Release User Group Agenda

December 1, 2020 *10:00 a.m.–11:00 a.m.* *(Pacific Time)*

Web Conference Information	Conference Call Information
Web Address: https://caiso.webex.com/meet/RUG Meeting Number: 960 941 245 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.	Dial-in Number: 866-528-2256 International Dial-in: 216-706-7052 Access Code: 291 426 5
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.	

Release User Group Agenda

December 1, 2020 *10:00 a.m. – 11:00 a.m. (Pacific Time)*

Time	Topic	Facilitator
10:00 – 10:05	Agenda & ISO Roll call	Adrian Chiosea
10:05 – 10:45	Release Plan	Trang Vo Janet Morris Jeremy Malekos Rashele Wiltzius

The ISO offers innovative training programs

Date	Training courses and workshops
January 14, 2021	Welcome to the ISO (Webinar)
March 2-3, 2021 (9am – 12pm)	Intro to ISO Markets *(Virtual Workshop)*
March 9-10, 2021 (9am – 12pm)	Market Transactions *(Virtual Workshop)*
March 16-17, 2021 (9am – 12pm)	ISO Settlements *(Virtual Workshop)*
	Email us at CustomerReadiness@caiso.com for any training or readiness related questions

New Modules (recorded webinar and slides)

You can now find the following new initiatives training courses on the learning center web page:

- ADS Training Part 1 & 2
- DOT Tariff Clarification
- Excess Behind the Meter Production
- Flexible Ramping Product Refinements
- ESDER 3B
- FERC 841
- Market Settlements Timeline Transformation
- Intertie Deviation Settlement

CustomerReadiness@caiso.com

Computer Based Training

There are more than 20 computer based training modules on the ISO website covering: Markets and Operations, Settlements and Metering, Reference Materials, Western Energy Imbalance Market and more!

Visit our **Learning Center** web page to access our training calendar, register for courses and find other informational resources: http://www.caiso.com/participate/Pages/LearningCenter/default.aspx

Release Plan Summary: 2020

Independent 2020

Activation - Dec

- **Dec 1:** Hybrid Resources - Phase 1
- **Dec 10:** Aliso Canyon Phase 5
- **Dec 16:** Slow Demand Response

Activation– Jan 2021

- **Jan 1, 2021**
  - Nodal Pricing Model – Advisory Service for PacifiCorp - Settlements Effective Date
  - Intertie Deviation Settlement
  - EIM Enhancements Symmetrical Wheeling
  - Q4 Winter Release – Settlements
- **Jan 13, 2021**
  - Commitment Costs and Default Energy Bid Enhancements Phase 1
  - Energy Imbalance Market (EIM) Enhancements 2020

Fall 2020

Activation on Jan 1, 2021

- Excess Behind the Meter Production
- Market Settlement Timeline Transformation

Activation on Dec 16

- Dispatch Operating Target Tariff Clarifications
- ADS new features: DOTT, Unannounced AS Test, RTCD Commitment, Follow DOT Flag, Operating Instructions

Release Plan Summary: 2021 - 2022

Independent 2021

- FERC Order 831 - Import Bidding and Market Parameters – (BOG Sept 2020)
- System Market Power Mitigation Phase 1 (BOG Nov 2020 and implementation prior to Q3, 2021)
- Variable operations and maintenance cost review (BOG Nov 2020)
- Real-Time Settlement Review (BOG Dec 2020)
- Pseudo Ties for Shared Resources (JOU Modeling) – (BOG Nov 2020)

Spring 2021

- Energy Imbalance Market (EIM) 2021 - BANC Ph 2/WAPA
- Energy Imbalance Market (EIM) 2021 - Turlock Irrigation District
- Energy Imbalance Market (EIM) 2021 - Public Service Company of New Mexico
- Energy Imbalance Market (EIM) 2021 - North-Western Energy
- Energy Imbalance Market (EIM) 2021 - Los Angeles Dept. of Water and Power

Fall 2021 – tentative, subject to impact assessment

- Resource Adequacy (RA) Enhancements (BOG Q1 2021)
- Energy Storage and Distributed Energy Resources Phase 4 (BOG Oct 2020)
- Flexible Ramping Product Refinements (BOG Oct 2020)
- Hybrid Resources Phase 2 (BOG Nov 2020)
- Western EIM Sub-Entity Scheduling Coordinator Role (BOG May 2021)

Spring 2022

- Energy Imbalance Market (EIM) 2022 - Avista
- Energy Imbalance Market (EIM) 2022 – Bonneville Power Administration
- Energy Imbalance Market (EIM) 2022 – Tacoma Power
- Energy Imbalance Market (EIM) 2022 – Avangrid
- Energy Imbalance Market (EIM) 2022 – Xcel Energy - Colorado
- Energy Imbalance Market (EIM) 2022 - Tucson Electric Power

Fall 2023

- Day Ahead Market Enhancements (BOG 2021)
- Extend DA Market (BOG 2021)

Release Schedule 2020 - 2021

Date of Data Refresh: 11/30/2020

California ISO

Legend			
Market Simulation		CA ISO Holiday	
External Testing		Deployment Week	

	11/30/20 - 12/06/20	12/7/20 - 12/13/20	12/14/20 - 12/20/20	12/21/20 - 12/27/20	12/28/20 - 1/3/21	1/4/20 - 1/10/21	1/11/20 - 1/17/21	1/18/21 - 1/24/21	1/25/21 - 1/31/21	2/1/21 - 2/7/21	2/8/21 - 2/14/21	2/15/21 - 2/21/21	2/22/21 - 2/28/21	3/1/21 - 3/7/21	3/8/21 - 3/14/21	3/15/21 - 3/21/21	3/22/21 - 3/28/21	3/29/21 - 4/4/21	4/5/21 - 4/11/21	4/12/21 - 4/18/21	4/19/21 - 4/25/21	4/26/21 - 5/2/21	5/3/21 - 5/9/21	5/10/21 - 5/16/21	5/17/21 - 5/23/21	5/24/21 - 5/30/21	5/31/21 - 6/6/21	6/7/21 - 6/13/21	6/14/21 - 6/20/21	6/21/21 - 6/27/21	6/28/21 - 7/4/21	7/5/21 - 7/11/21
MAP Stage Environment Window																																
EIM Enhancements Symmetrical Wheeling - Market Sim	EIM Enhancements Symmetrical Wheeling - Market Sim (11/17-12/18)																															
EIM Enhancements 2020 (CMRI) - Market Sim		EIM Enhancements 2020 - Market Sim (12/15-12/29)																														
CCDEBE Phase 1 (New SIBR Rules) - Market Sim	CCDEBE Phase 1 - Market Sim (12/03-12/18)																															
Intertie Deviation Settlement - Market Sim	Intertie Deviation Settlement - Market Sim (12/01-12/18)																															
EIM - BANC Phase 2 / WAPA - Market Sim	EIM - BANC Phase 2 / WAPA - Market Sim (11/03-01/31)																															
EIM - Public Service Company of New Mexico - Market Sim	EIM - Public Service Company of New Mexico - Market Sim (11/03-																															
EIM - Los Angeles Dept. of Water & Power - Market Sim	EIM - Los Angeles Dept. of Water & Power - Market Sim (11/03-01/31)																															
EIM - Turlock Irrigation District - Market Sim	EIM - Turlock Irrigation District - Market Sim (11/03-01/31)																															
EIM - North-Western Energy - Market Sim	EIM - North-Western Energy - Market Sim (12/01-01/31)																															
Production Environment Window																																
Hybrid Resources Phase 1	Hybrid Resources Phase 1 (12/01)																															
Aliso Canyon 5		Aliso Canyon 5 (12/10)																														
ADS - Activation of New Features			ADS - Activation of New Features (12/16)																													
Dispatch Operating Target Tariff Clarification			Dispatch Operating Target Tariff Clarification (12/16)																													
Slow Demand Response			Slow Demand Response (12/16)																													
Settlements Q4/Winter Release Effective Trade Date				Settlements Q4/Winter Release Effective Trade Date (01/01)																												
Excess Behind the Meter Production Activation Effective Trade Date				Excess Behind the Meter Production Activation Effective Trade Date																												
Market Settlement Timeline Transformation Activation Effective Trade Date				Market Settlement Timeline Transformation Activation Effective Trade Date (01/01)																												
Intertie Deviation Settlement				Intertie Deviation Settlement (01/01)																												
EIM Enhancements Symmetrical Wheeling				EIM Enhancements Symmetrical Wheeling (01/01)																												
EIM Enhancements 2020					EIM Enhancements 2020 (01/13)																												
CCDEBE Phase 1 Activation					CCDEBE Phase 1 Activation (01/13)																												
Nodal Pricing Model Settlements Effective Date				Nodal Pricing Model Settlements Effective Date (01/01)																												
Nodal Pricing Model Activation					Nodal Pricing Model Activation (01/15)																												
ADS - Decommission of Old ADS client, API v6						ADS - Decommission of Old ADS client, API v6 (02/01)																										
EIM - BANC Phase 2 / WAPA																		EIM - BANC Phase 2 / WAPA (03/25)														
EIM - Turlock Irrigation District																		EIM - Turlock Irrigation District (03/25)														
EIM - Public Service Company of New Mexico																												EIM - Public Service Company of New Mexico (04/01)				
EIM - Los Angeles Dept. of Water & Power																												EIM - Los Angeles Dept. of Water & Power (04/01)				
EIM - North-Western Energy																												EIM - North-Western Energy (04/01)				

http://www.caiso.com/Documents/ReleaseSchedule.pdf

2020 Independent

2020 – Hybrid Resources Phase 1

Project Info	Details/Date
Application Software Changes	**Scope:** Phase 1 of the Hybrid Resource Initiative will introduce co-located resources which are two or more resources sharing the same point-of-interconnection to the grid. In cases where the interconnection capacity is below the maximum aggregate output of the co-located resources, an aggregate capability constraint (ACC) will be modeled to ensure the total dispatch of the ACC's associated resources are within its maximum and minimum limits. The markets will support co-located resources for ISO and EIM (participating and non-participating) resources. Hybrid Resources will be introduced at a later time in Phase 2 of the initiative. **MasterFile:** Enhance to include Co-Located Status, Aggregate Capability Constraint Limits **IFM, RTM:** Enhance market model to optimize energy dispatch for co-located resources behind a generation capability nomogram constraint. Add ISO and EIM Operator display for ACC limit override (allowing reduction of ACC limits for a fixed time). Add energy congestion management logic to create and enforce POI limit constraints. **Price Corrections Tool** (internal to ISO)**:** Price correction logic will reflect the Point-of-Interconnection (POI) pnode LMP as the price for co-located resources. **ALFS:** Time periods where co-located VER are operating with negative supplemental DOT will be excluded from data forecast model training by ISO-provided FSP.
BPM Changes	Definitions and Acronyms, Energy Imbalance Market, Generator Management, Market Instruments, Market Operations, Metering, Reliability Requirement
Tariff Changes	Tariff amendments will define Aggregate Capability Constraint, Co-Located Resources, Point of Interconnection. Phase 1 interim will not support Ancillary Services for co-located resources (will be supported in future).

2020 – Hybrid Resources Phase 1

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	Jul 22, 2020	✓
External BRS	Milestone: Post External BRS	Jul 17, 2020	✓
Config Guides	Post Draft Config. Guides	N/A	
Tech Spec	Create ISO Interface Spec (Tech spec)	N/A	
Tariff	Draft Tariff	Jun 18, 2020	✓
BPMs	Post Draft BPM changes for review	Oct 20, 2020	✓
External Training	Deliver External Training	Oct 20, 2020	✓
Market Sim	Market Sim Window	Oct 26 – Nov 13, 2020	✓
Production Activation	Hybrid Resources Phase 1	Dec 1, 2020	

2020 – Aliso Canyon Ph5

Project Info	Details/Date
Application Software Changes	**Scope**: This project will consider enhancements to the existing Dynamic Competitive Path Assessment (DCPA) and Gas Nomogram capabilities currently in production. **IFM/RTN**: Formulate and solve the linear programming problem for maximizing the Residual Supplier Index (RSI) for each binding constraint that DCPA is applied. **SMDM:** Enhance the User Interface to include "All Markets" when the user is defining "Market" within the Curtailment to Process section. **SMDM:** Creation of error message if the RT curtail type "incremental" or "absolute" are used and total curtailment is left null.
BPM Changes	• Managing Full Network Model • Market Operations
Tariff Changes	• N/A

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval - NO BOG Needed	N/A	
External BRS	Post External BRS	May 05, 2020	✓
Config Guides	Post Draft Config Guides	N/A	
Tech Spec	Publish Technical Specifications	N/A	
Tariff	File Tariff	N/A	
BPMs	Post Draft BPM changes	Jul 17, 2020	✓
External Training	Deliver External Training	N/A	
Market Sim	Market Sim Window	N/A	
Production Activation	Aliso Canyon Phase 5	Dec 10, 2020	

2020 – Slow Demand Response

Overview

Following up on Proxy demand resource - resource adequacy clarifications policy initiative

The Master File GRDT (Generator Resource Data Template) will be updated with a new field called "SLOW DR" (GRDT v14).

- Field will be populated with Y, N or NULL
  - YES means the PDR or Curtailment LSR resource has been designated "slow"
  - NO means the PDR or Curtailment LSR resource has NOT been designated "slow" and
  - NULL means the resource is neither a PDR nor a Curtailment LSR

A resource is designated "slow" when it meets one or both of the following criteria:

- Startup + ramp is greater than 20 minutes to reach PMAX, or
- A bid dispatchable option of Hourly or 15 minute has been elected by the resource (this is done through a GRDT request)

"SLOW DR" will be a read-only field for Market Participants, indicating the resource met one or both of these criteria.

The Market Instruments BPM Attachment B will be updated to add the definition of the slow demand response resource designation.

For PDR or PDR_LSR where BID_DISP_OPT >= 15 or startup time plus ramp time to Pmax >= 20

Project Info	Details/Date
Application Software Changes	• Master File
BPM Changes	• Market Instruments Attachment B: Slow Demand Response resource definition
Tariff Changes	• No

See Frequently Asked Questions – Slow Demand Response

At www.caiso.com\Stay Informed\Release Planning\Independent 2020\Slow Demand Response

Activation anticipated December 16, 2020. ISO will communicate in advance the actual activation date.

2020 – Nodal Pricing Model – Advisory Service for PacifiCorp

Project Info	Details/Date
Reference	Reference – ISO market notice from Dec 18, 2019 – see: Stay Informed\Meetings and Events\Miscellaneous stakeholder meetings\Previous Meetings\2019 meetings\PacifiCorp nodal pricing model service informational call - Dec 18,2019 or http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=E8304346-54B9-4473-9E45-9C282AAD1340 Reference - NPM FERC filing http://www.caiso.com/Documents/Dec20-2019_NodalPricingModelAgmt_CAISO-PacifiCorp_ER20-664.pdf#search=NPM
Excerpt from the market notice:	"The California ISO is hosting an informational stakeholder call on Dec. 18, 2019, to discuss an agreement that it intends to file with Federal Energy Regulatory Commission (FERC) that will provide PacifiCorp with an advisory nodal pricing model (NPM) service. Information related to this effort available on the ISO website at http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx. This service will produce separate advisory day-ahead nodal pricing results for locations within PacifiCorp's balancing authority areas, without a financial settlement or impact to the ISO's day-ahead market. PacifiCorp will pay the ISO's estimated cost to provide the service. PacifiCorp plans to use the NPM solution results as the basis for its power cost allocation among the states within which it provides retail electric service, consistent with the recently filed inter-jurisdictional cost allocation agreement."

Milestone Type	Milestone Name	Dates	Status
Tariff	FERC Approval	Feb 28, 2020	✓
Config Guides	Publish Config Guide	Aug 10, 2020	✓
External Training	External training	Sep 03, 2020	✓
Market Sim	Market Sim Window	Oct 06, 2020 - Nov 13, 2020	✓
Production Activation	Day Ahead Nodal Pricing Model	Jan 15, 2021	

2020 – Intertie Deviation Settlement

Project Info	Details/Date
Application Software Changes	**Scope:** Implement a new Under/Over Delivery Charge for intertie deviations from Market Schedule and After-The-Fact (ATF) E-Tag, to replace Decline charge **Impacted Systems:** **Settlements** • Calculate FMM binding intertie award, exclude Curtailment, calculate under/over delivery quantity as deviation of schedule and ATF E-Tag, Charge under/over delivery Charge at 50% of RTD LMP. • Remove the decline charge calculation and Decline Threshold • Allocate Over/Under delivery charge to measured demand **ADS** - display the HASP schedule, the scheduling coordinator accepted value, and the difference between the two **RTM** - determine the 15-minute binding award for hourly intertie resources based on the E-Tag at T-40.
BPM Changes	Settlements and Billing
Tariff Change	Section 11.32

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	Feb 07, 2019	✓
External BRS	Post External BRS	Mar 02, 2020	✓
Config Guides	Post Revised Config Guides	Aug 10, 2020	✓
Tech Spec	Publish Technical Specifications	N/A	
Tariff	Tariff Activities	May 22, 2020	✓
BPMs	Settlements and Billing Market Operations	Aug 10, 2020	✓
External Training	Deliver External Training	Sep 29, 2020	✓
Market Sim	Market Sim Window	Dec 1 – Dec 18, 2020	
Production Activation	Intertie Deviation Settlement	Jan 1, 2021	

2020 – EIM Enhancements – Symmetrical Wheeling

Project Info	Details/Date
Application Software Changes	**Scope**: This project will allow EIM to settle Base ETSR attributes to support Base ETSR Imbalance Energy settlements between two EIM BAAs at a mutually agreed price. The enhancement is for base ETSR price setting to result in symmetrical settlement of wheeling through EIM BAAs enhancement. **RTM:** Update LMP price setting for Base ETSRs to be associated with From BAA of the Base ETSRs and retire split ratio price setting **MasterFile:** Retire the definition of the Base ETSR split ratio and From/To financial location. **Settlements**: Update formulation of Base ETSR export/import in Real Time Congestion Offset EIM and Real Time Marginal Losses
BPM Changes	• Energy Imbalance Market (EIM)
Tariff Changes	• N/A

Milestone Type	Milestone Name	Dates	Status
External BRS	Post External BRS	Oct 2, 2020	✓
Config Guides	Post Draft Config Guides	Sep 29, 2020	✓
Tariff	File Tariff	N/A	
BPMs	Post Draft BPM changes	N/A	
External Training	Deliver External Training (EIM Settlements webinar)	Dec 15, 2020	
Market Sim	Market Sim Window	Nov 17, 2020 –Dec 18, 2020	
Production Activation	EIM Enhancements Symmetrical Wheeling	Jan 1, 2021	

Settlements Q4/Winter Release

Release Scope:

- Day Ahead Nodal (NPM project)
- Intertie Deviation Settlement (IDS)
- EIM Enhancement: Symmetrical Wheeling
- Production defects as noted in release component SUG email

Release Milestones as follows:

- 1st draft technical documentation posted = **8/10**
- 1st draft configuration output file + initial release component summary posted = **8/25**
- 2nd draft configuration output file + 2nd draft tech docs + updated release component summary posted = **9/14**
- 3rd draft configuration output file (pre market sim) posted = **10/8**
- Unplanned draft configuration output file posted - **10/29**
  - IDS calc granularity change from MW to MWh
- Deployed to MAP-Stage = **10/6**
- Pre-prod configuration output file + release artifacts to post - **12/9**
- Production deployment - **12/16**

Winter 2020 settlements release draft settlements technical documentation:
http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=EF90CE68-D8D0-43F7-8052-04FBE1D0825B

2020 – Commitment Cost and Default Energy Bid Enhancements Ph1

Project Info	Details/Date
Application Software Changes	**Scope:** Enhances the ability to submit market-based commitment cost bids in order to reflect unique costs and volatility: • Ex-ante cost adjustment requests • Reference Level Adjustments to default commitment cost bids (start-up and minimum load costs) and default energy bids • Make Day Ahead Market process permanent • Make D+2 Process permanent • Use of indices clarification, and Monday Only in DAM and RTM, per LMPME • Conditionally Available Resources (CAR) **Impacted Systems:** • SIBR: Allow the submittal of Ex Ante cost adjustments. • CMRI: Provide additional source information for default bids. Submit requests through CIDI for manual consultation and ex-post default bid adjustments.
BPM Changes	• Market Instruments • Market Operations
Business Process Changes	• Maintain Major Maintenance Adders (MMG LIII) • Maintain Negotiated Default Energy Bids (MMG LIII) • Maintain Negotiated O_Ms (MMG LIII) • Manage Day Ahead Market (MMG LII) • Manage Market Billing Settlements (MOS LII) • Manage Real Time Hourly Market (RTPD) (MMG LII) • Manage Real Time Operations – Maintain Balance Area (MMG LII)

2020 – Commitment Cost and Default Energy Bid Enhancements Ph1

Milestone Type	Milestone Name	Dates	Status
Draft Policy	Publish Draft Business Rules externally	Jan 31, 2018	✓
Board Approval	Obtain Board of Governors Approval	Mar 22, 2018	✓
External BRS	Publish External BRS v1.5: implementation notes & clarifications (BRQ046, BRQ035/335), Generic Hub GPI update	Sep 03, 2019	✓
	Revised BRS v1.6: added clarifications and notes	Sept 14, 2020	✓
Config Guides	Config Guide	N/A	
Tech Spec	Publish Technical Specifications	May 17, 2019	✓
	Publish Technical Specification updates for CARs and Electric Pricing Hub weighting	Jun 28, 2019	✓
Tariff	Collect stakeholder comments	Feb 21, 2020	✓
	Draft tariff conference call with stakeholders	Feb 27, 2020	✓
	Stakeholder call to review CCDEBE draft tariff re-filing	May 20, 2020	✓
	Publish updated draft tariff (reflecting 20-May feedback)	Jun 05, 2020	✓
	Refile CCDEBE tariff	Jul 09, 2020	✓
BPMs	Publish draft Market Instruments: Attachment O on CCDEBE Stakeholder Processes page	Oct 04, 2019	✓
	PRR 1203 published: CCDEBE updates to Market Instruments BPM, incl. Attachment O	Oct 18, 2019	✓
External Training	Deliver External Training	Oct 08, 2019	✓
	Finalize external training material	Oct 04, 2019	✓
Market Sim	Market Sim Window	Oct 14, 2019 - Dec 03, 2019	✓
	Market Sim Window – New SIBR rules	Dec 3, 2020 – Dec 18, 2020	
Production Activation	CCDEBE Phase 1	Jan 13, 2021	

2020 – EIM Enhancements 2020

BAAOP

- Allow EIM entity override activation for the contingencies up to 15 in NA contingency list
- Add visibility of other adjacent BAA's ETSR locks and reasons
- Add Static ETSR transfer data to RTD Dispatch Control Display (ETSR tab). Add Static ETSR transfer data to BAAOP ETSR Detail Display (in RTD)
- In RTD/RTPD Dispatch Control display, in Dispatch Instruction Review table, add columns for UP and DN remaining ramp capacity (5/15 minute respectively). In addition, include the sum of these columns at bottom of table. Example Calculation: RTD UP Ramp = MIN(5MinRampRate, [UpperLim-CurrentDispatch].
- Add Supplemental DOT to VER resources to Dispatch Control displays; Detail: In BAAOP RTD/RTPD Dispatch Control, add SUPP DOT column
- Fix the functionality for Manual Dispatches - users should be able to utilize MSG functions, such as designating a specific configuration, and users should be able to do commitment override
- EIM Entities have a notification status of market inputs, showing if BAAOP received the latest payload of critical market inputs. Example Critical data submissions: (not all inclusive
- Fix/Improve SVG One Lines. Request to be able to view SE and telemetry values for all substation flows and elements

BSAP

- Add Manual Dispatch information to BSAP Resource Bal Viewer. Add any applicable deviations that used in the test to BSAP BAA Bal Viewer.
- For the Bid Range Capacity Test Results report, Requirement Amount Column needs to publish the true requirement, not just the INCREMENTAL/DECREMENTAL requirement

RTM

- Publish the effective ETSR import and export limits for the market run for RTPD and RTD
- Support Pump Storage for EIM BAAs
- Publish the effective load conforming for the market run for RTPD and RTD for Binding and Advisory
- Publish the data of the MW infeasibility data and ABC Up and Down Dispatches of RTPD/RTD

CMRI

- Display and publish, download the data of the MW infeasibility data and ABC Up and Down Dispatches of RTPD/RTD
- For the Bid Range Capacity Test Results report, Requirement Amount Column needs to display and publish, download the true requirement, not just the INCREMENTAL/DECREMENTAL requirement. Only upstream has changes with regards to the data that is sends to CMRI.
- Display and publish, download the data of the effective load conforming for the market run for RTPD and RTD for
    1. CMRI Load Conforming Binding rpt
    2. CMRI Load Conforming Advisory rpt

2020 - EIM Enhancements 2020 (cont.)

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	N/A	
External BRS	Milestone: Post External BRS	Mar 24, 2020	✓
Tech Spec	Create ISO Interface Spec (Tech spec) CMRI tech spec 1. MW Infeasibility Report 2. Load Conforming Report 3. Available Balance Capacity (ABC) Up and Down Dispatch Report by Resource 4. Advisory Load Conforming Report	 May 29, 2020 May 29, 2020 Jul 1, 2020 Aug 5, 2020	✓ ✓ ✓ ✓
Tariff	File Tariff	N/A	
BPMs	Draft BPM changes - Market Instruments – PRR 1281	Aug 31, 2020	✓
External Training	Deliver External Training – coordinate via customer readiness EIM ops mtg	Aug 31, 2020 – Oct 22, 2020	✓
Market Sim	Market Sim Window - unstructured CMRI	Dec 15, 2020 – Dec 29, 2020	
Production Activation	EIM Enhancements 2020	Jan 13, 2021	

OMS Roadmap for 2020-2021

Release	Major Changes	Participant	MAPStage	Production
October	Remove defaulting discovery date - For retro-active outages submit discovery date. - Handle no discovery date if not previously submitted.	All	✓ 11/05/2020	1/11/2021
	Aggregate Resource Outage retrieve results changes - Handle receiving only parent and impacted children.	All		
	Transmission Retrieve Changes - If moving to new version (= 10012020), consume new XSD and handle receipt of multiple change requests.	All		
	Retrieve Resource/Transmission outage change request - Limiting to 50 - Disable querying with participant ID & Date Range. - Query by Outage ID, Change request ID and Equipment ID/Resource ID	All		

OMS Roadmap for 2020-2021

Release	Major Changes	Participant	MAPStage	Production
November	TOP Calculations for shared equipment - Based on participant ID TOP attribute will be comma separated TOPs.	All	12/18/2020	02/15/2021
	Communication and RAS changes - Handle Providing these flags for Nature of Work for communication and Relay work. - RAS flags - UI change (RAS/SPS Out of Service, RAS/SPS Reduced Redundancy, Protection Zone, EMS/ICCP Outage) will be changed from Y/N to Y/N/NA(Undefined or Null)	All		
December	Significant Outage flag determination. - Flag will be displayed in the version history of the outage - Please see May 2020 - CPG slide deck for more details.	All	02/19/2021	04/19/2021

2020 - System Interface Changes

OMS					
Project	**Service**	**Summary**	**Tech Spec**	**MAP Stage**	**Production**
N/A	RetrieveResourceOutageChangeRequest_OMSv2_AP & DocAttach RetrieveResourceOutageChangeRequest_OMSv2_DocAttach_AP RetrieveResourceOutageChangeRequest_OMSv3_AP RetrieveResourceOutageChangeRequest_OMSv3_DocAttach_AP RetrieveTransmissionOutageChangeRequest_OMSv2_AP RetrieveTransmissionOutageChangeRequest_OMSv2_DocAttach_AP RetrieveTransmissionOutageChangeRequest_OMSv3_AP RetrieveTransmissionOutageChangeRequest_OMSv3_DocAttach_AP	• Performance Improvements: • Retrieve up to 50 outages by querying on outage ID) • Retrieve based on Change Request ID • Retrieve based on Equipment ID • Removed capability of querying by participant ID • Recommended use to sync data	✓ **8/11/20, v2.1**	✓11/5/2020	1/11/2021
N/A		• WebOMS system will not default the discovery date	✓ **8/11/20, v2.1**	✓11/5/2020	1/11/2021
N/A	SubmitResourceOutage_OMSv2_AP SubmitResourceOutage_OMSv2_DocAttach_AP SubmitResourceOutage_OMSv3_AP SubmitResourceOutage_OMSv3_DocAttach_AP	• Changes to aggregate resource outage submission for performance improvement • Submit de-rate for parent resource (required) and only the impacted child resources • Retrieve results will not be include (for both v2 and v3 services) child resources that have no curtailment • Parent resource availability points need not match with child resources' but will remain within the overall outage start and end date span • Child resource outages can be added to existing outage if the outage has not commenced • UI display and retrieve results for historical outages will be modified to support this model • Changes are being done to enhance webOMS performance	✓ **8/11/20, v2.1**	✓11/5/2020	1/11/2021

2020 - System Interface Changes

OMS					
Project	**Service**	**Summary**	**Tech Spec**	**MAP Stage**	**Production**
N/A	RetrieveTransmissionOutage_OMSv3_AP RetrieveTransmissionOutage_OMSv3_DocAttach_AP	• If Version Tag =v20201001, return all outage requests • If Version Tag <>v20201001, return a single request	✓ **8/11/20, v2.1**	12/18/2020	02/15/2021
N/A		• Auto-acceptance of non-significant changes	✓ **8/11/20, v2.1**	12/18/2020	02/15/2021

N/A		• Handling shared equipment
		  • Lists all valid TOPs
		  • Allow retrieval by all TOPs
			✓ **8/11/20, v2.1**	12/18/2020	02/15/2021

N/A	RetrieveResourceOutage_OMSv3_AP
	RetrieveResourceOutage_OMSv3_DocAttach_AP
	RetrieveTransmissionOutage_OMSv3_AP
	RetrieveTransmissionOutage_OMSv3_DocAttach_AP
	SubmitResourceOutage_OMSv3_AP
	SubmitResourceOutage_OMSv3_DocAttach_AP
	SubmitTransmissionOutage_OMSv3_AP
	SubmitTransmissionOutage_OMSv3_DocAttach_AP
		• Remedial Action Scheme (RAS) Changes
		  • Modeling for 4 RAS Flags will be modified: RAS/SPS Out of Service, RAS/SPS Reduced Redundancy, Protection Zone, EMS/ICCP Outage
		  • API validation changes are to require the submission of these flags for Nature of Work 'COMMUNICATION' or 'RELAY WORK'.
		  • API submission will continue to take in a 'Y' or 'N' for these flags.
		  • Changes will be made to validate to only v3 services (submit and retrieves)
		  • No changes to v2 services
		  • No Changes to historical outages
			✓ **8/11/20, v2.1**	12/18/2020	02/15/2021

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2020 - System Interface Changes - CCDEBE1 - Pending Activation

SIBR					
Project	**Change Type**	**API Service Name & Major Version, Artifacts**	**MAP Stage**	**Production**	**Technical Specifications**
CCDEBE1	Modify	RetrieveCleanBidSet_SIBRv5_AP RetrieveCleanBidSet_SIBRv5_DocAttach_AP	✓ 10/16/19	✓ Deploy 3/26/20 Activation 1/13/2021	13.2
CCDEBE1	Modify	RetrieveCurrentBidResults_SIBRv5_AP RetrieveCurrentBidResults_SIBRv5_DocAttach_AP	✓ 10/16/19	✓ Deploy 3/26/20 Activation 1/13/2021	13.2
CCDEBE1	Modify	SubmitRawBidSet_SIBRv5_AP SubmitRawBidSet_SIBRv5_DocAttach_AP	✓ 10/16/19	✓ Deploy 3/26/20 Activation 1/13/2021	13.2

CMRI						
Project	**Change Type**	**UI**	**API Service Name & Major Version, Artifacts**	**MAP Stage**	**Production**	**Technical Specifications**
LMPME CCDEBE1	Modify	Tab: Default Bids Existing Report: Default Energy Bid Curves	RetrieveDefaultBidCurves_CMRIv2_AP RetrieveDefaultBidCurves_CMRIv2_DocAttach_AP	LMPME ✓ 9/12/19 CCDEBE1 ✓ 11/6/19	LMPME ✓ 11/13/19 CCDEBE1 ✓ Deploy 3/26/20 Activation 1/13/2021	3.9.4 Release Notes 1.2
CCDEBE1	Modify	Tab: Default Bids Existing Report: Default Commitment Costs	RetrieveExternalDefaultCommitmentCost_CMRIv1_AP RetrieveExternalDefaultCommitmentCost_CMRIv1_DocAttach_AP	✓ 11/11/19	✓ Deploy 3/26/20 Activation 1/13/2021	3.9.4 Release Notes 1.2

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2020 - System Interface Changes

CMRI					
Project	**Change Type**	**Summary**	**Technical Specifications**	**MAP Stage**	**Production**
N/A	Decom	Decommission of deprecated versions	✓ **8/5/20, v3.9.7**	12/15/20	1/13/21
EIM2020	New	RetrieveEIMInfeasibility_CMRIv1_AP RetrieveEIMInfeasibility_CMRIv1_DocAttach_AP	✓ **8/5/20, v3.9.7**	12/15/20	1/13/21
EIM2020	New	Available Balance Capacity	✓ **8/5/20, v3.9.7**	12/15/20	1/13/21
EIM2020	New	RetrieveLoadConforming_CMRIv1_AP RetrieveLoadConforming_CMRIv1_DocAttach_AP	✓ **8/5/20, v3.9.7**	12/15/20	1/13/21
EIM2020	New	Advisory Load Conforming	✓ **8/5/20, v3.9.7**	12/15/20	1/13/21

BSAP					
Project	**Change Type**	**Summary**	**Technical Specifications**	**MAP Stage**	**Production**
N/A	Modify - XSD minor version only	RetrieveBalancingTestResults_BSAPv2 RetrieveBalancingTestResults_BSAPv2_DocAttach Add minor version 20201001 (currently 20191001)	✓ **10/23/20, v1.7.5**	November 2020	TBD

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2020 Fall Release

Fall 2020 Release – Overview

	BOG	BRS	Config Guide	Tech Spec	Mkt Sim Scenarios	Draft Tariff**	Draft BPMs	Training	Market Sim	Production Activation
Fall 2020 Release		**04/01/20**	**05/29/20**	**05/29/20**	**05/29/20**	**06/26/20**	**07/20/20**	**07/20/20**	**Jul 27, 2020 - Sep 4, 2020**	**10/01/20**
ADS UI Replacement **Add'l features activation**	*N/A*	08/06/18	*N/A*	05/22/20	05/29/20	*N/A*	07/23/20	06/01/20 06/11/20 07/16/20	Jul 27, 2020 - Sep 04, 2020	10/20/20- 10/21/20 12/16/20
Dispatch Operating Target Tariff Clarification	07/26/18	12/26/18 04/30/20	*N/A*	05/22/20	05/29/20	09/04/18	07/23/20	07/16/20	Jul 27, 2020 - Sep 04, 2020	12/16/20
Excess Behind the Meter Production	11/17/18	02/27/20 04/16/20	05/28/20	05/29/20	06/12/20	11/04/19	07/20/20	07/21/20	Jul 27, 2020 - Sep 18, 2020	01/01/21 (TD)
Market Settlement Timeline Transformation	11/14/19	02/06/20	6/26/20 - *Documentation Only*	05/29/20	06/12/20	5/19/20	07/20/20	07/20/20	Jul 27, 2020 - Sep 18, 2020	01/01/21 (TD)

Fall 2020 Release - System Interface Changes - Pending Activation

OASIS					
Project	**Change Type**	**Summary**	**Technical Specifications**	**MAP Stage**	**Production**
EBTMP	New	ENE_EBTMP_PERF_DATA	✓ **6/22/20, v5.1.14**	7/28/20	Activation 1/1/21

MRI-S					
Project	**Change Type**	**Summary**	**Technical Specifications**	**MAP Stage**	**Production**
EBTMP	Modify	For: - MRIS Meter: Submit Meter & - MRIS Meter: Retrieve Meter additionally include EBtMP measurement type values (as negative load) both Gross Load and EBtMP meter data would associate with same Load Resource ID	✓ **5/28/20, v2.5**	7/28/20	Activation 1/1/21

Fall 2020 – ADS Replacement

Project Info	Details/Date
Application Software Changes	• Transition to web-based user interface to eliminate the need to install thick client • Transition ADS provisioning to the Access and Identity Management (AIM) application including Resource Level Access Controls (RACL) access • The query tool will not change in requesting historical data • Various user interface enhancements adding content per Operation's request • ADS B2B services changes
BPM Changes	• Market Instruments • Market Operations

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	N/A	
External BRS	Post External BRS	Aug 06, 2018	✓
ADS Update	ADS Update Meeting	Aug 15, 2018	✓
ADS Demonstration	ADS WebEx Demonstration	Apr 16, 2020	✓
CPG Meeting	ADS CPG Meeting	Jul 09, 2020	✓
Config Guides	Design review - BPM and Tariff SMEs	N/A	
Tech Spec	Publish Technical Specifications	May 22, 2020	✓
Tariff	Tariff Activities	N/A	
BPMs	Post Draft BPM changes	Jul 27, 2020	✓
External Training	Provisioning ADS ACL Training	Jun 01, 2020	✓
	External Training Part 1 (Application Preview preparation)	Jun 11, 2020	✓
	Deliver External Training Part 2	Jul 16, 2020	✓
Market Sim	Market Sim Window	Jul 27, 2020 - Sep 04, 2020	✓
Parallel Operations	ADS Parallel Operations	Sep 1, 2020 – Oct 16, 2020	✓
Production Activation	ADS Replacement	Oct 20, 2020 - Oct 21, 2020	✓
Add'l features	DOTT, Unannounced AS Test, RTCD Commitment, Follow DOT Flag, Operating Instructions	Dec 16, 2020	
Decommission	Old ADS Decommission	Feb 01, 2021	

ADS Phase 3: Activation of New Features

- ✓ 10/20: ADS Phase 1: Network
- ✓ 10/20: ADS Phase 2: New ADS UI, API v8 available
- ✓ 10/30: Close Stage, End Parallel Operations
  - MAP-Stage remains available with active features from now on
- ➢ **12/16: Activation of New Features**
  - Only available on New ADS UI, API v8
    - DOTT
    - Unannounced AS Test
    - RTCD Commitment
    - Follow DOT Flag
    - Operating Instructions
- 2/1/21: ADS Phase 4: Decommission of Old ADS client, API v6

ADS Phase 3: Activation of New Features

- **12/16: Activation of New Features**
  - Only available on New ADS UI, API v8
  - ISO invites customers to leverage ISO Assisted Customer Cutover lines
    - To transition to new ADS UI, API v8
    - To report transition plans, progress, issues
    - By phone: call 1-866-528-2256, access code: 1465216
    - Dates: 11/4, 11/11, 11/18, skip 11/26 due to holiday, 12/2, 12/9 and 12/16
    - Time: 1300-1400 PT
  - Recommendation
    - Run ADS Client and new ADS UI in parallel for validation
    - Cutover to API v8 now, as it provides same functionality as v7

Fall 2020 – Dispatch Operating Target Tariff Clarification

Project Info	Details/Date
Application Software Changes	**Scope:** Allow Energy Intermittent Resources (EIRs) to automate their response to operational instructions that require the resource not to exceed their Dispatch Operating Target. **Impacted Systems:** **RTM:** Operator can select EIR resources, system to send Operating instruction Flag to ADS **ADS:** Receive Operating instruction flag for EIRs. Broadcast message to EIRs operator.
BPM Changes	Market Instruments Market Operations
Tariff Change	Changes tariff language from “Operating Order” to “Operating Instruction” in multiple sections.

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	Jul 26, 2018	✓
External BRS	Posted External BRS	Dec 26, 2018	✓
	Posted revised External BRS	Apr 30, 2020	✓
Config Guides	Design review - BPM and Tariff SMEs	N/A	
Tech Spec	Publish Technical Specifications	May 22, 2020	✓
Tariff	Draft Tariff	Sep 04, 2018	✓
	File Tariff	Oct 29, 2018	✓
BPMs	Post Draft BPM changes	Jul 27, 2020	✓
External Training	Deliver External Training	Jul 16, 2020	✓
Market Sim	Market Sim Window	Jul 27, 2020 - Sep 04, 2020	✓
Production Activation	Dispatch Operating Target Tariff Clarification	Dec 16, 2020	

2021 Spring Release

Spring 2021 – EIM integrations for BANC Phase 2, TID, PNM, LADWP, and NWE

Project Info	Details/Date
Application Software Changes	Implementation of BANC Phase 2, TID, PNM, LADWP, and NWE as EIM Entities
BPM Changes	EIM BPM will be updated if needed to reflect new modeling scenarios identified during implementation and feedback from BANC Phase 2, TID, PNM, LADWP, and NWE.
Market Simulation	December 2020 – January 2021
Parallel Operations	February 2021 – March 2021

Milestone Type	Milestone Name	Dates					Status
		BANC Phase 2	TID	PNM	LADWP	NWE	
Market Sim	Market Sim Window	11/3/20 - 1/31/21	11/3/20 - 1/31/21	11/3/20 - 1/31/21	11/3/20 - 1/31/21	12/1/20 - 1/31/21	
Parallel Operations	Parallel Operations	1/27/21 – 3/25/21	1/27/21 – 3/25/21	1/30/20 – 4/1/21	1/30/20 – 4/1/21	1/30/20 – 4/1/21	
Tariff	File Readiness Certification	Mar 2021					
Production	Activation	3/25/21	3/25/21	4/1/21	4/1/21	4/1/21	

Stay Informed

Ways to participate in releases

- Visit the Release Planning page
  - http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx

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

What to look for on the calendar…

Market Sim

Release Users Group (RUG)

Market Sim

Calendar of Meetings, Training and Events

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

today | February 2018 | month | day

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