



California ISO

# Technology User Group (TUG)

March 31, 2020

10:00 – 11:00 AM Pacific

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# TUG Agenda

Web Conference Information		Conference Call Information	
<i>URL</i>	<a href="https://caiso.webex.com/meet/CAISO-TUG">https://caiso.webex.com/meet/CAISO-TUG</a>	<i>Domestic Call-In</i>	(866) 528-2256
<i>Meeting Number</i>	966 010 353	<i>International Call-In</i>	(216) 706-7052
<i>Access Code</i>	389 588 9	<i>Access Code</i>	389 588 9

Topic	Facilitator
Agenda and Roll Call	Indu Nambiar
System Interface Changes	Trang Vo
NERC CIP-012-1 Implementation	Robert Melis
CMRI – Release Notes Update	Neela Alla
CAISO’s B2B Integration Improvements	Ajay Mannepalli
CAISO’s AUP Specification	Ajay Mannepalli
DRRS – ESDER3B Transition Timeline	Eureka Cullado

# System Interface Changes

## SIBR/BSAP

System	Project	Change Type	API Service Name & Major Version, Artifacts	MAP Stage	Production Activation	Technical Specifications
SIBR	CCDEBE1	Modify	<a href="#">RetrieveCleanBidSet_SIBRv5</a> <a href="#">RetrieveCleanBidSet_SIBRv5_DocAttach</a>	Oct 16, 2019	Deployment Mar 26, 2020 Activation Jul 2020	<a href="#">13.2</a>
SIBR	CCDEBE1	Modify	<a href="#">RetrieveCurrentBidResults_SIBRv5</a> <a href="#">RetrieveCurrentBidResults_SIBRv5_DocAttach</a>	Oct 16, 2019	Deployment Mar 26, 2020 Activation Jul 2020	<a href="#">13.2</a>
SIBR	CCDEBE1	Modify	<a href="#">SubmitRawBidSet_SIBRv5</a> <a href="#">SubmitRawBidSet_SIBRv5_DocAttach</a>	Oct 16, 2019	Deployment Mar 26, 2020 Activation Jul 2020	<a href="#">13.2</a>
BSAP	EIM2019	Modify	<a href="#">RetrieveBalancingTestResults_BSAPv2</a> <a href="#">RetrieveBalancingTestResults_BSAPv2_DocAttach</a>	Oct 16, 2019	Deployment Mar 26, 2020 Activation Mar 2020	<a href="#">1.7.3</a>

## CMRI

Project	Change Type	UI Change	API Service Name & Major Version, Artifacts	MAP Stage	Production Activation	Technical Specifications
LMPME CCDEBE1	Modify	Tab: Default Bids Existing Report: Default Energy Bid Curves	<a href="#">RetrieveDefaultBidCurves_CMRIv2</a> <a href="#">RetrieveDefaultBidCurves_CMRIv2_DocAttach</a>	LMPME - Sep 12, 2019 CCDEBE - Nov 6, 2019	LMPME - Nov 13, 2019 CCDEBE – ✓ Deployment Mar 26, 2020 Activation Jul 2020	<a href="#">3.9.3</a>
CCDEBE1	Modify	Tab: Default Bids Existing Report: Default Commitment Costs	<a href="#">RetrieveExternalDefaultCommitmentCost_CMRIv1</a> <a href="#">RetrieveExternalDefaultCommitmentCost_CMRIv1_DocAttach</a>	Nov 11, 2019	✓ Deployment Mar 26, 2020 Activation Jul May 2020	<a href="#">3.9.3</a>

# System Interface Changes

## OASIS

Project	Change Type	UI Change	API Service Name & Major Version, Artifacts	MAP Stage	Production Activation	Technical Specifications
CRR Data Transparency Enhancements	Modify	Modify Congestion Revenue Rights > CRR Aggregated Revenue Adjustment Data	CRR_AGG_REV_ADJ  Add 4 new columns: DIRECTION IFM_NET_FLOW_MW CLAWBACK_REV CIR_SCH_REV	✓ Mar 03, 2020	Apr 15, 2020	<a href="#">5.1.11</a>

## MMD

Project	Change Type	CSV Change	Data Change	MAP Stage	Production Activation	Technical Specifications
CRR Data Transparency Enhancements	Data	No Changes to Shift Factors CSV Format/Structure - Same Columns/Column Names	Apnode shift factors will be delivered in the same file as the Pnode shift factors  The value in the existing 'Node Name' column will have "- APND" at the end to identify Apnodes	N/A	Apr 15, 2020	N/A

## OMS

Project	Change Type	API Service Name & Major Version, Artifacts	MAP Stage	Production Activation	Technical Specifications
N/A - Retire v1 services	Deprecation	RetrieveResourceOutage_OMSv1_AP & DocAttach RetrieveResourceOutageChangeRequest_OMSv1_AP & DocAttach RetrieveTransmissionOutage_OMSv1_AP & DocAttach RetrieveTransmissionOutageChangeRequest_OMSv1_AP & DocAttach SubmitResourceOutage_OMSv1_AP & DocAttach SubmitResourceOutageChangeRequest_OMSv1_AP & DocAttach SubmitTransmissionOutage_OMSv1_AP & DocAttach SubmitTransmissionOutageChangeRequest_OMSv1_AP & DocAttach	Apr 13, 2020	TBD	N/A

# Fall 2020 Release - System Interface Changes *Draft*

## ADS

Project	Change Type	Summary	Technical Specifications	MAP Stage	Production Activation
ADS Replacement DOTTC	Modify	v7: Instructions to include Unannounced AS Test information	By May 29, 2020	Jul 27, 2020	Oct 01, 2020

## DRRS

Project	Change Type	Summary	Technical Specifications	MAP Stage	Production Activation
ESDER3B	Modify	DRRegistrationData xsd LSE for PDR Registrations	By May 6, 2020	Jul 27, 2020	Oct 01, 2020
ESDER3B	New	Alternate API to only retrieve incremental data changes (Locations, Registrations)	By May 6, 2020	Jul 27, 2020	Oct 01, 2020
ESDER3B		Retrieval of the complete location approval process workflow details (LSE & UDC)	By May 6, 2020	Jul 27, 2020	Oct 01, 2020
ESDER3B		Retrieval of location records that are under the defense process	By May 6, 2020	Jul 27, 2020	Oct 01, 2020
ESDER3B		Retrieval of the location defense process workflow details (Incumbent & Prospective DRPs)	By May 6, 2020	Jul 27, 2020	Oct 01, 2020

# Fall 2020 Release - System Interface Changes *Draft*

## MRI-S

Project	Change Type	Summary	Technical Specifications	MAP Stage	Production Activation
Excess Behind the Meter Production	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	By May 29, 2020	Jul 27, 2020	Jan 01, 2021

## Master File

Project	Change Type	Summary	Technical Specifications	MAP Stage	Production Activation
ESDER3B		Add enumeration to GRDT web service	By May 29, 2020	Jul 27, 2020	Oct 01, 2020
FERC841 Requested Adjustments		New GRDT attribute	By May 29, 2020	Jul 27, 2020	Oct 01, 2020
EIM 2020		New GRDT attribute	By May 29, 2020	Jul 27, 2020	Oct 01, 2020
Other		Remove MIN_LOAD from GRDT	By May 29, 2020	Jul 27, 2020	Oct 01, 2020

## CMRI

Project	Change Type	Summary	Technical Specifications	MAP Stage	Production Activation
EIM 2020		TBD	By May 29, 2020	Jul 27, 2020	Oct 01, 2020

## OASIS

Project	Change Type	Summary	Technical Specifications	MAP Stage	Production Activation
Excess Behind the Meter Production		TBD	By May 29, 2020	Jul 27, 2020	Jan 01, 2021



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## NERC CIP-012-1 Implementation

- Related to Cyber Security - Communications between Control Centers to protect the confidentiality and integrity of RT Assessment and RT monitoring data transmitted between Control Centers
- NERC mandatory compliance by 7/1/22
- Through CAISO's Energy Communications Network (ECN) the ISO will implement network – layer security controls between all entities who use CAISO's ECN network.





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## NERC CIP-012-1 Implementation (continued)

- CAISO will host a call in mid April 2020 with connected entities to discuss technical solution to meet compliance requirements.
- Connected entities that use CAISO's ECN include: Balancing Authorities, Generator Owner and Operators, Reliability Coordinators, Transmission Owner and Operators.
- We will send a targeted communication with conference call details.
- Questions can be sent to [isoclientrepresentatives@caiso.com](mailto:isoclientrepresentatives@caiso.com).

# CMRI Upcoming Release for CCDEBE and RC West

Please refer to updated release notes posted on [developer.caiso.com](http://developer.caiso.com)

## CMRI Customer Market Results Interface

HOME / APPS / CMRI

### Overview

CMRI is a reporting interface that contains private market information resulting from the ISO and EIM market processes: MPM, IFM, RUC, HASP, and Real-Time. This includes schedules and awards, resource-specific prices, default and mitigated bids, unit commitments, instructions, EIM base schedules, and EIM test results.

#### Resources

- [CMRI documentation](#)
- [CMRI UI screenshot](#)
- [HTTP Error Codes](#)
- [Connectivity Test](#)

[View UI Environments](#)

### Release Notes

NAME	STATUS	RELEASE	LAST UPDATED
CMRI 7.1.x Release Notes v1.0 (Fall 2019 Release).pdf	UPCOMING	Fall 2019	1/16/2020

### Tech Specs

# CAISO B2B Improvements

- **Goals**

- Enhance the developer experience working with CAISO Web API's
- Provide API's in REST/JSON using OpenAPI 3.0 specification
- Provide examples, mock services and tooling to generate client/server stubs and SDK
- Provide tests for the API's using Postman collections and/or SOAPUI projects
- Collaboration using Git and forums on developer.caiso.com
- Simplify authentication using X.509 certificates and API keys

- **Update**

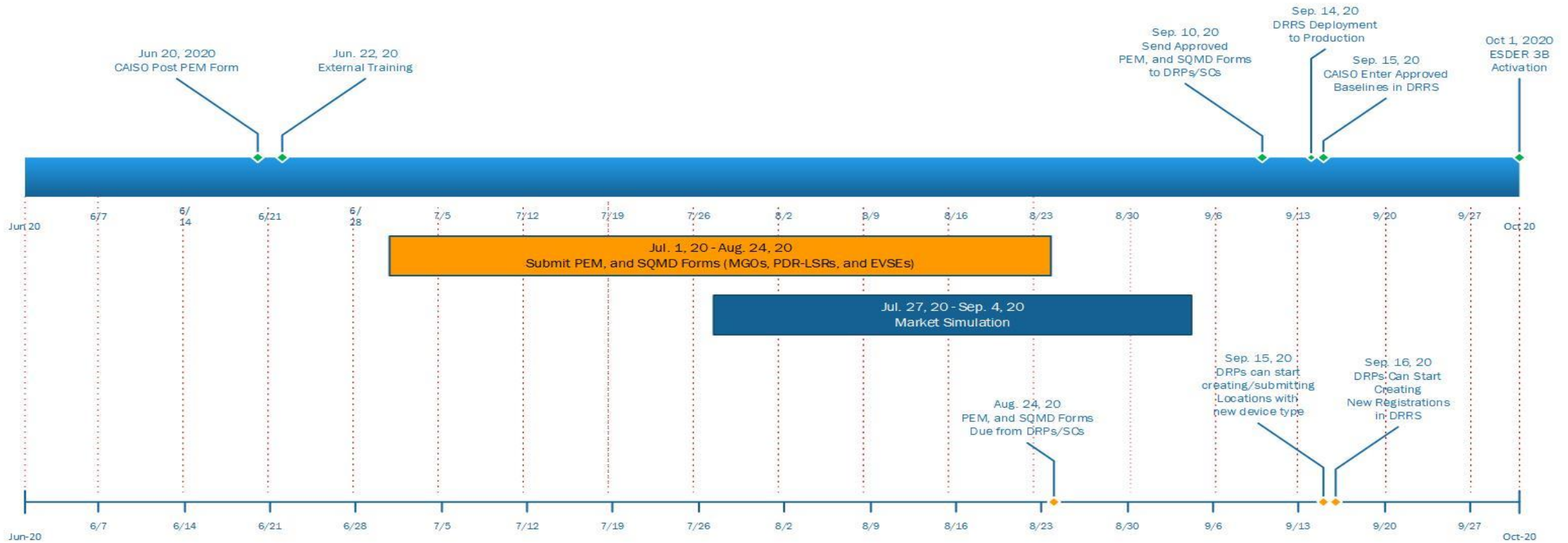
- POC updates are posted on developer forum at <https://developer.caiso.com/forum/topics.aspx?ForumID=4>
- Initial OpenAPI specification files for the services are uploaded to the POC git repository
- Services we will use for the POC
  - RetrieveSchedulePrices\_CMRIv4
  - SubmitRawBidSet\_SIBRv4
  - SubmitMeterData\_STLMTv1
  - RetrieveDRLocations\_DRRSv4

# CAISO AUP Specification

- AUP document has been updated to reflect the current implementation at <https://developer.caiso.com/Documents/TechnicalSpecifications-AcceptableUsePolicyImplementation.pdf>

# Energy Storage and Distributed Energy Resources Phase 3B – Transition Timeline

DRP/SC ISO Joint



# Ongoing Initiatives

# OMS Update

Propose to retire the following services mid-April, 2020:

- 3 participants are still using these services
  - RetrieveResourceOutage\_OMSv1\_AP
  - RetrieveResourceOutage\_OMSv1\_DocAttach\_AP
  - RetrieveResourceOutageChangeRequest\_OMSv1\_AP
  - RetrieveResourceOutageChangeRequest\_OMSv1\_DocAttach\_AP
- No participants are currently using these services
  - RetrieveTransmissionOutage\_OMSv1\_AP
  - RetrieveTransmissionOutage\_OMSv1\_DocAttach\_AP
  - RetrieveTransmissionOutageChangeRequest\_OMSv1\_AP
  - RetrieveTransmissionOutageChangeRequest\_OMSv1\_DocAttach\_AP
  - SubmitResourceOutage\_OMSv1\_AP
  - SubmitResourceOutage\_OMSv1\_DocAttach\_AP
  - SubmitResourceOutageChangeRequest\_OMSv1\_AP
  - SubmitResourceOutageChangeRequest\_OMSv1\_DocAttach\_AP
  - SubmitTransmissionOutage\_OMSv1\_AP
  - SubmitTransmissionOutage\_OMSv1\_DocAttach\_AP
  - SubmitTransmissionOutageChangeRequest\_OMSv1\_AP
  - SubmitTransmissionOutageChangeRequest\_OMSv1\_DocAttach\_AP
- **Implementation Plan:**
  - **Map Stage – April 13, 2020**
  - **Production - TBD**

# Next TUG: Apr 14, 2020

Contact for Questions & Agenda Requests: Indu Nambiar, [inambiar@caiso.com](mailto:inambiar@caiso.com)

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