

**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)

**COMMENTS OF CALPINE CORPORATION  
ON THE ORDER INSTITUTING RULEMAKING**

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January 21, 2011

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Pursuant to the December 16, 2010 *Order Instituting Rulemaking* (“OIR”) and Rules 1.4 and 6.2 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), Calpine Corporation (“Calpine”) respectfully submits these comments.

**I. DESCRIPTION OF CALPINE AND CALPINE’S INTEREST IN THIS PROCEEDING**

Calpine is the largest non-utility generator in California with approximately 5,800 MW of gas-fired generation in and around California, and more than 700 MW of additional gas-fired generation under development. From its large portfolio of gas-fired generation, Calpine is and will continue to be a major supplier of operational flexibility to California wholesale power markets. In addition, Calpine is keenly interested in adding operational flexibility to its portfolio through upgrades and retrofits to existing units and potentially investing in new units. Consequently, Calpine has a compelling interest in the regulatory framework for other potential sources of operating flexibility, such as storage.

In addition, Calpine’s subsidiary, Calpine PowerAmerica-CA, LLC, is an Energy Service Provider (“ESP”) that may be subject to regulations regarding the procurement of storage that might result from this rulemaking.

## **II. ISSUES TO BE CONSIDERED IN THIS PROCEEDING**

### **A. What Distinct Categories Will Allow the Commission to Effectively Evaluate the Cost-Benefit of Storage?**

Sections four and five of the whitepaper identify many relevant categories of the costs and benefits of storage. These include shifting power from off-peak to peak periods and capacity/RA value. However, Calpine believes that many of the categories of benefits identified in section five overlap and may lead to inflated estimates of value of storage if they are treated as additive.

For example, as described in the whitepaper, “[e]nergy bill savings from shifting demand to off-peak time,”<sup>1</sup> “[m]ore efficient use of renewable and other off-peak generation,”<sup>2</sup> and “[l]ower GHG and other emissions”<sup>3</sup> all involve using storage presumably to capture relatively low-GHG off-peak energy for use during on-peak periods. The Commission must first develop categories that do not overlap in this manner and thus artificially inflate the value of storage, in order to effectively determine the cost-effectiveness of storage.

Similarly, the distinction between the categories of the economic and reliability benefits of storage in section five of the whitepaper seems artificial. Many of the articulated benefits have both reliability and economic aspects. For example, “[r]educed need for peak generation capacity” may have reliability consequences, but it also obviates the need for purchases of RA capacity— an economic benefit.<sup>4</sup> If the distinction between economic and reliability benefits is even helpful or meaningful in the determination of the cost-effectiveness of storage, the Commission must develop analytic techniques that account for their potential overlap.

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<sup>1</sup> OIR, Attachment A, at 6.

<sup>2</sup> OIR, Attachment A, at 7.

<sup>3</sup> OIR, Attachment A, at 7.

<sup>4</sup> OIR, Attachment A, at 6.

Calpine suggests that the Commission determine a coherent and mutually exclusive set of cost and benefit categories that will allow it to evaluate the cost-effectiveness storage. Calpine suggests that a set of workshops may be the best approach to determine those categories.

**B. Will the Method Determined for the Cost-Benefit Evaluation of Storage Allow for Effective Comparison with Other Resources?**

Perhaps even more important than developing an effective and comprehensive framework for the analysis of the costs and benefits of storage is developing a framework that facilitates the comparison of many different types of resources. The Investor-Owned Utilities use proprietary valuation techniques to assess offers in their solicitations for conventional and Renewable Portfolio Standard resources. In addition, the Commission recently approved another methodology for assessing the cost-effectiveness of Demand Response.<sup>5</sup> This OIR potentially could introduce yet another cost-effectiveness methodology. To the extent possible, workshops should consider an overarching methodology that facilitates comparisons of the cost-effectiveness of different types of resources.

**C. Should Storage Procurement Mandates be Implemented?**

With respect to the use of the results of analyses of the cost-effectiveness of storage, Calpine notes that AB 2514 grants the Commission broad discretion to impose procurement mandates. Section 2836.(a)(1) of the Public Utilities Code specifies:

[o]n or before March 1, 2012, the commission shall open a proceeding to determine appropriate targets, *if any*, for each load-serving entity to procure viable and cost-effective energy storage systems to be achieved by December 31, 2015, and December 31, 2020. As part of this proceeding, the commission may consider a variety of possible policies to encourage the cost-effective deployment of energy storage systems, including refinement of existing procurement methods to properly value energy storage systems. (Emphasis added)

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<sup>5</sup> See Decision 10-12-024.

Further, section 2836.2(d) of the Public Utilities Code requires the Commission to “[e]nsure that the energy storage system procurement targets and policies that are established are technologically viable and cost effective.” If fair comparisons of the cost-effectiveness of different classes of resources yield the conclusion that storage is not cost-effective, then Calpine encourages the Commission not to impose storage procurement mandates. However, a fair comparison is only possible if the method ultimately determined by the Commission for the cost-benefit evaluation of storage allows for effective comparison with other resources. Here again, Calpine suggests that a set of workshops may be the best approach to ensure that the Commission’s evaluation of storage will allow the comparison of storage with other options.

**III. CATEGORIZATION, NEED FOR HEARING OR SCHEDULE**

Calpine does not object to the categorization of this proceeding as “quasi-legislative.” Furthermore, Calpine does not believe that hearings are necessary. However, as suggested above, Calpine believes that a series of workshops may be necessary to help the Commission determine the appropriate method of its evaluation of the costs and benefits of storage.

Respectfully submitted this January 21, 2011, at Dublin, California

By: \_\_\_\_\_ /s/

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## VERIFICATION

I am an officer of the corporation herein, and am authorized to make this verification on its behalf. The statements in the foregoing document are true of my own knowledge, except as to the matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on January 21, 2011, at Dublin, California.



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Avis Kowalewski

Vice President, Government and Regulatory Affairs

## CERTIFICATE OF SERVICE

I, Judy Pau, certify:

I am employed in the City and County of San Francisco, California, over eighteen years of age, and not a party to the within entitled cause. My business address is 505 Montgomery Street, Suite 800, San Francisco, California 94111.

On January 21, 2011, I caused the following to be served:

### COMMENTS OF CALPINE CORPORATION ON THE ORDER INSTITUTING RULEMAKING

enclosed in a sealed envelope, by first class mail on the parties listed as “Parties” and “State Service” on the attached service list R.10-12-007 who have not provided an electronic mail address, and via electronic mail to all parties on the service list who have provided the Commission with an electronic mail address.

Executed on January 21, 2011 at San Francisco, California.

/s/ Judy Pau  
Judy Pau

#### VIA US MAIL

Amy C. Yip-Kikugawa  
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#### VIA EMAIL

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