



California ISO

Market Simulation Structured Scenarios

Energy Storage and Distributed Energy Resources (ESDER) – Phase 3B

Version 1.1

7/09/2020

 California ISO <small>Shaping a Renewed Future</small>	Market Simulation Templates Program Office	Template Version:	1.1
		Template Date:	03/30/2011
ISO External Market Simulation Structured Scenarios		Document Version:	1.0
		Effective Date	5/29/2020

Location of Document

[Release Planning](#)

Revision History

Date	Version	Description	Author
5/04/2020	0.1	Initial Draft	Rich Giska
5/20/2020	0.2	MSDC added two Structured Scenario's	Phillip Boudreau
5/28/2020	0.3	Accepted all updates made to the document by Pia, Tyler and Phillip after team review	Mohan Koya
5/28/2020	1.0	Updated cases where only a charge code number existed (example: 6011) to its full name as it exists on BPM	Phillip Boudreau
7/9/2020	1.1	Removed the RUC references in the setup description. Updated section 2 with revised due dates	Tyler Dubeshter Pia Sok

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1. Introduction

The objective of this document is to provide the information needed to ISO Market Participants to participate in the Energy Storage and Distributed Energy Resources (ESDER) – Phase 3B simulation scenarios.

For the scope of this implementation and this initiative, please refer to the Energy Storage and Distributed Energy Resources (ESDER) – Phase 3B External Business Requirements Specification – [Release Planning](#)

2. Structured Scenarios Approach

2.1 High Level Overview

The identified scenarios will be executed during the structured scenario portion of the Energy Storage and Distributed Energy Resources (ESDER) – Phase 3B market simulation.

2.2 Structured Scenarios Conditions and Setup

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

MP's will need to register their request with the ISO to participate in this simulation via the MarketSim@caiso.com mailbox.

Please submit the information requested below

Market Participants

1. Please identify up to three (3) Baseline Methodologies that will be utilized in the registrations for PDR-LSR, and up to three (3) for EVSE by 7/31/2020.
2. Please request up to three (3) PDR-LSR resources by subLAP that will be registered in DRRS and Master File for use in the structured scenarios by 7/31/20.

Example 1:

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Two (2) resources under subLAP = ABCD

Example 2:

One (1) resource under subLAP = ABCD

One (1) resource under subLAP = EFGH

One (1) resource under subLAP = IJKL

Note: PDR Coordinator will provide the PDR-LSR *Curtailment* 'CUR' resource ID for use in market simulation. SC will submit GRDT for Master File. In addition to the *Curtailment* 'CUR' resource ID, the *Consumption* 'CON' resource ID must be on the same GRDT file (BRQ154).

3. Please identify any PDR registrations/resource ID that will be submitted for market runs that reflect EVSE by 7/31/20.

4. Preparations for Market Sim:
 - a. Create Registrations in DRRS for PDR-LSRs (BRQ100, BRQ110 and BRQ112) by 7/31/2020.
 - b. Create Registrations in DRRS for PDR-EVSEs (BRQ300) by 7/31/2020
 - c. Register PDR-LSR Resources in Master File per the following by 7/31/2020:
 - i. PDR- LSR Curtailment and PDR-LSR Consumption. At least one (1) PDR-LSR Curtailment Resource ID must be flagged as CERT_SPIN = 'Y'. (BRQ130, BRQ154, BRQ160)
 - ii. Verify these apply to the same physical entity (BRQ131)
 - iii. Pmin and Pmax (BRQ101)
 - iv. Dispatchable Option (BRQ135)
 - v. RDT Process parameters (BRQ160)
 - d. Develop SQMD data sets for PDR-LSR Resource IDs to be used in Mkt. Sim (BRQ303)
 - i. PDR-LSR Curtailment Resource ID by 8/25/2020:
 1. Set A – Data set that demonstrates compliance with an CAISO dispatch for Spin award for "X" MWs [compatible with the registered Pmax for Resource ID] for an hour (Trade hour TBD)
 2. Set B – Data set that reflects non-compliance for multiple intervals with the CAISO dispatch for Spin award identified in Set A
 - ii. PDR-LSR Consumption Resource ID:

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1. Set A – Data that demonstrates compliance with an CAISO dispatch for energy consumption within the Pmin and Pmax (<0)
2. Set B – Data set that reflects non-compliance for multiple intervals with the CAISO dispatch

CAISO

1. Will ensure market runs include Spin Awards for PDR-LSR Curtailment Resource IDs identified by Market Participants
2. Will ensure market runs include dispatches for PDR-LSR Consumption Resource IDs identified by Market Participants

MSDC

1. Masterfile will identify 1 PDR-LSR Curtailment resource which will submit Spin and/or Non-Spin Bids
2. Market will accept PDR-LSR Curtailment resources Spin and/or Non-Spin Bids and issue an AS Award
3. Settlements will run Spin Non-Spin No Pay PC in order to validate updates which incorporated PDR-LSR Curtailment into configuration stream.
4. Settlements settles any Spin non-compliance in No Pay Spinning Reserve Settlement (CC 6124) or settles any Non-Spin non-compliance in No Pay Non-Spinning Reserve Settlement (CC 6224)
5. ITPD manipulates the market results to cause a partial response to the Spin/NonSpin instruction.
6. Settlements will validate the integrity of the following primary bill determinants before a Settlement run is initiated:
 - BA_5M_RSRC_PDR_SOURCE_FLAG
 - BA_5M_RSRC_PERF_METER_QTY
 - BA_5M_RSRC_CHANNEL_4_GEN_METER_QTY
 - BA_5M_RSRC_METER_FOR_ASSOC_LOAD_ID_QTY
 - BA_5M_RSRC_PDR_NOPAY_PERF_METER_QTY
 - BA_5M_RSRC_METER_SOURCE_FLAG
 - BA_5M_RSRC_METER_QTY

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2.3 Structured Scenario

Scenario Number	Scenario Execution Trade Date: 8/19/2020	
1	Description	Dispatch PDR-LSR Curtailment Resources for Spin/Non spin Awards with Resources <u>complying</u> with dispatch instructions for duration of the dispatch
	ISO Actions	<p>Verify PDR-LSR Curtailment Resource IDs identified by Market Participants are registered in Master File</p> <p>Ensure market run creates dispatches for Spin awards for designated Resource IDs</p> <p>Run the market for designated trade date.</p>
	EIM Market Participant Actions	N/A (?)
	ISO Market Participant Actions	<p>Submit bids for Spin for registered Resource IDs for designated trade date</p> <p>After trade date run, submit prepared meter data set for designated trade date for Resource IDs</p> <p>Data set to reflect compliance with CAISO dispatch for Spin Award for all intervals of duration of the dispatch (Set A)</p>
	Expected Outcome	<p>Scheduling Coordinator's meter data submission to be processed (Set A) through:</p> <ul style="list-style-type: none"> a) MRI-S with appropriate measurement types aligned with performance methodology b) Settlements with estimated results available for all relevant charge codes <p>ISO to validate the PDR-LSR Curtailment resources response to a Spin or Non-Spin dispatch instruction in Spin Non-Spin No Pay PC and settle any Spin non-compliance in No Pay Spinning Reserve Settlement (CC 6124) or settle any Non-Spin non-compliance in No Pay Non-</p>

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		Spinning Reserve Settlement (CC 6224). This would not be expected on initial only on recal.
	Anticipated Settlement Outcome	Settlements processed and actual no pay quantity categories will generate zero values: No Pay Non-Spinning Reserve Settlement (CC 6224) No Pay Spinning Reserve Settlement (CC 6124)

Settlements	
	Scenario 1 is the settlement of PDR-LSR Curtailment Resource IDs that comply with the CAISO's dispatch for Spin/Non Spin Awards for the duration of the dispatch.

Scenario Number	Scenario Execution Trade Date: 8/19/2020	
2	Description	Dispatch PDR-LSR Curtailment Resources for Spin/ Non spin Awards with the Resources <u>not complying</u> with dispatch instructions for duration of the dispatch
	ISO Actions	Verify PDR-LSR Curtailment Resource IDs identified by Market Participants are registered in Master File Ensure market run creates dispatches for Spin awards for designated Resource IDs Run the market for designated trade date. <i>ISO to modify response to ensure non-compliance with awarded spin/ non-spin</i>
	EIM Market Participant Actions	N/A (?)
	ISO Market Participant Actions	Submit bids for Spin for registered Resource IDs for designated trade date After trade date run, submit prepared meter data set for designated trade date for Resource IDs

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Scenario Number	Scenario Execution Trade Date: 8/19/2020	
		Data set reflects variances from the CAISO dispatch for Spin Award in multiple intervals (+ or -) for the duration of the dispatch (Set B)
	Expected Outcome	<p>Scheduling Coordinator’s meter data submission to be processed (Set B) through:</p> <ul style="list-style-type: none"> a) MRI-S with appropriate measurement types aligned with performance methodology b) Settlements with estimated results available for all relevant charge codes c) ISO to validate the PDR-LSR Curtailment resources response to a Spin or Non-Spin dispatch instruction in Spin Non-Spin No Pay PC and settle any Spin non-compliance in No Pay Spinning Reserve Settlement (CC 6124) or settle any Non-Spin non-compliance in No Pay Non-Spinning Reserve Settlement (CC 6224). This would not be expected on initial only on recalc
	Anticipated Settlement Outcome	<p>Settlements processed and no pay quantity categories will generate non-zero values:</p> <p>No Pay Non-Spinning Reserve Settlement (CC 6224)</p> <p>No Pay Spinning Reserve Settlement (CC 6124)</p>

Settlements	
	Scenario 2 is the settlement of PDR-LSR Curtailment Resource IDs that <u>do not</u> comply with the CAISO’s dispatch for Spin/Non Spin Awards for multiple intervals for the duration of the dispatch.

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Scenario Number	Scenario Execution Trade Date: 08/19/2020	
3	Description	Dispatch PDR-LSR Consumption Resources for trade date where Resource complies with CAISO dispatch instructions
	ISO Actions	<p>Verify PDR-LSR Consumption Resource IDs identified by Market Participants are registered in Master File</p> <p>Ensure market run creates dispatches for designated Resource IDs</p> <p>Run the market for designated trade date.</p>
	EIM Market Participant Actions	N/A (?)
	ISO Market Participant Actions	<p>Submit bids for designated Resource IDs for trade date</p> <p>After trade date run, submit prepared meter data set for designated trade date for Resource IDs</p> <p>Data set reflects compliance with the CAISO dispatch for the duration of the dispatch (Set A)</p>
	Expected Outcome	<p>Scheduling Coordinator's meter data submission to be processed (Set A) through:</p> <ul style="list-style-type: none"> a) MRI-S with appropriate measurement types aligned with performance methodology b) Settlements with estimated results available for all relevant charge codes
	Anticipated Settlement Outcome	<p>Settlements processed and no pay quantity categories will generate zero values</p> <p>Affected charge codes: 6011 Day Ahead Energy Congestion Loss Settlement, 6460 FMM Instructed Imbalance Energy Settlement, 6470 Real Time Instructed Imbalance Energy Settlement</p>

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Settlements	
	Scenario 3 involves dispatch and settlement of PDR-LSR Consumption Resource IDs that comply with the CAISO's dispatch for all intervals for the duration of the dispatch.
Scenario Number	Scenario Execution Trade Date: 08/19/2020
4	Description Dispatch PDR-LSR Consumption Resources for trade date where Resource <u>does not</u> comply with CAISO dispatch instructions
	ISO Actions Verify PDR-LSR Consumption Resource IDs identified by Market Participants are registered in Master File Ensure market run creates dispatches for designated Resource IDs Run the market for designated trade date. <i>ISO to modify response to ensure non-compliance with awarded instructions</i>
	EIM Market Participant Actions N/A (?)
	ISO Market Participant Actions Submit bids for designated Resource IDs for trade date After trade date run, submit prepared meter data set for designated trade date for Resource IDs Data set reflects <u>non-compliance</u> with the CAISO dispatch for multiple intervals for the duration of the dispatch (Set B)
	Expected Outcome Scheduling Coordinator's meter data submission to be processed (Set B) through: a) MRI-S with appropriate measurement types aligned with performance methodology b) Settlements with estimated results available for all relevant charge codes
	Anticipated Settlement Outcome Settlements processed and no pay quantity categories will generate non-zero values

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Scenario Number	Scenario Execution Trade Date: 08/19/2020	
		Affected charge codes: 6011 Day Ahead Energy Congestion Loss Settlement, 6460 FMM Instructed Imbalance Energy Settlement, 6470 Real Time Instructed Imbalance Energy Settlement.

Settlements	
	Scenario 4 involves settlement of PDR-LSR Consumption Resource IDs that <u>do not</u> comply with the CAISO's dispatch in multiple intervals for the duration of the dispatch.

3. ISO Market Simulation Contact

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