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 ALTON ENERGY, INC. ON ASSIGNED COMMISSIONER'S RULING PROPOSING PROCUREMENT TARGETS AND MECHANISMS AND NOTICING ALL-PARTY MEETING

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In accordance with the California Public Utilities Commission's ("Commission's") Rules of Practice and Procedure, Alton Energy, Inc. ("Alton Energy") hereby submits these comments pursuant to the schedule set forth in the *Assigned Commissioner Ruling Proposing Storage Procurement Targets and Mechanisms and Noticing All-Party Meeting,* issued on June 10, 2013 ("ACR").

I. INTRODUCTION.

Alton Energy recognizes and commends the serious effort of Commissioner Peterman, and the Energy Division, in drafting the ACR for review and comment in this Proceeding. Our analysis and information will contribute to the final ACR, expected later this year. We are also supportive of the broader industry wide involvement of CESA and CalWEA in this Proceeding.

Further to Commissioner Peterman's request at the All Party Meeting to summarize the details of our projects, we provide a brief overview of our pumped hydro energy storage project:

A. Bulk Energy Storage Project Overview

The Bison Peak Pumped Storage Project (Bison Peak) rated 1,000 MW, located in Kern County, CA, is in the heart of the Tehachapi Renewable Transmission Project (TRTP) area, with an approved FERC Preliminary Permit and substantial early development work successfully completed. Bison Peak is a closed-loop pumped hydro energy storage project strategically located adjacent to major Extra High Voltage (EHV) Transmission tightly coupled to Southern California, the LA Basin, and Central California.

The Alton Energy Team Members were the Originating Developers of the 1,550 MW Alta Wind Energy Center[1], and contributed heavily to the accomplishment of the 4,500 MW TRTP. They have played an industry recognized role building successful clean energy projects since the early days of renewable energy in California, dating back to the mid-1980s.

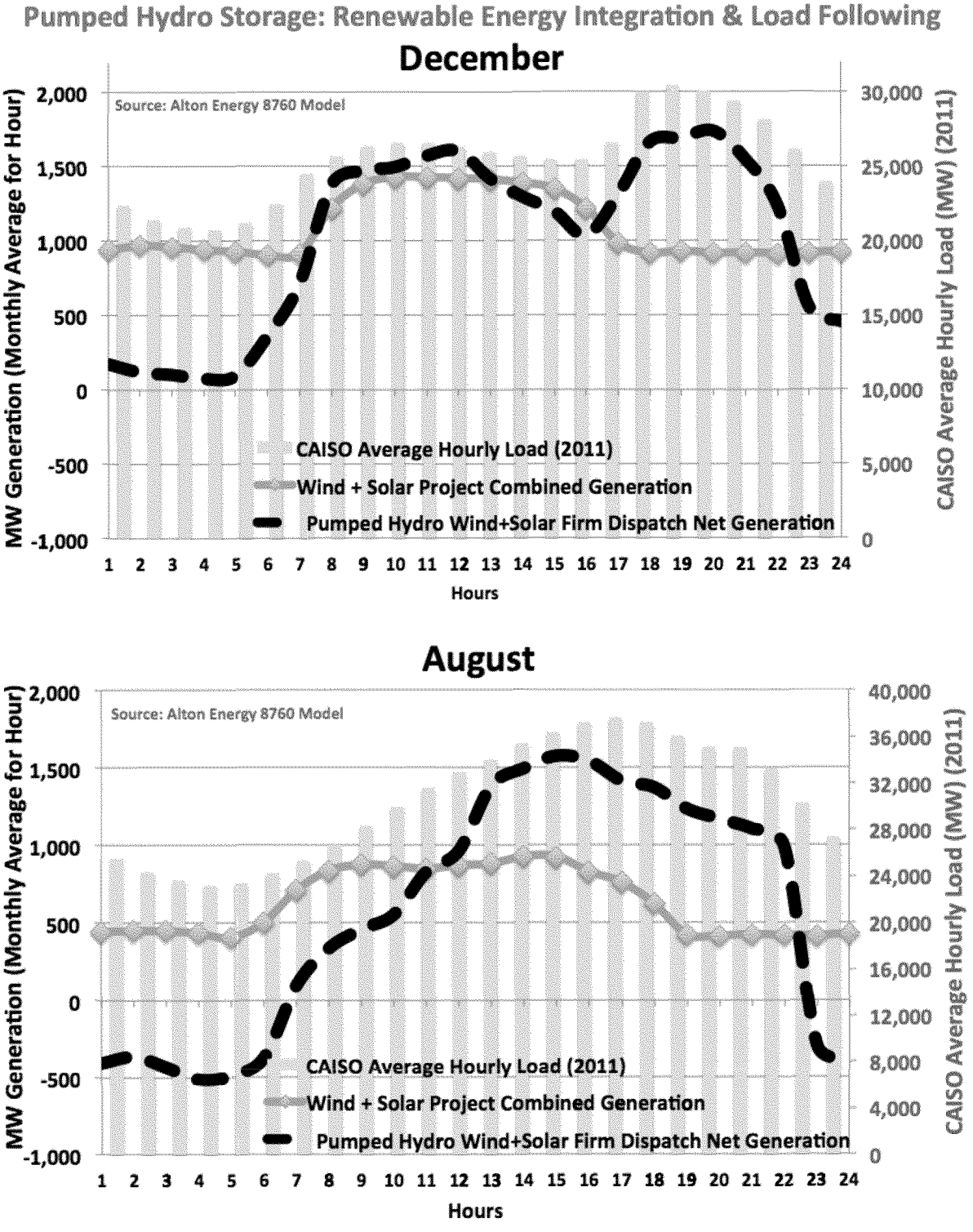
The following carefully modeled scenario of Bison Peak Pumped Storage shows one attractive implementation that highlights the importance of positive action on cost-effective energy storage by the Commission in this and related procurement proceedings. This implementation, when directly coupled with optimally matched new wind and solar primary energy, can provide over 8.8 million MWh annually of cost-effective, high-value Firmed and Shaped energy to California loads. The delivered firm dispatchable energy supply would be between 84% and 98% zero carbon energy, and at a lower levelized cost than a new fossil project. Bison Peak can be online by 2020, if the right market signals and procurement mechanisms are in place, and if a project such as this is allowed to compete on a level playing field.

The Pumped Hydro Storage technology utilized by Bison Peak is widely deployed and proven highly reliable, both in California and globally, with 127,000 MW[2] installed worldwide. Bison Peak is a world-class project with likely the highest efficiency and lowest water use per MWh in the US.

The following 8760 hour model charts show the successfully integrated firm energy and capacity product that can be achieved from the combined strategic dispatch of new wind, solar, and Bison Peak Pumped Storage. Close optimization and load following synchronization with the CAISO peak load curve during critical hours can be achieved with high reliability during critical months, as shown below for December and August. This demonstrates cost-effectiveness superior to that demonstrated in the EPRI Cost-Effectiveness model entered into the record of this Proceeding.

[1] http://en.wikipedia.org/wiki/Alta_Wind_Energy_Center
[2] EPRI

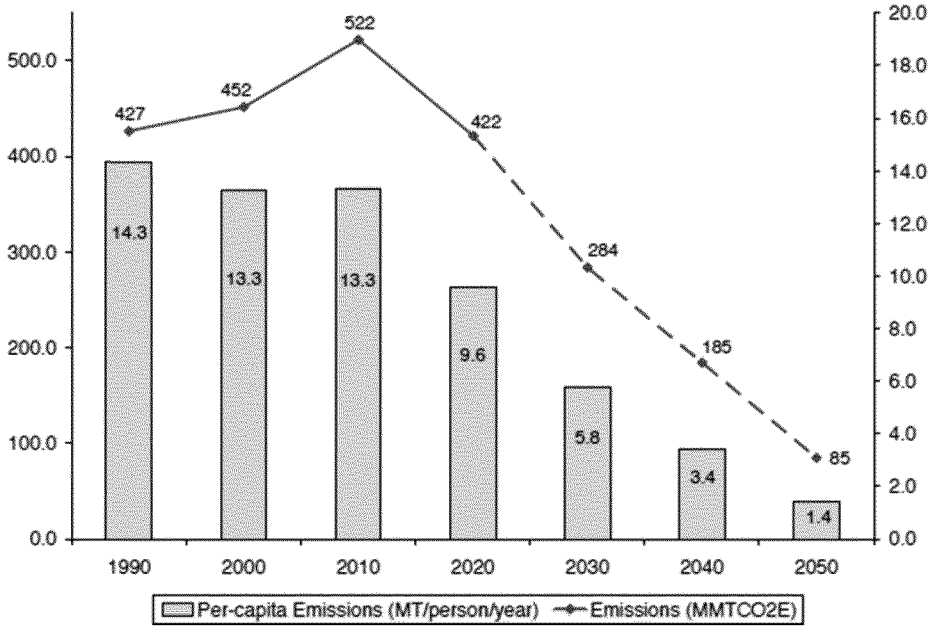
Profile of Cost-Effective Firmed & Shaped Supply of Clean Energy
Over 8.8 million MWh annually; 84% to 98% Carbon-Free



It is essential that substantial near-zero carbon new generation be utilized widely instead of fossil generation in order to meet ARB GHG Emission Goals of reducing Emissions by 80% by 2050. Elimination of the need for new fossil generators, regardless of how efficient they may be, is essential in order to avoid substantial post-2020 stranded costs from the fossil generators that would be expected to operate beyond 2040 and 2050. These fossil assets would likely be under-utilized due to environmental constraints with escalating costs of emission allowances.

California's Adopted Carbon Emissions Reduction Goal through 2050[3]

(Possible with meaningful integration of Cost-Effective Bulk Energy Storage)
(Not possible under electric sector business as usual)



With a 100+ year project life, bulk energy storage systems such as Bison Peak are able to offer a very cost-effective alternative to fossil procurement, ultimately providing the ratepayers with a cleaner more cost-effective energy supply. Optimized Bulk Energy Storage Systems can now provide a Firm Renewable Product that maximizes the system value of the renewable energy and creates dispatchable firm capacity, with very low carbon and high renewable content.

[3] California Air Resources Board (ARB) Scoping Plan: http://www.energy.ca.gov/2009publications/ARB-1000-2009-009/

Even when bulk energy storage is not directly integrated with renewables, there is substantial CO2 emissions reduction, and increased economic value, by simply charging during off-peak hours and nominally increasing the capacity factor of the most efficient CCGTs that will be economically dispatched to match this need. This avoids the on-peak emissions of the otherwise dispatched gas capacity that is higher polluting due to its very high heat rate, and inefficient dispatching cycles. As demonstrated in Alton Energy's Opening Comments[4] and Reply Comments[5] of this Proceeding, there can be a net emissions reduction even when considering the round-trip efficiency loss of pumped hydro storage. Bulk energy storage expands the flexible capacity available to the electric system by utilizing the most efficient energy qualities of the existing generation fleet.

B. Allow Energy Storage with Firm Low Carbon Energy to Compete

Recent events, particularly the unexpected, unplanned, early retirement of the SONGS Nuclear Generating Station in Southern California, along with the planned retirement of most of the nearly 17,000 MW of Once Through Cooling (OTC)[6] Coastal Impacting generators creates a substantial need for new generation. The big question being addressed now is: How will the needed generation capacity be procured? With Storage-Firmed Wind and Solar; or with new Natural Gas fired Combustion Turbines that will preclude the needed emissions down-ramp toward ARB Goals?

It has now been demonstrated in multiple Proceedings that California will have an increasing Flexible Capacity need, and the requirement for Fast-Ramping characteristics for an evolving electric grid, with details being defined. Most importantly, there is an urgent need to drastically cut the carbon emissions of our future power sector. Bulk energy storage, plus intermittent renewables, is the only well proven technology to achieve these goals cost-effectively. Such must be allowed to compete in the actual procurements for needed energy and capacity in California.

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[4] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M042/K157/42157392.PDF
[5] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M060/K419/60419649.PDF
[6] http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/

California does not need new carbon emitting resources if we can accelerate the integration of the next generation near zero carbon solutions able to offer the equivalent operational characteristics, and be most cost-effective. Any procured new gas generation should be limited in quantity, short in contract duration, and of extremely high efficiency.

C. Long-Term Off-Take Procurement for Bulk Energy Storage Projects

The procurement methodology including that for longer lead-time baseload or major supply projects is currently highly "siloed" and effectively precludes the most cost-effective bulk energy storage projects from meaningfully competing in the most important and necessary procurements. Pumped hydro storage is the most proven viable energy storage technology in the world, and can be the most cost-effective and most reliable. Proven wind and solar primary energy coupled with pumped hydro storage can effectively provide a functionally equivalent product at lower cost with better characteristics if allowed to do so. California needs to open its procurement processes to allow such valuable and important resources to compete on a level playing field.

D. Comments on the ACR proposal overall, with emphasis on the proposed procurement targets and design

All procurement should be non-exclusive, technology neutral, and based on cost-effectiveness to meet the functional needs identified. Procurement processes should incorporate the vast potential of cost-effective bulk energy storage, such as pumped hydro, in addition to appropriate consideration of valuable distributed energy storage resources.

This proceeding has been focusing on the importance of "Cost-Effectiveness." However, the recent proposal excludes pumped hydro, which is likely the most cost-effective storage solution. AB 2514 calls for procuring "viable and cost-effective energy storage systems." The best Pumped Hydro Energy Storage Solutions are likely the Least Cost, Best Fit solution in most cases, and are commercially viable and feasible today. The current Procurement Processes do not adequately and appropriately allow bulk energy storage to win meaningful financeable PPAs needed to enable such

projects to be built in California today. The Commission's help is crucially needed to correct this unintended consequence.

E. Match Procurement with California Environmental Policy Goals

Excluding pumped hydro eliminates the most cost-effective solution for putting California on track towards meeting the crucially important State environmental laws and mandates, such as AB 32, Executive Orders, and ARB Goals to reduce carbon emissions by 80% by 2050.

II. CONCLUSION.

We thank the Commission for consideration of these Comments. We look forward to collaborating further in this Proceeding to help facilitate a timely and meaningful framework for the successful creation of a cost-effective long-term opportunity for energy storage with increased penetration of zero carbon resources into the California energy mix.

Respectfully submitted,

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Date: July 3, 2013