Submitted by	Company	Date Submitted
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Stakeholder Comments Template

Public Generating Pool (PGP) appreciates the opportunity to comment on the California ISO's Flexible Resource Adequacy and Must Offer Obligation Phase 2 (FRACMOO2) Draft Flexible Capacity Framework dated November 20, 2017. PGP represents ten consumer-owned utilities in Oregon and Washington that own more than 6,000 MW of generation, over 4,500 MW of which is hydro and 96% of which is carbon-free.

PGP is very supportive of the ISO's direction in developing a new flexible RA framework that aligns forward procurement with the ISO's actual operational needs and how the ISO commits and dispatches resources through the various market runs. PGP appreciates the additional analysis provided by the ISO and believes the ISO has clearly demonstrated the need for significant re-design of the flexible RA framework to ensure adequate flexible capacity is available to the ISO to meet the full range of flexibility and operational needs of the grid now and in the future. PGP also appreciates the focus on providing a framework for external resources to be part of the flexible capacity solution. PGP is supportive of the overall proposed flexible capacity framework and offers comments on some of the specifics of the ISO's proposal.

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:

PGP strongly supports the ISO's proposal to separate the total flexible capacity requirements into ramping needs that can be forecasted ahead of time and uncertainty that is not known until real-time. A substantial portion of the daily maximum 3-hour net load ramp is known

ahead of time and can be met through forward commitments for energy deliveries shaped to offset the forecasted ramp. Additionally, it is important to ensure procurement of flexible standby resources that can meet the variability and uncertainty experienced between dayahead and real-time. PGP agrees with CAISO's approach, including that flexible RA needs should be procured to cover both upward and downward forecast error ranges.

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:

PGP believes maintaining continued use of the maximum forecasted 3-hour net load ramp plus contingency reserves and adding a portion for upward uncertainty can be a workable starting framework for determining flexible capacity needs. PGP appreciates CAISO's assessment of the distribution of real-time uncertainty using historical data. However, when setting the requirement for flexible RA, PGP suggests the CAISO using forecast data. Additionally, PGP encourages CAISO to consider using a percentile ranking of the forecasted uncertainty similar to other neighboring balancing authority areas in the West rather than a percentage of the need to determine the portion of upward uncertainty measure to the overall flexible capacity need. It is our understanding that neighboring balancing authorities use between a 95 and 99.5 percentile ranking of uncertainty.

PGP recognizes the distinction made by the ISO that regulation is different from the other types of uncertainty. One of the reasons the ISO provided for not including regulation as part of the flexible RA requirement is that there is sufficient regulation capacity available in the system today. As the system changes, how will the ISO maintaincertainty that there will be sufficient regulation capacity available in the system going forward?

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:

PGP strongly supports CAISO defining a five-minute and fifteen-minute flexible RA product, along with a day-ahead shaping product. Matching flexible RA products to these dispatch

intervals ensures the right quality of resources needed to support flexibility needs and should result in the most efficient and least cost solution to meeting flexible resources adequacy requirements.

- <u>5-minute Flexible RA Product</u>: PGP agrees that resource counting for the 5-minute Flexible RA product should be based on the number of MWs the resource can ramp in 5 minutes. In addition, the ISO has shown through its assessment that the current flexible capacity product is overly inclusive and risks exacerbating the ISO's operational challenges by sustaining largely inflexible resources (long starting, long minimum run times, and high Pmins). PGP believes it is important to include additional eligibility criteria for the 5-minute flexible RA product that assures resources that qualify for flexible RA do not further add to or exacerbate ramping and uncertainty needs.
- <u>15-minute Flexible RA Product:</u> PGP appreciates the ISO extending the eligibility of the 15-minute flexible RA product to include external resources. PGP supports the requirement that intertie resources be connected to specific resources, which may be a single resource or an electrically connected system of resources, like a single hydrological system. PGP agrees with the ISO's proposed change to the EIM ramp sufficiency tests to credit to the ISO any ramping capacity from intertie resources providing flexible RA and remove the resources from any EIM Entity's ramp sufficiency test. This change will be important to avoid double counting of resources. Lastly, PGP supports CAISO requiring external resources that provide flexible RA be available in both the day-ahead and real-time markets.
- <u>Day-ahead shaping Capacity</u>: PGP agrees that external resources, both outside and inside an EIM BAA should be allowed to provide this product. PGP believes the Must Offer Obligation windows for the day-ahead shaping product should follow the shape of the net load, providing energy during the morning and evening ramp and not providing energy during the midday hours.

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:

No comments.

<u>Other</u>

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

Comments:

PGP commends the ISO on its proposed flexible capacity framework and generally supports the proposal. As the ISO advances the inclusion of external resources in the flexible capacity solution, PGP encourages the ISO to consider reforming the Maximum Import Capability (MIC) framework in a parallel effort. The current MIC allocation process hinders the efficient and least-cost procurement of RA capacity and artificially limits participation by external resources when the amount allocated to an LSE goes unused. The ISO could consider a solution that does not pre-allocate MIC or allocates MIC only when it is within a certain percentage of the total MIC for a given path. In either case, there is a greater opportunity for external resources to participate in the flexible RA program if MIC is allocated in a manner that doesn't leave unused import capability stranded and unusable.

Lastly, PGP reiterates from previous comments that, given the potential reliability implications and the growing flexibility needs of the system, timely action is required to address the need for access to the appropriate flexible capacity. As such, PGP hopes to see many of the changes proposed by the ISO be adopted in the CPUC's RA proceeding for the 2019-2020 RA compliance year.