# Technical User Group (TUG)

April 28, 2020

10:00 – 11:00 AM Pacific

# Legal Disclaimer for Recording Meeting

*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 publically 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.*

California ISO

# TUG Agenda

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

| Topic | Facilitator |
|---|---|
| Agenda and Roll Call | Indu Nambiar |
| System Interface Changes | Trang Vo |
| ADS Replacement | Akm Ferdous |
| OASIS & CMRI - Version Management | Swami Mahalingam |
| CAISO's B2B Integration Improvements | Ajay Mannepalli |
| Ongoing Initiatives | Indu Nambiar |

California ISO

# System Interface Changes

**OASIS**

| Project | Change Type | UI | API Service Name & Major Version, Artifacts | MAP Stage | Production | Technical Specifications |
|---|---|---|---|---|---|---|
| CRR Data Transparency Enhancements | Modify | Tab: Congestion Revenue Rights<br>Existing Report: CRR Aggregated Revenue Adjustment Data | CRR_AGG_REV_ADJ<br><br>Add 4 new columns:<br>DIRECTION<br>IFM_NET_FLOW_MW<br>CLAWBACK_REV<br>CIR_SCH_REV | ✓ 3/3/20 | ✓ 4/15/20 | 5.1.11 |

**MMD**

| Project | Change Type | CSV | Data | MAP Stage | Production | 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<br><br>The value in the existing 'Node Name' column will have "-APND" at the end to identify Apnodes | N/A | ✓ TD 2/29/20<br>Notice | N/A |

California ISO

# System Interface Changes

| OMS | | | | | | |
|---|---|---|---|---|---|---|
| **Project** | **Change Type** | **UI** | **API Service Name & Major Version, Artifacts** | **MAP Stage** | **Production** | **Technical Specifications** |
| N/A: Retire v1 Services | Deprecation | N/A | RetrieveResourceOutage_OMSv1_AP<br>RetrieveResourceOutage_OMSv1_DocAttach_AP<br>RetrieveResourceOutageChangeRequest_OMSv1_AP<br>RetrieveResourceOutageChangeRequest_OMSv1_DocAttach_AP<br>RetrieveTransmissionOutage_OMSv1_AP<br>RetrieveTransmissionOutage_OMSv1_DocAttach_AP<br>RetrieveTransmissionOutageChangeRequest_OMSv1_AP<br>RetrieveTransmissionOutageChangeRequest_OMSv1_DocAttach_AP<br>SubmitResourceOutage_OMSv1_AP<br>SubmitResourceOutage_OMSv1_DocAttach_AP<br>SubmitResourceOutageChangeRequest_OMSv1_AP<br>SubmitResourceOutageChangeRequest_OMSv1_DocAttach_AP<br>SubmitTransmissionOutage_OMSv1_AP<br>SubmitTransmissionOutage_OMSv1_DocAttach_AP<br>SubmitTransmissionOutageChangeRequest_OMSv1_AP<br>SubmitTransmissionOutageChangeRequest_OMSv1_DocAttach_AP | ✓ 4/15/20 | 4/23/20 | N/A |

https://developer.caiso.com

California ISO

# System Interface Changes

**SIBR**

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

**BSAP**

| Project | Change Type | API Service Name & Major Version, Artifacts | MAP Stage | Production | Technical Specifications |
|---|---|---|---|---|---|
| EIM2019 | Modify | RetrieveBalancingTestResults_BSAPv2_AP<br>RetrieveBalancingTestResults_BSAPv2_DocAttach_AP | ✓ 10/16/19 | ✓ Deploy 3/26/20<br>Activation Apr 2020 | 1.7.3 |

**CMRI**

| Project | Change Type | UI | API Service Name & Major Version, Artifacts | MAP Stage | Production | Technical Specifications |
|---|---|---|---|---|---|---|
| LMPME<br><br>CCDEBE1 | Modify | Tab: Default Bids<br>Existing Report: Default Energy Bid Curves | RetrieveDefaultBidCurves_CMRIv2_AP<br>RetrieveDefaultBidCurves_CMRIv2_DocAttach_AP | LMPME<br>✓ 9/12/19<br><br>CCDEBE1<br>✓ 11/6/19 | LMPME<br>✓ 11/13/19<br><br>CCDEBE1<br>✓ Deploy 3/26/20<br>Activation 10/1/20 | 3.9.4<br><br>Release Notes 1.2 |
| CCDEBE1 | Modify | Tab: Default Bids<br>Existing Report: Default Commitment Costs | RetrieveExternalDefaultCommitmentCost_CMRIv1_AP<br>RetrieveExternalDefaultCommitmentCost_CMRIv1_DocAttach_AP | ✓ 11/11/19 | ✓ Deploy 3/26/20<br>Activation 10/1/20 | 3.9.4<br><br>Release Notes 1.2 |

https://developer.caiso.com

California ISO

# Fall 2020 Release - System Interface Changes

| ADS | | | | | |
|-----|-----|-----|-----|-----|-----|
| **Project** | **Change Type** | **Summary** | **Technical Specifications** | **MAP Stage** | **Production** |
| ADS Replacement<br><br>DOTTC | Modify | v7: Instructions to include Unannounced AS Test information | 5/29/20 | 7/27/20 | 10/1/20 |

| DRRS | | | | | |
|------|-----|-----|-----|-----|-----|
| **Project** | **Change Type** | **Summary** | **Technical Specifications** | **MAP Stage** | **Production** |
| ESDER3B | Modify | RequestDRRegistrationData.xsd<br>DRRegistrationData.xsd | 5/6/20 | 7/27/20 | Deploy 9/14/20 |
| ESDER3B | New | Alternate API to only retrieve incremental data changes (Locations, Registrations) | 5/6/20 | 7/27/20 | Deploy 9/14/20 |
| ESDER3B | | Retrieval of the complete location approval process workflow details (LSE & UDC) | 5/6/20 | 7/27/20 | Deploy 9/14/20 |
| ESDER3B | | Retrieval of location records that are under the defense process | 5/6/20 | 7/27/20 | Deploy 9/14/20 |
| ESDER3B | | Retrieval of the location defense process workflow details (Incumbent & Prospective DRPs) | 5/6/20 | 7/27/20 | Deploy 9/14/20 |

| MRI-S | | | | | |
|-------|-----|-----|-----|-----|-----|
| **Project** | **Change Type** | **Summary** | **Technical Specifications** | **MAP Stage** | **Production** |
| EBTMP | Modify | For:<br> - MRIS Meter: Submit Meter &<br> - MRIS Meter: Retrieve Meter<br><br>additionally include EBtMP measurement  type values (as negative load)<br><br>both Gross Load and EBtMP meter data would associate with same Load Resource ID | 5/29/20 | 7/27/20 | Activation 1/1/21 |

# Fall 2020 Release - System Interface Changes

| Master File | | | | | |
|---|---|---|---|---|---|
| Project | Change Type | Summary | Technical Specifications | MAP Stage | Production |
| ESDER3B | | Add enumeration to GRDT web service | 5/29/20 | 7/27/20 | 10/1/20 |
| FERC841 RA | | New GRDT attribute | 5/29/20 | 7/27/20 | 10/1/20 |
| EIM2020 | | New GRDT attribute | 5/29/20 | 7/27/20 | 10/1/20 |
| Other | | Remove MIN_LOAD from GRDT | 5/29/20 | 7/27/20 | 10/1/20 |

| CMRI | | | | | |
|---|---|---|---|---|---|
| Project | Change Type | Summary | Technical Specifications | MAP Stage | Production |
| EIM2020 | | TBD | 5/29/20 | 7/27/20 | 10/1/20 |

| OASIS | | | | | |
|---|---|---|---|---|---|
| Project | Change Type | Summary | Technical Specifications | MAP Stage | Production |
| FRP Improvements Buffer & Min | | TBD | 5/29/20 | 7/27/20 | 10/1/20 |
| EBTMP | | TBD | 5/29/20 | 7/27/20 | Activation 1/1/21 |

https://developer.caiso.com

California ISO

# ADS Replacement Update – FMM Schedules

- As both ADS & CMRI will get the FMM Schedules from the same source, in real time both applications will show the same results.

- ADS will not display the subsequent corrections, if any though CMRI will process and report accordingly.

- For real time dispatch information, users can follow either ADS or CMRI. However, for shadow settlements or post real time analysis, users should continue to use CMRI as the source.
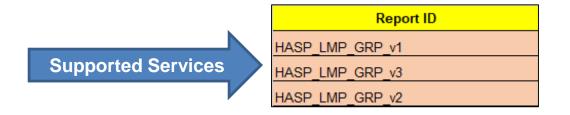
# Version Management for OASIS & CMRI

- Background

  - ISO's standard policy is to support two versions of services as described in the Technical Specifications

  - Goal is to provide customers time to transition to latest version

  - The ISO currently supports multiple versions for OASIS and latest two versions for CMRI

  - Customers continue to use unsupported versions, that are not tested for future upgrades.

  - Resulting in increased support time/cost for stakeholders and ISO when troubleshooting unsupported versions

California ISO

# OASIS Supported Versions Example - HASP_LMP_GRP

- The following table illustrates an example showcasing the versions supported by OASIS application vs documented Tech Specs

| Report ID |
|---|
| HASP_LMP_GRP_v1 |
| HASP_LMP_GRP_v3 |
| HASP_LMP_GRP_v2 |

**Supported Services** →

| HASP_LMP_GRP | http://oasis.caiso.com/oasisapi/GroupZip?groupid=HASP_LMP_GRP&startdatetime=20130919T07:00-0000&enddatetime=20130919T08:00-0000&version=1 |
|---|---|
| **From TechSpec** | OR |
| | http://oasis.caiso.com/oasisapi/GroupZip?groupid=HASP_LMP_GRP&startdatetime=20130919T07:00-0000&enddatetime=20130919T08:00-0000&version=3 |
| | Note: Version 3 response zip file will include separate file for each price component |

# Version Management for OASIS & CMRI

- The Plan ahead

  - Version Management

    - Enforce the policy to support only two versions of services

    - Technical Specification will indicate supported and deprecated versions

    - Revised Technical Specification will be available on **5/29/2020**

    - Deprecated versions will be decommissioned on **9/1/2020**

  - Identifying patterns to embed information related to events resulting in failed market intervals within API and UI

# OASIS – Version Management

- Path to latest Tech Specs on developer site:

  – Go to developer site

  – Click on OASIS under Apps

  – Navigate to Tech Specs

- Path to currently supported versions

  – Go to developer site & Click on OASIS

  – Navigate to Tech Specs section for these files

    - OASIS SingleZipServiceResults_SupportedVersions_April_09_2020.xls

    - OASIS GroupZipServiceResults_SupportedVersions_April_09_2020.xls

California ISO

# CMRI – Version Management

- CMRI currently supports two versions of services which is in compliance with CAISO guidelines

- Path to latest Tech Specs on developer site:

  – Go to developer site

  – Click on CMRI under Apps

  – Navigate to 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 and webinar notes are posted on developer forum at https://developer.caiso.com/forum/topics.aspx?ForumID=4. Next webinar will be on 5/5/2020.
    - Following git repositories have been updated (api-specs, api-docs, api-sdk )
    - Make the API query parameters naming consistent across all services.
    - Evaluate adding updateSinceDateTime query parameter across all services (similar to MRI-S and WebOMS)
    - CAISO will internally discuss API versioning, pagination logic and authentication options for the WebAPI's and present the proposal during the next webinar
    - Evaluate having an option of schedulingCoordinator set to ALL, which is derived from the certificate identity rather than having to include all the SCID's in the query parameters

# Ongoing Initiatives

California ISO

# 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 15, 2020
  - Production – April 23, 2020

California ISO

# Next TUG: May 12, 2020

Contact for Questions & Agenda Requests: Indu Nambiar, inambiar@caiso.com

## Stay connected

@California_ISO

Download ISO Today mobile app

Sign up for the Daily Briefing at www.caiso.com