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Date: September 30, 2013
Witness: Janice Lin

TESTIMONY OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON TRACK 4 ISSUES

ORDER INSTITUTING RULEMAKING TO INTEGRATE AND REFINE PROCUREMENT POLICIES AND CONSIDER LONG-TERM PROCUREMENT PLANS

TESTIMONY OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON TRACK 4 ISSUES

This testimony is submitted on behalf of the California Energy Storage Alliance ("CESA") in response to the September 16, 2013, Assigned Commissioner and Administrative Law Judge's Ruling Regarding Track 2 and Track 4 Schedules ("September 16 Ruling") that set this date for the service of reply to the opening testimony of the California Independent System Operator ("CAISO"), Southern California Edison ("SCE"), San Diego Gas & Electric ("SDG&E") and the City of Redondo Beach; opening testimony of all other parties; and comments on questions posed by Administrative Law Judge ("ALJ") David Gamson at the September 4, 2013 prehearing conference.

My testimony relates to proposals made by SCE in its opening testimony with regard to "addressing long term Local Capacity Requirements ("LCR") needs in SCE's service area with all Once Through Cooling ("OTC") generating facilities, including San Onofre Nuclear Generating Station Unit Nos. 2 and 3 ("SONGS"), retired in 2022." Energy Storage is the focus of my testimony.

A. Description of CESA

The California Energy Storage Alliance ("CESA") is a membership-based advocacy group committed to advancing the role of energy storage in the electric power sector through policy, education, outreach, and research. Our membership includes technology manufacturers, project developers, systems integrators, consulting firms, and other clean tech industry leaders.

B. The Important Role of Energy Storage.

CESA agrees with the following quoted passages from SCE's testimony:

> "SCE's testimony provides additional studies beyond those provided by the California Independent System Operator (CAISO) on August 5, 2013, concerning the need for new resources in SCE's western Los Angeles Basin

(LA Basin) local capacity area. SCE, like the CAISO, presents a scenario in which gas fired generation (GFG) meets any identified need for new generation. However, unlike the CAISO, SCE presents transmission upgrade scenarios and an aggressive Preferred Resource, Scenario as ways of reducing the need for additional GFG in the LA Basin.

Footnote 1. Energy Storage is a potential enabling technology, but is not a Preferred Resource because it stores power regardless of how that power is produced. That said, in this document, when SCE refers to Preferred Resources, SCE is also including Energy Storage in that definition for ease of use." (p. 1).

"Whether or not a specific type of Preferred Resources can be effective depends on how quickly Preferred Resources can respond to a contingent need (if it is controllable), whether it is available across all or most of the times when needed, and the duration of time it can be available.

Footnote 14. Each individual Preferred Resource does not necessarily need to meet all required attributes. A Preferred Resource that meets some attributes can be used as part of an overall portfolio that satisfies all required attributes. For example, if a four-hour duration is needed, two Energy Storage devices, each with two-hour capacity, could be used sequentially to meet need." (pp. 18-19).

Energy storage is an important technology class for meeting LCR needs in general, including those in SCE's service territory. Energy storage is an extremely diverse and modular resource class that addresses many of SCE's stated needs, including facilitating transmission upgrade deferral, and does so effectively (especially given SCE's definition of effectiveness for Preferred Resources). Storage resources are controllable and dispatchable (sometimes providing services almost instantaneously) and can provide services "across all or most of the times when needed," needed. Energy storage also has multiple resource subsets with diverse durations. Further, as SCE's statement says (footnote 14), energy storage resources can be modified or aggregated to help meet SCE's many needs. Therefore, energy storage represents an important resource class in general, and especially for meeting the system needs laid out in SCE's LCR statements.

C. The Importance of Reasonable Energy Storage Procurement.

SCE's local capacity requirement solicitation is not reasonable. In its current solicitation of energy storage resources, SCE uses unreasonably restrictive discharge duration requirements and arbitrary operational lifetime performance specifications. The Commission should in no way consider SCE's solicitation as a standard template for other energy storage procurement. 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 and/or operational lifetimes.

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. 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.

Utility-specific resource solicitation application and cost-effectiveness methodologies are foundational to the direction and success of statewide energy storage procurement. Accordingly, the development of solicitation applications and cost effectiveness methodologies should be conducted via a transparent process with opportunities for external stakeholder input. External stakeholder input will be extremely valuable during such development, as the energy storage market contains a vast diversity of expertise with the ability to identify best practices and areas for improvement based on successful commercial deployment outside of California. The energy storage industry, markets, and stakeholder knowledge are also constantly evolving, so transparency and stakeholder input should continue with biennial revisions of both applications and methodologies, consistent with the planned procurement schedule. By creating a comprehensive and accurate process with sound evaluation methodologies, utilities can ensure that resources that provide the most net benefits to the system are those procured, to the benefit of the grid and ratepayers.

This concludes my testimony.

My Statement of Qualifications is contained in Attachment 1 hereto.

ATTACHMENT 1

STATEMENT OF QUALIFICATIONS

JANICE LIN

FOUNDER AND MANAGING PARTNER, STRATEGEN CONSULTING, LLC

CO-FOUNDER, CALIFORNIA ENERGY STORAGE ALLIANCE (CESA)

Janice brings more than two decades of experience in clean energy strategy, market development, and corporate strategy to Strategen. During this time she has advised a diverse range of clients including renewable energy equipment manufacturers and service providers, large corporations diversifying into clean energy, and real estate developers building sustainable communities.

Janice co-founded the California Energy Storage Alliance (CESA) in 2009, and currently serves on the Board of Advisors for the Energy Policy Initiatives Center (EPIC) and the Energy Storage Committee of Joint Venture Silicon Valley. Prior to founding Strategen in 2005, Janice held several senior management positions with PowerLight Corporation (now SunPower Corporation), including Vice President of Product Strategy and Vice President of Business Development. During her tenure at PowerLight, Janice led initiatives in product and new market strategies, business development, regulatory affairs, strategic partnerships, investor relations, and customer finance.

Janice holds an MBA from the Stanford Graduate School of Business, a BS from the Wharton School, University of Pennsylvania, and a BA in International Relations from the University of Pennsylvania's College of Arts and Sciences. She is the winner of ESA's 2013 Phil Symons Energy Storage Award.

About Strategen

Strategen is a strategy consulting firm that helps organizations launch profitable, long-term ventures in clean energy markets. Since 2005 Strategen has developed tailored strategies for a range of clients, from global Fortune 100 firms to well-funded startups, empowering them with the insight they need to tackle their most critical business issues and develop lasting competitive advantage. Strategen's team has deep roots in the renewables market – particularly solar and energy storage, and has established itself as a trusted advisor in clean energy markets.

www.strategen.com

About the California Energy Storage Alliance

The California Energy Storage Alliance (CESA) is a membership-based advocacy group committed to advancing the role of energy storage in the electric power sector through policy, education, outreach, and research. CESA was founded in January 2009 by Janice Lin, Managing Partner of Strategen Consulting, and Don Liddell, Principal of Douglass & Liddell. CESA's mission is to make energy storage a mainstream energy resource, which accelerates the adoption of renewable energy technology and promotes a more efficient, reliable, affordable, and secure electric power system. www.storagealliance.org