



California ISO

Market Simulation Structured Scenarios

Resource Adequacy Enhancements: Track 1

Version 1.3

05/18/2021

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Location of Document

[Release Planning](#)

Revision History

Date	Version	Description	Author
03/10/2021	1.0	Initial Draft	Anshuman Vaidya
04/16/2021	1.1	Added Scenario 4 and 5 for Ops Storage	Anshuman Vaidya
05/05/2021	1.2	Added more details in Scenario 2 under "Expected outcome"	Anshuman Vaidya
05/18/2021	1.3	Added scenarios 6 and 7	Anshuman Vaidya

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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 Resource Adequacy Enhancements: Track 1 simulation scenarios.

For the scope of this implementation and this initiative, please refer to the Resource Adequacy Enhancements: Track 1 External Business Requirements Specification –

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2. Structured Scenarios Approach

2.1 High Level Overview

The identified scenarios will be executed during the structured scenario portion of the Resource Adequacy Enhancements: Track 1 market simulation.

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

Market participants will need to register their request with the ISO to participate in the Resource Adequacy Enhancements: Track 1 project simulation via the MarketSim@caiso.com mailbox. Market participants submit your request and any additional information requested in this document by April 26th, 2021.

Please submit your request and any additional information identified above by April 26, 2021.

Data preparation needed from market participants for Market Simulation:

1. Submit Planned Outage card for the targeted RA month on resources pertaining to scenario# 1 & 2 separately.
2. Make sure the resources are included in the Supply plans.
3. Make sure the resources you use for substitution has enough non-RA.
4. ISO will update the configuration parameters to support the timeline.

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2.3 Structured Scenario

Scenario Number	Scenario Execution Trade Date: TBD	
1	Description	Fully covered substitution
	ISO Actions	<ol style="list-style-type: none"> 1. Copy all references from Production 2. Run the cross validation, new POSO
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	<ol style="list-style-type: none"> 1. Upload Supply Plans 2. Verify in CIRA for CV & new POSO result 3. Submit Outage card 4. Validate in CIRA for CV & new POSO result 5. Submit the fully covered substitution
	Expected Outcome	Outage is not denied
	Anticipated Settlement Outcome	N/A

Scenario Number	Scenario Execution Trade Date: TBD	
2	Description	Less than full substitution
	ISO Actions	<ol style="list-style-type: none"> 1. Copy all references from Production 2. Run the cross validation, new POSO
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	<ol style="list-style-type: none"> 1. Upload Supply Plans 2. Verify in CIRA for CV & new POSO result 3. Submit Outage card 4. Validate in CIRA for CV & new POSO result

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Scenario Number	Scenario Execution Trade Date: TBD	
		5. Submit the fully covered substitution
	Expected Outcome	Outage is denied if the outage has not started Outage is not denied if the outage is already active
	Anticipated Settlement Outcome	N/A

**This scenario will be tested as unstructured*

Scenario Number	Scenario Execution Trade Date: TBD	
3	Description	Outages already started cannot be extended
	ISO Actions	N/A
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	1. Submit an Outage that starts next day/next hour 2. After Outage has started, Market Participant to extend the outage
	Expected Outcome	Outages already started cannot be extended
	Anticipated Settlement Outcome	N/A

Scenario Number	Scenario Execution Trade Date: TBD	
4	Description	Binding Min EOH SOC Requirements

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Scenario Number	Scenario Execution Trade Date: TBD	
	ISO Actions	CAISO will setup a scenario where RUC under-gen infeasibility is triggered for at least 1 hour in trade day T+1
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	N/A
	Expected Outcome	<p>Verify that DAM binding Min SOC requirements is published for trade date T+1 (CMRI)</p> <p>Verify that RUC undergen infeasibility is published for trade date T+1. (OASIS)</p> <p>Verify that Critical Hours are published for trade date T+1. (OASIS)</p> <p>Verify enforcement of binding min end-of-hour SOC requirements for RA storage resources in RTM during trade date T+1.</p>
	Anticipated Settlement Outcome	<ul style="list-style-type: none"> • CAISO will execute settlements calculations. • SCs will validate their statements.

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Scenario Number	Scenario Execution Trade Date: TBD	
5	Description	Deactivation of Enforcement of Binding Min EOH SOC Requirements in RTM
	ISO Actions	<p>CAISO will setup a scenario where RUC under-gen infeasibility is triggered for at least 1 hour of trade day T+1.</p> <p>CAISO operator deactivates enforcement of binding Min EOH SOC requirements in RTM before noon of Trade day T+1.</p>
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	N/A
	Expected Outcome	<p>Verify that DAM binding Min SOC requirements is published for trade date T+1 (CMRI).</p> <p>Verify that RUC undergen infeasibility is published for trade date T+1. (OASIS).</p> <p>Verify that Critical Hours are published for trade date T+1. (OASIS).</p> <p>Verify that time stamp when CAISO operator deactivated enforcement of binding Min EOH SOC requirements in RTM is published for trade date T+1. (OASIS).</p> <p>Verify enforcement of binding min end-of-hour SOC requirements for RA storage resources STOPS in RTM during trade date T+1 from time of deactivation onwards.</p>
	Anticipated Settlement Outcome	<ul style="list-style-type: none"> • CAISO will execute settlements calculations. • SCs will validate their statements.

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Scenario Number	Scenario Execution Trade Date: TBD	
6	Description	Curtailments for active outages cannot be increased beyond the max curtailment MW for a given trading day, once the outage becomes active (i.e. OUT state or later).
	ISO Actions	CAISO will decrease the window of time for a planned outage (generally 7 days in production). CAISO will decrease this to 1 day at the maximum to shorten the Market Sim.
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	Submit a planned Outage with one or more break-points for a trade date spanning at least 2 days. We suggest that the max. Curtailment for the trade dates be different. After Outage has started, Market Participant extends the curtailment of an existing break-point or creates a new break-point for the trade date.
	Expected Outcome	For an active outage, curtailment can be increased up to the max. Curtailment for the trade date but the curtailments cannot exceed the max curtailment for that trading day.
	Anticipated Settlement Outcome	N/A

Scenario Number	Scenario Execution Trade Date: TBD	
7	Description	Allowing Overlapping outages for 4 Nature of Work (NOW) , where this was previously not allowed
	ISO Actions	N/A
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	A. Submit an Outage with the following NOW: <ul style="list-style-type: none"> i. Ambient due to temperature – only in the forced timeframe ii. Ambient not due to temperature – only in the forced timeframe

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		iii. Ambient due to Fuel insufficiency – both planned and forced outages can be created iv. Ambient due to RIMS testing – both planned and forced outages can be created B. Create outages for the same NOW with an overlapping time-span.
	Expected Outcome	The system allows creation of overlapping outages for the 4 NOW.
	Anticipated Settlement Outcome	N/A

3. ISO Market Simulation Contact

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