



California ISO

Market Simulation Structured Scenarios

Energy Imbalance Market Winter 2017 Enhancements

Version 1.0

January 1, 2018

 California ISO	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	01/01/2018

Location of Document

[Link](#)

Revision History

Date	Version	Description	Author
11/13/17	Draft	Initial Draft	Christopher McIntosh
11/27/17	Draft	Scenario language updated	Alex Kandybenko
12/1/17	Draft	Scenario language updated	George Angelidis
12/6/17	Draft	Settlements Charge Codes Added	Melchor Ciubal/James Lynn
1/1/18	1.0	Publish	Trang Deluca

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1. Introduction

The objective of this document is to provide the information needed for new EIM entities to participate in the structured market simulation scenarios.

2. Structured Scenario Approach

2.1 High Level Overview

These identified scenarios will be executed during the structured scenario portion of the EIM implementation 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 will use a production TBD base case. 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.

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2.4 Structured Scenarios

Scenario Number	EIM Winter 2017 – TD (TBD)	
1	Description	Auto-Match Functionality
	ISO Actions	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. For EIM entities ISO will validate the schedules are balanced and feasible in BSAP.
	EIM Market Participant Actions	After T-40 one of the interchange schedule mapped to auto-match resource will be changed in RTSI by the market participant. After execution of next RTPD/RTD the new schedule of auto-match resource will be available on CMRI, the schedule will reflect the change of the tag of the System Resource. Verify outcome Real Time results, Expected Energy and Settlements Statements.
	ISO Market Participant Actions	Review OASIS reports: Under Prices > All LMP reports, Scheduling Constraint Shadow Prices, EIM GHG Shadow Prices; Under System Demand > Sufficiency Evaluation Demand Forecast, CAISO Demand Forecast, EIM Transfer; Under Energy > EIM Transfer Limits, EIM Transfer Limits by Tie, EIM Transfer by Tie, EIM BAA Hourly Base NSI, Flexible Ramp Requirements Inputs, Flexible Ramp Surplus Demand Curves
	Expected Outcome	The output auto-balancer resource will be increased/decreased with respect to change of the tag of the system resource.
	Anticipated Settlement Outcome	Primary: 6045, 6046, 64600, 64700, 64750, 7070, 7071, 66200, 4564, 491 Secondary: 64770, 67740, 69850, 6478, 7076, 7077, 7078, 7081, 7087, 7088, 66780

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Scenario Number	EIM Winter 2017 – TD (TBD)	
2	Description	Base ETSR Schedule
	ISO Actions	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. For EIM entities ISO will validate the schedules are balanced and feasible in BSAP.
	EIM Market Participant Actions	EIM Market participant will submit base schedules for base ETSRs. Verify outcome Real Time results for base ETSRs.
	ISO Market Participant Actions	Review OASIS reports: Under Prices > All LMP reports, Scheduling Constraint Shadow Prices, EIM GHG Shadow Prices; Under System Demand > Sufficiency Evaluation Demand Forecast, CAISO Demand Forecast, EIM Transfer; Under Energy > EIM Transfer Limits, EIM Transfer Limits by Tie, EIM Transfer by Tie, EIM BAA Hourly Base NSI, Flexible Ramp Requirements Inputs, Flexible Ramp Surplus Demand Curves
	Expected Outcome	No deviation from submitted base schedules for base ETSRs. DOT in ADS for Base ETSRs is equal to the submitted base schedules. Operator is not able to modify limits for base ETSRs (EIM/ETSR Detail display). Base ETSR LMP is calculated using following formula: Base ETSR LMP = FROM_Location LMP * Split_Ratio + TO_Location LMP * (1 – Split_Ratio).
	Anticipated Settlement Outcome	Primary: 64600, 64700, 64750 Secondary: 64770, 67740, 69850, 6478

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Scenario Number	EIM Winter 2017 – TD (TBD)	
3	Description	Auto Mirror Functionality
	ISO Actions	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. For EIM entities ISO will validate the schedules are balanced and feasible in BSAP.
	EIM Market Participant Actions	After T-40 one of the interchange schedule with CAISO mapped to auto-mirror resource will be changed in RTSI by the market participant. Verify outcome Real Time results, Expected Energy and Settlements Statements. Verify outcome Real Time results, Expected Energy and Settlements Statements.
	ISO Market Participant Actions	Review OASIS reports: Under Prices > All LMP reports, Scheduling Constraint Shadow Prices, EIM GHG Shadow Prices; Under System Demand > Sufficiency Evaluation Demand Forecast, CAISO Demand Forecast, EIM Transfer; Under Energy > EIM Transfer Limits, EIM Transfer Limits by Tie, EIM Transfer by Tie, EIM BAA Hourly Base NSI, Flexible Ramp Requirements Inputs, Flexible Ramp Surplus Demand Curves
	Expected Outcome	After execution of next RTPD/RTD the new schedule of auto-mirror will be available on CMRI, the schedule will reflect the change of the tag of the System Resource mapped to CAISO. Verify that for all different ties where auto-mirror resource exists in MF, auto-mirror resource schedule is always equal to sum of schedules of mapped ISO Import/Exports. Auto-mirroring will not fire if there is an economic bid submitted for the ISO Import/Export System Resource expected to be auto-mirrored. Also, if an economic bid submitted for such System Resources, the resource will not be auto-matched if the System Resource is mapped to an auto-match resource (note auto-match is different functionality, see scenario 1).
	Anticipated Settlement Outcome	Primary: 64600, 64700, 64750, 7070, 7071, 66200, 4564 Secondary: 6477, 6774, 6985, 64770, 67740, 69850, 6478, 7076, 7077, 7078, 7081, 7087, 7088, 66780

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3. ISO Market Simulation Contact

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