

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

Order Instituting Rulemaking to Consider Smart
Grid Technologies Pursuant to Federal Legislation
and on the Commission's own Motion to Actively
Guide Policy in California's Development of a
Smart Grid System.

R.08-12-009
Filed December 18, 2008

**OPENING COMMENTS OF THE CALIFORNIA ENERGY STORAGE
ALLIANCE ON PROPOSED DECISION**

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June 10, 2010

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Pursuant to Rule 14.3 of the California Public Utilities Commission' ("Commissions") Rules of Practice and Procedure the California Energy Storage Alliance ("CESA")¹ hereby submits these comments in response to Commissioner Nancy E. Ryan's *Proposed Decision Adopting Requirements for Smart Grid Deployment Plans Pursuant to Senate Bill 17 (Padilla), Chapter 327, Statutes of 2009*, issued May 1, 2010 ("Proposed Decision").

I. INTRODUCTION.

CESA agrees wholeheartedly with the Proposed Decision's embrace of energy storage in concept: ". . . we note that several parties commenting on the role of storage commonly view storage as not just a simple substitute for fossil generation, but a technology that fulfills a complex role. As these parties point out, storage benefits can include reduced emissions, a reduced need for transmission, and a technology that both shaves peaks and increases the reliability of the grid. These benefits should be part of the assessment of the storage component of any Smart Grid project. Those filing deployment plans should make every effort to assess all the benefits associated with the implementation of this new technology." (Proposed Decision, p. 72). However, CESA also submits that the Commission should also take the next logical step

¹ The California Energy Storage Alliance consists of A123 Systems, Altairnano, Applied Energy Capital, Beacon Power, Chevron Energy Solutions, Debenham Energy, Deeya Energy, East Penn International, Enersys, Enervault, Fluidic Energy, Ice Energy, International Battery, Powergetis, Prudent Energy, PVT Solar, Samsung SDI, SEEO, Suntech, SustainX, Xtreme Power and ZBB Energy Corporation. The views expressed in these Opening Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. <http://www.storagealliance.org/>

now, and *order* California’s electric utilities to include viable and cost-effective energy storage technologies as a class of resources comparable to generation in their deployment plans.²

II. THE COMMISSION SHOULD ORDER ELECTRIC UTILITIES TO INCLUDE COMMERCIALY AVAILABLE AND COST-EFFECTIVE ENERGY STORAGE TECHNOLOGIES IN THEIR DEPLOYMENT PLANS.

As noted above the Discussion Section of the Proposed Decision only says that those filing deployment plans should “make every effort to assess all the benefits associated with [energy storage] technology. This is not enough. First, the utilities should do more than simply assess the benefits of energy storage – they should also include energy storage in their deployment plans as viable and cost-effective options to fossil fuel generation resources and siting new transmission and distribution assets. Second, CESA recommends that the Commission define energy storage as including all commercially available technologies that are capable of storing energy for dispatch or displacement of energy on the grid at a later time. This definition would include all forms of energy storage, such as mechanical, thermal and chemical means of storing energy. Third, the Proposed Decision’s Findings of Fact, Conclusions of Law and Ordering Paragraphs should also include a mandatory requirement to give storage equal dignity in evaluation of reasonable procurement options and explain choices to one or the other of the two classes of technologies. To give such an important strategic policy determination real meaning, the Commission should adopt all of the modifications to the Proposed Decision set forth in Appendix A to these comments.

CESA strongly agrees with EDF’s recommendation that the utility deployment plans include the following three points:

1. Enable maximum access by third parties to the grid, creating a platform for innovation in technology and services
2. Have the infrastructure and policies necessary to enable and support the sale of demand response, energy efficiency, distributed generation and storage into wholesale energy markets as a resource, on equal footing with traditional generation resources; and

² CESA further submits that energy storage should be afforded the same consideration in at least two other planning-related open rulemaking dockets at the Commission, namely: Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long Term Procurement Plans, R.10-05-006, filed May 6, 2010, and Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Refinements, and Establish Annual Local Procurement Obligations, R.09-10-032, filed October 29, 2009.

3. Significantly reduce the total environmental footprint of the current electric generation and delivery system in California.

These additional principles will help ensure a competitive market, continued innovation and lower cost for consumers.

Application of commercially available and cost effective energy storage will be relevant to all eight elements of the Smart Grid deployment plan structure proposed in the decision:

1. Smart Grid vision statement
2. Deployment baseline
3. Smart Grid Strategy
4. Grid Security and Cyber Security Strategy
5. Smart Grid Roadmap
6. Cost Estimates
7. Benefits Estimates
8. Metrics

Energy storage, in its many forms, is a fundamental tool for each of these categories. For example, it is widely accepted that without local energy storage, achieving grid security would be nearly impossible. Because utilities have not evaluated energy storage as part of their procurement planning to date, simplistic consideration of direct benefits alone is insufficient. Adequate consideration of the many benefits and application of energy storage toward achieving comprehensive smart grid deployment plans will require an explicit order from the Commission.

III. THE COMMISSION'S SMART GRID VISION AND THE VISION SECTION OF ELECTRIC UTILITY DEPLOYMENT PLANS SHOULD INCLUDE ENERGY STORAGE

CESA agrees with the vision set forth by the Commission, that the smart grid vision should include: 1. Smart Markets, 2. Smart Customers and 3. Smart Utilities. It is imperative that energy storage be recognized as a key enabling technology to help each of these constitute parts be 'smart'. As stated in the Proposed Decision, a Smart Grid should: "accommodate all generation and storage options – a Smart Grid should continue to support traditional power loads, and also seamlessly interconnect with renewable energy, micro-turbines, and other distributed generation at local and regional levels." (Proposed Decision, p. 29). Much like renewable energy and generation, energy storage can be centralized or distributed, sited on the utility side of the meter or the customer side of the meter. The placement of storage will in large part determine its total system value to ratepayers. Controllable, dispatchable, cost-effective storage will help consumers, utilities and market achieve greater local and system efficiency,

lower cost, and enable smarter energy choices. To effectuate the inclusion of energy storage in the smart grid vision and utility deployment plans, CESA recommends modification of the Findings of Fact set forth in Appendix A. Moreover, the graphic set forth at page 33 of the Proposed Decision should be modified to include energy storage in the columns titled “Smart Market” as well as “Smart Consumer” and “Smart Utility”, as energy storage is a key smart grid asset for each of these major stakeholder groups.

IV. **CONCLUSION.**

CESA appreciates this opportunity to comment, and looks forward to continuing to work with the Commission and the parties to this proceeding.

Respectfully submitted,



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APPENDIX A

PROPOSED FINDING OF FACT, CONCLUSIONS OF LAW, AND ORDERING PARAGRAPHS

CESA asks that the Commission make the following modifications to the Proposed Decision. A proposed addition is shown in bold italics. Numbered paragraphs should be deemed renumbered to accommodate additions. The page number reference in brackets is to the page on which the original finding of fact appears in the Proposed Decision.

Findings of Fact.

[p.108] “16. A presentation of a Smart Grid Vision Statement that shows that the proposed deployment plan advances a “Smart Electric Market” that is transparent and demand responsive, provides pricing information and promotes distributed power *and energy storage* would be consistent with SB 17 policies and initiatives.”

Conclusions of Law.

[p. 118] “26. *It is reasonable to require smart grid deployment plans to include commercially available and cost-effective energy storage technologies.*”

Ordering Paragraphs.

[p. 120] “3. In the Smart Grid Vision Statement section of its Smart Grid deployment plan, Pacific Gas and Electric Company, Southern California Edison Company and San Diego Gas & Electric Company each shall address how the grid can achieve the following policies contained in Senate Bill 17:

- a. Be self-healing and resilient;
- b. Motivate consumers to actively participate in the operations of the grid;
- c. Resist attack;
- d. Provide higher quality of power and avoid outages;
- e. Accommodate all generation and *energy* storage options;
- f. Enable electricity markets to flourish;
- g. Run the grid more efficiently; and
- h. Enable penetration of intermittent power generation sources.

Each Smart Grid Vision Statement must also include three sections addressing (a) Smart Market; (b) Smart Customer; and (c) Smart Utility.

[p. 121] “6. Pacific Gas and Electric Company, Southern California Edison Company and San Diego Gas & Electric Company each shall recommend in the Smart Grid Strategy section of its Smart Grid deployment plan the adoption of *energy storage technologies*, communications protocols and interoperability standards.”

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of ***Opening Comments of the California Energy Storage Alliance*** on all parties of record in proceeding ***R.08-12-009*** by serving an electronic copy on their email addresses of record and by mailing a properly addressed copy by first-class mail with postage prepaid to each party for whom an email address is not available.

Executed on June 10, 2010, at Woodland Hills, California.



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