



California ISO

Fall 2018 Release External Implementation Plan

Version 1.1

October 24, 2018

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Revisions

Date	Version	Description	Author
10/01/2018	1.0	Initial for Fall 2018 Release	Trang Deluca
10/24/2018	1.1	Adjusted Deployment Schedule	Trang Deluca

Introduction

Executive Summary

In the Fall 2018 Release, the California ISO will deploy numerous system changes from various projects and other efforts. The intent of this document is to provide market participants with a description of the timeline and activities for the Fall 2018 Release.

Project Descriptions

The Fall 2018 Release includes changes to support the following projects.

Energy Storage and Distributed Energy Resources Phase 2

The central focus of the CAISO's energy storage and distributed energy resources (ESDER) initiative is to lower barriers and enhance the ability of transmission grid-connected energy storage and distribution-connected resources to participate in the CAISO market. The number and diversity of these resources is growing and represent an increasingly important part of the resource mix. Integrating these resources will help lower carbon emissions and add operational flexibility.

More information can be found under Fall 2018 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Settlements Performance Improvements

The purpose of this project is to implement Settlements performance improvements to statement generation processes by Fall 2018 Release. The additional market data created as the ISO extends EIM opportunities and new resources to surrounding Balancing Authorities (BA) throughout the West, has caused performance issues in the existing Settlements systems.

The existing file structure is a risk. There is a risk in the creation and posting of the actual bill determinant file. To mitigate the risk, we will break up the bill determinant contents broken into smaller file sizes.

This project means to address the performance improvements required to successfully support current stakeholders and additional EIM entities.

The scope of the Settlements Performance Improvements include:

- a. Performance improvements for Post Bill Determinant Mapping process
 - i. Non-production storage issue causing delays to the statement publication
- b. Performance improvements of Statement Generation (BD File Size issue):
 - i. Daily Statements generation
 - ii. Monthly Statements and Invoice generation
- c. Changes related to the XML file split
- d. Ccode removal.

More information can be found under Fall 2018 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Regional Integration and EIM Greenhouse Gas Compliance

Energy generated in California or imported into the state to serve California load is subject to California’s greenhouse gas (GHG) regulations adopted by the Air Resources Board (ARB). Under these regulations, the compliance obligations apply to first deliverers – generation owners or electricity importers. In the context of the western Energy Imbalance Market (EIM), participating resource scheduling coordinators are considered electricity importers if their resource(s) are dispatched to serve load in the California ISO (CAISO). These entities have a GHG compliance obligation under California’s GHG regulations.

The problem:

The CAISO’s least-cost dispatch can have the effect of attributing transfers to serve CAISO load to lower-emitting EIM participating resources because these resources face fewer or no costs to comply with ARB’s regulations. In some instances, higher-emitting resources will need “to backfill” this dispatch to serve EIM load outside of the CAISO. The CAISO refers to this phenomenon as secondary dispatch.

The proposed solution:

The CAISO proposes to adjust its solution to address emissions associated with secondary dispatch. The CAISO will limit the GHG bid quantity of EIM participating resources to the MW value between the EIM participating resource’s base schedule and the resource’s upper economic limit (UEL). Since the GHG bid quantity is now limited, this will change the market dispatch to identify other EIM participating resources that have available capacity above their base schedule to support EIM transfers into CAISO to serve CAISO demand. The GHG emissions of these resources will now be appropriately reflected in the market attribution.

The CAISO decided to withdraw the two-pass solution previously proposed.

Table A reflects how the CAISO has addressed and proposes to address EIM participating resource’s GHG bid quantities and GHG bid prices.

	GHG Bid Quantity	GHG Bid Price
At outset of EIM	Pmax of resource	< \$1,000 less Energy bid
Year One Enhancement	0 MW to Pmax	< Resource daily GHG cost plus 10%
Current Proposal	0 MW to upper economic limit less base schedule	< Resource daily GHG cost plus 10%

More information can be found under Fall 2018 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Congestion Revenue Rights Auction Efficiency 1A

Since 2012, congestion revenue rights auction revenues that are allocated to load serving entities were on average \$130 million less than the congestion payments received by entities purchasing these congestion revenue rights. This shortfall shows that auction valuations are consistently lower than eventual payouts on the products. If congestion revenue rights are truly valued as hedging instruments for market participants, then valuations over time should be greater than the observed payouts on those products.

In early 2017, the ISO began its initiative to address the CRR auction efficiency. It is concerned about the large CRR payments made to holders of auction CRRs in comparison to the auction revenues collected when releasing the CRRs through the auctions.

The ISO began its policy stage at a stakeholder working group on December 19, 2017. The policy stage is organized into three tracks: Track 0, Track 1, and Track 2.

- Track 0 - Process, business rules, and operational guidance.
- Track 1A – Focus is on enhancements to:
 - Information received and used for the CRR allocations and auction
 - CRR software to support a mechanism to allow market participants to sell previously acquired CRRs into subsequent auctions
- Track 1B – Focus is on reducing the gap between auction revenues and CRR payouts
- Track 2 - Focused on comprehensive design changes, structural matters and market design rules

This Business Requirements Specification includes requirements for only Track 1A enhancements.

More information can be found under Fall 2017 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Energy Imbalance Market Enhancements 2018

Business drivers for 2018 EIM Enhancements are as follows:

- Market improvement to exclude Flexible Ramping procurement from EIM BAAs undergoing contingency events
- Market improvement to provide added transparency to allow EIM Entities the ability to determine if/when their market data submissions are included in the EIM Markets via BAAOP displays
- [Removed from EIM Enhancements 2018 scope: automated PSE code synchronization]
- Market improvements for Energy Transfer System Resource (ETSR) pre-hour schedules with one of the BAA pairings as ISO BAA
- Market improvements for Fifteen Minute schedule calculation logic from hourly resources

More information can be found under Fall 2017 release on the Release Planning page at

<http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Deployment Strategy

Deployment Schedule Overview

The system changes will be implemented in a phased manner. The systems changes will be deployed/activated according to the following drops and dates.

Description	Deployment
DRRS	October 11, 2018
Master File	October 22, 2018
Integration	October 23, 2018
IFM/RTN/BAAOP	October 24, 2018
OASIS	October 24, 2018
CRR	October 29, 2018
Settlements	October 30, 2018
MRI-S	October 30, 2018

The strategy of spreading the deployment over time is in the interest of minimizing impact on resources and is consistent with deployment strategies implemented during previous major deployments. Some of these deployments will require brief outages. See *Deployment Times, Outages, and Market Participant Actions* section of this document for times and durations for each application.

The technical details for these system changes can be found on the Fall 2018 Release external site located at: <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

Web Services

Refer to the System Access Information document and System Interface Change Summary document for details about specific URLs:

- http://www.caiso.com/Documents/SystemAccessInformation_MarketParticipants.pdf
- <http://www.caiso.com/Documents/SystemInterfaceChangeSummary.pdf>

OASIS APIs

OASIS Interface Specification: http://www.caiso.com/Documents/OASIS-InterfaceSpecification_v5_1_5Clean_Fall2018Release.pdf

OASIS Artifacts: http://www.caiso.com/Documents/OASIS-ArtifactsPackage_v1_1_Fall2018Release.zip

Service	Project	Availability as of this Deployment
ENE_BAA_MKT_EVENTS	EIM 2018	New
PUB_CRR_BID	CRR 1A	Modification

Deployment and Activation Timeline

The Fall 2018 Release is scheduled for deployment across multiple dates. Each deployment may incur outages of varying lengths to specific systems. The table below highlights the systems that will be impacted by each deployment and provides relevant details for market participants.

Deployment Timeline

Date	Deployment Information	Status
10/11/2018	DRRS	Complete
10/22/2018	Master File	Complete
10/23/2018	Integration	Complete
10/24/2018	IFM/RTN/BAAOP	On-Track
10/24/2018	OASIS	On-Track
10/29/2018	CRR	On-Track
10/30/2018	Settlements	On-Track
10/30/2018	MRI-S	On-Track

Deployment Times, Outages, and Market Participant Actions

DRRS – October 11, 2018

System	Deployment Time	Outage	MP Action
DRRS	9:00 AM to 10:00 AM	Brief interruption for DRRS UI/API	N/A

All times are Pacific

Master File – October 22, 2018

System	Deployment Time	Outage	MP Action
Master File	10:00 AM to 3:00 PM	No outage anticipated	None

All times are Pacific

Integration – October 23, 2018

System	Deployment Time	Outage	MP Action
Integration	2:00 PM to 3:00 PM	Brief interruption for Web Services (API)	N/A

All times are Pacific

IFM/RTN/BAAOP – October 24, 2018

System	Deployment Time	Outage	MP Action
IFM/RTN/BAAOP	3:00 PM to 4:00 PM	Brief interruption for BAAOP UI/API	None

All times are Pacific

OASIS – October 24, 2018

System	Deployment Time	Outage	MP Action
OASIS	4:00 PM to 5:00 PM	Brief interruption for OASIS UI/API	N/A

All times are Pacific

CRR – October 29, 2018

System	Deployment Time	Outage	MP Action
CRR	10:00 AM to 11:00 AM	Brief interruption for CRR	N/A

All times are Pacific

Settlements – October 30, 2018

System	Deployment Time	Outage	MP Action
Settlements	3:00 PM to 5:00 PM	No outage anticipated	N/A

All times are Pacific

MRI-S – October 30, 2018

System	Deployment Time	Outage	MP Action
MRI-S	3:00 PM to 5:00 PM	Brief interruption for MRI-S UI/API	N/A

All times are Pacific

Communication and Support

Below is the Fall 2018 Release communication schedule:

Description	Method	Frequency	Responsible
Fall 2018 Release Deployment Market Notice	E-mail www.caiso.com	As Needed	ISO
Release Users Group (RUG)	(866) 528-2256 5251941	Every Other Week	ISO

Market Notices

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Routine Issues and Support

All normal support processes should be followed for support functions. The ISO Help Desk can be reached at (916) 351-2309.