



California ISO

Market Simulation Structured Scenarios

Day Ahead – Nodal Pricing Model

Version: 1.0

August 10, 2020

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Revision History

Date	Version	Description	Author
08/06/18	0.1	Initial Draft	Juan Alvarez Lopez
08/08/20	0.2	Merged in NPM project	Alex Kandybenko
08/10/20	1.0	Reviewed Scenarios with SME's	Anshuman Vaidya

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1. Introduction

The objective of this document is to provide the information needed for new *Nodal Pricing Model* (NPM) entities to participate in the structured market simulation scenarios.

2. Structured Scenario Approach

2.1 High Level Overview

These are generic scenarios that will be executed during the structured scenario portion of the new NPM entrant implementation market simulation. Depending on the specific needs of the NPM entrant some of these scenarios might not apply.

2.2 Structured Scenarios Conditions and Setup

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

1. ISO is will use a production set date as base case for load forecast and bids for all other existent NPM participants. ISO will augment this data with the relevant new NPM data and use the TD's bids as the base bid set. This will also include base schedules for NPM and demand forecast for non EIM /non NPM entities from WECC. Interchange Schedules will be pulled from WIT for this TD as well.
2. Determined by the scenario specifics ISO may seed MP's bids or allow the MP's to bid in whatever resources they see fit for the scenario.
3. All NPM Entity's will need to balance during the timeframes identified in the scenario "Execution Time" as well as provide the ETSR, TCOR limits.
4. Unless otherwise specified in the scenario, no outages will be considered.

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2.4 Structured Scenarios

Scenario Number	DA-NPM Implementation – TD 10/20	
1	Name	Congestion Management within NPM Entity BAAs
	Market	DA
	Description	Congestion in DA market
	ISO Actions	Create outages or de-rates to cause congestion across either TCOR, flowgate or ETSR. Ensure that PF is solving. Verify congestion in the DA market. Verify that SFs for the congested interface for all CAISO resources are zeroes.
	NPM Market Participant Actions	Submit outages/de-rates on selected flowgates that would cause congestion in DA markets.
	Expected Outcome	Resources impacting the flow in the congested flowgates have a congestion component (except CAISO resources); if contributing to congestion the component is negative and if relieving congestion the component is positive. All Market participants can verify that NPM congestion is not affecting their prices.
	Anticipated Settlement Outcome	CC 6011, CC 6790, CC 6947

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Scenario Number	DA-NPM Implementation – TD 10/20	
2	Name	Congestion Management within CAISO
	Market	DA
	Description	Congestion in DA market
	ISO Actions	Create outages or de-rates to cause congestion. Ensure that PF is solving. Verify congestion in the DA market. Verify that SFs for the congested interface for all NPM entity resources are zeroes.
	NPM Market Participant Actions	Submit outages/de-rates on selected flowgates that would cause congestion in DA markets.
	Expected Outcome	Resources impacting the flow in the congested flowgates have a congestion component (except NPM entity resources); if contributing to congestion the component is negative and if relieving congestion the component is positive. All Market participants can verify that NPM congestion is not affecting their prices.
	Anticipated Settlement Outcome	CC 6011, CC 6790, CC 6947

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Scenario Number	DA-NPM Implementation – TD 10/20	
3	Name	Isolation 1
	Market	DA
	Description	Isolation 1
	ISO Actions	ISO to create condition in ISO BAA to import energy from outside.
	NPM Market Participant Actions	Submit energy bids for market resources to cover not only their NPM load forecast but have extra room.
	Expected Outcome	Energy from generating resources of the NPM entity is not supposed to be dispatched to satisfy CAISO needs.
	Anticipated Settlement Outcome	N/A

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Scenario Number	DA-NPM Implementation – TD 10/20	
4	Name	Isolation 2
	Market	DA
	Description	Isolation 2
	ISO Actions	ISO to help to create condition in NPM BAA to import energy from outside.
	NPM Market Participant Actions	Submit energy bids for market resources to cover <u>only</u> their NPM load forecast with no extra room.
	Expected Outcome	Energy from generating resources of the CAISO is not supposed to be dispatched to satisfy NPM entity needs.
	Anticipated Settlement Outcome	N/A

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Scenario Number	DA-NPM Implementation – TD 10/20	
5	Name	DA Unit Commitment for new NPM entity
	Market	DA
	Description	Observe commitment of generating resources due to system condition changes (LF, congestion, etc).
	ISO Actions	ISO will create scenario in which load forecast will increase for certain hours of the TD. The units designated for commitment, have to have low price bids and low CC and MLC.
	NPM Market Participant Actions	SC submits bids for designated units with a zero base schedule, including startup and minimum run costs.
	Expected Outcome	Market commits the unit.
	Anticipated Settlement Outcome	CC 6630, CC 6637, CC 4516, CC 4560

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Scenario Number	DA-NPM Implementation – TD 10/20	
6	Name	Aggregate Capability Constraint
	Market	DA
	Description	Show that PACW JB and PACE JB shares are dispatched economically with respect to MF characteristics and sum of output does not exceed Pmax of the physical generator.
	ISO Actions	ISO will change system conditions to cause resources to move with respect to system requirements.
	NPM Market Participant Actions	The NPM Entity will need to submit energy bids, self schedules, AS self provision, derates for both of the shares.
	Expected Outcome	Market application will dispatch the shares economically respecting ACC, MF characteristics and outages.
	Anticipated Settlement Outcome	CC 6011, CC 6947, CC 4515, CC 4560

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Scenario Number	DA-NPM Implementation – TD 10/20	
7	Name	Third party load/generation.
	Market	DA
	Description	Third party load has to be derived by market application using MF LAF and renormalized LDFs. Third party generation has to be equal to third party load and to be distributed with MF GDFs with respect to current topology.
	ISO Actions	Execute DA market. Extract third party loads using SQLs. Past in excel spreadsheet provide to NPM entity. The values will have to reconcile with LF for PAC and renormalized LDF/LAFs.
	NPM Market Participant Actions	Normal activities.
	Expected Outcome	Market application derives and uses accurate values for third party load and generation.
	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.