

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

Order Instituting Rulemaking on the Commission's  
Own Motion to Improve Distribution Level  
Interconnection Rules and Regulations for Certain  
Classes of Electric Generators and Electric Storage  
Resources.

R.11-09-011  
Filed September 22, 2011

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE  
ON SMART INVERTER WORKING GROUP PHASE 2 RECOMMENDATIONS**

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The California Energy Storage Alliance (“CESA”)<sup>1</sup> provides these reply comments on the *Request of the Energy Division of the California Public Utilities Commission* (“Commission”), dated October 27, 2014 (“Request”).

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<sup>1</sup> 1 Energy Systems Inc., Advanced Microgrid Solutions, AES Energy Storage, Alton Energy, American Vanadium, Ampere 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, Steel Rives LLP, SunEdison, SunPower, TAS Energy, Toshiba International Corporation, Trimark Associates, Inc., Tri-Technic, UniEnergy Technologies, LLC, Wellhead Electric. The views expressed in this response 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 hereby submits these comments on Smart Inverter Working Group Phase 2 Recommendations at the request of the Energy Division of the Commission as part of the Agenda for a Workshop held at the Commission's offices in San Francisco, California on October 27, 2014.

**II. EDITORIAL COMMENTS ON THE RECOMMENDATIONS.**

CESA has no editorial comments at this time.

**III. SUBSTANTIVE COMMENTS ON THE RECOMMENDATIONS.**

CESA appreciates the efforts of the Commission and stakeholders to develop policies to support advanced inverter capabilities through the Smart Inverter Working Group. Establishing a robust and effective communications protocol is an important element in this effort.

**A. Allow Other Protocols That Meet The Same Standards**

The adoption a single protocol is important as it provides certainty to the market and will facilitate investment activities by reducing some of the technology risk that otherwise exist. At the same time, while CESA supports the goal of identifying and adopting a single protocol we also wish to ensure that a policy meant to expand adoption and effective utilization of distributed energy technologies does not inadvertently become a straitjacket that unduly constrains the market. With that in mind, we suggest that developers and utilities continue to have the flexibility to rely on something other than the ultimately identified communications protocol, provided such alternatives are mutually acceptable to utilities, aggregators and manufacturers.

This would be consistent with the flexibility that is currently reflected, for example, in IEEE 1547 where utilities and developers may pursue settings outside of the parameters

specifically spelled out within the standard. Below CESA offers relevant excerpts from the IEEE 1547a (emphasis added):

“From 4.2.3 (voltage section):

When any voltage is in a range given in Table 1, the DR shall cease to energize the Area EPS within the clearing time as indicated. **Under mutual agreement between the EPS and DR operators, other static or dynamic voltage and clearing time trip settings shall be permitted**

From 4.2.4 (frequency section):

When the system frequency is in a range given in Table 2, the DR shall cease to energize the Area EPS within a pre-set clearing time as indicated. **Under mutual agreement between the EPS and DR operators, other static or dynamic frequency and clearing time trip settings shall be permitted.”**

#### **B. Conduct Pilots.**

In addition to the above recommendation, CESA also suggests that as the Commission considers the communications protocol, it conducts near term pilots to assess the advantages and disadvantages different protocols may embody. While much of the Phase 2 recommendations focused on the SEP 2 protocol, it is not clear at this stage if this is the best option with which to move forward. In light of this uncertainty, we encourage the Commission to accelerate early pilots for integrating communications between utilities, aggregators and manufacturers. These pilots will provide invaluable information regarding the practical efficacy of SEP 2.0 as well as highlight alternatives that might be pursued. Such pilots should be scoped and scheduled for near term results and not become a reason for prolonged delay as the Commission and stakeholders seek to move things forward in a timely way.

#### **C. Clarify The Issues That Will Be Decided In Phase 3.**

The draft recommendations contain language that is overly conclusive about Phase 3 requirements. Section 4 and Section 5.3 should contain language in the opening paragraphs

clarifying that the use cases and performance requirements are proposed by the utilities for purposes of developing communications protocols but have yet to be vetted as recommended use cases and performance requirements.

Section 4 should be amended to read:

“The utilities reviewed the Phase 1 and Phase 3 functions as Use Cases to determine their *recommended* data requirements. These are summarized below, along with indications of the importance to utilities. *These use cases will be more fully considered in phase 3 but are presented here for illustrative purposes.*”

Section 5.3 could be amended to read:

“Utilities have *PROPOSED* the following performance requirements for interacting with different types of DER systems. *These requirements will be considered in phase 3 but are presented here for illustrative purposes.*”

#### IV. **CONCLUSION.**

CESA appreciates the opportunity to submit these comments, and looks forward to actively working with the Energy Division and stakeholders on these important issues.

Respectfully submitted,



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