

Stakeholder Comments Template

FRACMOO 2 Stakeholder Working Group

Submitted by	Company	Date Submitted
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Brattle Study

At the August 2, 2017 Working Group meeting, CAISO and Brattle Group outlined the parameters for a study Brattle had been contracted to conduct which would look holistically at the flexibility needs of the system and whether those needs could best be met through improvements in operations and market design or capacity products. It is our understanding that the Brattle Study is no longer being undertaken. Energy Division Staff are concerned that without this study, CAISO is proceeding directly to proposing changes in flexible capacity products without clear indication that the changes proposed are the best, or even an effective means of addressing operational issues.

Staff encourages CAISO to conduct a comprehensive study such as the one outlined in August. Capacity products are only capable of doing so much and it is important to understand the best uses for these products before making major changes to the flexible capacity requirements.

Proposed Approach

The CAISO proposal recommends four capacity products: day-ahead, 15 minute, 5 minute and regulation. The day-ahead product is proposed as the difference between the largest gross load of the month plus the planning reserve margin and the minimum forecasted net load for the month.

We have performed a rough calculation of what this requirement would be for 2018 and 2019 based on the data from the 2018 flexible capacity study. While these numbers are based on the current definition of net load, they provide a roughly accurate picture of the size of the proposed requirement. The table below shows the proposed day ahead capacity product, the system requirement for the month and the ratio of the proposed flexible requirement to a similar requirement based on the largest gross load + planning reserve margin minus lowest net load projected for a specific day in the month.

Based on these assumptions, rather than the 20,000 MW example used in the workshop presentation, some months would have a flexible requirement of over 40,000 MW. Calculating this requirement based on the largest and smallest loads of the month rather than the projected ramping need for any individual day results in a capacity requirement that can exceed 200% of the actual projected need.

Month	2018			2019		
	Proposed Flexible Requirement (MW)	System Requirement (MW)	Flexible Requirement /Daily Max-Min	Proposed Flexible Requirement (MW)	System Requirement (MW)	Flexible Requirement/Daily Max-Min
January	24,113	37,236	1.80	24,662	36,996	1.67
February	24,986	36,005	1.57	26,253	35,755	1.51
March	23,876	35,558	1.45	25,503	35,313	1.39
April	27,602	38,132	1.49	28,492	37,865	1.41
May	32,899	42,446	1.70	34,289	42,151	1.63
June	37,864	47,919	1.80	39,442	47,614	1.73
July	39,715	51,966	1.98	41,033	51,627	1.88
August	37,644	52,649	1.91	38,930	52,284	1.81
September	41,282	52,169	2.04	42,650	51,816	1.96
October	30,371	43,272	1.59	31,825	42,950	1.55
November	25,823	37,100	1.55	27,120	36,835	1.52
December	24,696	38,653	1.54	25,861	38,430	1.48

The 2018 EFC list contains 34,886 MW of September capacity. Even with the potential addition of intertie resources to the EFC list, the requirement appears unreasonably large. Our current fleet is able to meet flexibility needs despite significant amounts of intermittent resources. We would expect that a comprehensive analysis of the system’s flexible needs would result in a much lower requirement that could be met by existing resources.

Further Analysis Needed

The CAISO had provided descriptions of some challenges it is facing in the operational space and has proposed a new flexible framework, however much additional analysis is needed to demonstrate that the proposed framework would address operational challenges and is feasible both from a technical and procurement perspective.

Specific question include:

- **What do the operational challenges mean?** CAISO has described challenges with CPS1 scores, but has not provided information about the rate of change of these scores or the timeframe regarding when any potential NERC violations might occur.
- **Where do we draw the line?** The RA program is not designed be provide resources for the most extreme days. Where should we draw the line in terms of procuring for a

reasonable set of circumstances but not the most extreme and costly situations? Which tools (CPM, exceptional dispatch, etc.) should be used on those extreme days?

- **What challenges are best met through a capacity product and what are best met through other means?** As described above, a comprehensive look at what needs can best be met through flexible RA is needed. Some needs may be best met through other means. For example, there has been some discussion of potential benefits of the 15-minute day-ahead product but no analysis of what those benefits would be or how greater resolution in the day-ahead market would affect the need for flexible capacity.
- **How would the proposed product solve the operational problems?** CAISO has described current operational challenges and proposed new flexible capacity products but has not provided data to support how these products would address the challenges. It would be helpful if CAISO could provide information on the scope of the challenges and the extent to which its proposed products would ameliorate the situation.
- **Is the current fleet capable of meeting the proposed requirement? Is the future fleet?** The first test for any proposal should be whether it is technically feasible. We have made an attempt to assess this given the lack of information provided, but encourage CAISO to undertake this type of analysis early in the proposal phase to assist stakeholders in assessing any new proposals. The table above indicates that the requirement is much higher than necessary and quite possibly impossible to meet.
- **Are four capacity products necessary? Would contracting be overly complex?** CAISO has proposed four flexible capacity products, something that was deemed overly complex in FRAC MOO 1. Why is that no longer the case? Additionally, what is the benefit of four products? It is our impression that with the exception of imports, nearly all resources capable of bidding in the day-ahead market are doing so. Would a day-ahead flex product actually increase the number of resources bidding into the market? Also, it seems that the only difference between the 15-minute and 5-minute products is the eligibility of imports for the 15-minute product. What additional benefit would there be from a 5-minute product that could not be realized by a 15-minute product with a requirement for a certain percentage of in-state resources?