

**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 ) R.10-12-007  
Cost-Effective Energy Storage Systems )

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**COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR CORPORATION ON THE ASSIGNED COMMISSIONER’S  
RULING PROPOSING STORAGE PROCUREMENT TARGETS**

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On June 10, 2013, Assigned Commissioner Peterman issued a ruling (ACR) which, among things, proposed storage procurement targets for load-serving entities. The ACR also scheduled an all-party meeting which took place on June 25, 2013. The California Independent System Operator Corporation (ISO) has participated actively in this proceeding, took part in the all-party meeting and hereby submits written comments on the procurement targets and other topics addressed in the ACR.

**I. INTRODUCTION**

Energy storage systems, like preferred resources such as demand response and energy efficiency, can play an important role in providing operational flexibility as well as possibly deferring the need for transmission and thermal generation resources.<sup>1</sup> The ISO thus agrees with

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<sup>1</sup> At the all-party meeting, the Sierra Club representative commented that the ISO was likely to “discount” energy storage, as well as demand response and energy efficiency, for transmission planning purposes. This is an inaccurate characterization of the ISO’s consideration of preferred resources, and energy storage, when analyzing the need for transmission solutions or alternatives, that was addressed in detail in Track 1 of the current LTPP proceeding, R.12-03-014. In that case, and consistent with the comments submitted in this docket, the ISO specifically stated that energy storage systems should be considered in resource procurement processes on a comparable basis to other resource types, based on their ability to deliver the necessary characteristics. (See ISO Ex. 6, pp. 15-16).

the three policy purposes identified in the ACR: 1) grid optimization; 2) integration of renewable energy; and 3) reduction of greenhouse gas emissions. The ISO has been at the forefront of evaluating needs for resources that can provide fast ramping and regulation service to integrate increasing amounts of intermittent resources, and to meet those needs, has been gaining experience with energy storage projects that are under construction and preparing to synchronize with the ISO network and participate in the energy market.<sup>2</sup>

The ISO submitted comments in this docket expressing agreement with the two basic principles expressed in the initial Staff Proposal: 1) removing market barriers so that energy storage can participate on a technology-neutral, level playing field with other resources; and 2) focusing on potential energy storage “end uses”, to the extent that this policy focus is on specific and well-defined operational needs.<sup>3</sup> In prior comments and workshop presentations, the ISO has described market modifications that will facilitate energy storage participation along with other resources.<sup>4</sup> Many of these market changes have now been implemented. In addition, the ISO will support future modifications and enhancements to ensure that the full mix of capable resources participating in our market provide the resource flexibility required to meet our renewable targets and maintain a stable, reliable grid.

The ISO believes that the general framework of the ACR is consistent with these policy goals and can potentially encourage the development of cost effective storage systems that can

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<sup>2</sup> The ISO is engaged with SCE, PG&E, SDG&E, and non-IOU entities to bring storage resources into the ISO market. 39 storage resources participated in the fall, 2012 ISO Market Simulation, as non-generator resources. Five storage resources are currently active in the ISO interconnection process representing approximately 18 MW of capacity with over 75 MWh of energy potential. These five resources are on target for ISO market participation demonstration and evaluation in late 2013 through 2014.

<sup>3</sup> ISO Comments on Initial Staff Proposal, pp. 2-3.

<sup>4</sup> The ISO’s workshop presentation is attached hereto.

provide system and ratepayer benefits. With these comments, the ISO seeks clarification and offers some modifications to the ACR.

## **II. COMMENTS**

### **A. Procurement Targets Should Focus on Operational and Performance Characteristics.**

The ACR sets out initial proposed energy storage procurement targets for all three IOUs, and within each target, a certain procurement amount for three “use” categories: transmission, distribution and customer.<sup>5</sup> The various services and ISO market products that storage can provide are highlighted in the ACR at pages 12-13. The ISO assumes that these categories are those addressed in the January 4, 2013 Phase 2 Interim Staff Report.<sup>6</sup> The applications (use categories) for energy storage were also discussed in the Staff Straw Proposal, which listed potential market products (such as ancillary services) that could be provided by energy storage systems.<sup>7</sup> Because energy storage systems connected at either the transmission or the distribution level can participate in the ISO market and potentially provide some or all of the same services described in the Staff proposal and listed in the ACR, the ISO suggests that the use categories for IOU procurement be clarified. Specifically, the Commission should clarify that the “transmission” and “distribution” buckets refer only to the level of grid interconnection and not potential functions of the storage resources.

Assuming that the transmission and distribution buckets describe electrical grid interconnection, the ISO encourages the Commission to focus on the operational characteristics of storage technologies and not particular categories of use or technologies alone. Furthermore,

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<sup>5</sup> ACR, p. 8.

<sup>6</sup> Interim Staff Report, pp. 9-13.

<sup>7</sup> Energy Storage Staff Proposal, p. 12.

these resources must be encouraged to participate in the ISO market so that the attributes of particular technologies will be available to meet grid needs. Rather than viewing the “use” buckets as establishing prescriptive procurement goals, the ISO looks forward to gaining experience with the different types of storage technologies, at various interconnection levels, that develop through market participation. Similar to the work that is being done to encourage demand response as a resource that can participate in the ISO market, the ISO is more than willing to work with the IOUs in specifying the operational characteristics needed to structure energy storage procurement RFOs.

The ACR correctly recognizes that the establishment of procurement targets and consideration of the various uses for energy storage systems must be subject to ongoing scrutiny. To that end, the ISO strongly supports the ACR’s cost effectiveness “off ramps” and the evaluation, measurement and verification program. The ISO agrees that the development and participation of various technologies will dictate a need for further adjustments to the procurement targets and competitive solicitation process, as well as additional modifications to encourage the growth of market participation while balancing ratepayer costs.

**B. Energy Storage Market Participation Must Include Resource Adequacy Counting Rules and a Must Offer Obligation.**

The ACR notes that parties to the resource adequacy proceeding (R.11-10-023) are evaluating a new flexible capacity product, but does not connect energy storage development and market participation to this flexibility requirement and to the expected need for energy storage systems to be able to provide resource adequacy capacity. In order to enable storage resources to participate in the resource adequacy program, the Commission will need to develop resource

adequacy counting rules for storage facilities.<sup>8</sup> To complement the Commission's counting rules, the ISO is developing must-offer obligations for use-limited resources, including energy storage. As the ISO noted in previous comments in this docket and others, establishing capacity counting conventions and must offer obligations will be essential to the robust development of energy storage. Any decision in this proceeding addressing procurement targets for energy storage must also take into consideration these topics.

Respectfully submitted

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<sup>8</sup> ACR, p. 14. In a proposed decision issued on May 28, 2013 in R.11-10-023, the ALJ adopted flexible capacity requirements for 2015, consistent with the ISO's position and joint parties' proposal in that proceeding.