



California ISO

# Release User Group Agenda

October 18, 2022

10:00 a.m.–11:00 a.m. (Pacific Time)

Web Conference Information	Conference Call Information
<p>Web Address: <a href="https://caiso.webex.com/caiso/j.php?MTID=m78549e02a160a63df2c4004fa6c4a282">https://caiso.webex.com/caiso/j.php?MTID=m78549e02a160a63df2c4004fa6c4a282</a></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

October 18, 2022

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

<b>Time</b>	<b>Topic</b>	<b>Facilitator</b>
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
Fall 2022 Release Training has been completed. Presentations and recordings are available in the ISO Learning Center	N/A

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>



# Release Plan Summary 2022

## **Fall 2022 Release**

Flexible Ramping Product Improvements – Deliverability

Hybrid Resources Phase 2B

Reliability Demand Response Resource Bidding Enhancements 2

Central Procurement Entity Implementation

## **2022 Independent**

Operations Systems Improvements Enhancements

WEIM Enhancements: ETSR UI

WEIM Enhancements: Shared Ramping Constraint – Move to 2023

# Release Plan Summary WEIM Spring 2023

## **WEIM Spring 2023 Release**

WEIM 2023 – Avangrid

WEIM 2023 – El Paso Electric

WEIM 2023 – WAPA Desert Southwest Region

# Release Schedule

Date of Data Refresh: 10/17/2022



Legend	
Market Simulation	CA ISO Holiday
External Testing	Deployment Week



MAP Stage Environment Window	
Hybrid Resources Phase 2B - Market Sim	Hybrid Resources Phase 2B - Market Sim (10/11-11/11)
FRP Improvements - Deliverability - Market Sim	FRP Improvements - Deliverability - Market Sim (10/11-11/11)
RDRRBE2 - Market Sim	RDRRBE2 - Market Sim (10/11-11/11)
WEIM Avangrid - Market Sim	WEIM Avangrid - Market Sim (12/1-1/31)
WEIM El Paso - Market Sim	WEIM El Paso - Market Sim (12/1-1/31)
WEIM WAPA - Market Sim	WEIM WAPA - Market Sim (12/1-1/31)
Production Environment Window	
WEIM Enhancements	WEIM Enhancements (Multiple)
OSI Enhancements	OSI Enhancements (Multiple)
Hybrid Resources Phase 2B	Hybrid Resources Phase 2B (12/1)
FRP Improvements - Deliverability	FRP Improvements - Deliverability (12/1)
RDRRBE2	RDRRBE2 (12/1)
Central Procurement Entity Effective Trade Date	Central Procurement Entity Effective Trade Date (1/1)
Daylight Saving Time Ends - Long Day	Daylight Saving Time Ends - Long Day (11/6)

# 2022 Fall Release

# Fall 2022 Release Overview

	BRS	Config Guide	Tech Spec	Draft Tariff*	BPMs	External Training	Market Sim	Production Activation
<b>Fall 2022 Release</b>								
<a href="#"><u>Hybrid Resources Phase 2B</u></a>	V1.5 8/25/22  <b>V1.6 10/18/22 (Few RIMS updates)</b>	3 <sup>rd</sup> draft config output 8/30/22  Pre-prod config output file + release artifacts 11/17/22	ALFS MF OASIS CMRI	09/17/21  Accepted 11/30/21	2/14/22  9/29/22 Mkt Ops updates	8/18/22  9/26/22 – Metering  10/6/22 – Add'l Metering	10/11/22 – 11/11/22	12/01/22
<a href="#"><u>FRP Improvements - Deliverability</u></a>	V1.2 8/22/22	3 <sup>rd</sup> draft config output 8/30/22  Pre-prod config output file + release artifacts 11/17/22	OASIS  GMRI	08/31/20  Filed 8/15/22  Accepted 10/18/22	October 2022	9/07/22	10/11/22 – 11/11/22	12/01/22
<a href="#"><u>RDRR Phase 2</u></a>	<a href="#"><u>6/21/22</u></a>  <b>V1.1 10/12/22 to change re-rated pmin UEL from 0.1 to configurable value MW</b>	N/A	N/A	Filed 8/22/22	9/2/22	8/30/22	10/11/22 – 10/28/22	By 12/01/22
<a href="#"><u>Central Procurement Entity Implementation</u></a>	V1.2 9/14/22	3 <sup>rd</sup> draft config output 8/30/22  Pre-prod config output file + release artifacts 11/17/22	N/A	Filed 4/8/22  Approved 7/1/22	Settlements & Billing  Reliability Requirements 10/28/22	9/14/22	09/19/22 – 09/30/22	MF/CIRA 10/13/22  Effective Date 1/1/23 for 2023 RA Year

# Fall 2022 – Hybrid Resources Phases 2-B - Overview

Project Information	Details/Date
<p><b>High Level Business Problem or Need</b></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><b>High Level Project Scope</b></p>	<p><b>Phase 2</b> 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><b>Phase 2-A</b> 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><b>Phase 2-B</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><b>External BRS Posting:</b> V1.5 posted on 8/25.</p>
<p><b>BPM Changes</b></p>	<p>Direct Telemetry, Market Instruments, Market Operations, Metering, Settlements and Billing</p>
<p><b>Tariff Changes</b></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><b>Impacted Systems</b></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	Aug 4, 2022	✓
	BRS v 1.5	Aug 25, 2022	✓
	BRS v 1.6 (few minor RIMS updates)	Oct 18, 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	✓
	Accepted	Nov 30, 2021	✓
Market Sim Scenarios	Post proposed scenarios (Unstructured)	Feb 8, 2022	✓
BPMs	Publish Final Business Practice Manuals for mkt sim	Feb 14, 2022	✓
	Market Operations BPM update	Sep 29, 2022	✓
External Training	Deliver External Training	Aug 18, 2022	✓
	Deliver External Training - Metering Requirements	September 26, 2022	✓
	Deliver External Training - Metering Requirements additional discussion	October 6, 2022	✓
Market Sim	Market Sim Window	Aug 22, 2022 – Nov 11, 2022	
		Start Oct 25, 2022	
Production Activation	Hybrid Resources Phase 2-B	Dec 1, 2022	

# Fall 2022 – Flexible Ramping Product Improvements Deliverability

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

# 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 1.1	Aug 1, 2022	✓
	BRS 1.2	Aug 22, 2022	✓
Tariff	File Tariff	Aug 15, 2022	✓
	Tariff Accepted	Oct 18, 2022	✓
BPMs	Publish Draft BPM updates	October 2022	
Config Guides	Post Draft Config Guides	Jun 30, 2022	✓
Tech Spec	Publish Technical Specification - OASIS	July 15, 2022	✓
	Publish Technical Specification - CMRI	N/A	
External Training	Deliver External Training	September 7, 2022	✓
Market Sim	Market Sim Window	Aug 22, 2022 – Nov 11, 2022	
		Start Oct 18, 2022	
Production Activation	FRP Deliverability	Dec 1, 2022	

# Fall 2022 – Reliability Demand Response Resource Phase 2

Project Information	Details
<b>High Level Project Scope</b>	<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"> <li>• Infeasible Discrete RDRR RT Dispatch via Pmin Re-Rate</li> <li>• Discrete RDRR Cap Increase</li> </ul>
<b>BPM Changes</b>	<ul style="list-style-type: none"> <li>• Demand Response: Document process of submission and approval of discrete RDRR 100 MW exception.</li> <li>• Market Instruments: Document MF Changes</li> <li>• Market Operations: Document RTM Changes</li> <li>• Settlements and Billing: Documentation-Only Impact</li> </ul>
<b>Tariff Change</b>	Yes
<b>Impacted Systems</b>	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	✓
	v1.1 - change re-rated pmin UEL from 0.1 to configurable value MW	Oct 12, 2022	✓
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 30, 2022	✓
Market Sim	Market Sim Window	Aug 22, 2022 – Oct 28, 2022	
		Start Oct 11, 2022	
Production Activation	RDRR Ph2	By Dec 1, 2022	

# Fall 2022 – Central Procurement Entity Implementation

Project Information	Details		
<b>High Level Project Scope</b>	<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"> <li>1. Recognizing a Central Procurement Entity (CPE)</li> <li>2. System and Local Obligation for CPE and LSEs with Load in Multiple Transmission Access Charge (TAC) Areas</li> <li>3. Allocation of System and Flexible Attributes of Local Resource Adequacy (RA) Resources</li> <li>4. Clarification of Capacity Procurement Mechanism (CPM) Process and Cost Allocations in regards to CPE changes</li> </ol>		
<b>BPM Changes</b>	<ul style="list-style-type: none"> <li>- Reliability Requirements</li> <li>- Settlements and Billing</li> </ul>		
<b>Tariff Change</b>	Yes		
<b>Impacted Systems</b>	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 26, 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	Market Sim Window	Sep 19, 2022 – Sep 30, 2022	✓
Production Activation	MF and CIRA availability for registrations	Oct 13, 2022	✓
	RA/Supply Plan due dates for 2023 annual plans	Oct 31, 2022	
	RA/Supply Plan due date for Jan 2023 monthly plans	Nov 17, 2022	
	Full project activation	Jan 1, 2023	
2023 RA & CSP Due Dates for all LSEs & CPEs	<a href="https://www.caiso.com/Documents/2023ResourceAdequacyandCompetitiveSolicitationProcessDueDates.pdf">https://www.caiso.com/Documents/2023ResourceAdequacyandCompetitiveSolicitationProcessDueDates.pdf</a>		

# Independent 2022 Release

# Operations Systems Improvements 2021/2022 Enhancements

Project Information	Description
<b>High Level Business Problem or Need</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Affected Systems</b>	<ul style="list-style-type: none"> <li>A preliminary list of enhancements is included on the next slide.</li> </ul> <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>
<b>Schedule</b>	<ul style="list-style-type: none"> <li>External BRS                      2022 External BRS v1.0 Published 5/3</li> <li>    UPDATE v1.1 <a href="#">Published 8/12</a></li> <li>MAP Stage Availability        Multiple*</li> <li>Customer Training              Multiple*</li> <li>PROD                                    Multiple*</li> </ul> <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 for Commitment Instructions in ADS Instructions Table/Grid	Training Materials– October 17 Unstructured Mkt Sim- October 17-25 PROD – October 27

2022		
System	Summary Description	
ADS	ADS - Ability to update existing configuration	Training Materials– October 17 Unstructured Mkt Sim- October 17-25 PROD – October 27
Market	Modify Unit Details UI	Outreach/Release Note – 2023 PROD - 2023

# 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 Materials/Release Notes – 10/28/22
RC Portal	RAS Submit Reports workflow: Track if a report has been reviewed and communicate within the record.	
RC Portal	Add Title to TOP-003 Library: Add Title so name of document isn't only shown	PROD – 11/3/22

# WEIM Enhancements

Project Information	Details/Date
<b>High Level Business Problem or Need</b>	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).
<b>High Level Project Scope</b>	<ul style="list-style-type: none"> <li>• BAAOP: ETSR detail screen will be available to BOTH RTMO and WEIMs. (First drop for testing will only be available to RTMO).</li> <li>• BAAOP: WEIM shared ramping constraint IS NOT editable through UI.</li> </ul>
<b>BPM Changes</b>	WEIM, Market Instruments
<b>Tariff Change</b>	Section 29.4
<b>Impacted Systems</b>	RTM/BAAOP, RTM/Integration

System	High Level Changes
<b>Real-Time Market (RTM)</b>	<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"> <li>• New ETSR detail screens</li> </ul>
<b>Real-Time Market (RTM)</b>	<p>BAAOP: WEIM shared ramping constraint IS NOT editable through UI.</p> <ul style="list-style-type: none"> <li>• Shared ramping capability constraint</li> <li>• UI for WEIM entity input parameters for ramp sharing</li> <li>• Use in the optimization for each resource based on BAA ramp share parameters</li> </ul>

# 2023 CRR System Upgrade

# 2023 – Congestion Revenue Rights (CRR) Upgrade

Project Information	Details/Date
<b>High Level Project Scope</b>	<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>
<b>BPM Changes</b>	Yes, details TBD
<b>Tariff Change</b>	No
<b>Impacted Systems</b>	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
<b>CRR</b>	<p>Significant system upgrade including:</p> <ul style="list-style-type: none"> <li>• Enhancements made to the new CRR application.</li> <li>• Automatic publishing of CRR market results.</li> <li>• Automatic CRR notification.</li> <li>• New CRR schedule calendar.</li> <li>• New CRR FNM access.</li> <li>• New CRR data submission and download interface UI/API.</li> <li>• Other TBDs identified through BRS development.</li> </ul>
<b>AIM</b>	<ul style="list-style-type: none"> <li>• New users and roles to support new CRR functionality</li> </ul>
<b>CMRI</b>	<ul style="list-style-type: none"> <li>• Full and incremental Payload publishing</li> <li>• Publish CRR Awards payload on event-driven, ad-hoc or scheduled basis</li> <li>• Publish CRR Awards payload on event-driven, ad-hoc or scheduled basis</li> </ul>
<b>OASIS</b>	<ul style="list-style-type: none"> <li>• Publish CRR Calendar, and all available CRR market names, and credit margin information, 3 year historical expected value..</li> <li>• Allow authorized users to publish CRR inventory payloads</li> <li>• 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,</li> </ul>
<b>CTS</b>	<ul style="list-style-type: none"> <li>• Broadcast</li> </ul>
<b>EMMS</b>	<ul style="list-style-type: none"> <li>• CRR will consume data from EMMS</li> </ul>
<b>IFM/RTN</b>	<ul style="list-style-type: none"> <li>• CRR will consume data from IFM/RTN</li> </ul>
<b>MQS</b>	<ul style="list-style-type: none"> <li>• MQS will consume and process SCID in a new format</li> <li>• MQS will consume ownership payload in bulk</li> </ul>
<b>Master File</b>	<ul style="list-style-type: none"> <li>• Master File will be modified as needed to support the new CRR functionality</li> </ul>
<b>MPP</b>	<ul style="list-style-type: none"> <li>• CRR will provide pre-configured external reports</li> </ul>
<b>Settlement</b>	<ul style="list-style-type: none"> <li>• Settlements will be modified as needed to support the new CRR functionality</li> </ul>
<b>WebOMS</b>	<ul style="list-style-type: none"> <li>• CRR will consume data from WebOMS</li> </ul>
<b>ETCC</b>	<ul style="list-style-type: none"> <li>• CRR will consume data from ETCC</li> </ul>

## 2023 – Congestion Revenue Rights (CRR) Upgrade

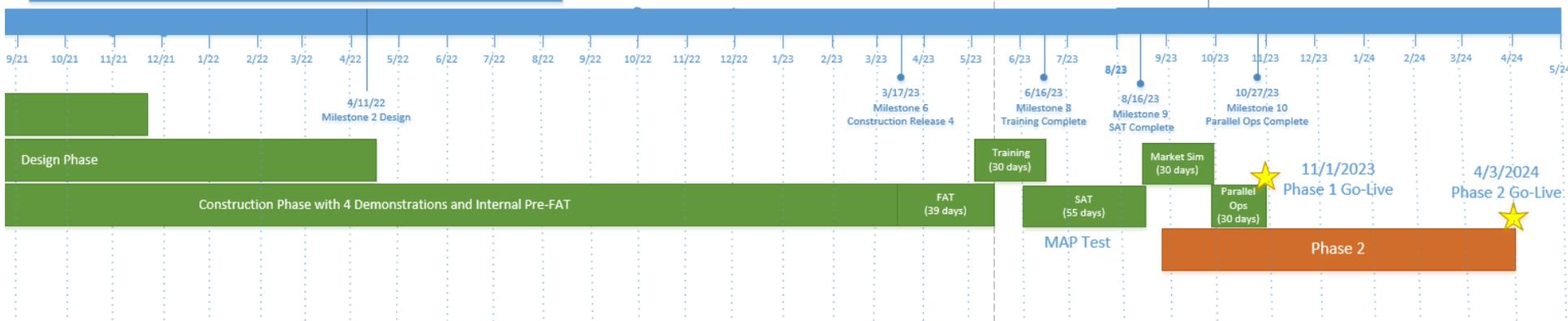
Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	N/A	
External BRS	Publish External BRS	N/A	
Config Guides	Post Draft Config Guides	N/A	
Tech Spec	Publish Technical Specification	Draft 11/5/21	✓
Tariff	File Tariff	N/A	
BPMs	Publish Draft BPM updates	Mar 1, 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.

[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](http://www.caiso.com)
    - Meeting details and presentation materials are available on the CAISO Developer site at [www.developer.caiso.com](http://www.developer.caiso.com) , which requires an account to be setup for access
  - **CRR Customer Partnership Group**
    - Next CPG meeting is Wed, 8/10 @ 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](http://www.developer.caiso.com) , requires an account setup for access

*Note: Meetings are available on the CAISO calendar on [www.caiso.com](http://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](http://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 WebbCONF: Market Simulation 2:00pm - 3:00pm	6 Training: Get to Know the ISO - Day 1 9:00am - 4:00pm WebbCONF: Imbalance Conformance Enhancements 10:00am - 12:00pm WebbCONF: 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 WebbCONF: Market Settlement User Group 10:00am - 11:00am	8 Meeting: Audit Committee Teleconference (Executive) 3:30pm - 6:30pm Training: Settlements 101 9:00am - 4:00pm Meeting: 2017-2018 Transmission Planning Process 10:00am - 4:00pm WebbCONF: Market Simulation 2:00pm - 3:00pm	9 Training: Settlements 201 9:00am - 4:00pm	10
11 WebbCONF: Participating Transmission Owner Per Unit Cost Guides 10:30am - 12:00pm WebbCONF: Market Simulation 2:00pm - 3:00pm	12 Meeting: Congestion Revenue Rights Auction Efficiency 10:00am - 4:00pm WebbCONF: 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 WebbCONF: 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) 3:15pm - 6:00pm Call: Board of Governors Teleconference (Executive) 9:00am - 10:00am Call: Market Update 10:15am - 11:00am WebbCONF: Market Simulation	15	16	17

Market Sim



Market Sim



Release Users Group (RUG)

