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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues.

Rulemaking 08-03-008 (Filed March 13, 2008)

COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON ADMINISTRATIVE LAW JUDGE'S RULING ALLOWING COMMENTS ON A COST-BENEFIT METHODOLOGY FOR DISTRIBUTED GENERATION

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Pursuant to the *Administrative Law Judge's Ruling Allowing Comments on a Cost-Benefit Methodology for Distributed Generation*, issued February 3, 2009, ("ALJ's Ruling"), the California Energy Storage Alliance ("CESA")¹ hereby submits these comments on the preliminary revised proposed decision on a cost-benefit methodology for a distributed generation ("DG"), attached as Appendix 1 to the ALJ's Ruling ("Revised PD"). CESA is an *ad-hoc* advocacy group made up of renewable energy system integrators, consultants and energy storage system manufacturers. CESA's mission is to expand the role of energy storage to promote faster adoption of renewable energy and a more stable and secure electricity grid in California.

I. INTRODUCTION.

CESA strongly supports the California Public Utilities Commission's ("Commission's") general expression of intent and purposes embodied in the Revised PD "to address cost-benefit methodology at this time: to use cost-benefit analyses to compare resource options as part of utility resource planning, to determine how to choose among candidate DG technologies and projects for incentives and other funding, to assess project alternatives as part of utility power procurement, and to assist in measuring and evaluating the effectiveness of DG incentive

¹ The California Energy Storage Alliance consists of Chevron Energy Solutions, Fluidic Energy Inc., Ice Energy, Inc., StrateGen Consulting and ZBB Energy Corporation.

programs. (Revised PD, at p 6).² There is much to praise in the Revised PD. Noteworthy examples include:

- "• The impacts of DG projects on electricity market prices should be included as a benefit in the Societal Test through a price elasticity adder;
- All relevant environmental benefits should be included in the costbenefit models, whether or not their impacts result from regulation or compliance with state or federal law;
- The cost-benefit analysis of DG should include an analysis and estimate of the value of the market transformation effects of DG. The value should be quantified as a market transformation adder to the Societal Test. (Revised PD, at page 5)."

However, CESA urges the Commission to seize this opportunity to step forward, not backwards, by revisiting an unnecessarily narrow definition of "distributed generation" that is currently used in the Revised PD. Instead the Commission should appropriately define this effort as encompassing "distributed energy resources" – a definition that explicitly encompasses energy storage. The definition of "DG" used in the Revised PD, which references only Public Utilities Code § 353.1 (dealing only with tariffs for generation), could have far-reaching negative policy implications, and create a very real risk of unintended consequences.³ CESA submits that the Commission's expansive policy reasons for addressing cost-benefit methodology in the context of this proceeding will be better served by use of the term "distributed energy resources," or "DER" rather than DG, particularly as the Commission is beginning to come to grips with the integrative conceptual underpinnings of the "smart grid".⁴ The Commission should address cost-benefit methodology in the broad context of the smart grid by expanding the scope of the Revised PD to encompass all forms of distributed energy resources.

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² As the source for these sound policy reasons to formally articulate a cost-benefit methodology, the Commission refers to the foundational decision in its *Rulemaking on the Commission's Own Motion to Solicit Comments and Proposals on Distributed Generation and Competition in Electric Distribution Services*, R.98-12-015, filed December 17, 1998, and, by extension, its successor *Order Instituting Rulemaking Regarding Policies, Procedures and Incentives for Distributed Generation and Distributed Energy Resources*, R.04-03-017, filed March 16, 2004).

³ There is no reason for the Commission to rely exclusively on Public Utilities ("P.U.") Code § 353.1, which provides that "distributed energy resources" means any electric generation technology that meets specified requirements. Instead, the Commission should also look to P.U. Code § 379.6 (formerly codified as P.U. Code § 399.15) because it is a far broader, and more relevant touchstone for legislative policy guidance.

⁴ See e.g., the Commission's recent decision adding a \$2/KW incentive for advanced energy storage in California's Self-Generation Incentive Program ("SGIP.") (D.08-11-044, issued November 1, 2008).

II. THE COMMISSION SHOULD ADDRESS COST-BENEFIT METHODOLOGY IN THE BROAD CONTEXT OF THE SMART-GRID BY EXPANDING THE SCOPE OF THE REVISED PD TO ENCOMPASS ALL FORMS OF DISTRIBUTED ENERGY RESOURCES.

CESA agrees wholeheartedly with the Revised PD's rejection of the restrictive definition proposed by CAC/EPUC for the reason stated by the Commission:

"We see no reason to adopt a new definition here for cost-benefit analysis purposes, and potentially create confusion. Finally, we do not want to create a standard definition when the technologies, sizes, and uses of DG continue to evolve. Rather, we want to be able to apply our cost-benefit methodology to DG in its various forms, as they arise." (Revised PD, at page 17).

It is very clear that energy storage has always been contemplated as part of what later led to the SGIP (and later the California Solar Initiative), well before the either program was designed and implemented by the Commission. Writing about the competitive aspects of the subject and assessing its impact on investor-owned utilities, in D.99-10-065, issued on October 21, 1999,⁵ the Commission articulated its "historical" frame of reference for encouraging development of DER in the following way:

"In this decision we use the term 'distributed generation' to refer to those small scale electric generating technologies such as internal combustion engines, microturbines, wind turbines, photovoltaics, and fuel cells. We use the term DER to refer to the distributed generation technologies, storage technologies, end-use technologies and DSM technologies.

'Distributed generation' has also been referred to as 'distributed energy resources' (DER) or 'distributed resources' (DR). (OIR, p. 2, fn. 1). DER appears to be the broadest of all three terms, and includes distributed generation, as well as energy storage technologies such as battery energy storage, superconducting magnetic energy storage, flywheel energy storage, and compressed air energy storage. DER can also refer to targeted "end-use technologies" or targeted DSM techniques.'

In general, a DER has the following attributes: the DER is usually located at or near the load center; it may be connected to the distribution system or it can operate independently of the distribution system; it provides an enhanced value other than its energy and capacity; the DER is usually small in terms of electric power output; and the DER facility is usually automated, modular and mass produced. (Mimeo, p. 14)."

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⁵ Issued in R.98-12-015.

The Commission subsequently opened a successor proceeding for the purpose of articulating a new comprehensive framework for DER, *Order Instituting Rulemaking Regarding Policies, Procedures and Incentives for Distributed Energy Resources*, R.04-03-017, filed March 16, 2004. This new proceeding further emphasized the growing importance of DER, including energy storage:

"In this proceeding we continue our consideration of rules and policies impacting distributed generation (DG). DG has taken on greater significance in the energy industry since this Commission opened its last DG rulemaking in October of 1999 (R.99-10-025). The technologies of DG continue to evolve, and their potential benefits present a compelling set of options to be considered in the resource planning and procurement context. As expressed in state legislation, in the joint agency Energy Action Plan and the California Energy Commission's (CEC) recently adopted Integrated Energy Policy Report, evaluating and deploying DG is a priority for California's energy future. (footnote omitted). There are multiple efforts underway to achieve these goals. (Mimeo, p. 1).

. . .

In addressing what we consider to be the three central issues in this rulemaking – cost-benefit analyses, incentives and IOU procurement guidance – we intend to develop a conceptual framework that will allow us to evaluate these similar resource options on an equal footing. With this Rulemaking we will begin to employ the name Distributed Energy Resources (DER) to encompass distributed generation, energy efficiency, demand response and electrical storage. These resource options share common characteristics in their ability to serve or otherwise manage onsite load, and in the potential benefits they can provide to the electrical network if employed with sufficient care and foresight . . ." [emphasis added] (Mimeo, p. 2).

The energy storage industry has come a very long way since 2004. While still in various stages of commercialization there are now many successful demonstrations of the benefits of energy storage in grid-connected distributed applications all over the world. CESA's view is that energy storage should be included in the Commission's cost-benefit methodology, not because of this commercial progress *per se*, but because of its technical and economic synergy with other distributed energy and demand and generation resources - in particular fuel cells, wind and solar. The Commission itself followed exactly this logic with its recent decision to award SGIP incentives for AES coupled with SGIP-eligible distributed generation technologies (currently wind and fuel cells).⁶

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⁶ See, footnote. 4, infra.

In addition, the Commission's related successor proceeding to R.98-12-015 devoted to distributed energy resources, *Order Instituting Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and other Distributed Generation Issues*, R.06-03-004, filed March 2, 2006, also expressly related back to the initial policy impetus that has been carried forward to successive proceedings, and has been implicitly carried forward to today's proceeding:⁷

III. THE COMMISSION SHOULD INCLUDE TRANSFORMATIONAL BENEFITS, ENVIRONMENTAL ADDERS AND TRANSMISSION AND DISTRIBUTION IMPACTS IN THE COST-BENEFIT METHODOLOGY THAT IT ADOPTS IN THIS PROCEEDING.

CESA applauds the Commission's stated intent to include market transformation benefits, and environmental and transmission and distribution adders in its proposed cost-benefit methodology. By correctly expanding the potential value streams from DER, energy storage, in its many forms, will be a key technology to help accelerate market transformation by enabling (i) increased use of variable renewable generation by "smoothing" its production profile and shifting it to peak periods which thus increases value of this generation for the electric power system and enables a more intelligent, better integrated and less costly interconnection of these resources with the utility grid, especially in the context of an evolving smart grid with two-way communications, (ii) integration of multiple distributed energy resources - for example, renewable microgrids require advanced energy storage to help 'balance' local onsite generation with the variability of the onsite load, (iii) lasting improvements in the energy and capital efficiency of the transmission and distribution system by, one, reducing congestion and thus improving grid reliability and lessen energy losses in the T&D lines and, two, deferring and/or avoiding T&D capital expenditures, and more broadly (iv) capturing a broad array of potential participant and societal value streams from capital investments in a single type of energy resources - for example, commercially available energy storage systems today can provide multiple benefits for an end-user including peak shaving and emergency/backup power, and can also be configured to provide ancillary services and. CESA also applauds the Commission's

⁷ "This rulemaking evolves from and builds on the work we began in three previous proceedings, Rulemaking (R.) 98-12-015, R. 99-10-025 and R.04-03-017. These previous rulemaking orders describe our fundamental view of DG and its role in providing the state with clean, reliable energy resources and remain useful as background documents guiding our work here." (Mimeo, p.1).

stated intent to include environmental adders, since DER technologies (such as storage coupled

with renewables) may have the ability to achieve the same energy delivery results as a gas fired

combustion engine or backup diesel generator – but with zero emissions. Finally, CESA is also

greatly encouraged by the Commission's stated willingness to examine employment effects later,

because these can be substantial -- and unlike central plant generation which is highly

concentrated in one location, the development, financing, design, installation and ongoing

operations and maintenance of distributed energy resources will occur in a broad-based fashion

all over California.

IV. **CONCLUSION.**

CESA appreciates this opportunity to comment on the Revised PD, and looks forward to

working with the Commission and other stakeholders to help produce a cost-benefit

methodology that will work for today and also maintain its value in the future as the Commission

implements the smart-grid in California.

Respectfully submitted,

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CALIFORNIA ENERGY STORAGE ALLIANCE

Date: February 25, 2009

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of Comments of the California Energy Storage Alliance on Administrative Law Judge's Ruling Allowing Comments on a Cost-Benefit Methodology for Distributed Generation on all parties of record in proceedings R.04-03-017 and R.08-03-008 by serving an electronic copy on their email addresses of record and by mailing a properly addressed copy by first-class mail with postage prepaid to each party for whom an email address is not available.

Executed on February 25, 2009, at Woodland Hills, California.

Michelle Dangott

SERVICE LISTS – R.04-03-017 and R.08-03-008

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