

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans.

Rulemaking 12-03-014
Filed March 12, 2012

**OPENING BRIEF OF THE
CALIFORNIA ENERGY STORAGE ALLIANCE**

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Pursuant to the *Scoping Memo and Ruling of the Assigned Commissioner and Administrative Law Judge*, dated May 17, 2012, the California Energy Storage Alliance (“CESA”)¹ hereby submits this opening brief, consistent with the briefing outline provided to parties pursuant to the order of Administrative Law Judge David M. Gamson that was issued on the record at the hearings held in this proceeding that concluded on August 17, 2012.

I. EXECUTIVE SUMMARY

In this opening brief, CESA limits its argument to the general subject of energy storage as it should be seen to fit into the evaluation of resources considered suitable to meet the Local Capacity Requirement (“LCR”) that is the subject of the present phase of this proceeding. CESA considers energy storage to be a “preferred resource” within the meaning of the term as it is used in this proceeding and asks that the Commission support this intuitively obvious proposition as a

¹ The California Energy Storage Alliance consists of A123 Systems, Applied Intellectual Capital, Beacon Power Corporation, Chevron Energy Solutions, Deena Energy, East Penn Manufacturing Co., Inc., Energy’s, Enervate, Fluidic Energy, General Compression, Green smith Energy Management Systems, HDR, Inc., Ice Energy, International Battery, Inc., Light sail Energy, Inc., MMEC/Sun Edison, Powergetics, Primus Power, Prudent Energy, Restore Energy Systems, SA, Samsung SDI, Silent Power, Snitch, Sun verge, Sustain, and Extreme Power. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. <http://www.storagealliance.org>.

policy determination.² In fact, because of its dispatchability and fast-flexible ramping capabilities, CESA proposes that energy storage should be at the *top of the list* of preferred resources. CESA does not burden the record in this proceeding with a restatement of its record testimony or address any other subjects related to energy storage in detail in this opening brief.

II. ENERGY STORAGE

A. Procedural Background.

In its Reply Testimony CESA responded to specific questions posed in the *Assigned Commissioner's Ruling*, issued July 13, 2012 ("ACR"), that posed a series of questions related to the role of preferred resources in this proceeding, including energy storage.³ In addition, CESA will determine whether or not there is a need to further augment the record in this proceeding related to energy storage, if appropriate, by filing a Reply Brief that would respond constructively to Opening Briefs filed by other parties. CESA will also file comments that specifically respond to the specific questions related to energy storage that are posed in the *Administrative Law Judge's Ruling Seeking Comment on Workshop Topics*, issued September 14, 2012 ("ALJ's Ruling").⁴

B. The Case for Energy Storage in Evaluating Local Capacity Requirements.

The Opening and Reply Testimony served by parties and admitted as evidence in the record in this proceeding, together with the examination of certain key witnesses at the hearings include more than enough record evidence to support CESA's view that energy storage should be

² CESA advocates elsewhere at the Commission and at the California Energy Commission for including energy storage at or near the top of the loading order, which is a different but closely related policy statement that was designed to accommodate advances in clean technologies such as energy storage.

³ CESA responded directly to the questions related to energy storage set forth in the ACR in its Reply Testimony of Janice Lin that was served on parties to this proceeding on July 23, 2011.

⁴ The ALJ's Ruling was served on the service lists in both this proceeding and the Energy Storage Rulemaking (R.10-12-007). In view of the clearly overlapping relevance, CESA submits that the record in this proceeding should be adopted *in toto* by reference as part of the record in the Energy Storage Rulemaking.

included as a preferred resource of the highest value to the CAISO and the utilities in managing LCR and the grid in general.⁵

1. CESA's Testimony.

In its Reply Testimony, CESA very briefly summarized its Opening testimony as follows:

“The Commission’s long-term procurement planning assumptions should begin including energy storage immediately. The Commission should consider the role of energy storage in utility procurement at the earliest possible time. The Commission should focus on assumptions needed to model the performance, costs, and benefits of energy storage. The Commission should adopt a multi-year procurement mechanism that includes energy storage. Additionally I note that CESA has filed directly relevant comments to the Commission in several closely related proceedings, including the Storage OIR, Resource Adequacy and Renewables Portfolio Standard.” (TR: page 2, lines 10-18).

Further in its Reply Testimony, CESA responded to certain Opening Testimony filed by other parties as follows:

“CESA also notes that while traditional fossil generation can typically perform the functions desired for LCR, we strongly disagree with the implication in the opening testimonies of some parties that *only* generation can perform those functions. Energy storage can certainly meet LCR and, like generation, is dispatchable. (In fact, storage is often more dispatchable in that unlike gas turbines which must be run at some minimum output level, most storage technologies have a minimum utilization of zero. As a result, it can be constantly synchronized to the grid, ready to provide fast-ramping flexibility in response to dispatch instructions, allowing lower cost alternative supply sources to be used). Distributed energy storage (like other non-generation resources) does not have most of the concerns that SCE, for example, cites in its opening testimony as to why new generation in the LA Basin is difficult and time consuming (*e.g.* permitting delays and other difficulties).” (TR: page 2, lines 6-16).

Responding to specific questions posed in the ACR, CESA provided the following testimony:

“**Q.** The ACR asks: “What barriers may currently exist to ensuring effective all source RFOs?” What is your response?”

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A. CESA believes that the barriers exist in two ways. First and foremost, RFOs need to fully and fairly value the attributes needed by the system and that can be provided by the widest variety of potential bidding resources. These include the well understood attributes that traditional generation brings as well as the additional benefits provided by energy storage and other non-generation resources described in responses to questions related to opening testimonies of parties above and elsewhere, including the Energy Storage Rulemaking.

Second, there appears to be in general a perception (and perhaps a reality) on the part of potential bidders that any California RFO process will not sufficiently consider the attributes of non-traditional resources such as energy storage and therefore it isn't worth a potential bidder's expense and effort to put forward an offer of a non-generation resource. As stated earlier, utilities in other states have received proposals from developers offering storage as a resource option in long-term capacity procurement. California utilities could attract the same interest if developers had confidence that the evaluation process would fairly count the benefits." (TR: page 6, line 7 – page 7, line 11).

2. Commissioner Florio's Examination of Witnesses.

Assigned Commissioner Florio uniquely contributed to the robust quality of the record as it relates to energy Storage thus far in this proceeding by examining certain witnesses sponsored by the Independent System Operator ("CAISO") and Southern California Edison Company ("SCE") as follows:

CAISO Witness Rothleder:

"Q: Okay. That's good. The overall takeaway I get from your testimony is – tell me if this is a fair characterization – is we're dealing here in this phase of the proceeding with replacing once-through cooling generation, but in doing that you're recommending that we keep an eye on the issue in the next phase of flexibility and, you know, potentially consider getting both elements at once rather than, say, pursuing a lot of inflexible resources here and then having to do more procurement of flexible resources later? A: I think that's right. You have an opportunity here to address the local issues, and potentially how you address those and the characteristics of those resources that you use to do -- satisfy the local issues, it has effects on what may be the residual flexibility needs in the Track 2." (TR: page 331, line 11 – page 332, line 2).

CAISO Witness Millar:

"Q: Now, if a different storage technology resource, let's say someone located a battery storage project in the Western LA Basin, would that resource be able

to apply to get on the NQC list, or do the PUC or the ISO have to take some additional action to allow that to happen?

A: Well, a new resource first has to go through the interconnection process and in that process specifies if it's wanting to be considered for or receive the status of full deliverability. If it goes through that interconnection process, and then each year just in case some system condition has changed, that a resource that was previously awarded that status for some other system change is no longer available, we do review those each year.

An entity can also ask to take advantage of any available deliverability on a year-by-year basis. Now but that applies in general to any resource. Then looking more specifically energy storage, the only issue there that needs to be managed is can that resource provide the necessary capabilities to truly be providing the service we need. I think Mr. Rothleder yesterday went over, discussed that in very good detail of the characteristics that the resource would need to provide in terms of how frequently it can be called upon, how quickly it can respond, and over what period of time it can provide the energy. But subject to meeting all of those requirements, then we welcome any new resource competing for providing this local capacity.” (TR: page 348, line 1 – page 349, line 8).

CAISO Witness Millar:

“Q: And we were talking in the context of demand response. Would the answer for storage be the same, or is storage a little more clear cut in terms of the criteria?

A: I think they're actually the same criteria. As long as -- Mr. Rothleder, I think, was -- spent some time on this yesterday. As long as the resource can meet the performance requirements, we're really not biased for or against any particular technology.” (TR: page 355, lines 15-25.)

SCE Witness Cushnie:

“Q: Okay. Now, I don't think we've had any discussion yet today about electricity storage. And I realize it is something of an emerging technology, but would you accept bids for electricity storage provided it met whatever criteria you felt were necessary for that resource to be effective?

A: At this point in time I don't have a reason to believe that we would not accept such a bid. But again, we would need to look at the specific technology and get an assessment as to how effective it would be in meeting the LCR need.” (TR: page 658).

III. CONCLUSION

Based on all of the evidence referred to and quoted in this opening brief, among many other reasons addressed by CESA and others in this proceeding and in the Storage OIR, the Commission should determine that energy storage belongs at the top of the list of preferred resources to be evaluated for LCR purposes.

Respectfully submitted,



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