

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Consider
Alternative-Fueled Vehicle Programs, Tariffs,
and Policies.

R.13-11-007
Filed November, 2013

**REPLY COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON ORDER INSTITUTING RULEMAKING**

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TABLE OF CONTENTS

I. INTRODUCTION.1

II. THE COMMISSION SHOULD PRIORITIZE ADOPTION OF RULES TO CLARIFY COMPENSATION MECHANISMS AND ENABLE ALL ENERGY STORAGE USE CASES CONCURRENTLY2

III. OWNERS OF HEAVY-DUTY ELECTRIC VEHICLE CHARGING CUSTOMERS SHOULD NOT BE EXEMPT FROM DEMAND CHARGES.3

IV. THE COMMISSION SHOULD REJECT PROPOSALS TO REOPEN ANY PREVIOUS POLICY DECISIONS RELATED TO ALTERNATIVE-FUELED VEHICLES IN THIS PROCEEDING.3

V. THE COMMISSION SHOULD BUILD ON GOAL SETTING ADDRESSED IN ITS SMART GRID PROCEEDING.4

VI. THE COMMISSION SHOULD PLACE EQUAL EMPHASIS ON ENSURING GRID RELIABILITY, AND UNLOCKING THE POTENTIAL LONG-TERM VALUE WITHIN ELECTRIC VEHICLES TO REDUCE COST OF OWNERSHIP.5

VII. THE COMMISSION SHOULD ENCOURAGE HIGH-POWERED CHARGING.6

VIII. RATE DESIGN TO ENCOURAGE LOWER CHARGING LEVELS AND SUPER OFF PEAK CHARGING ARE NOT WITHIN THE DEFINITION OF ENERGY STORAGE.6

IX. CONCLUSION.7

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In accordance with the California Public Utilities Commission’s (“Commission’s”) Rules of Practice and Procedure, the California Energy Storage Alliance (“CESA”)¹ hereby submits reply these comments on the *Order Instituting Rulemaking*, filed on November 14, 2013 (“OIR”).

I. INTRODUCTION.

CESA appreciates the opportunity to provide these reply comments in response to the comments filed by certain parties in response to the OIR as discussed below.

¹ The California Energy Storage Alliance consists of 1 Energy Systems, A123 Energy Solutions, AES Energy Storage, Alton Energy, American Vanadium, AU Optronics, Beacon Power, Bosch Energy Storage Solutions, Bright Energy Storage, BrightSource Energy, CALMAC, ChargePoint, Chevron Energy Solutions, Christenson Electric Inc., Clean Energy Systems Inc., CODA Energy, Deeya Energy, DN Tanks, Duke Energy, Eagle Crest Energy, EaglePicher, East Penn Manufacturing Co., Ecoult, Energy Cache, EnerSys, EnerVault, EV Grid, 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, NRG Energy, OCI Company Ltd., OutBack Power Technologies, 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, Sovereign Energy Storage LLC, Stem, Stoel Rives LLP, Sumitomo Corporation of America, TAS Energy, Tri-Technic, UniEnergy Technologies, Xtreme Power, and Wellhead Electric Co. 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>

II. THE COMMISSION SHOULD PRIORITIZE ADOPTION OF RULES TO CLARIFY COMPENSATION MECHANISMS AND ENABLE ALL ENERGY STORAGE USE CASES CONCURRENTLY

CESA stated in its opening comments that “direction of power flow is a key component of the framework, and that given the emerging nature of the industry, that vehicle-grid integration (“V1G”) is the necessary *starting point*.” CESA would like to clarify that that should not preclude immediate attention to key vehicle-to-grid (“V2G”) priorities such as grid interconnection, which may be handled in parallel and indeed are already being addressed to some degree by stationary energy storage systems. Emphasis should be placed on “starting point” because V1G technology currently represents the majority of electric vehicles (“EV’s”) sold thus far.

CESA recommends that the Commission avoid potential unintended consequences of inadvertently promoting or prioritizing certain business models over others by prioritizing V1G over V2G. What is of utmost importance to all EV charging energy storage use cases is to achieve transparency and clarity as to efficient interconnection and potential grid services revenue streams provided by energy storage. This would include both stationary energy storage co-located with the EV charging device and energy storage located on the vehicle itself. If the compensation mechanism is well understood, and bankable, then the market itself will respond to the best way to monetize these value streams, thus lowering the overall cost of ownership to EV users and accelerating adoption. CESA therefore recommends that the Commission consider all three use cases in parallel: (1) V1G, (2) EV charging coupled with stationary energy storage, and (3) V2G. As CESA noted in its Opening Comments, bi-directional flow is already being addressed today for behind the meter stationary energy storage to support load management objectives as well as services to be sold in the California Independent System Operator’s (“CAISO’s”) frequency regulation market. In addition, there is already a V2G project in

development in southern California sponsored by the United States Department of Defense (“DoD”). CESA recommends that this proceeding consider the challenges and progress made to date for the more generalized use case of behind the meter energy storage providing grid services, and certainly, the lessons learned from the DOD’s V2G project.

III. OWNERS OF HEAVY-DUTY ELECTRIC VEHICLE CHARGING CUSTOMERS SHOULD NOT BE EXEMPT FROM DEMAND CHARGES.

CESA disagrees with the opening comments of CCSE, ORA, and Proterra suggesting that owners of heavy-duty vehicles or corporations charging such vehicles should be exempt from demand charges. This would distort appropriate price signals created by demand charges, and would create cost shifting to other rate classes. CESA thus agrees with SDG&E’s statement in its Opening Comments that, “Recovery of grid costs are appropriately done through demand charges where the customer has the ultimate flexibility of deciding service demands based on the utility price signals.” (p. 11). As an alternative to exempting these customers from demand charges, CESA suggests that modulating EV charging (i.e., load management), as well as coupling EV charging with stationary energy storage, could help mitigate demand charges resulting from EV charging.

IV. THE COMMISSION SHOULD REJECT PROPOSALS TO REOPEN ANY PREVIOUS POLICY DECISIONS RELATED TO ALTERNATIVE-FUELED VEHICLES IN THIS PROCEEDING.

CESA strongly disagrees with SDG&E’s statement in its opening comments that, “utilities should be allowed to actively participate in all aspects of transportation electrification, including owning and operating grid-integrated charging facilities” (p. 5) because the Commission has already decided against utility ownership and operation of grid-integrated charging facilities in D.11-07-029. It is not efficient or productive for this proceeding to re-

litigate its prior decisions. However, this does not mean that utilities cannot play a very important, and very strategic role in encouraging and accelerating cost-effective EV adoption. Indeed, CESA advocated for a “hybrid approach” with respect to the utilities’ role in its comments because close collaboration with utilities is critical to optimize locational siting of EVs and EV charging resources for the benefit of all ratepayers. Utilities, in particular, possess rights of way in public spaces . . . a useful capability that could be leveraged to accelerate siting of public EV charging stations. CESA’s recommended hybrid approach for utility participation and aggregation should include long term, financeable contracts for EV energy storage services between utilities and third party EV system equipment developers, aggregators and large retail utility customers (ratepayers). Such services can be provided by EVs, or energy storage co-located with the EV charging infrastructure. Encouraging utility participation in this regard will also support multiple policy goals in California with respect to EV adoption, energy storage procurement and greenhouse gas (“GHG”) emission reduction.

V. THE COMMISSION SHOULD BUILD ON GOAL SETTING ADDRESSED IN ITS SMART GRID PROCEEDING.

CESA agrees with Clean Coalition’s statement in its Opening Comments that, “setting EV capacity and demand response or grid services participation targets for EVs in relation to both 2020 and longer term renewable energy scenarios, such as 50% by 2030, or high DG scenarios, that have been modeled in the LTPP [Long Term Procurement Plan rulemaking] already,” (p. 5). CESA also notes that the Commission has already begun the process of establishing specific participation goals in its smart grid proceeding (R.08-12-009). Generally, CESA supports goal setting to align stakeholder focus and help ensure that the Commission’s desired policy outcomes are achieved in a timely and cost-effective manner. Goal setting also sets expectations with other key enabling stakeholders such as providers of capital, thus

encouraging appropriate investment and market development. Furthermore, CESA agrees with Clean Coalition that the services provided by EVs and associated EV supply equipment are fully included and appropriately categorized as demand response or storage resources, and are thus considered a preferred resource.

VI. THE COMMISSION SHOULD PLACE EQUAL EMPHASIS ON ENSURING GRID RELIABILITY AND UNLOCKING THE POTENTIAL LONG-TERM VALUE WITHIN ELECTRIC VEHICLES TO REDUCE COST OF OWNERSHIP.

CESA disagrees with General Motor's ("GM's) suggestion that the focus of this proceeding should be primarily on reliability, rather than "unlocking the potential long-term value within the vehicle to reduce vehicle cost of ownership." These two foci are highly interrelated and one cannot be prioritized over the other. If the appropriate financial incentives are not in place, then the electrification of transportation will not happen. E3's presentation of its preliminary analyses at the Commission's Workshop held on December 4, 2013 indicated that EVs are a win-win for all ratepayers, so more aggressive electrification of transportation will benefit the grid, and California's air quality. According to the California Air Resources Board ("CARB"), in 2010 emissions from on-road motor vehicles contributed to approximately 7% of California's total emissions, including both anthropogenic and natural sources.²

CESA also notes that there is no near-term grid reliability issue resulting from EV deployment, although there is likely to be a longer-term issue with greater levels of EV adoption in the future. The near term goal should be to increase the customer value of EV ownership, not only financially, but also from a user consumer experience standpoint. Ratepayers need affordable power and transportation, but they also require convenience. Encouraging and finding

² See, CARB, http://www.arb.ca.gov/app/emsmv/cepam_emssumcat_query_v4.php

ways to more quickly refuel EVs is clearly an enabler to that goal. CESA also notes that GM is certainly one influential original equipment manufacturer (“OEM”), but there are a growing number of OEMs building V2G capable cars and fleet vehicles that would benefit greatly from V2G.³

VII. THE COMMISSION SHOULD ENCOURAGE HIGH-POWERED CHARGING.

CESA disagrees with GM’s comment that, “residential and workplace PEV rates should not encourage more complexity and cost by incentivizing higher-power, networked charging stations.” (p. 11). Additional context would be beneficial to distinguish between higher-power DC and higher-power AC charging. The major auto OEMs all support AC charging and are currently working on increasing the AC charging rates of their vehicles. High current, and thus faster, charging is essential to a successful user experience, especially in the face of constrained charging infrastructure. Furthermore, from an energy storage industry perspective, faster charging creates more opportunity for energy storage devices to manage demand while delivering a more desirable user experience and greater efficiencies for the charging operator.

VIII. RATE DESIGN TO ENCOURAGE LOWER CHARGING LEVELS AND SUPER OFF PEAK CHARGING ARE NOT WITHIN THE DEFINITION OF ENERGY STORAGE.

The following statement by SCE in its Opening Comments is both factually and legally incorrect: "Adoption of optional rates designed to encourage VGI activities including lower charging levels and super off-peak charging are within the definition of storage (under PEVs or permanent load shift)." There is no evidence whatsoever that design should be considered an

³ See, e.g., Nissan Build a Post-Fukushima Neighborhood Around the LEAF – Wired, October 5th, 2011 - <http://www.wired.com/autopia/2011/10/nissan-builds-a-post-fukushima-neighborhood-around-the-leaf/>.

energy storage system within the meaning of Public Utilities Code Section 2835.⁴ Accepting SCE's statement at face value would imply that the utility energy storage procurement requirements established by the Commission in D.13-10-040 could be met by rate design alone, and that is palpably inconsistent consistent with the technology-oriented intent of AB 2514. The Commission should therefore categorically reject SCE's unprecedented and incorrect interpretation of the intent of the legislature and the Commission.

IX. CONCLUSION.

CESA appreciates this opportunity to reply to comments filed by parties, and looks forward to working with the Commission and the parties in this proceeding.

Respectfully submitted,



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Date: December 20, 2013

⁴ “For purposes of this chapter, the following terms have the following meanings:

(a) (1) “Energy storage system” means commercially available technology that is capable of absorbing energy, storing it for a period of time, and thereafter dispatching the energy.”