Market Simulation – Winter 2017 Release

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Lead Market Simulation Coordinator

February 15, 2018

Agenda

- Winter 2017 MAP Stage Availability
- Winter 2017 Market Simulation Initiatives and Timelines
- Winter 2017 Release Market Simulation Focus
- Initiatives
  - Winter 2017
    - EIM Enhancements Winter 2017
    - RSI 2017
- Winter 2017 Known Issues
- Winter 2017 Settlements
- RAAIM Modifications Results Overview
- Commitment Cost Enhancements Phase 3
- Next Steps
- Reference Slides

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Winter 2017 MAP Stage Availability

Current MAP Stage Scheduled Maintenance

- February 16 – 27 - SIBR, CMRI GUI and API
- February 20 – TLS 1.0/1.1 Deactivation
- February 23 – 27, 2018 - All Systems

- TBD based on start of CCE3 Market Simulation – MF, SIBR, BSAP, ALFS, DRS

MAP Stage Weekly Maintenance Window
- Monday 0900 – Tuesday 0900

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Winter 2017 Market Simulation Initiatives and Timelines

Winter 2017 Release Initiatives	Start Date	Start Date (Trade Date)	End Date	Structured Simulation Start (Trade Date)	Expected Participation
Winter 2017 Release Market Simulation					
EIM Idaho Power Company	12/01/17	12/01/17	01/31/18	12/6/17	EIM Entities
EIM Powerex	12/01/17	12/01/17	01/31/18	1/3/18	EIM Entities
EIM Enhancements Winter 2017	12/01/17	12/01/17	01/31/18	1/9/18	EIM Entities
Reliability Services Initiatives 2017	12/05/17	12/05/17	01/31/18	12/5/17	ISO Market Participants

Market Simulation Plan – http://www.caiso.com/Documents/MarketSimulationPlan-Winter2017Release.pdf

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EIM Enhancements Winter 2017

The EIM Enhancements Winter 2017 Market Simulation timeline –

EIM Winter 2017: December 1 – January, 31 2018

Unstructured: December 1 – January 5, 2018

Structured: January 9 – January 12, 2018

RSI 2017

The RSI 2017 Simulation timeline –

RSI 2017: December 5 – January 31, 2018

Structured: CIRA and OMS only December 5 – December 15; End to End January 16 – 19 and January 23 - 26, 2018

Unstructured: December 18 – January 12, 2018

- RSI 2017 Structured Scenarios - http://www.caiso.com/Documents/StructuredScenarios-Draft-ReliabilityServicesInitiative_2017.pdf
- RSI 2017 RA Plan (can also be downloaded from MAP-Stage CIRA) - http://www.caiso.com/Documents/ResourceAdequacyPlanTemplate_2018.xls
- RSI 2017 Supply Plan (can also be downloaded from MAP-Stage CIRA) - http://www.caiso.com/Documents/SupplyPlanTemplate_2018.xls

RSI 2017

- **Available in Production now: MPs to provision the new CIRA roles in AIM accordingly for your organization**:
  - app_cira_supplier_read_ext
  - app_cira_supplier_write_ext
  - The new supplier roles have been created to provide suppliers access to:
    - (1) Outage analysis (for their outages)
    - (2) POSO analysis (for their outages)
    - (3) Provide substitutions for their planned outages.
    - Currently, the app_cira_sc role has access to the forced substitution screen which we are not changing but in the future we plan to separate the LSE role from the suppliers at which point only the suppliers will have access to the forced substitution functionality.
  - AIM User Guide - http://www.caiso.com/Documents/AccessandIdentityManagement_AIM_UserGuide.pdf

CIRA User Guide

- http://www.caiso.com/Documents/CIRAUserGuideforMarketParticipants.pdf

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Winter 2017 Known Issues

#	System	Summary	Status	Estimated Fix Date	CIDI #
1	Settlements	The RT LAP Prices available in MAP Stage may not align with the existing price formulation in Production in all cases. As a result, shadow calculations based on the Production algorithm may not yield the same result as seen in MAP Stage.	Fix delivered and ISO validating in pre-MAP-Stage environment	TBD	N/A
2	Settlements/CIRA	Missing Flex RAAIM Settlement	Resolved	2/12/18 Settlements statements for TDs 1/23, 1/24, 1/25 to be republished	201586

Winter 2017 Settlements

Calendar Day	CMRI T+1B	Publish Initial Statement T+4B	Submit Meter Data by T+4B 18:00 for Recalc	Publish Recalc Statement T+8B	Publish Market Invoice
01-Feb-18		Jan 26 23-Jan - 26-Jan		16-Jan - 19-Jan	
02-Feb-18					
03-Feb-18					
04-Feb-18					
05-Feb-18				24-Jan	
06-Feb-18					
07-Feb-18					
08-Feb-18					
09-Feb-18					
10-Feb-18					
11-Feb-18					
12-Feb-18					
13-Feb-18					
14-Feb-18	13-Feb				
15-Feb-18	14-Feb				
16-Feb-18	15-Feb				
17-Feb-18					
18-Feb-18					
19-Feb-18	ISO Holiday				
20-Feb-18		13-Feb			
21-Feb-18		14-Feb			
22-Feb-18		15-Feb			
23-Feb-18		13-Feb - 15-Feb			13-Feb 14-Feb 15-Feb 13-Feb - 15-Feb
24-Feb-18					
25-Feb-18					

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RAAIM Modifications Results Overview

Mel Ciubal & Brian Rothstein

Market Settlements Design & Configuration

February 12, 2018

RAAIM Statement Publication Status

- **01/23 – 01/25/2018 Monthly Initial Market Statement (Run number 2018020913) – Completed**
    - Statement published 2/9/18.
    - Partial Flex Obligation requirements broadcast from CIRA.
    - MSDC held processing of daily recalc and monthly recalc until full dataset received from CIRA.

- **CIRA re-published full dataset for DA and RT Flex Obligation quantities – Completed**

- **01/23/2018 Daily Recalc Market Statement (Run number 2018021211) – Completed**
    - Participants can validate CIRA RA Obligation quantities and daily settlement calculations
- **01/24/2018 Daily Recalc Market Statement (Run number 2018021212) – Completed**
- **01/25/2018 Daily Recalc Market Statement (Run number 2018021213) – Completed**
- **01/23 - 01/25/2018 Monthly Recalc Market Statement (Run number 2018021214) – Completed**
    - Participants can validate RAAIM monthly calculations

Commitment Cost Enhancements Phase 3

5/1
Production deployment for OCC
(for internal use)

11/1
Production Activation

Market Sim:
MF RDT
SIBR
Regression Test

5/1 - 10/31
Discovery/Evaluation of Opportunity Cost Calculation
Outreach to SCs (ongoing)

9/1 – 9/30
Full Market
Simulation Testing

1/26/18
2/1
3/1
4/1
5/1
6/1
7/1
8/1
9/1
10/1
11/1/18

Discovery/Evaluation Timeframe: Expectations

- New process to be defined; primarily an internal CAISO effort
- CAISO will identify resources impacted, type of constraints they have, and what time of eligibility period they will declare (monthly, annual, rolling)
- CAISO will then identify the formulation for calculation of opportunity costs (i.e. types of constraints that fit into model)
- CAISO can then validate the type of constraint declared and how constraints are translated into any of the three defined model constraints in the system
- CAISO will also be able to separate the resources that go into formula-based calculation versus resources that fall into negotiated opportunity costs.
  - For the negotiated option, CAISO will identify how to determine negotiated opportunity costs, which will be tailored to each resource.
- Planning for simulation of OCC in September, including integration of the OCC so that MPs can see adders flowing into SIBR and available in CMRI.
- Prior to November 1st, data will not be flowing downstream (publication explicitly blocked). During this period CAISO will interact with each MP depending on the specifics of their resources. This will be tracked via CIDI tickets.

*Updated 2/5/18

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Next Steps

- The next teleconference will take place @ 14:00 PPT on Thursday, March 1, 2018

Reference Slides

Winter 2017 Settlements

Calendar Day	CMRI T+1B	Publish Initial Statement T+4B	Submit Meter Data by T+4B 18:00 for Recalc	Publish Recalc Statement T+8B	Publish Market Invoice
04-Dec-17					
05-Dec-17					
06-Dec-17	5-Dec				
07-Dec-17	6-Dec				
08-Dec-17	7-Dec				
09-Dec-17					
10-Dec-17					
11-Dec-17		5-Dec	5-Dec		
12-Dec-17		6-Dec	6-Dec		
13-Dec-17	12-Dec	7-Dec	7-Dec		
14-Dec-17	13-Dec	5-Dec - 7-Dec			5-Dec - 7-Dec - I
15-Dec-17	14-Dec			5-Dec	
16-Dec-17					
17-Dec-17					
18-Dec-17					
19-Dec-17		12-Dec, 13-Dec		6-Dec, 7-Dec	
20-Dec-17	19-Dec	14-Dec		5-Dec - 7-Dec	
21-Dec-17	20-Dec	12-Dec - 14-Dec			
22-Dec-17	21-Dec				12-Dec - 14-Dec - I 5-Dec - 7-Dec - R
23-Dec-17					
24-Dec-17					
25-Dec-17			ISO Holiday		
26-Dec-17		19-Dec			
27-Dec-17		20-Dec			
28-Dec-17		21-Dec			
29-Dec-17		19-Dec - 21-Dec			
30-Dec-17					
31-Dec-17					

*Updated 2/7/18

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Winter 2017 Settlements

Calendar Day	CMRI T+1B	Publish Initial Statement T+4B	Submit Meter Data by T+4B 18:00 for Recalc	Publish Recalc Statement T+8B	Publish Market Invoice
01-Jan-18	ISO Holiday				
02-Jan-18					
03-Jan-18					
04-Jan-18	3-Jan				
05-Jan-18	4-Jan				
06-Jan-18					
07-Jan-18					
08-Jan-18					
09-Jan-18		3-Jan	3-Jan		
10-Jan-18	9-Jan	4-Jan	4-Jan		
11-Jan-18	10-Jan	3-Jan - 4-Jan			
12-Jan-18					
13-Jan-18					
14-Jan-18					
15-Jan-18	ISO Holiday				
16-Jan-18		9-Jan	9-Jan	3-Jan	
17-Jan-18	16-Jan	10-Jan	10-Jan	4-Jan	
18-Jan-18	17-Jan			3-Jan - 4-Jan	
19-Jan-18	18-Jan	9-Jan - 10-Jan			
20-Jan-18					
21-Jan-18					
22-Jan-18	19-Jan		16-Jan	9-Jan	9-Jan - 10-Jan - I
23-Jan-18		17-Jan	17-Jan	10-Jan	
24-Jan-18	23-Jan	18-Jan , 16-Jan	18-Jan		
25-Jan-18	24-Jan	19-Jan 16-Jan - 19-Jan	19-Jan	9-Jan - 10-Jan	
26-Jan-18	25-Jan			16-Jan	
27-Jan-18					
28-Jan-18					
29-Jan-18	26-Jan	23-Jan		17-Jan	16-Jan - 19-Jan - I 9-Jan - 10-Jan - R
30-Jan-18		24-Jan	24-Jan	18-Jan	
31-Jan-18		25-Jan		19-Jan	

*Updated 2/7/18

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Winter 2017 Release Market Simulation Focus

Week	Dates (Tuesday thru Friday, Monday is Maintenance)	Focus
1	12/5-12/8	• EIM Idaho Scenarios • RSI CIRA and OMS only - Structured
2	12/12-12/15	• EIM Idaho Scenarios • RSI CIRA and OMS only - Structured
3	12/19-12/22	• EIM Idaho Scenarios • RSI CIRA and OMS only - Unstructured
4	12/26-12/29 (ISO Holiday 12/25-Monday)	• MAP-Stage available; unsupported • RSI CIRA and OMS only - Unstructured
5	1/2-1/5 (ISO Holiday 1/1-Monday)	• EIM Powerex Scenarios • RSI CIRA and OMS only - Unstructured
6	1/9-1/12	• EIM Winter 2017 Scenarios • EIM Powerex Scenarios • EIM Idaho Scenarios • RSI CIRA and OMS only - Unstructured
7	1/16-1/19 (ISO Holiday 1/15-Monday)	• EIM Powerex Scenarios • EIM Idaho Scenarios • RSI/RAAIM End to End - Structured
8	1/23-1/26	• EIM Powerex Scenarios • RSI/RAAIM End to End - Structured
9	1/30-1/31	• Unstructured Bid to Market Output

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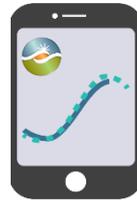
THANK YOU

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Winter 2017 Market Simulation Communication Plan

Schedule –
Mondays - December 4, 11, 18; January 8, 22, 29 (3PM on 1/29); and February 5, 12
Tuesdays - January 2, 16
Thursdays - December 7, 14; January 4, 11, 18, 25; and February 1, 8, 15

Connection information –
Web Conference Information
Web Address (URL): http://ems7.intellor.com/login/714714
Audio connection instructions will be available after connecting to the web conference.

Telephone-Only Participation
Please only use this dial-in method if unable to participate by web to enhance the ability to participate in Q&A
Call in: 877-369-5230, Access Code: 0299083#

Technical Support
AT&T Connect support at 1-888-796-6118

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ISO Market Simulation Support

- **Hours -** 09:00 - 18:00, PST (Monday through Friday)
- **Mkt Sim Coordinator Phone -** (916) 351-2248
- **ISO's 24X7 Help Desk -** (916) 351-2309 (Connectivity - GUI or API)
- **Email -** MarketSim@caiso.com

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Market Simulation Issue Management

- Submit all issues to the CIDI case management system.
- CIDI tickets will need to have "Functional Environment" = **"Market Simulation Winter 2017"** to be reviewed by ISO SME's.

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ISO System Access Documentation

- http://www.caiso.com/Documents/SystemAccessInformation_MarketParticipants.pdf

ISO System Interface Change Summary

- http://www.caiso.com/Documents/SystemInterfaceChangeSummary.pdf