Price Inconsistency Market Enhancements: Final Proposal

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ISO Stakeholder Initiative Process

POLICY AND PLAN DEVELOPMENT

- Issue Paper
- Straw Proposal
- Draft Final Proposal

We are here

Board

Stakeholder Input
Issue:
In certain scenarios the ISO market has observed inconsistencies between prices and dispatches, which may lead to uneconomical awards.

Final Proposal:
Implement a series of changes to the ISO market functionalities in both the day-ahead and real-time markets to address price inconsistencies.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Enhancement</th>
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<tr>
<td>Scheduling vs. Pricing Run</td>
<td>Use MW and prices from the Pricing run</td>
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<tr>
<td>APNode vs. Anode</td>
<td>Use Anode prices for default load aggregate points (DLAPs) and trading hubs (THs) across markets.</td>
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<tr>
<td>Point of delivery (POD) vs. Nodal Constraints</td>
<td>Enhancement already implemented to include physical location into the nodal constraints.</td>
</tr>
<tr>
<td>Disconnected Nodes</td>
<td>The ISO will not pursue the straw proposal of posting of information about disconnected nodes</td>
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Background

- Interplay of market functionalities may lead to price inconsistencies.
- While inconsistencies are infrequent, the integrated forward market and the hour ahead scheduling process may experience price inconsistencies.
- Price inconsistencies may create uncertainty and risks.
- Address price inconsistencies as a part of the ISO continued improvement process.
Issue 1: Scheduling run vs. Pricing run

The interplay of scheduling and pricing run may lead to uneconomical awards on inter-ties.

Final Proposal

Use both MW awards and clearing prices from the pricing run

– Current setup of both runs will remain unaltered.
– Priorities and relaxations are already preserved in the pricing run.
– Use MW from pricing run in downstream processes.

Additionally, the ISO proposes to implement a hard bid floor concurrently with the implementation of the -$150 bid floor.
Issue 2: Point of Delivery vs. Nodal Constraint

The interplay of point of delivery (POD) and Nodal Constraints may result in uneconomical awards.

- POD: Point at which energy enters the ISO controlled grid, and where the metering takes place.

- Nodal Constraint: Limits injections from convergence bids to help achieve alternate-current (AC) power flow convergence.

Enhancement

The ISO implemented on August 2nd, 2012 a software enhancement to the logic of forming Nodal Constraints.

- The physical location will now be part of the nodal constraint together with the financial location.
Issue 3: APNode vs. ANode

- MW award is based on ANode price.

- APNode price is used for settlement of awards.

- Final Proposal
  Use ANode prices for settlements of bids at default load aggregate points and trading hubs, contingent upon the ISO ability to generate an Anode for the real-time markets.
Issue 4: Disconnected Nodes

- Outages may disconnect nodes where convergence bids were submitted.

- Straw Proposal
  Post information about disconnected nodes by 6pm day prior to running the day-ahead market.

This final proposal will not incorporate the posting of information about disconnected nodes.
Alternative approach

• After further consideration and stakeholders’ feedback, the ISO is focused only on pursuing the targeted enhancement option.

• Targeted enhancements will address the root cause.

• Made-whole approach may have unintended consequences.

• An interim bid-cost approach may require the same time for implementation and may actually delay the implementation of the targeted enhancements.
## Next Steps

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<td>Post Issue Paper &amp; Straw Proposal</td>
<td>June 18, 2012</td>
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<td>Stakeholder Conference Call</td>
<td>June 26, 2012, 1 – 3 p.m.</td>
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<td>Stakeholder Comments Due</td>
<td>July 06, 2012</td>
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<tr>
<td>Post Revised Straw Proposal</td>
<td>August 2, 2012</td>
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<td>Stakeholder Meeting</td>
<td>August 9, 2012, 10am – 3 p.m.</td>
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<td>Stakeholder Comments Due</td>
<td>August 16, 2012</td>
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<td>Post Draft Final Proposal</td>
<td>August 31, 2012</td>
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<td>September 17, 2012</td>
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<td>Board Meeting</td>
<td>November 1-2, 2012</td>
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Please send comments to gbalderete@caiso.com

Questions?
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