

Stakeholder Comments Template

Frequency Response Phase 2 Initiative Working Group

Submitted by	Company	Date Submitted
<i>Debra Malin, 503-230-570)</i>	<i>Bonneville Power Administration</i>	<i>3/17/2017</i>

This template has been created for submission of stakeholder comments on the working group for the Frequency Response Phase 2 initiative held on February 9, 2017. Information related to this initiative may be found at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/FrequencyResponsePhase2.aspx>

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on **March 17, 2017**.

The ISO includes a summary of the brainstormed options for potential solutions to reference while responding to Question 1 and its subparts. Seven potential options were brainstormed, they include:

1. Annual Forward Procurement - external BAAs
 - a. Only procures incremental amount to cover expected shortfall
 - b. Requires one contract type (TFR)
 - c. Supports bid submission and settlement of that price if procured
 - d. Does not require any day-ahead or real-time market co-optimized constraint
2. Annual Forward Procurement - external BAAs and internal resources
 - a. Only procures incremental amount to cover expected shortfall
 - b. Requires two contract types (TFR and frequency response awards)
 - c. Supports bid submission and settlement of at least that price if procured
 - d. Requires day-ahead and real-time co-optimized constraint
3. Day-ahead or Real-Time Market Product
 - a. Procures amount to meet total requirement
 - b. Requires one contract type (frequency response awards)
 - c. Supports bid submission and settlement of at least that price if procured
 - d. Requires day-ahead and real-time co-optimized constraint
4. Day-ahead and Real-Time Constraint
 - a. Procures amount to meet total requirement
 - b. Does not support bid submissions but would include some type of settlement for service
 - c. Requires day-ahead and real-time co-optimized constraint
5. Combination Annual for externals and Day-ahead/Real-Time Product
 - a. Procures incremental amount in annual forward procurement that would support bid submission and settlement of at least that price if procured

- b. Separately procures remainder of the amount to meet the total requirement that would support bid submission and settlement of at least that price if procured
- c. Requires day-ahead and real-time co-optimized constraint
- 6. Combination Annual for externals and Day-ahead/Real-Time Constraint
 - a. Procures incremental amount in annual forward procurement that would support bid submission for TFRs and settlement of that price if procured
 - b. Separately procures remainder of the amount to meet the total requirement that would not support bid submission for market constraint but would include some type of settlement
 - c. Requires day-ahead and real-time co-optimized constraint
- 7. "Do nothing"
 - a. Take no proactive action including procuring TFR from external BAAs

Questions:

1. The ISO seeks stakeholder input on the brainstormed options for a potential solution to the ISO need to take proactive action to ensure its frequency response is sufficient to support reliability in the event of a loss of two Palo Verde units (BAL-003-1 requirement). These include
 - a. Provide description of view of advantages, disadvantages, or position on option 1 - Annual Forward Procurement - external BAAs.

BPA supports this option but believes it may not be viable given internal generator's support for a CAISO FRR market. BPA also believes generators within CAISO should be encouraged to provide FRR, as relying only on Transferred Frequency Response (TFR) could create a reliability risk for WECC; especially if many of the responding resources are geographically co-located.
 - b. Provide description of view of advantages, disadvantages, or position on option 2 - Annual Forward Procurement - external BAAs and internal resources.

BPA believes Option 2 has the potential to create a level playing field for TFR and FRR sourced from resources within the CAISO. It is also likely to improve WECC reliability.

However, before BPA can support this option, or any other option containing co-optimization, BPA would need to understand more about the mechanics:

 - 1) For each option, it would be helpful if the CAISO provided examples of how the CAISO would co-optimize FRR, spin, regulation and energy and how co-optimization affects dispatch and settlement.
 - 2) Dispatchable generation providing FRR, may cease operation if they are blocked from more lucrative awards due to co-optimization. (FRR prices could be driven to zero because generators who were not awarded FRR will likely continue to provide FRR and not be compensated.)
 - 3) Does the CAISO intend to meet its FRO for each event or the majority of events?
 - 4) How will the CAISO address non-performance?

- 5) How will the CAISO address outage periods for annual FRR awards under Option 2?
- 6) How will the CAISO implement day-ahead and real-time co-optimized constraints for an annual FRR award differently than the other alternatives?
- c. Provide description of view of advantages, disadvantages, or position on option 3 - Day-ahead or Real-Time Market Product.
- 1) Option 3 excludes TFR.
 - 2) No capacity payment therefore may result in decreased reliability.
 - 3) Option 3 has a higher risk of CAISO failing to meet its FRO than options which include TFR.
 - 4) See comments on Option 2.
 - 5) The CAISO should consider allowing CAISO-certified regulating resources, physically external to the CAISO, to bid into the FRR procurement market.
- d. Provide description of view of advantages, disadvantages, or position on option 4 - Day-ahead and Real-Time Constraint.
- 1) Option 4 excludes TFR.
 - 2) See comments on option 3
- e. Provide description of view of advantages, disadvantages, or position on option 5 - Combination Annual for externals and Day-ahead/Real-Time Product.
See comments on option 2
- f. Provide description of view of advantages, disadvantages, or position on option 6 - Combination Annual for externals and Day-ahead/Real-Time Constraint.
See comments on option 2
- g. Provide description of view of advantages, disadvantages, or position on option 7 - "Do nothing".
No comment.
8. ISO seeks stakeholder input on the proposed frequency response service specifications for fast frequency response, primary frequency response and fast regulation attached separately in the draft frequency control product specifications document found [here](#).
9. ISO seeks stakeholder input on the proposed scope of services for which a procurement mechanism would be designed. The proposed scope shown in the product specification handout is that the ISO only needs to evaluate procurement of primary frequency response whether from external BAAs or internal resource and does not need to procure fast frequency response or fast regulation capable of providing the secondary response shown on slide 47 in the appendices to the working group presentation. If any stakeholders believe that the scope should include the fast frequency response or fast regulation services under its evaluation of a procurement mechanism please provide an explanation.

10. ISO seeks stakeholder input on whether load responsive devices can perform with a proportional response or does it require shedding load at a specific trigger point? Also, whether there has been any exploration of the concept of stopping non-critical processes for short periods has been evaluated
11. ISO seeks stakeholder input on whether pump storage hydro is pumping rather than generating would frequency control device perform with a proportional response or require shedding load at specific trigger points?
12. ISO seeks stakeholder input on the statement made on Slide 15 of the ISO presentation, “Frequency control services require reserves above operating reserves that are not procured for RA”. The ISO stated that it believes that resource adequacy or flexible resource adequacy capacity procured to ensure RA to ensure energy deliverability cannot be awarded frequency responsive reserves since these reserves cannot be released by ISO dispatch to ensure deliverability during peak or ramping needs. If any stakeholders hold a different belief, the ISO asks that additional information and explanation be provided to continue to move the dialogue forward.