Market Simulation Structured Scenarios

Energy Imbalance Market Implementation - Nevada Energy and Energy Imbalance Market Year 1 Enhancements

Version 1.5

August 24, 2015

Location of Document

Link

Revision History

Date	Version	Description	Author
2/24/15	Draft	Initial Draft	Christopher McIntosh
3/25/15	Draft	Updated with PSTD Input	Christopher McIntosh
3/31/15	Draft	Updated with Settlements Input	Christopher McIntosh
3/31/15	Draft	Ready for Internal Review	Christopher McIntosh
4/16/15	1.0	Initial Version	Christopher McIntosh
5/5/15	1.1	Additional Scenario Added	Christopher McIntosh
6/16/15	1.2	Split SC Actions to ISO Market Participant and EIM Market Participant and Scenario 21 Added	Christopher McIntosh
7/27/15	1.3	Updated with Scenario Trade Dates and Execution Times	Christopher McIntosh
8/13/15	1.4	Added Scenario 22, Updated Execution Dates for Scenario 12, 13, 9 and 3	Christopher McIntosh
8/24/15	1.5	Updated with Scenario Trade Dates and Execution Times for Scenarios 9, 17, 11, and 21	Christopher McIntosh

Table of Contents

1. Introduction

The objective of this document is to provide the information needed by the existing and new EIM entities to participate in the structured market simulation scenarios. For scope of this implementation and this initiative, please refer to the EIM 1 year enhancements imitative - External Business Requirements Specification at –
[(link)](link)

2. Structured Scenario Approach

2.1 High Level Overview

These identified scenarios will be executed during the structured scenario portion of the EIM and FNM Expansion market simulation.

2.2 Structured Scenarios Conditions and Setup

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

1. ISO is using Production TD July 22nd, 2015 as its base inputs for Market Simulation, ISO will augment this data with the relevant EIM data and use the TD's bids as the base bid set. This will also include base schedules for EIM and demand forecast for non EIM 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 EIM Entity's will need to balance during the timeframes identified in the scenario "Execution Time" as well as provide the EIM Transfer Resource Limits.

2.4 Structured Scenarios

<table>
<tr>
<td>Scenario Number</td>
<td colspan="2">EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/4/15; Execution Time - 8/3/15 14:00 – 16:00</td>
</tr>
<tr>
<td rowspan="7">1</td>
<td>Description</td>
<td>DAM NVE Model Validation – Base Schedule Calculation, Transaction ID and Hubs</td>
</tr>
<tr>
<td>ISO Actions</td>
<td>ISO will load standard bid set for ISO resources from production save case; for non EIM entities we will create base schedules based on interchange data, and demand forecast. For EIM entities ISO will validate that submitted base schedules are balanced and feasible. ISO will run DAM and Real Time markets and publish results. Publish Settlements Statements.</td>
</tr>
<tr>
<td>EIM Market Participant Actions</td>
<td>EIM entity submits base schedules and verifies outcome DAM results, Expected Energy and Settlements Statements.</td>
</tr>
<tr>
<td>ISO Market Participant Actions</td>
<td>Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.</td>
</tr>
<tr>
<td>Expected Outcome</td>
<td>Published results will be based on EIM entity base schedules and non EIM ISO generated base schedules.</td>
</tr>
<tr>
<td>Anticipated Settlement Outcome</td>
<td>CC 4564, CC 64750, CC 6045, CC 6046, CC 67740, and CC 67740</td>
</tr>
</table>

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/4/15; Execution Time - 8/3/15 14:00 – 16:00	
2	Description	FNM Expansion DAM – Binding Physical Flow and Scheduling Constraints
	ISO Actions	ISO will obtain information from EIM entities for transmission interface constraints (TCOR/TIE). ISO will de-rate the transmission interface according to the information provided to cause congestion. ISO will load standard bid set for ISO resources from production save case; for non EIM entities we will create base schedules based on interchange data, and demand forecast. For scheduling constraints on EIM interties with non-EIM BAAs ISO will populate 15min intertie bids. For EIM entities ISO will validate that submitted base schedules are balanced and feasible. ISO will run DAM and Real Time markets and publish results. Publish Settlements Statements.
	EIM Market Participant Actions	Provide ISO transmission interface constraints (TCOR/TIE) through the EIM dynamic limits interface. EIM entities will review base schedules and resubmit for real time based on DAM results. Verify outcome DAM results, Expected Energy and Settlements Statements.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	Identified interfaces of the EIM entities will be congested and final results including congestion will be available.
	Anticipated Settlement Outcome	CC 4564, CC 64750, If dispatched in FMM CC 64600 or RTM CC64700. Congestion for CC 67740 and CC 64770

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/13/15; Execution Time - 8/13/15 14:00 – 18:00	
3	Description	EIM Real Time – Flexible Ramping Sufficiency Test NVE/ISO
	ISO Actions	ISO will load an ISO standard bid set; for non EIM entities ISO will create base schedules based on interchange data, and demand forecast. For EIM entities ISO will validate the schedules are balanced and feasible. ISO will set the Flex Ramp requirements (FRR) above available flex ramp capability in the EIM BAA. Broadcast the ISO, EIM BAA, and EIM footprint total load forecast, broadcast the FRR for the ISO, EIM BAAs, and EIM footprint to the Market. Perform flexible ramping requirement sufficiency test. T-75, T-55, T-40.
	EIM Market Participant Actions	Verify outcome Real Time results, Expected Energy and Settlements Statements.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	NVE/ISO fails the flex ramp sufficiency test for some hours; NSI constraint will be binding leading to price separation between the EIM BAA and rest of EIM Area. Flex Ramp price will be set by penalty price in the EIM BAA. Flex requirements will be available in OASIS.
	Anticipated Settlement Outcome	CC 7050, CC 7024, and CC 7056

Scenario Number	**EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/5/15; Execution Time - 8/5/15 14:00 – 18:00**	
4	Description	EIM Real Time – Congestion Management within EIM Entity BAAs
	ISO Actions	ISO will obtain information from EIM entities for transmission interface constraints. ISO will de-rate the transmission flowgates according to the information provided. ISO will load our standard bid set, for non EIM entities we will create base schedules based on interchange data, and demand forecast. For EIM entities ISO will validate the schedules are balanced and feasible. ISO will run DAM and Real Time markets and publish results. Publish Settlements Statements.
	EIM Market Participant Actions	Provide ISO transmission interface constraints (TCOR/TIE) through the EIM dynamic limits interface. Verify Congestion Information on OASIS, Real Time results, Expected Energy and Settlements Statements.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	Units will be dispatched and or committed/decommitted to relieve congestion. LMP will include congestion component.
	Anticipated Settlement Outcome	CC 4564, CC 64600, CC 64700, CC64750, CC 67740 and CC 64770

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/6/15; Execution Time - 8/6/15 14:00 – 18:00	
5	Description	EIM Real Time – Manual Dispatches for EIM Resources
	ISO Actions	ISO will load the ISO standard bid set; for non EIM entities ISO will create base schedules based on interchange data, and demand forecast. For EIM entities ISO will validate the schedules are balanced and feasible. ISO will run DAM and Real Time markets and publish results. Publish Settlements Statements.
	EIM Market Participant Actions	EIM BAA will manually dispatch selected EIM participating resources notifying the ISO accordingly.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	The market application will dispatch the resources in accordance with the ED instructions.
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 67740, and CC 64770

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/13/15; Execution Time - 8/13/15 14:00 – 18:00	
6	Description	EIM Real Time – EIM Specific Resource Mitigation
	ISO Actions	ISO to create a local constraint in the EIM BAA to trigger local market power mitigation.
	EIM Market Participant Actions	Submit expensive bids on the EIM participating resources that are expected to be mitigated.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	Resource with market power will be mitigated using their default energy bid and reported on CMRI.
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 66200 and CC 66780

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/11/15; Execution Time - 8/11/15 14:00 – 17:00	
7	Description	EIM Real Time – GHG Charges
	ISO Actions	ISO to increase the Load Forecast for the ISO BA. EIM specific energy bids are cheaper than other imports to ISO BA.
	EIM Market Participant Actions	MP will provide GHG bid adder for selected participating resources in the EIM BAA. Review Settlements Statements.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	GHG payments will be properly awarded to the exporting resources based on their export allocation values.
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 491, CC 67740, CC 69850, CC 64770, and CC 66200

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/5/15; Execution Time - 8/5/15 14:00 – 18:00	
8	Description	EIM Real Time – Neutrality
	ISO Actions	ISO to increase the Load Forecast for the ISO BA. EIM specific bids are cheaper than other imports to ISO BA.
	EIM Market Participant Actions	Review Settlements Statements.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	Transfer of RT neutrality between BAA and allocation to relevant SC's based on the EIM transfer.
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 67740, CC 69850, and CC 64770

Scenario Number	**EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/25/15; Execution Time - 8/25/15 10:00 – 11:00**	
9	Description	EIM Real Time – Contingency Event in the EIM BAA
	ISO Actions	ISO to verify the receipt of the contingency event notification from the EIM Entity. ISO will freeze the EIM transfer of the EIM Entity BAA at the last optimal solution.
	SC Actions	EIM Entity performs contingency dispatch using manual dispatch instructions that are communicated to the ISO. EIM resources to follow ADS instructions which reflect the manual dispatch.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	EIM entity takes appropriate actions to resolve their contingency. Contingency does not affect dispatch or prices in the ISO area.
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 67740, CC 69850, and CC 64770

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/11/15; Execution Time – 8/11/15 11:00 – 13:00	
10	Description	EIM Real Time – Contingency Event in the ISO BA
	ISO Actions	ISO will simulate a contingency in the ISO BA via RT contingency. ISO will load our standard bid set, for non EIM entities we will create base schedules based on interchange data, and demand forecast. For EIM entities ISO will validate the schedules are balanced and feasible. ISO will run DAM and Real Time markets and publish results. Publish Settlements Statements.
	EIM Market Participant Actions	EIM resources receive dispatch instructions through ADS.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	Contingency event in CAISO area does not affect dispatches or prices in the EIM BAs.
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 67740, CC 69850, and CC 64770

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/25/15; Execution Time - 8/25/15 12:30 – 14:30	
11	Description	EIM Entity BAA Isolation ISO BA, PAC BA's and NVE BAA
	ISO Actions	ISO to set EIM Transfer to zero (small threshold) Energy Transfer limits will be set on all interties for a given BAA
	EIM Market Participant Actions	Verify transfer limits
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	ISO and EIM Entity BAAs are dispatched separately.
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 67740, CC 69850, and CC 64770

Scenario Number	**EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/13/15; Execution Time - 8/13/15 11:00 – 13:00**	
12	Description	Restricted MW EIM Transfer limit for EIM Entity BA to EIM Entity BAA
	ISO Actions	ISO to set EIM Transfer low/high limits to a to be determined agreed upon value Energy Transfer limits will be set on all interties between two BAAs
	EIM Market Participant Actions	Verify transfer limits
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	EIM transfers from EIM Entity to EIM Entity are limited
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 491, CC 67740, CC 69850, and CC 64770

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/13/15; Execution Time - 8/13/15 11:00 – 13:00	
13	Description	Restricted MW EIM Transfer limit for EIM Entity to ISO BAA
	Description	Restricted MW EIM Transfer limit for EIM Entity BA to ISO BAA
	ISO Actions	ISO to set EIM Transfer low/high limits to a to be determined agreed upon value
	EIM Market Participant Actions	Verify transfer limits
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	EIM transfers from EIM Entity to EIM Entity are limited
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 491, CC 67740, CC 69850, and CC 64770

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/20/15; Execution Time - TD 8/20/15 09:00 – 18:00	
14	Description	EIM Entity Separation from EIM market
	ISO Actions	ISO will update EIM entity daily separation flag in Master File. ISO to set the Flex Ramp requirement to zero for the EIM BAA. ISO to set Flex Ramp Requirement Test to failed for the EIM BAA. ISO to lock the (NSI=base NSI) for the EIM BAA. ISO does not enforce EIM BAA transmission constraints. ISO verifies SIBR rejects any energy bids from resources belonging to the EIM entity. UFE Inclusion Flag will be set to zero in Settlements.
	EIM Market Participant Actions	EIM entity must submit base schedules. EIM entity SC must submit meter data equal to base schedules.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	No Unit Commitment/Economic Dispatch for EIM resources from the real time market.
	Anticipated Settlement Outcome	No charges should trigger

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/18/15; Execution Time - 8/18/15 14:00 – 18:00	
15	Description	Local RT Congestion Resolved by NVE resources
	ISO Actions	ISO will create a real time reduction in the transmission limit on ISO BA internal transmission that can be resolved by NVE EIM resources outside of ISO BA. ISO to constrain internal transmission and in the remaining area ISO to insure load exceeds available generation.
	EIM Market Participant Actions	SC will submit cost-based bids on resources that can resolve the congestion.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	ISO will dispatch out of area resource to resolve congestion problem. This test may not perform well if the efficiency of NVE resources is too low for resolving ISO internal congestion.
	Anticipated Settlement Outcome	CC 4564, CC 491, CC 64600, CC 64700, CC 66200; CC 67740, CC 69850, CC 64770 and CC 66780

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/18/15; Execution Time - 8/18/15 11:00 – 13:00	
16	Description	Impact of Real Time Unit Commitment on EIM Entity
	ISO Actions	ISO will create scenario in which either EIM BAA load forecast falls short or a forced outage or similar circumstance induces the CAISO system to commit a short-start unit in the EIM area. Ideally, the unit will be started but will not be economical over its entire minimum running time, creating a bid cost recovery impact.
	EIM Market Participant Actions	SC submits bids for a short start unit with a zero base schedule, including startup and minimum run costs. Minimum up time should be set to the max allowable for a short start unit, to keep it running under uneconomical conditions.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	CAISO commits the unit. If possible, the unit should be uneconomical for part of its run time. Bid cost recovery payments will be due to the unit.
	Anticipated Settlement Outcome	CC 66200 and CC 66780

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/25/15; Execution Time - 8/25/15 11:00 – 12:00	
17	Description	Local RT Congestion Resolved by PacifiCorp resources for NVE
	ISO Actions	ISO will create a real time reduction in the transmission limit on NVE internal transmission that can be resolved by PacifiCorp EIM resources. PacifiCorp to constrain internal transmission and in the remaining area PacifiCorp to insure load exceeds available generation.
	EIM Market Participant Actions	SC will submit cost-based bids on resources that can resolve the congestion.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	EIM market will dispatch PacifiCorp resource to resolve congestion problem in NVE. This test may not perform well if the efficiency of NVE resources is too low for resolving ISO internal congestion.
	Anticipated Settlement Outcome	CC 4564, CC 64600, CC 64700, CC 66200; CC 67740, CC 69850, CC 64770 and CC 66780

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/13/15; Execution Time - 8/13/15 09:00 – 18:00	
18	Description	Joint ownership of resource in EIM BAA
	ISO Actions	ISO to work with EIM Entities to identify joint ownership resources in the BAA. ISO to demonstrate new joint ownership resource dispatch functionality.
	EIM Market Participant Actions	Validate dispatch instructions.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	ISO successfully dispatches the joint ownership resource as per design.
	Anticipated Settlement Outcome	CC 64600, CC 64700, and CC 4564

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/18/15; Execution Time - 8/18/15 11:00 – 13:00	
19	Description	One Year Enhancements Flex Ramp Constraints Modeling Validation
	ISO Actions	ISO will load an ISO standard bid set; for non EIM entities ISO will create base schedules based on interchange data, and demand forecast. For EIM entities ISO will validate the schedules are balanced and feasible. ISO to dispatch to Flex Ramp via new modeling requirements.
	EIM Market Participant Actions	Validate dispatch instructions.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	ISO to demonstrate Flex Ramp requirements are met and prices are optimal.
	Anticipated Settlement Outcome	CC 7050, CC 7024, and CC 7056

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/19/15; Execution Time - 8/19/15 14:00 – 18:00	
20	Description	ISO capacity test using the histogram percentiles PacifiCorp and NVE
	ISO Actions	ISO will load an ISO standard bid set; for non EIM entities ISO will create base schedules based on interchange data, and demand forecast. For EIM entities ISO will validate the schedules are balanced and feasible. MQS calculates histogram values to an agreed upon value per EIM BAA.
	EIM Market Participant Actions	View results in CMRI for capacity percentage calculation and results.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS.
	Expected Outcome	ISO to demonstrate EIM BAA needs to have more capacity based on their historical decline rate.
	Anticipated Settlement Outcome	CC 7050, CC 7024, and CC 7056

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/27/15; Execution Time - 8/27/15 14:00 – 18:00	
21	Description	EIM Entities BA Transfer Schedule Validation, PACE and NVE
	ISO Actions	ISO will load an ISO standard bid set; for non EIM entities. ISO will create base schedules based on interchange data, and demand forecast including base transfer schedules for the NEVP ETSRs on the GON.PAV and REDB interties. For EIM entities ISO will validate the schedules are balanced and feasible. ISO will validate the necessary data flows to the Market Operator which facilitates the EIM (15-minute transfers and 5-minute transfers) across the PACE to NVE interface(s). ISO will work with the Entity's to verify tagged values as part of the EIM Interchange integration.
	EIM Market Participant Actions	NVE sends ETSR ATC limits to ISO for their internal EIM interties, including GON.PAV and REDB, via the EIM Dynamic Transmission Limit web service. PacifiCorp and NVE tag/approve the transfers and send the final after the fact dynamic tagged values to ISO as part of the EIM Interchange integration for neutrality settlement.
	ISO Market Participant Actions	Review EIM GHG Shadow Prices, EIM Transfer Limits, EIM Transfer MW's, EIM Transfer Net MW, EIM Transfer Shadow Price, EIM Transfer Schedule Shadow Prices, EIM Entity Demand Forecast, EIM BAA NSI and EIM LMP's on OASIS. Review neutrality allocation to PACE and NEVP considering Energy Transfer Schedule deviations from base.
	Expected Outcome	Energy Transfer Schedules at GON.PAV and REDB are limited by the corresponding limits; neutrality allocation to PACE and NEVP reflects energy transfer schedules at GON.PAV and REDB.
	Anticipated Settlement Outcome	CC 64600, CC 64700, CC 491, CC 67740, CC 69850, and CC 64770

Scenario Number	EIM Implementation - Nevada Energy and EIM Year 1 Enhancements – TD 8/26/2015; Execution Time - 8/26/2015 14:00 – 16:00	
22	Description	Available Capacity (Reserves)
	ISO Actions	ISO will change system conditions to cause infeasibility in an EIM BAA, to demonstrate the available capacity functionality.
	EIM Market Participant Actions	EIM Entities will need to register their non-R and PR for regulation capacity. Also submit energy bids in regulation range for PR and regulation capacity base schedules for both PR an NPR.
	ISO Market Participant Actions	No Action
	Expected Outcome	Energy bid for participating resources in regulation range and default energy bid for non-participating resources will be used for dispatch to resolve infeasibility. If infeasibility is resolved price will be set by the last marginal bid. If infeasibility is not resolved price will go to $1,000.
	Anticipated Settlement Outcome	For participating resources that have bids in regulation range being dispatched, bid cost in regulation range associated with instructed energy will be included in Energy Bid Cost Recovery. For non-participating resources that have default energy bids being dispatched, default energy bid cost associated with instructed energy will be included in energy Bid Cost Recovery.

3. ISO Market Simulation Contact

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