



Comments of the California Energy Storage Alliance on the Flexible Ramping Product Refinements Revised Straw Proposal

Submitted by	Organization	Date Submitted
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Please provide your organization’s overall position on the FRPR revised straw proposal:

- Support
- Support w/ caveats
- Oppose
- Oppose w/ caveats
- No position

1. Opening comments

CESA appreciates the opportunity to comment on CAISO’s Flexible Ramping Product (FRP) Initiative. CESA appreciates the ISO’s leadership and thoroughness to attend FRP issues identified in the CAISO Energy Markets Price Performance Report published on September 23, 2019. Similar to the ISO, CESA believes continuous engagement with stakeholders on these technical matters is fundamental to improve market performance, boost participation, and support the State in meeting its energy and environmental targets.

As it has been showed in the Markets Price Performance Report, the FRP presently does not operate in an adequate fashion. While CESA believes that the ISO is moving in the correct direction by solving some immediate technical flaws and shortcomings in this initiative, we believe that more high-level thinking is necessary for this product to translate into procurement, retention, and dispatch of flexible capacity across the EIM. Due to the limited value within FRP presently, it is unclear which actions or modifications are necessary for buyers (i.e. LSEs) and sellers (developers and asset managers) of flexible capacity resources to develop and operate. The current structure does not inform how asset owners should take into account FRP with regards to their bidding behavior; nor does it provide strong enough signals for LSEs to engage in procurement activities. Energy storage is a resource that is well-positioned to deliver on these fast and flexible needs but have not been given an economic signal from FRP to develop and deliver on FRP needs. Consequently, CESA believes it is necessary to revise and define the

ultimate goals of this product, an action that can be done in parallel to the adjustment of technical details within the FRP framework.

2. Proxy Demand Response Eligibility:

CESA supports CAISO's proposal to modify the default bidding option for Proxy Demand Resources (PDRs) in order to guarantee the correct operation of the FRP scheme. Any resource that seeks to provide FRP must have a sufficiently fast response product so as to mitigate the uncertainty associated with load and generation irregularity between market optimization runs. Given that the FRP scheme seeks to ensure there is enough ramping capability available in the case market conditions change between the fifteen-minute market (FMM) and the real-time dispatch (RTD); the ISO must corroborate that resources that pursue to provide FRP are able to respond quickly and reliably. Hence, CESA agrees with the ISO that only PDR resources that are able to respond to the 5-minute dispatch instruction should be eligible for FRP participation. Thus, in order to avoid awarding FRP dispatch to resources that are unable to provide fast response, CESA supports the ISO's determination to establish the default bidding option of PDRs to 60 minutes.

3. Ramp Management between fifteen minute market and real-time dispatch:

CESA supports the CAISO's proposal to manage resources between the FMM and RTD market runs but recommends that the CAISO maintain 100% of the FRP awards procured in the initial FMM run for buffer intervals. The CAISO highlighted the issues of differences between an initial market run and subsequent market runs resulting in lost or unavailable ramping capacity for the RTD since there are no binding schedules or prices. Instead of maintaining up to 100% of the FRP awards in the buffer interval; nevertheless, CESA recommends maintaining 100% of the FRP awards to ensure better utilization of resources and create a more efficient outcome from the operator's perspective. Additionally, this modification would better capture the opportunity cost perceived by resources when participating in both energy and FRP.

4. Minimum Flexible Ramping Product Requirement for BAA:

CESA supports the CAISO's proposal to establish a minimum FRP requirement within CAISO's balancing authority area (BAA) as it would signal to load-serving entities (LSEs) that intra-CAISO procurement of flexible and agile resources is needed. CESA considers the methodology employed by the ISO to determine the total minimum requirements to be adequate. Furthermore, CESA is supportive of the proposed execution of this initiative, as it minimizes the compliance risks when moving to a nodal procurement approach by having total

EIM requirements be a function of BAA-level shortfalls and their transfer capabilities.

5. Nodal Procurement:

CESA is partially supportive of the ISO's proposal to apply nodal procurement for FRP. As CESA has noted previously in comments in this initiative, the consideration of flexibility with regards to congestion is essential given the State's transition towards higher penetrations of renewable generators, DERs, and flexible loads (e.g., electrification of transportation and buildings). CESA supports this measure as it both maintains the feasibility of FRP dispatches and would eventually value the flexibility provided by fast-response resources in a fashion similar to energy markets. CESA, however, is concerned with potential sub-utilization of resources as the proposed nodal approach cannot ensure 100% deliverability. This suboptimal result requires further stakeholder vetting since it could result in the suboptimal use of resources, increasing costs for the ISO and ratepayers.

6. FRP Demand Curve and Scarcity Pricing:

CESA is partially supportive of the ISO's proposal to adopt a demand curve that would feed a scarcity pricing scheme for FRP. CESA views market signaling and price incenting as a positive step. By allowing for more flexible pricing structures, the ISO is able to indicate to resources and investors the need for increased participation in a market that will inevitably grow due to California's overarching energy policies. Nevertheless, CESA urges the ISO to consider some of the premises associated with this proposal. Namely, CESA does not agree with the ISO's assumption that the probability of power balance violations is exogenous to each of the areas within an EIM. CESA understands that the ISO's intention is to transition to a more viable scarcity pricing system via the nodal procurement proposal; nonetheless, CESA exhorts the ISO to reconsider said assumptions through this initiative in order to have more adequate and realistic market outcomes.

7. Scaling FRP Requirements:

CESA commends the ISO for seeking alternatives to historical data in order to estimate the FRP needs at any given point of time and geography. CAISO's concern over the potential limitations of a backward-looking methodology are timely, especially considering the ISO's own estimation that, due to the State's climate and energy targets, its footprint might require upwards of 25 GW of flexible ramping capacity by 2030.¹ CESA considers the quantile regression approach to be reasonable if applied for quantiles smaller than demi-deciles (i.e. < 5%). This is

¹ See CAISO, *Planning for reliability and resource adequacy under SB 100*, at 5.

because, as the ISO notes in its initiative, the main drivers of FRP need are conditions in the “tails” of the potential distribution of load and generation circumstances. Hence, the focus for this analysis should be as close to the outliers as possible in order to establish requirements that actually correspond with periods of high need, bot upwards and downwards.

8. EIM Governing Body Categorization – Advisory Role:

CESA offers no comments at this time