

**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

**OPENING COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE  
TO ADMINISTRATIVE LAW JUDGE'S RULING ENTERING DOCUMENT  
INTO RECORD AND SEEKING COMMENTS**

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Pursuant Rules 1.4(a) and 6.2 of the California Public Utilities Commission’s (“Commission’s”) Rules of Practice and Procedure, and *Administrative Law Judge’s Ruling Entering Documents Into Record and Requesting Comments*, issued July 21, 2011 (“ALJ’s Ruling”) the California Energy Storage Alliance (“CESA”)<sup>1</sup> hereby submits these comments to the ALJ’s Ruling.

**I. INTRODUCTION.**

The post-workshop questions posed to the parties in the ALJ’s Ruling appropriately focus on barriers to deployment of energy storage that the Commission can address directly; and as CESA has recommended, they highlight the equal importance of procedural and policy coordination with other proceedings and agencies.<sup>2</sup> The documents introduced into the record present useful background material,<sup>3</sup> but CESA’s opening comments respond only to the specific questions posed in the ALJ’s Ruling. The three themes that inform CESA’s opening comments

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<sup>1</sup> The California Energy Storage Alliance consists of A123 Systems, Applied Intellectual Capital/East Penn Manufacturing Co., Inc., Beacon Power Corporation, CALMAC, Chevron Energy Solutions, Debenham Energy, Deeya Energy, Enersys, EnerVault, Exide Technologies, Fluidic Energy, General Compression, Greensmith Energy Management Systems, HDR, Inc., Ice Energy, International Battery, Inc., LG Chem, LightSail Energy, Inc., MEMC/SunEdison, Powergetics, Primus Power, Prudent Energy, RedFlow, RES Americas, Saft America, Inc., Samsung SDI, SANYO, Seeo, Sharp Labs of America, Silent Power, Sumitomo Electric, SunPower, Suntech, Sunverge, SustainX, Xtreme Power, and Younicos. 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>.

<sup>2</sup> See, *Comments of the California Energy Storage Alliance to Order Instituting Rulemaking Pursuant to Assembly Bill 2514 to Consider the Adoption of Procurement Targets for Viable and Cost-Effective Energy Storage Systems*, filed January 21, 2011.

<sup>3</sup> See, *Tackling Barriers to Entry in Energy Storage: Recommendations for Regulatory Policy & Action*, Attachment D to the ALJ’s Ruling.

concerning barriers to deployment of energy storage systems are: (i) the importance of basic education, or thought leadership, that is needed to dispel common misconceptions about energy storage as a *class* of technologies, (ii) the need for the Commission to sustain a proactive leadership role in making needed changes in regulatory policies, and (iii) the acute need for a methodology to determine cost-effectiveness of energy storage at the application level, taking full account of the multiple benefit streams that may be provided in any single application.

Primary applications, discussed below, that CESA recommends the Commission focus on initially include:

1. Customer side of the meter peak load reduction, *e.g.* Self Generation Incentive Program (“SGIP”) and Permanent Load Shifting (“PLS”).
2. Peak reduction alternatives in utility procurement.
3. Renewable integration, *e.g.*, T&D deferral and firming, shaping, and dispatching.
4. Frequency regulation, which can be provided concurrent with the applications listed above, independent of location of the energy storage system.

With the three major themes that CESA introduces above, and four key application listed above in mind, CESA responds to the questions posed in the ALJ’s Ruling.

## **II. BARRIERS IDENTIFIED BY THE WORKSHOP PRESENTERS AND THE COMMISSION IDENTIFY THE GREATEST IMPEDIMENTS TO DEPLOYMENT OF ENERGY STORAGE SYSTEMS IN CALIFORNIA IN VERY GENERAL TERMS.**

There is no shortage of lists of barriers to deployment of energy storage systems. In fact, summary discussion of energy storage in this proceeding has become somewhat of a barrier in itself. Long before now the dialogue should have moved from academic generalities to real-time specific actions. An anecdotal review of the current regulatory landscape readily distills to the themes referred to above.<sup>4</sup>

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<sup>4</sup> See, *e.g.*, *Policy and Planning Division Staff White Paper* (2010), p. 8, *National Energy Policy Recommendations*, IEEE-USA Policy Position Statement, (January 2010) p. 10. *Energy Storage for the Electricity Grid: Benefits and Market Potential Guide*, Sandia, February 2010; *The Power of Energy Storage: How to Increase Deployment to Reduce Greenhouse Gas Emissions*, UC Berkeley-UCLA, July 2010; *Request for Comments Regarding Rates, Accounting and Financial Reporting for New Electric Storage Technologies*, FERC Office of Policy & Innovation, June 11, 2010; *Electricity Energy Storage Technology Options, A White Paper Primer on Applications, Costs, and Benefits*, Electric Power Research Institute, (2010) p. 5-7. *The Role of Energy Storage With Renewable Electricity*, NREL, January 2010; *Bottling Electricity: Storage as a Strategic Tool for Managing Variability and Capacity in the Modern Grid*, DOE Advisory Committee, December 2008, p. 15, *Market Analysis of Electricity Energy Storage Systems: Final Report*, DOE, July 31, 2008, p. 15; *Recommendations of the Economic and Technical Advancement Advisory Committee* Final Report to the California Air Resources Board, February 11, 2008, p. 5-8.

At this point, inability to see the forest for the trees obscures the fact that this proceeding should be *the* regulatory policy engine driving specific actions that are already well defined and understood. The real challenge is turning thought into to action in ways that will have the most immediate concrete impact.

### **III. CERTAIN BARRIERS THAT WERE NOT IDENTIFIED DURING THE WORKSHOP ARE IMPEDING DEPLOYMENT OF ENERGY STORAGE SYSTEMS IN CALIFORNIA.**

The early promise of AB 1514, and expedited opening of this proceeding in 2010 well before it was required<sup>5</sup> is at risk of becoming an impediment. It is not obvious, but the momentum of this proceeding may become dissipated by two developments that have troubling implications: (a) allowing the proceeding to be a “dumping ground” for barriers that are effectively avoided by being referred to this proceeding for resolution at some future indeterminate date, and (b) lack of “referrals” of energy storage to other proceedings where energy storage should already be integrated – such as long term procurement and resource adequacy.<sup>6</sup> In the proceeding dealing with the SGIP, for example, parties have suggested that stand alone energy storage should not be included in the program because the topic should be addressed in this proceeding instead.<sup>7</sup> A similar suggestion has been made regarding PG&E’s application for approval of initial funding for a new pumped storage facility.<sup>8</sup> These examples are diametrical opposed to the intent of AB 2514. Rather, this proceeding should be proactively doing everything possible to *accelerate* these important avenues for commercial deployment of operational energy storage projects.<sup>9</sup>

#### **A. Barriers that Can Be Mitigated or Removed by the Commission Itself.**

The most obvious regulatory process related to energy storage within the Commission’s complete control is this proceeding. CESA recommends that the Commission adopt a schedule with recognizable finite milestones as soon as possible in order to avoid “rulemaking fatigue.” This proceeding should not be slated as a long term vehicle for further study of promising energy

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<sup>5</sup> On numerous occasions CESA has previously expressed its gratitude for the Commission’s opening this proceeding on its own motion in December 2009, fifteen months before it was required to do so by AB 2514 (March 2012).

<sup>6</sup> R.10-05-006, and R.09-10-032, respectively.

<sup>7</sup> R.1-05-004.

<sup>8</sup> A.10-08-011.

<sup>9</sup> *See*, Public Utilities Code § 2836(a)(4) “Nothing in this section prohibits the commission’s evaluation and approval of any application for funding or recovery of costs of any ongoing or new development, trialing, and testing of energy storage projects or technologies outside of the proceeding required by this chapter.”

storage technology. Instead it should be a forum to identify targets for immediate action at the Commission and elsewhere. Several examples are front and center today.

First, the Commission should promptly issue a final decision that clearly includes stand alone energy storage systems and energy storage systems coupled with other eligible generation technology, including solar eligible under the California Solar Initiative, and should establish a firm schedule for lifting the suspension of the SGIP”.<sup>10</sup> This proceeding has been identified as a near term bridge for energy storage technology that is commercial but in need of a modest incentive program.

Second, the Commission should greatly expand the scope and budget of PLS programs that are embedded in the 2012-2014 Utility Demand Response Program, Pilot and Budget Applications before the end of 2011.<sup>11</sup> The PLS program targets an energy storage industry segment with the deepest discharge cycles, such as thermal energy storage and long-duration battery storage. It does not aid the entire spectrum of energy storage technologies; focusing instead on those that are capable of long duration load shifting, commercially available today, and can have very significant near term market impact.

Third, the Commission should order the utilities to open an immediate market opportunity to begin incorporating energy storage into its procurement planning to by initiating pilot competitive solicitation process. This third action is very important, as the SGIP and PLS programs listed above only address energy storage projects on the customer-side-of-the-meter. A Pilot utility procurement programs would address other key applications of energy storage and other strategically important ownership models, namely, utility and third-party-owned energy storage.

**B. Barriers That Other California Energy Regulatory Agencies Must Mitigate or Remove With the Commission’s Assistance.**

The California Energy Commission (“CEC”) should follow the Commission’s example and begin implementation of AB 2514 now by merging it with the process of developing regulations to implement SB 2 (1x) that is underway, so that the 33% renewables standard (“RPS”) and this proceeding are directly interconnected. It is not to late to graft an energy storage element into the regulatory process that is underway. In any event, though, the CEC

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<sup>10</sup> The SGIP was suspended on February 2, 2011.

<sup>11</sup> A.11-03-001, *et al.*

should begin the regulatory process that is mandated by AB 2514 as it applies to local publicly owned utilities.

The CEC should open a rulemaking proceeding in conjunction with the Commission to develop load management standards and associated tariffs that incentivizes deployment of energy storage. The CEC has deliberately refrained until now from exercising the very broad standard-setting authority it has under the Warren-Alquist Act, in part because the process of developing implementing regulation would be lengthy. While true, the challenge should be embraced rather than deferred indefinitely, because of the major impact possible in creating an impetus for dynamic pricing needed to compliment end incent energy storage technologies.

The California Independent System Operator (CAISO) should work with the Commission to accelerate the proxy demand response, and regulatory energy management ancillary service programs that are in early stages of implementation. Longer term, efforts to actively collaborate could focus on development of pay for performance, or “mileage-based” long term contracts to provide capacity, energy and ancillary services.

#### **IV. THE COMMISSION SHOULD LEVERAGE SB 1 (2X) IMPLEMENTATION AND PLACE A HIGHER PRIORITY ON THIS PROCEEDING.**

The Commission should either (i) reverse the current two-phased order of priority or (ii) compress both policy issues and development of a cost-benefit evaluation to take place concurrently so that a sense of urgency and focus on the most difficult issues are addressed immediately rather than deferred to be dealt with on a completely unspecified timetable. Methodology. There are a variety of ways to imbue the kind of “Manhattan project,” or “moon landing” mentality that is clearly required. The way the Commission is currently implementing Senate Bill (SB) 2 (ix) is a perfect example of the attitude and staffing required for deployment of energy storage.

To adequately track and execute all of the specific actions the Commission is required to manage full implementation of AB 2514, the Commission at a minimum, needs to name a seasoned executive-level individual “single-point accountability” to lead the administrative and strategic direction of the proceeding under the Assigned Commissioner’s immediate oversight. Further, the current implementation of SB 1 (2X) is a perfect opportunity to leverage energy storage to accelerate the deployment of renewable energy. CESA recommends that next workshop should be scheduled as soon as possible to solicit stakeholder input on how to

incorporate energy storage into current RPS-related utility procurement, including the P.U. Code Section 399.20 feed in tariff track of the proceeding.

Energy storage's ability to improve the efficiency of the grid itself, therefore enabling the deployment of more renewable energy more cost-effectively for ratepayers should be one of this proceeding's highest priorities. Already, large renewable energy developers are looking into ways they can develop and finance energy storage projects paired with renewables in California. Because a "renewable product" that is firmed, shaped, or dispatched with energy storage would have greater value than a "pure renewables" product, procurement mechanisms and the pricing of any such firmed, shaped, or dispatched renewable product should reflect that benefit. Currently, the RPS procurement processes do not make this possible, thus creating a major barriers for energy storage deployment to assist with renewable project development.<sup>12</sup>

**V. CONCLUSION.**

CESA appreciates this opportunity to respond to submit comments to the ALJ's Ruling, and looks forward to working with the Commission and other stakeholders throughout the entire proceeding.

Respectfully submitted,



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Date: August 29, 2011

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<sup>12</sup> CESA does not offer specific solutions in the context of these opening comments, but does raise the issue as one that is very important to resolve as soon as possible.