



# Release User Group Agenda

November 3, 2020

10:00 a.m.–11:00 a.m. (Pacific Time)

Web Conference Information	Conference Call Information
<p>Web Address: <a href="https://caiso.webex.com/meet/RUG">https://caiso.webex.com/meet/RUG</a> Meeting Number: 960 941 245</p> <p>Audio connection instructions will be available after connecting to the web conference. When prompted, select "Call me" and enter the phone number you will use during the call. You will be called by the conference shortly.</p>	<p>Dial-in Number: 866-528-2256 International Dial-in: 216-706-7052 Access Code: 291 426 5</p>
<p>Calls and webinars are recorded for stakeholder convenience, allowing those who are unable to attend to listen to the recordings after the meetings. The recordings will be publicly available on the ISO web page for a limited time following the meetings. The recordings, and any related transcriptions, should not be reprinted without the ISO's permission.</p>	

# Release User Group Agenda

November 3, 2020

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

<b>Time</b>	<b>Topic</b>	<b>Facilitator</b>
10:00 – 10:05	Agenda & ISO Roll call	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 ( <i>Virtual Workshop</i> )
March 9-10, 2021 (9am – 12pm)	Market Transactions ( <i>Virtual Workshop</i> )
March 16-17, 2021 (9am – 12pm)	ISO Settlements ( <i>Virtual Workshop</i> )
	Email us at <a href="mailto:CustomerReadiness@caiso.com">CustomerReadiness@caiso.com</a> for any training or readiness related questions



[CustomerReadiness@caiso.com](mailto:CustomerReadiness@caiso.com)

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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!

## 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              | • ESDER 3B                                   |
| • DOT Tariff Clarification             | • FERC 841                                   |
| • Excess Behind the Meter Production   | • Market Settlements Timeline Transformation |
| • Flexible Ramping Product Refinements | • Intertie Deviation Settlement              |

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

# Release Plan Summary: 2020

## Independent 2020

### Activation – Nov

- **Nov 4:** FRP Improvements - Buffer and Min

### Activation - Dec

- **Dec 1:** Hybrid Resources - Phase 1
- **Dec 1:** Commitment Costs and Default Energy Bid Enhancements Phase 1
- **Dec 7:** [Energy Imbalance Market \(EIM\) Enhancements 2020](#)
- **Dec 10:** Aliso Canyon Phase 5
- Slow Demand Response

### Activation– Jan 1, 2021

- Nodal Pricing Model – Advisory Service for PacifiCorp - Settlements Effective Date
- Intertie Deviation Settlement
- EIM Enhancements Symmetrical Wheeling
- Q4 Winter Release - Settlements

## Fall 2020

### Activation on Oct 20-21

- Automated Dispatch System (ADS) User Interface (UI) Replacement

### 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

- 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)
- FERC Order 831 - Import Bidding and Market Parameters – (BOG Sept 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)

## Spring 2022

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

## Fall 2023

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

# 2020 Independent

# 2020 – FRP Improvements – Buffer and Min

## Project Info

Improvements are needed for addressing the flexible ramping product (FRP) issues identified in the CAISO Energy Markets Price Performance report. The flexible ramping product secures additional ramping capability that can be dispatched in subsequent market runs to cover a range in the forecasted net load.

The scope behind this policy and project include:

- Scope 1 (2020) - To maintain up to 100% (configurable) of FRP awards in the buffer interval that were procured in the prior Fifteen Minute Market (FMM) to preserve ramping capability for the Real Time Dispatch (RTD).
- [Scope 2 \(2021\) - Changing Proxy Demand Response \(PDR\) dispatch capability default from five minute to hourly.](#)
- Scope 3 (2020) - To enforce a minimum FRP requirement in the Balancing Authority Area (BAA) that will ensure a minimum amount of FRP to be procured from resources within the BAA.

Project Info	Details/Date
Application Software Changes	<ul style="list-style-type: none"><li>• RTPD, RTD, STUC</li></ul>
BPM Changes	<ul style="list-style-type: none"><li>• Market Instruments</li><li>• Market Operations</li></ul>
Tariff Changes	<ul style="list-style-type: none"><li>• N/A</li></ul>

## 2020 – FRP Improvements – Buffer and Min

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	N/A	
External BRS	Milestone: Post External BRS	May 15, 2020	✓
Config Guides	Post Draft Config Guides	N/A	
Tech Spec	Create ISO Interface Spec (Tech spec)	N/A	
Tariff	File Tariff	N/A	
BPMs	Market Operations Market Instruments Demand Response	Jul 20, 2020	✓
External Training	Deliver External Training	Sep 28, 2020	✓
Market Sim	Market Sim Window	Oct 13, 2020 - Oct 28, 2020	✓
Production Activation	FRP Improvements - Buffer and Min	Nov 4, 2020	

# 2020 – Hybrid Resources Phase 1

Project Info	Details/Date
Application Software Changes	<p><b>Scope:</b> 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.</p> <p><b>MasterFile:</b> Enhance to include Co-Located Status, Aggregate Capability Constraint Limits</p> <p><b>IFM, RTM:</b> 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.</p> <p><b>Price Corrections Tool</b> (internal to ISO): Price correction logic will reflect the Point-of-Interconnection (POI) pnode LMP as the price for co-located resources.</p> <p><b>ALFS:</b> Time periods where co-located VER are operating with negative supplemental DOT will be excluded from data forecast model training by ISO-provided FSP.</p>
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 – Commitment Cost and Default Energy Bid Enhancements Ph1

Project Info	Details/Date
Application Software Changes	<p><b><u>Scope:</u></b>            Enhances the ability to submit market-based commitment cost bids in order to reflect unique costs and volatility:</p> <ul style="list-style-type: none"> <li>• Ex-ante cost adjustment requests</li> <li>• Reference Level Adjustments to default commitment cost bids (start-up and minimum load costs) and default energy bids</li> <li>• Make Day Ahead Market process permanent</li> <li>• Make D+2 Process permanent</li> <li>• Use of indices clarification, and Monday Only in DAM and RTM, per LMPME</li> <li>• Conditionally Available Resources (CAR)</li> </ul> <p><b><u>Impacted Systems:</u></b></p> <ul style="list-style-type: none"> <li>• SIBR: Allow the submittal of Ex Ante cost adjustments.</li> <li>• CMRI: Provide additional source information for default bids.</li> </ul> <p>Submit requests through CIDI for manual consultation and ex-post default bid adjustments.</p>
BPM Changes	<ul style="list-style-type: none"> <li>• Market Instruments</li> <li>• Market Operations</li> </ul>
Business Process Changes	<ul style="list-style-type: none"> <li>• Maintain Major Maintenance Adders (MMG LIII)</li> <li>• Maintain Negotiated Default Energy Bids (MMG LIII)</li> <li>• Maintain Negotiated O_Ms (MMG LIII)</li> <li>• Manage Day Ahead Market (MMG LII)</li> <li>• Manage Market Billing Settlements (MOS LII)</li> <li>• Manage Real Time Hourly Market (RTPD) (MMG LII)</li> <li>• Manage Real Time Operations – Maintain Balance Area (MMG LII)</li> </ul>

# 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	Nov 10, 2020 – Nov 24, 2020	
Production Activation	CCDEBE Phase 1	Dec 1, 2020	

# 2020 – EIM Enhancements 2020

Project Info	Details/Date
Application Software Changes	<p><b><u>Scope:</u></b>            Energy Imbalance Market Enhancements (EIM) 2020 is a collection of important issues identified by EIM market participants through Customer Inquiry, Dispute and Information system (CIDI) requests to improve the visibility, functions and features in the Energy Imbalance Market.</p> <p>Technology team and customer services review the 66 EIM enhancement requests by EIM entities and 4 internal request by ISO market operator. Combine each EIM entities submitted the priority list of 10 enhancements, ISO determine to include total 14 requests in EIM enhancement 2020 project.</p> <p><b><u>Impacted Systems:</u></b>  <b>BAAOP</b></p> <ul style="list-style-type: none"> <li>• Allow EIM entity override activation for the contingencies up to 15 in NA contingency list</li> <li>• Add visibility of other adjacent BAA's ETSR locks and reasons</li> <li>• Add Static ETSR transfer data to RTD Dispatch Control Display (ETSR tab). Add Static ETSR transfer data to BAAOP ETSR Detail Display (in RTD)</li> <li>• Fix/Improve SVG One Lines. Request to be able to view SE and telemetry values for all substation flows and elements. – available after Market Sim</li> <li>• 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: <math>RTD\ UP\ Ramp = MIN(5MinRampRate, [UpperLim-CurrentDispatch])</math>.</li> <li>• Add Supplemental DOT to VER resources to Dispatch Control displays; Detail: In BAAOP RTD/RTPD Dispatch Control, add SUPP DOT column</li> <li>• 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</li> <li>• 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)               <ul style="list-style-type: none"> <li>• BAAOP Dynamic Limits</li> <li>• BAAOP RTIS</li> <li>• ALFS (load forecast and/or VER forecast)</li> <li>• ICCP link</li> </ul> </li> </ul>

## 2020 – EIM Enhancements 2020 (cont.)

Project Info	Details/Date
Application Software Changes (cont.)	<p><b><u>Impacted Systems:</u></b></p> <p><b>BSAP</b></p> <ul style="list-style-type: none"> <li>• Add Manual Dispatch information to BSAP Resource Bal Viewer. Add any applicable deviations that used in the test to BSAP BAA Bal Viewer.</li> <li>• For the Bid Range Capacity Test Results report, Requirement Amount Column needs to publish the true requirement, not just the INCREMENTAL/DECREMENTAL requirement</li> </ul> <p><b>RTM</b></p> <ul style="list-style-type: none"> <li>• Publish the data of the MW infeasibility data and ABC Up and Down Dispatches of RTPD/RTD</li> <li>• Publish the effective load bias for the market run for RTPD and RTD</li> <li>• Publish the effective ETSR import and export limits for the market run for RTPD and RTD</li> <li>• Support Pump Storage for EIM BAAs</li> </ul> <p><b>CMRI</b></p> <ul style="list-style-type: none"> <li>• Display and publish, download the data of the MW infeasibility data and ABC Up and Down Dispatches of RTPD/RTD</li> <li>• Display and publish, download the data of the effective load conforming for the market run for RTPD and RTD</li> <li>• 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.</li> </ul> <p><b>Settlements</b></p>
BPM Changes	Market Instruments
Tariff Change	N/A

# 2020 – EIM Enhancements 2020 (cont.)

## 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	May 29, 2020	✓
	2. Load Conforming Report	May 29, 2020	✓
	3. Available Balance Capacity (ABC) Up and Down Dispatch Report by Resource	Jul 1, 2020	✓
	4. Advisory Load Conforming Report	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	Nov 16, 2020 – Nov 30, 2020	
Production Activation	EIM Enhancements 2020	Dec 7, 2020	

# 2020 – Aliso Canyon Ph5

Project Info	Details/Date
Application Software Changes	<p><b>Scope:</b> This project will consider enhancements to the existing Dynamic Competitive Path Assessment (DCPA) and Gas Nomogram capabilities currently in production.</p> <p><b>IFM/RTN:</b> Formulate and solve the linear programming problem for maximizing the Residual Supplier Index (RSI) for each binding constraint that DCPA is applied.</p> <p><b>SMDM:</b> Enhance the User Interface to include “All Markets” when the user is defining “Market” within the Curtailment to Process section.</p> <p><b>SMDM:</b> Creation of error message if the RT curtail type “incremental” or “absolute” are used and total curtailment is left null.</p>
BPM Changes	<ul style="list-style-type: none"> <li>Managing Full Network Model</li> <li>Market Operations</li> </ul>
Tariff Changes	<ul style="list-style-type: none"> <li>N/A</li> </ul>

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  $BID\_DISP\_OPT \geq 15$  or startup time plus ramp time to Pmax  $\geq 20$*

Project Info	Details/Date
Application Software Changes	<ul style="list-style-type: none"><li>• Master File</li></ul>
BPM Changes	<ul style="list-style-type: none"><li>• Market Instruments Attachment B: Slow Demand Response resource definition</li></ul>
Tariff Changes	<ul style="list-style-type: none"><li>• No</li></ul>

See [Frequently Asked Questions – Slow Demand Response](#)

At [www.caiso.com/Stay Informed/Release Planning/Independent 2020/Slow Demand Response](http://www.caiso.com/Stay%20Informed/Release%20Planning/Independent%202020/Slow%20Demand%20Response)

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

# 2020 – Nodal Pricing Model – Advisory Service for PacifiCorp

Project Info	Details/Date
Reference	<p>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 <a href="http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=E8304346-54B9-4473-9E45-9C282AAD1340">http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=E8304346-54B9-4473-9E45-9C282AAD1340</a></p> <p>Reference - NPM FERC filing <a href="http://www.caiso.com/Documents/Dec20-2019_NodalPricingModelAgmt_CAISO-PacifiCorp_ER20-664.pdf#search=NPM">http://www.caiso.com/Documents/Dec20-2019_NodalPricingModelAgmt_CAISO-PacifiCorp_ER20-664.pdf#search=NPM</a></p>
Excerpt from the market notice:	<p>“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 <a href="http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx">http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx</a>.</p> <p>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.”</p>

Milestone Type	Milestone Name	Dates	Status
Tariff	FERC Approval	Feb 28, 2020	✓
Config Guides	Publish Config Guide	Aug 10, 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	<p><b>Scope:</b> Implement a new Under/Over Delivery Charge for intertie deviations from Market Schedule and After-The-Fact (ATF) E-Tag, to replace Decline charge</p> <p><b>Impacted Systems:</b></p> <p><b>Settlements</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Remove the decline charge calculation and Decline Threshold</li> <li>• Allocate Over/Under delivery charge to measured demand</li> </ul> <p><b>ADS</b> - display the HASP schedule, the scheduling coordinator accepted value, and the difference between the two</p> <p><b>RTM</b> - determine the 15-minute binding award for hourly intertie resources based on the E-Tag at T-40.</p>
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	<p><b>Scope:</b> 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.</p> <p><b>RTM:</b> Update LMP price setting for Base ETSRs to be associated with From BAA of the Base ETSRs and retire split ratio price setting</p> <p><b>MasterFile:</b> Retire the definition of the Base ETSR split ratio and From/To financial location.</p> <p><b>Settlements:</b> Update formulation of Base ETSR export/import in Real Time Congestion Offset EIM and Real Time Marginal Losses</p>
BPM Changes	<ul style="list-style-type: none"> <li>• Energy Imbalance Market (EIM)</li> </ul>
Tariff Changes	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

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	Dec 15, 2020	
Market Sim	Market Sim Window	Nov 12, 2020 – Nov 30, 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**

## Winter 2020 settlements release draft settlements technical documentation:

<http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=EF90CE68-D8D0-43F7-8052-04FBE1D0825B>

# OMS Roadmap for 2020

Release	Major Changes	Participant	MAPStage	Production
October	<p>Remove defaulting discovery date</p> <ul style="list-style-type: none"> <li>- For retro-active outages submit discovery date.</li> <li>- Handle no discovery date if not previously submitted.</li> </ul>	All	11/04/2020	12/21/2020 (tentative)
	<p>Aggregate Resource Outage retrieve results changes</p> <ul style="list-style-type: none"> <li>- Handle receiving only parent and impacted children.</li> </ul>	All		
	<p>Transmission Retrieve Changes</p> <ul style="list-style-type: none"> <li>- If moving to new version (= 10012020), consume new XSD and handle receipt of multiple change requests.</li> </ul>	All		
	<p>Retrieve Resource/Transmission outage change request</p> <ul style="list-style-type: none"> <li>- Limiting to 50</li> <li>- Disable querying with participant ID &amp; Date Range.</li> <li>- Query by Outage ID, Change request ID and Equipment ID/Resource ID</li> </ul>	All		

# OMS Roadmap for 2020

Release	Major Changes	Participant	MAPStage	Production
November	<p>TOP Calculations for shared equipment</p> <ul style="list-style-type: none"> <li>- Based on participant ID TOP attribute will be comma separated TOPs.</li> </ul>	All	12/18/2020	02/15/2021
	<p>Communication and RAS changes</p> <ul style="list-style-type: none"> <li>- Handle Providing these flags for Nature of Work for communication and Relay work.</li> <li>- 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)</li> </ul>	All		
December	<p>Significant Outage flag determination.</p> <ul style="list-style-type: none"> <li>- Flag will be displayed in the version history of the outage</li> <li>- Please see May 2020 - CPG slide deck for more details.</li> </ul>	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	<ul style="list-style-type: none"> <li>Performance Improvements:               <ul style="list-style-type: none"> <li>Retrieve up to 50 outages by querying on outage ID)</li> <li>Retrieve based on Change Request ID</li> <li>Retrieve based on Equipment ID</li> <li>Removed capability of querying by participant ID</li> <li>Recommended use to sync data</li> </ul> </li> </ul>	✓ 8/11/20, v2.1	11/4/2020	12/21/2020 (tentative)
N/A		<ul style="list-style-type: none"> <li>WebOMS system will not default the discovery date</li> </ul>	✓ 8/11/20, v2.1	11/4/2020	12/21/2020 (tentative)
N/A	SubmitResourceOutage_OMSv2_AP SubmitResourceOutage_OMSv2_DocAttach_AP SubmitResourceOutage_OMSv3_AP SubmitResourceOutage_OMSv3_DocAttach_AP	<ul style="list-style-type: none"> <li>Changes to aggregate resource outage submission for performance improvement               <ul style="list-style-type: none"> <li>Submit de-rate for parent resource (required) and only the impacted child resources</li> <li>Retrieve results will not be include (for both v2 and v3 services) child resources that have no curtailment</li> <li>Parent resource availability points need not match with child resources' but will remain within the overall outage start and end date span</li> <li>Child resource outages can be added to existing outage if the outage has not commenced</li> <li>UI display and retrieve results for historical outages will be modified to support this model</li> <li>Changes are being done to enhance webOMS performance</li> </ul> </li> </ul>	✓ 8/11/20, v2.1	11/4/2020	12/21/2020 (tentative)

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# 2020 - System Interface Changes

OMS					
Project	Service	Summary	Tech Spec	MAP Stage	Production
N/A	RetrieveTransmissionOutage_OMSv3_AP RetrieveTransmissionOutage_OMSv3_DocAttach_AP	<ul style="list-style-type: none"> <li>If Version Tag =v20201001, return all outage requests</li> <li>If Version Tag &lt;&gt;v20201001, return a single request</li> </ul>	✓ 8/11/20, v2.1	12/18/2020	02/15/2021
N/A		<ul style="list-style-type: none"> <li>Auto-acceptance of non-significant changes</li> </ul>	✓ 8/11/20, v2.1	12/18/2020	02/15/2021
N/A		<ul style="list-style-type: none"> <li>Handling shared equipment                             <ul style="list-style-type: none"> <li>Lists all valid TOPs</li> <li>Allow retrieval by all TOPs</li> </ul> </li> </ul>	✓ 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	<ul style="list-style-type: none"> <li>Remedial Action Scheme (RAS) Changes                             <ul style="list-style-type: none"> <li>Modeling for 4 RAS Flags will be modified: RAS/SPS Out of Service, RAS/SPS Reduced Redundancy, Protection Zone, EMS/ICCP Outage</li> <li>API validation changes are to require the submission of these flags for Nature of Work 'COMMUNICATION' or 'RELAY WORK'.</li> <li>API submission will continue to take in a 'Y' or 'N' for these flags.</li> <li>Changes will be made to validate to only v3 services (submit and retrieves)</li> <li>No changes to v2 services</li> <li>No Changes to historical outages</li> </ul> </li> </ul>	✓ 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 12/1/20	13.2
CCDEBE1	Modify	RetrieveCurrentBidResults_SIBRv5_AP RetrieveCurrentBidResults_SIBRv5_DocAttach_AP	✓ 10/16/19	✓ Deploy 3/26/20 Activation 12/1/20	13.2
CCDEBE1	Modify	SubmitRawBidSet_SIBRv5_AP SubmitRawBidSet_SIBRv5_DocAttach_AP	✓ 10/16/19	✓ Deploy 3/26/20 Activation 12/1/20	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 12/1/20	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 12/1/20	3.9.4  Release Notes 1.2

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# 2020 - System Interface Changes

DRRS					
Project	Change Type	Summary	Technical Specifications	MAP Stage	Production
N/A	Modify	Changes related to making Resource ID optional for registration.	✓ 10/15/20, v3.3	✓ 10/16/20	✓ 10/28/20

CMRI					
Project	Change Type	Summary	Technical Specifications	MAP Stage	Production
N/A	Decom	Decommission of deprecated versions	✓ 8/5/20, v3.9.7	11/16/20	12/7/20
EIM2020	New	RetrieveEIMInfeasibility_CMRIv1_AP RetrieveEIMInfeasibility_CMRIv1_DocAttach_AP	✓ 8/5/20, v3.9.7	11/16/20	12/7/20
EIM2020	New	Available Balance Capacity	✓ 8/5/20, v3.9.7	11/16/20	12/7/20
EIM2020	New	RetrieveLoadConforming_CMRIv1_AP RetrieveLoadConforming_CMRIv1_DocAttach_AP	✓ 8/5/20, v3.9.7	11/16/20	12/7/20
EIM2020	New	Advisory Load Conforming	✓ 8/5/20, v3.9.7	11/16/20	12/7/20

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
<b>Fall 2020 Release</b>		<b>04/01/20</b>	<b>05/29/20</b>	<b>05/29/20</b>	<b>05/29/20</b>	<b>06/26/20</b>	<b>07/20/20</b>	<b>07/20/20</b>	<b>Jul 27, 2020 - Sep 4, 2020</b>	<b>10/01/20</b>
<b>ADS UI Replacement</b>	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
<b>Add'l features activation</b>										12/16/20
<b>Dispatch Operating Target Tariff Clarification</b>	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
<b>Excess Behind the Meter Production</b>	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)
<b>Market Settlement Timeline Transformation</b>	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	<ul style="list-style-type: none"> <li>• Transition to web-based user interface to eliminate the need to install thick client</li> <li>• Transition ADS provisioning to the Access and Identity Management (AIM) application including Resource Level Access Controls (RACL) access</li> <li>• The query tool will not change in requesting historical data</li> <li>• Various user interface enhancements adding content per Operation's request</li> <li>• ADS B2B services changes</li> </ul>
BPM Changes	<ul style="list-style-type: none"> <li>• Market Instruments</li> <li>• Market Operations</li> </ul>

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	<p><b>Scope:</b> Allow Energy Intermittent Resources (EIRs) to automate their response to operational instructions that require the resource not to exceed their Dispatch Operating Target.</p> <p><b>Impacted Systems:</b>  <b>RTM:</b> Operator can select EIR resources, system to send Operating instruction Flag to ADS  <b>ADS:</b> Receive Operating instruction flag for EIRs. Broadcast message to EIRs operator.</p>
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	

# Fall 2020 – Excess Behind the Meter Production

Project Info	Details/Date
Application Software Changes	<p><b>Scope:</b></p> <ul style="list-style-type: none"> <li>• Clarify the Tariff definition of Gross Load per amended tariff definition</li> <li>• Establish how EBTMP will be submitted, reported, and settled</li> <li>• Provide option for entities with meter agreements existing prior to ISO to submit EBTMP interval meter data</li> <li>• Update definitions for Net Load and Unaccounted For Energy settlement calculations</li> <li>• Publish EBTMP performance to market participants</li> </ul> <p><b>Impacted Systems:</b></p> <p><b>MRI-S - Meter submission</b></p> <ul style="list-style-type: none"> <li>• Allow SC to submit Gross Load and EBTMP under the single Resource ID               <ul style="list-style-type: none"> <li>• New EBTMP measurement type for interval meter data submission; existing Load measurement type interval meter data submission with represent new Gross Load tariff definition                   <ul style="list-style-type: none"> <li>• Meter submission UI and API will accept the new EBTMP measurement type</li> </ul> </li> </ul> </li> </ul> <p><b>OASIS</b></p> <ul style="list-style-type: none"> <li>• Publish hourly aggregated EBTMP by TAC area once meter data submission deadline passes for settlement date</li> </ul> <p><b>Settlements</b></p> <ul style="list-style-type: none"> <li>• Modify Net Load and UFE calculations to align with tariff amendments:               <ul style="list-style-type: none"> <li>• <math>NET\ LOAD = GROSS\ LOAD\ METER - EXCESS\ BTMPRODUCTION\ METER</math></li> <li>• <math>UFE\ QUANTITY = GENERATION\ METER + INTERTIE\ IMPORT\ METER - (NET\ LOAD\ METER + EXPORT\ INTERTIE\ METER + RTD\ LOSS\ MW)</math></li> </ul> </li> <li>• New Excess Behind the Meter Production (EBTMP) metered value bill determinant will be provided (similar to metered Load today)</li> <li>• Modify follow charge codes to settle based on Gross Load (Reliability based charge codes, list may not be comprehensive – See updated Settlements Configuration Guides)               <ul style="list-style-type: none"> <li>• 372 High Voltage Access Charge Allocation (UDC gross load)</li> <li>• 382 High Voltage Wheeling Allocation (Non PTO load)</li> <li>• 383 Low Voltage Wheeling Allocation (Non PTO load)</li> <li>• 591 Emissions Cost Recovery (Measured Demand)</li> <li>• 1101 Black Start Capability Allocation</li> <li>• ...</li> </ul> </li> </ul>

# Fall 2020 – Excess Behind the Meter Production (cont.)

Project Info	Details/Date
Application Software Changes (cont.)	<p><b>Impacted Systems:</b></p> <p><b>Settlements (continued);</b></p> <ul style="list-style-type: none"> <li>• Modify follow charge codes to settle based on Gross Load (Reliability based charge codes, list may not be comprehensive – See updated Settlements Configuration Guides)               <ul style="list-style-type: none"> <li>• 1302 Long Term Voltage Support Allocation</li> <li>• 1303 Supplemental Reactive Energy Allocation</li> <li>• 6090 Ancillary Service Upward Neutrality Allocation</li> <li>• 6194 Spinning Reserve Obligation Settlement</li> <li>• 6196 Spinning Reserve Neutrality Allocation</li> <li>• 6294 Non-Spinning Reserve Obligation Settlement</li> <li>• 6296 Non-Spinning Reserve Neutrality Allocation</li> <li>• 6594 Regulation Up Obligation Settlement</li> <li>• 6596 Regulation Up Neutrality Allocation</li> <li>• 6694 Regulation Down Obligation Settlement</li> <li>• 6696 Regulation Down Neutrality Allocation</li> <li>• 7256 Regulation Up Mileage Allocation</li> <li>• 7266 Regulation Down Mileage Allocation</li> <li>• 7896 Monthly CPM Allocation</li> </ul> </li> </ul>
BPM Changes	<ul style="list-style-type: none"> <li>• <b>Definitions &amp; Acronyms:</b> <ul style="list-style-type: none"> <li>• Update definition of Gross Load</li> <li>• Add Excess Behind the Meter Production</li> </ul> </li> <li>• <b>Metering</b> <ul style="list-style-type: none"> <li>• Submission, retrieval of new measurement type (EBTMP)</li> </ul> </li> <li>• <b>Settlements &amp; Billing</b> <ul style="list-style-type: none"> <li>• See Settlements Configuration Guide for changes</li> </ul> </li> </ul>
Tariff Change	<ul style="list-style-type: none"> <li>• <b>Appendix A:</b> <ul style="list-style-type: none"> <li>• Clarify Gross Load definition, Update Demand definitions,</li> <li>• Add new term Excess Behind the Meter production</li> </ul> </li> <li>• <b>Section 11:</b> <ul style="list-style-type: none"> <li>• Update reliability based tariff reference sections to be based upon gross load</li> </ul> </li> </ul>

## Fall 2020 – Excess Behind the Meter Production (cont.)

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	Nov 17, 2018	✓
External BRS	Publish Market Notice, External BRS to Release Planning	Feb 27, 2020	✓
	Publish External BRS update (v1.1), FAQ update	Apr 16, 2020	✓
Config Guides	Post Draft Config Guides	May 29, 2020	✓
Tech Spec	Publish Technical Specifications	May 29, 2020	✓
Tariff	File Tariff	Oct 01, 2020	
	Tariff Stakeholder Walkthrough	Dec 04, 2019	✓
	Draft Tariff published	Nov 04, 2019	✓
BPMs	Post Draft BPM changes	Jul 20, 2020 <ul style="list-style-type: none"> <li>• Metering BPM - PRR 1266</li> <li>• Market Instruments BPM - PRR 1263</li> </ul>	✓
External Training	Deliver external training webinar	Jul 21, 2020	✓
Market Sim	Market Sim Window	Jul 27, 2020 - Sep 18, 2020	✓
Production Activation	Excess Behind the Meter Production Deployment	Oct 01, 2020	✓
	Excess Behind the Meter Production Effective Trade Date	Jan 01, 2021	

# Fall 2020 – Market Settlement Timeline Transformation

Project Info	Details/Date
Application Software Changes	<p><b>Scope:</b></p> <ul style="list-style-type: none"> <li>• The California ISO is proposing changes to its market settlement timeline to reduce market participant financial exposure by producing initial settlement statements that will more closely approximate the final settlement, and allow sufficient time for CAISO and market participants to resolve disputes.</li> <li>• The California ISO's current settlement timeline is compressed, which places potentially avoidable burdens on CAISO and market participants. The compressed timeline causes CAISO to publish initial statements of lower financial quality and to sometimes delay the publication of its settlement statements. These inefficiencies impact market participants as they must bear a financial burden of varying magnitude for many business days.</li> <li>• The California ISO and market participants also devote a large level of effort to correct data, re-calculate, process, and validate relatively small financial adjustments associated with optional re-calculations long after the settlement trade date has passed.</li> <li>• To resolve inefficiencies and issues, CAISO proposes to calculate and publish two settlement statements within seventy (70) business days after a trade date and re-align the due dates for settlement quality meter data.</li> <li>• Additionally, and under certain defined circumstances, CAISO proposes to re-calculate and publish three settlement statements between seventy (70) business days after a trade date and twenty-four (24) months after a trade date thus reducing the normal settlement life cycle from thirty-six to twenty-four months.</li> </ul>
Application Software Changes (cont.)	<p><b>Impacted Systems:</b></p> <p><b>CIDI:</b></p> <p>The disputable statements in the Statement Disputed drop-down list will be updated to include the new statements per the MSTT. CAISO will continue to accept disputes from the date of statement publication through the dispute deadline, as prescribed by the tariff, and continue to calculate the Adjustment Publication Date based on the Correction Statement, as selected by the dispute analyst, and the Trade Date disputed.</p> <p><b>CMRI:</b> Data retention impact due to reducing from 39 months to 27 months.</p> <p><b>MRI-S Metering:</b></p> <ul style="list-style-type: none"> <li>• Impacts to the external data submission windows that currently exist, as well as the data transfers from MV-90 to MRI-S Metering and MRI-S Metering to Settlements.</li> <li>• Data submission/freeze timeline.</li> </ul> <p><b>MRI-S Settlements:</b></p> <ul style="list-style-type: none"> <li>• Update the Post Date calculation, as the payment calendar will change.</li> <li>• Auto scheduling for statement generation.</li> <li>• Statement posting.</li> </ul>

# Fall 2020 – Market Settlement Timeline Transformation (cont.)

Project Info	Details/Date	
Application Software Changes (cont.)	<p><b>Market Clearing:</b>            Updates needed to the deviation Interest calculations and credit calculation functions.            Updates needed for invoice clearing and interest calculations.            Check PTB publication timeline for any updates.            Will impact the Extrapolation Component (one of 16 EAL Components) for Daily &amp; Monthly Extrapolation and credit calculation.</p> <p><b>Recalculation Log:</b>            Post update recalculation log.</p> <p><b>Payment Calendar:</b>            Post the payment calendar to reflect overlap between existing and new timeline.</p> <p><b>OASIS:</b></p> <ul style="list-style-type: none"> <li>• Data retention impact due to reducing from 39 months to 27 months.</li> <li>• FERC 841 related data availability needs to be vetted.</li> </ul>	
BPM Changes	Credit Management and Market Clearing Definitions & Acronyms Energy Imbalance Market Market Instruments Metering Settlements and Billing	Rules of Conduct Administration Settlements and Billing <ul style="list-style-type: none"> <li>• Section 2.3.2 – Schedule for Settlement Statement Publication</li> <li>• Section 2.3.5.1.1 – Dispute Timing</li> <li>• Section 2.3.6 – Billing &amp; Payment</li> <li>• Section 2.4 – Payment Calendars</li> </ul>
Tariff Change	Section 10: Metering Section 11: California ISO Settlements and Billing (Publication Contingency document) Section 12: Creditworthiness Section 13: Dispute Resolution	Section 26: Transmission Rates And Charges Section 27: California ISO Markets And Processes Section 29: Energy Imbalance Market Section 37: Rules Of Conduct

# Fall 2020 – Market Settlement Timeline Transformation (cont.)

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	Nov 14, 2019	✓
External BRS	Post External BRS	Feb 06, 2020	✓
Config Guides	Post Draft Configuration Guides - <i>Documentation Only</i>	Jun 26, 2020	✓
Tech Spec	Create ISO Interface Spec (Tech spec)	May 29, 2020	✓
Tariff	Draft Tariff	May 19, 2020	✓
BPMs	Post Draft BPM changes	PRR #1264	✓
	• Credit Management and Market Clearing	Once per year	
	• Definitions & Acronyms	PRR#1271	✓
	• Energy Imbalance Market	PRR#1276	✓
	• Metering	PRR#1266	✓
• Settlements and Billing	<a href="#">Draft BPM</a>	✓	
External Training	Deliver External Training	Jul 20, 2020	✓
Market Simulation	Market simulation window	Aug 27, 2020 - Sep 18, 2020	✓
Production Activation	Market Settlements Timeline Effective Trade Date	Jan 01, 2021	

# 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	12/1/20 - 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](http://www.caiso.com) for meeting dates and times and add events to your calendar
    - Typically held on Mondays and Thursdays
  - Market Performance and Planning Forum
    - Bi-monthly review of market performance issues
    - High level discussion of release planning, implementation and new market enhancements

# What to look for on the calendar...

## Calendar of Meetings, Training and Events

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

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

Market Sim



Market Sim



Release Users Group (RUG)

