

Stakeholder Comments Template

| Submitted by | Company | Date Submitted |
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Please use this template to provide your comments on the presentation and discussion from the stakeholder web conference held on October 19, 2015.

Submit comments to InitiativeComments@caiso.com

Comments are due November 2, 2015 by 5:00pm

The presentation discussed during the October 19, 2015 stakeholder web conference may be found on the [Frequency Response Initiative](#) webpage. Please provide your comments on the ISO's straw proposal for each of the eight issues listed below along with the ISO's straw proposal. The ISO welcomes comments in addition to these issues as well.

Frequency Response Standard

The ISO believes the straw proposal and its accompanying technical appendix covers the standard's requirements for compliance purposes. The ISO is endeavoring to provide sufficient information to stakeholders for effective evaluation of the ISO's proposal. The ISO seeks comments on whether any unresolved questions on the standard and the ISO's obligation still exist.

Comments:

One unresolved question concerns the use of existing interruptible load programs to provide Primary Frequency Response (PFR). The Technical Appendix or Straw Proposal do not mention the use of interruptible load as a PFR resource, as CLECA and LSA have suggested on CAISO conference calls for this initiative. In fact, the CAISO's calculation of its PFR need includes a reduction in the WECC obligation to reflect 120 MW in load tripping in Arizona, indicating that this approach is being used in other BAAs.

These CAISO-area programs – e.g., 100-200 MW in the IOU Base Interruptible Program – could reduce the need for PFR from generators. According to CLECA, the current trip setting:

- Interrupts the loads when the system frequency declines to 59.65 Hz for 20 seconds; and
- Could be set with other triggers or timing to better meet CAISO needs. (Participants can either agree or exit the program through an annual November "opt-out" window.)

The CAISO said on the last stakeholder call that its PFR deficit based on the 2013-4 analysis was only around 29-30 MW. Thus, this source might bridge any generation PFR gap even if only a small amount of load agrees to trip with a smaller frequency decline. The CAISO should not overlook this potentially important resource.

(As a separate matter, LSA is concerned that the entities providing that interruptible load might consider that as part of its compliance, i.e., the CAISO should calculate its share of the WECC obligation without subtracting that PFR source. This issue should be examined further.)

Frequency Response Drivers

Several factors contribute to the primary frequency response performance of participating generators having governors. The ISO discusses some of the main drivers of PFR performance in Section 4.2 of its straw proposal. These factors include (1) magnitude of frequency deviation, (2) amount of synchronous on-line capacity providing sustained PFR, and (3) headroom available from that connected on-line capacity.

The ISO is evaluating what additional data points would need to be included in its Masterfile or through other mechanisms to facilitate a market tool or product to be designed. The ISO seeks comments on what factors influence a generators ability to provide PFR in the event of a frequency disturbance and the pieces of information necessary to estimate expected PFR.

Comments:

LSA has no comment on this issue.

Phase 1, addressing real-time deficiencies

Section 6.2 of the straw proposal discusses Phase 1 of the initiative which will enact the five steps to ensure it is capable of meeting the requirement at that time. The first step discussed in section 6.2.1 is to develop “look-ahead” tools to assess the PFR capability of the system at various time horizons in the future based on current system conditions. If the look ahead indicates an anticipated deficiency of PFR the ISO can take actions to address the deficiency.

The ISO seeks comments on its proposal for addressing real-time PFR deficiencies for 2017 compliance period.

Comments:

The look-ahead approach seems reasonable to identify potential deficiencies. See comments below on the specific proposed actions to remedy any identified deficiencies.

Phase 1, tariff and interconnection revisions

Section 6.2 of the straw proposal discusses Phase 1 of the initiative which will enact five steps to ensure it is capable of meeting the requirement at that time. The first step discussed in section 6.2.2 is to revise the tariff to include requirements for all participating synchronous generators with governors, not just those providing spinning reserves, to set governors to specified droop settings and deadbands, and to not override governor response through outer-loop controls or other mechanisms.

The ISO seeks comments on the tariff revisions it is proposing to help the ISO ensure sufficient frequency responsive headroom and whether other revisions should be considered.

Comments:

LSA's last comments encouraged the CAISO to first rely on enforcement of current WECC rules concerning governors for asynchronous generators. LSA supports any tariff clarifications that would facilitate generator compliance with WECC rules, and the proposed revisions should be consistent with those rules.

Phase 1, ISO's practice of preserving operating reserve headroom

Section 6.2 of the straw proposal discusses Phase 1 of the initiative, which will enact five steps to ensure it is capable of meeting the requirement at that time. The first step discussed in section 6.2.3 is to revise the tariff to clarify the authority of the ISO to designate any reserve not previously identified as Contingency Only by a Scheduling Coordinator (SC) as Contingency Only reserves.

Comments:

LSA has no comment on this issue.

Phase 1, performance requirements

Section 6.2 of the straw proposal discusses Phase 1 of the initiative which will enact five steps to ensure it is capable of meeting the requirement at that time. The first step discussed in section 6.2.4 is to include frequency response performance requirements for resources with governor control and frequency responsive capacity available.

The ISO will continue to develop the details of a proposed performance requirement and seeks comments from stakeholders on an appropriate performance requirement.

Comments:

As noted above, LSA believes that the CAISO should first rely on enforcement of current WECC rules concerning governors for synchronous generators, and LSA supports any tariff clarifications consistent with those rules.

Phase 1, allocation of BAL-003-1 non-compliance penalties

Section 6.2 of the straw proposal discusses Phase 1 of the initiative which will enact five steps to ensure it is capable of meeting the requirement at that time. The first step discussed in section 6.2.5 is considering provisions for allocating any non-compliance penalties associated with BAL-003-1, should they be imposed on the ISO, to resources that should have provided more PFR than they actually delivered during frequency events.

The process discussed in ISO tariff section 14.7 applies to an allocation of any reliability-based penalty. The ISO seeks comment on how it could apply these tariff provisions to BAL-003-1 compliance and whether it should explore additional tariff provisions beyond those set forth in section 14.7 to impose responsibility for penalties on any resource that fails to provide primary frequency response for which it has an obligation to provide.

Comments:

Steps 1 and 2 of the CAISO's proposed plan to remedy deficiencies rely on additional purchases of Spinning Reserve (SR). The very significant problems with this approach discussed on the stakeholder conference calls indicate that this may not be an optimal remedy, e.g.:

- Only a small portion of the additional purchases would be available for PFR, depending on the type of resource. The discussion on the last two conference calls indicates that this would be something like 3-8% of the incremental procurement.
- The additional purchases made in merit order could be those that are least efficient (or incapable) in providing PFR.
- Resources that are not bid or selected for SR could be those that could provide the most PFR benefit, e.g., Energy Storage resources.

It may be more efficient and effective for the CAISO to just use Steps 3 and 4, i.e., rely more on Exceptional Dispatch of resources that are most likely to fill in any PFR gaps. Again, the 29-30 MW average deficiency cited by the CAISO indicates that such dispatches would likely be limited, and it certainly would be better to issue that level of Exceptional Dispatches than to procure many times that amount of SR.

LSA also encourages the CAISO to examine the Exceptional Dispatch compensation provisions, similar to its actions in the Reactive Power & Financial Compensation initiative, to ensure that resources dispatched down to provide headroom for PFR are compensated for their opportunity costs. (For asynchronous generators and others paid on a volumetric basis, that opportunity cost should be based on the forgone revenue under their Power Purchase Agreements (PPAs).

Phase 2, long-term approaches

Phase 2 of the initiative will evaluate if a market constraint or product is better suited to competition for frequency response capability (Section 6.3 of straw proposal). Such market-based mechanisms could not be designed, approved and implemented by December 1, 2016, and therefore the ISO will need to consider them in a second phase of this initiative.

Comments:

LSA strongly supports investigation of a market-based approach to PFR procurement as the most efficient and viable solution for the provision of PFR from solar and other resources, and the CAISO should consider that approach as soon as possible. A market-based solution is needed to incentivize solar facilities to install the necessary equipment and contract in a manner that enables the necessary headroom.