

**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

**REPLY COMMENTS OF TAS ENERGY  
ON ASSIGNED COMMISSIONER'S RULING PROPOSING PROCUREMENT  
TARGETS AND MECHANISMS AND NOTICING ALL-PARTY MEETING**

Kelsey Southerland  
Director of Government Relations  
TAS Energy  
[www.tas.com](http://www.tas.com)  
[ksoutherland@tas.com](mailto:ksoutherland@tas.com)  
979.571.8094

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In accordance with the provisions of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), TAS Energy hereby submits these reply comments to the *Assigned Commissioner Ruling Proposing Storage Procurement Targets and Mechanisms and Noticing All-Party Meeting*, issued on June 10, 2013 (“ACR”).

**I. INTRODUCTION.**

TAS Energy appreciates the opportunity to serve as a party to this proceeding and offer reply comments to the Assigned Commissioner’s Ruling.

**II. THE COMMISSION NEEDS TO CLEARLY ENSURE FOR UTILITY OWNED STORAGE FACILITIES AT EXISTING UTILITY OWNED GENERATION ASSETS**

TAS Energy agrees with SCE on page 8 of their comments when it is stated, “...the Commission should allow greater flexibility in ownership models for energy storage and consider proposals for UOS [“Utility Owned Storage”].<sup>11</sup> UOS proposals should supplement, not replace, solicitations for third-party projects. UOS projects can fill opportunities that may be

less feasible for third-party ownership, including storage systems integrated with existing utility assets such as utility substations or utility-owned generation facilities.” (p. 8).

When installed, Generation Storage systems (thermal energy storage and chilling system for gas turbines) become an integrated system with the gas generation facility itself, requiring the complete remodel of the filter house of the turbine where inlet air passes before reaching the combustion chamber. Furthermore, the operation of the Generation Storage facility is integrated with the gas turbines’ performance and subject to the owner and operators’ market practice. Integration of this scale with the existing gas generation asset would make infeasible third party ownership of a Generation Storage system at a Utility Owned Asset. In fact, should such a determination not be made clear to IOUs, no Generation Storage systems would be deployed on Utility Owned Assets despite some assets being the best locations for deployment in California.

In order to ensure California rate payers have the ability to get the most out of investments they have already made, it is vital the Commission make clear that the Investor Owned Utilities are allowed, and even encouraged, to invest and own co-located cost effective energy storage systems on their existing owned generation assets.

### **III. COST EFFECTIVENESS**

It is hard to reconcile parties’ assertions, such as CALWEA, IEP and CEERT, that energy storage has not yet reached a cost effective commercial deployment level with real world, operational cost effective energy storage projects in U.S. markets outside CAISO. As one (of many) examples, TAS Energy has 564 MW of Generation Storage capacity deployed in PJM and ERCOT. However, we do not have a project in California, despite years of development and regulatory efforts.

Furthermore, none of these deployed projects required government funding or subsidy;

rather, they all met stringent private investment standards for expected rate of return. Without a doubt, existing market barriers unique to California prevent cost-effective energy storage technologies from currently being deployed.

As AB 2514 has made extremely clear that energy storage targets ought not result in the deployment of non-cost-effective systems, all of those energy storage systems that are already cost-effective will be deployed first. Further, the multi-year procurement targets will provide market certainty for companies bravely innovating energy storage technologies despite these incredible market barriers, whose costs need to lower.

As capitalism would have it, if there is a market opened and created for cost-effective energy storage technologies from 2014-2020, venture capital funds will invest in companies to meet that market, and California rate payers will benefit from some of the most advanced electric innovations at cost effective prices. While venture firms are investing and innovators are progressing, existing cost effective energy storage technologies will finally be deployed.

#### **IV. REGARDING THE COST EFFECTIVENESS STUDIES**

TAS Energy agrees with Bright Source on page 5 of their comments when they state, “The cost effectiveness phase of this proceeding was not comprehensive with regard to storage technologies, and technologies that were excluded could be disadvantaged as a result in the procurement process.”

Unfortunately, due to timing, technologies included in the study were only those already included in existing EPRI and DNV/KEMA tools. In fact, batteries and flywheels were the only two technologies chosen and several of the CPUC Staff priority use cases were not modeled, leaving out a number of other technologies uniquely valuable for the California grid.

Given that these reports will likely form a foundation for future modeling and analysis to understand the impact of the proposed procurement targets, as well as economic value provided to the electric grid from installed energy storage systems, we urge the Commission to direct continuation of this work with additional priority use cases of energy storage as included in the Staff Report.

While Generation Storage can and should be used for ancillary services such as fast ramping up or down, it has primarily been sold and used over the past 15 years as power augmentation, to provide increased capacity. As such, there is no market data put together by anyone in the industry as to how Generation Storage could perform in the ancillary services markets, including its impact to the grid in assisting renewables integration, from both the generation of additional megawatts in under two minutes, to the night time load sink service that can be provided when charging the storage tank. Furthermore, no cost effective analysis based on its ancillary services capabilities have been completed, its cost effectiveness has been evaluated on capacity alone.

Given that California receives greater than 50% of its electricity from gas generation, we encourage the inclusion of Generation Storage in future and expanded modeling and studies on energy storage along with energy storage technologies such as solar thermal, thermal on the demand side and compressed air energy storage. We look forward to working with DNV/KEMA, EPRI and the CEC should the opportunity be given to undergo continued study.

## **V. CONCLUSION**

TAS Energy appreciates this opportunity to provide reply comments, and looks forward to continuing to work with the Commission and parties in this proceeding.

Respectfully submitted,



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Kelsey W. Southerland  
Director of Government Relations  
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