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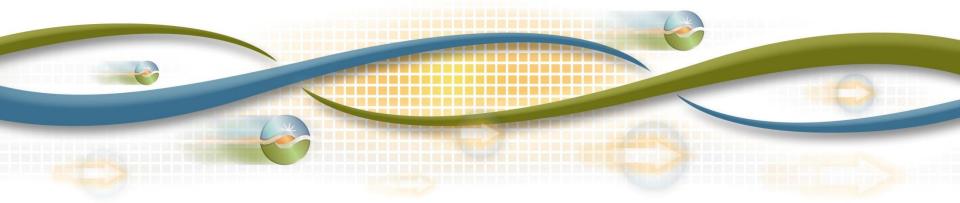
Release User Group Agenda

March 28th, 2017   *10:00 a.m.–11:00 a.m.* (Pacific Time)

Web Conference Information	Conference Call Information
URL: https://www.connectmeeting.att.com Meeting Number: 8665282256 Access Code: 5251941	Domestic Call In: (866) 528-2256 International Call In: (216) 706-7052 Access Code: 5251941

Release User Group Agenda

March 28th, 2017   *10:00 a.m. – 11:00 a.m. (Pacific Time)*

Time	Topic	Facilitator
10:00 – 10:05	Agenda & ISO Roll call	Brett Bruderer
10:05 – 10:45	Release Plan	Janet Morris Adrian Chiosea Jeremy Malekos Jim Barber Roxann Hall Michael Lucas John Williams Joanne Alai Marcelo Da Costa Marci Stuckey Christopher McIntosh Jami Herguth Prince Phillip Sandhya Balasubramanian Eureka Cullado Indu Nambiar Justin Wong Sunitha Srinivasan LuAnn Rivera Cynthia Hinman Trang Deluca

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The ISO offers comprehensive training programs

Date	Training
April 6	Welcome to the ISO (webinar)

Training calendar - http://www.caiso.com/participate/Pages/Training/default.aspx
Contact us - markettraining@caiso.com

Release Plan 2017

Independent 2017
- Settlements Release - Spring 2017
- MRI-S ACL Groups + CPG Enhancements (formerly OMAR Replacement)
- Administrative Pricing Policy Update
- RIMS Functional Enhancements

Spring 2017
- Acceptable Use Policy – CMRI
- RTD Local Market Power Mitigation (LMPM) Enhancements
- CRR Clawback Modifications
- Forecasting & Data Transparency Improvements (PIRP System Decommissioning)
- Metering Rules Enhancement

Fall 2017 (11/1/17)
- EIM Portland General Electric (PGE) – 10/1/17
- Bidding Rules Enhancements – Part B
- Reliability Services Initiative 2017
- Commitment Cost Enhancement Phase 3
- RM & EIM 2017 Enhancements
- Gas Burn Report

Release Plan – 2018 and subject to further planning

Spring 2018
- EIM 2018 Idaho Power Company

Fall 2018 – tentative, subject to impact assessment
- Bid Cost Recovery Enhancements
- Generation Contingency and Remedial Action Scheme
- Flexible Resource Adequacy Criteria and Must-offer Obligation Phase 2
- Frequency Response Phase 2
- Contingency Modeling Enhancements
- Commitment Costs and Default Energy Bid Enhancements
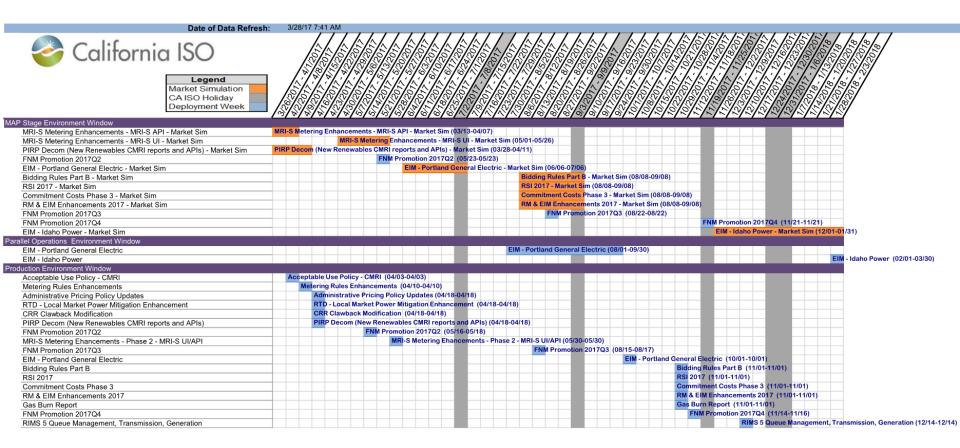- ADS User Interface Replacement

Spring 2019
- EIM 2019 Seattle City Light
- EIM 2019 Balancing Authority of Northern California (BANC)

Subject to further release planning:
- ESDER Phase 2
- Stepped Transmission Constraints
- Regional Resource Adequacy
- Regional Integration and EIM Greenhouse Gas Compliance
- Transmission Access Charge Options

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Release Schedule 2017 - 2018

http://www.caiso.com/Documents/ReleaseSchedule.pdf

Settlements Release – Spring 2017

ISSUE SUMMARY	BPM IMPACTED
Update configuration guide to compare the Balancing Authority Area Meter Load Quantity to the Balancing Authority Area Base Load Schedule instead of comparing Balancing Authority Area Meter Demand Quantity to Balancing Authority Area Base Load Scheduling when assessing Over and Under Scheduling EIM Settlement.	PRR 969: (CC 6045)
Update Pre-calculation RTM Net Amount to resolve two issues that relate to (1) the application of the Persistent Deviation Metric (PDM) and (2) the determination of BCR bid cost for a net-settled MSS.	PRR 970: (RTM Net Amount PC)
Settlement BPM and Charge Code updates for T+33M Settlement Statement implementation (Documentation Only)	PRR TBD: (CC 7989, CC 7999, Settlement Main Body BPM)
RAAIM - Flex Categories 2 and 3 Assessment Hour Updates (Documentation Only)	PRR 968: (RA Availability Incentive Mechanism PC)

Settlements Release – Spring 2017

Milestone	Date	Status
Configuration Guides Posted	February 10, 2017	✔
DRAFT Configuration Output File Posted	March 10, 2017	✔
SAMPLE statement for trade date 3/8/2017 Published	March 14, 2017	✔
Pre-Production DRAFT Configuration Output File Posted	March 21, 2017	✔
Production Deployment	March 27, 2017	✔
FINAL Configuration Output File Posted	March 27, 2017	✔

2017 - MRI-S ACL Groups+ CPG Enhancements

Project Info	Details/Date
Application Software Changes	The MRI-S metering (MRI-S) application cannot currently support ACL (Access Control List) groups functionality for defining a subset of resources belonging to an SCID. Enhancements to the Application Identity Management (AIM) application will enable the use of ACL groups for SCID-level read-only access for MRI-S. There will be no market simulation of AIM ACL groups but this functionality will be live in production to support the MRI-S Metering CPG enhancements market simulation. A customer partnership group will be scheduled to address the upcoming market sim.
BPM Changes	None
Business Process Changes	Potential Level-II business process changes under – • Manage Market & Reliability Data & Modeling • Manage Operations Support & Settlements

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board Approval	N/A	
BPMs	Business Practice Manuals	N/A	
External BRS	Post External BRS	Nov 14, 2016	✔
Tariff	Pre-Tariff Filing QRB	N/A	
Config Guides	Configuration Guide	N/A	
Tech Spec	Publish Tech Specs	Nov 02, 2016	✔
Market Simulation	MRI-S Metering Enhancements – MRI-S API MRI-S Metering Enhancements – MRI-S UI	Mar 13, 2017 - Apr 07, 2017 May 1, 2017 - May 26, 2017	
Production Activation	Phase 1 - ACL Groups	Mar 10, 2017	✔
	Phase 2 - MRI-S Metering Enhancements	May 30, 2017	

MRI-S ACL Groups + CPG Enhancements

#	System	Summary	Status	Estimated Fix Date
1	**MRI-S**	CIDI 183777, 183993 - MRI-S for Metering Limitation of 100,000 records.	In process	See previous slide
2	**MRI-S**	Option to choose UOM is missing on the UI		
3	**MRI-S**	CIDI 184018 - Time zone is missing on the UI		
4	**MRI-S**	CIDI 183777, 183993 - Modification to AUP policy on data retrieval to include querying by last updated time		
5	**MRI-S**	Option to request for data in various time interval in UI		
6	**MRI-S**	Ability to view log files within the same organization		
7	**MRI-S**	Ability to provide SC ID in the data retrieve request		
	MRI-S	*ACL Group – filter read-only at the resource level	In process	See previous slide

* ACL group creation to filter for a read only role at the resource level is not currently available

Per last fall's Customer Partnership Group discussions, the ISO will be not be performing any user access migration, including the current third party access in OMAR to AIM because:

- The platform and business logic for third party access are completely different between OMAR and AIM, so no automation is possible
- Any effort by the ISO would be manual, and would require heavy market participant involvement due to data integrity questions around security and third-party access concerns
- The data in OMAR is historical (aged) and therefore must be vetted by the Scheduling Coordinators to ensure its validity

2017 – Administrative Pricing Policy Updates

Project Info	Details/Date
Application Software Changes	• **MQS:** 　• *Part 1 (used under normal market conditions):* If there are less than 12 RTDs and 4 RTPDs missing – leverage existing process (last price used) 　• *Part 2 (used under normal market conditions):* If RTD prices are available copy over to RTPD; RTPD prices available copy over RTD. If neither RTPD or RTD prices are available use DA prices 　• *Part 3 (used Market Suspension conditions):* Use DA prices. If we don't have DA prices, revert to prior DA prices (awards and prices)
Business Process Change	• Manage Markets and Grid
BPMs	Market Instruments, Market Operations

Milestone Type	Milestone Name	Dates	Status
Board Approval	BOG Approval	Dec 10, 2014	✔
BPMs	Post Draft BPM changes	Mar 31, 2017	
External BRS	Post External BRS	Mar 20, 2015	✔
Tariff	Tariff Approval	Jan 30, 2017	✔
Config Guides	Prepare Draft Configuration Guides	Dec 6, 2016	✔
Tech Spec	Publish MF Tech Specs	N/A	
Market Sim	Market Sim Window	N/A	
Production Activation	Administrative Pricing Policy Updates	Apr 18, 2017 (Pending FERC extension)	

2017 – RIMS Functional Enhancements

Project Info	Details/Date	Status
Application Software Changes	Functional enhancements resulting from the Customer Partnership Group CPG. More details to be provided in the future.	
BPM Changes	Generator Interconnection and Deliverability Allocation Procedures Generator Interconnection Procedures Managing Full Network Model Metering Generator Management Transmission Planning Process	
Customer Partnership Group	10/16/15	✔
Application and Study Webinar	3/31/16	✔

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board approval not required	N/A	
BPMs	Generator Interconnection and Delivery Allocation	Apr 29, 2016	✔
External BRS	External BRS not Required	N/A	
Tariff	No Tariff Required	N/A	
Tech Spec	No Tech Specifications Required	N/A	
Production Activation Ph1	RIMS5 App & Study	Mar 21, 2016	✔
Production Activation Ph2	RIMS5 Queue Management, Transmission and Generation	Dec 14, 2017	

California ISO

Spring 2017 Release – Overview

	Board Approval	BPMs	External BRS	Tariff	Config Guide	Tech Spec	Market Sim	Production Activation
Spring 2017 Release								
Acceptable Use Policy - CMRI	N/A	N/A	N/A	N/A	N/A	N/A	8/23/16 - 9/23/16	4/3/17
RTD LMPM Enhancements	3/24/16	11/4/16	4/5/16	FERC approved effective date of 4/1/17	N/A	4/14/16	2/7/17 - 2/24/17	4/18/17 (Pending FERC Extension)
CRR Clawback Modifications	6/28/16	2/10/17	11/29/16	FERC approved effective date of 4/1/17	N/A	N/A	N/A	
Forecasting and Data Transparency Improvements (PIRP Decommissioning)	N/A	9/6/16	6/29/15	N/A	N/A	4/15/16	3/28/17 - 4/11/17	4/18/17
Metering Rules Enhancement	12/14/16	2/2/17	N/A	Filed with FERC on 2/8/17	N/A	N/A	N/A	4/10/17 (Pending FERC Approval

COMPLETE
N/A

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Spring 2017 – Acceptable Use Policy – CMRI

Project Info	Details/Date
Application Software Changes	Scope includes enforcement of Acceptable Use Policy for CMRI services to support the full implementation of 1 call per service per identity (as designated by certificate) every 5 seconds. An error code of 429 will be returned for any violation instance of the use policy.

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board Approval	N/A	
BPMs	BPMs	N/A	
External BRS	External BRS	N/A	
Tariff	Tariff	N/A	
Config Guides	Config Guide	N/A	
Tech Spec	Tech Spec	N/A	
Market Sim	Market Sim Window	Aug 23, 2016 - Sep 23, 2016	✓
Production Activation	Acceptable Use Policy - CMRI	Apr 03, 2017	

Spring 2017 - Real Time Dispatch Local Market Power Mitigation

Project Info	Details/Date

Application Software Changes	**CMRI –** Display mitigated bids from RTD process
	
	OASIS (Open Access Sametime Information System): Display RTD reports for Market Clearing
	    MPM Nomogram/Branch Group Competitive Paths – Report will be enhanced to provide "RTD" results.
	
	    MPM Intertie Constraint Competitive Paths – Existing report will be enhanced to provide "RTD" results.
	
	    MPM Interval Reference Bus - This will be a **NEW** report to provide the 12 RTD interval results.
	
	Market Power Mitigation Status - Existing report will be enhanced to provide "RTD" results.
	RTM (Real Time Market)
	    RTPD: Perform the LMPM run as an integral part of the binding interval RTPD run
	    RTD: Proposed mitigation in RTD run would work the same way as the current RTPD run

BPM Changes	• Energy Imbalance Market (EIM): under the proposed RTD method, bids are not necessarily mitigated for the whole hour • RTD MPM will work the same way as the current RTPD MPM
Business Process Changes	• Manage Markets & Grid • ATF – System Operations: Add MPM Application to Real Time and annotate inputs and outputs • ATF – System Operations, Real Time: Add MPM to diagram with inputs and outputs • Level II – Manage Real Time Operations – maintain balancing area

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Spring 2017 - Real Time Dispatch Local Market Power Mitigation

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board of Governors (BOG) approval	Mar 24, 2016	✓
BPMs	Posted Market Operations BPM PRR 945	Nov 04, 2016	✓
External BRS	Post External BRS	Apr 05, 2016	✓
Tariff	Received FERC approval	Nov 08, 2016	✓
	Received FERC approval for 4/1	Jan 27, 2017	✓
	File updated APR 1 deployment date	Jan 13, 2017	✓
Tech Spec	Publish Technical Specification - OASIS	Apr 08, 2016	✓
	Publish Technical Specification - CMRI	Apr 14, 2016	✓
Market Sim	Market Sim Window	Feb 06, 2017 - Feb 24, 2017	✓
Production Activation	RTD - Local Market Power Mitigation Enhancement	Apr 18, 2017 (Pending FERC extension)	

Updated OASIS technical specifications 4.3.5
- http://www.caiso.com/Documents/OASIS-InterfaceSpecification_v4_3_5Clean_Spring2017Release.pdf
- Updated the following MPM Services (Spring 2017)
    - Updated PRC_MPM_RTM_REF_BUS to add support for RTD LMPM.
    - Updated PRC_MPM_RTM_NOMOGRAM_CMP to add support for RTD LMPM.
    - Updated PRC_MPM_CNSTR_CMP to add support for RTD LMPM.

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Spring 2017 – Congestion Revenue Rights (CRR) Clawback

Project Info	Details/Date
Application Software Changes	**MQS/CRR Clawback:** If import bid <= day-ahead price, then the import is not considered a virtual award. If export bid >= day-ahead price, then the export is not considered a virtual award. If an import/export bid/self-schedule in real-time market is less than the day-ahead schedule, then the difference shall be still subject to CRR Clawback rule. CRR Clawback rule should include convergence bids cleared on trading hubs and load aggregation points in the flow impact used to determine if the 10% threshold is reached. Inform Market Participants of CRR annual allocation/auction for 2017.
BPM Changes	**Market Operations** Appendix F
Business Process Changes	Completed March 23, 2017

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board of Governors Approval	Jun 28, 2016	✔
BPMs	Posted Market Operations BPM PRR 972	Feb 10, 2017	✔
External BRS	Post External BRS	Nov 29, 2016	✔
Tariff	File Tariff	Jan 25, 2017	✔
Tariff	Receive FERC order	Mar 7, 2017	✔
Production Activation	CRR Clawback Modification	Apr 18, 2017 (Pending FERC extension)	

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Spring 2017 – Forecasting and Data Transparency Improvements (PIRP System Decommissioning)

Project Info	Details/Date
Application Software Changes: PIRP/CMRI	• Forecast Data Reporting (resource-level) that was performed in PIRP will be done in CMRI. Rolling Hour Ahead, Locked Hour Ahead, and Rolling Day-Ahead forecasts. • PIRP Decommissioning to occur in 2017 • CMRI to receive the Electricity Price Index for each resource and publish it to the Market Participants. • 60 Day PIRP / CMRI parallel production to start when AIM/ACL becomes available.
BPM Changes	CMRI Technical Specification; New APIs will be described.
Data Transparency • Independent changes, won't impact existing services • Will be made available in Production and cutover schedule is discretionary	Atlas Reference: 1. Price Correction Messages (ATL_PRC_CORR_MSG) 2. Scheduling Point Definition (ATL_SP) 3. BAA and Tie Definition (ATL_BAA_TIE) 4. Scheduling Point and Tie Definition (ATL_SP_TIE) 5. Intertie Constraint and Scheduling Point Mapping (ATL_ITC_SP) 6. Intertie Scheduling Limit and Tie Mapping (ATL_ISL_TIE) Energy • EIM Transfer Limits By Tie (ENE_EIM_TRANSFER_LIMITS_TIE) • Wind and Solar Summary (ENE_WIND_SOLAR_SUMMARY) Prices • MPM Default Competitive Path Assessment List (PRC_MPM_DEFAULT_CMP)
Business Process Changes	MPs will receive the VER reports from CMRI rather than PIRP.

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Spring 2017 – Forecasting and Data Transparency Improvements (PIRP System Decommissioning)

Project Info	Details/Date
User-Provisioning process for CMRI in preparation of Market Simulation and subsequently for production	• Client Services will reach out to the User Access Administrator (UAA) • Updated AIM User Guide, detailing how to create new ACL groups, was posted on February 21, 2017 - The market notice was posted on February 23, 2017 • If a user is at the SC level, there is no need to provision ACL access • Exceptions - (Non-SC Level Users) – provisioning via AIM will be required • Provisioning will be required to be done prior to Market Simulation • Provisioning for PIRP via AARF will discontinue on Feb 16, 2017 for Map Stage and Mar 20, 2017 for Production. • Participants should begin to download their PIRP data (all reports) as soon as possible as the data will not be available after June 18, 2017 • PIRP application including all the UI and API reports will be decommissioned June 18, 2017 • If you have any questions please contact your client services representative

Spring 2017 – Forecasting and Data Transparency Improvements (PIRP System Decommissioning)

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board Approval	N/A	
BPMs	Publish Draft Business Practice Manuals (Market Instruments; PRR 936)	Sep 06, 2016	✓
External BRS	External Business Requirements	Jun 29, 2015	✓
Tariff	Tariff Filing Activities	N/A	
Config Guides	Settlements Configuration	N/A	
Tech Spec	Publish Technical Specifications (CMRI; Wind and Solar)	Apr 15, 2016	✓
Tech Spec	Publish Technical Specifications (CMRI: PIRP Decommissioning)	Feb 05, 2016	✓
Market Sim	CMRI Reports; VER Forecast & EPI (Fall 2016 Release)	Aug 23, 2016 - Sep 23, 2016	✓
Market Sim	New Renewables CMRI reports and APIs Market Simulation	Mar 28, 2017 - Apr 11, 2017	
Production Activation	CMRI Reports; VER Forecast & EPI (Fall 2016 Release)	Oct 01, 2016	✓
Production Activation	OASIS API Enhancements; 9 Reports	Dec 20, 2016	✓
Production Activation	New Renewables CMRI reports and APIs Production Deployment	Apr 18, 2017	
PIRP Decommission	PIRP Decommissioning	Jun 18, 2017	

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Project Info	Details/Date
Application Software Changes	N/A
BPM Changes	**Metering** • Metering BPM will be updated to reflect the ISO ME vs SC ME role options, changes to the metering entity election process, and impacts for metering data access via the metering data submission portal. • EIM BPM will be updated to explain Metering data reporting access based on transitions from ISOME to SCME (shall transition to submission of SQMD meter data to Metering Data submission portal) or SCME to ISOME (shall be able to review historical meter data in MRI-S when resource was SCME). **Definitions & Acronyms BPM Changes** • New Tariff and Business Process/System acronyms.

Business Process Changes	• **Manage Transmission & Resource Implementation**
	• **Manage Market & Reliability Data & Modeling (MMR) (80004)**
	    • ISO Meter Certification (MMR LII)
	    • Metering Systems Access (Production) (MMR LII)
	    • Metering System Configuration for Market Resources (MMR LII)
	    • Station Power Implementation (MMR LIII)
	• **Application Flow - Billing & Settlements**
	• **Analyze Missing Measurement Report (MOS LIII)**
	• **Manage Market Billing & Settlements (MOS LII)**
	• **Manage Market Quality System (MOS LII)**
	• **Manage Rules of Conduct (MOS LII)**
	• **Meter Data Acquisition & Processing (MOS LII)**
	• **SCME Self Audit (MOS LII)**

California ISO

Spring 2017 – Metering Rules Enhancements

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board of Governors (BOG) approval	Dec 14, 2016	✓
BPMs	Metering BPM	Feb 02, 2017	✓
	Energy Imbalance Market BPM	Feb 02, 2017	✓
External BRS	External Business Requirements	N/A	
Tariff	Tariff Filing at FERC	Feb 08, 2017	✓
Config Guides	N/A	N/A	
Tech Spec	N/A	N/A	
Production Activation	Metering Rules Enhancements	Apr 10, 2017 Pending FERC approval	

California ISO

Fall 2017 Release – Overview

	Board Approval	BPMs	External BRS	Tariff	Config Guide	Tech Spec	Market Sim	Production Activation
Fall 2017 Release								
EIM Portland General Electric	N/A	N/A	N/A	8/31/17	N/A	N/A	6/6/17 - 7/6/17	10/1/17
Bidding Rules Enhancements - Part B	3/25/16	6/15/17	1/13/17	6/1/17	6/27/17	• 4/3/17 (MF) • 4/3/17 (OASIS) • 4/14/17 (CMRI)	8/8/17 - 9/8/17	11/1/17
Reliability Services Initiative 2017	5/12/15		3/3/17 (Updates)					
Commitment Cost Enhancement Phase 3	3/25/16		1/6/17	TBD				
RM & EIM 2017 Enhancements	TBD	N/A	2/17/17 (Updates)	N/A				
Gas Burn Reports	N/A	N/A	7/29/16	N/A	N/A		N/A	

COMPLETE
N/A

Fall 2017 – EIM Portland General Electric

Project Info	Details/Date
Application Software Changes	Implementation of Portland General Electric as an EIM Entity.
BPM Changes	EIM BPM will be updated to reflect new modeling scenarios identified during PGE implementation and feedback from PGE.
Market Simulation	ISO promoted market network model including PGE area to non-production system and allow PGE exchange data in advance of Market Simulation.
Parallel Operations	August 1 – September 30, 2017

Milestone Type	Milestone Name	Dates	Status
Tariff	File Readiness Certification	Aug 31, 2017	
Market Sim	Market Sim Window	Jun 6, 2017 – Jul 6, 2017	
Parallel Operations	Parallel Operations Window	Aug 1, 2017 – Sep 30, 2017	
Production Activation	EIM - Portland General Electric	Oct 01, 2017	

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Fall 2017 - Bidding Rules Enhancements – Part B

Project Info	Details/Date

Application Software Changes	• **MasterFile:**
	    • Electric Region added to GRDT as non-modifiable
	
	• **OASIS:**
	   • Publish fuel regions (public information)

Business Process Change	• Manage Transmission & Resource Implementation • Manage Entity & Resource Maintenance Updates • Manage Full Network Model Maintenance
BPMs	Market Instruments, Reliability Requirements

Milestone Type	Milestone Name	Dates	Status
Board Approval	BOG Approval	Mar 25, 2016	✔
BPMs	Post Draft BPM changes	Jun 15, 2017	
External BRS	Post External BRS	Jan 13, 2017	✔
Tariff	File Tariff	Jun 01, 2017	
Config Guides	Prepare Draft Configuration Guides	Jun 27, 2017	
Tech Spec	Publish MF Tech Specs	Apr 03, 2017	
Market Sim	Market Sim Window	Aug 08, 2017 - Sep 08, 2017	
Production Activation	Bidding Rules Part B	Nov 01, 2017	

Fall 2017 – Reliability Services Initiative 2017

Project Info	Details/Date

Application Software Changes	Developments under consideration include:
	
	Scope:
	Redesign of Replacement Rule for System RA and Monthly RA Process.
	• RA Process and Outage Rules for implementation for 2017 RA year.
	• Scope not delivered in RSI Phase 1A (OASIS reporting),
	
	Impacted Systems:
	CIRA
	    • OASIS
	    • Settlements
	
	CIRA:
	• Modifications to the RA and Supply Plan to show breakdown of local and system. Validation rules need to be updated.
	• Update planned/forced outage substitution rules
	• Allow market participants to select how much system/local MWs to substitute.
	• Modification of UI screens to accommodate system/local MW split.
	• Enhance system to allow exemption from submission of RA Plans for LSE that have a RA obligation < 1 MW for a given capacity product.
	
	Settlements:
	• Splitting local from system in upstream RA system could potentially impact the RAAIM calculation.

BPM Changes	• Reliability Requirements: Changes to the monthly RA process • Settlements and Billing
Business Process Changes	**Manage Market & Reliability Data & Modeling** - Manage Monthly & Intra-Monthly Reliability Requirements - Manage Yearly Reliability Requirements

Fall 2017 - Reliability Services Initiative 2017

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board Approval	May 12, 2015	✓
BPMs	Post Draft BPM changes	Jun 15, 2017	
External BRS	Post Updated External BRS v1.3	Mar 03, 2017	✓
Tariff	File Tariff	Jun 01, 2017	
Config Guides	Config Guide	Jun 27, 2017	
Tech Spec	Publish Technical Specifications	Apr 03, 2017	
Market Sim	Market Sim Window	Aug 08, 2017 - Sep 08, 2017	
Production Activation	RSI 2017	Nov 01, 2017	

Project Info	Details/Date

Application Software Changes	**Scope:**
	1. Clarify use-limited registration process and documentation to determine opportunity costs
	2. Each submission evaluated on a case-by-case basis to determine if the ISO can calculate opportunity costs
	    • ISO calculated; Modeled limitation
	    • Market Participant calculated; Negotiated limitation
	3. Enhanced definition of "use-limited" in response to FERC's rejection of the proposed definition in Cost Commitment Enhancements Phase 2
	4. Change Nature of Work attributes (Outage cards)
	    1. Modify use-limited reached for RAAIM Treatment
	    2. Add new demand response nature of work attribute for RDRR and PDR
	5. Market Characteristics
	    1. Maximum Daily Starts
	    2. Maximum MSG transitions
	    3. Ramp rates
	Impacted Systems:
	    1. CIRA
	    2. CMRI
	    3. IFM/RTN
	    4. SIBR
	    5. MasterFile
	    6. OASIS
	    7. OMS
	    8. Settlements

BPM Changes	Market Instruments, Outage Management, Reliability Requirement, Market Operations, Settlements & Billing
Business Process Changes	Level II – Manage Reliability Requirements Level II – Manage Day Ahead Market

Milestone Type	Milestone Name	Dates	Status
Board Approval	Board of Governors (BOG) Approval	Mar 25, 2016	✓
BPMs	Post Draft BPM changes	Jun 15, 2017	
	Publish Final Business Practice Manuals	TBD	
External BRS	Post External BRS	Jan 06, 2016	✓
Tariff	File Tariff	TBD	
	Receive FERC order	TBD	
Config Guides	Config Guide	June 27, 2017	
Tech Spec	Publish ISO Interface Spec (Tech spec) – MF Publish ISO Interface Spec (Tech spec) – CMRI	Apr 03, 2017 Apr 14, 2017	
Market Sim	Market Sim Window	Aug 08, 2017 – Sep 8, 2017	
Production Activation	Commitment Costs Phase 3	Nov 01, 2017	

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Fall 2017 – RM & EIM Enhancements 2017

Project Info	Details/Date
Application Software Changes	Address enhancements identified by policy, operations, technology, business and market participants. The following requirements are being evaluated: • EIM Entity access reports • BAAOP provisioning in AIM • EIM data report enhancements to support market participant and EIM entity shadow settlements • Shared BAA Resource Modeling • Change to ETSR formulation to separate base energy transfer to distinct non-optimizable ETSRs.
BPM Changes	TBD
Business Process Changes	TBD

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Milestone Type	Milestone Name	Dates	Status
BPMs	BPM changes	N/A	
External BRS	Post External BRS	Jan 23, 2017	✓
	Post Updated External BRS to public site	Feb 17, 2017	✓
Tariff	File Tariff	N/A	
Config Guides	Config Guide	June 27, 2017	
Tech Spec	Publish Technical Specifications – OASIS Publish Technical Specifications – CMRI	Apr 03, 2017 Apr 14, 2017	
Market Sim	Market Sim Window	Aug 08, 2017 – Sep 8, 2017	
Production Activation	EIM Enhancements 2017	Nov 01, 2017	

Fall 2017 – Gas Burn Reports

Project Info	Details/Date
Application Software Changes	**CMRI** - implement ISO Market software functionality to calculate and present gas burn estimates to gas companies serving electric generation located within the CAISO BAA
Business Process Change	• Develop Infrastructure • Manage Market & Reliability Data & Modeling

Milestone Type	Milestone Name	Dates	Status
Board Approval	BOG Approval	N/A	
BPMs	Post Draft BPM changes	N/A	
External BRS	External Business Requirements	Jul 29, 2016	✓
Tariff	Receive FERC order	N/A	
Tech Spec	Publish Technical Specifications - OASIS	Apr 03, 2017	
	Publish Technical Specifications - CMRI	Apr 14, 2017	
Market Sim	Market Sim Window	N/A	
Production Activation	GenDB MF Consol and Gas Burn Report	Nov 01, 2017	

Spring 2018 – EIM Idaho Power Company

Project Info	Details/Date
Application Software Changes	Implementation of Idaho Power Company as an EIM Entity.
BPM Changes	EIM BPM will be updated if needed to reflect new modeling scenarios identified during Idaho Power implementation and feedback from Idaho Power.
Market Simulation	The ISO approved the Idaho Power network model and continues to make progress integrating the Idaho model into the ISO non-production environment in preparation for integration testing.
Parallel Operations	February 1, 2018 – March 30, 2018

Milestone Type	Milestone Name	Dates	Status
Tariff	File Readiness Certification	Feb 28, 2018	
Market Sim	Market Sim Window	Dec 01, 2017 - Jan 31, 2018	
Parallel Operations	Parallel Operations Window	Feb 01, 2018 - Mar 30, 2018	
Production Activation	EIM - Idaho Power	Apr 04, 2018	

Short-Term Plan OASIS

OASIS API New Versions - Transition Schedule :

Market Simulation Testing : Available from 1/3/2017

Production Deployment – 2/2/2017

Production Transition Period : 2/02/2017 – **3/31/2017**

XML Report Name	Market Run ID	Group Name	Version	Transition Period in Production	After Transition Period(4/1/2017 onwards)
PRC_INTVL_LMP	RTM	RTM_LMP_GRP	1	Supported	Not Supported/ Invalid Request
PRC_INTVL_LMP	RTM	RTM_LMP_GRP	2	Supported	Not Supported/ Invalid Request
PRC_INTVL_LMP	RTM	RTM_LMP_GRP	3	Supported	Supported
PRC_HASP_LMP	HASP	HASP_LMP_GRP	1	Supported	Not Supported/ Invalid Request
PRC_HASP_LMP	HASP	HASP_LMP_GRP	2	Supported	Not Supported/ Invalid Request
PRC_HASP_LMP	HASP	HASP_LMP_GRP	3	Supported	Supported
PRC_RTPD_LMP	RTPD	RTPD_LMP_GRP	1	Supported	Not Supported/ Invalid Request
PRC_RTPD_LMP	RTPD	RTPD_LMP_GRP	2	Supported	Not Supported/ Invalid Request
PRC_RTPD_LMP	RTPD	RTPD_LMP_GRP	3	Supported	Supported
PRC_SPTIE_LMP	DAM,RTD,RTPD	DAM_SPTIE_LMP_GRP, RTD_SPTIE_LMP_GRP, RTPD_SPTIE_LMP_GRP	3	Supported	Not Supported/ Invalid Request
PRC_SPTIE_LMP	DAM,RTD,RTPD	DAM_SPTIE_LMP_GRP, RTD_SPTIE_LMP_GRP, RTPD_SPTIE_LMP_GRP	4	Supported	Not Supported/ Invalid Request
PRC_SPTIE_LMP	DAM,RTD,RTPD	DAM_SPTIE_LMP_GRP, RTD_SPTIE_LMP_GRP, RTPD_SPTIE_LMP_GRP	5	Supported	Supported

Short-Term Plan OASIS

The updated OASIS Technical Specifications v4.3.3 include changes noted below:

API Report Name	Existing	Proposed Changes
PRC_INTVL_LMP- Changes apply to Group Zip Only	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG	New Version -Separate file for each price component within the same zip file - LMP, Congestion , Energy, Loss and GHG
PRC_RTPD_LMP - Changes apply to Group Zip Only	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG	New Version -Separate file for each price component within the same zip file - LMP, Congestion , Energy, Loss and GHG
PRC_HASP_LMP - Changes apply to Group Zip Only	One file with all price components within the same zip file- LMP, Congestion , Energy and Loss	New Version -Separate file for each price component within the same zip file - LMP, Congestion , Energy and Loss
PRC_SPTIE_LMP(DAM,RTD,RTPD)- Changes apply to Group Zip only	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG	New Version - Separate file for each price component within the same zip file - LMP, Congestion , Energy, Loss and GHG
TRNS_CURR_USAGE	Request allows for past , current and future trade dates	Existing Version - No change to current and future trade dates . System will throw - "Invalid Request Error" for requests with past trade dates.
TRNS_CURR_USAGE & TRNS_USAGE	No restriction on number of transmission id's requested in single zip.	Existing Version - System will throw error 1017 which is "Please select a maximum of 10 nodes or use the ALL option." when you are requesting data for more than 10 transmission id's for single zip.

Short-Term Plan OASIS

OASIS API changes based on query type:

XML Report Name	Market Run ID	Version	Query Type	Response file
PRC_INTVL_LMP	RTM	3	Single node	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG
PRC_INTVL_LMP	RTM	3	ALL_APNODES	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG
PRC_INTVL_LMP	RTM	3	ALL	Separate file for each price component within the same zip file - LMP, Congestion , Energy, Loss and GHG
PRC_HASP_LMP	HASP	3	Single node	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG
PRC_HASP_LMP	HASP	3	ALL_APNODES	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG
PRC_HASP_LMP	HASP	3	ALL	Separate file for each price component within the same zip file - LMP, Congestion , Energy, Loss and GHG
PRC_RTPD_LMP	RTPD	3	Single node	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG
PRC_RTPD_LMP	RTPD	3	ALL_APNODES	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG
PRC_RTPD_LMP	RTPD	3	ALL	Separate file for each price component within the same zip file - LMP, Congestion , Energy, Loss and GHG
PRC_SPTIE_LMP	DAM,RTD,RTPD	5	Single node	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG
PRC_SPTIE_LMP	DAM,RTD,RTPD	5	ALL_APNODES	One file with all price components within the same zip file- LMP, Congestion , Energy, Loss and GHG
PRC_SPTIE_LMP	DAM,RTD,RTPD	5	ALL	Separate file for each price component within the same zip file - LMP, Congestion , Energy, Loss and GHG

California ISO