



**Comments of Pacific Gas and Electric Company**  
***Flexible Resource Adequacy Criteria and Must-Offer Obligation***  
***Revised Straw Proposal***

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) offers the following comments in the stakeholder process for the California Independent System Operator’s (CAISO) Flexible Resource Adequacy Criteria and Must-Offer Obligation (FRAC-MOO) Initiative June 13, 2013 revised straw proposal (Proposal).

In general, PG&E’s comments are primarily focused on the allocation methodology. Although we offer three specific recommendations to improve the granular allocation method presented in the Proposal, we encourage the CAISO to provide adequate time for stakeholders to develop and vet alternative allocation methodologies.

PG&E offers seven recommendations:

1. The CAISO should consider simpler alternatives to allocate the flexibility requirement.
2. Allocation of flexible capacity requirement is more appropriate to a LRA-level than to a LSE-level.
3. PG&E does not support technology mandates for flexible capacity.
4. The granular allocation methodology should recognize intermittent resources that are dispatchable or economically curtailable.
5. Revisit the appropriate intermittent capacity measure for calculating flexible RA allocation.
6. The allocation of the flexible requirement should include the option for a third quarter true-up.

7. The CAISO and stakeholders should explore alternatives to the proposed “bid high” approach to limiting dispatch.

PG&E also requests clarification on four design elements and notes what we believe is an error in the Proposal.

## **Recommendations**

### **1. The CAISO should consider simpler alternatives to allocate the flexibility requirement.**

PG&E understands the CAISO’s reasoning behind the most recent proposed requirement allocation methodology. However, one major downside is the complexity of the method. Although PG&E does not currently offer a third method beyond the two presented for consideration (peak load ratio share and the more granular method presented in the Proposal), PG&E believes the stakeholder process should be open to consideration of other allocation methodologies that are simpler than the “granular” method and welcomes ideas from other participants.<sup>1</sup> PG&E recommends that the CAISO give stakeholders adequate time to develop alternatives allocation approaches before locking down this element of the design.

### **2. Allocation of flexible capacity requirement is more appropriate to a LRA-level than to a LSE-level.**

PG&E is concerned with the CAISO’s plan to allocate flexible capacity requirements to load serving entities (LSEs). Allocations to local regulatory authorities (LRAs) are more appropriate. While the CAISO may recommend a total flexible capacity requirement to the California Public Utilities Commission (CPUC), the CPUC should maintain final responsibility for determining the flexible capacity procurement requirements its jurisdictional LSEs.

The CAISO’s discussion of penalties<sup>2</sup> is inappropriate at this time as the specifics of the requirements process have not yet been finalized. PG&E encourages the CAISO to consider a before-the-fact verification process in concert with the CPUC and California Energy Commission (CEC).

### **3. PG&E does not support technology mandates for flexible capacity.**

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<sup>1</sup> PG&E does recommend specific modifications to the granular allocation method presented in the Proposal. See items 4, 5 and 6.

<sup>2</sup> As alluded to in Section 3, page 8 of the Revised Straw Proposal.

Although the CAISO may develop different counting or must-offer rules for different technology types, PG&E does not support mandates that prescribe a portion of a LSE's flexibility showing from a certain technology type. The CAISO or the CPUC should not set a minimum requirement (i.e. mandate) for flexible capacity from specific technologies or resource types with less stringent counting or must-offer rules. Doing so reduces the overall reliability of the system, supplants other economic resources that could have offered their capacity (and may need the RA revenue stream to stay economic) and harms customers by providing higher costs with a reduced reliability benefit.<sup>3</sup>

#### **4. The granular allocation methodology should recognize intermittent resources that can be dispatched.**

PG&E recommends a modification to the Proposal's flexibility requirement allocation methodology to account for dispatchable intermittent resources, that is, those that can offer economic bids to the CAISO. Many intermittent resources could be made dispatchable for all or a large portion of their operating range and could offer flexibility benefits to the system. To the extent that a resource is dispatchable and can offer flexibility under its contract, that portion of the resource should not be considered in calculating the percentage of LSE-contracted intermittent capacity (used in the allocation).

The granular methodology relies on calculating each LSE's percentage of the total contracted capacity for three intermittent categories: 1) wind, 2) solar PV and 3) solar thermal. The greater a LSE's percentage of these technologies, the greater the allocation to the LSE.

The methodology lumps all renewables in one of three bucket, regardless of their ability to be dispatched. This lumping together of all resources by technology means that capacity that is dispatchable and economically curtailable will increase the LSE's share of the flexibility requirement. This discourages LSE's that contract with intermittent resources from seeking the functionality the CAISO needs to more effectively manage variations, the ability to dispatch through its markets. The proposed approach perpetuates the very problem the CAISO is attempting to solve and is unfair to both LSEs procuring intermittents that offer flexibility and the owners of those resources that built their facilities with investments in additional functionality to allow them to respond to CAISO dispatch.

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<sup>3</sup> Higher costs would be associated with any minimum requirement or set-aside since if the resources we're available at lower costs than other alternatives, they would be procured for LSE's RA showings and wouldn't require any set-aside.

If this allocation methodology is to be adopted, PG&E recommends the CAISO modify its calculation of the LSE percentage of the total contracted capacity for each of the three categories. The capacity counted for each LSE, and in total, should only include intermittent capacity that is not dispatchable or economically curtailable. This modified treatment of intermittent resources would then need to be applied in a consistent manner throughout, where appropriate. This different treatment for different classes should be considered in multiple aspects of the flexibility framework. For example, these resources may need to be accounted for differently when modeling the forward looking monthly 3-hour ramp.

PG&E also requests the allocation methodology address the calculation for LSEs that have contracted procurement of renewable power generally, but lack the granularity to identify the source and generation type of those contracted resources.

**5. Revisit the appropriate intermittent capacity measure for calculating flexible RA allocation.**

As noted during the June 19, 2013 stakeholder meeting, the percent of total contracted *capacity* may not be a reasonable measure for calculating a LSE's flexible RA allocation as it may over-represent the *energy* output of an intermittent facility. PG&E requests the CAISO revisit whether there are other appropriate measures such as net qualifying capacity (NQC) or a number based on the generation profile of a facility.

**6. The allocation of the flexible requirement should include the option for a third quarter true-up.**

The CAISO plans to provide the requirement allocation to each LSE by May 1<sup>st</sup> of the year preceding the compliance year. The allocation of the flexibility requirement may change due to changes in a LSE's portfolio (e.g., early or late contract start dates, early termination, contract capacity updates) as well as load migration. PG&E recommends the CAISO incorporate an option to provide updated load and portfolio information which would be used to revise the allocations. We suggest mirroring the process currently employed in the CPUC's local RA process in which LSEs can provide updates in August with the CPUC providing an updated allocation to LSEs in September.<sup>4</sup>

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<sup>4</sup> Please refer to the CPUC's 2013 Final RA Filing Guide for an example of a timeline that includes a True-Up, pages 2-3. The total system requirement is not altered, but the amounts of the requirement allocated to LSEs changes.

[http://www.cpuc.ca.gov/PUC/energy/Procurement/RA/ra\\_compliance\\_materials.htm](http://www.cpuc.ca.gov/PUC/energy/Procurement/RA/ra_compliance_materials.htm)

When this idea was raised at the stakeholder meeting, the CAISO noted a change from one LSE could affect the allocation to other LSEs. However, the CPUC has already shown that it is able to successfully implement a similar third quarter true-up for the local RA process (which similarly affects other LSEs) and is a more fair allocation of obligations across all LSEs.

**7. The CAISO and stakeholders should explore alternatives to the proposed “bid high” approach to limiting dispatch.**

For resources with monthly and annual use-limitations, the CAISO’s current proposal suggests that market participants should ‘bid-at-high-prices’ to control CAISO dispatch of these types of resources. High-priced bids, or effectively economic-withholding through such bids, creates a number of market and compliance issues<sup>5</sup> and should not be considered as a preferred solution. The CAISO and stakeholders should continue to explore non-priced alternatives, such as those that are already in place to address daily use-limitations<sup>6</sup>. While still recognizing the importance of bidding into the CAISO markets, additional software or processes may need to be developed. Alternative approaches to monthly and annual use-limitations appear superior to the current proposal and should be explored during the stakeholder process.

**Clarifications**

**The proposal would benefit from clarity on several elements in its next iteration:**

**8. Clarify the requirement for non-contingent ancillary services bids.**

PG&E would like the CAISO to clarify that the requirement for flexible capacity resources to bid into the ancillary service markets on a non-contingent dispatch basis applies to thermal resources with no use-limitations and not to use-limited resources.

**9. Treatment of Combined Heat and Power resources.**

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<sup>5</sup> Irrespective of the CAISO proposal’s suggestion that Default Energy Bid prices could be increased to reflect opportunity costs.

<sup>6</sup> Specifically the daily energy limits, and additional resource characteristics included in the Masterfile such as number of starts per day.

For combined heat and power (CHP) and other resources that contain both dispatchable and non-dispatchable capacity, please:

- a) Confirm that they are eligible to count their dispatchable capacity toward an LSE's required flexible capacity showing;
- b) Clarify how the Effective Flexible Capacity (EFC) would be determined for CHP resources;
- c) Whether there will be any change to the MOO in the event of daily operational constraints or ambient conditions that prevent economic bids for the full EFC. (We note that ambient conditions may affect output of natural gas resources, as well.)

#### **10. Discussion of the error term.**

PG&E requests clarification in the next proposal of the methodology the CAISO will use to determine the error term ( $\epsilon$ ) in the Flexibility Requirement calculation. The methodology should be clearly described.

#### **11. The proposal should clearly distinguish between "Need" and "Requirement".**

PG&E asks that the CAISO define "Requirement" as what is physically needed to operate the system. Flexible capacity requirements would then be allocated by the CAISO to ensure sufficient procurement to meet the identified system flexible capacity requirement.

"Need," on the other hand, should be used to describe the difference between the requirement and the capacity that is physically available to meet that requirement. We ask that the CAISO use these suggested definitions consistently in the next proposal.

#### **Correction**

#### **12. Expiration of Capacity Procurement Mechanism.**

The Proposal contains what PG&E believes to be a factual error. On page 23 of the Proposal the CAISO states, "... the ISO's backstop Capacity Procurement Mechanism expires at the end of March 2015." The pricing mechanism actually expires on February 16, 2016.<sup>7</sup>

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<sup>7</sup> CAISO Tariff, section 43.7.1.