



Market Simulation – Fall 2019 Release

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Recordings

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Agenda

- MAP Stage Availability
- Fall 2019 Release Market Simulation Initiatives & Timelines
- External Interface Changes
- Known Issues
- Settlements Calendar
- Initiatives
 - 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
 - MAP Stage Offline November 21, 19:00 – November 22, 01:00
- Upcoming MAP Stage Maintenance
 - SIBR - November 26, 30 minute outage for deployment
- MAP Stage Weekly Maintenance Window
 - Monday 0700 PT - Tuesday 0900 PT

Fall 2019 Release Market Simulation Initiatives & Timelines

| Fall 2019 Release Initiatives | Start Date | Start Date (TD) | End Date | Structured Simulation Start (Trade Date) | Expected Participation | Status |
|--|-------------------|------------------------|-----------------|---|--|---------------|
| Fall 2019 Release Market Simulation Phase 1 | 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 | Complete |
| <i>Energy Storage and Distributed Energy Resources (ESDER) Phase 3A</i> | | | | Scenarios Execution TD 9/18 | ISO Market Participants EIM Market Participants | Complete |
| <i>Federal Energy Regulatory Commission (FERC) Order 841</i> | | | | N/A | ISO Market Participants EIM Market Participants | Complete |
| <i>Local Market Power Mitigation Enhancements (LMPME)</i> | | | | Scenarios Execution TD 09/25 | ISO Market Participants EIM Market Participants | Complete |
| <i>Real-Time (RT) Market Neutrality Settlement</i> | 09/25/19 | 09/25/19 | | N/A | EIM Market Participants | Complete |
| <i>Reliability Must-Run (RMR) and Capacity Procurement Mechanism (CPM) Enhancements</i> | | | | Scenarios Execution TD 09/25 | ISO Market Participants | Complete |
| Fall 2019 Release Market Simulation Phase 2 | 10/14/19 | 10/21/19 | 11/04/19 | N/A | | |
| <i>Commitment Costs and Default Energy Bid Enhancements (CCDEBE)</i> | 10/14/19 | 11/07/19 | 11/26/19 | N/A | ISO Market Participants EIM Market Participants | In Progress |
| <i>Energy Imbalance Market (EIM) Enhancements 2019 (BSAP Interface Changes and Reporting Features)</i> | | | | N/A | EIM Market Participants | Complete |

Fall 2019 Release – System Interface Changes

CMRI

| Project | Change Type | UI Change | API Service Name & Major Version, Artifacts | MAP Stage | Technical Specifications |
|------------------|-------------|---|--|--|--------------------------|
| LMPME CCDEBE1 | Modify | Tab: Default Bids Existing Report: Default Energy Bid Curves | RetrieveDefaultBidCurves_CMRIv2 RetrieveDefaultBidCurves_CMRIv2_DocAttach | LMPME Sep 12, 2019 CCDEBE1 Nov 15, 2019 | 3.9.3 |
| CCDEBE1 | Modify | Tab: Default Bids Existing Report: Default Commitment Costs | RetrieveExternalDefaultCommitmentCost_CMRIv1 RetrieveExternalDefaultCommitmentCost_CMRIv1_DocAttach | Nov 15, 2019 | 3.9.3 |
| EIM 2019 | New | Tab: Energy Imbalance Market New Report: Resource Operating Limits | RetrieveEIMResourceOperatingLimit_CMRIv1 RetrieveEIMResourceOperatingLimit_CMRIv1_DocAttach | Oct 3, 2019 | 3.9.3 |
| EIM 2019 | New | Tab: Real-Time New Report: Resource Operating Limits | RetrieveResourceOperatingLimit_CMRIv1 RetrieveResourceOperatingLimit_CMRIv1_DocAttach | Oct 3, 2019 | 3.9.3 |

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 | ENE_TRANS_LOSS | Oct 7, 2019 | 5.1.9 |

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 | SIBR | UI submit of SUC Adjustment, after submit the display shows blank | Resolved | To be fixed 11/26 | N/A |
| 3 | SIBR | Energy adjustment submitted for resource with no DEB from RLC rule 31665 invalidates the bid. | Resolved | To be fixed 11/26 | N/A |
| 4 | SIBR | Energy adjustment bids not setting the origin (ExAnte or Threshold if exceeding the Threshold price curve. | Resolved | To be fixed 11/26 | N/A |
| 5 | SIBR | Energy adjustment bid does not have to match Energy bid curve segments. (not impacting submissions) This is in discussion with vendor. | Re-Opened | Estimated 11/26 | N/A |
| 6 | SIBR | SUC adjustments that exceed the Threshold are not showing THRESHOLD as the Origin. | Open | Estimated 11/26 | N/A |
| 7 | SIBR | SUC Threshold calculation rules enhancement 41353 | New | Estimated 11/26 | N/A |

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 | |
|--------------|-----------|--------------------|---------------------------------|--|--------------------------------|---|--|
| 02-Dec-19 | Monday | | | | | | |
| 03-Dec-19 | Tuesday | | | | | | |
| 04-Dec-19 | Wednesday | 3-Dec | | | | | |
| 05-Dec-19 | Thursday | 4-Dec | | | | | |
| 06-Dec-19 | Friday | | | | | | |
| 07-Dec-19 | Saturday | | | | | | |
| 08-Dec-19 | Sunday | | | | | | |
| 09-Dec-19 | Monday | | 3-Dec | 3-Dec | | | |
| 10-Dec-19 | Tuesday | | 4-Dec | 4-Dec | | | |
| 11-Dec-19 | Wednesday | 10-Dec | | | | | |
| 12-Dec-19 | Thursday | 11-Dec | | | | | |
| 13-Dec-19 | Friday | | | | 3-Dec | | |
| 14-Dec-19 | Saturday | | | | | | |
| 15-Dec-19 | Sunday | | | | | | |
| 16-Dec-19 | Monday | | 10-Dec | 10-Dec | 4-Dec | | |
| 17-Dec-19 | Tuesday | | 11-Dec | 11-Dec | | | |
| 18-Dec-19 | Wednesday | 17-Dec | Monthly Initial 03-Dec - 11-Dec | | | | |
| 19-Dec-19 | Thursday | 18-Dec | | | | Daily Initial 03-Dec, 04-Dec, 10-Dec, 11-Dec Monthly Initial 03-Dec - 11-Dec | |
| 20-Dec-19 | Friday | | | | 10-Dec | | |
| 21-Dec-19 | Saturday | | | | | | |
| 22-Dec-19 | Sunday | | | | | | |
| 23-Dec-19 | Monday | | 17-Dec | 17-Dec | 11-Dec | | |
| 24-Dec-19 | Tuesday | | 18-Dec | 18-Dec | Monthly Recalc 03-Dec - 11-Dec | | |
| 25-Dec-19 | Wednesday | ISO Holiday | | | | | |
| 26-Dec-19 | Thursday | 24-Dec | | | | Daily Recalc 03-Dec, 04-Dec, 10-Dec, 11-Dec Monthly Recalc 03-Dec - 11-Dec | |
| 27-Dec-19 | Friday | | | | | | |
| 28-Dec-19 | Saturday | | | | | | |
| 29-Dec-19 | Sunday | | | | | | |
| 30-Dec-19 | Monday | | | | 17-Dec | | |
| 31-Dec-19 | Tuesday | | 24-Dec | 24-Dec | 18-Dec | | |

Commitment Costs and Default Energy Bid Enhancements Phase 1: FERC Response

- 4-11 Dec Production Go-Live schedule assumed receipt of FERC order by 20-Nov
- FERC response to initial tariff filing not received; FERC deficiency letter received 4-Nov
- CAISO responding to deficiency letter this week, per RUG update on Tuesday
- FERC has up to 60 days to respond with a decision
- CCDEBE's revised implementation date is estimated to be approximately +3 months from the date of FERC's response
- CAISO continuing to resolve Known Issues for SIBR
- Market Simulation unstructured testing planned to end 26 November
- Participants can leverage existing scheduled EIM Settlements Statement run dates

Commitment Costs and Default Energy Bid Enhancements Phase 1

- **SIBR Code:** Unstructured began November 7
SIBR functionality available
 - Submit Regular Bids (without Adjustments), MLC, Startup Cost, Energy
 - Submit Adjustments Cost for MLC, Startup, Energy
 - Retrieve All
 - Submission rules (Underlying rules depends on ECIC payloads)
 - Content validated, calculation
- **CMRI Code:** CMRI UI was available November 13, API was available November 15, unstructured began November 14

Next Steps

- The final teleconference is scheduled on Monday, November 25 at 1400 PPT

Reference Slides

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 |
|--------------|-----------|-----------|---------------------------------|--|--------------------------------|---|
| 21-Oct-19 | Monday | | | | 9-Oct | |
| 22-Oct-19 | Tuesday | | | | 10-Oct | |
| 23-Oct-19 | Wednesday | | | | Monthly Recalc 09-Oct - 10-Oct | Daily Recalc 09-Oct, 10-Oct Monthly Recalc 09-Oct - 10-Oct |
| 24-Oct-19 | Thursday | 23-Oct | | | | |
| 25-Oct-19 | Friday | 24-Oct | | | | |
| 26-Oct-19 | Saturday | | | | | |
| 27-Oct-19 | Sunday | | | | | |
| 28-Oct-19 | Monday | | | | | |
| 29-Oct-19 | Tuesday | | 23-Oct | | | |
| 30-Oct-19 | Wednesday | | 24-Oct | | | |
| 31-Oct-19 | Thursday | 30-Oct | Monthly Initial 23-Oct - 24-Oct | | | Daily Initial 23-Oct, 24-Oct Monthly Initial 23-Oct - 24-Oct |
| 01-Nov-19 | Friday | | | | | |
| 02-Nov-19 | Saturday | | | | | |
| 03-Nov-19 | Sunday | | | | | |
| 04-Nov-19 | Monday | | | | | |
| 05-Nov-19 | Tuesday | | 30-Oct | | | |
| 06-Nov-19 | Wednesday | | | | | |
| 07-Nov-19 | Thursday | | | | | |
| 08-Nov-19 | Friday | | | | | |

Energy Imbalance Market Enhancements 2019

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

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

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.

Local Market Power Mitigation Enhancements

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

Real-Time Market Neutrality Settlements

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

FERC Order 841

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

Fall 2019 Release MAP Stage Data Setup

- Production data seeding the environment is from August 27th, 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

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**

| <i>Monday</i> | <i>Tuesday</i> | <i>Thursday</i> |
|---|-----------------------|---|
| September 9, 16, 23, 30 October 7, 14, 21, 28, November 4, 11, 18, 25 | September 3 | August 29 September 5, 12, 19, 26 October 3, 10, 17, 24, 31 |
| | | November 7, 14, 21 |

- **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