



# Market Simulation – Fall 2019 Release

Christopher McIntosh  
Lead Market Simulation Coordinator

October 3, 2019

# Recordings

Calls and webinars are recorded for stakeholder convenience, allowing those who are unable to attend to listen to the recordings after the meetings. The recordings will be publicly available on the ISO web page for a limited time following the meetings. The recordings, and any related transcriptions, should not be reprinted without the ISO's permission.

# Agenda

- MAP Stage Availability
- Fall 2019 Release Market Simulation Initiatives & Timelines
- External Interface Changes
- Known Issues
- Structured Scenarios Settlement Calendar
- Initiatives
  - Phase 1
    - Energy Storage and Distributed Energy Resources Phase 3A
    - RMR and CPM Enhancements
    - Local Market Power Mitigation Enhancements
    - EIM 2019 Enhancements
    - Real-Time Market Neutrality Settlement
    - FERC Order 841 – Energy Storage Resources
  - Phase 2
    - Commitment Costs and Default Energy Bid Enhancements Phase 1
- Next Steps

## Fall 2019 Release MAP Stage Availability

- Refer to MAP Stage portal <https://portalmap.caiso.com> for system availability information
- Current MAP Stage Scheduled Maintenance
  - None at this time
- Upcoming MAP Stage Maintenance
  - Environment Offline: October 10 – October 14
- MAP Stage Weekly Maintenance Window
  - Monday 0700 PT thru Tuesday 0900 PT

# Fall 2019 Release Market Simulation Initiatives & Timelines

<b>Fall 2019 Release Initiatives</b>	<b>Start Date</b>	<b>Start Date (TD)</b>	<b>End Date</b>	<b>Structured Simulation Start (Trade Date)</b>	<b>Expected Participation</b>
<b>Fall 2019 Release Market Simulation Phase 1</b>	09/03/19	09/04/19	10/11/19	09/18/19	
<i>Energy Imbalance Market (EIM) Enhancements 2019 (BAAOP)</i>				N/A	EIM Market Participants
<i>Energy Storage and Distributed Energy Resources (ESDER) Phase 3A</i>				Scenarios Execution TD 9/18	ISO Market Participants EIM Market Participants
<i>Federal Energy Regulatory Commission (FERC) Order 841</i>				N/A	ISO Market Participants EIM Market Participants
<i>Local Market Power Mitigation Enhancements (LMPME)</i>				Scenarios Execution TD 09/25	ISO Market Participants EIM Market Participants
<i>Real-Time (RT) Market Neutrality Settlement</i>	09/25/19	09/25/19		N/A	EIM Market Participants
<i>Reliability Must-Run (RMR) and Capacity Procurement Mechanism (CPM) Enhancements</i>				Scenarios Execution TD 09/25	ISO Market Participants
<b>Fall 2019 Release Market Simulation Phase 2</b>	10/14/19	10/15/19	11/04/19	N/A	
<i>Commitment Costs and Default Energy Bid Enhancements (CCDEBE)</i>				N/A	ISO Market Participants EIM Market Participants
<i>Energy Imbalance Market (EIM) Enhancements 2019 (BSAP Interface Changes and Reporting Features)</i>	Reporting Features 10/3/19			N/A	EIM Market Participants

Market Simulation Plan:

<http://www.aiso.com/Documents/MarketSimulationPlan-Fall2019Release.pdf>

# Fall 2019 Release – System Interface Changes

## MF

Project	Change Type	API Service Name & Major Version, Artifacts	Minor Version	RDT	MAP Stage	Technical Specifications
ESDER3A LMPME CCDEBE1	Modify	<a href="#">RetrieveGeneratorRDT_MFRDv4</a> <a href="#">RetrieveGeneratorRDT_MFRDv4_DocAttach</a>	20191001		Sep 5, 2019	<a href="#">5.1</a>
ESDER3A LMPME	Modify	<a href="#">SubmitGeneratorRDT_MFRDv4</a> <a href="#">SubmitGeneratorRDT_MFRDv4_DocAttach</a>	20191001	<a href="#">GRDT v13.0</a>	Sep 5, 2019	<a href="#">5.1</a>

## SIBR/BSAP

System	Project	Change Type	API Service Name & Major Version, Artifacts	MAP Stage	Technical Specifications
SIBR	CCDEBE1	Modify	<a href="#">RetrieveCleanBidSet_SIBRv5</a> <a href="#">RetrieveCleanBidSet_SIBRv5_DocAttach</a>	Oct 14, 2019	<a href="#">v13.1</a>
SIBR	CCDEBE1	Modify	<a href="#">RetrieveCurrentBidResults_SIBRv5</a> <a href="#">RetrieveCurrentBidResults_SIBRv5_DocAttach</a>	Oct 14, 2019	<a href="#">v13.1</a>
SIBR	CCDEBE1	Modify	<a href="#">SubmitRawBidSet_SIBRv5</a> <a href="#">SubmitRawBidSet_SIBRv5_DocAttach</a>	Oct 14, 2019	<a href="#">v13.1</a>
BSAP	EIM 2019	Modify	<a href="#">RetrieveBalancingTestResults_BSAPv2</a> <a href="#">RetrieveBalancingTestResults_BSAPv2_DocAttach</a>	Oct 14, 2019	<a href="#">1.7.1</a>

# Fall 2019 Release – System Interface Changes

## CMRI

Project	Change Type	UI Change	API Service Name & Major Version, Artifacts	MAP Stage	Technical Specifications
LMPME	Modify	Tab: Default Bids Existing Report: Default Energy Bid Curves	<a href="#">RetrieveDefaultBidCurves_CMRIv2</a> <a href="#">RetrieveDefaultBidCurves_CMRIv2_DocAttach</a>	Sep 12, 2019	<a href="#">3.9.1</a>
CCDEBE 1	Modify	Tab: Default Bids Existing Report: Default Commitment Costs	<a href="#">RetrieveExternalDefaultCommitmentCost_CMRIv1</a> <a href="#">RetrieveExternalDefaultCommitmentCost_CMRIv1_DocAttach</a>	Oct 14, 2019	<a href="#">3.9.1</a>
EIM 2019	New	Tab: Energy Imbalance Market New Report: Resource Operating Limits	<a href="#">RetrieveEIMResourceOperatingLimit_CMRIv1</a> <a href="#">RetrieveEIMResourceOperatingLimit_CMRIv1_DocAttach</a>	Oct 3, 2019	<a href="#">3.9.1</a>
EIM 2019	New	Tab: Real-Time New Report: Resource Operating Limits	<a href="#">RetrieveResourceOperatingLimit_CMRIv1</a> <a href="#">RetrieveResourceOperatingLimit_CMRIv1_DocAttach</a>	Oct 3, 2019	<a href="#">3.9.1</a>

## OASIS

Project	Change Type	UI Change	API Service Name & Major Version, Artifacts	MAP Stage	Technical Specifications
EIM 2019	New	Tab: ENERGY New Report: Transmission Loss	<a href="#">ENE_TRANS_LOSS</a>	Oct 7, 2019	<a href="#">5.1.9</a>

# Known Issues -

#	System	Summary	Status	Estimated Fix Date	CIDI #
1	MRI-S	MSG resources settlements statements may not reflect accurately because the MMA Transition Cost functionality is not currently implemented	Open	End of the year	N/A
2	RTM	Hourly resource rounding issue with PDR's	Open	ISO validation taking place	216930
3	SIBR	SIBR Rule Net Benefit Test for TD 9/18 was set to \$-30	Closed	Corrected 9/19 forward	216897
4	RTM	HE 18 and 19 TD 9/18 Award generated bids failed to make it to RTM	Closed	Corrected 9/19 forward	N/A
5	CMRI	ExternalDefaultCommitmentCost_v1.xsd incorrectly state optional element is mandatory	Open	Documentation to be corrected ASAP	216521
6	BAAOP	Flexible Ramping Sufficiency Results, the DB Factor UP and DB Factor DN are display an incorrect value	Open	TBD	N/A
7	BAAOP	There are some resources reported with non zero flex up capacity under existing resource flex ramping display not showing in the new UI	Open	TBD	N/A
8	CMRI	Resource Operating Limits Report, not accessible with "Entity" only certificate.	Open	TBD	N/A



# Structured Scenario Settlements Calendar -

Calendar Day	Day	CMRI T+1B	Publish Initial Statement T+4B	Submit Meter Data by T+4B 18:00 for Recalc	Publish Recalc Statement T+8B	Publish Market Invoice
23-Sep-19	Monday					
24-Sep-19	Tuesday		18-Sep	18-Sep	12-Sep	
25-Sep-19	Wednesday		19-Sep	19-Sep	13-Sep	
26-Sep-19	Thursday	25-Sep	Monthly Initial 18-Sep - 19-Sep		Monthly Recalc 12-Sep - 13-Sep	Daily Recalc 12-Sep, 13-Sep Monthly Recalc 12-Sep - 13-Sep
27-Sep-19	Friday	26-Sep				Daily Initial 18-Sep, 19-Sep Monthly Initial 18-Sep - 19-Sep
28-Sep-19	Saturday					
29-Sep-19	Sunday					
30-Sep-19	Monday				18-Sep	
01-Oct-19	Tuesday		25-Sep	25-Sep	19-Sep	
02-Oct-19	Wednesday		26-Sep	26-Sep	Monthly Recalc 18-Sep - 19-Sep	Daily Recalc 18-Sep, 19-Sep Monthly Recalc 18-Sep - 19-Sep
03-Oct-19	Thursday	2-Oct	Monthly Initial 25-Sep - 26-Sep			Daily Initial 25-Sep, 26-Sep Monthly Initial 25-Sep - 26-Sep
04-Oct-19	Friday	3-Oct				
05-Oct-19	Saturday					
06-Oct-19	Sunday					
07-Oct-19	Monday				25-Sep	
08-Oct-19	Tuesday		2-Oct	2-Oct	26-Sep	
09-Oct-19	Wednesday		3-Oct	3-Oct	Monthly Recalc 25-Sep - 26-Sep	Daily Recalc 25-Sep, 26-Sep Monthly Recalc 25-Sep - 26-Sep
10-Oct-19	Thursday	9-Oct	Monthly Initial 02-Oct - 03-Oct			Daily Initial 02-Oct, 03-Oct Monthly Initial 02-Oct - 03-Oct
11-Oct-19	Friday	10-Oct				

# Energy Storage & Distributed Energy Resources

## Phase 3A

- **Timeline:** September 3 – October 11
- **Structured:** September 16 – September 27
- **Structured Scenarios Execution Date:** Trade Date September 18
- **DRRS Code:** Available September 18
- **Scenario #3:** 15 Min PDR BCR, can be validated on the September 18 Initial Statement.

# Reliability Must-Run and Capacity Procurement Mechanism Enhancements

- **Timeline:** September 3 – October 11
- **Structured:** September 16 – September 27
- **Structured Scenarios Execution Date:** Trade Date September 25

# Local Market Power Mitigation Enhancements

- **Timeline:** September 3 – October 11
- **Structured:** September 16 – September 27
- **Structured Scenarios Execution Date:** Trade Date September 25

# Energy Imbalance Market Enhancements 2019

- **Timeline: September 3 – November 4**

Area	Features/Scope	Timing Status
BAAOP	<ul style="list-style-type: none"> <li>▪ Transformer Flow – In MAP Stage</li> <li>▪ Resource Flex Ramping – In MAP Stage</li> <li>▪ Flexible Ramping Sufficiency Results – In MAP Stage</li> <li>▪ EIM Area Summary – In MAP Stage</li> <li>▪ ETSR Detail – In MAP Stage</li> <li>▪ EIM Threshold Display and Calculations – In MAP Stage</li> <li>▪ RTD Dispatch Control – In MAP Stage</li> <li>▪ RTPD Dispatch Control – In MAP Stage</li> </ul>	Available
Reporting Features and BSAP Interface Changes	<ul style="list-style-type: none"> <li>▪ Loss Transmission OASIS Report</li> <li>▪ CMRI Resource Operating Limits Report</li> <li>▪ CMRI EIM Operating Limits Report</li> <li>▪ Copy and Modify Base schedule (<b>BSAP</b>) EIM19-BRQ1270</li> <li>▪ Add retrieve aggregate service for BS Deviation (<b>BSAP</b>) EIM19-BRQ1560</li> </ul>	CMRI available now, OASIS available October 7, BSAP Target availability in MAP Stage October 14

# Real-Time Market Neutrality Settlements

- **Timeline:** September 25 – October 11

# FERC Order 841

- **Timeline:** September 3 – October 11

# Commitment Costs and Default Energy Bid Enhancements Phase 1

- **Timeline:** October 14 – November 4
- “CommitmentCostType” is an optional element in the ExternalDefaultCommitmentCost\_v1 payload, XSD to be updated to match the Tech Specs



# Next Steps

- The next teleconference is scheduled on Monday, October 7<sup>th</sup> at 1400 PPT

# Reference Slides

# Fall 2019 Release MAP Stage Connectivity Testing

- **Timeline Phase 1:** September 3 – September 13
- **Timeline Phase 2:** October 14 – October 18

# Fall 2019 Release MAP Stage Data Setup

- Production data seeding the environment is from August 27<sup>th</sup>, 2019
- CIRA accepting September and October Supply plans

# Market Simulation Issue Management

- Submit all issues to the CIDI case management system
- CIDI tickets must have “**Functional Environment**” = “**Market Simulation Fall 2019**” to be reviewed by ISO SMEs

# ISO Market Simulation Support

- **Hours:** Monday thru Friday 0900-1800 PPT
- **Market Simulation Coordinator Phone:** (916) 351-2205
- **ISO's 24x7 Service Desk:** (916) 351-2309 (Connectivity – UI or API)
- **Email:** [MarketSim@caiso.com](mailto:MarketSim@caiso.com)

# Market Simulation Issue Management

- Submit all issues to the CIDI case management system
- CIDI tickets must have “**Functional Environment**” = “**Market Simulation Fall 2019**” to be reviewed by ISO SMEs

# Fall 2019 Release Communication Plan

- **Schedule**

<b><i>Monday</i></b> September 9, 16, 23, 30 October 7, 14, 21, 28	<b><i>Tuesday</i></b> September 3	<b><i>Thursday</i></b> August 29 September 5, 12, 19, 26 October 3, 10, 17, 24, 31
--	--------------------------------------	---

- **Connection Information**

- **Web Conference Information**

- Web Address: <https://caiso.webex.com/meet/MarketSim>
    - Meeting Number: 962 067 710
    - Audio connection instructions will be available after connecting to the web conference. When prompted, select "Call me" and enter the phone number you will use during the call. You will be called by the conference shortly.

- **Conference Call Information**

- Dial-in Number: 866-528-2256
    - International Dial-in: 216-706-7052
    - Access Code: 202 249 0