Christopher McIntosh
Lead Market Simulation Coordinator

Spring 2014 Release
April 28th, 2014
Agenda

• Spring 2014 Market Simulation Initiatives and Timelines
• Spring 2014 MAP Stage Availability
• Spring 2014 Production Activation
• Acceptable Use Policy Phase 1
• FERC 764 with Dynamic Transfers
• Adjacent BA FMM Scheduling Support
• RIMPR Phase 1 with Post Emergency BCR
• Spring 2014 Release Structured Scenario Execution Report
• Next Steps
• Reference Slides
Spring 2014 Release Market Simulation Initiatives and Timelines

**Spring Release Market Simulation** - MAP-Stage will remain open and the ISO will continue to support unstructured scenario support through 4/30/14.

**FERC Order 764 Compliance with 15 Minute Market and Dynamic Transfers** - February 11th – April 18th, 2014 (Structured and Unstructured)

**Post Emergency Filing Bid Cost Recovery (BCR) with Mandatory Multi-Stage Generations (MSG), Renewable Integration Market and Product Review (RIMPR) Phase, Bid Cost Recovery (BCR) Mitigation Measures and Bid Floor Cap** - February 11th – April 23rd, 2014 (Structured and Unstructured)

**Revisions to Price Corrections** - February 17th – March 7th, 2014 (Unstructured) - Completed

**Acceptable Use Policy Phase 1 (Enforcement)** - March 28th, 2014
Spring 2014 Release MAP Stage Availability

Upcoming Scheduled Maintenance - Closing May 2\textsuperscript{nd}, 2014 @ 16:00 - 20:00

MAP Stage Spring Release Daily Maintenance Window - 16:00 - 20:00

MAP Stage Weekly Maintenance Window - Friday’s, 09:00 - 20:00
Spring 2014 Production Activation

To better prepare for CAISO’s FERC 764 day 1 operation, please communicate to ISO MarkeSim@caiso.com account the following on per SCID basis.

- To SCs for wind/solar generators: do you plan to submit economic bids in the real-time market?
  - Number of resources -

- To SCs for scheduling interties: do you plan to schedule in the 15 minute market?
  - Number of resources -

- To SCs for scheduling interties: do you plan to use the hourly one time change option?
  - Number of resources –

Such information will only be used by CAISO to evaluate the preparation efforts to focus on. It does not serve as a binding commitment.
Spring 2014 Deployment Plan

Updated 4/28 –
The Acceptable Use Policy Phase 1 Simulation timeline –

- Acceptable Use Policy Phase 1 Enforcement OASIS only: March 28th, 2014 (Unstructured)

OASIS Services Implemented –

- TRNS_CURR_USAGE
- AS_OP_RSRV
- SLD_FCST_PEAK
FERC 764 with Dynamic Transfers Simulation

The FERC Order 764 Compliance with 15 Minute Market and Dynamic Transfers Simulation timeline – Structured Scenarios Complete

- FERC Order 764 Compliance with 15 Minute Market and Dynamic Transfers: February 11th – April 18th, 2014 (Structured and Unstructured)
- Structured Scenario Execution Dates Week 1
  - Scenario’s #1 & #2 TD 2/13
- Structured Scenario Execution Dates Week 2
  - Scenario #8 TD 2/18 and Scenario #9 TD 2/19
- Structured Scenario Execution Dates Week 3
  - Scenario #7 TD 2/25
- Structured Scenario Execution Dates Week 4
  - No Scenarios Run
- Structured Scenario Execution Dates Week 5
  - Scenario #1 & #2 TD 3/13
- Structured Scenario Execution Dates Week 6
  - Scenario #5 TD 3/18, Scenario #6 TD 3/19 and Scenario #3 & #4 TD 3/20
### Adjacent BA FMM Scheduling Support

<table>
<thead>
<tr>
<th>Balancing Authority</th>
<th>15 minute scheduling support</th>
</tr>
</thead>
<tbody>
<tr>
<td>LADWP:</td>
<td>5/1/14 (15 minute tags will not be supported on the PDCI and the IPPDC.)</td>
</tr>
<tr>
<td>BPA:</td>
<td>Sometime between August – October 2014</td>
</tr>
<tr>
<td>APS:</td>
<td>11/1/13</td>
</tr>
<tr>
<td>SRP:</td>
<td>11/1/13</td>
</tr>
<tr>
<td>PAC:</td>
<td>11/1/13</td>
</tr>
<tr>
<td>CFE:</td>
<td>?</td>
</tr>
<tr>
<td>NV Energy:</td>
<td>11/12/13</td>
</tr>
<tr>
<td>BANC:</td>
<td>4/1/14</td>
</tr>
<tr>
<td>WAPA:</td>
<td>4/1/14</td>
</tr>
<tr>
<td>IID:</td>
<td>?</td>
</tr>
<tr>
<td>TID:</td>
<td>?</td>
</tr>
</tbody>
</table>

Note: This information is based on responses we have received from adjacent Balancing Area Authorities. It may change without notice to the CAISO.”
<table>
<thead>
<tr>
<th>#</th>
<th>Application</th>
<th>Severity (H/M/L)</th>
<th>New or Existing Variance</th>
<th>Variance Description</th>
<th>Resolution Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SIBR</td>
<td>L</td>
<td>New</td>
<td>The start and end times in the cancel trade response not in GMT.</td>
<td>Existing issue in Production, to be fixed post Spring Release activation.</td>
</tr>
<tr>
<td>#</td>
<td>Application</td>
<td>Severity (H/M/L)</td>
<td>New or Existing Variance</td>
<td>Variance Description</td>
<td>Resolution Expectations</td>
</tr>
<tr>
<td>----</td>
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<td>----------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>1</td>
<td>OASIS</td>
<td>L</td>
<td>Existing</td>
<td>OASIS SLD_REN_FCST report RTD and RTPD responses fail XSD validation.</td>
<td>Fixed.</td>
</tr>
<tr>
<td>2</td>
<td>ADS</td>
<td>L</td>
<td>New</td>
<td>Decline and Partial functionality not available in the ADS GUI for specific intertie resources.</td>
<td>Fixed.</td>
</tr>
</tbody>
</table>
RIMPR Phase 1, Mandatory MSG, Post Emergency Filing BCR and BCR Mitigation Measures with Bid Floor Cap Simulation

The RIMPR Phase 1, BCR changes with Bid Floor and Mandatory MSG – Structured Scenarios Complete

• RIMPR Phase 1, BCR changes with Bid Floor and Mandatory MSG: February 11th – April 23rd, 2014 (Structured and Unstructured)
  • Bid Floor Cap Structured Scenario Execution Date Scenario #1 TD 2/27
# Spring 2014 Market Simulation Structured Scenario Execution Report

## 2014 Spring Release Structured Scenario Execution Report

<table>
<thead>
<tr>
<th>FERC 764 with Dynamic Transfers Scenarios</th>
<th>Execution Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario #1</td>
<td>03/13/14</td>
<td>Passed</td>
</tr>
<tr>
<td>Scenario #2</td>
<td>03/13/14</td>
<td>Passed</td>
</tr>
<tr>
<td>Scenario #3</td>
<td>03/20/14</td>
<td>Passed</td>
</tr>
<tr>
<td>Scenario #4</td>
<td>03/20/14</td>
<td>Passed</td>
</tr>
<tr>
<td>Scenario #5</td>
<td>03/18/14</td>
<td>Passed</td>
</tr>
<tr>
<td>Scenario #6</td>
<td>03/19/14</td>
<td>Passed</td>
</tr>
<tr>
<td>Scenario #7</td>
<td>02/25/14</td>
<td>Passed</td>
</tr>
<tr>
<td>Scenario #8</td>
<td>02/18/14</td>
<td>Passed</td>
</tr>
<tr>
<td>Scenario #9</td>
<td>02/19/14</td>
<td>Passed</td>
</tr>
<tr>
<td><strong>RIMPR Scenario</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scenario #1</td>
<td>02/27/14</td>
<td>Passed</td>
</tr>
</tbody>
</table>
Next Steps

• The next teleconference will take place at 13:00 PPT on Thursday, May 8\textsuperscript{th}, 2014.
Spring 2014 Production Deployment Plan

Spring 2014 Release Market Simulation Plan

ISO System Access Documentation

ISO Market Simulation Support

- **Hours** - 09:00 - 18:00, PST (Monday through Friday)
- **Phone** - (916) 351-2248
- **ISO’s 24X7 Help Desk** - (916) 351-2309 (Connectivity, Endpoints)
- **Email** - MarketSim@caiso.com
Market Simulation Issue Management

- Submit all issues to the CIDI case management system.
- CIDI tickets will need to have “Functional Environment = Market Simulation Spring 2014” to be reviewed by ISO SME’s.
ISO will host Bi-weekly call on Mondays and Thursdays starting February 3rd, 2014

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>28 – Kick Off Call 1:00 p.m. to 2:30 p.m. (Pacific Time)</td>
</tr>
<tr>
<td>March</td>
<td>3, 6, 10, 13, 18, 20, 24, 27</td>
</tr>
<tr>
<td>February</td>
<td>3, 6, 10, 13, 17, 20, 24, 27</td>
</tr>
</tbody>
</table>

The web conference details are different for each scheduled meeting. Please refer to the California ISO public calendar at [http://www.caiso.com/Pages/Calendar.aspx](http://www.caiso.com/Pages/Calendar.aspx) for current login information relevant for each meeting.

Please note ISO has shifted the normally scheduled call from February 17th to 18th, 2014 in observance of Presidents Day.
<table>
<thead>
<tr>
<th>Report</th>
<th>Release</th>
<th>Affected API Version</th>
<th>Availability as of spring 2014 release</th>
</tr>
</thead>
</table>
| Expected Energy      | GoLive        | RetrieveExpectedEnergy_PTR_AP
RetrieveExpectedEnergy_PTR_DocAttach_AP | Remain supported                       |
|                      | MSG           | RetrieveExpectedEnergy_PTRv20091101_AP
RetrieveExpectedEnergy_PTRv20091101_DocAttach_AP | Remain supported                       |
|                      | GMT Fall 2013 | RetrieveExpectedEnergy_CMRIv1_AP
RetrieveExpectedEnergy_CMRIv1_DocAttach_AP | To be decommissioned                   |
|                      | Spring 2014   | RetrieveExpectedEnergy_CMRIv2_AP
RetrieveExpectedEnergy_CMRIv2_DocAttach_AP | New version will be supported          |
| Expected Energy Allocation | GoLive    | RetrieveExpectedEnergyAllocationDetails_PTR_AP
RetrieveExpectedEnergyAllocationDetails_PTR_DocAttach_AP | Remain supported                       |
|                      | MSG           | RetrieveExpectedEnergyAllocationDetails_PTRv20091101_AP
RetrieveExpectedEnergyAllocationDetails_PTRv20091101_DocAttach_AP | Remain supported                       |
|                      | GMT Fall 2013 | RetrieveExpectedEnergyAllocationDetails_CMRIv1_AP
RetrieveExpectedEnergyAllocationDetails_CMRIv1_DocAttach_AP | To be decommissioned                   |
|                      | Spring 2014   | RetrieveExpectedEnergyAllocationDetails_CMRIv2_AP
RetrieveExpectedEnergyAllocationDetails_CMRIv2_DocAttach_AP | New version will be supported          |
| ISO Commitment Cost Details | GoLive    | RetrieveISOCommitmentCostDetails_PTR_AP
RetrieveISOCommitmentCostDetails_PTR_DocAttach_AP | Remain supported                       |
|                      | MSG           | RetrieveISOCommitmentCostDetails_PTRv20091101_AP
RetrieveISOCommitmentCostDetails_PTRv20091101_DocAttach_AP | Remain supported                       |
|                      | GMT Fall 2013 | RetrieveISOCommitmentCostDetails_CMRIv1_AP
RetrieveISOCommitmentCostDetails_CMRIv1_DocAttach_AP | To be decommissioned                   |
|                      | Spring 2014   | RetrieveISOCommitmentCostDetails_CMRIv2_AP
RetrieveISOCommitmentCostDetails_CMRIv2_DocAttach_AP | New version will be supported          |
| Market Schedules     | Spring 2014   | RetrieveMarketSchedules_CMRIv1_AP
RetrieveMarketSchedules_CMRIv1_DocAttach_AP | New version will be supported          |
| Non-Dispatchable Time Ranges | Spring 2014 | RetrieveNonDispatchableTimeRanges_CMRIv1_AP
RetrieveNonDispatchableTimeRanges_CMRIv1_DocAttach_AP | New version will be supported          |
| Market Forecast      | Spring 2014   | RetrieveMarketForecast_CMRIv1_AP
RetrieveMarketForecast_CMRIv1_DocAttach_AP | New version will be supported          |
Web Service Impacts OASIS

- Current Transmission Usage: TRNS_CURR_USAGE
- Transmission Interface Usage: TRNS_USAGE
- Market Available Transfer Capacity: TRNS_ATC
- CAISO Demand Forecast: SLD_FCST
- Wind and Solar Forecast: SLD_REN_FCST
- Locational Marginal Prices - 15 minute PRC_RTPD_LMP (new) level
# Web Service Impacts

<table>
<thead>
<tr>
<th>Service Operation</th>
<th>Version 4 Multi-Stage Generator</th>
<th>Version 5 Contingency Dispatch Enhancements</th>
<th>Version 6 FERC764</th>
</tr>
</thead>
</table>
| **Retrieve/Request**  
getDispatchBatchesSinceUID  
getBatchStatus  
getBatchHeader  
getDispatchBatch  
isNewTrajData  
getTrajectoryData  
submitMSSLFRequest  
validateDispatchBatch | To be decommissioned upon spring 2014 ADS deployment | Will still be supported | New; to be supported upon spring 2014 ADS deployment |
| **Response**  
acceptInstruction  
declineInstruction  
partialAcceptInstruction | To be decommissioned upon spring 2014 ADS deployment | To be decommissioned upon FERC 764 activation | New; to be supported upon spring 2014 ADS deployment |