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 Draft Framework Proposal posted on May 1, 2017.

Submit comments to InitiativeComments@CAISO.com

Comments are due December 13, 2017 by 5:00pm

The Draft Framework Proposal posted on November 20, 2017 and the presentation discussed during the November 29, 2017 stakeholder web conference may be found on the FRACMOO webpage.

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

Identification of ramping and uncertainty needs

The ISO has identified two drivers of flexible capacity needs: General Ramping needs and uncertainty. The ISO also demonstrated how these drivers related to operational needs.

Comments:

The Center for Energy Efficiency and Renewable Technologies (CEERT) and Renewable Northwest (RNW) are pleased with the direction of FRAC MOO 2, in that it seeks to align the

flexible capacity requirements (FCR) with the operational needs of the grid and seeks to allow imports, such as zero carbon Northwest hydro, to be eligible for payment to supply flexible capacity. CEERT and RNW are in agreement with the CAISO that the current flexible capacity requirements attempt to address two fundamentally different needs, as CEERT and RNW stated in comments on the FRAC MOO 2 Revised Straw Proposal[1]. "General ramping needs" refer to the needs for resources that can relatively quickly ramp at the neck of the duck. As the CAISO demonstrated, these needs are relatively predictable, with some uncertainty. "Uncertainty needs" is a different need and is driven by forecast error. CEERT and RNW agree these needs should be addressed in separate criteria to more efficiently meet the operational needs of the grid operator. One of the major flaws of the current framework in practice today is that such broad criteria (at least in relation to the gas fleet) allows the least flexible gas plants to be contracted to meet flexibility needs. This has led to idling of long start gas in preparation for the evening ramp, exacerbating the level of curtailment on low net-load days. By separating the day-ahead shaping needs, it both prevents the reliance on inflexible gas for intra-hour flexibility and allows low-carbon resources to be contracted for the needs they have the capability to meet.

Quantification of the flexible capacity needs

The ISO has provided data regarding observed levels of uncertainty, in addition to previous discussion of net load ramps.

Comments:

CEERT and RNW appreciate the extensive analysis provided on uncertainty and net load ramp needs. CEERT and RNW recommend the "tails" of the forecast error curves be more closely studied before quantifying FCR needs. In order to avoid over-procurement of flexible capacity, it would be helpful to determine if there is "predictable unpredictability", or commonalities in conditions for many of the extreme forecast errors. For example, it may be possible that certain weather events, such as monsoons in the desert, have a significant impact on the net load uncertainty. If this is the case, significantly less FCR could be procured on a yearly basis and the CAISO could determine operational strategies, such as increasing reserves or greater reliance on curtailment, when these conditions are forecasted to be likely. Also, it is likely that a significant fraction of observed errors represent relatively minor shifts in timing of ramps where the size of the ramp on that particular day is accurate. In this instance, there would be no need

[1] CEERT and RNW Comments on the CAISO FRAC MOO 2 Revised Straw Proposal https://www.caiso.com/Documents/CEERTandRNWComments_FlexibleResourceAdequacyCriteriaandMustOfferObligationPhase2-RevisedStrawProposal.pdf

to procure additional flexibility in day ahead – much less year ahead timeframes, since a shift error would not require additional flexible resources.

Its also worth examining how other ISOs with high levels of intermittent renewables meet the challenge of increased forecast error. In ERCOT, for example, the need for regulation has actually decreased over time as wind and solar penetrations have significantly increased. Much of this can likely be attributed to more experience gained in operating a grid with high levels of renewable energy and corresponding improvements in forecasting.

Additionally, the planned policy initiatives should be considered. The current Policy Initiative Draft Roadmap indicates the CAISO will be developing 15 min scheduling in the day ahead market and developing a day ahead flexible capacity product. Given that these policies are intended to also address flexibility needs, the CAISO should consider how to quantify the remaining flexibility needs in the FMM and RTD.

Eligibility criteria and must offer obligations

The ISO has outlined the need for three different flexible RA products: Day-ahead load shaping, a 15-minute product, and a 5-minute product. Additionally, the ISO has identified a preliminary list of resources characteristics and attributes that could be considered for resource eligibility to provide each product. Additionally, the ISO is considering new counting rules for VERs that are willing to bid into the ISO markets.

Comments:

CEERT and RNW caution that the criteria and procurement of flexible capacity should not be unduly complicated. The criteria framework should be specific enough to meet operational needs but broad enough that they can continue to effectively function as the portfolio evolves. CEERT recommends the CAISO work the CPUC on simplifying RA procurement and determine what needs are better met through wholesale energy and ancillary service market mechanisms.

CEERT and RNW are strongly supportive of updating counting rules for VERs that are willing to make economic bids into CAISO markets.

Equitable allocation of flexible capacity needs

Equitable allocation of flexible capacity needs is a critical element of a new flexible RA framework. The ISO seeks comments on potential allocation methodologies.

Comments:

CEERT and RNW recommend that at least a few years of actual experience with newly developed 15-minute and 5-minute products be gained before much effort is spent on

developing new cost allocation protocols. This complicated and contentious exercise should be based on actual experience rather than guesses about how the market will adapt to the new paradigm. CEERT and RNW recommend that, initially, allocation of the 15-minute and 5-minute products be proportionally to the day-ahead shaping product.

Other

Please provide and comments not addressed above, including any comments on process or scope of the FRACMOO2 initiative, here.

Comments:

More broadly, CEERT and RNW recommend further understanding be developed on the relationship between Resource Adequacy contracts and what resources are actually being used to meet the needs of the grid. As stated in CEERT and RNW's comments on the FRAC MOO 2 Revised Straw Proposal, imports have been significantly utilized to meet the evening ramp[2]. Depending on what the imports are comprised of, this could bare significant impacts on the actual greenhouse gas emissions. While CEERT and RNW are supportive of the progress thus far and while its not prudent for the CAISO to precisely identify what resources will be used to meet the ramp, this type of analysis may be helpful in understanding how efficient the new framework may be and potentially identify criteria for the new products.

[2] CEERT and RNW Comments on the CAISO FRAC MOO 2 Revised Straw Proposal https://www.caiso.com/Documents/CEERTandRNWComments_FlexibleResourceAdequacyCriteriaandMustOfferObligationPhase2-RevisedStrawProposal.pdf