# Market Simulation

Trang Vo
Release Manager

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**ISO PUBLIC**

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# Market Simulation Communication

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| **September** | ✓ 2 | ✓ 3 | ✓ 4 | ✓ 5 | ✓ 6 |
| | ✓ 9 | ✓ 10 | ✓ 11 | ✓ 12 | ✓ 13 |
| | ✓ 16 | ✓ 17* | ✓ 18 | ✓ 19* | ✓ 20 |
| | ✓ 23 | ✓ 24* | ✓ 25 | ✓ 26* | ✓ 27 |
| | ✓ 30 | | | | |
| **October** | | ✓ 1* | ✓ 2 | ✓ 3* | ✓ 4 |
| | ✓ 7 | ✓ 8* | ✓ 9 | ✓ 10* | 11 |
| | ✓ 14 | 15 | 16 | ✓ 17 | 18 |
| | ✓ 21 | 22 | 23 | 24 2PM | 25 |
| | 28 | 29 | 30 | 31 | |

| ISO Closure | Market Simulation Forum |
|---|---|

**\*Settlements Trade Date**

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# Market Simulation MAP Stage Availability

- MAP Stage weekly maintenance window is Friday*

| System | UI | API | Comments |
|--------|-----|------|----------|
| ADS | | | |
| ALFS | NA | New API framework | |
| BAAOP | New UI framework | | BAAOP UI Maintenance: Commitment Override Preparation by 10/22 (tentative) |
| BSAP | New UI framework | | |
| CIRA | | New API framework | |
| CMRI | | | |
| CRR | | | |
| DRRS | | | |
| ECIC | NA | New API framework | |
| FDR | NA | New API framework | |
| MF | | | |
| OASIS | | | |
| OMS | | | OMS UI/API Maintenance: HER Preparation 10/22-10/25 |
| PLC | | NA | |
| RCBSAP | New UI framework | | |
| RIMS | | NA | |
| SIBR | New UI framework | | |
| MRIS | | | |
| TR | New UI framework | NA | |
| webWheel | | NA | |

| AVAILABLE |
|-----------|
| MAINTENANCE |

# Market Simulation MAP Stage Code

| System | MAP-STAGE | PRODUCTION | Comments |
|---|---|---|---|
| Market | 10/2/24 – Release 18 | 10/15/24 – Release 18 | Release 19 to MS & P Oct-Nov 2024 |
| FNM | **DB130.5 to MS Oct 2024 TD 10/18** | DB130.5 | ✓ DB130.5 to MS Oct 2024 TD 10/18 |
| ADS | | | |
| ALFS | New API framework | | |
| BAAOP | > New UI framework<br>> UI: Commitment Override (WEIM Enh) | | BAAOP UI Maintenance 10/11-10/18 for Commitment Override Preparation |
| BSAP | New UI framework | | |
| CIRA | New API framework | | |
| CMRI | | | |
| DRRS | | | |
| ECIC | New API framework | | |
| FDR | New API framework | | |
| MF | FERC 2222 | | |
| OASIS | | | |
| RCBSAP | New UI framework | | |
| SIBR | New UI framework | | |
| TR | New UI framework | | |

| |
|---|
| AHEAD OF PRODUCTION |
| SYNCED WITH PRODUCTION |
| BEHIND PRODUCTION |

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# Market Simulation Activities

| Initiative | Market Simulation | Comments | Production |
|---|---|---|---|
| Settlements Fall 2024 Release | ✓ 9/16 – 10/14: Unstructured<br>✓ By 9/30: Submit October Monthly via CIRA for RAAIM for 10/1 & 10/3 Mini-Monthly | Leverage settlements TDs | 11/01/24 |
| FERC 2222 | ✓ 9/16 – 10/11: Market Simulation Window<br>✓ 9/16 – 9/30: Connectivity<br>✓ 10/01 – 10/11: Unstructured Market Simulation | No settlements impacts | 11/01/24 |
| Framework Upgrades | Unstructured:<br>UI: BAAOP, SIBR, BSAP, RCBSAP, TR available<br>API: ALFS/FDR, CIRA, ECIC | No settlements impacts<br>See UI known issues | Various: October<br><br>Additional UIs/APIs may go beyond October |
| WEIM Enhancements<br>- WEIM Commitment Override – BAAOP UI | 10/22 – 11/1 ***Tentative***: Unstructured | No settlements impacts | Q4 2024 |
| TSMSP2T3 – Resale Scope | Oct – Nov 2024 | TSMSP2T1: Settlements fix will be in sample statements 9/16-10/14 (Production will be retroactive to 6/1/24)<br><br>TSMSP2T3: Settlements will be included in the 10/7-10/14 statements | Nov 2024 |
| CRR System Upgrade | 11/4 – 11/8: Connectivity<br>11/11: Start Market Simulation<br>- 3 weeks Structured<br>- 2 weeks Unstructured | | 01/27/25 to 01/30/25; March 2025 is first month with processes fully on the new system |
| HER | November: Unstructured | No settlements impacts | Q4 2024 - 2025 |
| HR2C RIMS | Early 2025: Unstructured (Shapefiles) | No settlements impacts | Feb 2025 |
| TEA | February 2025: Unstructured | | 2025 |

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# Market Simulation Settlements Calendar

| Calendar Day | Day | CMRI T+1B | Submit Meter Data by **T+2B 10:00** for Initial | Publish Initial Statement **T+5B** | Submit Meter Data by **T+5B 18:00** for Recalc | Publish Recalc Statement **T+8B** | Publish Market Invoice |
|---|---|---|---|---|---|---|---|
| | | | T+9B | T+9B | T+70B | T+70B | |
| 17-Sep-24 | Tuesday | | | | | | |
| 18-Sep-24 | Wednesday | 17-Sep | | | | | |
| 19-Sep-24 | Thursday | | 17-Sep | | | | |
| 20-Sep-24 | Friday | 19-Sep | | | | | |
| 23-Sep-24 | Monday | | 19-Sep | | | | |
| 24-Sep-24 | Tuesday | | | 17-Sep | 17-Sep | | |
| 25-Sep-24 | Wednesday | 24-Sep | | | | | |
| 26-Sep-24 | Thursday | | 24-Sep | 19-Sep | 19-Sep | | |
| 27-Sep-24 | Friday | 26-Sep | | Monthly Initial 17-Sep - 19-Sep | | 17-Sep (9/30) | Daily Initial 17-Sep; Daily Initial 19-Sep; Monthly Initial 17-Sep - 19-Sep |
| 30-Sep-24 | Monday | | 26-Sep | | | | |
| 01-Oct-24 | Tuesday | | | 24-Sep | 24-Sep | 19-Sep | |
| 02-Oct-24 | Wednesday | 1-Oct | | | | Monthly Recalc 17-Sep - 19-Sep | Daily Recalc 17-Sep; Daily Recalc 19-Sep; Monthly Recalc 17-Sep - 19-Sep |
| 03-Oct-24 | Thursday | | 1-Oct | 26-Sep | 26-Sep | | |
| 04-Oct-24 | Friday | 3-Oct | | Monthly Initial 24-Sep - 26-Sep (10/7) | | 24-Sep (10/7) | Daily Initial 24-Sep; Daily Initial 26-Sep; Monthly Initial 24-Sep - 26-Sep (10/7) |
| 07-Oct-24 | Monday | | 3-Oct | | | | |
| 08-Oct-24 | Tuesday | | | 1-Oct | 1-Oct | 26-Sep | |
| 09-Oct-24 | Wednesday | 8-Oct | | | | Monthly Recalc 24-Sep - 26-Sep | Daily Recalc 24-Sep; Daily Recalc 26-Sep; Monthly Recalc 24-Sep - 26-Sep |
| 10-Oct-24 | Thursday | 8-Oct | | 3-Oct | 3-Oct | | |
| 11-Oct-24 | Friday | 10-Oct | | Monthly Initial 01-Oct - 03-Oct *RAAIM | | 1-Oct | Daily Initial 01-Oct; Daily Initial 03-Oct; Monthly Initial 01-Oct - 03-Oct; |
| 14-Oct-24 | Monday | | 10-Oct | | | | |
| 15-Oct-24 | Tuesday | | | 8-Oct | 8-Oct | 3-Oct | |
| 16-Oct-24 | Wednesday | | | | | Monthly Recalc 01-Oct - 03-Oct | Daily Recalc 01-Oct; Daily Recalc 03-Oct; Monthly Recalc 01-Oct - 03-Oct; |
| 17-Oct-24 | Thursday | | | 10-Oct; 3-Oct Re-exec due to data issue; Monthly Initial 01-Oct - 03-Oct Re-exec due to data issue; | 10-Oct | | |
| 18-Oct-24 | Friday | | | Monthly Initial 08-Oct - 10-Oct (early 10/17) | | 8-Oct (early 10/17) | Daily Initial 08-Oct; Daily Initial 10-Oct; Monthly Initial 08-Oct - 10-Oct; (early 10/17) |

# Fall 2024 Settlements Release

✓ Active in MAPSTAGE as of TD 8/1/24

- 9/16/24 – 10/14/24
- Unstructured – Sample Settlements Statements for Tuesday & Thursday TDs 9/17/24 thru 10/10/24
- Scope as of 9/4/24 Communication:

| Fall 2024 Settlements Release Component Summary | |
|---|---|
| CHANGE SUMMARY | IMPACTS |
| **FERC 2222**<br>• *FERC Order 2222 seeks to remove barriers for DCR (Distributed Curtailment Resources) participation in RTO/ISO markets. The CAISO will amend it's existing DER (Distributed Energy Resource) policy to accommodate FERC 2222, which will include reducing the maximum capacity requirement and introducing a new DERA resource type with underlying DCR.* | ***No PRR required***<br><br>• There are no configuration/formulation changes, hence no tech doc or PRR/BPM posting. For information only.<br><br>• Effective Start Date: 11/01/2024 |
| **COTP Loss**<br>• *Defect: Apply losses for the California Oregon Transmission Project (COTP) scheduled into the California Independent System Operator Corporation (CAISO) Balancing Authority Area using COTP capacity made available by Pacific Gas and Electric Company (PG&E) and the Transmission Agency of Northern California (TANC) consistent with the CAISO Tariff. This is an enhancement to implement an amended LOA among TANC, PGAE, WAPA. Instead of using average Day-Ahead Nodal prices for all nodes that includes the intertie (TRCYCOTPISO), a five-year rolling average cost will be used as as alternative for comparison with an hourly MEAA – another agreement - price. The MEAA price is at the intertie TRCYPGAE and Apnode WAPAMEEA3_ON_ASR-APND.* | ***PRR 1583***<br><br>• For those with schedules tagged at the intertie TRCYCOTPISO, the CAISO shall accumulate daily each scheduling coordinator's portion of COTP losses on an hourly basis and invoice each scheduling coordinator per payment calendar.<br><br>• Effective Start Date: 11/01/2024 |
| **RC Config Change**<br><br>• *Defect: Issue with multiple BAA for Minimum RC Charge Flag. BA_RC_SVCS_NLOAD_TOP_MTH_EXMPT_FLAG has reference date "S" and needs to be updated to "T" to correctly be included in RC Settlement runs.* | ***No PRR required***<br><br>• There are no configuration/formulation changes, hence no PRR/BPM posting. Updates is to reflect CAISO internal processing to ensure data is captured correctly.<br><br>• Effective Start Date: 11/01/2024 |
| **RAAIM LESR change**<br><br>• *Defect: Revise the Generic Availability and Flexible Obligation calculations for Limited Energy Storage Resources (LESR) RA resources. Consistent with how generic obligation award is computed only for positive capacity, the generic availability will recognize only bids/availability for the capacity above zero. Conversely, since flexible obligation award allows for the full range – from negative Pmin to positive Pmax – the flexible obligation assessment shall recognize the negative capacity values, particularly for NGRs which can operate in the negative range.* | ***PRR 1584***<br><br>• This will directly impact non-generating resources (NGR) and LESR generic availability calculation and flexible obligation assessment. More likely, as a result of these resettlement, the other resources (non-NGRs, traditional generators and supply resources) may have more or less adjustments in the incentives they settled previously. The generic issue only occurs when the NGR resources has outage on its positive capacity. The flexible issue more likely will be a charge to NGRs for those with penalties, a slight uptick in incentives if they were previously getting incentives, and a likely net effect to non-NGRs to be an increase incentives.<br><br>• Effective Start Date: 3/1/2023. This is retrospective going as far back at T+21M. |

# Fall 2024 Settlements Release (continued)

✓ Active in MAPSTAGE as of TD 8/1/24

- 9/16/24 – 10/14/24
- Unstructured – Sample Settlements Statements for Tuesday & Thursday TDs 9/17/24 thru 10/10/24
- Scope as of 9/4/24 Communication:

| Fall 2024 Settlements Release Component Summary | |
|---|---|
| **CHANGE SUMMARY** | **IMPACTS** |
| **RMR** <br><br> • *Defect: Fix a typo in BD with impact to CC 6470 design template. Typo correction will allow an RMR specific daily amount to be consumed by 7020 correctly.* | ***No PRR required*** <br><br> • There are no configuration/formulation changes, hence no PRR/BPM posting. Update is for typo error clean-up only. <br><br> • Effective Start Date: 11/1/2024. |
| **BD Name Alias Change** <br> • *Defect: Hierarchy Charge Names with Discrepant BILL_DETERMINANT_NAME & BILL_DETERMINANT_ALIAS Values. The BILL_DETERMINANT and ALIAS columns should be exact matches except that the enumeration in the BILL_DETERMINANT column should have an '@' sign in the name. The ALIAS enumeration will have an '_' (underscore) in the same position. As long as we do not plan to recalc the BD for any trade dates in the past that have calculated using the previous spelling in the enumeration column we can make the change prospective without causing calculation errors going forward.* | ***No PRR required*** <br><br> • There are no configuration/formulation changes, hence no PRR/BPM posting. No financial impact because the impacted BDs (some PTB BDs) were never used. <br><br> • Effective Start Date: 11/1/2024. |
| **T vs. S:** <br><br> • *Defect: Some Bill Determinants need to be updated from reference date "S" to "T" to align with best business practices. During review there were three bill determinants that had a different reference date than expected. While no settlements issues have been reported, to align the bill determinants with best practices, they will be updated prospectively. The following are the bill determinants impacted. RSRC_DAILY_APPLY_WHSL_CHG_FLAG, RSRC_DAILY_NGR_VER_FLAG, BA_5M_RSRC_TIE_DEV_EXEMPT_FLAG.* | ***No PRR required*** <br><br> • There are no configuration/formulation changes, hence no PRR/BPM posting. Updates is to reflect CAISO internal processing to ensure data is captured correctly. <br><br> • Effective Start Date: 11/1/2024. |
| **TSMSP2:** <br> • *When updates (with a 6/1/2024 Effective Date) associated with the TSMSP2 project were released to Production with the Summer 2024 Release a defect discovered that entities with ATC Reservations are seeing a doubling of the export quantities associated with that intertie. This occurred because the PriorityWheelThruPosition payload (which provides the ATC PWT Reservation Quantity derived in WebWheel) provides the CONTRACTRIGHT_MRID attribute and the DReAMS and MSDC team had believed this to be a renaming of the CONTRACT_REF_ID which we were expecting in existing configurations. This is causing conflicts with existing business drivers and leads to inaccurate calculations.* | ***PRR 1585*** <br><br> • A change is required to sum over this conflicting attribute in the configuration so that it not cause conflicts. Its purpose is informational and summing over it will not impact calculations. <br><br> • Effective Start Date: 6/1/2024. |

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# Draft of 2024 Fall Settlements Release Milestones

**Release Milestones:**

- ✓ *1st draft config output file + release component summary posted:* **8/13/24**

- ✓ *PRR/BPM posting:* **8/27/24**

- ✓ **2nd draft config output file + revised release component summary posted: 9/4/24**

- Market sim/sample statement window: **9/16 – 10/14**
    - Active in MAPSTAGE as of TD 8/1/24
    - Unstructured – Sample Settlements Statements for Tuesday & Thursday TDs 9/17/24 thru 10/10/24
    - First Sample Settlement TD is 9/17/24, to publish 9/24 for Daily Initial
    - Last Sample Settlement TD is Today 10/10/24

- Pre-prod configuration output file + release artifact revisions targeting: **10/23**

- Anticipated prod activation effective trade date: **11/1**

- **The ISO presented more details about the Market Simulation for the RAAIM change in Settlement User Group 9/25/24. Added to this Market Simulation presentation's references (end of deck).**

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# FERC 2222

✓ Register by Friday, 9/13/24

✓ 9/16 – 10/11: Market Simulation Window

✓ 9/16 – 9/30: Connectivity

– MF, SIBR, MRI-S ready

✓ 10/1 – 10/11: Unstructured Market Simulation

• FERC 2222 Impacted Systems: MF, SIBR, MRI-S, RIMS

• BRS response matrix published

| ID# | Guidance on Market Participant Impacts | Source System | Sink System | Reason for Potential Scenario |
|---|---|---|---|---|
| *FERC2222 -MKTSIM- 001* | Unstructured Testing.<br><br>SIBR, MFRD, MRI-S enhancements will be made available if a market participant wants to test the HDERA resource type.<br><br>Unstructured testing requires participant has at least one HDERA and one DERA resource set up in Master File for:<br><br>• MFRD web service data retrieval<br><br>• SIBR NBT process (HDERA only), GDF submission with bids<br><br>• MRI-S meter and (for HDERA only) monitor measurement data submission | SC | MFRD<br><br>MRI-S<br><br>Settlements<br><br>SIBR | • Interface Changes<br><br>• New/Modified Model Data<br><br>• New system process |

# FERC 2222

| Unstructured guided scenario | |
|---|---|
| Description | Verify HDERA resources in CAISO market |
| ISO Actions | ISO will provision HDERA resources in CAISO markets |
| WEIM Market Participant Actions | • Submit HDERA resources GRDT for CAISO Masterfile<br>• Verify resource availability in SIBR NBT process and GDF submissions with bids.<br>• Verify MRIS meter and monitor measurement data submission for the resources.<br>• Verify Settlements results for the resources |
| ISO Market Participant Actions | • Submit HDERA resources GRDT for CAISO Masterfile<br>• Verify resource availability in SIBR NBT process and GDF submissions with bids.<br>• Verify MRIS meter and monitor measurement data submission for the resources.<br>• Verify Settlements results for the resources |
| Expected Outcome | Resources are available/visible in CAISO systems. |
| Anticipated Settlement Outcome | N/A |
| Expected Settlement Outcome | N/A |

# Framework Upgrades

- UI/API framework upgrades for multiple systems

- No application functionality changes

- No impact to user access

- Will be made available in MAP-Stage prior to Production cutovers where applicable

| Interface | MAP-Stage | Production |
|---|---|---|
| UI: BAAOP | ✓ July 2024 | Oct-Nov 2024 |
| UI: BSAP | ✓ August 2024 | Oct-Nov 2024 |
| UI: RCBSAP | ✓ August 2024 | Oct-Nov 2024 |
| UI: SIBR | ✓ August 2024 | Oct-Nov 2024 |
| UI: TR | ✓ | Q4 2024 |
| UI: HANA | NA | Oct-Nov 2024 |
| UI: HANA STUDY | NA | Oct-Nov 2024 |
| API: ALFS/FDR | ✓ | Q4 2024 |
| API: CIRA | ✓ | Q4 2024 |
| API: ECIC | ✓ | Q4 2024 |
| Other UIs & APIs | Various | Various |

# UI Framework Upgrades

- Known Issues – UIs only
  - SIBR
    - Create Bid Product Type NULL – *Fixed 9/24*
    - Upload bids/trades function not working – *Fixed 9/24*
    - Loading Screen Speed Slow
    - Dynamic Limit Resource not populating for SC

  - BSAP
    - Submit Base Schedule Button Not Available
      - Workaround: right-click to submit

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# WEIM Enhancements: WEIM Commitment Override – BAAOP UI

✓ **Register by September 30, 2024**

• October 22 – November 1 **_Tentative_** - Unstructured

| ID# | Guidance on Market Participant Impacts | Source System | Sink System | Reason for Potential Scenario |
|---|---|---|---|---|
| MKT - 010 | **Unstructured Market Sim – WEIM External Commitment Override**<br><br>External WEIM BA Operators must have the capability within RTM - BAAOP to enter commitment overrides directly in the RTM Market UI.<br><br>Note: See BRQ030. | N/A | *RTM – BAAOP* | Changes to UI |

| ID# | Business Feature | Req. Type | Potential Application(s) Impacted |
|---|---|---|---|
| *FAB – BRQ03* | *External WEIM Commitment Override*<br><br>System (RTM) within BAAOP, must have the capability for external WEIM BA Operators to enter commitment overrides directly in the RTM Market UI.<br><br>Implementation note: This would be similar functionality as CAISO BA Operations (Generation Dispatcher) having this ability.<br><br>Implementation note: use the External BAA Operator role for BAAOP.<br><br>Implementation note: Currently, external WEIM entities call the RTMO to request the commitment override and the RTMO enters the override into the RTM via BAAOP. The RTMOs do not have the authority to deny the request from the external WEIM entity.<br><br>Implementation note: This requirement applies to any WEIM BAA with existing access to RTM. No new access provisioning needed in AIM, no updates to roles needed in AIM.<br><br>Implementation note: UI updates only<br><br>Impacted: BPM, UIs, Unstructured Market Sim | *Core* | *RTM - BAAOP* |

# TSMSP2T3

- ✓ **Register by Friday, 9/27/24**
- October – November: Market Simulation Window TBD
- MF, OASIS, webWheel, SIBR, Settlements, Market
- ✓ ***[BRS revision published 10/02/24](#)***
- Market/Business Simulation Business Requirements:

| Guidance on Market Participant Impacts | Source System | Sink System | Reason for Potential Scenario |
|---|---|---|---|
| ***Unstructured Market Sim:*** <br> *SCs must have the capability to submit, view, and download their resale information.* | N/A | *webWheel™* | New Process, New Data |
| *SCs performing resale must attest that the information entered therein for resale meets the applicable attestation requirements of CAISO tariff Section 23.* | N/A | *webWheel™* | New Process, New Data |
| ***Unstructured Market Sim:*** <br><br> *Market Participants must have the capability to view the resale information* | webLineR | *OASIS* | New Process, New Data |
| ***End-to-End*** <br> *Internal ISO operator must have the capability to update reason code for submitted resales and Forced Releases.* | N/A | *webWheel™* | New Process, New Data |
| ***Unstructured Market Sim:*** <br> *SCs must have the capability to submit, view, and download their Forced Release information.* | N/A | *webWheel™* | New Process, New Data |

# TSMSP2T3

- ✓ OASIS Interface Specification 7.6.3, Artifacts, and Examples Published on https://developer.caiso.com
  - New Report:
    - Priority Wheeling Through Resale Transactions

| Project | Report | New or Update | Service | Schema | Version # | |
|---------|--------|---------------|---------|--------|-----------|---|
| | | | | | **Major** | **Minor** |
| Transmission Service and Market Scheduling Priorities – Phase 2 | Priority Wheeling Through Resale Transactions | New | PWT_RESALE_TRANS | Priority Wheeling Through Resale Transactions_v1.xsd | 1 | N/A |

Group Report Service Versions:

| Service Name | Major Version | Minor Version |
|--------------|---------------|---------------|
| PWT_RESALE_TRANS_GRP | v1 | N/A |

| Name Space | Major Version | Minor Version |
|------------|---------------|---------------|
| http://www.caiso.com/soa/ PriorityWheelingThroughResaleTransactions_v1.xsd | 1 | 20241001 |

- CSV Format: PWT_RESALE_TRANS

| Report/ResultSet | XML Name | XML Data Items | Description |
|------------------|----------|----------------|-------------|
| Priority Wheeling Through Resale Transactions | PWT_RESALE_TRANS | START_DATE_TIME_GMT<br>END_DATE_TIME_GMT<br>TRANS_DATE<br>BUYER<br>SELLER<br>RESERVATION<br>PRICE | Interval Start Time in GMT<br>Interval End Time in GMT<br>Transaction Date<br>Buyer<br>Seller<br>Reservation<br>Resale Price |

| GroupID | Reports in Group | Market Type | Report XML Names |
|---------|------------------|-------------|------------------|
| PWT_RESALE_TRANS_GRP | Priority Wheeling Through Resale Transactions | N/A | PWT_RESALE_TRANAS |

# CRR System Upgrade

- ✓ **Register by 9/30/24**
- **10/24 CRR Customer Partnership Group for more updates**
- Multiple Training Sessions: First is tentative for 10/28
- 11/4 – 11/8: Connectivity: *UI & APIs available*
- 11/11: Start Market Simulation
  - 3 weeks Structured
  - 2 weeks Unstructured

- Access Provisioning: Ready for **MAPSTAGE** provisioning
  - CRR: EXTERNAL CRR HOLDER READ-ONLY ACCESS
  - CRR: EXTERNAL CRR HOLDER READ/WRITE ACCESS
  - CRR: EXTERNAL CRR NDA REPORTS READ-ACCESS
  - CRR: EXTERNAL UTILITY DISTRIBUTION COMPANY (UDC) READ/WRITE ACCESS
  - CRR: EXTERNAL TRANSMISSION OWNERSHIP RIGHT (TOR) OWNER READ/WRITE ACCESS
  - CRR: EXTERNAL CALIFORNIA ENERGY COMMISSION (CEC) READ/WRITE ACCESS

- Reminder: OASIS Tech Specs include the new & modified reports (https://developer.caiso.com)

# 2024 - Congestion Revenue Rights (CRR) Upgrade

*Updated September 2024*

- Functional UI Site Acceptance Testing and integration testing continues. UI test cases are 92% passed.
- **Connectivity Testing – 1 week after above testing, starting November 4th, just before Market SIM**
- **Training – 2 weeks before Market SIM in late October**
- **Market SIM - 3 weeks structured, then 2 weeks unstructured starting on November 11th**
- 2025 Annual Cycle, carried out in 2024, will occur on the current Production CRR application
- 1 week Cutover to new CRR application 1/27/25 to 1/30/25
- March is first month with processes fully on the new system
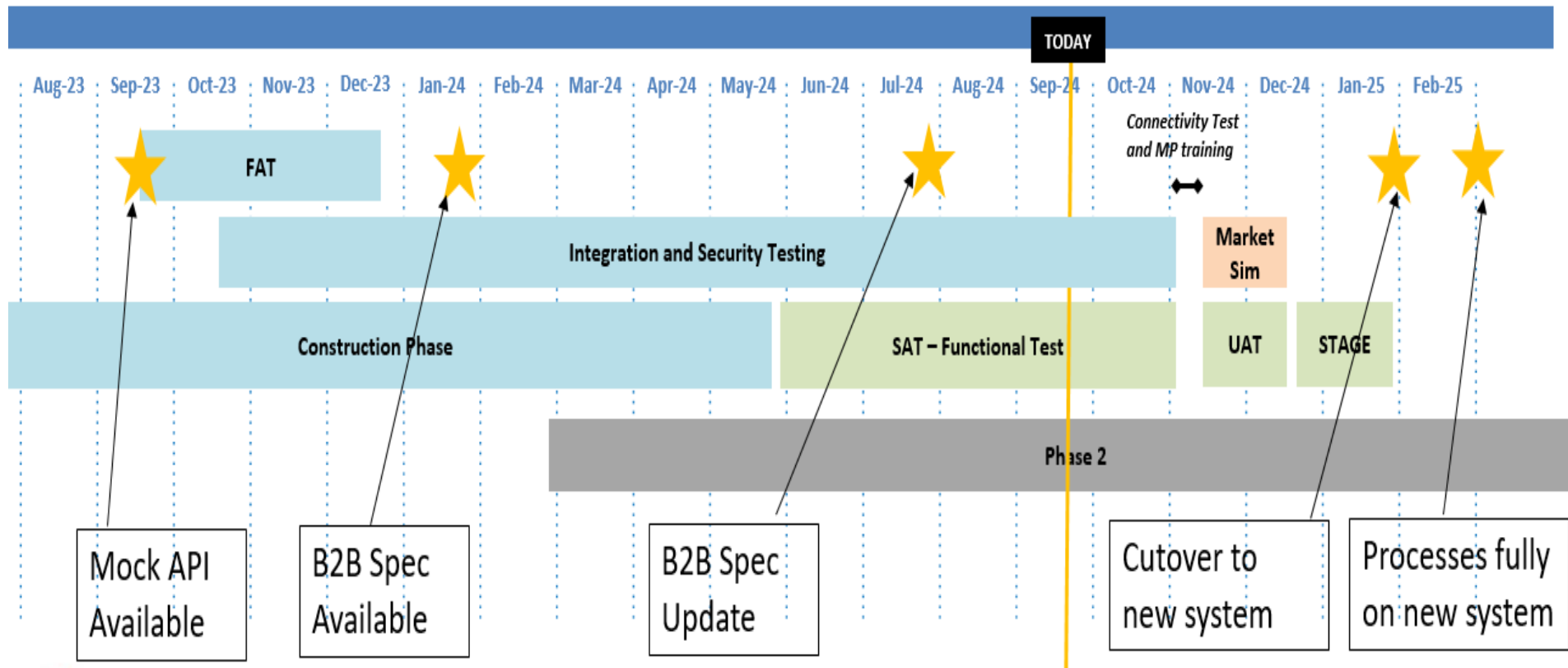
# HER

- ✓ **Register by September 30, 2024**
- • OMS maintenance 10/21-10/25
- • OMS Connectivity starts 10/28
- • Training 10/28
- • Unstructured Market Simulation 11/4-11/15

| Guidance on Market Participant Impacts | Source System | Sink System | Reason for Potential Scenario |
|---|---|---|---|
| **End-to-End Testing:**<br><br>RC Customers to adjust the ER, HER and limit durations.<br><br><br><br>Note: Reference BRQ403 for more information. | webOMS | webOMS, HANA | New Data Fields |

| ID# | Business Feature | Req. Type | Potential Application Impacted |
|---|---|---|---|
| HER – BRQ403 | System (webOMS) must have the capability for all current user who have read/write access to adjust the following new transmission MVA rating data elements/fields:<br>• Emergency Rating Duration (set in minutes)<br>• Highest Emergency Rating Limit (set in MVA)<br>• Highest Emergency Rating Duration (set in minutes)<br>• Start/End time of override (existing field, set for above fields)<br><br>Implementation note: Operators shall be able to adjust to a higher rating, in addition to how they currently adjust to a lower rating; ; ISO users and RC customers shall use existing "Nature of Work" type of "EQUIPMENT_DERATE" in order to adjust rating higher or lower.<br><br>Implementation and note: ISO users and RC customers shall utilize existing "Nature of Work" type of "EQUIPMENT_DERATE" in order to adjust to a higher or lower rating. | *Core* | *webOMS* |

# Modification of Maximum Import Bid Price Hourly Energy Shaping Factor

| Project Information | Details/Date |
|---|---|
| **High Level Project Scope** | Modify MIBP Energy Price Hourly Shaping Factor<br><br>The new formula for shaping factor is based on the high-priced day SMEC only. Use high-priced day SMEC shape to adjust Electric Hub price of the trading day. This is a change from current one that using the SMEC of trade hour in trading day or the same hour of the closest prior day if trading day DAM is not run yet. |

| Milestone Type | Milestone Name | Dates | Status |
|---|---|---|---|
| **Workshop** | **Maximum Import Bid Price Workshop** | **May 28, 2024** | ✔ |
| **BRS** | **Business Requirements Specification V1.2**<br>**Update MIBP Shaping Factor formula (PFECAP-BRQ-151)** | **Oct 08, 2024** | ✔ |
| **BPM** | **Market Instruments – PRR 1591**<br>**Initial Comments Deadline**<br>**BPM CM PRR Review** | **Sep 25, 2024**<br>**Oct 15, 2024**<br>**Oct 22, 2024** | ✔<br>✔ |
| **Production** | **Activation** | **November 14, 2024** | |

# Enable Non-Generating Resources to Participate in Inter-SC Trade

| Information | Details |
|---|---|
| **Source** | 2024 Annual Policy Initiatives Roadmap Process |
| **Category** | Storage |
| **Submission** | Enable non-generating resources to participate in inter-SC trade |
| **Summary** | Allow non-generating resources to participate in inter-SC trade and offer physical energy product in order to continue effective integration of higher capacities of energy storage and meet RA and GHG compliance goals. |
| **Description** | In the current market design, standalone battery storage projects are not available to be selected in the "location" dropdown list for transactive physicals in IST. To continue effective integration of higher capacities of energy storage and meet RA and GHG compliance goals, the ISO should allow NGRs to participate in inter-SC trade and offer physical energy product. Enabling battery storage to participate in physical IST would increase market efficiency and reduce uncertainty in the preschedule window, and would allow battery storage to offer supplemental capacity or replacement energy through IST. |
| **Presentation** | May 15, 2024 |
| **System Impacts** | Scheduling Infrastructure & Business Rules (SIBR) |

| Milestone Type | Milestone Name | Dates | Status |
|---|---|---|---|
| **BPM** | **Publish PRR: Market Instruments** | | |
| **SIBR Release Notes** | **Publish SIBR Release Notes** | | |
| **SIBR Rules** | **Publish Inter-SC Trades Rules** | | |
| **SIBR SC User Guide** | **Update to allow NGR for Physical Trades** | | |
| **SIBR Inter-SC Trades (IST) Tutorial** | **Update to allow NGR for Physical Trades** | | |
| **Market Simulation** | **Market Simulation** | | |
| **Production** | **Activation** | | |

*\*This effort is separate from the "Inter-SC Trades in Regional Markets" policy initiative*

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# Next Steps

- The next Market Simulation Forum will be on Thursday, October 24, 2024 @ *2:00 PM PT*

- Contact
  - Trang Vo @ tvo@caiso.com
  - MarketSim@caiso.com

# References

- The following slides include information from previous presentations and/or for general reference

# Market Simulation Support

- Submit questions to CIDI with 'Functional Environment' = "Market Simulation"

- [marketsim@caiso.com](mailto:marketsim@caiso.com)

- Service Desk: (916) 351-2309

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# 2024 - CRR System Upgrade – Calendar References

- Calendar layout of proposed CRR monthly and Annual Market Sim plan
- DRAFT - CRR 2024 & 2025 Allocation and Auction Markets Calendar

# 2024 - CRR System Upgrade – Calendar References

## Market Sim 2024

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
|---|---|---|---|---|
| **week 1**<br>**T-2w - Connectivity**<br>**Prior to Market Sim - Kickoff and Overview**<br>• Market Sim Plan<br>• High level overview of new system<br>• Uploading and Downloading<br>  ○ Manual Entry,<br>  ○ File<br>  ○ Upload, API<br>• Public/Private Downloads<br>• Messages<br>• Sorting and Filtering<br>• Documentation and Resources<br>• Contact Information | **Miscellaneous process**<br>1. UDC Load Migration Submissions and post (N-hour)<br>2. LT Re-nomination<br>3. Secondary Market<br>4. TOR conversion submission<br><br>**Allocation Monthly Participants**<br>1. CEC Load Forecast Submissions<br>2. Submit Historical Load<br>3. Submit Forecast Load<br><br>**Allocation Annual Participants**<br>Submit AN Historical Load for 2024<br><br>Public/Private messages<br>Public/Private downloads (existing CRRs)<br>Market Sim Webex | **Miscellaneous process**<br>1. UDC Load Migration Submissions Open<br>2. Secondary Market<br>3. TOR conversion approval<br><br>**Allocation Monthly Participants**<br>Post Monthly nomination cap (MEQ T1)<br><br>**Allocation Annual Participants**<br>Post Annual nomination cap (SEQ T1, SEQ LT, UB, SS T1, SS LT)<br><br>Public/Private messages<br>Market Sim Webex | **Miscellaneous process**<br>1. UDC Load Migration Submissions close and post<br>2. Secondary Market<br><br><br><br>Market Sim Webex 3-4pm PST | **Reserved for CRR team data processing and participant responses**<br><br>**Environment Patching** |

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# 2024 - CRR System Upgrade – Calendar References

## Market Sim 2024

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
|---|---|---|---|---|
| **week 2**<br>**Reserved for CRR team data processing and participant responses**<br><br>**CRR team setup for Monthly Markets** | **Allocation Monthly Participants**<br>1. Submit Nominations for Tier 1 Monthly Market<br>2. Windows Close on <u>Wednesday</u><br>3. Download Nomination Cap data<br>4. Download Allocation Market MN V0 ETC and T1 model results(NDA user)<br><br><br>**Auction Monthly Participants**<br>1. Submit Auction Portfolios Monthly Auction Market<br>• Buy Bids, Sell Offers<br>• Credit - provide $10mil to all MPs for testing<br>2. Windows Close on <u>Thursday</u><br>3. Download Auction market model results(NDA user)<br><br>Market Sim Webex | **Allocation Monthly Participants**<br>1. Download Allocation Market T1 Results<br><br>2. Submit Nominations for Tier 2 Monthly Market<br>3. Windows Close on <u>Thursday</u><br>4. Download Nomination Cap T2 data<br>5. Download Allocation Market T2 model results(NDA user)<br><br><br>Market Sim Webex | **Allocation Monthly Participants**<br><br>Review results<br><br>**Auction Monthly Participants**<br><br>Review results<br><br>Market Sim Webex 3-4pm PST | **Reserved for CRR team data processing and participant responses**<br><br>**Environment Patching** |

# 2024 - CRR System Upgrade – Calendar References

## Market Sim 2024

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
|---|---|---|---|---|
| **week 3**<br>**Reserved for CRR team data processing and participant responses**<br><br>**CRR team setup for Annual markets** | **Allocation Annual Participants**<br>1. Submit Nominations for Tier 1 Annual Market<br>2. Windows Close on Wednesday<br>3. Download Nomination Cap data<br>4. Download Allocation Market AN V0 V1 and T1 model results(NDA user)<br><br>1. Submit Nominations for LT Annual Market<br>2. Windows Close on Wednesday<br>3. Download Nomination Cap data<br>4. Download Allocation Market ETC and LT model results(NDA user)<br><br><br>**Auction Annual Participants**<br>1. Submit Auction Portfolios Annual Auction Market<br>• Buy Bids, Sell Offers<br>• Credit - provide $10mil to all MPs for testing<br>2. Re-submit for any processes or scenarios which had issues previously<br>3. Windows Close on Thursday<br>4. Download Auction market model results(NDA user)<br><br>Market Sim Webex | **Allocation Annual Participants**<br>1. Submit Nominations for Tier 2 Annual Market<br>2. Windows Close on Thursday<br>3. Download Nomination Cap T2 data<br>4. Download Allocation Market T1 Results<br><br><br><br>Market Participant Webex 3-4pm PST | **Allocation Annual Participants**<br><br>Review results<br><br>**Auction Annual Participants**<br><br>Review results<br><br><br>**Miscellaneous Annual process**<br>1. Submit Auction Portfolios for Participant requested scenarios<br><br><br><br>Market Sim Webex | **Reserved for Q&A sessions, issue reporting, etc.**<br><br>**Environment Patching** |

# 2024 - CRR System Upgrade – Calendar References

## Market Sim 2024

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | |
|---|---|---|---|---|---|
| **week 4** | **Unstructured**<br><br>• Re-submit for any process of scenarios for customer specific testing<br><br>Market Sim Webex | **Unstructured** | **Unstructured**<br><br><br><br>Market Sim Webex | **Reserved for CRR team data processing and participant responses**<br><br>**Environment Patching** | |
| **week 5** | **Unstructured Cont.** | **Unstructured Cont.** | **Unstructured Cont.**<br><br>Market Sim Webex | **Reserved for CRR team data processing and participant responses**<br><br>**Environment Patching** | |

# 2024 - CRR System Upgrade – Calendar References

## November 2024

**Legend:**
- Annual (yellow)
- December (blue)
- January (red)
- Market Sim/Cutover (black)

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
|---|---|---|---|---|
| | | | | **1** <br> 2025 Auction Open |
| **4** <br> Dec List of outages post by 5P <br><br> Post January Source/Sink List <br><br> 2025 Auction Closes 5P | **5** <br> Dec Incr. Update by 5P <br><br> Market Sim – Week 1 | **6** <br><br> Market Sim – Week 1 | **7** <br> Dec Tier 1 Opens 1A <br> Dec Tier 1 Closes 5P <br> Jan Hist Load Wind Opens 1A <br> Jan Hist Load Wind Closes 5P <br><br> Market Sim – Week 1 | **8** <br> Jan Frcst Load Wind Opens 1A <br><br> Market Sim – Week 1 |
| **11** <br> Dec Post Tier 1 Results by 5P <br> Post 2025 Auction Results by 5P <br> Jan Frcst Load Wind Closes 5P | **12** <br> Dec Post Set-Aside <br> Dec Tier 2 MEQ <br><br> Market Sim – Week 2 | **13** <br> Dec Tier 2 Opens 1A <br> Dec Tier 2 Closes 5P <br><br> Market Sim – Week 2 | **14** <br><br> Market Sim – Week 2 | **15** <br> Dec Post Tier 2 Results by 5P <br><br> Market Sim – Week 2 |
| **18** | **19** <br> Dec Auction Opens 1A <br><br> Market Sim – Week 3 | **20** <br> Dec Auction Closes 5P <br> Dec UDCs submit LM data by 12P <br><br> Market Sim – Week 3 | **21** <br><br> Market Sim – Week 3 | **22** <br> Dec Auction results post by 5P <br><br> Market Sim – Week 3 |
| **25** <br> Jan Post CRR FNM by 5P <br><br> Market Sim – Week 3 | **26** <br><br> Market Sim – Week 3 | **27** <br> Jan Post MEQ <br><br> Market Sim – Week 3 | **28** <br> Holiday (Thanksgiving) | **29** <br> Holiday (Thanksgiving) |

# 2024 - CRR System Upgrade – Calendar References

## December 2024

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
|---|---|---|---|---|
| **2**<br>Post February Source/Sink List | **3**<br><br><br>Market Sim – Week 4 | **4**<br><br><br>Market Sim – Week 4 | **5**<br><br><br>Market Sim – Week 4 | **6**<br>Jan List of outages post by 5P |
| **9**<br>Feb Hist Load Wind Opens 1A<br>Feb Hist Load Wind Closes 5P | **10**<br>Jan Incr. Update by 5P<br>Feb Forecast Load Wind Open 1A<br><br>Market Sim – Week 5 | **11**<br>Feb Forecast Load Wind Closes 5P<br><br><br>Market Sim – Week 5 | **12**<br>Jan Tier 1 Opens 1A<br>Jan Tier 1 Closes 5P<br><br>Market Sim – Week 5 | **13**<br>Jan Post Tier 1 Results by 5P |
| **16**<br>Jan Post Set-Aside<br>Jan Tier 2 MEQ | **17**<br>Jan Tier 2 Opens 1A<br>Jan Tier 2 Closes 5P | **18** | **19**<br>Jan Post Tier 2 Results by 5P | **20**<br>Jan UDCs submit LM data by 12P |
| **23**<br>Jan Auction Opens 1A | **24**<br>Jan Auction Closes 5P | **25** | **26**<br>Feb Post CRR FNM by 5P | **27**<br>Jan Auction results post by 5P |
| **30**<br>Feb Post MEQ | **31** | | | |

Legend:
- 🟥 January
- 🟦 February
- ⬛ Market Sim/Cutover

## January 2025

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | |
|---|---|---|---|---|---|
| ■ (orange) February<br>■ (blue) March<br>■ (black) Market Sim/Cutover | | **1**<br>Holiday<br>(New Year's Day) | **2** | **3**<br>Feb List of outages post by 5P | |
| **6**<br>Post March Source/Sink List | **7**<br>Feb Incr. Update by 5P | **8**<br>Mar Hist Load Wind Opens 1A<br>Mar Hist Load Wind Closes 5P<br>(Entered in current system, will be migrated to new System) | **9**<br>Feb Tier 1 Opens 1A<br>Feb Tier 1 Closes 5P<br><br>Mar Frcst Load Wind Opens 1A | **10**<br><br>Mar Frcst Load Wind Closes 5P | |
| **13**<br>Feb Post Tier 1 Results by 5P | **14**<br>Feb Post Set-Aside<br>Feb Tier 2 MEQ | **15**<br>Feb Tier 2 Opens 1A<br>Feb Tier 2 Closes 5P | **16** | **17**<br>Feb UDCs submit LM data by 12P<br><br>Feb Post Tier 2 Results by 5P | |
| **20**<br>Holiday<br>(Martin Luther King's B-Day) | **21** | **22**<br>Feb Auction Opens 1A | **23**<br>Feb Auction Closes 5P | **24** | |
| **27**<br>Feb Auction results post by 5P | **28**<br>Mar Post CRR FNM by 5P – on SFTP site<br><br>Production Deployment –Phase 1 cutover | **29**<br><br>Production Deployment –Phase 1 cutover | **30**<br><br>Production Deployment –Phase 1 cutover | **31**<br><br>Production Deployment – Phase 1 cutover Complete | |

# 2024 - CRR System Upgrade – Calendar References

## February 2025

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
|---|---|---|---|---|
| ■ March<br>■ April | | | | |
| **3**<br>New System Online<br>Mar Post MEQ<br>Post April Source/Sink List | **4** | **5**<br><br>Apr CEC Load Wind Opens 1A<br>Apr CEC Load Wind Closes 5P | **6**<br>Mar List of outages post by 5P<br>Mar Incr. Update by 5P<br><br>Apr Hist Load Wind Opens 1A<br>Apr Hist Load Wind Closes 5P | **7**<br>Mar Tier 1 Opens 1A<br>Mar Tier 1 Closes 5P<br><br>Apr Frcst Load Wind Opens 1A |
| **10**<br><br>Apr Frcst Load Wind Closes 5P | **11**<br>Mar Post Tier 1 Results by 5P | **12**<br>Mar Post Set-Aside<br>Mar Tier 2 MEQ | **13**<br>Mar Tier 2 Opens 1A<br>Mar Tier 2 Closes 5P | **14** |
| **17**<br><br>Holiday<br>(Presidents Day) | **18**<br>Mar Post Tier 2 Results by 5P | **19** | **20**<br>Mar UDCs submit LM data by 12P<br>Mar Auction Opens 1A | **21**<br>Mar Auction Closes 5P<br>Apr Post CRR FNM by 5P |
| **24** | **25**<br>Mar Auction results post by 5P | **26**<br>Apr Post MEQ | **27** | **28** |

# Market Simulation Registration

- **Please register for your participation in Market Simulation activities for each Market Simulation initiative as appropriate**
  - If you have intent to actively engage in MAP Stage testing of access, systems, functionality, processes, and/or review of results/data
- **This informs CAISO Market Simulation to provide more specific support for your efforts**, including
  - Data setup for your testing
  - More immediate communication and coordination impacting your testing/review
  - More detailed information for the applicable initiatives
- **How to register**
  - Submit CIDI with 'Functional Environment' = "Market Simulation"
    - Identify the Market Simulation initiative(s) you will participate in
    - Identify any specific resources as applicable
    - List the contacts and e-mail addresses that you would like to include
  - CIDI is preferred and if you don't have CIDI, you can e-mail marketsim@caiso.com with the same information

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# HR2C RIMS

- **Register by December 31, 2024**
- Early 2025: Unstructured Shapefiles Market Simulation

| ID# | Guidance on Market Participant Impacts | Source System | Sink System | Reason for Potential Scenario |
|---|---|---|---|---|
| MKT-004 | **Unstructured Market Simulation**<br><br>Market Participants must have the capability to input Site information data into web form submission.<br><br>Note: BU requested that Market Participants have the opportunity to practice filling out and submitting the form prior to production. | N/A | RIMS | *Unstructured Market Sim, New Data type* |
| MKT – 005 | **Unstructured Market Simulation**<br><br>*Market Participant must have the capability to upload Topo Map, Sharing Agreement, Shapefile, and provide Site Info via web form.*<br><br>*Note: See BRQ150, BRQ285, BRQ144, BRQ300.* | N/A | RIMS | *Unstructured Market Sim, New Data type* |
| MKT – 006 | **Unstructured Market Simulation**<br><br>*Market Participant must have the capability to see on UI uploaded Topo Map, Sharing Agreement, Shapefile, and provide Site Info via web form.*<br><br>*Note: See BRQ150, BRQ285, BRQ144, BRQ300.* | N/A | RIMS | *Unstructured Market Sim, New Data type* |
| MKT – 007 | **Unstructured Market Simulation**<br><br>*Market Participants must have the capability to add Topo Map, Site Info, Shapefile, and Sharing Agreement (applicable only to Fuel Type of Solar) to Bucket 1 for any hybrid resource project created with a fuel type of Solar or Wind.*<br><br>*Note: BRQ145, BRQ275.* | N/A | RIMS | *Unstructured Market Sim, New Data type* |
| MKT – 008 | **Unstructured Market Simulation**<br><br>*In the event Market Participant's upload fails validation, Market Participant must receive notification of the error.*<br><br>*Note: See BRQ350A, BRQ350B, BRQ205, BRQ335, BRQ325.* | N/A | RIMS | *Unstructured Market Sim, New Data type* |

# TEA

- **Register by December 31, 2024**
- February 2025 Market Simulation
- MF, SIBR, ETCC, ITS, Settlements, CMRI, OASIS

| ID# | Guidance on Market Participant Impacts | Source System | Sink System | Reason for Potential Scenario |
|---|---|---|---|---|
| MKT-001 | Owner of Transmission Owner Rights must have the capability to send sale information to CAISO.<br><br>Note: See BRQ003 for more information. | OASIS OATI | Internal ISO System | Interface changes, New system process |
| MKT-002 | Entities with pre-registered CRNs must have the capability to purchase Transmission Owner Rights.<br><br>Note: See BRQ002 for more information. | N/A | MF | Interface changes, New system process, Rule Impacts |
| MKT-003 | Entities with Parent CRN and have active transacted purchases with Sub CRNs will have access to both Parent and Sub CRN Report data in CMRI. | CMRI | User Client, System | Interface changes, Report Changes, New system process, Rule Impacts |

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# TEA

- ## Draft unstructured scenario

| Unstructured guided scenario | |
|---|---|
| Description | 3rd party to purchase right and schedule in the market |
| ISO Actions | N/A |
| WEIM Market Participant Actions | Transmission owner right sale should be recorded with CAISO |
| ISO Market Participant Actions | Needs to establish contract reference numbers (CRN) va MF? <br> Schedule the rights in SIBR <br> Submit tags consistent with their schedule |
| Expected Outcome | Contract self-schedule will receive priority awards <br> Receive scheduling priority in ITS <br> Receive awards in settlements based on their contract usage <br> Verify the results in CMRI <br> WEIM entities can verify sale information on CMRI |
| Anticipated Settlement Outcome | Reversal of congestion occurring up to their contract schedule. <br> Receive exemption from wheeling or transmission access charges |
| Expected Settlement Outcome | Under review |

# Revise Generic Availability and Flexible Obligation Calculations to resolve for RAAIM LESR issue

Mel Ciubal

Market Services, CAISO

9/25/2024

# Resolution

- Update Settlements configuration to ensure:
    - Generic availability does not include capacity below zero.
    - Flexible obligation outage thresholds and outage availability uses the full range capacity from Pmin (even if negative value) to Pmax of any resource.

- Formulation configuration only, no primary input change

- Effective Date: 3/1/2023 (retro to T+21M)

# Objectives

- Generic awards rely on the Net Qualifying Capacity, NQC, which do not include capacity below zero. So, for generic RA and CPM assessment, restrict to capacity zero and above only.

- Flexible Obligation relies on effective flexible capacity (EFC), which includes full capacity range from Pmin to Pmax. So, for flexible RA and CPM assessment, and particularly for resources which can operate at negative Pmin, include those negative values.

- System calculation needs to follow general principles on the awards of Generic and Flexible RA. The fixes needs to be included in the BPM for Resource Adequacy Assessment Incentive Mechanism (RAAIM) RAAIM PC.

# MAPSTAGE Market Simulation for RAAIM LESR fix

- Trade Dates: Oct 1 and Oct 3, mini-monthly

- CIRA UI open for CISO BAA market participants to submit for Oct 2024 month data

  **(Submit by COB Sep 30, earlier the better)**:

  1. Supply plan from supplier Scheduling Coordinator

  2. RA plan from Load Serving Entity (LSE)

- SIBR bids

  Please submit applicable RA availability bids, in DA and/or RT.

- Outages (optional). For LESRs could submit upper operating limit to be at zero, and keep lower operating limit below zero. (None for Oct 1, restrict UOL for Oct 3)

# Sample (please use your usual RA plans and bid submissions)

- Resource A (an LESR): Pmin is negative. Pmax is positive, say Pmin = -10 and Pmax = 10

- Resource B (traditional generator): Pmin is 0 or higher. say Pmin = 10  Pmax = 75


- Supply and RA plans submitted
  - Res A: 20 for flex, 10 gen
  - Res B: 50 for flex, 25 for gen

- SIBR bid availability in DA and/or RT as applicable

  Res A: 20 (covering Up 10, Down -10)

  Res B: 75

# Observe

Outage (optional), for LESR restricts upper operating limit to zero.

Res A: UOL = 0 (unavailable to supply)

Res B: any within its operating range

Expected results:

a) generic availability does not include the negative capacity range

Res A: 10     Res B: 25

b) Flexible obligation includes the full range

Res A: 20     Res B: 50

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# Additional Notes

All these are prior to succeeding calculations in RAAIM,

For the LESR Res A:

Due to Flex priority over generic obligation, only flex will be satisfied for Res A.

Also, if outage is recognized/approved, the original obligation of 10 generic will be zeroed out (due to outage exemption). And the flex obligation of 20 will be cut to 10 (since it cannot operate on the positive range).

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