

**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)

**OPENING COMMENTS OF RIVERBANK PUMPED STORAGE, LLC
ON THE ENERGY DIVISION STAFF INTERIM REPORT (PHASE 2)
ON ENERGY STORAGE**

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I. INTRODUCTION

Riverbank Pumped Storage, LLC (RB PSH) is pleased to submit the following comments on the Energy Storage Phase 2 Interim Staff Report (Staff Report), issued January 4, 2013. RB PSH commends Energy Division Staff on its comprehensive and thoughtful report of energy storage.

RB PSH agrees with most of the Staff Report and believes it is essential for the State to develop energy storage policy. RB PSH believes that customers will benefit in the long term if the policy is technology neutral and provides reasonable accommodation of the long development time and contracting requirements of bulk storage technologies such as pumped storage hydro (PSH) and compressed air storage (CAES).

RB PSH's comments are summarized below:

II. SUMMARY OF POSITION

- i. Need for Term Contracts and Development Times for Bulk Storage: Mature, viable bulk storage technologies are both proven and cost effective. Care must be taken to ensure that the policies developed by the Commission encourage the additional development of such technologies in California. These projects have long development times and must be able to obtain long-term contracts to be financed. It is important the Commission consider appropriate long-term competitive procurement solicitations that value all of the capabilities and benefits of storage technologies and allow for the longer development and permitting time such that large, very cost efficient technologies such as pumped storage hydro can compete.
- ii. Preferred Resources: Riverbank Pumped Storage encourages the Commission to designate Energy Storage as a Preferred Resource within the Loading Order, either through action of the Joint Agencies or through Commission policy statement. RB PSH believes that this is important to enable bulk storage to be embraced as a Preferred Resource as it may not be deemed to qualify under existing definitions such as energy efficiency or demand response.

- iii. Use Cases: The Transmission Connected Energy Storage Use Case describes a number of benefits that may be uniquely provided by bulk storage such as pumped storage. While long development and construction times are identified, Riverbank Pumped Storage believes that more work should be done to identify ways to remove these barriers such as longer term procurement processes and evaluation of system wide benefits these larger scale projects provided both for individual utilities and California.
- iv. Importance of California's leadership position in regulation

Riverbank Pumped Storage commends the Commission's willingness to consider the enunciation of a policy position that would enable the co-existence of market-oriented and ratebased end uses on the same asset. Riverbank Pumped Storage strongly encourages the Commission to issue this policy position.

III. RIVERBANK PUMPED STORAGE COMMENTS

Riverbank Pumped Storage LLC is the developer of two California ("CA") in-state and/or electrically interconnected closed loop pumped storage projects; Swan Lake North Hydro, LLC and Don Pedro Hydro, LLC. Riverbank Pumped Storage's affiliate Swan Lake Holdings owns 65% of Swan Lake North. EDF-re, a California Company, holds the other 35% interest. The Swan Lake North project is approximately 11 miles NE of Klamath Falls, Oregon. The transmission line from the project to the proposed Point of Interconnection (POI) is approximately 33 miles long. It terminates roughly 2.5 miles south of the state line, 9.5 line miles south of BPA's Captain Jack Substation and approximately 7.5 miles east of Tulelake, California. The proposed POI will be a new point of interconnection to the existing TANC California Oregon Transmission Project ("COTP"), a 500 kV transmission line.

Pumped storage is the predominant form of bulk energy storage both in the United States and worldwide, with over 270 plants and over 127,000 MW of capacity in operation or under construction. Pumped storage projects such as Swan Lake North are large scale energy storage projects that will provide capacity/resource adequacy, energy, fast ramping, frequency response and transmission system benefits deemed essential for cost-effective integration of a high level of renewable wind and solar generation sources and the maintenance of transmission reliability for California utilities, the California Independent System Operator ("CAISO") and California ratepayers. In addition, bulk storage projects such as Swan Lake would likely reduce the need for future gas-fired peaking plants, potentially reducing future greenhouse gas emissions.

i. **NEED FOR TERM CONTRACTS AND DEVELOPMENT TIMES FOR BULK STORAGE**

While it is clear that the future need for pumped storage and other large capacity storage technologies will be driven by operational requirements, these facilities will be needed to ensure the reliability of the grid. As a result, we request that the Commission address the specific challenges faced by these larger, capital intensive projects such as an 8-10 year development time period, need for long term contracts at or in excess of 20 years, and the ability to receive value for the demand response (load) and transmission components of pumped storage as well as the generation component.

The Commission could facilitate the development, construction, and operation of cost-effective, large bulk-storage projects by working to institute a procurement process that recognizes both the long-lead time necessary for these asset types and the cost-effectiveness of such projects. The Commission also needs to support long-term, 20 year, contracts with creditworthy counterparties since long term financing, both equity and debt, to build billion-dollar facilities will require term contracts. These projects will not be built if costs must be recovered costs in day-ahead markets.

Planning models and utility IRPs need to be revised such that they value all of the capabilities of advanced storage technologies, including advanced pumped storage. Riverbank Pumped Storage acknowledges the success of the early efforts by Staff and is willing to participate in these efforts and share knowledge and information to advance the capabilities of these tools.

ii. **PREFERRED RESOURCES**

Riverbank Pumped Storage encourages the Commission to designate Energy Storage as a Preferred Resource within the Loading Order, either through action of the Joint Agencies or through Commission policy statement. RB PSH believes that this is important to enable bulk storage to be embraced as a Preferred Resource as it may not be deemed to qualify under existing definitions such as energy efficiency or demand response.

The use bulk storage such as of pumped storage hydro will reduce greenhouse gas emissions (GHG) and minimize emissions from other grid connected assets by allowing them to operate more efficiently.

iii. **USE CASES**

Riverbank Pumped Storage applauds the Staff's efforts to date to focus the diverse parties to this proceeding on the issues raised by AB 2514, the Order instituting this rulemaking and the Decision Adopting Proposed Framework for Analyzing Energy Storage Need (August 6, 2012).

We believe the Use Case format, when combined with one or more cost effectiveness methodologies, will provide the Commission with the framework

necessary to identify cost-effective storage technologies and applications that could provide value to ratepayers in the near future.

Riverbank believes that it is necessary to add the quantifying system wide benefits of technologies such as pumped storage hydro and resolving the issues identified above during the next phase of this proceeding. This would help ensure that long-lead, cost-effective projects being developed today can compete for multi-year procurement opportunities provided by investor-owned and municipal utilities.

iv. **IMPORTANCE OF CALIFORNIA'S LEADERSHIP POSITION IN REGULATION**

Riverbank Pumped Storage commends the Commission's willingness to consider the enunciation of a policy position that would enable co-existence of market-oriented and ratebased end uses on the same asset.

This would be especially useful for bulk storage assets such as pumped storage where there may be multiple owners, one seeking market oriented compensation for the generation attributes and another seeking ratebased treatment for the transmission attributes. Riverbank strongly encourages the Commission to issue this policy position and believe that this could support a similar resolution at the Federal Level.

IV. CONCLUSION

Riverbank Pumped Storage appreciates the opportunity to submit these comments on the Staff Report for the Commission's consideration and looks forward to continued collaboration with Staff on this matter.

Respectfully submitted,

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