

**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.

Rulemaking 10-12-007  
(Filed December 16, 2010)

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E) REPLY  
COMMENTS ON ADMINISTRATIVE LAW JUDGE'S RULING ENTERING INITIAL  
STAFF PROPOSAL INTO RECORD AND SEEKING COMMENTS DATED  
DECEMBER 14, 2011**

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DECEMBER 14, 2011**

Pursuant to the December 14, 2011 *Administrative Law Judge’s Ruling Entering Initial Staff Proposal Into Record And Seeking Comments* in the above-captioned proceeding (“ALJ Ruling”), Pacific Gas and Electric Company (“PG&E”) submits its reply comments to opening comments filed on January 31, 2012 by a number of parties. PG&E’s reply comments address the four categories identified in Section 4.2 of the Staff Proposal attached to the ALJ’s Ruling.<sup>1/</sup>

**A. General Comments**

PG&E reiterates its support for an environment where storage can compete on equal footing with other resource alternatives, whether demand-side or supply-side. PG&E also continues to support the Commission’s efforts to identify and remove impediments that limit or hinder the ability for energy storage to fairly compete with other alternatives. Highlights from PG&E’s opening comments may be summarized as follows:

- PG&E opposes the setting of procurement targets for energy storage.

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<sup>1/</sup> Those categories are: (1) Regulatory Framework; (2) Cost Effectiveness; (3) Roadmap; and (4) Procurement Objectives.

- The California Standard Practice Manual (“SPM”) tests are useful in evaluating the cost-effectiveness of energy storage. The Commission should include only demonstrated benefits into the SPM test calculations and avoid double counting.
- The endpoint of the roadmap should be an environment where energy storage technologies can compete on a level playing field with other technology alternatives. Near-term and long-term milestones should focus on removing challenges or impediments to energy storage.

## **B. Regulatory Framework**

The California Energy Storage Alliance (“CESA”) again proposes in its Opening Comments (“CESA Opening Comments”) that the California Energy Commission (“CEC”) begin implementation of AB2514 now by merging it with the process of developing regulations to implement SB 2 (1x) that is underway, so that the 33% RPS and this proceeding are directly interconnected<sup>2</sup>. PG&E reiterates its opposition to this proposal. The legislature has already determined the process for energy storage and instructed the Commission to determine appropriate targets, if any, to procure viable and cost-effective energy storage systems. CESA’s proposal appears to simply circumvent the instructions of AB2514 and should therefore be rejected.

While PG&E continues to question the intended purpose of the Matrix in Figure 1 of the Staff Proposal (the “Storage Barriers Regulatory Matrix”), PG&E concurs with the comments presented in Southern California Edison Company’s Opening Comments (“SCE Opening Comments”) that it would be helpful if the Matrix would highlight the proceedings which will directly contribute to resolving a given barrier and identify the specific action needed to resolve

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2 CESA Opening Comments at p. 7.

that barrier, identify other proceedings that can inform or influence the barrier, but will not directly resolve the barrier, and identify those proceedings that have only a tangential relationship to storage and simply require collaboration.<sup>3/</sup>

### **C. Cost Effectiveness**

In its Opening Comments, The Vote Solar Initiative (“Vote Solar Opening Comments”) uses without defining the term “stacking benefits” which can be misconstrued as double-counting storage’s resource adequacy (“RA”) capacity value.<sup>4/</sup> PG&E believes it would be inaccurate to essentially double-count the same type of capacity benefit of storage to increase the compensation stream for storage services. Capacity from operationally flexible resources like storage may qualify for resource adequacy (“RA”) capacity benefits. That capacity can also earn a premium to the extent it qualifies to provide one or more ancillary services. However, the resource’s contribution to reliability (RA value) can only be counted once.

The Opening Comments of Sierra Club California (“Sierra Club Opening Comments”) also refers to “stacked benefits” but without defining it.<sup>5/</sup> However, in another part of its comments, the Sierra Club endorses the CEC’s Public Interest Energy Research (“PIER”) Program report’s concept of valuing storage, stated as follows:

“Determining which services/applications and related value streams may be aggregated to maximize financial return to a storage system without double-counting benefits or committing the same resource to incompatible uses at one time.”<sup>6/</sup>

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3/ SCE Opening Comments at pp. 4-6.

4/ Vote Solar Opening Comments at p. 4.

5/ Sierra Club Opening Comments at p. 15.

6/ *Id.* at p. 13 [citing to PIER Report at p.9.]

PG&E agrees with the foregoing PIER Report's stated concept for valuing storage which allows for storage to be properly accounted for while prohibiting double-counting of benefits or committing the same resource to incompatible uses at one time.

**D. Roadmap**

**i. Vote Solar and Sierra Club recommendations on the energy storage roadmap are unsubstantiated**

Vote Solar<sup>7</sup> and Sierra Club<sup>8</sup> recommend setting an interim procurement target between 450MW and 1100MW as part of the energy storage road map. PG&E does not agree with either of these proposals as they represent unsubstantiated, arbitrary values for energy storage procurement. Resource needs and procurement for energy storage should be based on the determination of system needs through the long term procurement plan ("LTPP") process. Rather than setting arbitrary procurement targets, PG&E recommends that the Commission continue to support pilot projects and fund feasibility studies to build experience while the future resource needs, cost-effectiveness methodology, and other identified challenges are resolved.

In addition, Vote Solar indicates that, because the California Independent System Operator Corporation ("CAISO") has reported a system need of "3-4000MW" of storage, it is recommending procurement of 15% of this estimated need, or 450-600 MW of energy storage, in order to enable demonstration and learning.<sup>9/</sup> As an initial matter, PG&E notes that the CAISO

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<sup>7</sup> "Vote Solar believes 15% of this estimated need, or 450-600 MW, is a good threshold for demonstration and experiential learning in the near term (1-3 years). Vote Solar recommends splitting the 450-600 MW need roughly equally between the bulk transmission system and the distribution grid." (Vote Solar Opening Comments at p. 5.)

<sup>8</sup> "Setting initial, minimal procurement objectives, for example, goals of 500 megawatts each for PG&E and SCE and 100 megawatts for SDG&E by December 31, 2015, would at least get the program moving with low risk to billpayers. More complex questions about market systems can be postponed by simply allowing IOUs to obtain cost recovery for a modest amount of early storage facilities built in the first year." (Sierra Club Opening Comments at p. 11.)

<sup>9/</sup> Vote Solar Opening Comments at p.5

renewable integration studies to which Vote Solar refers are not complete and, as a result, any conclusions on “need” are premature at this time. The system need studies are being performed as a part of the LTPP and will continue through 2012. Further, while PG&E agrees with Vote Solar that demonstration and experimental learning is needed, there are already considerable efforts underway to enable learning and gaining experience. For example, PG&E currently has several pilot projects and programs that incent development of energy storage. In terms of pilots, PG&E is in the process of deploying two NaS (sodium sulfur) battery projects in its service territory. In addition, PG&E is performing initial studies and analysis on compressed air energy storage (“CAES”). SCE and San Diego Gas and Electric Company (“SDG&E”) are also in the process of deploying similar demonstration projects of energy storage. In terms of incentive programs, all three IOUs have the Self Generation Incentive Program (“SGIP”) and the Permanent Load Shifting (“PLS”) program. The SGIP pays incentives to customers installing new, qualifying standalone storage projects and storage projects coupled with other eligible technologies to meet all or a portion of their electric needs. The PLS was proposed in PG&E’s Demand Response application and would pay incentives for the deployment of storage technologies that can shift peak demand.

The Sierra Club, in its comments, recommends to set procurement targets, allow modest cost recovery only for the first year, and wait to establish the market polices for energy storage, which, according to the Sierra Club, would place a low risk on customers.<sup>10/</sup> PG&E does not agree with these recommendations and assertions. Market policies for determining the benefits of energy storage and cost-recovery polices are two of the most significant challenges of energy storage that must be resolved. Without a clear policy for attributing benefits of energy storage

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10/ Sierra Club Opening Comments at p.11

and cost recovery, IOUs and energy storage developers will find it difficult to procure or invest in energy storage projects. Lack of resolution around these policies places considerable risk to all parties, customers, IOUs, and energy storage companies.

#### **E. Procurement Objectives**

PG&E disagrees with the recommendation of Vote Solar,<sup>11/</sup> Sierra Club,<sup>12/</sup> and MegaWatt Storage Farms, Inc.(“MW Storage Farms”)<sup>13/</sup> that the Commission adopt procurement targets for energy storage. PG&E agrees with the opening comments submitted by Calpine Corporation (“Calpine”),<sup>14/</sup> the Division of Ratepayer Advocates (“DRA”)<sup>15/</sup>, Jack Ellis,<sup>16/</sup> SCE,<sup>17/</sup> and SDG&E<sup>18/</sup> that procurement targets are unnecessary and that the focus should remain on creating a technology neutral environment, where all resources can compete on a level playing field.

#### **F. Other Replies to Stakeholder Comments**

PG&E agrees with the Sierra Club’s recommendation<sup>19</sup> to enter PIER Report into the record in this proceeding and have the Commission provide stakeholders the opportunity to

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11/ Vote Solar Opening Comments at p.5

12/ Sierra Club Opening Comments at p.11

13/ MW Storage Farms Opening Comments at p.2 (there are no page numbers on their comments; only 3 pages in total. MM)

14/ Calpine Opening Comments at p.3

15/ Division of Ratepayer Advocates Opening Comments at p. 1

16/ Jack Ellis Opening Comments at pp. 12-13

17/ SCE Opening Comments at p.16-17

18/ SDG&E Opening Comments at p.6

19 “The PIER report should be made part of the record and analyzed in conjunction with Framework Proposal in Phase 1.” (Sierra Club Opening Comments at p. 6.)

review, analyze, and provide comments on it. PG&E believes that this report could provide useful information about storage technologies, as well as policy and regulatory drivers.

**G. Conclusion**

PG&E appreciates the opportunity to provide these reply comments to the Commission.

Respectfully submitted,

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