Technical User Group (TUG)

April 14, 2020

10:00 – 11:00 AM Pacific

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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
DRRS – ESDER3B Transition Timeline	Eureka Cullado
OASIS - TechSpec Updates	Swami Mahalingam & Neela Alla
CAISO's B2B Integration Improvements	Ajay Mannepalli
Ongoing Initiatives	Indu Nambiar

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 Existing Report: CRR Aggregated Revenue Adjustment Data	CRR_AGG_REV_ADJ Add 4 new columns: DIRECTION IFM_NET_FLOW_MW CLAWBACK_REV 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 The value in the existing 'Node Name' column will have "-APND" at the end to identify Apnodes	N/A	✓ TD 2/29/20 Notice	N/A

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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 RetrieveResourceOutage_OMSv1_DocAttach_AP RetrieveResourceOutageChangeRequest_OMSv1_AP RetrieveResourceOutageChangeRequest_OMSv1_DocAttach_AP 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	4/13/20	TBD	N/A

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System Interface Changes

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 7/1/20	13.2
CCDEBE1	Modify	RetrieveCurrentBidResults_SIBRv5_AP RetrieveCurrentBidResults_SIBRv5_DocAttach_AP	✓ 10/16/19	✓ Deploy 3/26/20 Activation 7/1/20	13.2
CCDEBE1	Modify	SubmitRawBidSet_SIBRv5_AP SubmitRawBidSet_SIBRv5_DocAttach_AP	✓ 10/16/19	✓ Deploy 3/26/20 Activation 7/1/20	13.2

BSAP

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

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 7/1/20	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 7/1/20	3.9.4 Release Notes 1.2

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Fall 2020 Release - System Interface Changes

ADS					
Project	**Change Type**	**Summary**	**Technical Specifications**	**MAP Stage**	**Production**
ADS Replacement 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 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: - 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	5/29/20	7/27/20	Activation 1/1/21

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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

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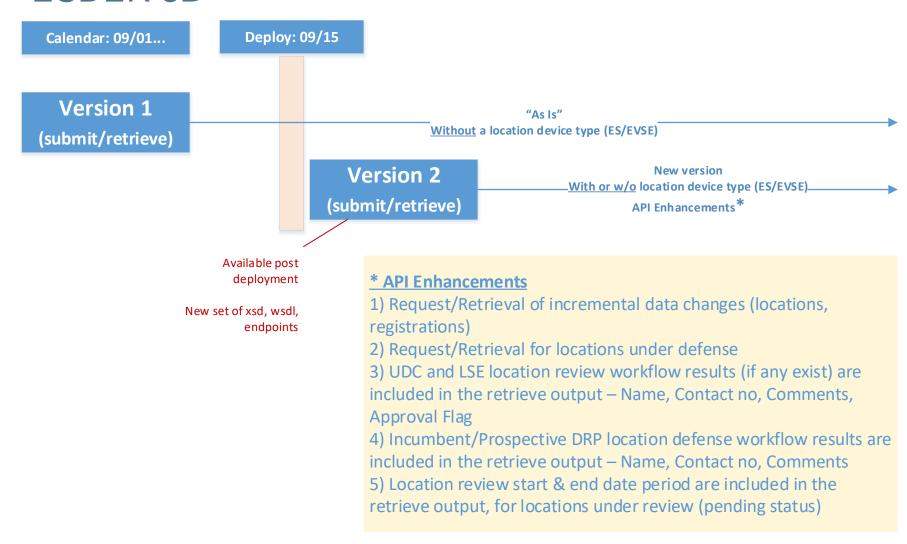
ADS Replacement Update

- Following Technology changes as per the posted external BRS will be soon ready in Map Stage for testing:
  - Transition to web-based user interface to eliminate the need to install thick client.
    - Supported browsers are Chrome and Edge with Chromium.
  - Transition ADS access provisioning to the Access and Identity Management (AIM) application including resource level access control via self provisioning

- Demo/Preview of new ADS is scheduled on 4/16

DRRS – ESDER 3B

Calendar: 09/01...

Deploy: 09/15

Version 1
(submit/retrieve)

"As Is"
<u>Without</u> a location device type (ES/EVSE)

Version 2
(submit/retrieve)

New version
<u>With or w/o</u> location device type (ES/EVSE)
API Enhancements*

Available post deployment

New set of xsd, wsdl, endpoints

* API Enhancements
1) Request/Retrieval of incremental data changes (locations, registrations)
2) Request/Retrieval for locations under defense
3) UDC and LSE location review workflow results (if any exist) are included in the retrieve output – Name, Contact no, Comments, Approval Flag
4) Incumbent/Prospective DRP location defense workflow results are included in the retrieve output – Name, Contact no, Comments
5) Location review start & end date period are included in the retrieve output, for locations under review (pending status)

DRRS – ESDER 3B

Registration baselines-		...09/01/2020	09/15/2020	09/30/2020	10/01/2020 ...
Pre-existing to ESDER3B *Effective today onwards* *MGO **MGO with 10 in 10 to End	Weather Matching	X	X	X	X
	Day Matching Combined	X	X	X	X
	Day Matching 10/10	X	X	X	X
	Day Matching 5/10 (Residential Only)	X	X	X	X
	Control Group	X	X	X	X
	*Meter Generation Output (without an Energy Storage location)	X	X	X	
	*Meter Generation Output (@ least one Energy Storage location)				X
	**Meter Generation Output with 10 in 10	X	X	X	Not Available
New with ESDER3B – Load Shifting *Effective starting ESDER3B* *Requires at least one location with an Energy Storage (ES) device type*	PDR-LSR				X
	PDR-LSR+Day Matching 5/10				X
	PDR-LSR+Day Matching 10/10				X
	PDR-LSR+Weather Matching				X
	PDR-LSR+Day Matching Combined				X
	MGO+Day Matching 5/10				X
	MGO+Day Matching 10/10				X
	MGO+Day Matching Combined				X
	MGO+Weather Matching				X
New with ESDER3B – Electric Vehicle Supply Equipment *Effective starting ESDER3B* *Requires at least one location with an Electric Vehicle Supply Equipment (EVSE) device type*	EVSE res				X
	EVSE res+Day Matching 5/10				X
	EVSE res+Day Matching 10/10				X
	EVSE res+Day Matching Combined				X
	EVSE res+Weather Matching				X
	EVSE non-res				X
	EVSE non-res+Day Matching 10/10				X
	EVSE non-res+Weather Matching				X
	EVSE non-res+Day Matching Combined				X

Locations-	...09/01/2020	09/15/2020	09/30/2020	10/01/2020 ...
Location without Device Type *Effective today onwards*	X	X	X	X
Location with Device Type *Effective starting ESDER3B*				X

OASIS – TechSpec Updates

- CIDI00220856 – OASIS API PRC_CURR_HUB_LMP Returning Invalid Parameter Message

- Upon review "enddatetime" element was missing in the sample URLs listed in Tech Specs

- Updated and published OASIS Tech Spec version 5.1.12 on Developer Site.

	http://oasis.caiso.com/oasisapi/SingleZip?queryname=PRC_CURR_LMP&node=___&startdatetime=20130919T07:00-0000&enddatetime=20130919T07:00-0000&version=2
PRC_CURR_HUB_LMP	http://oasis.caiso.com/oasisapi/SingleZip?queryname=PRC_CURR_HUB_LMP&startdatetime=20130919T07:00-0000&enddatetime=20130920T07:00-0000&version=1
PRC_NOMOGRAM	http://oasis.caiso.com/oasisapi/SingleZip?queryname=PRC_NOMOGRAM&market_run_id=DAM&nomogram

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OASIS – TechSpec Updates

- CIDI00219258 was reported for errors in the XSD definition of OASISMaster_v4

- Updated and published OASISMaster_v4 XSD on Developer Site.

Tech Specs

i About status

NAME	STATUS	RELEASE	LAST UPDATED
OASIS-ArtifactsPackage_v1_3_Independent2020Release.zip	● UPCOMING	2020	4/9/2020

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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 (api-specs)
    - The documention markup content and tooling is now moved to it's repository (api-docs)
    - Next webinar will be on 4/21/2020
    - Services we will use for the POC
        - RetrieveSchedulePrices_CMRIv4
        - SubmitRawBidSet_SIBRv4
        - SubmitMeterData_STLMTv1
        - RetrieveDRLocations_DRRSv4

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Ongoing Initiatives

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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.

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.
  - Tentative date is April 22 but will be confirmed soon with the actual invitation being sent
- 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.

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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 – April 27, 2020

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Next TUG: Apr 28, 2020

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

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