BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Pursuant to Assembly Bill 2514 to Consider the Adoption of Procurement Targets for Viable and Cost-Effective Energy Storage Systems.	R.10-12-007 (Filed December 16, 2010)

JOINT LARGE-SCALE SOLAR ASSOCIATION AND SOLAR ENERGY INDUSTRY ASSOCIATION COMMENTS AND RESPONSE TO QUESTIONS IN ASSIGNED COMMISSIONER'S RULING

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Dated: July 3, 2013

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I. INTRODUCTION

Pursuant to the schedule set forth in the June 10, 2013 *Assigned Commissioner Ruling Proposing Storage Procurement Targets and Mechanisms and Noticing All-Party Meeting* ("ACR"), the Large-scale Solar Association and Solar Energy Industries Association[1] ("Joint Parties") hereby submits these opening comments.

The Joint Parties applaud the ACR's efforts to develop a framework for the planning, procurement and evaluation of energy storage within the electric system. The solar industry has been the beneficiary of forward-thinking policy measures intended to transform the market in favor of preferred resources and enable greater penetration of these resources at competitive cost. The Joint Parties are supportive of a measured approach to bringing storage applications into the mainstream using similar forward-thinking policy measures.[2] Properly designed program elements with clear metrics for cost-effectiveness and rules for coordination with existing planning and procurement vehicles are key for a smooth increase in the application of storage

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[1] The comments contained in this filing represent the position of the Solar Energy Industries Association and the Large-scale Solar Association as organizations, but not necessarily the views of any particular member with respect to any issue.

[2] On May 21, 2013, SEIA and the Electricity Storage Association (ESA) entered into a Memorandum of Understanding (MOU) to help grow solar energy markets and accelerate the deployment of grid-scale energy storage systems throughout the United States.

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technologies. While the ACR offers many detailed questions for parties to consider, the Joint Parties offer the following observations and principles for deliberation.

II. DEFINING THE PROBLEM

In considering new policy around procurement targets for storage applications, a useful first question is "what problems are we intending to solve?" Optimizing the grid reliably, safely, affordably and consistent with California's energy and environmental goals is a complex undertaking.

From the perspective of the Joint Parties, integration of variable resources and other grid services is a primary focus area for the role of storage. The discussion of integration is already within the scope of numerous proceedings at various state agencies and each are contemplating the issue utilizing institutional, market, and physical options as policy levers. These include, but are not limited to:

CAISO:

- FERC Order 764 Implementation
- Energy Imbalance Market Implementation with PacifiCorp
- Flexible Ramping Product
- Flexible Capacity and Must Offer Obligations
- Capacity Procurement Mechanism (CPM)
- Flexible Capacity & Local Reliability Resource Retention Mechanism (FLRR)
- Demand Response and Energy Efficiency Roadmap

CPUC:

- Resource Adequacy Proceeding – Flexible Capacity Procurement
- 2012 Long Term Procurement Plan (LTPP) – Renewable Integration
- Renewable Portfolio Standard – LCBF

Some of the policy options considered in each of these proceedings and processes may be more expensive and difficult to implement, while some may be more cost-effective and more feasible. The Joint Parties make no comment on that point here, but simply observe that when contemplating storage targets in the context of integrating more variable generation and other

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grid services the full suite of options available to the CPUC and policymakers should be taken into account.

III. RESPONSES TO ASSIGNED COMMISSIONER'S QUESTIONS

The Joint Parties comment on some, but not all, of the questions listed in the ACR below:

a. Please comment on this proposal overall, with emphasis on the proposed procurement targets and design.

As noted above, the Joint Parties support the deployment of energy storage and believe storage applications can play a role in optimizing the grid of the future. Flexibility in procuring within the identified use-case "buckets" could potentially allow a more efficient and cost-effective rollout of storage applications. Such flexibility will allow Load Serving Entities (LSEs) to accommodate the fact that the markets for transmission-connected, distribution-connected, and customer-side storage will develop independently of one another, at different times and at different rates. The Joint Parties also recommend the proposal further develop the definitions and specific services sought through each of the buckets. For example, depending on location, the same type of storage project could be interconnected to the distribution or the transmission system or similar services could be provided by customer-sited storage. While the Joint Parties also support a competitive procurement mechanism to procure storage technologies, utilizing a Renewable Auction Mechanism ("RAM)-style auction may present implementation challenges. The RAM both utilizes a standard contract and seeks a very narrowly-defined set of products and services based on years of renewables procurement through annual Request for Offer ("RFO") proceedings. In the Joint Parties' experience, this type of procurement is more appropriate for a market that is well developed. A RAM-style auction is not likely to be able to accommodate the breadth and diversity of services offered by storage in all three use-cases or the normal growing pains of an emerging market. For example, a standard contract will not be flexible enough to accommodate a variety of payment structures or to address technology specific needs. During this initial stage, allowing for normal contract negotiation and using various procurement forums, including all-source storage RFOs, with clear project viability and cost-effectiveness metrics, is more likely to result in procurement that provides the services the grid needs on a least-cost, best-fit basis.

Given the importance of strategic deployment of storage technologies, the procurement

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process also needs to be informed by transmission and distribution level system planning. Identifying where on the grid storage technologies have their highest and best use is the logical starting point. For example, the storage procurement protocols should include location information to guide bidding.

b. Comment on whether any of the projects proposed to count toward the procurement targets be excluded, or any additional projects included, and on what basis.

The Joint Parties have no comment on this item at this time.

c. Comment on how actual operational deployment should be defined for PIER- and EPIC-funded projects potentially eligible to count toward a utility's procurement target.

The Joint Parties have no comment on this item at this time.

d. Comment on how any utility's procurement that exceeds a target in one year should be addressed and considered for future procurement targets.

Exceeding procurement targets is not the most likely scenario for IOUs. Rather, it is much more likely that the IOUs will under-procure. The Joint Parties recommend that if an off-ramp mechanism is approved and utilized, then the IOU's MW obligation should be pushed to the next auction in a cumulative fashion. This will preserve the overall procurement signal to the market while providing further time to spur transformation and drive costs down the cost curve.

e. Comment on whether and to what extent utilities should be permitted flexibility in procuring among the use-case "buckets" (transmission, distribution, and customer-sited) of energy storage within one auction, and whether a minimum amount in each "bucket" must be targeted.

As noted above, the Joint Parties recommend some amount of flexibility in procuring within the identified use-case "buckets" as this will potentially allow for a more efficient and cost-effective rollout of storage applications. Such flexibility will allow Load Serving Entities (LSEs) to accommodate the fact that the markets for transmission-connected, distribution-connected, and customer-side storage will develop independently of one another, at different times and at different rates. Any flexibility mechanism, however, should be mindful of the need

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for regulatory certainty within each bucket in order to stimulate the market or sub-market and ultimately transform it.

Additionally, we recommend that the CPUC re-visit the targets in 2017, for example, to evaluate whether MWs should be reallocated given the evolving needs of the grid and state of the market.

f. Comment on the appropriate "off ramps" for relief from procuring up to each target and what metrics should be used to evaluate the appropriateness of the off ramps.

The Joint Parties support the importance of cost containment in this proposal. Procurement off ramps may offer protection from costly procurement of non-cost-effective storage resources; however, there should be a minimum, yet substantial, amount of procurement that occurs each period to stimulate the market. During implementation of the 20% RPS, there was a specific set of "above market funds" which IOUs were authorized to access. This type of incentive would balance the goals of Commission to protect ratepayers while ensuring that procurement does occur to feed the market's innovation process.

g. Comment on how this proposal may be coordinated with Renewable Portfolio Standard procurement plans, as set out in Public Utilities Code section 2837.

The Joint Parties recommend that storage procurement be closely coordinated with the RPS procurement plans and that clear metrics and rules be developed to appropriately value renewable energy projects with storage that participate in the RPS RFOs and allow these projects to count toward storage targets. In addition, the proposal should clearly delineate how storage targets should be incorporated into both the RPS procurement plans and in Long-Term Procurement Planning. Contracted storage assets via various procurement vehicles be incorporated into planning analyses, and feedback loops between the inter-related RPS procurement plans and this procurement effort should make variable resources look and feel more like the conventional resources which the grid operator is most familiar with.

h. Comment on the options presented for ESPs and CCAs to either a) be required to procure an equivalent amount of storage projects commensurate with the load they serve or b) have their customers assessed the costs of the IOU procurement of energy storage projects through

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a cost allocation mechanism.

The Joint Parties have no comment on this item at this time.

i. Comment on how the preliminary results of the cost-effectiveness models should be applied to the question of setting procurement targets.

Having a fully transparent methodology for accounting what benefits are captured by storage, how they are monetized and fully vetted will be key in creating the level playing field on which the ACR sets its future goals. The Joint Parties note that the DNV KEMA and EPRI analyses released as of the date of this ACR contain draft, not final, results. The cost-containment and off ramp mechanisms in this ACR are based in large part upon these preliminary methodologies, and the Joint Parties suggest further time is needed to digest the results and refine the methodologies both in the workshop process and in the forthcoming proposed decision in October per AB 2514. Many of the questions regarding program design (setting procurement targets and off ramp levels, for example) could be better-answered once more robust cost-effectiveness modeling and results are available.

j. Based on the preliminary results, should the utilities set a cost cap for offers to be submitted in the 2014 auction? If yes, what should the cap be and how should the auction be structured to incorporate the cap?

The Joint Parties have no comment on this item at this time.

IV. CONCLUSION

The Joint Parties appreciates the opportunity to provide these comments on possible implementation of storage procurement targets in California, and looks forward to participating further to achieve the goals of this proceeding.

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Respectfully submitted this July 3, 2013, at San Francisco, California.

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