Commitment Costs Refinements – Greenhouse Gas – Phase 1

Client Training Team
Customer Services Department

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Background

• The California greenhouse gas cap regulations will apply to in-state generators that emit at least 25,000 mtCO2 equivalents annually.
Generating Resource

• Cost of greenhouse gas allowances under the California Air Resources Board cap-and-trade program (per-MWh cost)
  – Applies to start-up, minimum load, default energy bids and generated bids
ISO market provides resources with the ability to indicate and recover costs of committing a resource.

- Resources incur costs when starting up and when running the resource at or above its minimum output level
  - If a resource’s daily market revenues are insufficient to cover its commitment costs, a “make-whole” payment is provided

- Resources have two options for specifying start-up and minimum load costs
  - Proxy cost option calculated daily by the ISO
  - Registered cost option which is capped at a percentage above the proxy cost value and fixed for 30 days
Transition costs for multi-stage generators

• In addition to start-up and minimum load costs, the ISO accounts for transition costs for multi-stage generators.
• Currently, the ISO provides a mechanism for market participants to specify their transition costs, subject to rules governing the shape and magnitude of the bids.
• This is not a cost-based approach and, as such, would not need to be explicitly altered to accommodate accounting for emission costs.
The ISO also uses cost-based calculations in other circumstances:

- Default energy bids are used when a resource has been determined to have local market power.

- Generated bids are used when a resource adequacy resource does not meet its obligation to bid into the ISO market.
New information in the RDT

<table>
<thead>
<tr>
<th>PGA Name</th>
<th>Scheduling Coordinator ID</th>
<th>Resource ID</th>
<th>RMT Off Peak Expiration Date</th>
<th>Green House Gas Emission Rate</th>
<th>Green House Gas Compliance Obligation</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGA_NAME</td>
<td>SC_ID</td>
<td>RES_ID</td>
<td>TG_OFF_PEAK_EXPIRATION</td>
<td>GHG_EMISSION_RATE</td>
<td>GHG_COMPLIANCE_OBLIG</td>
<td></td>
</tr>
</tbody>
</table>

California ISO
Shaping a Renewed Future
Requested information links

• External BRS for the ($/MWh) calculation can be view at the following link:
  
  http://www.caiso.com/Documents/Commitment%20costs%20refinement%202012%20greenhouse%20gas%20-%20implementation%7CBusiness%20requirements%20specification

• Resource Data Template location:
  

  – Scroll down the page to resource data submission

• Resource Data Template definitions 6.0:
  
  http://www.caiso.com/Documents/Master%20file%20application%20artifacts
QUESTIONS ?? ?? ??

Thank you for attending and submit any further requests to MarketTraining@caiso.com