

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

Order Instituting Rulemaking to Enhance the  
Role of Demand Response in Meeting the  
State's Resource Planning Needs and  
Operational Requirements.

R.13-09-011  
(Filed September 19, 2013)

**REPLY COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE  
ON ADMINISTRATIVE LAW JUDGE'S RULING INVITING COMMENTS  
ON STAFF PROPOSAL REGARDING THE USE OF FOSSIL-FUELED  
BACK-UP GENERATION IN DEMAND RESPONSE PROGRAMS**

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The California Energy Storage Alliance ("CESA")<sup>1</sup> hereby submits these reply comments pursuant to the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission") in response to *Administrative Law Judge's Ruling Inviting Comments on Staff Proposal Regarding the Use of Fossil-Fueled Back-Up Generation in Demand Response Programs*, issued by Administrative Law Judge Kelly A. Hymes on September 29, 2015 ("ALJ's Ruling"), and the ALJ's Email Ruling issued on October 7, 2015, granting an extension of time to file these reply comments to today, October 19, 2015.

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<sup>1</sup> 1 Energy Systems Inc., Abengoa, Advanced Microgrid Solutions, AES Energy Storage, Aquion Energy, ARES North America, Brookfield, Chargepoint, Clean Energy Systems, CODA Energy, Consolidated Edison Development, Inc., Cumulus Energy Storage, Customized Energy Solutions, Demand Energy, Duke Energy, Dynapower Company, LLC, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, ELSYS Inc., Energy Storage Systems, Inc., Enersys, EnerVault Corporation, Enphase ENERGY, EV Grid, Flextronics, GE Energy Storage, Green Charge Networks, Greensmith Energy, Gridtential Energy, Inc., Hitachi Chemical Co., Ice Energy, IMERGY Power Systems, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Invenergy LLC, K&L Gates, LG Chem Power, Inc., LightSail Energy, Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Manatt, Phelps & Phillips, LLP, Mitsubishi Corporation (Americas), Mobile Solar, NEC Energy Solutions, Inc., NextEra Energy Resources, NRG Solar LLC, OutBack Power Technologies, Panasonic, Parker Hannifin Corporation, Powertree Services Inc., Primus Power Corporation, Princeton Power Systems, Recurrent Energy, Renewable Energy Systems Americas Inc., Rosendin Electric, S&C Electric Company, Saft America Inc., Sharp Electronics Corporation, Skylar Capital Management, SolarCity, Sony Corporation of America, Sovereign Energy, Stem, SunEdison, SunPower, Toshiba International Corporation, Trimark Associates, Inc., Tri-Technic, Wellhead Electric. 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>).

## I. INTRODUCTION.

The ALJ's Ruling invites party comments on an attached "Demand Response and Back Up Generation Energy Division Staff Proposal", dated September 21, 2015 ("Staff Proposal"), and: (a) states that, to adopt it in part or in its entirety, the Commission requires the creation of a record on the Staff Proposal, and (b) asks parties to respond to ten specific questions related to the Staff Proposal. CESA responds in these reply comments to certain of the opening comments filed by parties that relate to *only* Question Number 3, as set forth in the ALJ's Ruling:

"3. The Staff Proposal recommends that stand-alone storage and storage coupled with renewable generation is allowed to be used in demand response, but must meet the relevant greenhouse gas emissions factor thresholds adopted for the Self Generation Incentive Program (see Staff Proposal at 7). Should this exemption be adopted as is? Should a modified version be adopted? If so, what modifications should the Commission consider?" (ALJ's Ruling, p. 5).

CESA generally supports the opening comments filed by parties that respond *directly* to the question posed but strongly opposes and urges rejection by the Commission of the opening comments by several parties that go beyond the scope of this proceeding in a wayward attempt to collaterally attack and improperly interfere with the Commission's orderly treatment of issues related to the role of greenhouse gas (GHG) emission standards in the Self Generation Incentive Program ("SGIP") in R.12-11-005.<sup>2</sup> The Commission's Staff proposal notes the need to focus on BUG policy when it notes:

"The Decision [sic] clearly intends for BUG policy to address traditional fossil fueled DG technology (gensets) in quadrant C, but the language is vague and could be interpreted more broadly to include fossil-fueled "clean DG" and storage technologies in quadrant A. Meanwhile, the SGIP policy review underway in R.12-11-005 is re-examining whether dual-participation of SGIP resources in DR programs should be permitted. Hence, which resources should be defined as "BUG" for purposes of prohibiting or limiting

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<sup>2</sup> *Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues*, filed November 8, 2012.

their use with DR is critical and has implications for resources outside of the DR proceeding.”<sup>3</sup>

Question Number 3 seeks comment from parties regarding whether energy storage systems participating in demand response (“DR”) programs should meet a GHG emissions factor threshold, as required by the Commission in R.12-11-005. This question is relevant in general terms, given that a Commission focus in this proceeding is on the GHG emissions of certain back-up generation (“BUG”) technologies, but the GHG reduction benefits of energy storage systems themselves is a question already currently pending at the Commission in R.12-11-005.<sup>4</sup> By rejecting the misplaced, and erroneous, opening comments of parties regarding energy storage systems and the clean emission-reducing benefits of energy storage technologies, the Commission can readily confine its focus here on how best to limit GHG emissions-generating BUGs from participation in demand response (“DR”) programs. To do otherwise would unfairly allow parties that are clearly identified by their self-interest in promotion of fossil fuel usage in any and every context to “hijack” issues that are squarely within the scope of R.12-11-005.

**II. THE COMMISSION SHOULD REJECT AND DISREGARD COMMENTS OF PARTIES THAT SEEK TO INJECT ISSUES UNRELATED TO THE POLICY QUESTIONS ADDRESSED IN THE STAFF PROPOSAL.**

CESA strongly disagrees with the comments filed by PG&E concerning the use of storage for DR:

"Since the storage may be charged by energy from the grid, the impacts on emissions are not clear. It is possible that the incremental grid system resource to charge the storage device may be fossil fuel based, and given the fact that storage will lose some of that energy before it can be used, there is a reasonable chance that this exemption may be for an application that produces more emissions than some of the other applications being prohibited (e.g.

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<sup>3</sup> *Staff Proposal*, p. 6.

<sup>4</sup> *Proposed Decision Revising the Greenhouse Gas Emission Factor to Determine Eligibility to Participate in the Self-Generation Incentive Program Pursuant to Public Utilities Code Section 379.6(b)(2)*, issued July 10, 2015, is on the Commission’s Agenda for approval on October 22, 2015.

CHP). This issue should be considered in workshop along with all the other issues. It points out the complexity of the BUG prohibition issues and how unintended consequences may arise.”

Dispatchable DR facilitated by energy storage offers tremendous benefits to grid needs in at least the following important ways:

1. Energy storage can offer reliable flexibility needed by the California Independent System Operator (“CAISO”) by being dispatchable on command, offering reliable load reduction and energy/ancillary services.
2. Presumed and or substantiated cycling patterns of energy storage typically imply the resource provides clear GHG emissions reductions by offsetting energy needs from periods with higher heat-rate resources by increasing energy consumption from lower hear-rate and thus less polluting resources. With more renewable resources on the system, the emissions benefits of energy storage can be presumed to increase.
3. Energy storage can efficiently utilize renewable energy by instantly increasing load at times characterized by high excess renewable generation, and reducing load during ramping time periods, and adding to the regulation capability of the grid.
4. Energy storage can offset the need for inefficient ramping of traditional generation, and ultimately relieve the system of the need for new peaking capacity.

Customer-sited energy storage systems installed to provide DR as well as other services likely reduce the overall effective heat rate of the California electric grid. Energy storage produces no local emissions, and the existence of storage when grid-connected additionally provides system-level GHG emission reduction. Stand-alone storage supplements California’s clean grid power which will advance from a 33% RPS to a 50% RPS by 2030.<sup>5</sup> Further, energy storage charged from renewable energy results in zero total emissions and zero onsite emissions. Commission policy, in line with goals of clean and reliable power system operation, should promote better utilization of these resources.

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<sup>5</sup> Results from PLEXOS modeling of a 40% RPS based on a LTPP 2024 scenario showed that energy storage readily avoids curtailment of renewables while also reducing the use of and need for gas-fired ‘peaking resources’. CESA Commissioned these modeling studies which showed GHG-reductions linked to the use of storage (compared to cases of less energy storage.) PLEXOS is a definitive model based on its use in key resource planning decisions and based on its comprehensive WECC-wide vantage.

Pacific Gas and Electric Company's ("PG&E's") observation in its Opening Comments regarding the unclear impacts of charging energy storage and the GHG profile that results for grid operations is unsubstantiated and misleading. At worst, energy storage has a cycle impact of kWh / (1 – Round Trip Efficiency), which means that more total energy may be needed to meet load. However, there is no instantaneous increase with energy storage as there would be with generation resources and energy storage is flexible as to when and from what source to charge. This allows for minimization of GHG impacts. If an onsite distributed energy resource, such as solar PV is present the impact is further mitigated.

Energy storage resources provide other benefits through their wide functionalities. Unlike the other fossil fuel technologies being examined by the Commission, energy storage is fully dispatchable, flexible, and ideally suited for DR. Conversely, fuel cells, CHP units, and diesel generators generally operate less efficiently when they are cycled, e.g. for ramping.

### **III. THE COMMISSION SHOULD REJECT AND DISREGARD COMMENTS OF PARTIES THAT PROPOSE TO PROHIBIT APPROPRIATE USE OF SELF-GENERATION INCENTIVE PROGRAM FUNDS.**

CESA strongly disagrees with the opening comments filed by the Office of Ratepayer Advocates ("ORA") concerning the use of energy storage for DR that are also eligible to qualify for SGIP funds:

"The Staff Proposal also states the Self-Generation Incentive Program (SGIP) rulemaking, R.12-11-005, is reviewing "double-dipping" of SGIP and DR incentives, which may impact how stand-alone storage and storage coupled with renewable generation is allowed to be used in DR. ORA agrees the Commission should resolve the issue of double-dipping of incentives before inclusion of storage in DR is allowed." (ORA Comments, p. 7).

ORA's comment reflects a fundamental misperception of both a key intent of SGIP and the goals set forth in in this proceeding to enhance the role of demand response programs in meeting the state's long-term clean energy goals while maintaining system and local reliability.

The overarching intent of SB 861 was to use the ratepayer-funded SGIP to curb GHG emissions and other air pollutants and support energy technologies that increase the efficiency, reliability, and utilization of California’s existing electricity grid assets. SGIP eligible resources have never been prohibited from participating in DR programs. SGIP funded energy storage can provide demand response capabilities and benefits while also meeting SGIP requirements. .

Keeping SGIP-eligible energy storage out of DR programs is contrary to intent of the SGIP, and supporting DR with SGIP funded-resources does not constitute double dipping. Rather, the very existence of an SGIP-eligible energy storage asset enables achieving greater DR participation and facilitates further GHG and system level grid benefits. This is good for all ratepayers and consistent with state policy.

For similar reasons, the Commission should also reject San Diego Gas & Electric Company’s (“SDG&E’s”) opening comments:

"SDG&E also opposes participation by customers through resources that are already benefitting from other incentives from another program (such as receipt of SGIP incentives); this requirement would protect ratepayers from having to pay twice for the same resource. SDG&E recognizes the important role of Energy Storage in performing demand response functions. However, if storage is allowed to participate, it should not be allowed to concurrently receive funding from SGIP or any other ratepayer funded program.” (SDG&E Comments, p. 1 and p. 3).

**IV. THE COMMISSION SHOULD NOT PRECLUDE CUSTOMERS FROM PARTICIPATION IN DEMAND RESPONSE PROGRAMS SIMPLY BECAUSE THEY HAVE AN UNRELATED BUG SYSTEM ONSITE.**

CESA agrees with the Sierra Club in its statements allowing customers to participate in Demand Response programs while also having a BUG or BUGs on site, so long as the BUG is not used in the demand response program.<sup>6</sup> CESA thus recommends the Commission clarify or affirm that BUGs are allowed on the premises of a DR - providing customer deals, if unrelated to

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<sup>6</sup> “Sierra Club Comments on Staff Proposal Regarding The Use Of Fossil-Fueled Back-Up Generation In Demand Response Programs” Sierra Club, October 15, 2015, pg. 5.



the DR program. Overly broad language regarding BUGs on a customer's premises could inappropriately restrict customers from participation in DR programs merely because they have some form of BUG on site, completely unrelated to DR. This overly restrictive approach will create undue impediments and could lead to disqualifications of available DR that is fully compliant with the intent of the DR programs.

V. **IF CESA'S COMMENTS ARE NOT ACCEPTED, THE COMMISSION SHOULD SCHEDULE A WORKSHOP TO ADDRESS THE RELATIONSHIP OF ENERGY STORAGE TO THE SUBJECT MATTER OF THE STAFF PROPOSAL.**

CESA recommends the Commission reject the out of scope comments advocating for exclusionary approaches that could hinder clean DR growth and participation via energy storage. If, however, the Commission should determine that the record on why use of energy storage is not sufficiently supported by the record for participation in DR programs, it may be necessary to host a workshop so that confusion and misperceptions can be dispelled

VI. **CONCLUSION.**

CESA thanks the Commission for the opportunity to provide these reply comments in response to the ALJ's Ruling.

Respectfully submitted,



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