Market Simulation Overview of the Spring Release Local Market Power Mitigation (LMPM) Phase 1 Enhancements and Multi Stage Generation (MSG) Enhancements Phase 2

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Market Simulation Coordinator

2012 Spring Release
March 1st, 2012
Agenda

- LMPM Spring Release Market Simulation Planning
- MSG Enhancements Phase 2
- MAP Stage Availability
- Next Steps
- Reference Slides
LMPM Phase 1 Enhancement Schedule

The LMPM Simulation timeline –

- LMPM Phase 1 Enhancements Kickoff call: 2/2
- LMPM Phase 1 Enhancements Connectivity Testing: 2/6 – 2/13
- LMPM Phase 1 Registration of Corporate Affiliation and Resource Control Agreement Submittal Due Date: 2/6
- LMPM Phase 1 List of Transmission Interfaces Submittal Due Date: 2/6
- LMPM Phase 1 Enhancements Market Simulation Dates: 2/14 – 3/2
- LMPM Structured Scenario Execution: DA 2/14 – 2/24, RT 2/27 – 3/1
- LMPM Unstructured Scenario Execution Per Request: TD 3/6 with Settlement run
LMPM Phase 1 Enhancement Production Schedule Registration Requirements

In anticipation of the FERC Approval of the ISO’s Nov 16, 2011 Tariff filing for a Trade Date 04/11 Implementation date

✓ 02/14 – Updated SC Certification BPM (PRR 538)
  – Refer to sections 5.3.15, 5.3.15.1 and 5.3.15.2. Attachment E provides examples.

• 03/05 – ISO releases Production version of the SC Affiliate form and Resource Control Agreement disclosure form

• 3/23 – Disclosure forms submission due date
# LMPM Phase 1 Scenario Schedule

<table>
<thead>
<tr>
<th>Trade Date</th>
<th>Scenario</th>
<th>Market Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/14/2012</td>
<td>1</td>
<td>DA</td>
<td>RT unstructured.</td>
</tr>
<tr>
<td>2/15/2012</td>
<td>1</td>
<td>DA</td>
<td>RT unstructured.</td>
</tr>
<tr>
<td>2/16/2012</td>
<td>2</td>
<td>DA</td>
<td>RT unstructured.</td>
</tr>
<tr>
<td>2/17/2012</td>
<td>3</td>
<td>DA</td>
<td>RT unstructured.</td>
</tr>
<tr>
<td>2/18/2012</td>
<td>4</td>
<td>DA</td>
<td>RT unstructured.</td>
</tr>
<tr>
<td>2/22/2012</td>
<td>6</td>
<td>DA</td>
<td>RT unstructured.</td>
</tr>
<tr>
<td>2/23/2012</td>
<td>7</td>
<td>DA</td>
<td>RT unstructured.</td>
</tr>
<tr>
<td>2/24/2012</td>
<td>7</td>
<td>DA</td>
<td>RT unstructured.</td>
</tr>
<tr>
<td>2/27/2012</td>
<td>2</td>
<td>RT</td>
<td>DA unstructured</td>
</tr>
<tr>
<td>2/28/2012</td>
<td>3</td>
<td>RT</td>
<td>DA unstructured</td>
</tr>
<tr>
<td>2/29/2012</td>
<td>4</td>
<td>RT</td>
<td>DA unstructured</td>
</tr>
<tr>
<td>3/1/2012</td>
<td>6</td>
<td>RT</td>
<td>DA unstructured</td>
</tr>
<tr>
<td>3/2/2012</td>
<td>unstructured</td>
<td>DA/RT</td>
<td>Can be used for failed scenarios</td>
</tr>
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</table>
LMPM Phase 1 RT Scenario 2, 3 and 4 Transmission interfaces.

- **Scenario #2, TD 2/27/2012. Flowgate Congestion.**
  - 32218_DRUM _115_32244_BRNSWK2T2_115_BR_2_1
  - 30005_ROUND MT_500_30015_TABLE MT_500_BR_1
  - 30060_MIDWAY _500_24156_VINCENT _500_BR_1

  HE 12 to 24

- **Scenario #3, TD 2/28/2012, TCOR congestion**
  - PATH26_BG
  - PATH15_BG

  HE 14 to HE 24

- **Scenario #4, TD 2/29/2012, Nomogram congestion.**
  - TMS_DLO_NG
  - T-133 METCalf_NG

  HE 13 and 24
**Scenario 6**

RMR 2 unit OAK C_7_UNIT 1 will be manually dispatched at 15MW for 24 hours, TD 3/1/2012.

Due to congestion across 32786_OAKLAN_115_32790_STATIN X_115_BR_2_1 the unit will be dispatched higher than the manual RMR pre-dispatch. The cost curve of the generator was build using adjusted RMR proxy curve (the original curve will be modified). Results will be published and available on Oasis (congestion) and CMRI (RMR).

In order to facilitate scenario following lines will be outaged:

- 32786_OAKLAND _115_32790_STATIN X_115_BR_3 _1
- 32782_STATIN D_115_32788_STATIN L_115_BR_1 _1

And 32786_OAKLAND _115_32790_STATIN X_115_BR_2 _1 will be de-rated to ~85MVA.
MSG Enhancements Phase 2

The MSG 2 Simulation timeline –

- MSG 2 Simulation Kickoff call: 3/1
- MSG 2 Simulation Schedule Dates: 3/5 – 3/9
- MSG 2 Structured Scenario Execution Date: TD 3/6
- MSG 2 Simulation RDT Due Date: 2/15

MSG Enhancements Phase 2 Market Simulation Plan –
### MSG Enhancements Phase 2 Scenarios

<table>
<thead>
<tr>
<th>Scenario Number</th>
<th>Description</th>
<th>ISO Actions</th>
<th>SC Actions</th>
<th>Expected Outcome</th>
<th>Anticipated Settlement Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meter is higher than the Eligible Configuration.</td>
<td>ISO creates DAM and RTM bids for MSG resources. RTM configuration is higher than DAM. Meter will be higher than the RTM configuration.</td>
<td>Verify market results and settlement statements.</td>
<td>The SC will receive the MLC cost at the configuration based on meter.</td>
<td>CC 6620</td>
</tr>
<tr>
<td>2</td>
<td>Meter is lower than the Eligible Configuration.</td>
<td>ISO creates DAM and RTM bids for MSG resources. RTM configuration is higher than DAM. Meter will be lower than the RTM configuration.</td>
<td>Verify market results and settlement statements.</td>
<td>The SC will receive the MLC cost at the configuration based on meter.</td>
<td>CC 6620</td>
</tr>
<tr>
<td>Calendar Day</td>
<td>Day</td>
<td>TD to be Settled</td>
<td>Publish MQS T+1B</td>
<td>Publish Settlement Stmt T+5B</td>
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<tr>
<td>Market Simulation START</td>
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<td>3/6/2012</td>
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<td>Wednesday</td>
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<td>3/6/2012</td>
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<tr>
<td>08-Mar-12</td>
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<td>09-Mar-12</td>
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<tr>
<td>13-Mar-12</td>
<td>Tuesday</td>
<td>3/6/2012</td>
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</tr>
<tr>
<td>14-Mar-12</td>
<td>Wednesday</td>
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<td>16-Mar-12</td>
<td>Friday</td>
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</tbody>
</table>
Spring Release MAP Stage Availability

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

MAP Stage Weekly Maintenance Window: Thursday’s, 09:00 - 20:00

ISO Scheduled Maintenance Outage Thursday March 1st, 2012
Next Steps

• The next teleconference will take place at 13:00 PPT on Monday March 5th, 2012.
Reference Slides
Spring Release Communication Plan

• Twice-weekly Checkpoint (Status)
  – Mondays and Thursdays: Teleconference
    • Time: 13:00-15:00 PPT
    • Domestic: (800) 288-8967
      International: (612) 332-0345
      Access Code: N/A
  – Mondays and Thursdays: WebEx
    • URL: www.webmeeting.att.com
    • Meeting Number: 8665282256
    • Access Code: 9365289
2012 Default O&M Adder revision
Frequently Asked Questions (FAQs)

• When the FERC approval is expected for this initiative?
  – The ISO has requested FERC to issue us an order by March 16, 2012.

• Which O&M Adder would be used to validate the "Registered Minimum load Costs" for the month of April?
  – In addition to the O&M adder value, the monthly futures gas price is another variable that determines the maximum allowed registered cost for a natural gas-fired resource. For the month of April 2012, the ISO would published the gas price for different fuel regions on March 22, 2012. As a general rule, the ISO validates the submitted registered costs using the Gas price and O&M Adder values that are effective on the first trade date of the effective date of the submitted registered cost. Example: If SC_A submits Registered cost for Gen_X for Effective Start Date of 04/01, the ISO would validate that using the gas price and O&M Adder that will be effective on 04/01.
LMPM Phase 1 Registration Requirements
Affiliate Disclosure Form (section 4.5.1.1.12)

• Are you affiliated with any other SC in the CAISO Markets?
  – If Yes, then you need to disclose this information to the ISO, if not already done so. (optional* for Market Simulation)
  – If not, then you need to tell us that you are not Affiliated with any other SC (optional* for Market Simulation)
  – All SC_IDs associated with an SC automatically become affiliated unless the ISO is told otherwise.

• Due Date for Market Simulation?
  – For guaranteed availability by the start of Market Simulation, forms are due by COB 02/06/2012

* Submission is not mandatory unless the SC wants to test a certain scenario like Net Buyer / Net Seller Status etc.
LMPM Phase 1 Registration Requirements
Resource Control Agreement Form (Section 4.5.1.1.13)

• What is a Resource Control Agreement?

An agreement that gives an entity bidding, scheduling, and/or operational control over a physical resource owned by or under contract to another entity, or otherwise directs the manner in which such a resource participates in the ISO markets.

- Submission of Resource Control Agreement is Optional for Market Simulation unless an SC would like to test a certain scenario
- Example:

<table>
<thead>
<tr>
<th>Resource_ID</th>
<th>From_SC (SC_ID)</th>
<th>To_SC\ (SC_ID)</th>
<th>Start_Date</th>
<th>End_Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen_ABC</td>
<td>ABCD</td>
<td>WXYZ</td>
<td>02/14/2012</td>
<td>12/31/2012</td>
</tr>
</tbody>
</table>

• Due Date?

- For guaranteed availability by the start of Market Simulation, forms are due by COB 02/06/2012
LMPM Affiliate Form FAQ’s

• If an SC has filled out an affiliate form in the past (i.e. via CRR or CB process), do they need to complete the Generation Affiliate Disclosure form for the LMPM effort?
  – Yes

• What is the difference between the Affiliate Disclosure for LMPM and the Affiliate Disclosure that is completed for CRR/CB registration?
  – This is a new requirement for SCs to complete the Affiliate Disclosure. Previously the requirement was for CRR entities and Convergence Bidding entities, that may or may not be an SC

• What should an SC do if an affiliate is not listed on the Affiliate Disclosure form?
  – Disclose the affiliate by adding the entity name to the form
LMPM Affiliate Form FAQ’s

• An SC completed an affiliate form in the past, and needs to update it. Can the ISO send what was submitted in the past, to have a starting point?
  – Yes

• If an SC is also an agent for another SC; is the ‘agent’ relationship considered an affiliation?
  – No

• An SC completed the 2012 Generation Ownership and Tolling Agreement survey in January ’12; do they need to complete the Resource Control Agreement form?
  – Yes

• If an SC completes the forms for Market Simulation, do they need to send the forms in again for production?
  – Yes – mostly likely the form will be revised for production
LMPM Phase 1 Project Documentation

The LMPM Phase 1 Enhancements Market Simulation Plan –

The LMPM Phase 1 Enhancements Market Simulation Scenarios –

The LMPM Phase 1 Enhancements Market Simulation Scenario FAQ’s

Registration Form for Affiliate Disclosure and Resource Control Agreement
http://www.caiso.com/Documents/SchedulingCoordinatorAffiliationResourceControlAgreementDisclosureForm.xls