BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local and Flexible Procurement Obligations for the 2016 and 2017 Compliance Years.	R.14-10-010 October 16, 2014

COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON ADMINISTRATIVE LAW JUDGE'S RULING SEEKING PARTY COMMENTS AND PROPOSALS

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The California Energy Storage Alliance ("CESA")[1] hereby submits these comments pursuant to the *Administrative Law Judge's Ruling Seeking Party Comments and Proposals*, filed December 12, 2014 ("ALJ's Ruling").

[1] 1 Energy Systems Inc., Advanced Microgrid Solutions, AES Energy Storage, Alton Energy, American Vanadium, Amperex Technology Limited, Aquion Energy, ARES North America, Beacon Power, LLC, Bosch, Bright Energy Storage Technologies, Brookfield, CALMAC, Chargepoint, Clean Energy Systems, Coda Energy, Consolidated Edison Development, Inc., Cumulus Energy Storage, Customized Energy Solutions, Demand Energy, DN Tanks, Duke Energy, Eagle Crest Energy Company, EaglePicher Technologies, LLC, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, Energy Storage Systems, Inc., Enersys, EnerVault Corporation, EV Grid, FAFCO Thermal Storage Systems, FIAMM Energy Storage Solutions, Flextronics, Foresight Renewable Solutions, GE Energy Storage, Green Charge Networks, Greensmith Energy, Gridscape Solutions, Gridtential Energy, Inc., Halotechnics, Hitachi Chemical Co., Hydrogenics, Ice Energy, Imergy Power Systems, ImMODO Energy Services Corporation, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Invenergy LLC, K&L Gates, KYOCERA Solar, Inc., LG Chem, LightSail Energy, LS Power Development, LLC, Mitsubishi International Corporation, NEC Energy Solutions, Inc., NextEra Energy Resources, NRG Solar LLC, OCI, OutBack Power Technologies, Panasonic, Parker Hannifin Corporation, PDE Total Energy Solutions, Powertree Services Inc., Primus Power Corporation, Recurrent Energy, Renewable Energy Systems Americas Inc., Rosendin Electric, S&C Electric Company, Saft America Inc., Samsung, SEEO, Sharp Electronics Corporation, SolarCity, Sony Corporation of America, Sovereign Energy, STEM, Stoel Rives LLP, SunEdison, SunPower, TAS Energy, Toshiba International Corporation, Trimark Associates, Inc., Tri-Technic, UniEnergy Technologies, LLC, 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. See, http://storagealliance.org.

I. INTRODUCTION.

CESA very much appreciates the Commission asking such directive questions with regard to energy storage and resource adequacy ("RA") qualification. In many cases, relevant stakeholder proceedings are ongoing or needed at the California Independent System Operator ("CAISO") to address the specific questions posed in the ALJ's Ruling. CESA asks the Commission to continue working closely with the CAISO to create a streamlined, durable, and flexible approach to RA for all resources.

CESA provides these limited responses to certain of the specific questions posed in the ALJ's Ruling focused on essentially two topics, namely: (a) RA participation for distributed aggregated energy storage systems, and (b) energy storage RA qualification rules. CESA reserves the right to address these issue, and other not touched on here, in greater depth in comments on the Commission Staff Proposal published on January, and to address other questions posed in the ALJ's Ruling in comments on the Commission's staff proposals due on January 30, 2015, and at the workshop currently scheduled to take place on February 9, 2015.

II. RESPONSES TO SPECIFIC QUESTIONS POSED IN THE ALJ'S RULING.

1. Are the current eligibility criteria for energy storage and demand response (DR) appropriate? If not, what changes would you recommend? If you recommend less stringent eligibility criteria, please consider any restrictions that may need to be clarified such as resource type limitations, capacity caps, regional considerations and Local vs. System RA status, and any other constraints that may be advisable. Please also consider how any changes to eligibility criteria would interact with NQC and Effective Flexible Capacity (EFC) listings, Maximum Cumulative Capacity (MCC) buckets, other CPUC programs and proceedings, and CAISO processes such as Master File reporting.

CESA's Response: The Commission should unbundle the procurement of Effective Flexible Capacity ("EFC") from Net Qualifying Capacity ("NQC"). CESA agrees with the key points

advocated for by San Diego Gas & Electric Company ("SDG&E") in its proposal,[2] namely that: (a) a prescriptive rule requiring bundling in all instances is not necessary to promote least cost/best fit procurement, and (b) requiring bundling in every instance promotes overprocurement, and artificially constrains the market for flexible RA. Simply put, CESA sees no compelling reason to bundle EFC with NQC. As the Commission works toward defining and implementing a durable flexible capacity product, CESA strongly recommend that the Commission should follow the lead of the CAISO[3] in unbundling flexible capacity from capacity used to meet system or local peak demand. At a minimum, the Commission should certainly expressly support EFC-only resources, since in many cases; it may be most cost-effective options available. As California moves toward an increasingly renewable grid, flexibility will exponentially increase in importance.[4] Among other reasons, these resources may require considerably lower cost interconnections, and they may also be optimum for Variable Energy Resource support.

2. Should the measurement hours be changed for any resources? If so, how?

CESA's Response: CESA expresses no opinion at this time.

3. Should any changes be made to the MCC bucket system, or should any particular analysis be conducted to enable future refinements or changes to the current system?

CESA's Response: CESA expresses no opinion at this time.

4. In its flexible resource adequacy criteria and must offer obligations (FRAC-MOO) initiative, the California Independent System Operator (CAISO) proposed that energy storage resources wishing to qualify as Flexible RA based on both charge and

[2] See, e.g., *Opening Comments of San Diego Gas & Electric Company on the Proposed Decision of Administrative Law Judge Gamson Adopting Local Procurement and Flexible Capacity Obligations for 2015, and Further Refining the Resource Adequacy Program*, filed June 16, 2014.

[3] http://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleCapacityProcurement.aspx

[4] *Investigating a Higher Renewable Standard in California*, Energy and Environmental Economics, January 2014.

discharge capabilities should be required to register as non-generator resources (NGR). The following questions relate to this and to related concepts.

a. Is the NGR requirement of continuous operation through the transition point (moving without interruption from charge to discharge mode) appropriate, and why?

CESA Response*:* CESA expresses no opinion at this time.

b. How might discontinuous operation through the transition point be similar to or different from the concept of "forbidden operating zones" for conventional generators?

CESA's Response: CESA expresses no opinion at this time.

c. If a transition period between charging and discharging is advisable, how long of a transition period is acceptable, and why?

CESA's Response: CESA expresses no opinion at this time.

d. If a transition period between charging and discharging is advisable, should there be any restrictions on discontinuity in output (difference between P demand min and P supply min), and why?

CESA's Response: CESA expresses no opinion at this time.

e. Are the bidding limitations for NGRs described in Section 4.1.1 of the CAISO BPM for Market Instruments3 appropriate to apply to energy storage resources that wish to qualify as Flexible RA resources? If not, why not?

CESA's Response: CESA expresses no opinion at this time.

f. Should the NGR designation or a similar, modified designation be applied to behind-the–meter storage resources? What issues or modifications should be considered? Please consider both exporting and non-exporting resources.

CESA's Response: Significant conceptual gaps need to be addressed to allow effective participation of distributed aggregated NGRs behind-the-meter. Currently, there are still major barriers to distributed energy storage resources located behind-the-meter because the supply side demand response ("DR") resource category has yet to be fully defined by the Commission. Implementation considerations concerning supply side DR resources effectively preclude

procurement of these resources, specifically including appropriate qualification for participation as flexible resource adequacy ("RA"). In addition, harmonization is needed between Non-Generator Resource ("NGR") and Proxy Demand Response ("PDR") product categories currently in use at the CAISO. Today's PDR rules only allow distributed aggregated resources to count for their load modifying capability, rather than their full flexible capacity. NGR rules, on the other hand, allow for resources to count for their full flexible capacity, but do not yet fully accommodate aggregation. Filling these gaps is critical to allow behind the meter resources to participate in DR and be appropriately valued in RA.

g. Should energy storage resources wishing to qualify as Flexible RA be required to register as NGR resources? Why or why not? Should any changes be made to the NGR requirements in order to facilitate participation of energy storage resources in the RA program?

CESA's Response: While NGR registration may make sense for some energy storage resources; it is inappropriate to require NGR registration for all energy storage resources in order to qualify for flexible RA. CESA supports NGR registration for energy storage resources in many cases. However, NGR registration should not be a *requirement* to qualify as flexible RA. For example, here may be circumstances in which it is preferable to allow a behind-the-meter resource to participate as part of an end use customer's overall energy management scheme. The resource might then qualify for flexible RA in a DR category. Depending upon future changes to ELCC and EFC methodology, an energy storage resource may also better qualify for flexible RA in combination with a traditional or renewable generator rather than as an NGR.

h. Should the NQC of behind-the-meter storage resources registered as Proxy Demand Resources (PDR) be based on metered performance or testing, instead of the current 10-in-10 baseline methodology (load impact protocol) for DR? If so, what methodology or protocol is appropriate?

CESA's Response: CESA recommends that there be two options for the NQC methodology for behind-the-meter storage resources registered as PDR:

1. In cases where the energy storage resource is an integrated component of a DR scheme that may include building controls and behavioral change, the NQC should be based upon the current 10-in-10 baseline methodology. Such an approach might be considered a demand side DR resource in the parlance of the Commission's DR proceeding (R.13-09-011).

2. Alternatively, behind-the-meter energy storage resources should be allowed to participate as PDR/NGRs, in which case the NQC and EFC should be based upon metered performance and testing. As noted above, PDR/NGR harmonization will be required by the CAISO to allow the aggregation of distributed energy storage resources. Such resources should be considered supply side DR resources in the context of R.13-09-011. It is also very important that the Commission support adoption of streamlined metering and telemetry rules and equipment. The CAISO's "Expanding Metering and Telemetry Options" is currently initiative has begun addressing these key technical requirements

III. CONCLUSION.

CESA appreciates this opportunity to comment on the ALJ's Ruling, and looks forward to working with the Commission and stakeholders in this proceeding going forward.

Respectfully submitted,

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