

August 6, 2024

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

Web Conference Information	Conference Call Information				
Web Address: https://caiso.webex.com/caiso/j.php?MTID=m8f4dee2c7 059898b3609c46be3cd2c20	1-844-621-3956 United States Toll Free				
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.	+1-650-479-3208 United States Toll Meeting number (access code): 2491 042 7352 e				
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.					
https://www.caiso.com/meetings-events/topics/release-users-group-rug					
http://www.caiso.com/informed/Pages/ReleasePlanning/Def	fault.aspx				

Release Plan Summary

Independent 2024 Releases

✓ Advisory Shutdown Flag Data TD 8/1/24
✓ Price Formation Enhancements – Rules for Bidding Above Soft Offer Cap (FERC831)* TD 8/1/24 Application Delivery Resiliency – URL & IP Changes (& AUP Changes)
Highest Emergency Rating
Transmission Service & Market Scheduling Priorities Phase 2 – Resale Scope*
Transmission Exchange Agreement
FERC 2222 – Distributed Curtailment Resources
Congestion Revenue Rights System Upgrade
Hybrid Resources Phase 2C – RIMS*
FERC 881 – Managing Transmission Line Ratings Track 2 – Operational/EMS Model Data & Applications*

Fall 2024 Settlements Release (No Projects)

Spring 2026 Release

Day-Ahead Market Enhancements Activation* Extended Day-Ahead Market Activation* EDAM ISO BAA Participation Rules Track A* EDAM Onboarding Pacificorp, BANC, PGE WEIM BHE Montana*

Future Release

Subscriber Participating Transmission Owner Model*

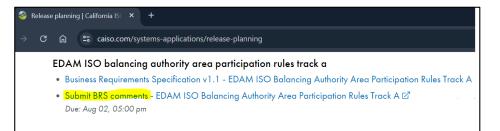
Settlement Upgrade Project – Next RUG/SUG quarterly update late July 2024

New: BRS Stakeholder Comments & Review Sessions

- Stakeholders can now submit comments on Business Requirements Specifications
 - BRS Comments open for:

Closed	Оре	n	Upcoming	
EDAM ISO E Participation 1.1 thru 8/2/2	Rules v1.0- • 24 5PM PT •	FERC Order 2222 thru 8/9/24 5PM PT Subscriber PTO thru 8/15/24 5PM PT New DAME v1.3 thru 8/26/24 5PM PT New EDAM v1.3thru 8/26/24 5PM PT	 EDAM ISO BAA PR v1.2 – August 2024 	

- Access from Release Planning at <u>http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx</u> or access from <u>Policy</u> page
- ISO will schedule BRS reviews as appropriate
- Learn how to use the commenting tool:
 - <u>View presentation</u>
 - <u>View video</u>





Independent 2024 Releases



2024 – Advisory Shutdown Flag Data

Project Information	Details/Date
High Level Business Problem or Need	Problem: Missing input data value for existing BD, BA_5M_RSRC_A DV ISORY_SHUTDOWN_FLAG, prevents CAISO from qualifying Minimum Load Cost consistent with Tariff 11.17.2.1, even if Settlements formulations currently exist. Solution: Work with upstream units to ensure advisory shutdow n instruction data is broadcasted so that advisory shutdow n flag BD can be created Use the input and reflect Minimum Load Costs qualification in Settlements
BPM Changes	Settlements & Billing, Market Instruments

Impacted Systems Settlements, CMRI

Milestone Type	Milestone Name	Dates	Status
Board	Board	NA	
BRS	BRS BRS 1.1: BRQs 045 + 046: Add Instruction Cost field to CMRI BRS 1.2 & 1.3: BRQs 001, 017, 045 + 046	May 09, 2024 May 30, 2024 Jul 05, 2024	✓ ✓ ✓
BPM	Settlements & Billing PRR 1571 - Updating SUC MLC PC BPM documentation for Advisory shutdow n flag for MLC qualification Market Instruments PRR 1574 - Addition of new Real Time Advisory Shutdow n Instructions Customer Market Results Interface report	Apr 26, 2024 May 21, 2024	√
Tech Spec	CMRI Tech Spec	May 13, 2024	\checkmark
Training	Training	Jun 11, 2024	\checkmark
Market Simulation Scenarios	Market Simulation Scenarios	Jun 10, 2024	\checkmark
Market Simulation	Market Simulation	Jun 28 – Jul 17, 2024	\checkmark
Production	Deployment Activation	Jul 24, 2024 Effective Trade Date Aug 1, 2024	\checkmark

Additional slides were covered in the Apr 24, 2024 Settlement User Group (SUG), presentation and recording available here: <u>www.caiso.com</u> > Stay Informed > Meetings & Events > User groups and recurring meetings > Settlement User Group



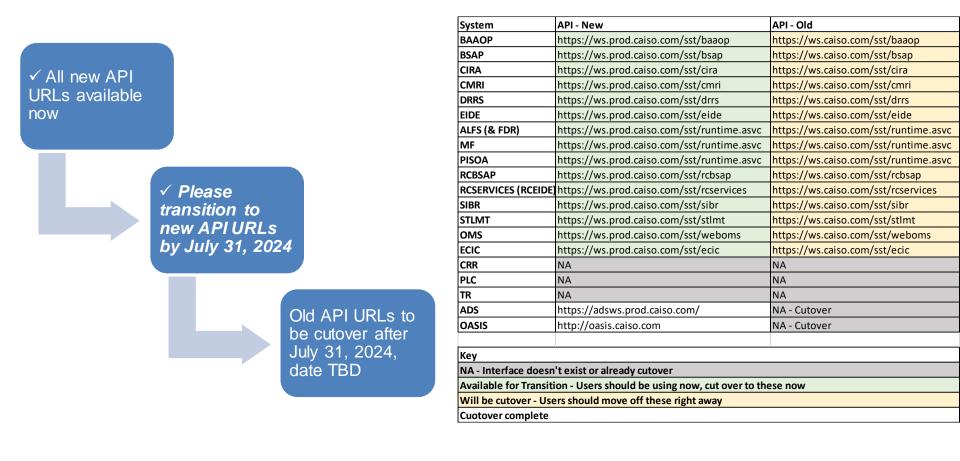
2024 - Price Formation Enhancements – Rules for Bidding Above Soft Offer Cap (FERC 831)

Project Information	> Details/Date					
High Level Project Scope	This initiative will explore several topics related to price formation in the California ISO markets focused on real-time market pricing. Scarcity prices are important to attract supply and incent resources to be available and perform. They are also important to provide appropriate price signals to reduce demand. Recent energy shortages and associated prices in the ISO real-time market have emphasized the need for the ISO to review and enhance its scarcity pricing provisions. Consequently, the ISO plans to consider the following topics in this initiative: (1) enhance real-time market scarcity pricing to better reflect tight supply conditions, (2) consider fast-start pricing, and (3) enhance how the real-time market uses advisory prices to dispatch resources.					
Milestone Type		Milestone Name	Dates	Status		
Board Approval		Board approval	May 22, 2024	\checkmark		
Tariff		Draft Tariff Language Revised Draft Tariff Language File with FERC	May 13, 2024 May 20, 2024 May 31, 2024	\checkmark		
Policy		Final Proposal	May 17, 2024	\checkmark		
Workshop	Maximum Import Bid Price Workshop – Analysis on MIBP Shaping Factor May 28, 2024					
BRS		BRS	Jun 25, 2024	\checkmark		
SIBR Rules 11.8.3 Release Notes Jun 28, 2024		\checkmark				
Training Training Jul 11,			Jul 11, 2024	\checkmark		
Market SimulationJul 23 – Jul 26, 2024				\checkmark		
Production	Production Aug 01, 2024					

CAISO initiated an effort to explore enhancements to the calculation of the shaping factors used in the determination of the maximum import bid prices. It held a stakeholder call on May 28, 2024, to explore the current logic, its background and areas for potential improvement. Currently, CAISO is assessing an enhancement to the logic of the shaping factors and once it completes the estimates for the implementation of effort and a feasible timeline, CAISO will communicate about its plan for this enhancement.



2024 - Application Delivery Resiliency: API Customer Transition & Cutover



🍣 California ISO

2024 – Highest Emergency Rating

Project Information	Details/Date
High Level Business Problem or Need	The project aims to primarily 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 minor defects or functionality enhancements identified in by the business units.
High Level Project Scope	This enhancement focuses specifically on internal ISO users and RC Customers having the capability to adjust the HER and ER duration in OMS. Step 1 – HER data cleanup Load HER in EMMS in one of the existing slots Transfer HER to RTCA during the network model build process Step 2 – Use RTCA to update HER For interim changes to HER in between models, change the data directly in RTCA Make the ER and HER duration and value fields editable Include validation to make sure HER is not less than the emergency rating Step 3 – WebOMS changes Work with OATI to include a new field for HER HER can be updated in WebOMS in between model promotions Updates to HER will be sent to downstream systems
BPM Changes	Not Impacted
Tariff Changes	Not Impacted
Impacted Systems	webOMS, HANA, Market

Milestone Type	Milestone Name	Dates	Status
Board	Board	NA	
BRS	BRS BRS 1.1	Feb 15, 2024 Apr 10, 2024	\checkmark
Tech Spec	Present OMS in TUG OMS	Feb 27, 2024 Yes	V
Market Simulation	Market Simulation	Sep 16 – Oct 04, 2024	
Production	Production	Q4 2024	
🌍 California ISO	ISO PUBLIC		Page 8

2024 - Highest Emergency Rating - OMS

- Three new fields will be added on the current OMS Derate User Interface and user will have capability to adjust the values through UI and API:
 - "Emergency Rating Duration" as integer, set in minutes.
 - "Highest Emergency Rating" as a numeric input.
 - "Highest Emergency Rating Duration" as integer, set in minutes.

Equipment Picker Station:	Notes RIMS	-		– Equipment								
Voltage Level:		•		Equipment	Station	1	Name	Voltage	Туре	Switch Modeling Complete	Use Facility Model	ID
Equipment Type: Equipment:		•				Use Facility M	odel					
Station	Name	Voltage	Equipme	Switches	Station	Name	Voltage	Туре	Status	Start Date/Time End [Pate/Time ID	Is Trumped
				Equipment	Rating Changes	Voltage	Normal Rating (MVA)	Seasonal Normal Rating	Emergency Rating (MVA)	Seasonal Emergency Rating	Start Date/Time	End Date/Time
Emergency Rating Duration HER Duration												

WebOMS will give validation error if below conditions are not satisfied:

Rating Limits and Durations are not defined for ERC.

Highest Emergency Rating is less than active Emergency Rating.

Highest Emergency Duration is greater than Emergency Rating Duration.

If HER Limit and Duration values are partially complete.

If user want to enter ER greater than the current HER then would first have to adjust HER then update ER.

- If neither HER Limit and Duration values are defined, system should auto-fill the HER Limit and Duration values to match their associated Emergency Rating Limit and Duration values.
- Emergency Rating (ERC) flows to Market, RTCA, and EMS; and HER only flows to RTCA, and EMS. WebOMS will display a pop-up notification on submitting the ERC or HER through UI,API akin to SUCCESS message
- There will be XSD update on below services :

SubmitTransmissionOutage_v3-Regular and DocAttach SubmitTransmissionOutageChangeRequest_v3-Regular and DocAttach RetrieveTransmissionOutage_v3 - Regular and DocAttach RetrieveTransmissionOutageChangeRequest_v3 - Regular and DocAttach.

Summer 2024 – Transmission Service & Market Scheduling Priorities Phase 2

Project Information	Details
High Level Business Need	Presents a long-term, durable framew ork to establish w heeling through scheduling priorities in the ISO markets that can further evolve w ith operational experience. It does not focus on, nor does it change, the processes for w heeling out or exporting from the ISO BAA. This project introduces a design to identify Available Transfer Capability (ATC) that can be allocated to Priority-Wheeling-Through (PWT) across the ISO system. This project also provides opportunity for external entities to drive transmission upgrades across the ISO system to support a w heeling-through . Will result in updates to the Wheel Export Quantity PC. The Original Wheeling Priority SC should be charged WAC for the Maximum of Wheeling Priority Quantity and scheduled export. If a resale should occur the purchaser of the resale Wheeling Priority Quantity should be assessed WAC on the maximum of schedule export less purchased Wheeling priority MW and zero.
High Level Project Scope	 The following are the key design elements for Priority-Wheeling-Through (PWT): Calculating PWT Available Transfer Capability (ATC) Aw arding PWT ATC to PWT Requests Using PWT Aw ards in Market Operations Settling PWT Aw ards and Schedules Transmission Planning for PWT Capacity
BPM Changes	 Market Instruments – MF & SIBR Changes Market Operations – ITS, DAM, RTM Changes Reliability Requirements – Internal System Changes Settlements and Billing – Settlements Changes Transmission Planning Process – Impact for long term ATC Generator Interconnection and Deliverability Allocation Procedures – Impact for long term ATC
Tariff Changes	 §23.1, §23.2, §23.3, §23.4, §23.5, §23.6, §23.7 §26.1.4.5 §30.5.1 §34.12.3 §Appendix A §Appendix L §Appendix LDD § New Appendix GG Long-Term Transmission Service & Market Scheduling Priorities
Im pacted System s	 AIM CIRA MF New system for ATC calculation, access, and reservation SIBR RTM Settlements OASIS RIMS

Summer 2024 – Transmission Service & Market Scheduling Priorities Phase 2

			0
MilestoneType	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	Feb 01, 2023	\checkmark
External BRS	Post External BRS	Jan 31, 2024	\checkmark
External DRS	Post External BRS – Resale Scope	Aug 2024	
Settlements	Tech Doc	Feb 12, 2024	\checkmark
Config Guides	1 st Draft Config File & Release Component Summary	March 4, 2024	1
Coning Ourdes	Create ISO Interface Specifications – OASIS	Jan 12, 2024	
Tech Spec			•
·	Create ISO Interface Specifications – OASIS	Aug 21 2024	
	Filed ER23-2510 for Wheeling Through	Jul 28, 2023	\checkmark
	FERC Acceptance of ER 23-2510 (calculation of available transfer capability (ATC) and the process for establishing market	Oct 30, 2023	\checkmark
	scheduling priority for wheeling through the ISO transmission system)		
	Compliance Filing	Nov 29, 2023	\checkmark
	Petition for Limited Waiver for resale or assignment of monthly Wheeling Through Priority	Apr 12, 2024	1
Tariff		· · · ·	
	Order Granting Petition for Limited Waiver ER 23-2510 NLT Dec 17, 2024	Jul 08, 2024	v
	Track 2 DTL	Jul 14, 2023	\checkmark
	Track 2 Revised DTL	Oct 05, 2023	\checkmark
	Track 2 Final DTL	Dec 19, 2023	\checkmark
	Draft BPM changes – Market Instruments (PRR1558)	Mar 20, 2024	\checkmark
	Draft BPM changes – Market Operations (PRR1548)	Jan 16, 2024	1
	Draft BPM changes – Market Operations (Automation) (PRR 1570)	Apr 19, 2024	
		Api 19, 2024	×
BPMs	Draft BPM changes – Reliability Requirements		
	Draft BPM changes– Settlementsand Billing (PRR1560)	Mar 20, 2024	\checkmark
	Draft BPM changes – Transmission Planning Process		
	Draft BPM changes – Generator Interconnection and Deliverability Allocation Procedures		
Market Sim	Market Simulation – Resale Scope	Sep 30 – Oct 11, 2024	
	Implementation of wheeling through priority process supports load service planning for Summer 2024		
	ISO has in implementations that manual processors		
	ISO begin implementation thru manual processes		
	- Publication of Monthly ATC values for June 2024 to January 2025 (13-month horizon)	Jan 16, 2024	✓
	- Request window opened (Submit via CIDI)	Jan 18 – Jan 31, 2024	\checkmark
	- Results communicated	Feb 5, 2024	\checkmark
Production	Monthly Scope: New automation functionality available to support reservation of Monthly and Daily ATC in June 2024 and beyond	Apr 19, 2024	\checkmark
Activation		· · · · · · · · · · · · · · · · · · ·	
Activation	Daily Search Transmission Service & Market Scheduling Drighting Dhase 2. Activate daily and long term incremented sylptions	Mov 24 for lup 01 2024	
	Daily Scope: Transmission Service & Market Scheduling Priorities Phase 2 – Activate daily and long-term increment calculations	May 24 for Jun 01, 2024	v
	Resale Scope: Resale or Assignment of Monthly Wheeling Through Priority	Oct 23, 2024	
	OASIS ETC Data	2024	
	2024 Monthly Wheeling Through Priority Request Due Dates		



2024 – Transmission Exchange Agreement

Project Information	Details/Date
High Level Business Problem or Need	The ISO is committed to develop a process or system that allows Western Area Power Administration – Sierra Nevada Region ("WAPA") to resell some or all of their 400 MW ownership rights on the PACI#1 line to other SCIDs and retain the perfect hedge and scheduling priority to further contract negotiations to extend the term of the Transmission Exchange Agreement. The Transmission Exchange Agreement ("TEA") with WAPA-SNR, PG&E and ISO is scheduled to expire 9/30/2024. A term of the original agreement executed in 2004, was that the ISO would develop a system that allowed WAPA to sell their unused capacity on their line. This project provides solution to the scheduling issue which needs to be in place by June 2024 to ensure that the ISO has solved the problem and support filing an amendment and extension of the TEA at FERC.
High Level Project Scope	 WAPA needs functionality to sell their TOR to other parties on their OASIS. If the TOR rights are sold then WAPA will notify the CAISO to provide the purchaser the hedging and scheduling priority opportunity provided all ETCs/TORs. The market and settlement systems need to be able to "move" the Contract Reference Number ("CRN") from the WAPA CRN to the purchaser SCIDs so that the settlement to the purchaser SCID reverses the costs of the transmission access charge and congestion (aka the perfect hedge) and provides a high scheduling priority in the IFM and RTM. WAPA will not take on the obligation to settle with their purchaser. WAPA can sell any increments of MWs up to their 400 MW ownership rights. Therefore, the solution needs to be flexible enough to allow the "existing" TORs to vary the MWs capabilities. [Note: The MW increments to be sold can be no less than 5 MW.] WAPA's functionality allows them to schedule between Malin and Round Mountain, Malin and PG&E DLAP, and Malin and Tracy. This would be the source and sink that that functionality needs to provide. If there are outages on the line, the curtailment should be consistent with current practice.
BPM Changes	Settlements Configuration Guides
Tariff Changes	N⁄A
Impacted Systems	AIM, MF, CMRI

2024 – Transmission Exchange Agreement

Milestone Type	Milestone Name	Dates	Status
External BRS	Post External BRS	NA	
BRS	Provide to WAPA	Jan 23, 2024	\checkmark
Settlements Config Guides	Tech Doc 1st Draft Config File & Release Component Summary	Feb 12, 2024 Mar 04, 2024	\checkmark
Tech Spec	Create ISO Interface Specifications – CMRI UI: The current CMRI CRN report is not being changed. WAPA will be able to see Sub CRNs mapped to its own Parent CRN	Mar 26, 2024	~
Tariff	NA	NA	
BPMs	Draft BPM changes – Settlements & Billing PRR 1559	Mar 20, 2024	\checkmark
Market Simulation	Market Simulation – WAPA	Oct 2024	
Production Activation	Transmission Exchange Agreement Renegotiation	TBD	



2024 – FERC 2222 – Distributed Curtailment Resources

Project Information

FERC Order 2222 seeks to remove barriers for DCR (Distributed Curtailment Resources) participation in RTO/ISO markets. Through its prior initiatives, CAISO already supports DER (Distributed Energy Resource) market participation. In this implementation, the CAISO will amend its existing DER policy to accommodate FERC Order 2222, which will include reducing the maximum capacity requirement and introducing a new DERA resource type with underlying DCR. In total, FERC Order 2222 requires RTOs/ISOs to revise the Tariff to establish a DERA participation model, which will:

- 1) Allow DERAs to participate in markets and establish DERAs as a type of market participant,
- 2) allow aggregators to register operational characteristics of a DERA,
- 3) establish maximum capacity requirements for DERAs,
- 4) address locational requirements,
- 5) address distribution and bidding,
- 6) address data and information,
- 7) allow for coordination between necessary entities,
- 8) address metering and telemetry,
- 9) address modifications to the list of resources in DERA, and
- 10) address market participation agreements.

The CAISO and its participating transmission owners have already gone to great lengths to ensure that DERs can easily access the wholesale markets for energy and ancillary services. These include ensuring that the CAISO does not prohibit any particular DER from participating in DERAs. This implementation now builds on this work by adding the DCR as an underlying resource type for the Distributed Energy Resource Aggregate (DERA). DERAs with any underlying DCR will be considered HDERA (given its capability to support both DER and DCR types) as opposed to the existing DERA (which only allow s underlying DER). Demand response is considered a type of DCR in this context. Similarly, as with demand response, the metering performance of DCRs will be reflected as supply (or metering channel 4).

The existing CAISO Tariff already complies with most of FERC Order 2222; how ever, a few changes will be needed to align the tariff with the order by including a new resource classification, reducing the minimum allow able DER energy nameplate capacity limit (i.e. Pmax), and the creation of DCRs. Some of these changes will include:

1) Adapt small utility opt-in provision in its pro forma Demand Response Provider agreement for the CAISO's pro forma DERP Agreement, replacing Demand Response references with DER references.

- 2) Change definition of DER to align with the Commission's definition as found in section III B of the Order No. 2222 DERAs Compliance Filing.
- 3) CAISO proposes to implement a heterogeneous DERA model such that:
 - "Heterogeneous" DERAs must consist of at least one curtailment resource, and may comprise of the aggregate's underlying capacity in part or total. - Heterogeneous DERAs will provide a net response of energy, demand curtailment or both at its PNode(s). Settlements for heterogeneous DERAs will
 - be based on the net service provided to the CAISO. This will be a sum of the net energy and the demand curtailment provided by the aggregate.
- 4) Define "Distributed Curtailment Resource" as a DER providing demand curtailment in a heterogeneous DERA.
- 5) Settle heterogeneous DERAs as a single supply resource, as a sum of net energy provided by DERs and the demand curtailed from DCRs.

6) The CAISO will apply a net benefits test to determine a threshold Market Clearing Price for Demand Response Providers and the new HDERA resource type. 7) Provision against double counting for any possible future scenarios, prevents a DER from participating in a DERA where the DER already participates in a retail net energy metering program that does not expressly permit wholesale market participation, requiring the distribution company to confer regarding any double-counting concerns

8) Reduce the minimum aggregate capacity limit of DERs from 500kW to 100kW for a DERA.

9) Revise Tariff to require DERPs to notify the CAISO whenever DERA information changes due to the removal, addition or modification of a DER within a DERA.



2024 – FERC 2222 – Distributed Curtailment Resources

Project Information	Details/Date
	The proposed changes amend the CAISO's Tariffto comply with FERC Order 2222. FERC Order 2222 requires that all RTOs/ISOs all ow for Distributed Curtailment Resources (DCRs) that can provide a minimum qualified aggregate Pmax value of at least 100kW to participate in all markets. The CAISO already allows for DER participation but will have to make some adjustments to ensure compliance with FERC 2222.
Description	Key Notes: • Reduces DERA and HDERA minimum participation capacity to 100kW • Introduction of HDERA Resource, aggregate with underlying DCR • Settlements for HDERAs • Same Net Benefitstesting as PDR for HDERAs
Scope	 RIMS add new Interconnection Customer display to process HDERA/DERA resource project details during NRI; change Pmax limit from 500 kW to 100 kW Master File GRDT, API Web Service update to accommodate HDERA_YN flag, + HDERA/DERA attributes receive (read-only, may only submit HDERA MF data through Concurrence Letter Attachment A submission and successful NRI process) SIBR enhancements to recognize HDERA resources, apply them to NBT with PDR prices, update rules to allow hourly GDF submission with bids IFM/RTM markets will model HDERA as generic NGR with NREM MRI-S extension of meter submission support for HDERA resources Settlements will configure HDERA charges and payments to settle as generic NGR with NREM (no new charge codes) Process Only (no system impact): Internal ISO process will track HDERA SQMD and monitoring data submission to ensure complian ce; ISO will contact SCs with delinquent submissions
ВРМ	 Definitions and Acronyms: Include HDERA, DCR terms Demand Response: Elaboration of net benefit testing Distributed Generation for Deliv erability: Addition of the HDERA resource type. Generator Management: Inclusion of DCR in DERPAs, Schedule 1, and Concurrence Letter A template (add HDERA language) Market Instruments: Revision to minimum allowed Pmax limit; and HDERA (aggregate includesboth DER and DCR child units, models as an aggregate generic NGR, bidshave NBT applied, may submit GDFs with bidselse default used) Market Operations: Revision to minimum allowed Pmax limit; and HDERA (aggregate includesboth DER and DCR child units, models as an aggregate generic NGR, bidshave NBT applied, may submit GDFs with bidselse default used) Metering: New HDERA resource type includesnet energy meter submission for DERA, as well as monitoring requirement data from DCR and underlying consumption/energy data used with metering basisfor baseline determination); HDERA monitoring Settlements and Billing: Impactson settlements for HDERAs
Tariff Changes	<pre>§ 4.17.7 § 11.6.5.1 § 30.5.2.6 § 4.6.3.2 (existing) Appdx K: A 1.1 B 1.1 C 1.1 (existing)</pre>
Impacted Systems	RIMS, Master File, SIBR, MRI-S, Settlements

2024 – FERC 2222 – Distributed Curtailment Resources

Milestone Type	Milestone Name	Dates	Status
Tariff	FERC Filing ER21-2455	Jul 19, 2021	\checkmark
	FERC Filing ER21-2455 Amend Effective Date NLT Nov 01, 2024	Aug 15, 2022	\checkmark
	FERC Order Accepting ER 21-2455	May 18, 2023	\checkmark
BRS	Publish BRS 1.2 BRS <u>comment</u> period open thru Aug 09, 2024 05:00 pm (PT)	Jul 01, 2024 <mark>Open</mark>	\checkmark
Tech Spec	MF Generator RDT v6: Add HDERA flag and baseline methodology attributes (read-only): Validation: values must be read-only; cannot be submitted via: Generator RDT excel template or SubmitGeneratorRDT_MFRD SubmitGeneratorRDT_MFRD_DocAttach	Aug 09, 2024	
ВРМ	Definitions and Acronyms Demand Response Distributed Generation for Deliverability Generator Management Market Instruments Market Operations Metering Settlements and Billing– Not applicable	Aug 26, 2024	
Operating Procedures	5330 – Resource Testing Guidelines	Yes	
Market Simulation	Market Simulation Scenarios Market Simulation – Unstructured	Jul 22, 2024 Sep 30 – Oct 18, 2024	~
Production	FERC 2222 – Distributed Curtailment Resources	Nov 01, 2024	



Project Information	Details/Date
	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.
	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.
High Level Project Scope	 Congestion Revenue Rights (CRR) system replacement project scope is the roll-out of a: Brand new user-interface (UI) system with an updated new look-and-feel, to replace the existing legacy system implemented during the MRTU 2008 go-live and brought up to current ISO technology standards Set of application-programming interfaces (APIs) to enable integration between ISO and market participant systems
	 Overall, to support the following in one consolidated CRR external-facing system: Annual/Monthly Auction and Allocation market participant bid submission and results retrieval Load data submission by CRR LSEs, CEC Load migration data submission by CRR UDCs Secured "Congestion Revenue Rights Full Network Model" information access Private and public access of CRR market input and output information
BPM Changes	 Congestion Revenue Rights Enhancements made to the new CRR product. 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. New CRR market results interface. Load Migration
Tariff Change	No
Impacted Systems	CRR, AIM, CMRI, OASIS, CTS, Market Clearing, EMMS, IFM/RTN, MQS, Master File, MPP, Settlements, WebOMS, ETCC.
🍣 California	ISO PUBLIC

High Level Changes
 Significant system upgrade including: 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 dow nload interface UI/API. Other TBDs identified through BRS development.
New users and roles to support new CRR functionality
 Full and incremental Payload publishing Publish CRR Aw ards payload on event-driven, ad-hoc or scheduled basis Publish CRR Aw ards payload on event-driven, ad-hoc or scheduled basis
 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,
Broadcast
CRR will consume data from EMMS
CRR will consume data from IFM/RTN
 MQS will consume and process SCID in a new format MQS will consume ow nership payload in bulk
Master File will be modified as needed to support the new CRR functionality
CRR will provide pre-configured external reports
Settlements will be modified as needed to support the new CRR functionality
CRR will consume data from WebOMS
CRR will consume data from ETCC

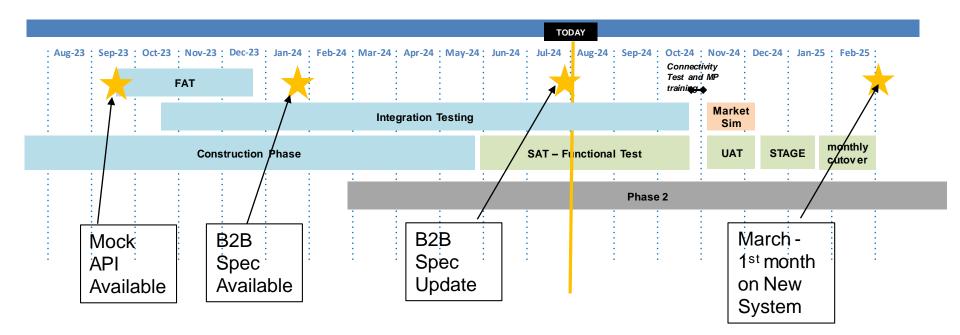


Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	NA	
External BRS	Publish External BRS BRS Revision v1.3	Nov 16, 2022 Mar 29, 2023	✓ ✓
Config Guides	Post Draft Config Guides	Yes	
Tech Spec	Publish Technical Specification	Feb 24, 2023	~
Deployment Plan	Draft Deployment Plan	Yes	
Training	Training	Yes	
Customer Partnership	Last CPG	Jul 25, 2024	~
Group	Next CPG	Aug 22, 2024	



Updated July 2024

- Functional Site Acceptance Testing, B2B integration and security testing continues
- Connectivity Testing 1 week after above testing, starting in late October, just before Market SIM
- Training 1 week before Market SIM in late October
- Market SIM 2 week structured, then 3 week unstructured starting in early November
- 2025 Annual Cycle, carried out in 2024, will occur on the current Production CRR application
- Cutover to new CRR application 2025 March Monthly Allocation and Auction Market, carried out in February 2025



🍣 California ISO

2024 - CRR System Upgrade – Get Connected

- CRR meetings:
 - Bi-weekly Technical User Group (TUG) Tue 10 AM, alternates with RUG.
 - Meetings available on the CAISO calendar on <u>www.caiso.com</u>
 - Meeting details and presentation materials are available on the CAISO Developer site at <u>www.developer.caiso.com</u>, which requires an account to be setup for access
 - CRR Customer Partnership Group
 - Last CPG Jul 25, 2024; recording available
 - Next CPG meeting is Thursday, Aug 22, 2024
 - Monthly
 - Meetings available on the CAISO calendar on <u>www.caiso.com</u>
 - Meeting details and presentation materials are available on <u>www.caiso.com</u> > Stay Informed > Meetings & Events > Customer Partnership Groups



2024 – Hybrid Resources 2C RIMS

Project Information	Details/Date
High Level Business Problem or Need	 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 (hybrid and co-located resources) project participation in the ISO markets. Prior to this initiative, Phase 1 identified a first set of modifications generally concerned with setting up and operating co-located resources. Building on phase 1, 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.
High Level Project Scope	With this initiative, there's an opportunity to increase storage and the number of hybrid resources that can connect to the ISO grid. Currently the interconnection queue includes more than 24,000 MW of mixed fuel projects and nearly 20,000 MW of storage which represents roughly half of all generation in the current interconnection queue.
BPM Changes	Settlements & Billing
Impacted Systems	Summer 2023: Settlements Fall 2023: Metered Quantities for Hybrids Independent 2024: RIMS Completed: Today's Outlook, ISO Today Mobile Application, Reports
Requirements	http://www.caiso.com/Documents/BusinessRequirementsSpecifications-HybridResourcesPhase2.pdf

2024 – Hybrid Resources 2C RIMS

Milestone Type	Milestone Name	Dates	Status
External BRS	Publish External BRS Revision – Add 4 Market Simulation Business Requirements	Jan 31, 2023 Jan 04, 2024	\checkmark
Settlements Config Guides	NA for RIMS	NA	
Tech Spec	Create and Publish ISO Interface Spec (Tech Specs)	NA	
Market Sim	Market Sim Window – RIMS	Q3 2024	
Production Activation	Hybrid Resources 2C – RIMS	Oct 1, 2024	



Project Information	Details/Date				
	transmission	will address the California ISO's compliance with FERG line rating requirements) new	
	providers	31 establishes new transmission line rating requirements	for public utility transmission		
High Level Project Scope	 Establish and use ambient-adjusted ratings and seasonal ratings for all transmission lines unless excepted Use AARs for near-term transmission service requests Use seasonal rating for long-term transmission service requests RTOs/ISOs must implement systems and procedures to allow transmission owners to electronically update transmission line ratings at least hourly Use uniquely determined emergency ratings for contingency analysis in the operations horizon and in 				
		ngency simulations of constraints t transparency reform			
Milestone Type		Milestone Name	Dates	Status	
Tariff		Draft Tariff Language	May 20, 2022	\checkmark	
		Revised Draft Tariff Language	Jun 23, 2022	\checkmark	
		FERC Filing ER22-2362	Jun 16, 2022	\checkmark	
		FERC Acceptance ER22-2362	Apr 20, 2023	\checkmark	
		FERC Acceptance Tariff Revisions	Dec 13, 2023	\checkmark	
BRS		Publish BRS – Track 1 Publish BRS – Track 1 (Updates & Added FAC-011)	Jan 30, 2024 Jun 11, 2024	\checkmark	
Market Simulation		Market Simulation	NA		
Production		Track 1 Real-Time Reliability Applications	Apr 1, 2024	\checkmark	
		Track 2 Operational/EMS Model Data & Applications	2024/early 2025		
🥣 California ISO		ISO PUBLIC		Page 24	

2024 – FERC 881 – Managing Transmission Line Ratings

FERC 881 Project Timelines by Tracks



- Track 1 Real Time Reliability Applications
 - Delays in application deliver timeline with FAC-11 additions to the project.
 - Utilization of AAR in real time reliability applications.
 - Estimated Target Capability to be ready by Q3 2024. Originally Q2.
- Track 2 Operational/EMS Model Data and Applications
 - OATI WeblineR product will be utilized for receiving Look ahead ratings.
 - Finalizing OATI functional specification document.
 - Estimated Target Capability to be ready early 2025
- Track 3 Market Application and Look Ahead Applications
 - Requirements phase started and should be complete by September 2024.
 - Based on requirements gathering and vendor/internal resources constraints potential for delay in some aspects of implementation.
 - Estimated Target Capability to be ready in Q2 2025.



California ISO

Fall 2024 Settlements Release – No Projects



Draft of 2024 Fall Settlements Release

Please note this is our first draft of 2024 Fall Release. It's subject to change

Release Scope:

- Non-Projects:
 - COTP Loss:
 - 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
 - RC Configuration Change:
 - Defect: Issue with multiple BAA for Minimum RC Charge Flag
 - No ICG change, no BPM or PRR
 - RAAIM LESR Change:
 - Defect: Revise the Generic Availability and Flexible Obligation calculations for LESR RA resources
 - RMR:
 - Defect: Fix a typo in BD with impact to CC 6470 and 7020
 - No ICG change, no BPM or PRR
 - Hierarchy Charge Name
 - Defect: Hierarchy Charge Names with Discrepant BILL_DETERMINANT_NAME & BILL_DETERMINANT_ALIAS Values
 - AET:
 - Defect: ABC Regulation not being accounted for correctly in some scenarios for AET.
 - Reference Date Usage (T vs S):
 - Defect: Some Bill Determinants need to be updated from reference date "S" to "T" to align with best business practices. align with best business practices.



Draft of 2024 Fall Settlements Release Milestones

Please note this is our first draft of 2024 Fall Release. It's subject to change

Release Milestones:

- 1st draft config output file + release component summary posted: 8/12/24
- 2nd draft config output file + revised release component summary posted: 9/4/24
- Market sim/sample statement window: 9/16 10/14
- Pre-prod configuration output file + release artifact revisions targeting: 10/23
- Anticipated prod activation effective trade date: **11/1**



Spring 2026 Release



Day Ahead Market Enhancements	
Project Information	Details/Date
High Level Business Problem or Need	In recent years, Variable Energy Resource (VER) have gained significant traction in the energy grid, playing a crucial role in achieving renewable energy targets and reducing greenhouse gas emissions. However, their increasing presence has introduced a new challenge energy imbalances between the Day Ahead and Real Time markets.
	Another reason for the energy imbalance is the day-ahead market operates on hourly time increments, whereas real-time market schedules energy in 15 and 5-minute intervals. This discrepancy in granularity results imbalances since the rea-I-time market schedules fluctuate within the hour while day-ahead market schedules remain fixed for the entire hour.
	These imbalances necessitates out-of-market interventions by operators, such as forecast biasing and dispatches, to uphold grid reliability. However, this situation presents an opportunity to improve our market software, enabling us to achieve a more efficient and economical solution while addressing the variability and reliability concerns within the market.
High Level Project Scope	 Enhance the California ISO's (CAISO's) day-ahead market by: Introducing an imbalance reserve (IRU/IRD) product to provide flexible capacity to account for real-time ramping needs Enhancing the residual unit commitment process to also ensure there is sufficient downward dispatch capability (RCU/RCD) Enhancing the day-ahead market to maximize benefits of greater West-wide diversity in the day-ahead optimization for Western Energy Imbalance Market participants
BPM Changes	Settlements and Billing, Market Instruments & Market Operations
Tariff Changes	Sections 27, 31, 34, 39
Impacted Systems	MF, SIBR, DAM, OASIS, CMRI, Settlements & Internal Systems



Day Ahead Market Enhancements

System	High Level Changes
MF	Define IRU, IRD, RCU, RCD eligibility for the resource ID in MF.
SIBR	IRU,IRD,RCU,RCD bid rules
DAM	 Calculate IRU/IRD requirements MPM: Market Power Mitigation for IRU/IRD IFM: procure IRU/IRD IRU/IRD deployment scenarios IRU/IRD requirement distribution IRU/IRD in NA-AC power flow Include IRU/IRD in constraints RCU/RCD procurement RUC-MPM pass Impact on RUC performance with additional MPM pass LMP for EN, IRU/IRD, RCU/RCD
OASIS	IRU, IRC, RCU, RCD related public reports
CMRI	IRU, IRC, RCU,RCD related private reports
Settlements	IRU, IRC, RCU, RCD Settlements



Day Ahead Market Enhancements

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board briefing/approval	May 17, 2023	\checkmark
External BRS	Publish External BRS v1.0	Jul 25, 2023	\checkmark
	Publish External BRS v1.1	Dec 22, 2023	\checkmark
	Publish External BRS v1.2	Apr 24, 2024	\checkmark
	Publish External BRS v1.3	Aug 02, 2024	\checkmark
Settlements Config Guides	Post Draft Config Guides - First set of charge codes	Jan 16, 2024	\checkmark
	Post Draft Config Guides - Second set of charge codes	Mar 26, 2024	\checkmark
	Post Draft Config Guides - Third set of charge codes & updates to First & Second sets	Aug 26, 2024	
Tech Spec	Publish Technical Specifications - OASIS	Nov 09, 2023	\checkmark
	Publish Technical Specifications – MF Publish MF GRDT v19.0 DRAFT	Nov 21, 2023	\checkmark
	Publish Technical Specifications - SIBR	Nov 28, 2023	\checkmark
	SIBR/BSAP/RCBSAP Rules Release Notes	Mar 05, 2024	\checkmark
	SIBR SC User Guide	Mar 05, 2024	\checkmark
	Publish Technical Specifications - CMRI	Dec 15, 2023	\checkmark
Tariff	First Draft Tariff Posting	Jun 02, 2023	\checkmark
	Second Draft Tariff Posting	Jul 11, 2023	\checkmark
	FERC Filing	Aug 22, 2023	\checkmark
	Receive FERC order – Acceptance in part	Dec 20, 2023	\checkmark
	Draft Compliance Filing Posting	Feb 05, 2024	\checkmark
	Compliance Filing	Feb 16, 2024	\checkmark
BPMs	Business Practice Summary (New)	Apr 25, 2024	\checkmark
	Post Draft BPM – Market Instruments	Apr 15, 2025	
	Post Draft BPM – Market Operations	Apr 15, 2025	
	Post Draft BPM – Settlements and Billing	Apr 15, 2025	
	Post Draft BPM – Definitions and Acronyms	Apr 15, 2025	
Implementation meeting	Implementation meeting	Aug 07, 2024	
External Training	External User Training	May 08, 2025	
Market Sim	Fall 2025 Release Market Simulation Plan	Jan 24, 2024	\checkmark
	Market Sim Scenarios	Aug 04, 2023	\checkmark
	Market Sim Window	Jun 02, 2025 - Aug 22, 2025	
Production Deployment	Day Ahead Market Enhancements (Inactive)	Oct 01, 2025	
Production Activation	Day Ahead Market Enhancements (Financially Binding)	May 01, 2026	



Extended Day Ahead Market (EDAM) Implementation

Project Information	Details/Date
High Level Business Problem or Need	The purpose of this initiative is to create a comprehensive extended day-ahead market that extends over multiple balancing authority areas (BAAs) participating in the Western Energy Imbalance Market (WEIM). EDAM is a voluntary day-ahead electricity market with the potential to deliver significant economic, environmental, and reliability benefits for participants across the West. EDAM will more efficiently and effectively integrate renewable resources and address the significant operational challenges presented by a rapidly changing resource mix, emerging technologies, and the impacts of climate change. EDAM will enable procurement of robust supply and flexible capacity that will position EDAM participants to effectively address changes in conditions from day-ahead to real-time, improving their response to potential reliability challenges. EDAM builds upon the proven ability of the WEIM to increase regional coordination, support state policy goals, and cost effectively meet demand.
High Level Project Scope	The EDAM design leverages existing features of the ISO day-ahead market that are common in other day-ahead markets across the country. The design also considers enhancements proposed in contemporaneous stakeholder initiatives that will harness flexibility across the larger footprint by incorporating an imbalance reserve product that will enhance price formation. EDAM introduces new products, imbalance reserve and reliability capacity, as well as new penalties, and a Resource Sufficiency Evaluation (RSE) surcharge.
BPM Changes	Definitions and Acronyms Energy Imbalance Market (EIM) Market Instruments Market Operations Settlements and Billing EDAM
Impacted Systems	MF, ALFS, ALFS-SOA, SIBR, RTSI, RTBS, BSAP, DAM (IFM and RUC), DA-RSE (new), RTM (RTPD and RTD), STUC, MPM, ITS, BARC, GHG Pass (new), Settlements, CMRI, OASIS, ADS, WebOMS, Internal ISO Systems



Extended Day Ahead Market (EDAM) Implementation

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board approval	Feb 01, 2023	
Boald Apploval	Publish External BRS v1.0	Aug 02, 2023	•
External BRS			×
	Publish External BRS v1.1	Dec 22, 2023	×
	Publish External BRS v1.2	Apr 25. 2024	×
	Publish External BRS v1.3	Aug 05, 2024	\checkmark
	Draft Tariff Language	Mar 30, 2023	√
	Revised Draft Tariff Language	Jun 08, 2023	\checkmark
	Updated Revised Draft Tariff Language	Jul 25, 2023	\checkmark
	FERC Filing	Aug 22, 2023	\checkmark
	Receive FERC order – Acceptance in part	Dec 20, 2023	\checkmark
Tariff	Requested effective date for tariff changes for EDAM agreements and onboarding provisions	Dec 21, 2023	\checkmark
	Draft Compliance Filing Posting	Feb 05, 2024	\checkmark
	Compliance Filing; accepted Apr 30, 2024	Feb 16, 2024	\checkmark
		10010,2024	
	Filing for EDAM access charge	Apr 12, 2024	1
	Receive FERC order accepting EDAM Access Charge Design (EDAM Tariff fully approved)	Jun 11, 2024	v
Settlements Config Guides	Post Draft Config Guides - First set of charge codes	Jan 16, 2024	√
	Post Draft Config Guides - Second set of charge codes	Mar 26, 2024	\checkmark
3	Post Draft Config Guides - Third set of charge codes & updates to First & Second sets	Aug 26, 2024	
	Publish Technical Specifications – RTSI	Dec 5, 2023	\checkmark
	Publish Technical Specifications – MF	Jan 4, 2024	\checkmark
	Publish Technical Specifications – SIBR	Mar 21, 2024	\checkmark
Tech Spec	Publish Technical Specifications – OASIS	Apr 12, 2024	\checkmark
Tech Spec	Publish Technical Specifications – CMRI	Apr 12, 2024	\checkmark
	Publish Technical Specifications – PLC	Jul 19, 2024	\checkmark
	Publish Technical Specifications – ALFS	NA	
	Publish Technical Specifications – OMS	NA	
BPMs	Business Practice Summary	Jul 10, 2024	1
	Post Draft BPM – Energy Imbalance Market (EIM)	00110,2024	
	Post Draft BPM – Market Instruments		
		TBD	
DEMIS	Post Draft BPM – Market Operations	TBD	
	Post Draft BPM – Settlements and Billing		
	Post Draft BPM – EDAM		
	Post Draft BPM – Definitions and Acronyms		
Market Sim	Fall 2025 Release Market Simulation Plan	Jan 24, 2024	V
	Market Sim Scenarios	Jan 29, 2024	\checkmark
	Market Sim Scenarios v1.1	Feb 15, 2024	\checkmark
	EDAM Onboarding Market Sim	Sep 01, 2025 – Jan 16, 2026	
Parallel Operations	Draft Parallel Operations Plan	Apr 15, 2024	\checkmark
, i permiting	EDAM Production Deployment - Inactive	Oct 01, 2025	
Production	EDAM Onboarding (Financially Binding) & Activation (Pacificorp & BANC)	May 01, 2026	
	EDAM Onboarding – PGE	Fall 2026	
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Extended Day Ahead Market BRS Revisions 1/3

- BRS v1.3 published 8/5/24
- Updated for the following
 - 1. Clarified RUC scope item
 - 2. Clarify ISO vs. EDAM BAA RSE participation rules
 - 3. Updates to GMC definition and configuration
 - 4. Added BRQ to define AS regions for each EDAM BAA
 - 5. Updates to account for new GMC definition for use in variable cost-based DEBs
 - 6. Changed EDAM Entity access of "clean bids" to "bid-in quantity"
 - 7. Added EDAM Entity submission of CRN entitlement updates
 - 8. RSE optimization shall run for entire EDAM footprint
 - 9. Clarifications/additional details regarding EDAM disruption rules
 - 10. Clarify constraint interactions in RUC
 - 11. Clarify hourly TSR award tagging as EDAM Entity Responsibility
 - 12. Clarification to change calculation of hourly DA forecasted movement from "resource specific" to "nodal, by SC"
 - 13. New EDAM Access Charge requirements
 - 14. Updated list of reports to be accessible to EDAM entity
 - 15. Example added to Appendix A8 support new EDAM Access Charge requirements
 - 16. Updates to Requirement type
 - 17. Updates to impacted systems
 - 18. Language/terminology alignment, updates, and clarifications



Extended Day Ahead Market BRS Revisions 2/3

BRS v1.3 published 8/5/24

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Section	Overview of Changes	Reason for Update	Updated	New	Removed
1.3 Scope	Clarified RUC scope item	Clarification			
	Clarify ISO vs. EDAM BAA RSE participation rules	Clarification	BRQ-02060		
5.1 Manage Model and Contract Implementation and Full	Updates to GMC definition	Align EDAM GMC definition with 2023 Cost of Service Initiative	BRQ-02180		
Netw ork Model (MF)	Added BRQ to define AS regions for each EDAM BAA	ISO SME Feedback		BRQ-02270	
	Updates to account for new GMC definition for use in variable cost-based DEBs	Align EDAM GMC definition with 2023 Cost of Service Initiative	BRQ-08040		
5.4 Manage Default Energy Bids	Requirement type changed from "Core" to "Existing"	ISO SME Feedback	BRQ-08132		
	Redundant/unnecessary requirement removed	Changes are covered under BRQ-08040		BRQ-08130	
	Removed RTBS as impacted system	ISO SME Feedback	BRQ-11058a		
5.5 Manage Bid Submission	 Removed AIM as impacted system Language clarification 	ISO SME Feedback	BRQ-11260		
(SIBR)	Changed EDAM Entity Access of "clean bids" to "bid-in quantity"	ISO SME Feedback	BRQ-11295		
	EDAM Entity submission of CRN entitlement updates	ISO SME Feedback		BRQ-11261	
5.6 Manage DAM Resource Sufficiency Evaluation (DA-RSE)	Removal of "TBD: or each BAA" for RSE optimization	ISO SME Feedback	BRQ-12090		
5.7 Manage DAM (DAM)	-Removal of Settlements as impacted system -Clarifications regarding EDAM disruption rules	ISO SME Feedback	BRQ-13052		
• · · /	Additional details for EDAM disruption procedure	ISO SME Feedback		BRQ-13052a	
5.8 Manage RUC	Clarify constraint interactions in RUC	ISO SME Feedback	BRQ-14020		
5.9 Manage agging DAM Schedules and Resupply	Clarify hourly TSR aw ard tagging as EDAM Entity Responsibility	ISO SME Feedback	BRQ-15050		
5.12 Mange Market Quality, Validation, and Price Correction	Clarification to change calculation of hourly DA forecasted movement from "resource specific" to "nodal, by SC"		BRQ-18140		

Extended Day Ahead Market BRS Revisions 3/3

BRS v1.3 published 8/5/24

Section	Overview of Changes	Reason for Update	Updated	New	Removed
	Updates to GMC configuration	Align EDAM GMC configuration with 2023 Cost of Service Initiative	BRQ-19298		
5.13 Manage Billing and Settlements	New EDAM Access Charge requirements	Developed updated BRQs to reflect FER-approved Tariff language		BRQ-19300, BRQ-19301, BRQ-19302, BRQ-19305, BRQ-19310, BRQ-19310a, BRQ-19310b, BRQ-19310c, BRQ- 19320, BRQ-19330, BRQ-19330a, BRQ-19330b, BRQ-19330c, BRQ- 19340a, BRQ-19340b, BRQ-19340c, BRQ-19350a, BRQ-19350b, BRQ- 19350c, BRQ-19360, BRQ-19361, BRQ- 19362, BRQ-19364, BRQ-19365	
	Removed "10 am"	Make requirements less prescriptive	BRQ-20050, BRQ- 20051, BRQ-20070		
5.14 Manage Market	Updated list of reports to be accessible to EDAM entity	ISO SME Feedback	BRQ-20054		
Reporting (CMRI, OASIS)	Changed requirement "movement" to requirement "transfer	ISO SME Feedback	BRQ-20082		
	Removed details	Make requirement less prescriptive	BRQ-20245		
	Detail added	ISO SME Feedback	MSISM-BRQ-2040		
Section 5.17 Market/Business	Changed "Entity" to "SC"	ISO SME Feedback	MSIM-BRQ-24120		
Simulation	Changed EDAM "Administrative Charge" to EDAM "GMC"	Policy/term alignment	MSIM-BRQ-24220		
Appendix A8: EDAM Access Charge Illustrative Example	Example added to support nev	v EDAM Access Charge requirements (See Section 5.13)		

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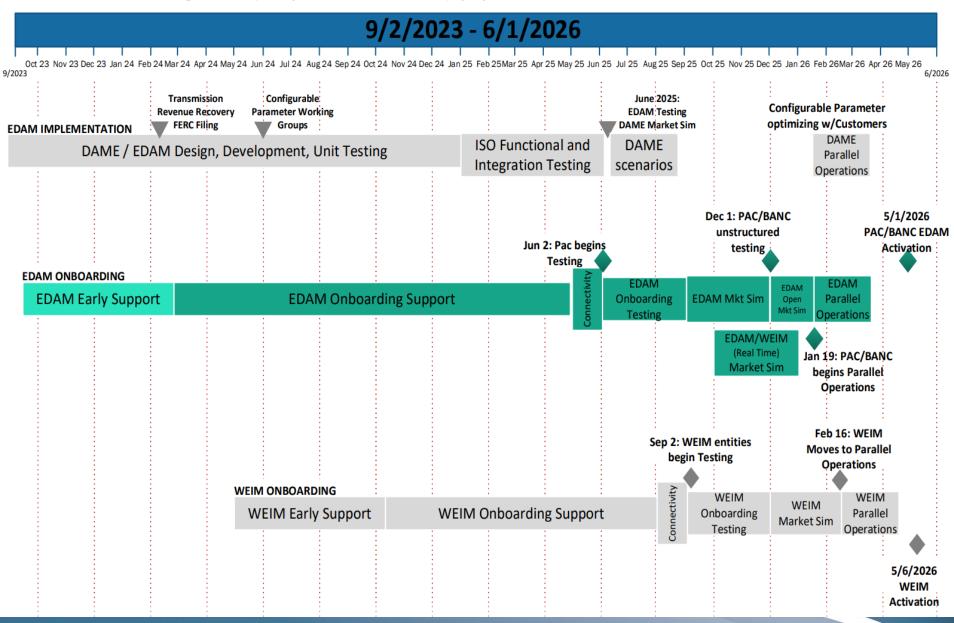
- Link to EDAM BRS v1.3 Redline
- Link to EDAM BRS v1.3 Clean
- Link to commenting tool for EDAM BRS v1.3

Comments due August 26, 2024 Reminder: Users must be registered in order to use the commenting tool

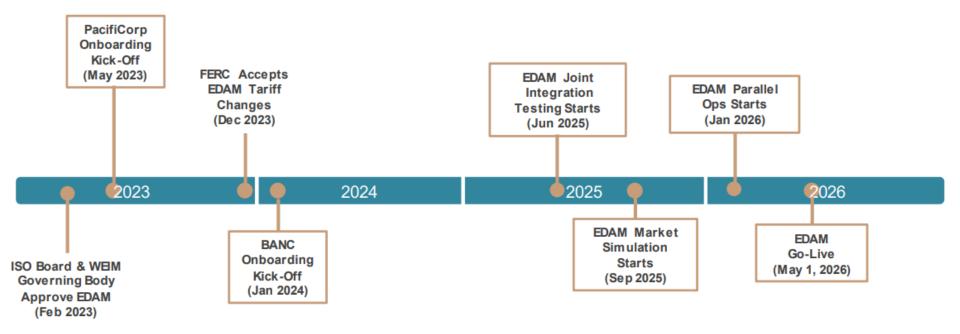


EDAM & DAME Activation May 1, 2026

1/24/2023 EDAM Onboarding Timeline (w/implementation and WEIM) - proposed



Key EDAM Onboarding Milestones to Date





Spring 2026 – EDAM ISO BAA Participation Rules Track A

Project Information	Details/Date
Policy Scope	The purpose of this initiative was to define the unique aspects of how the ISO Balancing Authority Area (BAA) will participate in the Extended Day-Ahead Market (EDAM). The policy addressed how to settle Transfer Resources and Transfer Revenue, the criteria to set ISO BAA's net EDAM Export Transfer constraint, how to allocate ISO BAA resource sufficiency evaluation (RSE) failure surcharges and revenues, and the process for calculated historical revenue recovery amounts.
Tariff Changes	 FERC Filing ER24-379 - Sections 11, 26, and 27 Approved Tariff Changes: To allow for the settlement of all Transfer System Resources in the CAISO BA. To allow for the settlement of EDAM Transfer revenue allocated to the CAISO BA, inclusive of EDAM Transfer revenue and EIM Transfer revenue To allow the CAISO BA to enable the Net EDAM Export Transfer Constraint, a voluntary, and optional, mechanism that each EDAM Balancing Authority may enable to preserve sufficient supply to meet its projected needs, while managing reliability based on conditions and circumstances anticipated within its balancing area. To allow an interim solution for the CAISO to distribute all CAISO BA revenues and surcharges for the EDAM RSE Failure Surcharge. Unapproved Tariff Changes (requires refiling): To set forth the calculations for the EDAM Historical Revenue Recovery amounts for transmission owners in the CAISO BA
High Level Project Scope	Based on current approved Tariff changes
Impacted Systems	Internal ISO Systems, Settlement configuration changes



Spring 2026 – EDAM ISO BAA Participation Rules Track A

	-		
Milestone Type	Milestone Name	Dates	Status
Policy Development	Track A1 Final Proposal Historical Recovery Revenue policy confirmation	Aug 31, 2023 Part of tariff work	\checkmark
Board Approval	Board approval	Sep 21, 2023	\checkmark
Tariff	Draft Tariff Language Revised Tariff Language FERC Filing (CAISO BA Participation in EDAM ER24-379) FERC Order (DAME/EDAM in ER23-2686): <i>didn't accept EDAM Access Charge</i> FERC Order (CAISO BA Participation in EDAM ER24-379): <i>acceptance in part, mooted</i> <i>Historical Recovery Revenue</i> FERC Filing (EDAM Access Charge ER24-1746) FERC Order (EDAM Access Charge ER24-1746): <i>acceptance</i> FERC Filing (Historical Recovery Revenue for ISO BAA)	Aug 25, 2023 Oct 11, 2023 Nov 13, 2023 Dec 20, 2023 Mar 7. 2024 Apr 12, 2024 Jun 11, 2024 TBD	
BRS	Publish BRS BRS <u>comment</u> period open thru Aug 02, 2024 05:00 pm (PT) Publish External BRS v1.n: <i>Clarifications, corrections, adding market simulation requirements</i> Publish External BRS v1.n: <i>Historical Recovery Revenue tariff dependency</i>	Jun 18, 2024 Closed TBD TBD	\checkmark
Settlement Config Guides	Post Draft Config Guides - second set of charge codes Post Draft Config Guides - Third set of charge codes & updates to First & Second sets Charge codes impacted by Historical Recovery Revenue	Mar 26, 2026 Aug 26, 2024 TBD	√
Tech Spec	Part of EDAM framework (if applicable)		
BPMs	Post Draft BPM – Congestion Revenue Rights Post Draft BPM – Definitions and Acronyms Post Draft BPM – Energy Imbalance Market (EIM) Post Draft BPM – EDAM Post Draft BPM – Market Instruments Post Draft BPM – Market Operations Post Draft BPM – Settlements and Billing Post Draft BPM – Transmission Planning Process	TBD	
External Training	Training	TBD	14
Market Sim	Coordinated with EDAM market sim	TBD	1
Production	EDAM Production Deployment - Inactive EDAM Onboarding (Financially Binding) & Activation	Oct 01, 2025 May 01, 2026	

Spring 2026 – WEIM BHE Montana

Project Info	Details/Date
Application Software Changes	System modifications as needed to accommodate any unique Berkshire Hathaway Energy Montana needs to support their WEIM onboarding.
BPM Changes	WEIM BPM will be updated if needed to reflect changes identified during the onboarding and as required to reflect the unique processes of Berkshire Hathaway Energy Montana.
Market Simulation	December 2025 thru January 2026
Parallel Operations	February 2026 thru March 2026

Milestone Type	Milestone Name	Dates
Market Sim	Market Sim Window	Dec 2025 thru Jan 2026
Parallel Operations	Parallel Operations	Feb 2026 thru Mar 2026
Tariff	File Implementation Agreement FERC acceptance of Implementation Agreement File Readiness Certification	 ✓ Mar 27, 2024 ✓ May 17, 2024 Mar 2026
Production	Activation	May 2026



Future Releases



Subscriber Participating Transmission Ownership Model Project Details/Date Information The Subscriber Participating Transmission Owner (Subscriber PTO) model is a new transmission development option available for transmission projects with generation development opportunities outside the CAISO balancing area to bring generation to meet California's policy initiatives. The model specifically supports CPUC generation portfolios required by the memorandum of understanding with the California State agencies and the CAISO. Accordingly, the Subscriber PTO model allows for additional transmission to be developed to connect the CAISO BAA with out-of-state generation that currently lack the necessary transmission to provide electricity to the CAISO BAA. The Subscriber PTO model thereby provides an option for projects not **High Level** chosen in the transmission planning process to solicit Subscribers who then pay for the project (generation and transmission) Business and join the CAISO balancing area. **Problem or** Need The new Subscriber PTO Model enables a subscriber PTO to develop its project without recovering the costs for its project through a transmission revenue requirement. At the same time, those who have paid for the project, *i.e.*, the subscribers, are exempt from congestion and other related costs on the subscriber PTO line because the subscribers will receive similar treatment and priority to existing contract rights holders (ETCs). Additionally, the Subscriber PTO model provides a mechanism for subscribers that financed the project and associated network upgrades the ability to receive reimbursement for those costs from non-subscribers that use the Subscriber PTO transmission facilities. Develop Subscriber PTO Model: account for a new PTO model that does not increase the Transmission Revenue Requirement (TRR) of the Transmission Access Charge / Wheeling Access Charge (TAC/WAC)) and provides those who funded the project ("subscribers") with Existing Transmission Contract (ETC) designation to account for their rights on the CAISO controlled arid Revise the TAC allocation process to fund the non-Subscriber usage payment amount ahead of allocation to the non-load serving PTOs Charge non-subscribers for use of the Subscriber PTO line the applicable non-subscriber usage rate (\$/MWH) **High Level** Create a mechanism that allows for the payment to the Subscriber PTO for non-subscriber usage of the Subscriber PTO Project transmission facility: Scope Compare the Non-Subscriber Usage rate(s) (\$/MWh rate approved by FERC) to the TAC rate and pay the Subscriber PTO the lower of the two values o Create a flag to denote when the Non-Subscriber Usage Rate is higher than the TAC rate and publish results in the ISO bill determinant file Indicate monthly gross exports and imports for Non-Subscriber usage of the Subscriber PTO transmission line o Indicate the TAC rate and the Non-Subscriber Usage Rate(s) as part of the Settlements TAC reports Develop methodology to address economic BAA to BAA transfers at new scheduling points created by Subscriber PTO transmission lines

Subscriber Participating Transmission Ownership Model

System	High Level Changes
BPM Changes	 Definitions and Acronyms Generator Interconnection and Deliverability Allocation Procedures Market Instruments Market Operations Reliability Requirements Settlements & Billing Transmission Planning Process
Tariff Changes	 Section 4: Roles and Responsibilities Section 16: Existing Contracts Section 24: Comprehensive Transmission Planning Process Section 25: Interconnection of Generating Units and Facilities Section 26: Transmission Rates and Charges Appendix A: Master Definition Supplement Appendix F: Rate Schedules Appendix DD: Generator Interconnection Deliverability Allocation Procedures
Impacted Syster	ns
MF	• Develop Subscriber PTO model: including new participant type, new TAC area, new UDC, new WAC rules, and mapping
CIRA	 Identify resources subject to MIC and stablish MIC at Sub PTO scheduling points/interties Define RA obligation
SIBR	Receive ETC designation and support bidding rules for subscriber generating resources (existing functionality)
ITS	 Consume new tie points and/or ITCs Add Subscriber PTO loss resource IDs to loss table
IFM/RTM	Calculate ASRSConsume all hourly MSSC values
Settlements/ DReAMS	 Develop new bill determinants Calculate financial loss return Apply existing ETC rules Update TAC/WAC revenue allocation process to include non-subscriber usage rate Update configuration guides and bill determinants Exclude Subscriber PTO UDC areas from UFE

Subscriber Participating Transmission Ownership Model

Milestone Type	Milestone Name	Dates	Status
Policy	Straw Proposal	Feb 13, 2023	\checkmark
	Draft Final Proposal	Apr 10, 2023	\checkmark
	Revised Draft Final Proposal	May 15, 2023	\checkmark
	Final Proposal	Jun 22, 2023	\checkmark
Tariff	First Draft Tariff Posting	Jun 22, 2023	\checkmark
	Second Draft Tariff Posting	August 08, 2023	\checkmark
Board Approval	Board approval	July 20, 2023	\checkmark
BRS	Publish BRS v1.0	Jul 26, 2024	\checkmark
Settlements Config Guides	Post Draft Configuration Guide	Yes	
Tech Spec	Publish Technical Specifications	Yes	
BPMs	Post Draft BPM – Definitions and AcronymsPost Draft BPM – Generator Interconnection and DeliverabilityAllocation ProceduresPost Draft BPM – Market InstrumentsPost Draft BPM – Market OperationsPost Draft BPM – Reliability RequirementsPost Draft BPM – Settlements and BillingPost Draft BPM – Transmission Planning Process	Yes	
Training	Training	Yes	
Market Sim	Market Sim Scenarios	Yes	
	Market Sim Window	Yes	
Deployment	Production Deployment	TBD	
Activation	Production Activation	TBD	





Settlement Upgrade Project

Jul 23, 2024

Settlement Upgrade Project – 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



Settlement Upgrade Project – 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 leverage the Settlement User Group and Technical User Group 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 and timely support to the market participants and their vendors during the testing phase.



Settlement Upgrade Project – Targeted Goals (continued)

- 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.



Settlement Upgrade Project – Status

- The ISO is reviewing the overall schedule for implementation. The current schedule is colliding with EDAM and DAME implementation.
- In order to allow customers to have the time to focus on the Settlement Upgrade Project, as well as EDAM and DAME, a new schedule will be developed.
- ISO will provide quarterly updates for the implementation for now and will ultimately increase the frequency of updates and the depth of information provided accordingly as we proceed
- The updates will be provided in the Release User Group and Settlement User Group
- To help ensure alignment of our communications between these two (2) forums, this same update was provided in the next Settlement User Group call
- The next Settlement Upgrade Project update will be in October 2024
- For comments or questions, please submit CIDI cases



Stay Informed



Ways to participate in releases

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



RUG Calendar 2024

	January						
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CAISO Holiday

RUG Forum



Contact

- tvo@caiso.com
- <u>release@caiso.com</u>
- CIDI
 - Functional Environment (Area)
 - "Release"
 - "Market Simulation"



REGISTRATION IS OPEN 2024 STAKEHOLDER SYMPOSIUM

Welcome reception - Oct. 29 at Kimpton Sawyer Hotel, Sacramento, CA Symposium program - Oct. 30 SAFE Credit Union Convention Center

Sacramento, CA

Visit the event website: www.reg.eventmobi.com/2024stakeholdersymposium

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