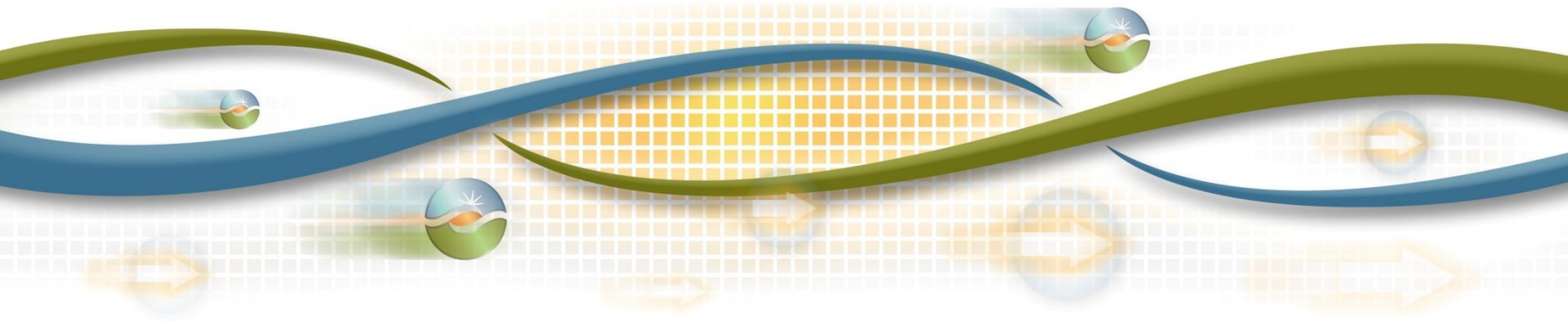# Market Simulation – Winter 2017 Release

Trang Deluca

Sr. Change & Release Planner

Winter 2017 Release Market Simulation

February 1, 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
- Commitment Cost Enhancements Phase 3
- Next Steps
- Reference Slides

Winter 2017 Release MAP Stage Availability

Current MAP Stage Scheduled Maintenance –

- February 20 TLS 1.0/1.1 Deactivation
- February 20-21, 2018 – all systems

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

MAP Stage Weekly Maintenance Window - Monday's 09:00 - Tuesday 09:00

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Winter 2017 Release 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

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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EIM Enhancements Winter 2017

The EIM Enhancements Winter 2017 Market Simulation timeline –

EIM 2017: December 1 – January, 31 2018

Unstructured: December 1 – January 5, 2018

Structured: January 9 – January 12, 2018

Winter 2017 RSI

The Winter RSI 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 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

Winter 2017 RSI

- **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	CIRA	In 'Generic Obligation Report' and 'LSE Obligation Report' when ITIE data has RA for a subset of days, the system RA calculation should consider the Max RA for the ITIE resource for the month and instead is summing up the RA for the multiple rows when the RA is broken out by subset of days.	Closed	1/31/18	199966
2	CIRA	ISO Policy team provided further clarification requiring additional system changes: (1) Currently, CIRA does not include the PRM % while determining capping for monthly obligation and this needs to change (2) Annual capping logic needs to be removed as well	Closed	1/31/18	200210, 200255
3	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.	Open	TBD	N/A
4	CIRA	Error message to be re-worded when POSO run has no assignments because the system is long	Closed	1/31/18	200738
5	CIRA	When a user enters text > 255 characters in the Notes field in the Create Planned Substitution UI, the system throws an error.	Closed	1/31/18	200996

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 2/1/18

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Winter 2017 Settlements

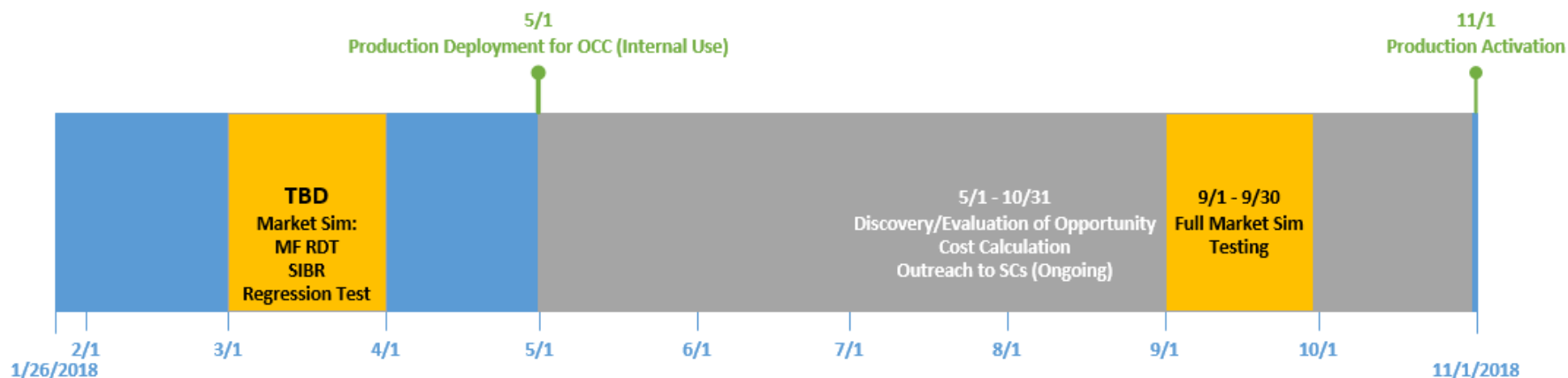| Calendar Day	CMRI T+1B	Publish Initial Statement T+4B	Submit Meter Data by T+4B 18:00 for Recalc	Publish Recalc Statement T+8B	Publish Market Invoice
01-Jan-18	ISO Holiday				
02-Jan-18					
03-Jan-18					
04-Jan-18	3-Jan				
05-Jan-18	4-Jan				
06-Jan-18					
07-Jan-18					
08-Jan-18					
09-Jan-18		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 2/1/18

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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-Feb-18		Jan 26 23-Jan - 26-Jan		16-Jan - 19-Jan	
02-Feb-18	Trade Dates for RAAIM Scalable Market sim are TBD				
03-Feb-18					
04-Feb-18					
05-Feb-18				24-Jan	

*Updated 2/1/18

CCE3: Project Timeline, Deployment Dates, Major Milestones

5/1
Production Deployment for OCC (Internal Use)

11/1
Production Activation

TBD
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 Sim
Testing

| 2/1 | 3/1 | 4/1 | 5/1 | 6/1 | 7/1 | 8/1 | 9/1 | 10/1 | |
| 1/26/2018 | | | | | | | | | 11/1/2018 |

Engagement During Discovery/Evaluation period
- OCC tool will run calculations for all applicable resources
- In parallel, negotiated resources will be contacted to review constraints
- Engagement with SCs will be ad hoc and informed by the results of evaluation
- The volume of the calculated and negotiated groups is TBD; all details will be defined prior to 11/1

Market Simulation Plan to publish by 2/2/18

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Next Steps

- The next teleconference will take place @ 14:00 PPT on Monday, February 5, 2018

Reference Slides

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Winter 2017 Release 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

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.

ISO System Access Documentation

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

ISO System Interface Change Summary

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

ISO Winter 2017 Implementation Plan Draft

- http://www.caiso.com/Documents/ImplementationPlanDraftWinter2017.pdf

Winter 2017 RSI

Planned Outage Substitution Obligation (POSO) Testing

- The ISO will establish a combination of System and LSE RA Obligation to such extent that all LSEs and additionally the System RA obligation will not be met for the month of January 2018. This will enable participants to simulate the scenario where a POSO is assigned to the participant.

- As of 1/3, the ISO has reduced the peak obligation in MAP Stage for both the monthly January submittals and annual 2018 submittals.

- Monthly peak obligation for January:
  1. Initial state - The system peak obligation in Map Stage (based on prod data) was 30,361.21 MW
  2. ISO deleted the obligation for all LSEs other than the ones participating in Market Sim.
  3. The LSEs with RA plans submitted for January are listed below and the system peak obligation based on these LSE stands at 23,372.95 MW:
     - CALJ
     - CDWR
     - LRCEA
     - PCG2
     - RVSD
     - SCE1
     - SDG3
  4. ISO further reduced the system demand by 50% for each entity and now the system demand stands at 11,686.48 MW

- Annual peak obligation for 2018:
  1. Initial state – based on prod data, sum for all months = 418,232.83 MW
  2. ISO deleted all LSEs not participating in Mkt Sim
  3. New state with just the LSEs listed above, sum for all months = 326,774.82 MW
  4. ISO reduced for each LSE per month by 50% and now the sum for all months = 163,387.41 MW

Structured Scenarios Conditions and Setup (MAP Stage Timeline)

The following additional setup will be used by the ISO during the scenario execution.

1. MP's will need to provision the new CIRA roles in AIM, please provision these roles accordingly for your organization **"app_cira_supplier_write_ext"** and **"app_cira_supplier_read_ext".**
2. ISO will post NQC values for each month ahead of time, they will be Production values.
3. RA and Supply Plans should be submitted for December 2017 and January 2018 months. ISO will change the plans cutoff to accommodate the RA and Supply plans. All plans are due by 12/06 for December and 12/15 January RA.
4. For T-25 Outage Substitution testing (POSO) ISO will manually set the configuration to be T-15 for January RA month so the POSO analysis would begin on 12/16 for January RA. For December RA month please submit outages to test rolling outage analysis during the month and any other substitution scenarios.
   - *Outages can be submitted through the end of the trade month in keeping with existing/ production rules for planned versus forced outages. Substitutions will need to be provided for the planned outages that have POSO assigned to reduce the POSO obligation. Substitution will continue to follow the day-ahead cut-off criteria.*
   - *The POSO stack will be recomputed in a subsequent run (runs 4 times/day) as new planned outages are created and substitutions are provided for POSO assigned outages.*
5. MPs are required to submit planned and forced outages, these will be auto approved in OMS
6. MPs may bid in whatever resources they see fit for the scenario for RAAIM
7. ISO will run suitable modules and designate CPM's for the substitution scenario
   a. ISO will ensure all new automated jobs are setup.
8. ISO will validate internal reports

Winter 2017 RSI

Customer Training

- Scheduled for ✓1/10/18 and ✓1/17/18

- [Market Notice](#)

    The ISO has scheduled two training sessions for RSI 2017 Phase 1B as described below. Please plan to attend both sessions as the second session will not be a repeat of the training on January 10.

    ✓ **January 10**: review of application changes related to RSI 2017 as it relates to the Customer Interface for Resource Adequacy (CIRA) application. The scope of this session includes:Changes to Resource Adequacy and Supply plan templates
    New role being introduced for suppliers
    Viewing Cross Validation results
    Viewing Outage Impact Analysis results

    ✓ **January 17**: address additional stakeholder concerns that may arise from the first training session. The scope of this session includes:Follow-up training as needed based on the scope of questions and stakeholder input received in the first training session.

    The application changes will be implemented and effective for the compliance month April 2018.

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