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)

COMMENTS OF THE ENERGY PRODUCERS AND USERS COALITION ON THE ASSIGNED COMMISSIONER'S RULING PROPOSING STORAGE PROCUREMENT TARGETS AND MECHANISMS

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The Energy Producers and Users Coalition (EPUC)[1] submits these comments in response to the Assigned Commissioner's Ruling in Rulemaking (R.) 10-12-007 issued on June 10, 2013. Specifically, EPUC responds to Commissioner Peterman's requests lettered (a), (i) and (j). EPUC has no comment at this time on items (b), (c), (d), (e), (f), (g), or (h).

I. SUMMARY OF POSITION

The Assigned Commissioner's Ruling (the Ruling) establishing procurement targets lacks a sufficient foundation for its solicitation target recommendations. EPUC would prefer that the Commission wait until it has approved a cost-effectiveness methodology for all energy storage projects before establishing energy storage targets. Recognizing the statutory direction, however, EPUC recommends that the Commission set modest solicitation

[1] EPUC is an ad hoc group representing the electric end use and customer generation interests of the following companies: Aera Energy LLC, Chevron U.S.A. Inc., Phillips 66 Company, ExxonMobil Power and Gas Services Inc., Shell Oil Products US, THUMS Long Beach Company, and Occidental Elk Hills, Inc.

targets to avoid reaching for targets that may later be found to be overstated. Specifically, the Commission should establish interim targets at levels that match the "*storage projects that are currently planned, authorized for procurement, or in development by California utilities*."[2]

II. COMMENTS IN RESPONSE TO ALJ'S REQUEST

A. Please comment on this proposal overall, with emphasis on the proposed procurement targets and design.

It is more important that the Commission set targets and design a program that reflects the market's needs and operational abilities than it aggressively meet the deadlines provided for in statute. The Energy Storage Rulemaking was opened as a result of Assembly Bill (AB) 2514 directing the Commission to study energy storage and "*to determine appropriate targets, if any, for each load serving entity to procure viable and cost-effective energy storage systems.*"[3] If determined to be appropriate, the legislation directs the CPUC to, establish energy storage procurement targets by October 1, 2013, for the load serving entities to reach by 2015 and 2020.[4] Finally, the statute requires the Commission to "*ensure that the energy storage system procurement targets…are technologically viable and cost effective*."[5] By forcing targets by the deadlines provided in the statute, the Commission risks violating the requirement that the targets be based on viable technologies.

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2 Assigned Commissioner's Ruling (Ruling) at 8.
3 AB 2514.
4 AB 2514.
5 AB 2514.

1. The Procurement Targets should be set at a modest level in order to gather further operational data on energy storage.

EPUC has a number of reservations with the solicitation targets proposed in the Ruling. The Ruling sets targets that "*reflect a modest to moderate reach above the storage projects that are currently planned, authorized for procurement, or in development by California utilities*."[6] The targets will increase every two years by 33% until 2020.[7] First, the Ruling does not provide a sufficient foundation for the initial solicitation targets. The Ruling does not provide evidence that procurement by the utilities beyond what is currently planned is technologically viable or cost-effective (cost effectiveness is further discussed in Section II.B. below). Second, the Ruling provides no justification for the 33% increases to the targets each year nor does AB 2514 suggest increases of this frequency are necessary.[8] EPUC recommends that the Commission adopt targets that have some basis in reality, relying on the current procurement plans of the utilities, without any increase beyond those levels required.

The Commission may be tempted by the success of the Renewable Portfolio Standards Program (RPS) to set aggressive energy storage targets, but to do so at this time would be misguided and result in targets lacking justification. When Senate Bill (SB) 1078 requiring the procurement of 20% renewables by 2017 was passed in 2002, California had experience with renewable generation. Under the Public Utilities Regulatory Policies Act of 1978, wind and solar

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6 Ruling at 8.
7 Ruling at 8.
8 AB 2514.

renewable energy programs had been deployed in California for 15 years.[9] The 2003 Integrated Energy Policy Report confirms this fact, stating that early in the RPS program the three IOUs were on track to meet the 20% target well in advance of the 2017 deadline.[10] While targets were successfully employed for RPS, there is no basis for employing aggressive targets for unproven storage on the "hope" that cost-effective storage will become a viable and proven technology.

Energy Storage technology is still relatively new to the market and, as the Commission has stated, operational data is lacking. The proposed procurement targets are "…*for commercially available, eligible storage technologies utilized in grid applications that may have been demonstrated but are not yet generally deployed on the grid in California*."[11] The record, as developed, neither supports a method for establishing that a project is commercially available nor that the procurement targets are reasonable for ratepayer funding. Procurement targets would be more effective if the Commission first adopted a means to demonstrate that a storage project is cost effective, commercially viable and satisfies a defined California operational objective (*e.g.*, frequency control, ramp control, ancillary services).

The Ruling admits that the operational data regarding the viability of emerging technologies is not "*fully available*."[12] If further operational data is required in order to assess the viability of storage technologies, initial target

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9 SB 1078.
10 California Energy Commission, 2003 Integrated Energy Policy Report at 13.
11 Ruling at 5.
12 Ruling at 12.

levels should be modest and match the current energy storage procurement plans of the utilities. Modest targets will prevent the procurement of costly and infeasible projects, and will give the Commission further time to monitor market development allowing it to set more accurate targets in the future. As the Commission learns more about the energy storage market and technologies, the Commission can update and increase the targets. EPUC also calls on the Commission to demonstrate there is a reasonable basis to believe that any subsequent targets adopted (*i.e.*, the proposed 33% biennial increase) are reasonable.

2. The Energy Storage proceeding should coordinate with the Long Term Procurement Plan proceeding.

The Energy Storage proceeding predates the Long Term Procurement Plan (LTPP) proceeding, and while the Ruling recognizes that the two proceedings should be integrated, it declines to do so in the short term.[13] In the LTPP Decision, the Commission requires the procurement of 50 MW of storage stating, "*we intend to promote the inclusion of energy storage technologies in SCE's upcoming procurement process*."[14] EPUC recommends that the Energy Storage proceeding pursue integration with LTPP sooner, rather than later. The longer these two proceedings operate on parallel tracks, the more difficult it becomes to integrate their respective goals.

Regarding the 50 MW of energy storage required, in the LTPP Decision the Commission states:

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[13] Ruling at 14-15.
[14] D.13-02-015 at 61.

We view this as a reasonable and modest level of targeted procurement of an emerging resource, and as an opportunity to assess the cost and performance of energy storage resources.[15]

As described by the Commission, the LTPP storage requirement is set at a level that will allow the further assessment of energy storage in operation. The Commission should adopt a similar position in this proceeding and set the targets at a modest level that will allow the Commission the opportunity to assess storage projects in operation.

B. Comment on how the preliminary results of the cost-effectiveness models should be applied to the question of setting procurement targets.

The Ruling acknowledges that the models being used to evaluate the cost effectiveness of energy storage are preliminary and "*do not set out a Commission-approved methodology*."[16] Until and unless the Commission approves a common cost-effectiveness methodology, the targets established under this program beyond the current utility procurement plans remain speculative and unjustifiable.

A workshop was held on two cost-effectiveness reports from the Electric Power Research Institute (EPRI) and DNV KEMA Energy and Sustainability. These studies did not consider all of the proposed storage use cases identified in the R.10-12-007 Phase 1 Decision.[17] The methodologies are under

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15 D.13-02-015 at 62.

16 Ruling at 14.

17 The EPRI report reviews the Bulk Storage Use Case (Peaker Substitution), the Ancillary Services Only Use Case and the Distribution Energy Storage at Substation Use Case. The DNV-KEMA report considers Ancillary Services Storage for Frequency Regulation only, comparative Portfolio of storage resource additions, substation sited distribution storage, distribution circuit sited storage and customer bill reduction.

development, and provide no grounds for accurate comparison between different storage projects or between traditional storage and traditional generation.

As the Energy Storage Phase 2 Interim Staff Report admits:

> *Determining a global cost effectiveness methodology for storage, under these tests is very challenging because of the wide variety of storage technologies, applications and location specific, operational specific, factors that impact measurement of costs and benefit streams.*[18]

The reports provide analysis on the cost effectiveness of energy storage, but each admits that the final analysis depends on a number of sensitivities and inputs that cannot be accurately reflected in their model.[19] The models are based on cost and technology assumptions provided by Commission staff that may not actually occur when energy storage is in operation.[20] Further, each report tailors its cost effectiveness study to the individual use cases making accurate comparisons between different energy storage projects unnecessarily difficult. The EPRI report also notes the struggle of comparing energy storage projects to traditional generation.[21] The EPRI and DNV-KEMA Reports are ultimately unreliable and cannot provide a basis for additional procurement solicitation targets.

A common, Commission approved methodology is the only means of making accurate comparisons of storage projects across technologies and utilities. Without an accurate means of determining cost-effectiveness, the use of

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[18] Energy Storage Phase 2 Interim Staff Report, January 4, 2013, at 20.
[19] EPRI Report at 7-3-7-5; DNV-KEMA at 15.
[20] EPRI Report at 7-6. DNV-KEMA states that its reports use the same inputs as the EPRI Report and these inputs were provided by the California Energy Storage Alliance (CESA). DNV-KEMA at 23.
[21] EPRI at 2-1.

procurement targets may result in an inefficient use of ratepayer funds, especially if the targets are set higher than the market can bear. During the June 28 workshop, Commission staff stated that without operational data it is difficult to make any conclusions regarding energy storage and cost-effectiveness. If that is truly the case, the solicitation targets should be set at current planned levels of utility storage procurement, allowing for the gathering of operational data to be used as the foundation for a common methodology. This allows the Commission to both meet the statutory mandate to establish targets, but also take the time necessary to establish a methodology that accurately reflects cost effective and commercially viable energy storage options in the market.

C. Based on the preliminary results, should the utilities set a cost cap for offers to be submitted in the 2014 auction? If yes, what should the cap be and how should the auction be structured to incorporate the cap?

The Ruling indicates that the Commission would be amenable to establishing cost caps in the first auction in 2014 and solicits inputs on how cost caps should be incorporated. EPUC supports a cost cap on energy storage projects whether it be in a unique storage RFO or an auction. While EPUC reserves the right to develop its position further, it suggests that one means of establishing a cost cap in the initial procurement process would be to limit the cost for any storage project to no more than a percentage of the highest winning bid in the most recent all-source RFO (*e.g.*, 150%). This pricing method establishes the outer limit of cost for which the IOUs' ratepayers are responsible while providing a preference to storage compared to the current market.

III. CONCLUSION

For all of the foregoing reasons, EPUC recommends that the Commission set solicitation targets at current levels of planned utility energy storage procurement.

Respectfully submitted,

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