Market Simulation Fall 2014 Release

Christopher McIntosh
Lead Market Simulation Coordinator

Fall 2014 Release
October 2\textsuperscript{nd}, 2014
Agenda

• Fall 2014 Market Simulation Initiatives and Timelines
• Fall 2014 MAP Stage Availability
• FNM Expansion with EIM Off
• FNM Expansion with EIM
• Fall Release ADS Client – 5.2.8.0
• OMS
• FRAC MOO
• Many to Many
• Next Steps
• Reference Slides
Fall 2014 Release Market Simulation Initiatives and Timelines

Outage Management System Replacement - July 28<sup>th</sup>, 2014 – November 28<sup>th</sup>, 2014 (Unstructured)

Flexible Resource Adequacy Criteria and Must Offer Obligation (FRAC-MOO) - September 22<sup>nd</sup>, 2014 – October 3<sup>rd</sup>, 2014 (Unstructured)

Full Network Model Expansion with Energy Imbalance Market Off – September 29<sup>th</sup>, 2014 – October 10<sup>th</sup>, 2014 (Unstructured)

Many to Many: Standard Capacity Payment (SCP) Availability Calculations - October 15<sup>th</sup>, 2014 – October 29<sup>th</sup>, 2014 (Structured)
Fall 2014 Release MAP Stage Availability

• MAP Stage Scheduled Maintenance - October 3rd, 2014 @ 09:00, no OMS Outage during this time.

• EIM off in MAP Stage starting TD 9/29

• OMS Maintenance MAP Stage - 10/1 16:00 – 10/2 16:00

• In October (TBD) ISO will transition MAP Stage SIBR URL’s to match Sandbox and Production - "/sst/runtime.asvc" -> "/sst/sibr"

• System Access Information for Market Participants Version 6.0 posting 9/25 will have the full set of new SIBR URL’s
FNM Expansion with EIM Off

The Full Network Model Expansion with Energy Imbalance Market Simulation Off timeline –

• **FNM Expansion with EIM Off:** September 29\(^{th}\), 2014 – October 10\(^{th}\), 2014 (Unstructured)
FNM Expansion with EIM
The Full Network Model Expansion with Energy Imbalance Market Simulation timeline –

- **FNM Expansion with EIM:** July 28th - September 30th, 2014 (Structured and Unstructured)
- **FNM Expansion with EIM:** July 28th - September 1st, 2014 (Structured)
- **FNM Expansion with EIM:** September 2nd, 2014 - September 30th, 2014 (Unstructured)


**Week 1** - Scenario #1 TD 7/30 and # 2 TD 7/31 – Bid to Market Output, completed successfully
**Week 2** - Scenario #5 TD 8/6 and #4 8/7 – Successful executed, Statements posting this week, one day delay in 8/7 statement posting
**Week 3** - No Scenarios
**Week 4** - TD 8/19 12, 13, 14 and 15 - TD 8/20 7, 18 and 19 – completed successfully TD 8/21 6 and 8. Executed and scenario 8 failed. Will be re-executed in Week 6
**Week 5** - TD 8/26 9 and 20 – completed successfully
**Week 6** - TD 9/3 11,TD 09/04 8, 9 and 10 – completed successfully
**Scenario 16 and 17** - To be determined
<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>OASIS</td>
<td>M</td>
<td>Open</td>
<td>OASIS - Node column is duplicated in CSV API download file for Contingency Dispatch Locational Marginal Prices (LMP) Report in Prices section.</td>
<td>To be resolved 10/6</td>
</tr>
<tr>
<td>2</td>
<td>OASIS</td>
<td>M</td>
<td>Open</td>
<td>OASIS - ATLAS Publication Schedule is missing information for PRC_RTM_NOMOGRAM</td>
<td>To be resolved 10/6</td>
</tr>
<tr>
<td>3</td>
<td>CMRI</td>
<td>M</td>
<td>Open</td>
<td>CMRI_GUI_MAPP_Transmission Limit -- Generated MPP (FMM) Files are not available.</td>
<td>To be resolved 10/6</td>
</tr>
<tr>
<td>4</td>
<td>CMRI</td>
<td>H</td>
<td>Open</td>
<td>SchedulePrices_CMRIv2 API response is retrieving data for GHG and so fails XSD validation</td>
<td>To be resolved 10/6</td>
</tr>
<tr>
<td>5</td>
<td>CMRI</td>
<td>H</td>
<td>Open</td>
<td>In Map Stage ExpectedEnergy_CMRIv2 API gives IO Exception: Read timed out error.</td>
<td>To be resolved 10/6</td>
</tr>
<tr>
<td>6</td>
<td>CMRI</td>
<td>H</td>
<td>Open</td>
<td>MarketSchedules_CMRIv1 is failing XSD validation.</td>
<td>To be resolved 10/6</td>
</tr>
<tr>
<td>7</td>
<td>CMRI</td>
<td>H</td>
<td>Open</td>
<td>SchedulePrices_CMRIv2 fails XSD Validation as # is missing in the XSD xml response.</td>
<td>To be resolved 10/6</td>
</tr>
<tr>
<td>8</td>
<td>CMRI</td>
<td>H</td>
<td>Open</td>
<td>In the MarketSchedules_CMRIv2 response Version says v20140401 instead of v20141001.</td>
<td>To be resolved 10/6</td>
</tr>
</tbody>
</table>
Version 5.2.8.0 is comprised of the following enhancements relating to the Energy Imbalance Market and Full Network Expansion project initiatives:

- Addition of a new optional field called “Base Schedule” on the resource grid and query tool report displays
- Expansion of the “Resource ID” field width to accommodate the 50-character length of the dynamically generated intertie transaction identifier (ID) alphanumeric value on the resource grid and query tool report displays
- Ability to generate query tool reports for resources with intertie transaction identifiers (IDs)
- Change of the display text label from “Contingency” to “CAISO Contingency” on the “Dispatch Interval” cell
- Addition of a new product code “IEEA” (Imbalance Energy Export Allocation or California Export Allocation) per 15-minute market results on the “Instruction Panel” grid and query tool reports

For market simulation or external testing purposes, market participants must have access to the Market and Performance (MAP) Stage Market Participant Portal (MPP) in order to download the latest version 5.2.8.0 installation package at [https://portalmapi.caiso.com/ads_install](https://portalmapi.caiso.com/ads_install)

Outage Management System

The Outage Management System Market Simulation –

- **Outage Management System**: July 28\(^{\text{th}}\) – November 28\(^{\text{th}}\), 2014 (Unstructured)

Beginning July 28\(^{\text{th}}\), 2014 ISO will approve outages with no ISO operations review; this will last until August 1\(^{\text{st}}\), 2014. ISO will be approving outages throughout the day for outages submitted prior to 16:00, for immediate outage approval please email [MarketSim@caiso.com](mailto:MarketSim@caiso.com).

Beginning August 4\(^{\text{th}}\), 2014 ISO operations will review submitted outages prior to 16:00 daily, this support will end August 15\(^{\text{th}}\), 2014.

The time period from August 18\(^{\text{th}}\), 2014 through the end of unstructured market simulation September 30\(^{\text{th}}\), 2014. ISO will be approving outages throughout the day for outages submitted prior to 16:00, for immediate outage approval please email [MarketSim@caiso.com](mailto:MarketSim@caiso.com).

OMS Integration with IFM/RTM available 9/29
<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>OMS</td>
<td>M</td>
<td>Existing</td>
<td>Users unable to submit outages for Intertie RA resources</td>
<td>CAISO is validating this fix</td>
</tr>
<tr>
<td>2</td>
<td>OMS</td>
<td>H</td>
<td>Existing</td>
<td>RetrieveAvailability and RetrieveResourceOutage services return Unhandled SOAP Fault Exception</td>
<td>CAISO is investigating on a case by case basis. Unhandled SOAP fault is a generic error that is returned. The actual error typically differs on a case by case basis</td>
</tr>
<tr>
<td>3</td>
<td>OMS</td>
<td>H</td>
<td>Existing</td>
<td>Issue with Pmin re-rate submission when the start and end date time points are specified. Error message: Pmin re-rate profile outside of outage time</td>
<td>CAISO is investigating</td>
</tr>
<tr>
<td>4</td>
<td>OMS</td>
<td>M</td>
<td>Existing</td>
<td>WithdrawOutageChangeRequest API returning null OutageStandardOutput</td>
<td>CAISO is investigating</td>
</tr>
<tr>
<td>5</td>
<td>OMS</td>
<td>H</td>
<td>Existing</td>
<td>Unable to submit transmission outages via API using TR ID. Error message: “Equipment MRID is not found.”</td>
<td>CAISO is investigating</td>
</tr>
<tr>
<td>6</td>
<td>OMS</td>
<td>H</td>
<td>Existing</td>
<td>Unable to retrieve transmission outages via API using date range criteria. Error message: Request does not contain valid criteria</td>
<td>CAISO is investigating</td>
</tr>
<tr>
<td>7</td>
<td>OMS</td>
<td>M</td>
<td>Existing</td>
<td>Retrieve Availability API for MSG resources only returning 1 configuration</td>
<td>CAISO is investigating</td>
</tr>
<tr>
<td>8</td>
<td>OMS</td>
<td>M</td>
<td>New</td>
<td>Unable to select child units for Pump Storage (PTUR) units in WebOMS</td>
<td>CAISO is investigating</td>
</tr>
</tbody>
</table>
**FRAC MOO**

- **Flexible Resource Adequacy Criteria and Must Offer Obligation (FRAC-MOO):** September 22\textsuperscript{nd}, 2014 – October 3\textsuperscript{rd}, 2014 (Unstructured)

- **Week 1 and 2 Unstructured – No Settlements**

<table>
<thead>
<tr>
<th>Date</th>
<th>Scenario Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/22/2014</td>
<td>Upload RA and Supply Plans that contain Flex RA showings</td>
</tr>
<tr>
<td>9/23/2014</td>
<td>ISO to run Flex Cross Validation by 11:00 AM and market participants to review results</td>
</tr>
<tr>
<td>9/25/2014</td>
<td>Market participants to correct errors by 11:00 AM. ISO to run Flex deficiency analysis and data will be published by close of business</td>
</tr>
<tr>
<td>9/25/2014 and 9/29/2014</td>
<td>Cure period - Market participants to cure deficiency by close of business - 9/29</td>
</tr>
<tr>
<td>9/29/2014</td>
<td>End of Cure period - Market Participants to cure deficiency by resubmitting the RA and Supply Plans by close of business – 9/29</td>
</tr>
</tbody>
</table>

**DATA:**
- Use October 2014 EFC data posted on reliability requirements webpage
- Use October showings. Participants may choose to copy production showings and reuse the template in Map Stage
- ISO will create LSE requirements
- ISO will not process generic RA showings as this market simulation applies to only Flexible RA
- Note: FRAC-MOO RUC Validation structured Market Simulation will occur sometime in November with FRAC-MOO Settlements.
Many to Many: SCP Availability Calculations

Many to Many: Standard Capacity Payment (SCP) Availability Calculations – October 15th, 2014 – October 29th, 2014 (Structured)

DATA
1. Use October NQC and October reference data
2. Select max of two RA resources from October supply plan for each availability calculation scenario
3. Create outages in OMS for selected RA resources
4. Select substitute resources from RAAM. The sub resources will be based of the September supply plan using the formula Non RA = NQC-RA. No limit on the number of substitute units.
   - Follow DA and RT substitution timelines and for RT ensure the units are prequalified. If local units are not prequalified then send a request to reliabilityrequirements@caiso.com to get the units prequalified

• Note: Structured Scenarios posted on Market Sims Release Site and Reliability Requirement Site
## Many to Many: SCP Availability Calculation and FRAC-MOO

### Market Sims Timeline

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Market Sim Date</th>
<th>Type</th>
<th>Go Live</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRAC-MOO</td>
<td>Submission of RA and Supply Plans</td>
<td>9/22 - 10/3</td>
<td>Unstructured</td>
<td>11/6/2014</td>
<td>Will test submission of RA and Supply Plans. Does not include Settlements testing</td>
</tr>
<tr>
<td>FRAC-MOO</td>
<td>Settlements testing</td>
<td>12/1</td>
<td>Structured</td>
<td>1/1/2015</td>
<td>Will trigger CPM Charge codes and will also test Settlement statements</td>
</tr>
<tr>
<td>FRAC-MOO</td>
<td>RUC Validation</td>
<td>12/1</td>
<td>Structured</td>
<td>12/22/2014</td>
<td>Will need to test for when Generic RA &gt; Flex RA</td>
</tr>
<tr>
<td>Many to Many</td>
<td>SCP Availability Calculations</td>
<td>10/15 - 10/29</td>
<td>Structured</td>
<td>12/1/2014</td>
<td>Will test SCP &amp; CPM availability calculations, forced outages, RAAM UIs, DA &amp; RT substitutions</td>
</tr>
</tbody>
</table>
ISO Settlements MAP Stage

- ISO is adding 6 additional statements for Market Simulation of FNM expansion with EIM off 10/2 – 10/3 and 10/6 – 10/9
Next Steps

- The next teleconference will take place @ 13:00 PPT on Monday, October 6th, 2014
Reference Slides
ISO Market Simulation Support

- **Hours** - 09:00 - 18:00, PST (Monday through Friday)
- **Mkt Sim Coordinator Phone** - (530) 518 - 8539
- **ISO’s 24X7 Help Desk** - (916) 351-2309 (Connectivity - GUI or API)
- **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 Fall 2014” to be reviewed by ISO SME’s.
ISO will host Bi-weekly call on Mondays and Thursdays starting July 28th, 2014

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 28</td>
<td>1:00 p.m. to 2:30 p.m. (Pacific Time)</td>
</tr>
<tr>
<td>August 4, 7, 11, 14, 18, 21, 25, 28, 4, 8, 11, 15, 18, 22, 25, 29</td>
<td></td>
</tr>
</tbody>
</table>

Please refer to the California ISO public calendar at http://www.caiso.com/Pages/Calendar.aspx for current login information relevant for each meeting.