



# California ISO

## Fall 2019 Release Implementation Plan

Version 1.0

October 11, 2019

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## Revisions

| Date       | Version | Description   | Author       |
|------------|---------|---|--------------|
| 10/01/2019 | 0.1     | Initial for Fall 2019 Release   | Trang Deluca |
| 10/11/2019 | 1.0     | <ul style="list-style-type: none"><li>- Add project information</li><li>- MF moved from 11/4 to 10/29</li><li>- Integration moved from 11/5 to 11/4</li><li>- adjusted implementation times</li><li>- Add contact information</li></ul> | Trang Deluca |

## Introduction

### Executive Summary

In the Fall 2019 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 2019 Release.

### Project Descriptions

The Fall 2019 Release includes changes to support the following projects.

#### Energy Storage and Distributed Energy Resources Phase 3A

The energy storage and distributed energy resource (ESDER) initiative aims to identify and mitigate barriers that hinder effective market participation of storage and distributed energy resources. The presence of renewables and storage continues to increase and evolve, and therefore so does the integration of these resources into the CAISO markets. The multi-phase ESDER initiative allows these resources to participate more efficiently, thus allowing for more robust market solutions while reducing carbon emissions.

More information can be found under Fall 2019 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

#### Reliability Must-Run & Capacity Procurement Mechanism Enhancements

The objective of the RMR and CPM Enhancements initiative was to enhance existing ISO backstop procurement mechanisms, specifically the Capacity Procurement Mechanism (CPM) and Reliability Must-Run (RMR) agreement, as the use of backstop resource adequacy procurement by the ISO moves forward. Updates to the RMR tariff provisions, pro forma agreements, and procurement processes shall clarify how RMR and CPM procurements align. Under these changes, RMR contracts shall only be used when a resource owner has notified the ISO of its intention to enter retirement (merging risk-of-retirement into this mechanism). Short of retirement notice, CPM will serve as the procurement backstop for resource adequacy.

More information can be found under Fall 2019 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

## Commitment Costs & Default Energy Bid Enhancements 1

Due to Stakeholder concerns, there has been increasing need for the ISO to enhance its market rules to support Bidding Flexibility and also comply with FERC order 831. Based on the Second Revised Draft Final Proposal posted on 3/2/2018, the following are the major scope items for this initiative:

- Support integration of renewable resources through incentivizing flexible resources participation during tight fuel supply
- Account for costs of flexible resources (gas and non-gas) to reduce risk of insufficient cost recovery
- Encourage participation of non-RA and voluntary EIM resources
- ISO needs to comply with FERC Order 831
- Requires supporting verified costs of energy bids above \$1,000/MWh (Phase 2)

More information can be found under Fall 2019 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

## Local Market Power Mitigation Enhancements

This project includes four elements to address cases of mitigation. The mitigation framework enhancements introduce an optional rule for EIM BAAs to limit transfer quantities or avoid cases of economic displacement. Further modifications include modifying the mitigation framework to eliminate the balance of the Fifteen Minute Market (FMM) and balance of the hour mitigation, with reexamination and application of the competitive LMP at every interval. The project includes the creation of a new default energy bid for hydro resources with storage capability. The project also makes changes to the reference level adjustment process originally established within the Commitment Cost Default Energy Bid Enhancements (CCDEBE) initiative. Lastly, the project will make enhancements to the gas price indices used for Mondays.

More information can be found under Fall 2019 release on the Release Planning page at <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>.

## Real-Time Market Neutrality Settlement

The Real Time Market Neutrality Settlement policy scope includes:

- No longer perform real-time imbalance energy offset (RTIEO) transfer adjustment
- EIM transfer financial value uses...
  - System marginal energy cost (SMEC) with California BAAs
  - SMEC + GHG ( $\leq$  \$0.00) between non-California EIM BAAs
- BPM change to standardize how EIM entity updates EIM transfer system resource (ETSR) with 5 minute transfer value

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

## FERC Order 841 – Energy Storage Resources

Through issuance of FERC Order 841, the Federal Energy Regulatory Commission amended its regulations under the Federal Power Act (FPA) to remove barriers to the participation of electric storage resources in the capacity, energy, and ancillary service markets operated by Regional Transmission Organizations (RTO) and Independent System Operators (ISO) (RTO/ISO markets).

FERC Order 841 requires the CAISO to have a participation model that consist of market rules that recognize physical and operational characteristics of electric storage resources and facilitate their participation in the CAISO markets.

CAISO’s “non-generator resource” (NGR) Model for storage resources established in 2011, and continued tailoring of market rules and participation models, satisfy nearly all the requirements imposed by FERC Order 841. The CAISO’s Pumped Storage Hydro Unit model and demand response models also comply with FERC Order 841.

To comply with FERC Order 841, the CAISO has amended its Minimum Size Requirement to meet FERC’s 100 kW minimum threshold for storage resources.

The CAISO also has amended its Tariff to remove the Transmission Access Charge (TAC) for pumping load of Pumped-Storage Hydro Units. This change will align with the CAISO’s treatment of NGR resource charging for which no TAC is assessed.

All of the above is subject to change based on FERC’s review of the CAISO’s compliance filing.

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 2019

The purpose of this project, Energy Imbalance Market Enhancements 2019, is to collectively address important issues identified by Energy Imbalance Market (EIM) participants that would improve resource modeling and EIM design.

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       |
|--------------------------|------------------|
| <b>Master File</b>       | October 29, 2019 |
| <b>Settlements</b>       | October 30, 2019 |
| <b>MRI-S</b>             | October 30, 2019 |
| <b>Integration</b>       | November 4, 2019 |
| <b>CMRI</b>              | November 5, 2019 |
| <b>OASIS</b>             | November 5, 2019 |
| <b>CIRA</b>              | November 5, 2019 |
| <b>DRRS</b>              | November 6, 2019 |
| <b>Market/BAAOP/HANA</b> | November 6, 2019 |
| <b>SIBR/BSAP/RCBSAP</b>  | November 6, 2019 |

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 Developer site at:

<https://developer.caiso.com/>.

## Web Services

Refer to the Developer site for details about specific URLs:

- <https://developer.caiso.com/>

### MF APIs

MF Interface Specification:

<https://developer.caiso.com/Artifacts/MFRD/TechSpecs/Master%20File%20Interface%20Specification%20v5.1.pdf>

MF Artifacts: [http://www.caiso.com/Documents/OASIS-ArtifactsPackage\\_v1\\_1\\_Fall2019Release.zip](http://www.caiso.com/Documents/OASIS-ArtifactsPackage_v1_1_Fall2019Release.zip)

| Service                               | Project          | Availability as of this Deployment |
|---------------------------------------|------------------|------------------------------------|
| RetrieveGeneratorRDT_MFRDv4           | ESDER3A<br>LMPME | Modification                       |
| RetrieveGeneratorRDT_MFRDv4_DocAttach | CCDEBE1          |                                    |
| SubmitGeneratorRDT_MFRDv4             | ESDER3A<br>LMPME | Modification                       |
| SubmitGeneratorRDT_MFRDv4_DocAttach   |                  |                                    |

### SIBR APIs

SIBR Interface Specification:

<https://developer.caiso.com/Artifacts/SIBR/TechSpecs/SIBR%20Interface%20Specification%20Web%20ervices%20v13.2.pdf>

SIBR Artifacts: <https://developer.caiso.com/pages/application.aspx?app=SIBR>

| Service                                    | Project | Availability as of this Deployment |
|--|---------|------------------------------------|
| RetrieveCleanBidSet_SIBRv5                 | CCDEBE1 | Modification                       |
| RetrieveCleanBidSet_SIBRv5_DocAttach       |         |                                    |
| RetrieveCurrentBidResults_SIBRv5           | CCDEBE1 | Modification                       |
| RetrieveCurrentBidResults_SIBRv5_DocAttach |         |                                    |
| SubmitRawBidSet_SIBRv5                     | CCDEBE1 | Modification                       |
| SubmitRawBidSet_SIBRv5_DocAttach           |         |                                    |

## BSAP APIs

BSAP Interface Specification:

[https://developer.caiso.com/Artifacts/BSAP/TechSpecs/Base%20Schedule%20\(BSAP\)%20Interface%20Specification%20Web%20Services%20v1.7.2.pdf](https://developer.caiso.com/Artifacts/BSAP/TechSpecs/Base%20Schedule%20(BSAP)%20Interface%20Specification%20Web%20Services%20v1.7.2.pdf)

BSAP Artifacts: <https://developer.caiso.com/pages/application.aspx?app=BSAP>

| Service                                       | Project  | Availability as of this Deployment |
|---|----------|------------------------------------|
| RetrieveBalancingTestResults_BSAPv2           | EIM 2019 | Modification                       |
| RetrieveBalancingTestResults_BSAPv2_DocAttach |          |                                    |

## CMRI APIs

CMRI Interface Specification:

<https://developer.caiso.com/Artifacts/CMRI/TechSpecs/CMRI%20Interface%20Specification%20v3.9.1.pdf>

CMRI Artifacts: <https://developer.caiso.com/pages/application.aspx?app=CMRI>

| Service  | Project          | Availability as of this Deployment |
|--|------------------|------------------------------------|
| RetrieveDefaultBidCurves_CMRIv2                        | LMPME<br>CCDEBE1 | Modification                       |
| RetrieveDefaultBidCurves_CMRIv2_DocAttach              |                  |                                    |
| RetrieveExternalDefaultCommitmentCost_CMRIv1           | CCDEBE1          | Modification                       |
| RetrieveExternalDefaultCommitmentCost_CMRIv1_DocAttach |                  |                                    |
| RetrieveEIMResourceOperatingLimit_CMRIv1               | EIM 2019         | New                                |
| RetrieveEIMResourceOperatingLimit_CMRIv1_DocAttach     |                  |                                    |
| RetrieveResourceOperatingLimit_CMRIv1                  | EIM 2019         | New                                |
| RetrieveResourceOperatingLimit_CMRIv1_DocAttach        |                  |                                    |

## OASIS APIs

OASIS Interface Specification:

<https://developer.caiso.com/Artifacts/OASIS/TechSpecs/OASIS%20Interface%20Specification%20v5.1.9.pdf>

OASIS Artifacts: <https://developer.caiso.com/pages/application.aspx?app=OASIS>

| Service        | Project  | Availability as of this Deployment |
|----------------|----------|------------------------------------|
| ENE_TRANS_LOSS | EIM 2019 | New                                |

## DRRS

DRRS Interface Specification:

<https://developer.oa.caiso.com/Artifacts/DRRS/TechSpecs/DRRS%20Interface%20Specification%20v3.1.pdf>

## MRI-S

MRI-S Interface Specification: <https://developer.caiso.com/Artifacts/MRI-S/TechSpecs/MRI-S%20Interface%20Specification%20v2.3.pdf>

## Deployment and Activation Timeline

The Fall 2019 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   |
|------------|------------------------|----------|
| 10/29/2019 | Master File            | On-Track |
| 10/30/2019 | Settlements            | On-Track |
| 10/30/2019 | MRI-S                  | On-Track |
| 11/04/2019 | Integration            | On-Track |
| 11/05/2019 | CMRI                   | On-Track |
| 11/05/2019 | OASIS                  | On-Track |
| 11/05/2019 | CIRA                   | On-Track |
| 11/06/2019 | DRRS                   | On-Track |
| 11/06/2019 | Market/BAAOP/HANA      | On-Track |
| 11/06/2019 | SIBR/BSAP/RCBSAP       | On-Track |

## Deployment Times, Outages, and Market Participant Actions

### Master File – October 29, 2019

| System             | Deployment Time     | Outage                           | MP Action |
|--------------------|---------------------|----------------------------------|-----------|
| <b>Master File</b> | 10:00 AM to 4:00 PM | Brief interruption for MF UI/API | None      |

All times are Pacific

### Settlements – October 30, 2019

| System             | Deployment Time     | Outage                | MP Action |
|--------------------|---------------------|-----------------------|-----------|
| <b>Settlements</b> | 9:00 AM to 12:00 PM | No outage anticipated | N/A       |

All times are Pacific

### MRI-S – October 30, 2019

| System       | Deployment Time     | Outage                              | MP Action |
|--------------|---------------------|-------------------------------------|-----------|
| <b>MRI-S</b> | 9:00 AM to 12:00 PM | Brief interruption for MRI-S UI/API | N/A       |

All times are Pacific

### Integration – November 4, 2019

| System             | Deployment Time    | Outage                                    | MP Action |
|--------------------|--------------------|---|-----------|
| <b>Integration</b> | 1:00 PM to 3:00 PM | Brief interruption for Web Services (API) | N/A       |

All times are Pacific

### CMRI – November 5, 2019

| System      | Deployment Time    | Outage                             | MP Action |
|-------------|--------------------|------------------------------------|-----------|
| <b>CMRI</b> | 1:00 PM to 6:00 PM | Brief interruption for CMRI UI/API | N/A       |

All times are Pacific

### OASIS – November 5, 2019

| System       | Deployment Time    | Outage                              | MP Action |
|--------------|--------------------|-------------------------------------|-----------|
| <b>OASIS</b> | 1:00 PM to 6:00 PM | Brief interruption for OASIS UI/API | N/A       |

All times are Pacific

### CIRA – November 5, 2019

| System      | Deployment Time    | Outage                             | MP Action |
|-------------|--------------------|------------------------------------|-----------|
| <b>CIRA</b> | 1:00 PM to 6:00 PM | Brief interruption for CIRA UI/API | N/A       |

All times are Pacific

### DRRS – November 6, 2019

| System      | Deployment Time    | Outage                             | MP Action |
|-------------|--------------------|------------------------------------|-----------|
| <b>DRRS</b> | 1:00 PM to 6:00 PM | Brief interruption for DRRS UI/API | N/A       |

All times are Pacific

### Market/BAAOP/HANA – November 6, 2019

| System                   | Deployment Time    | Outage                                       | MP Action |
|--------------------------|--------------------|--|-----------|
| <b>Market/BAAOP/HANA</b> | 1:00 PM to 6:00 PM | Brief interruption for BAAOP UI/API, HANA UI | None      |

All times are Pacific

### SIBR/BSAP/RCBSAP – November 6, 2019

| System                  | Deployment Time    | Outage   | MP Action |
|-------------------------|--------------------|--|-----------|
| <b>SIBR/BSAP/RCBSAP</b> | 1:00 PM to 6:00 PM | Brief interruption for SIBR/BSAP/RCBSAP UI/API | N/A       |

All times are Pacific

## Communication and Support

Below is the Fall 2019 Release communication schedule:

| Description  | Method  | Frequency        |
|--|---|------------------|
| <b>Fall 2019 Release Implementation Market Simulation Call</b> | By phone: call 1-866-528-2256 or International 1-216-706-7052, access code: 202 249 0<br>By web: join web conference at <a href="https://caiso.webex.com/meet/MarketSim">https://caiso.webex.com/meet/MarketSim</a> , meeting number: 962 067 710<br><br>Related information:<br><a href="http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx">http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx</a>                              | Twice Weekly     |
| <b>Release Users Group (RUG)</b>                               | By phone: call 1-866-528-2256, access code: 291 426 5<br>By web: join web conference at <a href="https://caiso.webex.com/meet/RUG">https://caiso.webex.com/meet/RUG</a> , meeting number: 960 941 245<br><br>Related information:<br><a href="http://www.caiso.com/informed/Pages/MeetingsEvents/UserGroupsRecurringMeetings/Default.aspx#RUG">http://www.caiso.com/informed/Pages/MeetingsEvents/UserGroupsRecurringMeetings/Default.aspx#RUG</a>            | Every Other Week |
| <b>Technical Users Group (TUG)</b>                             | By phone: call 1- 866-528-2256, access code: 3895889<br>By web: join web conference at <a href="https://caiso.webex.com/meet/CAISO-TUG">https://caiso.webex.com/meet/CAISO-TUG</a> , meeting number: 966 010 353<br><br>Related information:<br><a href="http://www.caiso.com/informed/Pages/MeetingsEvents/UserGroupsRecurringMeetings/Default.aspx#TUG">http://www.caiso.com/informed/Pages/MeetingsEvents/UserGroupsRecurringMeetings/Default.aspx#TUG</a> | Every Other Week |

### Implementation Plan Contact Information

- ISO Market Simulation Coordination at [marketsim@caiso.com](mailto:marketsim@caiso.com)
- CIDI

### 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.