

Stakeholder Comments Template

Flexible Resource Adequacy Criteria and Must-Offer Obligation Straw Proposal, December 13, 2012

Submitted by	Company	Date Submitted
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This template is for submission of stakeholder comments on the topics listed below, covered in the Flexible Resource Adequacy Criteria and Must-Offer Obligation straw proposal dated December 13, 2012, and issues discussed during the stakeholder meeting on December 20, 2012. The ISO will also review comments filed with the CPUC in R.11-10-023¹ that respond to the questions asked on the Joint Parties' Proposal per the CPUC's December 4, 2012 Scoping Memo.² Therefore, the ISO has not included questions in this template that have already been asked by the CPUC. However, stakeholders that have not submitted comments to the CPUC may include comments regarding those questions at the end of this document.

Please submit your comments below where indicated. Your comments on any aspect of this initiative are welcome. If you provide a preferred approach for a particular topic, your comments will be most useful if you provide the reasons and business case.

Please submit comments (in MS Word) to fcp@caiso.com no later than the close of business on January 9, 2013.

1. The ISO has outlined the basic considerations and assumptions that it proposes (in conjunction with the "Joint Parties") for the flexible capacity needs assessment for 2104. Please provide any general comments/questions/clarifications regarding the needs assessment.

CEERT believes that the Joint Parties proposal for defining flexible capacity is fundamentally and irrevocably flawed and should be completely rejected. At the December 20, 2012, CAISO workshop, the Joint Parties stated that the primary reason for developing this Proposal is to ensure that Variable Generation (VG) and other non-gas resources (for example, Demand Response or the judicious curtailment of VG resources) should not be allowed to "crowd out" the ability of dispatchable resources from meeting LSE RA showings. However, these very rules being proposed by the Joint

¹ The record for R.11-10-023 can be found at http://delaps1.cpuc.ca.gov/CPUCProceedingLookup/f?p=401:56:1171820792119401::NO:RP,57,RIR:P5_PROCEEDING_SELECT:R1110023.

² The Scoping Memo can be found at <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M031/K723/31723210.PDF>.

Parties will instead inappropriately ensure that the only resources available for meeting LSE RA showings are in fact conventional thermal generation, which are the only types of resources able to meet the proposed flexibility requirements. In fact, the definition of “dispatchability” is written so strictly in this proposal that PG&E states that its own hydro resources that have provided flexibility, load following, operating reserves and other ancillary services to the California grid for over a century are excluded from consideration. This result will have the perverse effect of incentivizing development of only new gas resources to meet these flexible RA capacity needs, thereby completely “crowding out” the ability of non-thermal resources from being able to compete with the conventional resources procured to satisfy these new rules. Such an outcome will increase reliance in California on gas resources, instead of following the CPUC “loading order” of preferred resources, such as demand response. Moreover, with the surfeit of new thermal resources that will inevitably be developed to meet these flexible capacity RA requirements, there will be a super abundance of resources available to meet the CAISO’s flexible capacity needs on operational time scales. Such an excess of resources able to meet the operational requirements of the CAISO in real time will suppress ancillary service and the proposed flexible ramping prices, precluding the impetus needed to develop the ability of other preferred resources, such as DR and the judicious use of VG curtailment, from meeting flexible ramping needs. Furthermore, fixed payments outside of any CAISO market will be required to justify construction and continued operation of “dispatchable” thermal resources.

The Joint Parties are really co-opting the meaning of the term “crowd out”. The Joint Parties are using this term to refer to the fact that, using the current CPUC approach of calculating RA from the 70% exceedance methodology, which only looks at availability of generation to meet load during peak summer hours, solar and wind RA will satisfy LSE RA showings without necessarily being able to provide dispatchable resources to the CAISO. In turn, apparently from the Joint Parties’ perspective, this outcome would therefore “crowd out” the ability of conventional resources from providing dispatchable RA to the CAISO. So, the Joint Parties are foreseeing a situation where the CAISO is short dispatchable resources to meet increasing system flexibility needs.

Of course this entire problem would be minimized if RA were calculated using an Effective Load Carrying Capability (ELCC) type calculation, which looks at the ability of new generation to meet net load across all hours of the day using net load shapes that are reflective of the actual fleet makeup and performance. Ironically, the use of ELCC to establish the contribution of wind and solar energy resources to a utility’s RA requirements is already mandated by law.³ Using ELCC to calculate RA would cause solar resources being added on top of an existing solar fleet to receive low RA values since adding incremental PV resources to the system would simply be adding incremental generation during times (mid-day) where there is low system net load, and also the new peak of net load would be occurring later in the day, after the sun sets, where the addition of incremental PV resources cannot carry load. But this is exactly right: PV should in fact receive low RA values under these circumstances, which would provide room for other resources (conventional as well as DR) to meet load. So instead of directly addressing the deficiencies of the current RA accounting practice, the Joint Parties are instead proposing a restriction of flexible RA capacity procurement to generation that

³ As part SB1x2 in P.U. Code Section 399.26(d). See http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_bill_20110412_chaptered.pdf

can meet a continuous 3 hour ramp and must submit feasible bids into CAISO real time markets for seventeen hours of most days. However, if only 3 hour ramping, non use restricted resources are procured in order to provide flexible RA capacity to the system, then since only conventional generation can satisfy this constraint, conventional resources will therefore be built to satisfy these ramping needs. These conventional resources will, therefore, “crowd out” (defined in contrast to the Joint Parties meaning) the ability of other resources, most notably DR, but also potentially judicious use of VG curtailment, from providing flexible ramping to the CAISO.

CEERT therefore suggests that the solution to this problem is not to create unreasonable flexible RA capacity requirements but rather to use ELCC to calculate RA, as already mandated by state law.

If the CPUC, CAISO, or State is to “pilot” the concept of procurement of flexible capacity as part of the annual RA process, clearly, a pilot should be adopted to explore the role that can be played by non-traditional, but preferred, resources in the procurement process. The Joint Parties proposal clearly thwarts any such efforts. Thus, if LSEs are to be required to procure conventional fossil resources that meet the overly restrictive “flexibility” definition in the Joint Parties Proposal, that procurement should be only for a fraction of the total flexibility need leaving room for PG&E’s hydro and other preferred resources. They should also be required to procure a defined amount of non-traditional loading order preferred resources that would then participate in a pilot to determine how they can be used to satisfy the needs of the grid for dispatchable, flexible resources. As part of this process, the CAISO and CPUC should also take a closer look at how the standard method for calculating RA is creating an artificial shortage of resources able to provide dispatchable resources to the CAISO.

CEERT would note that the question is not *if* these preferred resources such as DR can provide grid flexibility, but *how*. The “if” question has already been answered by the 2009 Participating Load Pilot Project. The CAISO Final Report of that pilot states:

“The ISO can confidently state that the PLP [Participating Load Pilot] projects have demonstrated and affirmed that smaller demand response resources can successfully participate in and enhance ISO markets and reliably provide ancillary services, on a basis closely comparable to supply-side resources.”⁴

All that remains to be considered, therefore, is how these resources can and will provide grid flexibility. A pilot to do so should be a required priority before any pilot that results from the Joint Parties Proposal.

The definition of “flexibility” being proposed here significantly understates the ability of existing resources to respond to either contingency reserve needs or ramping requirements. Neither distributed generation, any type of DR nor a significant fraction of existing conventional or even hydro resources (see our comments below to question #9) are willing or even capable of submitting economic bids into CAISO markets over a seventeen hour period with a minimum of three hour

⁴ CAISO 2009 Participating Load Pilot Project Report, February 18, 2010 p.4

continuous ramp. However, many of these resources are perfectly capable of making a dispatchable step change in output or submitting economic bids during fewer hours or for less than three continuous hours. The CAISO must take action to explore how such preferred or other conventional or hydro resources that would otherwise be excluded can and should be allowed to provide this flexible RA capacity to the CAISO.

2. The ISO proposes to allocate flexible capacity procurement obligations to LRAs based on the LRAs contribution to forecasted monthly system peak. Is this the appropriate allocation methodology? What other allocation methodology could be considered?

No comment.

3. The ISO proposes to include default tariff provisions for LRAs that do not set flexible capacity procurement obligations. The default level would be the flexible capacity requirement established in the ISO's flexible capacity assessment. Are there other considerations that should be included in the default provisions?

No comment.

4. The ISO is proposing a year-ahead and 12 monthly showings demonstrating that an LSE has procured sufficient quantities of flexible capacity for each month, with 90 percent of the total flexible capacity obligation be shown in the year-ahead showing and 100 percent in the month-ahead showing. Are these the right levels? Are there any other attributes that should be included in these showings?

No comment.

5. The ISO is proposing new backstop authority in the system is deficient in the total amount of flexible capacity required. Are the triggers for issuing a backstop procurement designation sufficient? What else should the ISO consider?

The use of backstop authority by the CAISO reflects a failure of the CPUC's RA and long term procurement processes to establish and promote the timely development of the proper balance of resources needed to meet load. Providing the CAISO with the ability to correct the failure of these processes through a backstop procurement should be avoided, and only allowed in the most extreme circumstances.

6. The ISO is proposing to use the current CPM rate in procuring backstop flexible capacity. Are there additional considerations in the use of this rate?

No comment.

7. The ISO proposes to allocate costs for backstop procurement designations to all LSEs that are deficient in their flexible capacity showings. Is cost allocation for backstop correct? If not, what other options should be considered

No comment.

8. Are the ISO's proposed criteria for determining selecting resources to procure for any flexible backstop procurement designation correct?

The CAISO's proposed criteria for selecting resources to procure for flexible RA capacity procurement are fundamentally flawed and will result in over procurement of thermal resources to meet these goals, in complete disregard to the CPUC loading order. See our reply for question #1 above.

9. The ISO has put forth a proposed counting convention for hydro resources. PG&E presented an alternative approach. Please comment on the relative merits of each proposal? Does your organization have any additional suggestions to enhance either proposal?

The very fact that the proposed flexible capacity counting convention would exclude hydro resources is an indication that the current counting mechanism is flawed. Hydro resources represent one of the most versatile ancillary services available to the grid operator that can be used towards meeting flexible capacity requirements. The fact that the current counting rules would exclude hydro resources is a strong indication that there is a serious problem with the proposed approach.

10. Beyond the three issues identified by the ISO, are there any other issues the ISO needs to consider in Stage Two of this stakeholder initiative and why?

No comment.

11. Are there any additional comments your organization wished to make at this time?

No comment.

12. Please feel free to respond to any comments already submitted to the CPUC in R.11-10-023 as they apply to the ISO straw proposal or the Joint Parties proposal.

In addition to our fundamental opposition to the very nature of the flexible RA capacity requirements being proposed here, CEERT has significant reservations as to the way in which the CAISO is proposing to calculate flexible capacity requirements for future compliance goals. As has been

pointed out in the Vote Solar and Sierra Club comments to the CPUC,⁵ the way in which the CAISO is calculating flexible ramping requirements will systematically overestimate the quantity of flexible capacity needed to reliably integrate solar PV resources by over estimating the steepness of the solar PV diurnal ramp rate. This systematic bias results from a miscalculation of the amount of fixed versus single axis PV resources that are on the system. Furthermore, the CAISO is calculating flexible capacity needs using wind resource capacity factors that are consistent with older generation wind turbines, whereas modern type 4 turbines have significantly higher capacity factors. The use of these modern turbines will reduce the variability of aggregated wind resources on the system and provide incremental energy in mid to late morning and mid afternoon -- precisely the times that the CAISO analysis shows maximum ramp requirements, thereby lowering the flexible capacity RA requirements needed as a result of wind resources. Overall, the CAISO is significantly and systematically overestimating the flexible capacity requirements needed to integrate wind and solar PV resources.

The Vote Solar and Sierra Club comments also include an exhaustive accounting of the physical ramping capabilities of resources currently on the system, and conclude that there is more than enough ramping capacity from existing system generation (2013) to meet the proposed flexible capacity requirements in 2020:

“There is no 2020 ramping scenario that would come close to requiring the ramping rate speed in MW/min or ramping capacity in MW that is achievable with existing generation resources. Moreover, the significant excess of ramping capacity already in the system further illustrates the lack of need for additional resource adequacy payments to flexible resources.”⁶

This result should give pause to those proposing to build new thermal resources to meet future flexibility needs, and points to a fundamental problem with the current CAISO market. The fact that MRTU is not able to call upon existing physical resources to supply flexible ramping capabilities necessary to reliably serve load is a strong indication that there is a serious flaw in the current CAISO market. CEERT believes that this flaw is at least partly the result of the excess use of self scheduling practices within the current markets. We have repeatedly asked the CAISO to look into the root cause of this practice. It is our firm belief that without a clear understanding of the full extent of and the root causes for self scheduling, any proposal to ‘fix’ this problem will result in an incomplete solution doomed to failure, and potentially at great cost to utility customers, the environment, and quite possibly not even fully addressing the reliability concerns that are at the root cause of this issue. We therefore repeat our request of the CAISO and the CPUC to perform an exhaustive accounting of the full extent of, as well as an analysis of the causes for and implications of the widespread use of self scheduling practices.

⁵ Sierra Club and Vote Solar Initiative Comments on the Resource Adequacy and Flexible Capacity Procurement Joint Parties Proposal, Rulemaking 11-10-023, December 26, 2012

⁶ Ibid p. 9