Bidding rules enhancements

Issue paper discussion

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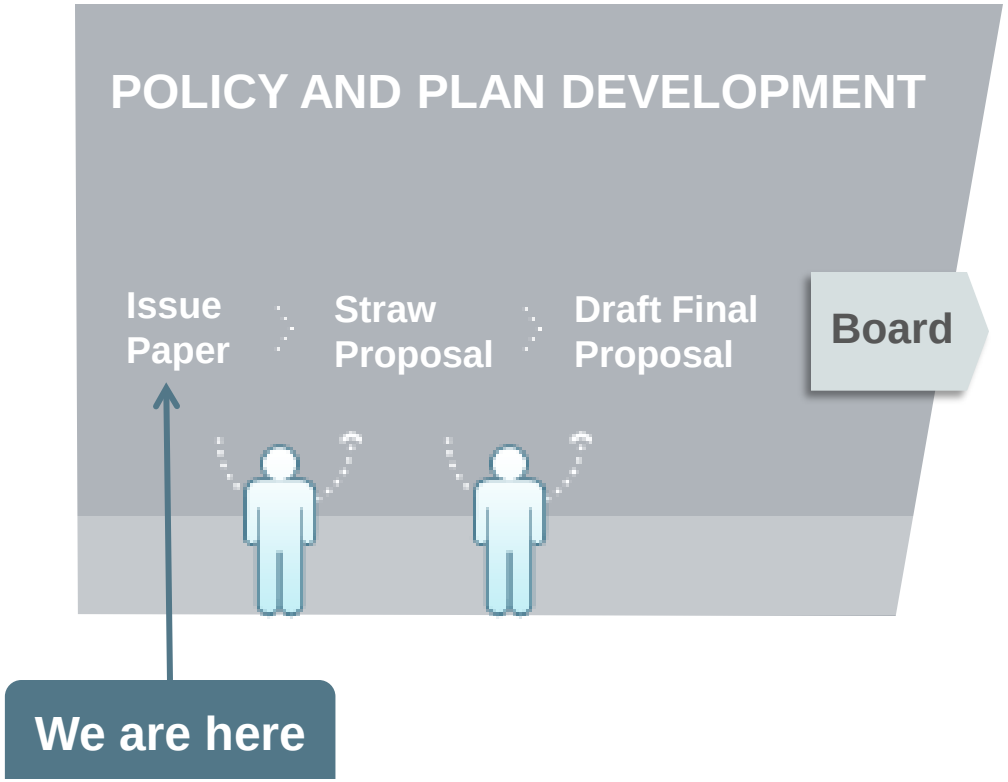
Agenda

Time	Topic	Presenter
1:00 – 1:05	Introduction	Kristina Osborne
1:05 – 2:55	Issues	Delphine Hou
2:55 – 3:00	Next steps	Kristina Osborne

ISO Policy Initiative Stakeholder Process



Bidding rules enhancements initiative

- Initiative has been in stakeholder catalog as a non-discretionary item
- Initiative will evaluate the following:

  1) unrestricted flexibility of resources to change energy bid prices between the day-ahead and real-time markets, and across real-time hours;

  2) restrictions on commitment cost changes between and within the day-ahead and real-time markets; and

  3) verification of generator resource characteristics.

- These proposals may require significant market design and system changes.

Energy bidding

- ISO has relatively flexible energy bidding rules (see Table 1 in issue paper).
- Flexible energy bidding rules help the ISO achieve reliability and market efficiency.
- Current rules allow for changing bids when none is warranted. For example,
  - During inter-temporal constraints
  - Due to the time horizon or STUC and RTUC

Energy bidding related questions

1. Should the ISO market disallow or reduce changes to real-time energy bids during an inter-temporal constraint?
2. On the other hand, should the ISO market continue to allow real-time energy bidding flexibility but instead calculate bid cost recovery on the bid cost that the optimization used to make the commitment decision?
3. What other options can the ISO consider including other limitations that are not compatible with energy bidding flexibility?

Commitment cost bidding

- ISO has more limited bidding flexibility given our more stable natural gas market (see Table 2 in issue paper).
- However, increased volatility warrants a review of current rules, balanced against reliability and market efficiency concerns.
- At minimum, the ISO can allow resources that did not receive a day-ahead schedule to rebid into the real-time market.

Commitment cost bidding questions

1. Should the ISO continue to use a gas price index?

2. If the ISO does retain use of the gas price index, should it permanently shift the close of the day-ahead market later in order to use the single ICE index? Does this mean the current manual process for a gas price spike should be retained? (This assumes that the ISO may or may not have additional market power mitigation for commitment costs.)

3. If the ISO does not continue to use a gas price index, should there be a cap on what costs can be bid into the market or allow for after-the-fact cost recovery? Does this mean the current manual process for a gas price spike can be eliminated? (This assumes that the ISO will have market power mitigation beyond the current bid caps for commitment costs and will involve consideration of the complex interaction of minimum online commitment constraints, exceptional dispatch, and other tools used by the ISO that impact commitment.)

Commitment cost bidding questions

4. In the day-ahead timeframe (as well as real-time for short-start units), bids reflecting intra-day gas costs are estimates as the gas has likely not been procured. How can the ISO establish a priori a reasonableness threshold and not rely entirely on ex post verification?

5. If the ISO retains a bid cap, should it be differentiated among the various proxy cost components? For example, stakeholders have proposed a low bid cap on all non-gas items (O&M, greenhouse gas cost, etc.) and a higher one for gas.

6. What process should the ISO institute to periodically review the cost cap (if retained) to ensure that it still enables headroom for market participants to accurately reflect their natural gas costs?

7. Some stakeholders have requested a breakup of the current three-day weekend gas "package." If this is not currently an available index option, what, if anything, can the ISO do about it?

Resource characteristics review

- Valid inter-temporal constraints, such as minimum up and down times, and other resource characteristics are the foundation for effective bidding rules.
- The tariff requires:

4.6.4 Identification Of Generating Units

Each Participating Generator shall provide data identifying each of its Generating Units and such information regarding the capacity and the operating characteristics of the Generating Unit as may be reasonably requested from time to time by the CAISO. All information provided to the CAISO regarding the operational and technical constraints in the Master File shall be accurate and actually based on physical characteristics of the resources except for the Pump Ramping Conversion Factor, which is configurable.

Resource characteristics review questions

1. What characteristics, if any, should allow for engineering judgment? How can ISO verify this assessment independently?
2. How often should resource characteristics be allowed to change?
3. Should ISO establish default resource characteristics for different generation technology types and use these parameters when a resource is mitigated? For example, combined cycles of a certain vintage may have heat rates within one range but for every 10 years the heat rates will change to a different range.
4. Should the ISO establish upper and lower bounds for resource characteristics regardless if there is mitigation?

Next steps

Date	Event
Wed 12/3/14	Issue paper posted
Wed 12/10/14	Stakeholder call
Tue 12/30/14	Stakeholder comments due

Additional dates will be added to the schedule as the scope of the initiation becomes clearer.

Please submit comments to BiddingRules@caiso.com