Comments of the California Energy Storage Alliance (CESA)

on

CAISO FRACMOO Flex Capacity Framework Proposal

Submitted by	Company	Date Submitted
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CESA appreciates the opportunity to comment on the CAISO's Flexible Capacity and Must Offer Obligations Phase 2 (FRACMOO2) Draft Flex Capacity Framework Proposal.[1] CESA offers both general comments and responses to the CAISO's Comments-Response Template.

FRACMOO 2 remains an important stakeholder initiative that should promote proper fleet planning and contracting in order to ensure reliability across the year.

CESA supports the basic premise of the Draft Framework to assess and plan for fleet-wide ramping capabilities based on predictable ramping and also based on uncertainty needs. CESA also supports the use of principles and goals to help shape the CAISO's flexible capacity design to guide efforts. With a more forward-looking data set, CESA believes the CAISO's ramping needs may be significantly understated or misrepresented by the current three-hour framework, endangering reliability and increasing the likelihood of costly out-of-market capacity contracts or other operator actions. As such the CAISO should aggressively pursue and finalize its design.

Key areas for input or improvement in the basic framework include:

[1] http://www.caiso.com/Documents/DraftFlexibleCapacityFrameworkProposalFlexibleResourceAdequacyCriteria_MustOfferObligationPhase2.pdf

- CESA supports a framework that plans ramping needs to meet both predictable ramping needs (variability) and also uncertainty-driven ramping needs. (*See Comment A.)*
- Need assessments should be based on forward-looking conditions, not just historical conditions. (*See Comment B.)*
- Eligibility criteria should value fast-ramping resources and should link to 'steel in the ground', or resources physically guaranteed to be available. (*See Comment C.)*
- Energy Storage resources are use-limited and should count as high-grade flexibility. (*See Comment C.)*
- Considerations of deliverability and of 'decoupling' a resource's Flexible Capacity from its System and Local Capacity should be explored. (*See Comment E.)*
- Principles should be used but additions are needed. (*See Comment E)*
- Goals should be used but additions are needed. (*See Comment E.)*
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II. Responses to CAISO Comments Template

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.

A. 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:

CESA Comments: CESA supports this framework. A focus on fast-ramping capability should be a part of any solution. The CAISO should ensure it defines its ramping needs in ways that meet grid conditions. Resources that are often not sufficient to meet ramping needs, such as very slow ramping resources, should likely be devalued as ramping resources, where reasonable.

The CAISO's current model fundamentally implies it has Day-Ahead ramping in the current solution, but that more fast-ramping is needed for uncertainty. The data about more challenging real-time conditions shared at the workshop on November 29th, seems to support this conclusion.

B. 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:

CESA Comments: the CAISO should use forward-looking data to assess the needs in the future. This should inform the speed with which we should implement changes. Also, this may highlight the scale of the need. For instance, the CAISO should align its planning with forward-looking RPS conditions, and should provide not just year-ahead assessments but also assessments for conditions further into the future, such as when RPS levels are at or above 50%. This will help resources to respond to known and expected market needs, boosting the 'signaling' aspects of the state's one-year ahead planning capacity program. In this way, the criteria for ramping can be more aligned with the any Resource Planning process from the Local Regulatory Authority.

The CAISO may also need to assess if the Day-Ahead ramping needs are better reflected with a different product than today's three-hour ramping product. CESA understands that some days have ramping periods longer than three hours, while others have shorter periods. Forward looking data should inform this calculation. The CAISO should review if long-ramping periods or conditions should also be planned for.

Finally, CESA requests further input on the need-calculation formula, which, as proposed, only requires 50% of the upward uncertainty requirement, and may not include Regulation up capacity. CESA suggests the planning model be robust in planning for all cases, including when a Reg up resources are being used, contingency reserves are held, energy schedules are met. To CESA, this condition would reflect some of the 'worst-case' needs. Regulation needs may also need to be higher to address uncertainty and shaping inside the 5-minute (RTD) solution.

C. 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:

CESA Comments:

CESA understands that further work on some details of eligibility and must-offer obligations (MOOs) is needed. CESA believes the CAISO should be conservative in these regards in several ways.

First, eligibility should continue to link to physical resources to ensure resources are known to be available. Using physical resources also informs outage planning. Dating back to the energy crisis of 2001, California has specified that resources must be known and offering in the CAISO markets if fulfilling planning capacity needs. The CAISO should not deviate from this core safeguard now.

Second, the "Counting" of eligible ramping capability from a resource should ensure ramping is not overstated. The current product focuses on three-hour capability and ninety-minute start-up time. The CAISO should tighten the criteria to all be more reflective of fast ramping needs.

Third, MOOs should be structured to meet grid needs, but should also not unreasonably or overly restrict resource participation. The CAISO may wish to again link MOOs to 'buckets' of resource types, e.g. ones that are often needed, ones that are likely needed in key times, and ones that are seldom needed but should be available and offering in key periods. The CAISO's current structure labels these as category 1, 2, and 3 flexibility resources. By limiting the amount of the less available resources, the CAISO can ensure it allows broad competition but still has resources available as needed.

Finally, use-limited resource considerations are important, and energy storage solutions should qualify as use-limited. CESA believes that many resources, like energy storage or hydro, can deliver high quality ramping, energy, and capacity services. These resources can be critical for planning capacity. A reasonable 'use-limited' categorization can help these resources compete in prudent manners without being unduly penalized. That said, CESA recognizes that FRACMOO rules should ensure reliability by having signals and penalties for resources not available. CESA suggests the CAISO consider various approaches to manage this, including: buckets that limit the total amount of resources which may have stringent use-limitations, a broad assessment of the role of outages and use-limitations for all resources, including hydro and effective forced outage rates for gas plants, and finally a concept where outage planning is mitigated by an assumed outage rate and a higher overall determined need. The CAISO slides on November 29th indicate the CAISO may expose all use-limited resources to availability charges in a month if the resource takes a use-limited outrage and does not replace its (RA) capacity. This is a shift from today's structures, and CESA supports exploring it *if all* resources face equivalent treatment, and if some version of the type 1-2-3 buckets are used to allow for participation by resources in ways that boost market efficiency and reliability. CESA would be concerned if some resource categories retained full and current use-limited exemptions but other use-limited resources did not.

D. 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 comment from CESA at this time.

E. Other

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

Comments:

CESA Comments:

- The CAISO should expand its list of goals and objectives for the RA program. Specifically, it should build on the originally stated goals and should also add goals to reflect the current RA program's needs going forward, including that the RA program "provide a portfolio to the ISO that meets grid reliability needs through economic market dispatch".[2]
- CESA supports the use of principles to guide FRACMOO 2 designs. The proposed principles seem logical: that the RA paradigm should fit with operational needs and that flexibility resources should deliver service through markets and without the need for out of market actions. CESA cautions that any potential shift towards using unidentified resources as planning capacity is a major shift from exiting rules and approaches. Such a change would need serious vetting and careful safeguards. The CAISO must ensure rules do not inadvertently allow a structure that could create shortages, e.g. by presuming uncontracted resources will be available. Instead, the CAISO should ensure all planning capacity resources are contracted ahead of time.
- Considerations of deliverability and of 'decoupling' a resource's Flexible Capacity from its System and Local Capacity should be explored. A major limitation on the capacity planning structures in the state is the continued considerations of deliverability as defined for peaking conditions. Full deliverability at peak can require costly upgrades in the interconnection processes. CESA believes that the delivery of flexible capacity may

[2] FRACMOO 2: Draft Flex Capacity Framework, CAISO Meeting Slides, November 29, 2017

require its own formulation which is different from peak-period deliverability. The 'deliverability' of the charging component of NGRs should also be fully authorized. To provide more competition and to avoid unnecessary costs on resources that only seek to offer and deliver flexible capacity, the CAISO should promote structures to 'decouple' flexible capacity, and to authorize 'full flexible delivery' separately from traditional peak 'full deliverability'. These changes will also support CAISO reliability and capacity market efficiency by allowing resources to avoid lengthy and costly upgrades, while competing to provide the service the resource is best suited for.