Stakeholder Comments Template

Submitted by	Company	Date Submitted
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Please use this template to provide your comments on the FRACMOO Phase 2 stakeholder initiative Revised Straw Proposal posted on May 1, 2017.

Submit comments to InitiativeComments@CAISO.com

Comments are due May 22, 2017 by 5:00pm

The Revised Straw Proposal posted on May 1 and the presentation discussed during the May 8 stakeholder web conference may be found on the FRACMOO webpage.

Please provide your comments on the Revised Straw Proposal topics listed below and any additional comments you wish to provide using this template.

The Bonneville Power Administration (BPA) appreciates the opportunity to provide comments on the Flexible Resource Adequacy Criteria and Must Offer Obligations Phase 2 Revised Straw Proposal. Overall, BPA recommends developing a day-ahead flexible ramping product and conducting a long-term review of Resource Adequacy requirements to better define CAISO's flexibility needs and to develop a durable long-term solution. BPA is pleased to see that allowing external resources is now part of the long-term work plan. BPA will continue to support equal access for external and internal resources through a non-discriminatory and competitive process and is willing to continue to engage with the CAISO in this development.

BPA is a federal power marketing administration within the U.S. Department of Energy that markets electric power from 31 federal hydroelectric projects and some non-federal projects in the Pacific Northwest with a nameplate capacity of 22,500 MW. Bonneville currently supplies 30 percent of the power consumed in the Northwest. Bonneville also operates 15,000 miles of

high voltage transmission that interconnects most of the other transmission systems in the Northwest with Canada and California. Bonneville is obligated by statute to serve Northwest municipalities, public utility districts, cooperatives and then other regional entities prior to selling power out of the region.

The Pacific Northwest-Pacific Southwest Intertie was constructed in 1964 to provide the benefits of coordinated markets to the two regions. One of the products envisioned by Congress, the sale of surplus peaking capacity from the Federal Columbia River Power System (FCRPS), could potentially meet several California needs for integrating renewables:

- Provide planned amounts of energy to California during the daily ramp;
- Provide some load to use surplus California renewable energy when the peaking energy is returned to the Pacific Northwest;
- Provide the above benefits without exacerbating California's net load ramping concerns through must-run requirements in hours when not needed; and
- Meet those requirements with surplus capacity produced by primarily hydroelectric resources that have no or minimal carbon use.

The transmission assets that make up the interties between the Northwest and California can be described by how flexible they can be: 400 MW are flexible within 5-minute intervals to support 5-minute dispatch and delivery of regulating resources; 4,800 MW are flexible from one 15-minute scheduling interval to the next; and, with the 3,100 MW direct current intertie from the Northwest to Los Angeles included, 7,900 MW are flexible from one hourly scheduling interval to the next.

In general, BPA is supportive of the CAISO incorporating hourly and day-ahead commitment of resources alongside real-time dispatch in meeting its flexibility needs. Not only does this open up the amount of transmission available to allow Northwestern resources to provide flexibility, it allows hydro-based utilities the time necessary to set up hydrological systems in order to provide the most cost-effective flexible capacity possible.

Proposal to modify eligibility criteria

1. Start-up time less than 4.5 hours

   Comments:
   No comment

2. Minimum run-time less than 4.5 hours
   Comments:

   No comment

3. Category 3 flexible capacity resources must be available seven day per week
   Comments:

   No comment

Future considerations

The ISO identified the following six objectives for long-term RA enhancements:

1) Provide for the efficient retention and retirement of resources needed to maintain reliable grid operations by aligning resource adequacy requirements with operational needs;
2) Simplify RA procurement and showing processes through alignment with system and local capacity provisions;
3) Enhance requirements to more closely differentiate particular resource attributes of flexible capacity needed to maintain operational reliability and achieve state policies;
4) Align long-term planning and annual RA processes to ensure the long-term planning objectives and assumptions are properly reflected through RA procurement and vice versa;
5) Provide opportunities for internal and external resources to qualify to supply flexible capacity if they are able meet the specified requirements; and
6) Solutions should be scalable regardless of number of LSEs or size of LSEs

Please provide comments, as appropriate, on these objectives.

Comments:

Develop a Durable Long-Term Solution

BPA supports the suggestion of conducting additional analysis to more clearly define the flexible need, which was brought up in the May 8, 2017 stakeholder meeting and in previous comments submitted to the CAISO. This would allow CAISO to focus on developing a durable long-term solution for Resource Adequacy, rather than an interim solution. BPA would like to reiterate its suggestion from the January 6, 2016 comments on the FRAC MOO Phase 2 Supplemental Issue Paper that CAISO consider separating its flexibility needs into a forecastable net load requirement (and allow commitment of day-ahead resources) and within-hour uncertainty and variability. A day-ahead product could be developed as part of a short-term solution while assisting in gathering the necessary analysis for a longer-term solution.

Day-Ahead Flexible Ramping Product: To allow external resource participation and assist in analysis of CAISO's flexibility need and supply

CAISO should look into the development of a day-ahead flexi-ramp product to maximize the existing flexibility. BPA encourages the CAISO to develop a day-ahead flexible ramping product, which was mentioned in Pacific Gas and Electric and Powerex's FRAC MOO Phase 2 Supplemental Issue Paper comments. A day-ahead flexible ramping product could allow internal and external resource qualification as flexible capacity. This product may also assist in the analysis of the needs of the CAISO system for flexibility while better optimizing resources to meet forecastable ramps and real-time uncertainty. This product would allow the CAISO on its own initiative to access flexibility from external resources while waiting for the longer term Resource Adequacy solution to resolve itself among the different California agencies.

The day-ahead flexible ramping product would ensure that flexible capacity is set aside in the day-ahead timeframe in order to be available during real-time operations. This maximizes availability of resources with ramping flexibility for the real-time market to meet 5-minute within-hour uncertainty while the CAISO develops a durable long term solution. BPA believes the long term solution should support the provision of flexibility using day ahead hourly and fifteen minute schedules from internal and external resources to optimize the provision of flexibility from resources limited to these schedules and resources capable of 5-minute dispatch.

A day-ahead flexible ramping product would also assist in developing the quantitative analysis many stakeholders have been demanding, in order to more clearly define the flexibility needs and flexibility supply of the CAISO. The results of such analysis can and should be used in a long-term overhaul of Resource Adequacy to allow the CAISO to focus on creating a durable long-term solution. This would afford the CAISO the opportunity to create a more robust methodology and implement business practices to send the better market signals over the correct dispatch horizon to resource adequacy resources.

The CAISO has indicated there may be a superior approach to access flexibility from external resources.[1] Any clarification of these thoughts would be appreciated to allow us to comment.

BPA supports equal access for external and internal resources through a non-discriminatory and competitive process. A similarly capable resource, regardless of whether it resides in the ISO, EIM or bilateral market footprint should be similarly compensated. Northwest participation will be limited by the transmission flexibility described in the introduction above until changes are made to allow shaped hourly schedules and fifteen minute schedules.

[1] Flexible Resource Adequacy Criteria and Must Offer Obligation – Phase 2 Revised Straw Proposal – Short Term Solutions, pg. 13.