. 6824 No Pay Residual Unit Commitment (RUC) Settlement
 - f. 6488 Exceptional Dispatch Uplift Settlement
 - g. 6482 Real Time Excess Cost for Instructed Energy Settlement
 - h. 64750 Real Time Uninstructed Imbalance Energy EIM Settlement
 - i. 6475 Real Time Uninstructed Imbalance Energy Settlement
 - j. 64740 Real-Time Unaccounted for EIM Energy Settlement
 - k. 6474 Real-Time Unaccounted for Energy Settlement
 - l. 64700 Real Time Instructed Imbalance Energy Settlement
 - m. 6470 Real Time Instructed Imbalance Energy Settlement
 - n. 64600 FMM Instructed Imbalance Energy EIM Settlement
 - o. 6460 FMM Instructed Imbalance Energy Settlement
 - p. 6011 Day Ahead Energy, Congestion, Loss Settlement in order to validate updates which incorporated wholesale exempt resources into configuration stream.
4. Settlements settles any resource that charges with:
 - a. RUC Net Amount PC
 - b. RTM Net Amount PC
 - c. IFM Net Amount PC
 - d. Real Time Energy Quantity PC
 - e. 6824 No Pay Residual Unit Commitment (RUC) Settlement
 - f. 6488 Exceptional Dispatch Uplift Settlement
 - g. 6482 Real Time Excess Cost for Instructed Energy Settlement

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- h. 64750 Real Time Uninstructed Imbalance Energy EIM Settlement
 - i. 6475 Real Time Uninstructed Imbalance Energy Settlement
 - j. 64740 Real-Time Unaccounted for EIM Energy Settlement
 - k. 6474 Real-Time Unaccounted for Energy Settlement
 - l. 64700 Real Time Instructed Imbalance Energy Settlement
 - m. 6470 Real Time Instructed Imbalance Energy Settlement
 - n. 64600 FMM Instructed Imbalance Energy EIM Settlement
 - o. 6460 FMM Instructed Imbalance Energy Settlement
 - p. 6011 Day Ahead Energy, Congestion, Loss Settlement
5. Masterfile will identify 1 NGR resource which will submit RUC Availability Bids
 6. Market will accept NGR resources RUC Availability Bids and issue a RUC Capability Payment
 7. Settlements will run RUC No Pay PC in order to validate updates which incorporated wholesale exempt NGR resource into configuration stream.
 8. Settlements settles any RUC non-compliance in CC 6824 - No Pay Residual Unit Commitment RUC Settlement
 9. ITPD manipulates the market results to cause a partial response to the RUC instruction.
 10. Settlements will validate the integrity of the following primary bill determinants before a Settlement run is initiated:
 11. ResourceDailyApplyWholesaleChargeFlag rmd

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2.3 Structured Scenarios

| Scenario Execution Trade Date(s): 8/12/2020 | |
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| Scenario #1 | Show that exempted storage resources will not be settled when charging in DA, FMM, RTM, RUC. |
| Description | Exempted storages that have demonstrated co-mingled meters for retail and wholesale markets will not be settled for wholesale when charging. |
| Expected System Outcome | Awards to charge will be zeroed out from being settled in initial settlement statement. |
| Anticipated Settlement Outcome | CC 6011, 6460, 6470, 64600, 64700 |
| Details: | |
| ISO Actions | The Market Simulation Team to: <ol style="list-style-type: none"> 1. Run the market 2. Create low price conditions in the market 3. Settlements to receive expected energy 4. Publish Settlement statements 5. Publish market invoices |
| ISO Market Participant Actions | Scheduling Coordinators to: <ol style="list-style-type: none"> 1. Submit bids to charge 2. Submit meter data |
| EIM Market Participant Actions | Scheduling Coordinators to: <ol style="list-style-type: none"> 1. Submit bids to charge 2. Submit meter data |

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| Scenario Execution Trade Date(s): 8/12/2020 | |
|--|---|
| Scenario #2 | Show that exempted resources will not be assessed penalties for not fully responding to awards for charging |
| Description | Exempted storages that have demonstrated co-mingled meters for retail and wholesale markets will not be assessed penalties or settled on flex ramp as part of the wholesale market when charging. |
| Expected System Outcome | Awards are not fully met, triggering unaccounted, uninstructed, and flex ramp charge codes in the initial settlement statement |
| Anticipated Settlement Outcome | CC 6474, 6475, 6824, 64740, 64750, 7070, 7071, 7077, 7081, 7087 |
| Details: | |
| ISO Actions | The Market Simulation Team to <ol style="list-style-type: none"> 1. Run the market 2. Create low price conditions in the market 3. Modify meter to ensure awards are not fully met 4. Settlements to receive expected energy from participating resources 5. Publish Settlement statements 6. Publish market invoices |
| ISO Market Participant Actions | Scheduling Coordinators to: <ol style="list-style-type: none"> 1. Submit bids to charge 2. Submit meter data |
| EIM Market Participant Actions | Scheduling Coordinators to: <ol style="list-style-type: none"> 1. Submit bids to charge 2. Submit meter data |

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| Scenario #3 | Uneconomically dispatch wholesale exempt resources to demonstrate bid cost recovery functionality change. |
| Description | Exempted storages that have demonstrated co-mingled meters for retail and wholesale markets will not be eligible for bid cost recovery in the wholesale market when charging. |
| Expected System Outcome | Resource will be ineligible for BCR for intervals that the resource is charging but uneconomic in settlement statement |
| Anticipated Settlement Outcome | CC 6620, 6630, 66200 |
| Details: | |
| ISO Actions | The Market Simulation Team to <ol style="list-style-type: none"> 1. Run the market 2. Create low price conditions in the market 3. Modify Pricing to ensure BCR/ uneconomic dispatches generated 4. Settlements to receive expected energy and meter data from participating resources 5. Publish Settlement statements 6. Publish market invoice |
| ISO Market Participant Actions | Scheduling Coordinators to: <ol style="list-style-type: none"> 1. Submit bids to charge 2. Submit meter data |
| EIM Market Participant Actions | Scheduling Coordinators to: <ol style="list-style-type: none"> 1. Submit bids to charge 2. Submit meter data |

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| Scenario Execution Trade Date(s): 8/12/2020 | |
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| Scenario #4 | Exceptionally Dispatch wholesale exempt storage resource to charge. |
| Description | Exempted storages that have demonstrated co-mingled meters for retail and wholesale markets will not be settled for responding to exceptional dispatches to charge. |
| Expected System Outcome | Resources exceptionally dispatched to charge will not be settled for this instruction in settlement statement |
| Anticipated Settlement Outcome | CC 6482, 6488 |
| Details: | |
| ISO Actions | The Market Simulation Team to <ol style="list-style-type: none"> 1. Exceptionally Dispatch storage resources to charge 2. Settlements to receive expected energy and meter data from participating resources 3. Publish Settlement statements 4. Publish market invoices |
| ISO Market Participant Actions | Scheduling Coordinators to: <ol style="list-style-type: none"> 1. Submit bids to charge 2. Submit meter data |
| EIM Market Participant Actions | Scheduling Coordinators to: <ol style="list-style-type: none"> 1. Submit bids to charge 2. Submit meter data |

3. ISO Market Simulation Contact

Please contact MarketSim@caiso.com if you have any questions or concerns regarding these scenarios.