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

COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON ORDER INSTITUTING RULEMAKING ON CALIFORNIA’S DEVELOPMENT OF A SMART GRID SYSTEM

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February 9, 2009
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Pursuant to Ordering Paragraph Number 3 of the Order Instituting Rulemaking, R.08-12-009, issued December 18, 2008 (“OIR”), and Rules 1.4(a) and 6.2 of the California Public Utilities Commission (“Commission”) Rules of Practice and Procedure, the California Energy Storage Alliance (“CESA”)\(^1\) hereby submits these comment on the 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. CESA supports the scope of the proceeding set forth in the OIR, and concurs in the Commission’s preliminary (i) classification of the proceeding as quasi-legislative, and (ii) the determination that hearings should not be needed. CESA also responds in general terms on certain of the questions posed in Section 4.1.3 of the OIR.

I. INTRODUCTION.

In these comments, CESA commends the Commission for acting to implement the requirements of the Energy Independence and Security Act of 2007 (“EISA”), and expresses its strong interest in, and support for, the Commission’s determination to fully implement the EISA, and actively consider setting policies, standards and protocols to guide the development of a smart grid system and integration of new technologies for California. In this proceeding, CESA intends to advocate for maximum focus on the benefits of energy storage and peak shaving

technology in its many forms, including battery and thermal energy storage, as an integral, indeed central, part of the smart grid.

II. THE COMMISSION CORRECTLY EMPHASIZES THE IMPORTANCE OF ENERGY STORAGE AND PEAK SHAVING TECHNOLOGY TO THE SUCCESS OF THE SMART GRID IN THE GOALS OF THE OIR.

CESA applauds the emphasis on energy storage that is evident throughout the OIR. “The proceeding will consider setting policies, standards and protocols to guide the development of a smart grid system and facilitate integration of new technologies such as distributed generation, storage, demand-side technologies, and electric vehicles.” (OIR, at page 2). Of course, the Commission’s broad policy objective picks up directly from EISA’s preamble: “Since ‘smart grid’ is a new concept, EISA describes what constitutes a smart grid and what it can do. Section 1301 goes on to state:

… and to achieve each of the following, which together characterize a Smart Grid:

…

(7) Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.” (OIR, at pages 4-5).”

The Commission goes on to appropriately link California’s research and implementation efforts that are targeting integration of generation and storage technologies with those taking place at the national level as a key enabler of the smart grid: “The Department of Energy (DOE), pursuant to § 1303(a) of EISA, has created a Smart Grid Task Force to ensure the successful implementation of EISA. The DOE through its Electric Advisory Committee has also recently created a smart grid subcommittee as required by EISA § 1303(b). The Smart Grid Task Force has adopted a working definition of smart grid to have the following characteristics:

…

• Accommodating all generation and storage options.” (OIR, at pages 10-11).

Finally, the Commission properly emphasizes the distributed nature of storage and related integrating technology:
“We believe that it is important to set policies to ensure functionality and interoperability with technologies such as distributed generation, plug-in hybrid and electric vehicles, and distributed storage.” (OIR, at pages 13-14).

Rapid deployment of distributed energy storage has numerous positive attributes that can contribute significantly to several of the state and nation’s energy reliability and environmental goals, including:

- driving transformational improvements in electric system efficiency and reliability;
- enhancing power plant capacity utilization factors relieve upward pressure on rates from T&D capex;
- reducing CO2 and NOx emissions from utility generation;
- helping integrate variable renewable power into the grid and greatly enhancing the value of renewables;
- dampening system volatility by shifting power demand from peak to off-peak periods; and
- increasing reliability and power quality for end use customers.

“Smart” distributed energy storage is deployable in utility-scale capacity as a strategically critical resource in the evolution of the smart grid. Distributed energy storage in its several forms provides an immediate opportunity to address several energy challenges faced by California and the Nation.

III. CESA’S INITIAL RESPONSES TO THE SPECIFIC QUESTIONS POSED IN THE OIR.

CESA responds very briefly here to a few of the specific questions posed by the OIR. The fact that all of the questions are not addressed should not, however, be taken as lack of interest, because the CESA may comment more extensively on the responses of other parties to these and other questions in replies to initial comments that are currently due to be filed with the Commission on March 9.
“Principles and Criteria”

Question 1. Does the following list include the appropriate principles and criteria to guide the Commission’s decisions in this proceeding regarding the possible development of a smart grid in California? Explain any modifications you propose.

CESA response: CESA supports utility ownership of smart grid technology, including energy storage, and recommends adding an additional principle of “free market competition and open standards”, particularly for those components of the Smart Grid that will integrate with utility distribution systems. This global principle supports economic development in California, as well as the efficacy of interoperability and cost effectiveness.

“State of the Smart Grid in California”

Question 11. What progress has each utility made toward establishing a smart grid? In answering this question, please provide details on progress related to each of the ten characteristics identified in EISA § 1301 and repeated below:

. . .

  g. Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.” (OIR, at page 17).

CESA Response: The Commission is by no means beginning with a clean slate in this OIR, and it is clear that the California investor owned utilities have made varying degrees of progress in recent years. Each utility is certainly well equipped to (and will of course) answer the question, but CESA’s simple response is that the tip of the iceberg has only begun to appear and there is considerable progress that need be made.  

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2 See e.g., the Commission’s recent decision adding a $2 /KW incentive for advanced Energy Storage in California’s Self-Generation Incentive Program (D.08-11-044, issued November 1, 2008) in Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues (R.08-03-008, filed March 13, 2008).

“Standards as Part of a Smart Grid”

**Question 12.** Are standards needed as part of a smart grid? If so, in what areas are standards needed to integrate components into the grid, e.g., interoperability standards for distributed generation, distributed storage, plug-in hybrid and electric vehicles, home area networks, in-home displays, energy management systems, etc. (OIR, at page 18).

**CESA Response:** It is axiomatic that standards are required to achieve integration and interoperability of all technologies that are necessary elements of the smart grid. However, as has been shown in the software and telecommunications industries, technology innovation and cost effectiveness can be optimized by the existence of *open* standards. Finally, although there are efforts underway to address load management using permanent load shifting and dispatchable demand response, the results thus far are very limited and could be greatly expanded with modest additional interagency collaboration.4

“Deploying a Smart Grid in California”

**Question 24.** How should a smart grid be deployed? What should a utility do in order to successfully deploy smart grid technology? (OIR, at page 21).

**CESA Response:** The answer to this question is complex and will require significant collaboration between utilities and the various stakeholders that will be involved in deploying California’s smart grid. CESA’s primary comment at this stage in the proceeding is to encourage the Commission to consider, in addition to the investor-owned utilities, the many other stakeholders needed to deploy the smart grid. CESA also encourages the Commission to consider non-traditional business models in addition to utility ownership and deployment of supply-side resources. For example, the smart grid may include microgrids that are owned and operated by third parties who will need to interface with utility distribution grids or, alternatively, demand-side resources that are owned and rate-based by utilities and the California Independent System Operator.

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IV. CONCLUSION.

CESA appreciates this opportunity to comment initially on the OIR, and looks forward to working with the Commission and other stakeholders to achieve the smart grid goals and objectives articulated in the EISA and by the Commission in the OIR.

Respectfully submitted,

[Signature]

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CALIFORNIA ENERGY STORAGE ALLIANCE

Date: February 9, 2009
CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of Comments of the California Energy Storage Alliance on Order Instituting Rulemaking on California Development of a Smart Grid System 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 February 9, 2009, at Woodland Hills, California.

[Signature]

Michelle Dangott