

MEMORANDUM

Date : July 19, 2010

**To : The Commission
(Meeting of July 29, 2010)**

**From : Elizabeth Dorman, Legal Division
Aloke Gupta, Energy Division
R. Mihai Cosman, Energy Division**

Subject : FERC Docket No. AD10-13-000 – Rates, Accounting and Financial Reporting for New Electric Storage Technologies: Staff Seeks Authority to File Comments in Response to FERC’s Request for Comments Regarding the Treatment of Storage Technologies

INTRODUCTION: On June 14, 2010, the Federal Energy Regulatory Commission (“FERC”) published a Request for Comment regarding rates, accounting, and financial reporting for new electric storage technologies. These comments must be submitted by August 9, 2010. Because storage technology offers a diverse range of benefits, cost allocation can be difficult. The FERC seeks comment on how to address this challenging situation. The CPUC Staff accordingly seeks the Commission’s approval to submit comments consistent with the various points set forth below.

BACKGROUND: The CPUC generally supports State and federal efforts to provide regulatory frameworks that aid the development of electricity storage technologies, as such tools are likely to facilitate California’s increasing reliance upon renewable and demand response resources while helping move towards a low-carbon future. With the passage of the Energy Policy Act of 2005 (“EPAAct”), national interest in electric storage technologies has increased. EPAAct called for research, development, and pilot programs to ensure the reliability, efficiency and environmental integrity of the electric transmission and distribution systems, including deployment of storage technologies¹. EPAAct Section 1223 defines various forms of energy storage, “pumped hydro,

¹ EPAAct, §. 925.

compressed air, superconducting magnetic energy storage, flywheels, and batteries”² as potential advanced transmission.

Since the passage of the EPAct, several storage projects have been proposed within California’s borders. Nevada Hydro proposed that FERC treat the pumped storage component of its project as a FERC jurisdictional transmission asset with appropriate Transmission Access Charge (“TAC”) cost recovery. The FERC subsequently denied Nevada Hydro’s request. AES completed a 2 MW lithium-ion battery project in Huntington Beach, but as yet is unable to participate in the CAISO’s market. The CAISO and AES are, however, working together on the issue. In the CAISO’s recent 2010 Transmission Plan, several storage developers proposed projects to be included in the CAISO’s Transmission Plan. The CAISO rejected these projects.

In Decision D.10-01-025, the CPUC approved \$24.9 million for Phase 1 of PG&E’s Compressed Air Energy Storage (“CAES”). In Advice Letter 2482-E; which is pending before the CPUC; Southern California Edison Company (SCE) proposes to build, operate, and evaluate a 32MWh (8 MW for 4 hours) utility-scale lithium-ion battery facility at SCE’s Monolith Substation in Tehachapi.

DISCUSSION: The CPUC Staff requests authority to file comments at the FERC in the above-referenced proceeding consistent with the following points:

The Multiple Uses of Storage

The CPUC comments should highlight the variety of benefits that may be associated with storage. The list below represents a few of the uses for storage that CPUC comments will address in brief detail:

- Load shifting;
- Renewable resource integration;
- Market participation as Ancillary Services;
- Provides benefits similar to a generator;
- Demand Response integration;
- Distributed resource integration;
- Transmission resource support/replacement;
- State and Local Area Reliability support; and
- Reliability of the Bulk Electric System support.

² *Id.*, § 1223.

State versus Federal Jurisdiction

A “Bright Line” test may eventually be helpful to distinguish between State and federal jurisdiction over various storage applications, but the establishment of such a test now is premature. Storage is not a widely used technology, and more time is needed to fully understand all of its possible applications and implications. For the time being, the FERC should rely on case-by-case determinations of the appropriate rate, accounting, and financial reporting for new electric storage technologies.

The FERC has acknowledged that a State has jurisdiction to choose the portfolio of resources upon which it will depend for long-term reliability. Many potential uses for and benefits of storage will likely occur at the distribution level and therefore will likely fall under State oversight of distribution-level facilities. The CPUC will be addressing the development of electricity storage procurement by load-serving entities, pursuant to its authority over long-term electric portfolio procurement. Thus, to the extent that a storage device provides benefits similar to generation, the long-term procurement issues are State-jurisdictional. Similarly, whether to allow ancillary services provided by storage to qualify as capacity under the CPUC’s existing Resource Adequacy program is a State-jurisdictional question. Storage also may be used as a distributed resource or to satisfy State and local long-term reliability goals. Finally, while the transmission system may benefit incidentally from the use of storage at the distribution level, which may displace or eliminate the need for certain transmission additions, the deployment of storage at the distribution system level is also a matter of State jurisdiction.

California already has a number of state-level initiatives related to storage which can provide beneficial information to the FERC and market participants. The FERC should not prematurely characterize such activities, but rather should allow such activities to run their course in order to continue to inform State and national market participants. For example, storage is a subject of the CPUC’s current Smart Grid Proceeding. The CPUC also recently issued a White Paper on storage technologies.³ Various stakeholders in California (including the CPUC, the CAISO and the major California electric utilities) are currently working on changes to the current ancillary services procurement framework that are likely to have a direct impact on the ability to deploy storage within the CAISO footprint. Further, Assembly Bill 2514 (Skinner),⁴ currently being considered in the California Legislature, highlights the emerging benefits of storage and would direct a CPUC proceeding to establish policies to encourage cost-effective deployment of energy storage systems, including incentives and refinement of existing procurement methods to

³ *Electric Energy Storage: An Assessment of Potential Barriers and Opportunities*, published on July 9, 2010, available at www.cpuc.ca.gov/PUC/energy/reports.htm.

⁴ The June 21, 2010 version of the Skinner Bill is available at www.leginfo.ca.gov/pub/09-10/bill/asm/ab_2501-2550/ab_2514_bill_20100621_amended_sen_v94.html

properly value storage systems. California law already requires the Investor Owned Utilities to fulfill future unmet resource needs through “demand reduction resources that are cost effective, reliable and feasible.”⁵

Cost Recovery

The use of storage technology in the electric system is not yet a common occurrence, and the storage industry is in the nascent stages of development. Because the uses and benefits of storage are numerous, a case-by-case approach should be used for cost-recovery purposes until the varied uses of storage in the electric system are more commonly used and understood. The FERC should be wary of a one-size-fits-all approach to characterizing storage projects at this point in time.

The FERC’s decisions provide that transmission cost allocation is “not a matter for the slide-rule. It involves judgment on a myriad of facts. It has no claim to an exact science[,]”⁶ should involve judgment on a myriad of facts and therefore “allow regional flexibility in cost allocation.”⁷ Further, any cost allocation decisions should provide adequate compensation to develop and construct storage and provide for a fair allocation of costs. In instances where storage is treated as a transmission resource, these principles may easily apply. There are, however, alternative approaches for addressing cost recovery for storage technologies, including, but not limited to the following:

- Revenue earned through State-jurisdictional procurement processes, such as California’s existing Resource Adequacy program, Renewable Portfolio Standard and Long-Term Procurement and Planning proceedings;
- Market mechanisms for developers who want to bid independently into the CAISO markets;
- CAISO’s Transmission Access Charge for projects approved in the CAISO Transmission Plan (*e.g.*, on the basis of economics and/or reliability);
- Retail rate recovery for projects constructed by Investor-Owned Utilities in order to fulfill State reliability, renewable and other procurement goals;
- Demand Response mechanisms/payment for projects used primarily for load shifting; and

⁵ Cal. Pub. Utils. Code, § 454.5 (b)(9)(C).

⁶ *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, FERC Stats. & Regs. P 31,241 at ¶ 559, citing *Colorado Interstate Gas Co. v. Federal Power Commission*, 324 U.S. 581, 589 (1945).

⁷ *Id.*

- Generation expenses for storage projects proposed as part of a larger intermittent renewable generation project.

ACTION REQUESTED: The CPUC Staff requests authorization to submit comments on behalf of the Commission regarding the FERC's Request for Comments Regarding Rates, Accounting and Financial Reporting for New Electric Storage Technologies consistent with the foregoing points.

Assigned Staff: **Elizabeth Dorman (EDD, 3-1415);**
Mihai Cosman (MR2, 5-5504);
Aloke Gupta (AG2, 3-5239).