

**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

**OPENING COMMENTS OF THE CALIFORNIA WIND ENERGY ASSOCIATION ON
PROPOSED DECISION ADOPTING ENERGY STORAGE PROCUREMENT FRAMEWORK AND
DESIGN PROGRAM**

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September 23, 2013

TABLE OF CONTENTS

	Page
I. THE COMMISSION SHOULD REQUIRE 100 PERCENT OF STORAGE PROCUREMENTS TO BE COST-EFFECTIVE	2
II. COST-EFFECTIVENESS MUST BE CONSIDERED IN VIEW OF SYSTEM NEEDS FOR FLEXIBLE AND/OR LOCAL RELIABILITY RESOURCES AND CALIFORNIA'S GREENHOUSE-GAS-REDUCTION GOALS	3
A. The IOUs Should Be Able To Defer RFOs Based on Lack of System Need	3
B. The Utilities Should Take Into Account The Need For System Services In Determining Storage Cost-Effectiveness	4
III. THE FINAL DECISION SHOULD STATE THAT NO COSTS ASSOCIATED WITH THIS STORAGE MANDATE SHOULD BE ATTRIBUTED TO PROCUREMENTS NEEDED TO ACHIEVE AND MAINTAIN THE 33% RPS	6
IV. TRANSPARENCY AND CONSISTENCY SHOULD BE PROMOTED IN THE LCBF METHODOLOGY TO FOSTER HOLISTIC AND EFFICIENT PLANNING AND PROCUREMENT	6
V. ALL STORAGE TECHNOLOGIES THAT PROVIDE THE BENEFITS ENUMERATED IN AB 2514 SHOULD BE ELIGIBLE TO MEET THE STORAGE PROCUREMENT TARGETS	7
VI. CONCLUSION	8
APPENDIX A - CALWEA RECOMMENDED MODIFICATIONS TO FINDINGS OF FACT AND CONCLUSIONS OF LAW	9

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Pursuant to the provisions of Article 14 of the Commission’s Rules of Practice and Procedure, the California Wind Energy Association (“CalWEA”) submits these opening comments on the Proposed Decision (“PD”) of Commissioner Peterman issued on September 3, 2013.¹

CalWEA recognizes that energy storage technologies offer many valuable benefits to the electricity system and that storage will be essential to achieving very high penetrations of renewable energy on the grid under an increasingly stringent carbon cap. CalWEA strongly supports the fair consideration of energy storage resources as one of many means of addressing system needs and supporting the long-term policy goals of the state. However, CalWEA urges the Commission to modify the PD to ensure that any established targets are fulfilled only if proposed procurements meet robust cost-effectiveness standards that reflect the current need (or lack thereof) for the services that storage provides. Otherwise, the targets are likely to result in inefficient procurement, unwarranted ratepayer costs, and potentially even increased overall greenhouse gas emissions.² Such an outcome could undermine public support for California’s important clean energy goals.

Specifically, CalWEA urges the following modifications to the PD:

¹ These comments reflect the views of the trade association, not necessarily the views of any member company.

² For more detail on these points, see CalWEA’s comments in this docket on Assigned Commissioner’s Ruling Proposing Storage Procurement Targets and Mechanisms (July 3, 2013).

- The Commission should require 100 percent of storage procurements to be cost-effective;
- Cost-effectiveness must be considered in view of system needs for flexible and/or local reliability resources and California’s greenhouse-gas-reduction goals; therefore, the utilities should be able to defer storage RFOs if no system need for flexible or local capacity has been identified, and should take these needs into account in determining the cost-effectiveness of any storage procurements;
- The Commission should state that no costs associated with this storage mandate should be attributed to the 33% RPS, as there has been no finding in the LTPP process of new integration resources needed to achieve the 33% RPS;
- Transparency and consistency should be promoted in the LCBF methodology for storage to foster holistic and efficient planning and procurement; and
- All storage technologies, regardless of project size, that provide the benefits enumerated in AB 2514 should be eligible to meet the storage procurement targets.

I. THE COMMISSION SHOULD REQUIRE 100 PERCENT OF STORAGE PROCUREMENTS TO BE COST-EFFECTIVE

AB 2514 could not have stated more clearly that “all procurement of energy storage systems by a load-serving entity or local publicly owned electricity shall be cost-effective.”³ Further, the statute requires the Commission to ensure that the energy storage system procurement targets themselves are cost-effective.⁴ And yet, the PD does not attempt to justify the cost-effectiveness of its proposed targets, totaling 1,325-MW among the three investor-owned utilities (IOUs), deferring “any actual finding of cost-effectiveness” instead to a utility application for approval of storage contracts or rate-based additions, where there is a specific project and actual project inputs.⁵

Still, the PD would allow the IOUs to defer only up to 80 percent of their procurement targets “with an affirmative showing of unreasonableness of cost based on the approved evaluation methodology or the lack of operationally viable number of bids in the energy storage

³ Pub. Util. Code § 2836.6.

⁴ Pub. Util. Code § 2836.2(d).

⁵ PD at p. 58.

solicitation.”⁶ The 80 percent limitation is in clear violation of the statute, and could impose hundreds of millions of dollars in costs on consumers. The Commission must, instead, subject 100 percent of the targets to a cost-effectiveness evaluation.

II. COST-EFFECTIVENESS MUST BE CONSIDERED IN VIEW OF SYSTEM NEEDS FOR FLEXIBLE AND/OR LOCAL RELIABILITY RESOURCES AND CALIFORNIA’S GREENHOUSE-GAS-REDUCTION GOALS

Any cost-effectiveness evaluation should inherently relate to whether there is a physical or economic need for new capacity to provide needed services, since projected values will reflect expected resource scarcity or abundance. Thus, in view of the statute’s clear requirement for cost-effective storage procurements, it is troubling and gratuitous for the PD to state: “AB 2514 is silent on any requirement to conduct or apply a system need determination as a basis for procurement targets. As such, we are not prevented from establishing procurement targets, based on our expertise and authority, in the absence of a system needs determination.”⁷ Failing to account for system needs would also belie the PD’s stated intent to coordinate among relevant Commission proceedings. A need for resources may also arise from greenhouse-gas reduction policies.

Therefore, as the PD would set targets without regard to cost-effectiveness, it is essential that the IOUs be able to take into account the need for system services and the state’s greenhouse-gas policies in fashioning or even issuing RFOs and in determining cost-effectiveness, as discussed further below.

A. The IOUs Should Be Able To Defer RFOs Based on Lack of System Need

As the PD states, the IOUs should be able to “tailor a ‘targeted’ RFO to reflect their specific resource needs and criteria.”⁸ The PD should be further amended to allow the IOUs to defer any RFO upon a showing that (a) storage is unlikely to be cost-effective based on a lack of need for system services, consistent with the most recent findings in the Long-Term

⁶ PD at Appendix A p. 7.

⁷ PD at p. 24.

⁸ PD at p. 51.

Procurement Plan (“LTPP”) process and (b) the state’s greenhouse-gas-reduction goals can be met without storage.

The Commission’s LTPP Track 2 has recently been cancelled reflecting “some indication that system flexibility needs may be low or non-existent depending on the level of local capacity procurement authorized in Track 4” and recognizing that any local capacity procurement authorized in Track 4 (addressing SONGS’ retirement) will bear on the determination of system flexibility needs.⁹ Thus, the only potential need for system services that might be identified in the near term will be in LTPP Track 4 to address local reliability concerns.

Given the present costs of most storage technologies, and the lack of any identified system flexibility needs, it appears to be highly unlikely that any storage applications will be cost-effective outside of the area previously served by the San Onofre Nuclear Generating Station (SONGS) (and, as Track 4 will not conclude for several months, no local reliability needs have yet been found), unless needed to meet greenhouse-gas reduction goals. Therefore, it may be most efficient if the utilities limit storage solicitations to those aimed at needs identified in the LTPP Track 4 process. Further, to be cost-effective, any such procurement must offset the need for other local reliability resources, such as new local gas-fired capacity, which will require a showing of high viability.

Certainly, if any storage procurement is to be mandated without regard to cost effectiveness, it should be limited to meeting any identified needs in the Track 4 LTPP process.

B. The Utilities Should Take Into Account The Need For System Services In Determining Storage Cost-Effectiveness

When an RFO is warranted, the IOUs’ determination of cost-effectiveness should take into account the extent to which system services are physically or economically needed. The Commission can ensure such consideration by adopting a more explicit approach to the determination of cost-effectiveness. The PD appropriately requires the utilities to propose a methodology for a “least-cost, best-fit” (“LCBF”) analysis of storage bids. The LCBF methodology, at least as adopted by the Commission as it accepted the utilities’ 2012 RPS

⁹ Assigned Commissioner and Administrative Law Judge’s Ruling Regarding Track 2 And Track 4 Schedules (at p. 6.). R.12-03-014. September 16, 2013.

Procurement Plans, includes a standardized Adjusted Net Market Value (“ANMV”) formula.¹⁰ The Commission should adopt this same formula as a means of determining cost-effectiveness for storage. A cost-effective storage procurement would be one that has a positive ANMV, meaning that the benefits of the procurement exceed the costs.

The values in this formula for capacity and ancillary services in particular should reflect the degree to which these resources are expected to be needed over the timeframe of the analysis. The Commission should ensure that the need for capacity and ancillary services is reflected in the forward-market values used by the utilities, based on the most recent findings in the LTPP process. The adopted ANMV formula will accommodate any ancillary service values or negative integration cost values that may be identified separately in consideration of the preliminary evaluation tools developed by EPRI and DNV KEMA.

Future energy values in the ANMV should reflect projected carbon allowance costs and/or constraints based on the Air Resources Board’s updated AB 32 Scoping Plan, due out in January 2015. (These energy values should be reflected on both sides of the ANMV equation in recognition that storage resources both consume and provide energy, and due to the significant energy losses associated with the storage process, which will benefit the more efficient storage technologies.) If not included in the separate evaluation tools, an additional variable should be added to the ANMV formula to reflect the ability of an energy storage project to convert lower-value energy to higher value energy.

¹⁰ In D. 12-11-01, the Commission adopted the following standardized ANMV calculation to be used for the quantitative portion of the LCBF evaluation:

$$\text{ANMV} = (E+C+S) - (P+T+G+I), \text{ where}$$

- E = Energy value
- C = Capacity value
- S = Ancillary Services value
- P = Post-TOD PPA price
- T = Transmission cost adder
- G = Congestion cost adder
- I = Integration cost adder

III. THE FINAL DECISION SHOULD STATE THAT NO COSTS ASSOCIATED WITH THIS STORAGE MANDATE SHOULD BE ATTRIBUTED TO PROCUREMENTS NEEDED TO ACHIEVE AND MAINTAIN THE 33% RPS

As indicated in section III.A above, there has been no showing of any need for new flexible resources to address the grid-integration of 33% renewables by 2020 under studies conducted by SCE and CAISO in the LTPP process. The PD should therefore be amended to state clearly that no costs associated with this storage mandate should be attributed to the renewable energy procurements needed to achieve and maintain the 33% RPS, whether in integration cost adders or otherwise.

IV. TRANSPARENCY AND CONSISTENCY SHOULD BE PROMOTED IN THE LCBF METHODOLOGY TO FOSTER HOLISTIC AND EFFICIENT PLANNING AND PROCUREMENT

CalWEA has previously called on the Commission to require that the utilities make more transparent the values that they use in the ANMV formula so that bidders will have the information necessary to make efficient decisions; e.g., the value ascribed to capacity will inform developers' decisions on whether paying for transmission system upgrades would be worth the ascribed benefits.¹¹ Transparency will also be needed in the storage procurement process, particularly with regard to locational values. Although the PD states that "[p]roviding valuation information to competitive developers may invite 'gaming' of the solicitation,"¹² some degree of transparency regarding key variables in the ANMV formula will better enable potential bidders to tailor their bids towards cost-effectiveness, increasing the likelihood that their products will be found cost-effective. (This information will also inform bidders whether it is worthwhile to participate in the bidding process.) Therefore, the Commission should require the IOUs to provide some indication, in their solicitation materials, of the values of at least the largest variables to be considered in the ANMV evaluation.

As importantly, even if the Commission does not call for these values to be made public, it is essential that the Commission provide some consistency among "siloes" proceedings and

¹¹ See, e.g., CalWEA's Comments in R.11-05-005, on the Second Assigned Commissioner's Ruling Issuing [RPS] Procurement Reform Proposals, Nov. 20, 2012.

¹² PD at p. 51.

procurements (including LTPP, RPS, storage, Resource Adequacy, SGIP, the California Solar Initiative, demand side management and electric vehicles) by ensuring that all utilities use the same methodologies to generate ANMV formula values across all of the silos. Providing such consistency is an essential first step toward a more holistic and efficient approach to planning and procurement. The Commission’s final decision should express this intent.

V. ALL STORAGE TECHNOLOGIES THAT PROVIDE THE BENEFITS ENUMERATED IN AB 2514 SHOULD BE ELIGIBLE TO MEET THE STORAGE PROCUREMENT TARGETS

Regarding the PD’s proposed exclusion of pumped storage on the sole basis of size, it would be inappropriate and contrary to AB 2514 for the Commission to exclude any storage technology that can cost-effectively accomplish the purposes and provide the benefits enumerated in the statute, regardless of project size. As California strives to provide leadership to the nation and other countries in demonstrating achievement of its greenhouse-gas reduction goals, it should be single-minded in also demonstrating that these goals can be affordably achieved. To that end, the Commission should not exclude any technology solely due to project size, and without regard to its ability to cost-effectively meet the stated goals of the statute, which include reducing emissions of greenhouse gases, substituting for investment in generation, transmission, or distribution assets, integrating intermittent renewable energy generation into the grid, and providing ancillary services otherwise provided by fossil-fueled generating facilities.

To that end, the Commission should also allow utilities significant flexibility in meeting the storage targets, whether or not they conform to the arbitrary “grid domain” targets set forth in the PD. More broadly, the Commission should facilitate the ability of all potentially competitive technologies to compete against fossil-fuel resources by addressing multiple long-term system needs simultaneously, enabling the utilities to optimize overall long-term procurement. These needs include those being contemplated in currently separate (“siloed”) planning and procurement proceedings for resource adequacy, local capacity, flexible and renewable energy resources and any need evidenced under relevant CAISO markets. Such planning will enable the utilities to optimize overall procurement and enable storage providers

to more effectively compete directly with fossil-fuel and other alternatives to simultaneously fulfill a spectrum of identified long-term needs.

VI. CONCLUSION

For the foregoing reasons, CalWEA urges the Commission to modify the Proposed Decision as recommended herein. In accordance with Rule 14.3(b), proposed Findings of Fact and Conclusions of Law corresponding to CalWEA's recommended modifications to the Proposed Decision are set forth in Appendix A attached hereto.

Dated: September 23, 2013

Respectfully submitted,

_____/s/_____

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APPENDIX A

CALWEA RECOMMENDED MODIFICATIONS TO THE PD'S FINDINGS OF FACT AND CONCLUSIONS OF LAW (additions underscored and deletions ~~struck through~~)

Findings of Fact

8. A cost-effectiveness evaluation will inherently relate to whether there is a physical or economic need for new capacity to provide needed services.

9. Any potential need for system resources that may arise in the near term will be limited to LTPP Track 4, relating to local reliability concerns.

10. There has been no showing of any need for new flexible resources to address the grid-integration of 33% renewables in the LTPP process; therefore, no costs associated with this storage mandate should be attributed, directly or indirectly, to the renewable energy procurements needed to achieve and maintain the 33% RPS.

11. The procurement targets may be changed to reflect determinations in other Commission proceedings, including determinations of system and local resource needs, if any.

~~12. The sheer size of a large-scale pumped storage project would dwarf other smaller, emerging technologies and could inhibit the fulfillment of market transformation goals.~~

Conclusions of Law

~~4. AB 2514 is silent on any requirement to conduct or apply a system need determination as a basis for procurement targets.~~

5. It is reasonable to set procurement targets to encourage the development and deployment of new energy storage technologies, provided proposed procurements are subject to a cost-effectiveness evaluation reflecting the need for system resources and ability to meet state greenhouse-gas reduction targets without storage.

6. ~~Prior precedent supports the setting of storage procurement targets without a system needs determination.~~

9. ~~It is reasonable to exclude pumped storage projects 50 MW and over from participating in the Energy Storage Procurement Framework and Design Program.~~

22. The utilities should be allowed, under certain circumstances, to defer up to ~~80~~100 percent of their procurement targets and should bear the burden of making a showing that deferral is appropriate.

27. PG&E, SCE and SDG&E should be directed to file an application on or before January 1, 2014 that would contain a proposal for the first energy storage solicitation, unless a utility demonstrates that storage is unlikely to be cost-effective based on lack of need for system services and ability to meet greenhouse-gas goals without new storage.

33. Allowing the utilities to defer ~~a portion~~ all of their procurement and flexibility in procurement among grid domains eliminates the need to set a cost cap on storage procurement contracts.

37. The IOUs should confer with Energy Division in ensuring as much consistency as possible across Commission proceedings and procurements (including LTPP, RPS, storage, Resource Adequacy, SGIP, the California Solar Initiative, demand side management and electric vehicles) by using the same methodologies to generate the values used in cost-effectiveness evaluations.