

**Comments of the**  
***Center for Energy Efficiency and Renewable Technologies***  
**Flexible Resource Adequacy Criteria and Must-Offer Obligation**  
**Revised Straw Proposal (June 13, 2013)**

<b>Submitted by</b>	<b>Company</b>	<b>Date Submitted</b>
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## **I. INTRODUCTION**

On June 13, 2013, the California Independent System Operator (CAISO) issued a "Revised Straw Proposal" entitled "Flexible Resource Adequacy Criteria and Must Offer Obligation" (FRACMOO Straw Proposal). The FRACMOO Straw Proposal is designed to advance "measures" to "implement the flexible capacity requirements (FCR) for 2015 RA [Resource Adequacy] compliance"<sup>1</sup> and called for a Stakeholder Meeting to be held on June 19, followed by Stakeholder Comments to be submitted by June 26.

Following that meeting, the CAISO staff circulated a "Comment Template" with questions posed on the FRACMOO Straw Proposal. By these Comments, the Center for Energy Efficiency and Renewable Technologies (CEERT) offers its Comments on the FRACMOO Straw Proposal below.

While CEERT does respond to the questions posed by CAISO Staff in its Comment Template, CEERT believes that these questions do not permit consideration of overarching concerns and issues related to this proposal. CEERT, therefore, first offers an overview of its position (Section II), detail on its specific concerns and requests regarding the Straw Proposal (Section III), and, finally, responses to the questions posed in the Comment Template (Section IV). It is CEERT's hope that the entirety of CEERT's comments will be considered by the CAISO in taking any next steps on the Straw Proposal.

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<sup>1</sup> CAISO FRACMOO Straw Proposal, at p. 4.

## **II. OVERVIEW OF CEERT POSITION**

CEERT agrees with the CAISO that successfully integrating increasing amounts of variable generation resources into the grid is of paramount importance. CEERT also agrees that measures should be undertaken as soon as possible to ensure that sufficient flexible capacity is available to ensure that ramp rates can be addressed.

However, CEERT believes that the FRACMOO Straw Proposal is seriously flawed and should not become the basis of a tariff filing. CEERT strongly recommends that FRACMOO's shortcomings be addressed in close coordination with the California Public Utilities Commission's 2015 RA rulemaking.

In summary, and as supported by its comments and responses to the questions posed in the CAISO Comment Template below, it is CEERT's position that:

1. The FRACMOO Straw Proposal requires modification to minimize procurement of flexible resources in excess of what is needed to meet reliability requirements. The Straw Proposal currently ignores resources which are commonly used by load serving entities (LSEs) to provide "flexibility" but which do not or cannot meet requirements for full, unconditional dispatchability by the CAISO. Without modification, the Straw Proposal therefore overestimates the amount of flexible capacity needed to ensure reliability and would result in procurement of resources which are not needed to meet reliability requirements.
2. The FRACMOO Straw Proposal cost allocation methodology requires significant revision in order to comply with the CAISO's own adopted Cost Causation Principles. While a welcome starting point, in its present form it is not an appropriate template for detailed tariff language.
3. Further development of the FRACMOO Straw Proposal must be closely coordinated with the Resource Adequacy (RA) procurement decisions of the CPUC, especially the CPUC's 2015 RA Rulemaking and must be consistent with California environmental and energy laws, policies, and targets that govern electric energy development, generation, and procurement in this State. In particular, the CAISO needs to either significantly accelerate the implementation of its multi-year "DR Roadmap<sup>2</sup>," or support significant trial procurements of DR prior to completing the integration process outlined in the Roadmap.

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<sup>2</sup> California ISO Demand Response and Energy Efficiency Roadmap: Making the Most of Green Grid Resources, DRAFT June 12, 2013

### III. OVERARCHING CONSIDERATIONS

- A. The FCR adopted by the CAISO must account for all potential sources of grid flexibility and only require a Must Offer Obligation for that portion of total flexibility needed to complement traditional market response to price signals. The FCR should not be based only on modeling and projections unless those projections reflect the contributions to flexibility of resources that do not meet the strict definition of Effective Flexible Capacity (EFC) in the Straw Proposal and EFC quantities required are trued up to actual need.**

Many existing resources have historically supplied “flexibility” to the grid without explicit real time dispatch instructions from the CAISO and are capable of stepping up that contribution in the future. These include price responsive demand (a subset of Demand Response (DR)), out of state imports/exports of economy energy, the emerging Energy Imbalance Market (EIM) in WECC, limited self-scheduling of resources not capable of submitting to full dispatch by the CAISO, and spot purchases and sales from other California balancing authorities – many of which possess surplus flexibility.

Significantly, however, none of these resources would have an “Effective Flexible Capacity” (EFC) value and thus be eligible to be procured and receive RA payments under the Proposed Decision’s adopted “Flexible Capacity Framework” or the FRACMOO, both of which are based on the Joint Parties’ (CAISO, SCE, and SDG&E) Proposal for flexible capacity procurement. It is not appropriate to leap to the conclusion that 100% of any identified “flexible capacity” need must be formally procured in advance, explicitly compensated with RA payments, and made available for formal CAISO dispatch in real time.

LSEs will no doubt continue to rely on these traditional strategies to provide flexibility and should be encouraged to do so. As a consequence, the amount of flexible capacity to be dispatched by the CAISO will be considerably less than that calculated by the FRACMOO formula. LSEs should not be required to procure or to assume costs for flexible capacity resources in excess of their actual need.

An obvious additional source of significant flexibility outside of the FRACMOO is utilization of those resources that have a calculated EFC value, offer capacity into the annual RA procurement process, but do not win the auction and thus receive no EFC RA payment, and, in turn, are not under any Must Offer Obligation. To assume that these resources simply disappear and NEVER offer to sell energy into the daily ramps or bid for ancillary services defies common sense. All of the CAISO presentations to

date show that there is a significant “reserve margin” for flexibility in the existing and projected generation fleet. To assume that NONE of these resources will provide ANY “flexible capacity” in real time is simply untenable.

The requirement that 100% of all “flexibility needs” be explicitly procured in advance and subject to a MOO seems to be motivated by a fear of withholding in day ahead and hour ahead markets by sellers of “flexible capacity” who are presumed to have market power and will use it to drive up the price and thus reap monopoly rents for eventually supplying this flexibility in real time. There is no basis in logic or history to support this presupposition. First, the vast majority of “flexibility” is owned or controlled, not by merchant sellers of capacity, but by the Load Serving Entity Scheduling Coordinators themselves. It is hard to construct a scenario where they would withhold flexibility from themselves in order to drive up their own costs. The CAISO points to today’s rampant self-scheduling practices as justification for requiring a 100% MOO. At least anecdotally, it is asserted that approximately 90% of resources are self-scheduled to avoid CAISO dispatch. However detrimental this self-scheduling practice is, and regardless of how important it is to understand and mitigate the root causes, it necessarily means that the overwhelming majority of EFC today is supplied without an explicit MOO payment and without explicit CAISO dispatch instructions. It strains credulity to assert that, in the future, there will be ZERO response from ANY resource to follow supply/demand principles unless bribed to submit to the very real costs associated with CAISO dispatch instructions.

CEERT has always been very aware that the dramatic restructuring of the electricity supply portfolio inherent in the successful implementation of State policy to rely on new renewable resources and to retire obsolete coastal fossil resources that are polluting the air and harming the marine environment requires careful planning and procurement of BOTH renewable and new fossil resources. In addition, significant modifications to traditional operating procedures and the role of the demand side in the balancing equation will be required. Given the dramatic looming change in the supply/demand for grid “flexibility” and the uncertainty surrounding both the timing and the magnitude of those changes, it is entirely appropriate that, at least during the interim when the market is adjusting to the new paradigm, that special precautions be taken to ensure grid reliability by paying special attention to flexibility. It is also entirely appropriate that these precautions take the form of special provisions to ensure that the grid operator has in its hip pocket a suite of resources at its beck and call to step in if and when required. However, this is not justification to completely suspend the laws of supply and demand and grant the CAISO an exclusive monopoly over 100% of this poorly defined commodity we term “flexibility.”

In other venues, CEERT has proposed that, initially, the fraction of flexibility need under explicit advance procurement and control of the CAISO be set at 70%<sup>3</sup>. If one looks at the “flexibility requirement duration curves” published in various versions in various venues by the CAISO, and makes the analogy to other systems experiencing similar forces, and other capacity like products in the CAISO, it seems logical to assume that, eventually, a well functioning reliable system could be operated with something like a 15% “flexibility reserve margin” that needs to be explicitly procured in advance and put in the grid operator’s exclusive control – similar in magnitude to the traditional generic capacity reserve margin. CEERT picked a 70% reserve margin to start the process recognizing that most people had not bought into the concept of thinking about flexibility in this manner, that the needs can never be precisely defined in advance with little or no actual operating experience, and that the initial market response would be rudimentary at best, The initial precise fraction is not critical as long as the incremental need is relatively small, the supply is relatively robust, and the price is thus relatively low. What is absolutely critical is that people feel comfortable that reliability is ensured, that actual operating experience serves as a guide, and that a significant fraction of the potential supply of flexibility be reserved for the development of a future more robust “natural” market response. What is important is that the process be started NOW to gain operating experience while there is time to refine the details without compromising reliability or incurring huge unnecessary costs, Accordingly, it is also critical that we do not cast in stone a tariff that creates a set of expectations and entitlements that will be difficult to unwind as experience is gained.

Whatever formula is eventually approved by the CAISO as the basis of its FCR need should be demonstrated over a reasonable length of time to be consistent with actual need for flexible resources to be dispatched by the CAISO. Failure to do so will not only result in excessive costs but would prematurely require new infrastructure that may never be needed.

**B. The FRACMOO must Fully Consider and Integrate Preferred, Use-Limited, and Existing Flexibility Resources.**

The principal issue discussed in this section is not which resources are capable of contributing to grid flexibility, but which resources are eligible to be paid in return for committing, in advance, to CAISO dispatch instructions, and how those eligibility rules should reflect the diverse nature of the inherent resource characteristics while preserving some semblance of equal treatment for all eligible resources.

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<sup>3</sup> See, e.g., R 11-10-023 Comments of the Center for Energy Efficiency and Renewable Technologies on Proposed Decision Adopting 2014 RA Obligations, Flexible Capacity Framework, and Program Refinements, California Public Utilities Commission, June 17, 2013

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The FCR unnecessarily restricts DR and other “use-limited” resources, and the CAISO must commit to a faster and better stakeholder process to fully integrate these preferred resources into the FCR. CEERT welcomes the CAISO publication of its DR Roadmap and commits to actively joining that long, involved multi-year journey. In cooperation with the CPUC, the CAISO must squarely address these resources and ensure that they are fully and appropriately integrated into the FCR procurement mechanism. In this regard, while the FRACMOO Straw Proposal does address “flexible capacity availability requirements” (Section 6) that appear intended to include use-limited or preferred resources, CEERT believes that there are several shortcomings with those provisions and the proposal as a whole that could lead to unnecessary over-procurement of fossil resources and shortchange the role that preferred resources are expected to play, such as demand response, in meeting that need. CEERT, in fact, asked questions regarding this section of the FRACMOO Straw Proposal at the June 19 Workshop, only to have consideration of those issues deferred to some indefinite time.

However, the future availability of such resources must be considered sooner rather than later. This is especially true when a tariff may result. It is critical to ensure that any final tariff language actually match the capabilities of preferred and use limited resources and that standards or metrics that may exceed those needed to achieve flexibility, are not imposed on these resources simply based on the characteristics of traditional fully dispatchable resources.

Instead, as CEERT has recommended before the CPUC, the best way to get the flexibility requirements and “metrics” right for preferred resources, such as DR, is to have a targeted procurement of demand response, especially to gain the necessary operating experience, program redesign, and customer involvement for the successful integration of DR.

For these reasons, CEERT urges the CAISO to work with the CPUC to structure a true stakeholder process, which ensures input from third parties providing demand response and energy storage, as well as the LSEs and agency staffs. CEERT asks that no further action be taken on the FRACMOO until the important issue of how best to integrate demand response, storage, and existing sources of flexibility are fully and effectively considered, and changes to the FRACMOO are made in response. CEERT believes that this process can and should begin as early as this August 2013.

**C.) The cost allocation methodology outlined in the FRACMOO Straw Proposal, while well intentioned, is incomplete and unsuitable as a basis for developing tariff language at the CAISO or allocation of procurement costs at the CPUC.**

Until the publication of the FRACMOO Straw Proposal, the only cost allocation methodology proposed by any party for procurement and utilization of flexibility was articulated in the Joint Party Proposal as a variation of the current CPUC CAM methodology for allocating generic RA capacity. This current proposal relies upon an LSE's load ratio share as the billing determinant. Most if not all parties recognize this proposal as only a placeholder pending a much more robust stakeholder process to more closely align cost allocation with cost causation. While CEERT welcomes the CAISO's contribution to this dialogue as set out in the FRACMOO Straw Proposal, it rejects the implied notion in the Straw Proposal and in the Comments Template that the cost allocation methodology outlined here forms the basis for a future tariff filing and only the details and implementing language remain to be decided. Specific comments by CEERT on the cost allocation proposal are included later in response to the specific questions raised in the Comment Template. In this section, CEERT would like to step back to first principles and discuss overall philosophy and architecture of the cost allocation methodology. To this end, CEERT offers the following observations.

- First, CEERT completely endorses the notion that cost causation principles should apply and that costs of executing the FRACMOO program should be allocated to LSEs in proportion to their contribution to the net load ramping requirement of the grid as a whole.
- Second, it is not clear what costs the FRACMOO Straw Proposal proposes to allocate. A very significant fraction of the overall costs of the FRACMOO program are CPUC jurisdictional procurement costs for EFC. It is not clear whether their inclusion in the Straw Proposal is meant to be advisory as a single party proposal in a CPUC proceeding, or whether they are meant to be specifically included in the CAISO Tariff as FERC jurisdictional wholesale costs to be borne by all users of the grid. CEERT believes that the former is the only appropriate treatment and that CAISO Tariff language is required only for those costs related to the real time execution costs of the program such as any opportunity costs in default energy market bids, out of merit order dispatch instructions to procure incremental flexibility in real time, and backstop procurement provisions.

- Third, the cost allocation proposal exclusively relies on modeling and projections from a history that is per se not completely applicable to future conditions. There is no provision in the proposal to first measure the performance of the models then modify the methodology based on experience. It is extremely difficult and time consuming to modify the CAISO Tariff once filed and accepted at FERC. The current proposal cannot be the basis for such a Tariff filing without significant multi-year operating experience to validate the concepts and precisely define actual costs incurred.
- Fourth, the proposal violates the CAISO's own Cost Causation Principles by relying on opaque and proprietary models and confidential data not available on an equal basis to all affected parties and by not allowing self-supply or behavior modification by affected parties to avoid the allocated costs or mitigate overall program costs.

CEERT believes that the topic of cost causation and cost allocation presents novel and complicated issues that are simply not ripe for drafting of tariff language. They must be discussed in a robust, joint stakeholder process on a separate timeline from other programmatic issues in concert with the CPUC -- including not only workshops and informal comments, but potentially evidentiary hearings and formal legal briefs at potentially both the CPUC and the FERC before adoption. In the meanwhile, CEERT sees no option other than to keep the Joint Party Proposal of queuing off the existing RA load ratio share as a default billing determinant. We completely understand and agree that this is only an interim solution that is seriously deficient in the long term, and this is a priority topic for program development.

#### IV. CEERT Responses to CAISO Comment Template Questions

1. CAISO Proposed Allocation Methodology to Allocate Flexible Capacity Requires to Load Serving Entity (LSE) Scheduling Coordinator (SC).

- a. *Has the ISO identified the core components for allocation? Are more needed? If so, what additional components should be considered and how should ISO consider them? Are fewer needed? If so, what should the ISO include?*

No. The current methodology relies exclusively on proprietary models, historic databases--which may not be accurate predictors of future conditions--and confidential contract terms and conditions. In addition, it lumps CPUC jurisdictional procurement costs with FERC jurisdictional energy and ancillary service market information in order to arrive at a total revenue requirement as well as LSE specific billing determinants. The essential missing elements are: 1.) A robust feedback loop to true up modeling estimates to actual system ramps, and 2.) Mechanisms where LSEs can both self-supply ramping capability and modify load shapes to reduce actual ramp requirements and thus reduce both total costs and their share of program costs.

- b. *Has the ISO used the right allocation factors for the identified components (i.e. load ratio share, percent of total capacity contracted)? If additional or fewer components should be considered as identified in 1a, above, please provide specific allocations factors for these components.*

It is too early in the development process to answer this question with any specificity.

- c. *Does your organization have any additional comments or recommendations regarding the allocation of flexible capacity requirements?*

CEERT repeats its agreement with the direction the CAISO has taken in this process and commits its resources to working out the significant issues CEERT Comments on identified above, plus any others that become apparent during the coming development process. In the meanwhile, CEERT sees no logical choice other than the load ratio share approach taken in the Joint Party Proposal. CEERT believes that this cost allocation process is a long and involved process that should not affect the development timing of other FRACMOO program elements. It is a priority task, but needs its own separate timeline and tariff language development process distinct from, for example, the MOO tariff language development

2. Treatment of Preferred and Use-Limited Resources in CAISO FRACMOO Straw Proposal.

- a. *Please provide comments regarding what use-limitations are currently managed by existing or proposed ISO tools and what must-offer obligation should apply to these resources.*

Other than the recent agreement on counting conventions for use limited hydro initiated by PG&E, CEERT does not believe that existing or proposed ISO tools manage ANY “use-limitations”. However, it does appear from initial presentations at the June 19 workshop that parties may be close to a preliminary consensus on counting conventions for combined cycle facilities. CEERT believes that the initial proposals for counting conventions be the result of “trilateral” negotiations between the CPUC, the CAISO, and representatives of the developer/owners of each specific resource type before being work shopped to the broader stakeholder group. CEERT believes that, while these negotiations should be held to a FERC-like “comparability standard,” the first priority is to appropriately account for the specific inherent resource attributes rather than by rote adherence to a common template taken from conventional traditional resources such as the template used in the Joint Party Proposal. CEERT also believes that any detailed resource specific must-offer obligation language be developed AFTER consensus is reached on counting conventions and that this MOO be held only to a FERC comparability standard.

- b. *Should the ISO consider other minimum energy or run time limits for other types of use limited resources to be eligible to provide flexible capacity? If so, what should these limits be? Why?*

Absolutely. See above.

3. Bid Validation Rules and Potential Interpretations in CAISO FRACMOO Straw Proposal.

CEERT believes that these necessary resource specific protocols be developed AFTER consensus is reached on the resource specific counting conventions AND the corresponding resource specific MOO protocols.

4. CAISO Consideration and Calculation of Opportunity Costs for Start Limitations.

CEERT reserves comment on this topic at this time. While skeptical of the treatment of this topic in the Straw Proposal, we wish to assimilate the comments of parties more directly impacted by this issue.

5. CAISO Proposed Must-Offer Obligation.

Again, it is not practical to precisely define MOO protocols for resources for which appropriate treatment of resource specific characteristics in the portfolio of resources eligible for FRACMOO procurement and the fraction of overall flexibility needs to be filled by FRACMOO resources have not been quantified and resource specific counting conventions have not achieved reasonable consensus among the parties.

6. CAISO Flexible Capacity Backstop Procurement Proposal.

While CEERT is conceptually supportive of the notion that a FERC jurisdictional Backstop Procurement Process is required to augment a CPUC jurisdictional EFC procurement process, it does not believe that backstop program basics such as triggers for actually conducting, such a procurement, prices to be paid, auction protocols, etc., have been conceptually articulated sufficiently to even begin tariff language development.

7. Additional Comments.

Please see Sections II and III of these Comments above. CEERT asks that its recommendations and discussion offered in those sections be considered in any further action taken on the CAISO FRACMOO Straw Proposal.

**V. Conclusion**

CEERT again appreciates and welcomes the opportunity to continue to work on these important issues before the CAISO today and through this summer. CEERT renews its request that the CAISO continue to work with the CPUC, especially in coordination with the CPUC's 2015 RA rulemaking, to ensure that any flexible capacity requirement adopted is consistent with all state energy and environmental policies.