**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<br>Filed December 16, 2010 |
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# REPLY COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON PROPOSED DECISION ADOPTING ENERGY STORAGE PROCUREMENT FRAMEWORK AND DESIGN PROGRAM

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# REPLY COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON PROPOSED DECISION ADOPTING ENERGY STORAGE PROCUREMENT FRAMEWORK AND DESIGN PROGRAM

The California Energy Storage Alliance ("CESA")[1] hereby submits these reply comments on the *Proposed Decision Adopting Energy Storage Framework and Design Program*, issued September 3, 2013 ("Proposed Decision").

## I. INTRODUCTION.

CESA thanks the Commission for the Proposed Decision's vision and leadership. The Energy Storage Framework and Design Program ("Storage Framework") will serve the state well as a landmark starting point in guiding California's clean energy policy in the years ahead.

## II. SOUTHERN CALIFORNIA EDISON'S LOCAL CAPACITY REQUIREMENT SOLICITATION IS NOT A REASONABLE TEMPLATE FOR THE STORAGE FRAMEWORK.

In its current solicitation of energy storage resources, Southern California Edison Company ("SCE") uses unreasonably restrictive discharge duration requirements and arbitrary

[1] The California Energy Storage Alliance consists of 1 Energy Systems, A123 Systems, AES Energy Storage, Alton Energy, American Vanadium, AU Optronics, Beacon Power, Bright Energy Storage, BrightSource Energy, CALMAC, Chevron Energy Solutions, Christenson Electric Inc., Clean Energy Systems Inc., CODA Energy, Deeya Energy, Demand Energy, DN Tanks, Eagle Crest Energy, East Penn Manufacturing Co., Ecoult, Energy Cache, EnerVault, FAFCO Thermal Storage Systems, FIAMM Group, FIAMM Energy Storage Solutions, Flextronics, Foresight Renewable Systems, GE Energy Storage, Green Charge Networks, Greensmith Energy Management Systems, Growing Energy Labs, Gridtential Energy, Halotechnics, Hecate Energy LLC, Hydrogenics, Ice Energy, Innovation Core SEI, Invenergy, K&L Gates LLP, KYOCERA Solar, LightSail Energy, LG Chem Ltd., NextEra Energy Resources, OCI Company Ltd., Panasonic, Paramount Energy West, Parker Hannifin, PDE Total Energy Solutions, Powertree Services, Primus Power, RedFlow Technologies, RES Americas, S&C Electric Co., Saft America, Samsung SDI, Sharp Labs of America, Silent Power, SolarCity, Stem, Sovereign Energy Storage LLC, Sumitomo Corporation of America, TAS Energy, UniEnergy Technologies, and Xtreme Power. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. http://storagealliance.org

operational lifetime performance specifications. The Commission should in no way consider SCE's solicitation as a standard template for energy storage procurement to be designed and implemented pursuant to the Storage Framework.[2] While suitable for some applications, blind use of those requirements will lead to a potentially sub-optimal resource mix through the exclusion of cost effective resources with shorter durations or operational lifetimes, especially for energy storage procured for non-LCR applications.

## III. THE COMMISSION SHOULD DISREGARD UNSUBSTANTIATED ASSERTIONS REGARDING A NEED REQUIREMENT FOR ENERGY STORAGE RESOURCES.

CalWEA's Comments display an apparent lack of understanding of the diverse ability of energy storage to perform many different functions throughout California's electric power system. For example, investment in energy storage has already been successfully deployed by San Diego Gas & Electric Company ("SDG&E") to help enable renewable resource integration.[3]

## IV. UTILITIES SHOULD NOT BE ALLOWED TO DEFER 100% OF TARGETS

CESA strongly disagrees with the Energy Producers and Users' ("EPUC's") assertion that utilities should be allowed to defer 100% of any target until the Commission approves a standard cost effectiveness methodology.[4]

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[2] CESA strongly disagrees with EPUC's suggestion to require 30 year project lifetimes across all use cases of energy storage. See also: https://www.sce.com/wps/portal/home/procurement/LCR-RFO/

[3] In its recently CPUC-approved general rate case, SDG&E obtained $26 million in approved inclusion in the rate base for energy storage projects in its service territory to prudently invest in energy storage to help mitigate the impacts of dramatically increasing amounts of distributed photovoltaic ("PV") generating facilities on SDG&E's distribution system. See, https://www.sdge.com/sites/default/files/regulatory/SDG&E-11-CWP%20Bialek_Z.pdf.

[4] This approach would send the wrong market signal and set the stage for potential paralysis by analysis, where momentum towards actual procurement and market stability will be disrupted through unnecessary delays. The Commission should instead exercise its authority to set a deadline for establishing cost-effectiveness evaluation methodologies, and should use that deadline to motivate stakeholders to do so. The Commission should also recognize that the initial methodology does not have to be perfect: much will be learned following the biennial procurement targets and triennial (or biennial, as CESA recommends) reviews, and procurement target methodologies can and should be adjusted taking into account what is learned.

## V. PUMPED STORAGE SHOULD BE INCLUDED IN THE STORAGE FRAMEWORK PROVIDED THAT THE TOTAL PROCUREMENT TARGET IS EXPANDED.

CESA supports inclusion of large-scale pumped storage, provided that the total energy storage procurement target is expanded accordingly. This applies both if the full capacity or only 50MW/project is counted towards targets.

## VI. THE COMMISSION SHOULD CLARIFY WHEN BILATERAL AGREEMENTS, IF INCLUDED IN THE FRAMEWORK, ARE NOT APPROPRIATE.

CESA supports SCE's recommendation to allow bilateral agreements under certain circumstances, and also encourages both the Commission and utilities to specifically outline when bilateral contracts would *not* be appropriate.[5]

## VII. VEHICLE TO GRID APPLICATIONS SHOULD BE ELIGIBLE, BUT ONLY THE UTILIZED CAPACITY SHOULD QUALIFY TOWARDS TARGETS.

CESA advocates that vehicle-Grid (VxG) applications should be appropriately included in the scope of the Energy Storage procurement framework and that barriers to such use should be addressed. It should be made clear, however, that only the proportion of each VxG project that regularly provides grid services should be counted toward the procurement target (rather than the total installed capacity), and only provided that the project meets other eligibility criteria.

## VIII. SHIFTING BETWEEN THE TRANSMISSION AND DISTRIBUTION AND CUSTOMER-SITED DOMAINS SHOULD NOT BE ALLOWED, AND UTILITY OWNERSHIP WITHIN ANY ONE DOMAIN SHOULD BE LIMITED TO 50%.

Shifting significant capacity into or out of the customer sited domain would compromise the competitive landscape of many energy storage resources.[6] Unlimited utility shifting between domains and unlimited utility ownership across domains could result in 100% utility owned

[5] Regarding RFOs, a term-sheet approach, rather than pro-forma agreements, should be encouraged because pro-forma language is convenient for projects in industries that have become standardized over time (i.e., wind and solar). With energy storage, however, technologies and the applications are still in a "discovery" phase. Term-sheets will thus allow for greater flexibility and creativity in project proposals, which will help bring a multitude of resources online in a much more cost-effective manner.

[6] CESA also requests that the Commission clarify which domain "community energy storage" would fall under. This is a utility application for distribution support that is sited on the utility easement on customer property. CESA recommends that this application, while literally "customer sited," should be included in the distribution interconnected grid domain as it is exclusively a utility-owned distribution support application.

storage for distribution support only. This would be an unfortunate outcome that would reduce competition to the detriment of ratepayers. A key goal of enforcing customer sited storage procurement goals should be to encourage alignment of interests between utilities, their customers and third party behind the meter project developers. Thus, CESA does not agree with PG&E's recommendation to count such projects upon completion of an SGIP or other program reservation--a better approach would be to count a project toward the targets upon successful interconnection approval.

Further, it should be noted that generation-classified third-party owned resources can provide distribution system benefits (customer sited and distribution sited), and when proposed energy storage does so its value should be acknowledged. This is consistent with SCE's proposed evaluation process in its LCR solicitation.[7] Finally, aggregate project size can impact project cost effectiveness. Very large projects (e.g. >50MW) may exceed the biennial MW goal of either utility owned or third party owned systems. If such projects are found to be cost effective then they should be procured, and the biennial MW goal increased accordingly.

## IX. CYBERSECURITY AND OPERATIONAL CONCERNS ARE UNSUBSTANTIATED AND ARE NOT A REASONABLE BASIS FOR LIMITING THIRD-PARTY OWNERSHIP OF ENERGY STORAGE RESOURCES

CESA disputes Snohomish PUD's assertion that third-party ownership and/or operation of energy storage facilities creates risks of "[compromising utilities'] system data acquisition and control architecture, cyber security risks, and risk to [their] ability to comply with mandatory

[7] It would follow that if a "reliability" application project receives credit for a generation function (i.e. SCE's procurement plan proposes that "dual use" storage would receive LCR credit and that this should apply whenever such storage meets any RA/generation need) then the same rules applying to generation procurement, including third-party bidding and independent evaluation, should apply. If SCE can reasonably calculate estimates of other costs and/or benefits that are directly attributable to an offer, then these estimates will be included in the quantitative valuation, and ultimately, in the offer's NPV. For example, LCR procurement is required to ensure that there are sufficient resources in certain sub-areas of the Big Creek/Ventura and LA Basin local reliability areas. Also, within these specific areas there are locations where additional generation would not only satisfy the LCR needs, but also enhance the reliability of the distribution system. In these instances, the benefits of new generation are twofold: 1) LCR procurement, and 2) distribution system benefits that reduce, eliminate or defer the need for other reliability upgrades. When offers provide this additional benefit of eliminating, reducing or deferring costs that would otherwise be incurred, SCE should estimate and ascribe the resulting avoided cost as a benefit to the offer. VxG projects are a potentially very cost effective energy storage resource because it leverages private investment in electric vehicles

federal reliability requirements from [FERC]."[8] CESA expects that any utility-facing technology would be subjected to end-to-end integration testing, and the utility would have the liberty to establish required communications protocols; indeed, this has occurred in other domains.[9] So while these concerns can be used to set standards, they should not restrict third-party ownership of energy storage resources.

## X. UTILITY OWNERSHIP BEHIND THE METER SHOULD BE CLARIFIED AND TESTED

SCE had suggested in its comments that competitive solicitations are not required for customer-sited projects. To the extent that projects are customer or third party owned and recipients of SGIP or PLS funding, CESA agrees. However, if utility owned or controlled, then competitive solicitations and use of independent engineers are warranted. CESA suggests that the Proposed Decision be modified to expressly require that the utilities, if they intend to pursue utility-owned systems on the customer side of the meter, identify in their applications the specific need and/or market failure they intend to address through utility ownership, how utility ownership will result in a better result, and then support those assertions with an appropriate market test coincident with the first energy storage solicitation.

Respectfully submitted,

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[8] Snohomish PUD Comments, pp.4-5.
[9] Utilities, in fact, are positioned to drive such standardization within the industry, as has occurred with ZigBee-enabled devices utilized in Smart Grid applications. In a broad yet common context, IP protocol allows the secure routing of data across networks. Any business with interests to protect establishes its own protocol that a third-party is required to follow should the third-party wish to interact with the business' technical systems