



California ISO

Release User Group Agenda

July 26, 2022

10:00 a.m.–11:00 a.m. (Pacific Time)

| Web Conference Information | Conference Call Information |
|---|---|
| <p>Web Address: https://caiso.webex.com/caiso/j.php?MTID=m78549e02a160a63df2c4004fa6c4a282</p> <p>Meeting Number: 978 929 42</p> <p>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.</p> | <p><i>1-844-517-1271 US Toll Free</i> <i>+1-682-268-6591 US Toll</i> <i>Access code: 978 929 42</i></p> |
| <p>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.</p> | |

Release User Group Agenda

July 26, 2022

10:00 a.m. – 11:00 a.m. (Pacific Time)

| Time | Topic | Facilitator |
|---------------|------------------------|--------------------------------|
| 10:00 – 10:05 | Agenda & ISO Roll call | Trang Vo |
| 10:05 – 10:45 | Release Plan | Adrian Chiosea Jami Herguth |

ISO Training Schedule

| Training Course | Date and time |
|---|--------------------------------------|
| FRP Improvements Deliverability Webinar (tentative) | August 16, 2022 11am – 12:30pm |
| RDRR Enhancements Track 2 Webinar (tentative) | August 17, 2022 1:30pm – 2:30pm |
| Hybrid Resources Phase 2B Webinar (tentative) | August 18, 2022 10am – 11:30am |
| Central Procurement Entity Webinar (tentative) | September 14, 2022 11am – 12:30pm |

Are you looking for more training?

The ISO Learning Center has computer based training available for lots of topics.
Check out the Learning Center:

<http://www.caiso.com/participate/Pages/LearningCenter/default.aspx>



CustomerReadiness@caiso.com

Release Plan Summary 2022

Fall 2022 Release

Flexible Ramping Product Refinements – Deliverability

Hybrid Resources Phase 2B

Reliability Demand Response Resource Bidding Enhancements 2

Central Procurement Entity Implementation

2022 Independent

Interconnection Process Enhancements Phase 1

Operations Systems Improvements Enhancements

WEIM Enhancements: ETSR UI – Q3

WEIM Enhancements: Shared Ramping Constraint – Q4

Release Plan Summary WEIM Spring 2023

WEIM Spring 2023 Release

WEIM 2023 – Avangrid

WEIM 2023 – El Paso Electric

WEIM 2023 – WAPA Desert Southwest Region

2022 Fall Release

Fall 2022 Release Overview

| | BRS | Config Guide | Tech Spec | Draft Tariff* | BPMs | External Training | Market Sim | Production Activation |
|--|--|----------------|---|-----------------------------------|-----------------|----------------------------|----------------------------|---|
| Fall 2022 Release | 04/01/22 | 07/5/22 | 06/30/22 | 07/21/22 | 08/15/22 | 08/15/22 – 08/19/22 | 08/22/22 – 09/30/22 | 11/1/22 |
| <u>Hybrid Resources Phase 2B</u> | 8/3/21 V1.3 3/10/22 V 1.4 7/29/22 | 01/25/22 | 09/10/21 ALFS MF 7/15/22 – OASIS, CMRI | 09/17/21 | 02/14/22 | 8/18/22 | 08/22/22 – 09/30/22 | 11/01/22 |
| <u>FRP Improvements - Deliverability</u> | <u>V1.0: 01/28/21</u> Reqmts Enh V1.0: 03/11/22 Revision to include CMRI 7/26/22 | 06/30/22 | 07/15/22 – OASIS 07/29/22 CMRI | 08/31/20 Filing target 8/30/22 | 8/23/22 | 8/16/22 | 08/22/22 – 09/30/22 | 11/01/22 |
| <u>RDRR Phase 2</u> | <u>6/21/22</u> | N/A | N/A | 8/4/22 | 8/26/22 | 8/17/22 | 08/22/22 – 09/30/22 | 11/01/22 |
| <u>Central Procurement Entity Implementation</u> | 3/10/22 <u>v 1.1 4/7/22</u> | 06/30/22 | N/A | <u>4/8/22</u> | 8/4/22 | 9/14/22 | 09/19/22 – 09/30/22 | MF/CIRA by 10/13/22 Effective Date 1/1/23 for 2023 RA Year |

Fall 2022 Release Market Simulation

| | Scenarios | Unstructured | Structured |
|--|--------------------------------------|---|--|
| Fall 2022 Release | | | |
| <u>Hybrid Resources Phase 2B</u> | <u>V1.3; 7/25/22</u> | <ol style="list-style-type: none"> 1. Verify submitted hybrid resource data and component level data 2. Verify that VERs behind any given Sub-ACC have their "Follow DOT" flags set equal to 'Y' whenever one of their co-located resources has an AS award/AS base schedule. | N/A |
| <u>FRP Improvements – Deliverability</u> | <u>V1.0; 7/25/22</u> | <ol style="list-style-type: none"> 1. Demonstrate the variability of locational pricing for FRU/ FRD. 2. Demonstrate the Settlements processing for FRP PASS/FAIL. | N/A |
| <u>RDRR Phase 2</u> | <u>V1.0; 7/25/22</u> | N/A | Submit Competitive Bids by Discrete RDRRs' SCs |
| <u>Central Procurement Entity Implementation</u> | | | |

For all market simulations, register by 8/12/22
 Market Simulations 8/22-9/30; CPE 9/19-9/30

Fall 2022 – Hybrid Resources Phases 2-B - Overview

| Project Information | Details/Date |
|---|---|
| <p>High Level Business Problem or Need</p> | <p>The ISO launched this stakeholder initiative to identify new or enhanced market rules and business processes needed to accommodate hybrid resources, resources that consist of two sets of market rule changes that will facilitate mixed-fuel type project participation (hybrid and co-located resources) in the ISO markets.</p> |
| <p>High Level Project Scope</p> | <p>Phase 2 focuses on modifications that will explore how hybrid generation resources can be registered and configured to operate within the ISO market. The initiative will further develop solutions allowing developers to maximize the benefits of their resource's configuration. Additionally, hybrid resource configurations also raise new operational and forecasting challenges that the ISO plans to address during this initiative.</p> <p>The Phase 2 project has been split into two separate implementations, phases 2-A and 2-B, to support strategic delivery timing. Phase 2-B information is available under the Spring 2022 release section.</p> <p>Phase 2-A was implemented on December 15, 2021. This phase focuses on implementing Ancillary Services (AS) and High Sustainable Limit (HSL) functionality with a focus on the EMS and IFM/RTM systems.</p> <p>Phase 2-B is scheduled to implement Fall 2022. This project phase focuses on implementing the Hybrid Dynamic Limit functionality, Multiple ACC, along with all remaining project scope to include changes to systems RIMS, Master File, EMS, SIBR, IFM/RTM, OASIS, ALFS, Settlements, MRI-S Metering, CMRI, MPP, Today's Outlook, ISO Today Mobile Application, Monthly Renewables Performance Report, Wind and Solar Real-Time Dispatch Curtailment Report', and the Over Supply Page.</p> <p>External BRS Posting: V1.3 posted on 3/10.</p> |
| <p>BPM Changes</p> | <p>Direct Telemetry, Market Instruments, Market Operations, Metering, Settlements and Billing</p> |
| <p>Tariff Changes</p> | <p>Proposed sections 4.18, 34.1.6.3, 30.5.6.1 Sections 27.13, 8.4.1.1(g), 8.4.3, Appendix K, Parts A, B and C, 8.2.3, 8.4.5, 34.7, 11.6.6, 4.8.2, 40.9.2 (b) (D)</p> |
| <p>Impacted Systems</p> | <p>ALFS, CMRI, Reporting, IFM/RTM, Master File, OASIS, RIMS, Settlements, MRI-S Metering, SIBR, MPP, Today's Outlook, ISO Today Mobile Application, Monthly Renewables Performance Report, Wind and Solar Real-Time Dispatch Curtailment Report, Over Supply Page.</p> |

Fall 2022 – Hybrid Resources Phase 2-B

| Milestone Type | Milestone Name | Dates | Status |
|-----------------------|---|-----------------------------|--------|
| Board Approval | Obtain Board of Governors Approval | Nov 18, 2020 | ✓ |
| External BRS | Post External BRS (Includes Phase 2-A and 2-B) | Aug 3, 2021 | ✓ |
| | Post BRS v1.3 | Mar 10, 2022 | ✓ |
| | BRS v 1.4 | July 29, 2022 | |
| Config Guides | Post Draft Config Guides | Jan 25, 2022 | ✓ |
| Tech Spec | Create ISO Interface Spec (Tech spec) | Sep 10, 2021 | ✓ |
| Tariff | File Tariff | Sep 17, 2021 | ✓ |
| Market Sim Scenarios | Post proposed scenarios (Unstructured) | Feb 8, 2022 | ✓ |
| BPMs | Publish Final Business Practice Manuals for mkt sim | Feb 14, 2022 | ✓ |
| External Training | Deliver External Training | Aug 18, 2022 | |
| Market Sim | Market Sim Window | Aug 22, 2022 – Sep 30, 2022 | |
| Production Activation | Hybrid Resources Phase 2-B | Nov 1, 2022 | |

Fall 2022 – Flexible Ramping Product Improvements Deliverability

| Project Information | Details/Date |
|---|---|
| High Level Project Scope | <p>The scope of the project FRP Deliverability is:</p> <ol style="list-style-type: none"> 1. Procurement of FRP for BAA's that fails the flex test is separate for each BAA. 2. Procurement of FRP for BAA's that pass the flex test for the entire group of BAA. 3. Transmission constraints and transfer limits are enforced in FRP deployment scenarios 4. Distributing the uncertainty requirement in each BAA load and VER locations versus just load 5. Distributing the demand curve surplus variable as a decision variable at load aggregation points (LAP) versus Balancing Authority Areas (BAA) 6. To establish the Locational Marginal Capacity Prices (LMCP) for FRP <p>The scope of the FRP Requirements Enhancements is:</p> <ol style="list-style-type: none"> 1. To enhance the current approach by adopting a quantile regression method to adjust the current flexible ramping product up and down requirement. 2. Calculation of the demand curve. |
| BPM Changes | Market Instruments, Market Operations |
| Tariff Change | Yes |
| Impacted Systems | RTM, Settlements, CMRI/OASIS |
| System | High Level Changes |
| Real Time Markets (RTM) | <ul style="list-style-type: none"> • RTM to be impacted based on the change in the FRP procurement systems. • Input data needed for forecasted advisory in the binding interval for RTPD for approx. 40 work days or weekends. • New demand curve calculation is needed. |
| Settlements | <ul style="list-style-type: none"> • Prices are nodal therefore mechanics for cost allocation pricing to be changed • Nodal FRP prices |
| CAISO Market Results Interface (CMRI)/ Open Access Same time Information (OASIS) | <ul style="list-style-type: none"> • Publish Resource Nodal prices for the FRP awards (CMRI) • Publish requirements for FRP per BAA and BAA group (OASIS) • Publish surplus by LAP (OASIS) • Publish the nodal FRP prices (OASIS) |

Fall 2022 – Flexible Ramping Product Improvements Deliverability

| Milestone Type | Milestone Name | Dates | Status |
|-----------------------|--|-----------------------------|--------|
| Board Approval | Obtain Board of Governors Approval | Sept 30, 2020 | ✓ |
| External BRS | Flexible Ramp Product: Deliverability | Jan 28, 2021 | ✓ |
| | Flexible Ramp Product: Requirements Enhancements | Mar 11, 2022 | ✓ |
| | BRS Revision to include CMRI | Jul 26, 2022 | |
| Tariff | File Tariff | Aug 30, 2022 | |
| BPMs | Publish Draft BPM updates | Aug 23, 2022 | |
| Config Guides | Post Draft Config Guides | Jun 30, 2022 | ✓ |
| Tech Spec | Publish Technical Specification - OASIS | July 15, 2022 | ✓ |
| | Publish Technical Specification - CMRI | July 29, 2022 | |
| External Training | Deliver External Training | August 16, 2022 | |
| Market Sim | Market Sim Window | Aug 22, 2022 – Sep 30, 2022 | |
| Production Activation | FRP Deliverability | Nov 1, 2022 | |

Fall 2022 – Reliability Demand Response Resource Phase 2

| Project Information | Details |
|---------------------------------|--|
| High Level Project Scope | <p>The purpose of this initiative is to better reflect Reliability Demand Response Resources' (RDRR) operational capabilities in the market via select enhancements to real-time bidding for discrete RDRRs.</p> <ul style="list-style-type: none"> • Infeasible Discrete RDRR RT Dispatch via Pmin Re-Rate • Discrete RDRR Cap Increase |
| BPM Changes | <ul style="list-style-type: none"> • Demand Response: Document process of submission and approval of discrete RDRR 100 MW exception. • Market Instruments: Document MF Changes • Market Operations: Document RTM Changes • Settlements and Billing: Documentation-Only Impact |
| Tariff Change | Yes |
| Impacted Systems | MF, RTM |

| Milestone Type | Milestone Name | Dates | Status |
|----------------------------|---|-----------------------------|--------|
| Board Approval | Obtain Board of Governors Approval | July 20-21, 2022 | |
| External BRS | RDRR Phase 2 | Jan 21, 2021 | ✓ |
| Tariff | File Tariff | Aug 4, 2022 | |
| BPMs | Publish Draft BPM updates | Aug 26, 2022 | |
| Config Guides & Tech Specs | Post Draft Config Guides and Publish Technical Specifications | N/A | |
| External Training | Deliver External Training | Aug 17, 2022 | |
| Market Sim | Market Sim Window | Aug 22, 2022 – Sep 30, 2022 | |
| Production Activation | RDRR Ph2 | Nov 1, 2022 | |

Fall 2022 – Central Procurement Entity Implementation

| Project Information | Details |
|---------------------------------|---|
| High Level Project Scope | <p>The CAISO tariff currently allows LSEs to aggregate responsibilities to procure Local Capacity Area Resources. However, given the unique nature of the CPE as outlined in CPUC D. 20-06-002, relying solely on this existing tariff provision is not sufficient to facilitate implementation of the CPE construct. The CAISO has identified additional needed tariff, software, and business process enhancements. Although the CPUC's CPE order is the impetus for this stakeholder initiative, the CAISO does not propose to limit a CPE to CPUC-jurisdiction LSEs. The CAISO instead proposes to allow all Local Regulatory Authorities (LRAs) to designate a CPE to procure local resources on behalf of its LSEs and that LRAs may designate the same CPE to procure local resources on behalf of the LSEs under the jurisdiction of those multiple LRAs.</p> <p>Scope:</p> <ol style="list-style-type: none"> 1. Recognizing a Central Procurement Entity (CPE) 2. System and Local Obligation for CPE and LSEs with Load in Multiple Transmission Access Charge (TAC) Areas 3. Allocation of System and Flexible Attributes of Local Resource Adequacy (RA) Resources 4. Clarification of Capacity Procurement Mechanism (CPM) Process and Cost Allocations in regards to CPE changes |
| BPM Changes | <ul style="list-style-type: none"> - Reliability Requirements - Settlements and Billing |
| Tariff Change | Yes |
| Impacted Systems | MF, CIRA, Settlements |

| Milestone Type | Milestone Name | Dates | Status |
|-----------------------|--|-----------------------------|--------|
| Board Approval | Obtain Board of Governors Approval | N/A | |
| External BRS | Central Procurement Entity BRS | Apr 8, 2022 | ✓ |
| Tariff | File Tariff | Apr 8, 2022 | ✓ |
| BPMs | Publish Draft BPM updates | Aug 4, 2022 | |
| Config Guides | Post Draft Config Guides | Jun 30, 2022 | ✓ |
| Tech Specs | Publish Technical Specifications | N/A | |
| External Training | Deliver External Training | Sep 14, 2022 | |
| Market Sim | CPE IDs Market Sim Window | Sep 19, 2022 – Sep 30, 2022 | |
| Production Activation | CPE IDs MF and CIRA availability for registrations Full project activation | Oct 13, 2022 Jan 1, 2023 | |

CPE ID Registration

- In preparation for CPE, each entity will need to request a CPE ID with SCID.
- This will need about 10 business days to setup. CPE IDs will be created in the beginning of August. Please submit requests now for Market Simulation.

Independent 2022 Release

Independent 2022 – Interconnection Process Enhancements (IPE) 2021 – Phase 1

| Project Information | Details |
|--|--|
| High Level Business Problem or Need | The proposal is focused on four main areas including how to manage the “currently overheated” interconnection queue and encourage resource developer discipline to submit only viable projects; removing barriers for timely development of needed resources; better alignment of resource procurement by LSEs with the ISO process and state policy direction; and addressing residual issues that have emerged since the process was last reviewed in 2018. Those residual issues include how to allocate costs for generator driven network upgrades, and reimbursement for reliability network upgrades for generators outside the ISO system. |
| High Level Project Scope | The project will focus on the following: <ul style="list-style-type: none">•Continuous improvement of the generator interconnection process•Provide greater visibility and transparency to the stakeholders•Eliminate manual workarounds•Provide single source of data |
| System Changes | N/A |

Independent 2022 – Interconnection Process Enhancements (IPE) 2021 – Phase 1 (cont'd)

| Milestone Type | Milestone Name | Dates | Status |
|-----------------------|---------------------------------------|--------------|--------|
| Board Approval | Board of Governors | May 11, 2022 | ✓ |
| External BRS | Post External BRS | N/A | |
| Config Guides | Post Draft Config Guides | N/A | |
| Tech Spec | Create ISO Interface Spec (Tech spec) | N/A | |
| Tariff | File Tariff ER22-2018 | Jun 2, 2022 | ✓ |
| External Training | Deliver External Training | N/A | |
| Market Sim | Market Sim Window | N/A | |
| Production Activation | Production | Sep 1, 2022 | |

Operations Systems Improvements 2021/2022 Enhancements

| Project Information | Description |
|---|--|
| <p>High Level Business Problem or Need</p> | <ul style="list-style-type: none"> The goal of this project is to deliver timely systems improvements that support efficient day-to-day work and operations. The project aims to improve market robustness, performance, and the technology foundation for system grid reliability by updating functionality and interfaces to reduce workarounds, automating manual processes and addressing functionality enhancements. A list of specific high priority improvements will be the scope for the project. A number of these improvements may have an impact on the way in which customers interact with CAISO systems. |
| <p>Affected Systems</p> | <ul style="list-style-type: none"> A preliminary list of enhancements is included on the next slide. <p>PLEASE NOTE: This list may change as the project progresses and priority are factored. The goal is to provide advanced notification of changes whenever possible</p> |
| <p>Schedule</p> | <ul style="list-style-type: none"> External BRS 2022 External BRS v1.0 Published 5/3 UPDATE v1.1 ECD 8/1 MAP Stage Availability Multiple* Customer Training Multiple* PROD Multiple* <p>* The plans for testing and deployment will vary between improvement items as these may be released individually or in groups. More information on specific improvements will be made available as planning and schedules are solidified.</p> |
| | |

Operations Systems Improvements Projects

List of Proposed Improvements*

*PLEASE NOTE: This list may change as the project progresses and priorities are factored. The goal is to provide advanced notification of changes whenever possible

2021

| System | Summary Description | |
|--------|--|--|
| ADS | Add advance filter, additional color scheme, change grid color | Training – August. 2022 Unstructured Mkt Sim- Sept. 2022 PROD – Sept. 2022 |

2022

| System | Summary Description | |
|--------|---|---|
| ADS | System must have the capability to "update existing configuration" across profiles & "have shared displays synchronized." | Training – September 2022 Unstructured Mkt Sim- October 2022 PROD – October. 2022 |
| Market | Modify Unit Details UI | Outreach/Release Note – Sept. 2022 PROD - October 2022 |

Operations Systems Improvements Projects

List of Proposed Improvements*

*PLEASE NOTE: This list may change as the project progresses and priorities are factored. The goal is to provide advanced notification of changes whenever possible

2022 (cont.)

| System | Summary Description | |
|-----------|---|------------------------------------|
| RC Portal | View-based alerting: Create a view that filters the library and alerts user for changes to that specific view (when documents become available or changed). | Training – September 2022 |
| RC Portal | Internal Field for OPA Delay Reason: Track reasons for when the OPA report is delayed. | Unstructured Mkt Sim- October 2022 |
| RC Portal | RAS Submit Reports workflow: Track if a report has been reviewed and communicate within the record. | PROD – October 2022 |
| RC Portal | Add Title to TOP-003 Library: Add Title so name of document isn't only shown | |

WEIM Enhancements

| Project Information | Details/Date |
|--|---|
| High Level Business Problem or Need | To collectively address important issues identified by WEIM market participants through Customer Inquiry, Dispute and Information system (CIDI) requests to improve the visibility, functions and features in Energy Imbalance Market (WEIM). |
| High Level Project Scope | <ul style="list-style-type: none"> • BAAOP: WEIM shared ramping constraint IS NOT editable through UI. • BAAOP: ETSR detail screen will be available to BOTH RTMO and WEIMs. (First drop for testing will only be available to RTMO). |
| BPM Changes | WEIM, Market Instruments |
| Tariff Change | Section 29.4 |
| Impacted Systems | RTM/BAAOP, RTM/Integration |

| System | High Level Changes |
|-------------------------------|---|
| Real-Time Market (RTM) | <p>BAAOP: WEIM shared ramping constraint IS NOT editable through UI.</p> <ul style="list-style-type: none"> • Shared ramping capability constraint • UI for WEIM entity input parameters for ramp sharing • Use in the optimization for each resource based on BAA ramp share parameters |
| Real-Time Market (RTM) | <p>BAAOP: ETSR detail screen will be available to BOTH RTMO and WEIMs. (First drop for testing will only be available to RTMO).</p> <ul style="list-style-type: none"> • New ETSR detail screens |

2023 CRR System Upgrade

2023 – Congestion Revenue Rights (CRR) Upgrade

| Project Information | Details/Date |
|---------------------------------|--|
| High Level Project Scope | <p>The Congestion Revenue Rights (CRR) system was implemented by CAISO in 2008 as part of the Market Redesign and Technology Upgrade (MRTU) implementation. The current CRR system is at its end of life, does not have the flexibility to accommodate future policy changes and requires the ISO to calculate data and run processes manually outside the current system to produce a successful CRR Auction.</p> <p>The CAISO has decided on a significant upgrade of the existing CRR system and adopt the latest technology stack aligned with CAISO's technology standards, consolidate all CRR related functions, minimize human errors, reduce processing time, eliminate manual workarounds, and positions the system to accommodate policy changes down the road.</p> |
| BPM Changes | Yes, details TBD |
| Tariff Change | No |
| Impacted Systems | CRR, AIM, CMRI, OASIS, CTS, Market Clearing, EMMS, IFM/RTN, MQS, Master File, MPP, Settlements, WebOMS, ETCC. |

2023 – Congestion Revenue Rights (CRR) Upgrade

| System | High Level Changes |
|--------------------|---|
| CRR | <p>Significant system upgrade including:</p> <ul style="list-style-type: none"> • Enhancements made to the new CRR application. • Automatic publishing of CRR market results. • Automatic CRR notification. • New CRR schedule calendar. • New CRR FNM access. • New CRR data submission and download interface UI/API. • Other TBDs identified through BRS development. |
| AIM | <ul style="list-style-type: none"> • New users and roles to support new CRR functionality |
| CMRI | <ul style="list-style-type: none"> • Full and incremental Payload publishing • Publish CRR Awards payload on event-driven, ad-hoc or scheduled basis • Publish CRR Awards payload on event-driven, ad-hoc or scheduled basis |
| OASIS | <ul style="list-style-type: none"> • Publish CRR Calendar, and all available CRR market names, and credit margin information, 3 year historical expected value.. • Allow authorized users to publish CRR inventory payloads • Broadcast the following: set aside values, the results of all CRR markets, retired pnode/anode mapping, binding constraints, initial and updated CRR source and sink list for each CRR market, |
| CTS | <ul style="list-style-type: none"> • Broadcast |
| EMMS | <ul style="list-style-type: none"> • CRR will consume data from EMMS |
| IFM/RTN | <ul style="list-style-type: none"> • CRR will consume data from IFM/RTN |
| MQS | <ul style="list-style-type: none"> • MQS will consume and process SCID in a new format • MQS will consume ownership payload in bulk |
| Master File | <ul style="list-style-type: none"> • Master File will be modified as needed to support the new CRR functionality |
| MPP | <ul style="list-style-type: none"> • CRR will provide pre-configured external reports |
| Settlement | <ul style="list-style-type: none"> • Settlements will be modified as needed to support the new CRR functionality |
| WebOMS | <ul style="list-style-type: none"> • CRR will consume data from WebOMS |
| ETCC | <ul style="list-style-type: none"> • CRR will consume data from ETCC |

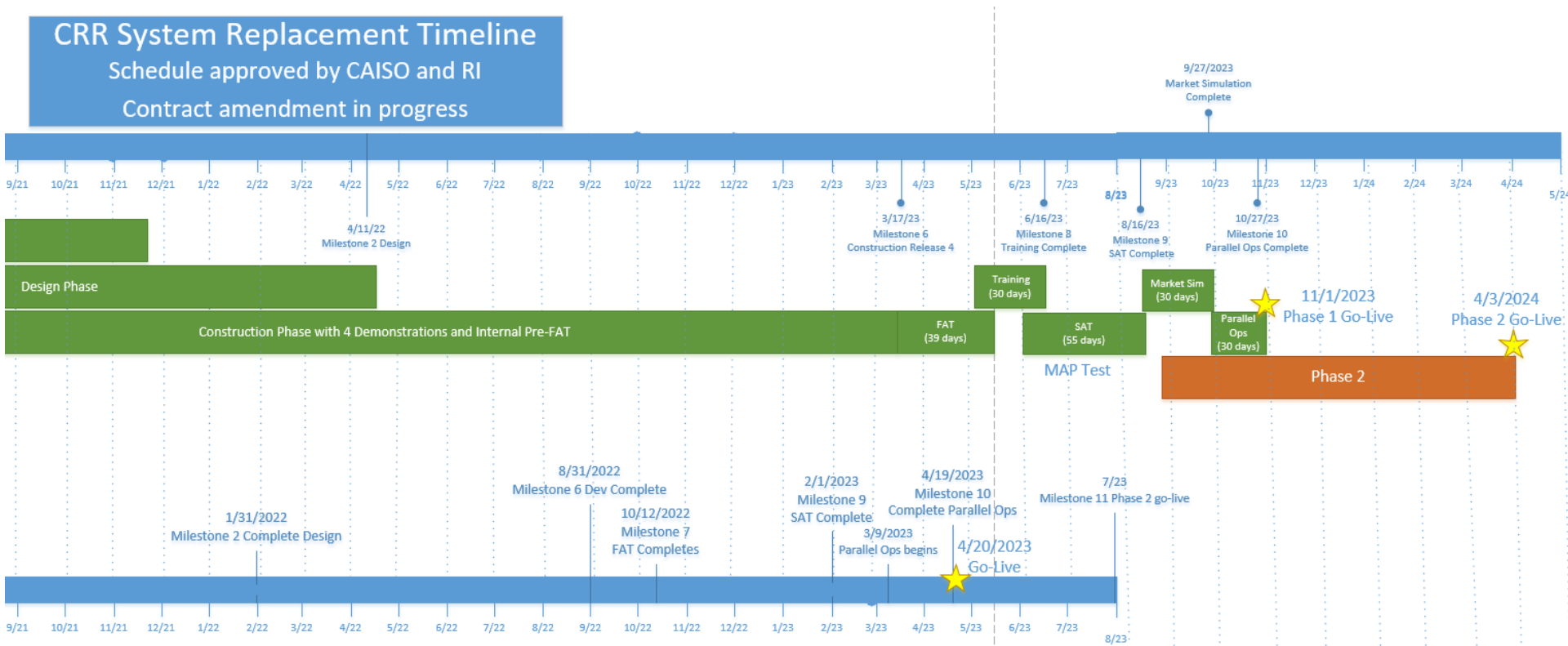
2023 – Congestion Revenue Rights (CRR) Upgrade

| Milestone Type | Milestone Name | Dates | Status |
|-------------------------------|--|-----------------------------|--------|
| Board Approval | Obtain Board of Governors Approval | N/A | |
| External BRS | Publish External BRS | N/A | |
| Config Guides | Post Draft Config Guides | N/A | |
| Tech Spec | Publish Technical Specification | Draft 11/5/21 | ✓ |
| Tariff | File Tariff | N/A | |
| BPMs | Publish Draft BPM updates | Mar 1, 2023 | |
| External Training | Deliver External Training | May 8, 2023 – Jun 16, 2023 | |
| Market Sim | Market Sim Window | Aug 17, 2023 - Sep 27, 2023 | |
| Production Activation | CRR Upgrade | Nov 1, 2023 | |
| Effective Date | First Trade Date for Monthly Auction results on new system | Jan 1, 2024 | |
| Phase 2 Production Activation | Phase 2 Go-Live | Apr 3, 2024 | |

2023 CRR System Upgrade – Milestone Schedule

CRR System Replacement Timeline

Schedule approved by CAISO and RI
Contract amendment in progress



Phase 2 scope is being added to the External BRS and expected to be posted within the next week.

[Link to Business Requirements Specifications - Congestion Rights Revenue Upgrade \(posted 5/10/2022\)](#)

2023 CRR System Upgrade – Get Connected

- CRR External meetings:
 - **Bi-weekly Technical User Group (TUG)** Tue 10 AM, alternates with RUG.
 - Meetings available on the CAISO calendar on www.caiso.com
 - Meeting details and presentation materials are available on the CAISO Developer site at www.developer.caiso.com , which requires an account to be setup for access
 - **CRR Customer Partnership Group**
 - Next CPG meeting is Wed, 7/13 @ 10 AM

2024 Settlement Upgrade

2024 - Settlement Upgrade - Overview

The current settlement system, implemented in 2008 as part of the Market Redesign and Technology Upgrade (MRTU) implementation, is nearing its end of life. The CAISO is upgrading existing settlement applications to approved architectural and information security standards.

Benefits for our customers include:

- Improved business efficiency
- Better gathering and analysis for data and front-end improvements for customers interacting with CAISO Settlement Systems
- Increased transparency for some calculations
- Accommodating data processing increases resulting from new market products and an increase in market participants
- Ability to perform complex settlement calculations

2024 - Settlement Upgrade – Get Connected

- Vendors and Market Participants plan to attend:
 - **Settlement User Group (SUG)** 10 AM on Wednesdays, alternating with RUG. (Next meeting 3/2)
 - Schedule updates, request for enhancements, Configuration change details, examples, calendar format differences etc.
- Settlement technical users plan to attend:
 - **Bi-weekly Technical User Group (TUG)** 10 AM on Tuesdays, alternating with RUG. (Next meeting 3/1)
 - B2B Improvements and New API specifications will be presented and discussed in this meeting
 - meeting details and presentation materials are available on the CAISO Developer site at www.developer.caiso.com , requires an account setup for access

Note: Meetings are available on the CAISO calendar on www.caiso.com

2024 - Settlement Upgrade – Targeted Goals

- The ISO will work closely with our market participants to ensure seamless transition from e-terra 2.5 to 3.0 configuration output file.
- The ISO will provide a forum for participants to ask more technical questions.
- The ISO will provide an environment with production-like data allowing customers to validate changes.
- The system will provide settlement outputs in various file formats, allowing all customers to access and use the data in day-to-day operations. The ISO will strive to make formulas and inputs transparent to enable market participants to monitor and/or validate settlement results.
- The ISO will provide market participants with an extended market simulation
- The ISO will give timely support to the market participants and their vendors during the testing phase.

2024 - Settlement Upgrade – Targeted Goals Cont.

- From a vendor perspective:
 - ISO will provide third party vendors with support during the transition period.
 - ISO will provide an extended market simulation and/or parallel statements and invoices during the transition period so vendors can resolve defects on their systems.
 - ISO will provide open communications to resolve settlement differences through a customer forum.

2024 - Settlement Upgrade – We would like to hear from you

- Decomposition of the settlement files
 - Migrating to OpenAPI specifications
 - Upgrading to a new output config file format
 - Any other enhancement requests?
-
- Next steps
 - Use the CIDI process to submit comments and enhancement requests. Your submittal will be reviewed and added to a master list that will be presented at the Settlement User Group (SUG)
 - The CIDI ticket will be closed once added to the SUG master list.

Stay Informed

Ways to participate in releases

- Visit the Release Planning page
 - <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>
- Attend meetings
 - Release Users Group (RUG) bi-weekly meetings
 - Initiative status updates
 - System change updates on independent releases
 - Market Simulation calls
 - Visit the ISO calendar at www.caiso.com for meeting dates and times and add events to your calendar
 - Typically held on Mondays and Thursdays
 - Market Performance and Planning Forum
 - Bi-monthly review of market performance issues
 - High level discussion of release planning, implementation and new market enhancements

What to look for on the calendar...

Calendar of Meetings, Training and Events

Month: February Year: 2018 Calendar View List View Print View

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|--|--|---|--|--|--|-----|
| | 5 WebCONF: Market Simulation 2:00pm - 3:00pm | 6 Training: Get to Know the ISO - Day 1 9:00am - 4:00pm WebCONF: Imbalance Conformance Enhancements 10:00am - 12:00pm WebCONF: Technical User Group 10:00am - 11:00am | 7 Deadline: Comments - Interconnection Process Enhancements 2018 - Issue Paper and Meeting Discussion Training: Get to Know the ISO - Day 2 9:00am - 4:00pm Meeting: Flexible Resource Adequacy Criteria Must Offer Obligation Phase 2 - Revised Draft Flexible Capacity Framework 10:00am - 4:00pm WebCONF: Market Settlement User Group 10:00am - 11:00am | 8 Meeting: Audit Committee Teleconference (Executive) 8:30am - 9:30am Training: Settlements 101 9:00am - 4:00pm Meeting: 2017-2018 Transmission Planning Process 10:00am - 4:00pm WebCONF: Market Simulation 2:00pm - 3:00pm | 9 Training: Settlements 201 9:00am - 4:00pm | 10 |
| 11 WebCONF: Participating Transmission Owner Per Unit Cost Guides 10:30am - 12:00pm WebCONF: Market Simulation 2:00pm - 3:00pm | 12 Meeting: Congestion Revenue Rights Auction Efficiency 10:00am - 4:00pm WebCONF: Release User Group 10:00am - 11:00am Call: Energy Imbalance Market Governing Body Teleconference (Executive) 11:30am - 12:30pm | 13 Deadline: Submissions - April 2018 Monthly Resource Adequacy and Supply Plans Call: Congestion Revenue Rights 11:00am - 11:30am WebCONF: Outage Management System Customer Partnership Group 2:00pm - 3:00pm | 14 Deadline: Comments - Review Transmission Access Charge Structure Straw Proposal and Meeting Discussion Call: Board of Governors Teleconference (General) 8:15am - 9:00am Call: Board of Governors Teleconference (Executive) 9:00am - 10:00am Call: Market Update 10:15am - 11:00am WebCONF: Market Simulation | 15 | 16 | 17 |

Market Sim



Market Sim



Release Users Group (RUG)

