

**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.

Rulemaking 11-09-011
(Filed September 22, 2011)

**CLEAN COALITION REPLY COMMENTS ON
SMART INVERTER WORKING GROUP
PHASE 2 COMMUNICATIONS PROTOCOLS**

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I. INTRODUCTION

The Clean Coalition submits these reply comments pursuant to a request for comments on the Smart Inverter Working Group—Phase 2 Communications Protocols agenda for a workshop of October 27, 2014.

The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement, interconnection, and realizing the full potential of integrated distributed energy resources, such as distributed generation, advanced inverters, demand response, and energy storage. The Clean Coalition also designs and implements programs for utilities and state and local governments—demonstrating that local renewables can provide at least 25% of the total electric energy consumed within the distribution grid, while maintaining or improving grid reliability through community microgrids. The Clean Coalition participates in numerous proceedings in California and before other state and Federal agencies.

II. COMMENTS

a. General Comments

The Clean Coalition wishes to acknowledge the collaboration of the Smart Inverter Working Group (“SIWG”), including both provider and utility representatives, in working toward consensus positions on issues, and the Energy Division staff for their foresight and efficiency in addressing this topic. While perspectives and the focus of concerns vary, we believe substantial alignment has been achieved in delineating an effective path toward realization of the benefits of substantial deployment of advanced inverters.

b. Reply Comments

The Clean Coalition supports the concerns expressed in opening comments of Enphase (p.1) and the California Solar Energy Industries Association (p.2) regarding the potential cost of communication requirements, and recommends steps to address this issue.

We believe all parties share the common goal of ensuring customers have equal access and opportunity to generation choices, and to clean, reliable, safe, and secure power at the least total net cost. While we are succeeding in effectively addressing the technical standards, we must acknowledge that associated issues relating to potential costs, revenue, and compensation must also be addressed.

Several of the proposed new communication features could have a significant cost impact and tariff standards should be designed to reflect and mitigate these impacts. With this consideration, it is both appropriate to only require communication functionality to the extent it is anticipated to be cost effective, and where the value does not result in a net cost burden against either system owners or non-owner ratepayers.

As we have done previously in this broader proceeding and elsewhere, the Clean Coalition continues to recommend that cost effectiveness evaluation be applied to ensure that interconnection communication requirements not exceed the value created, and that cost responsibility be aligned with the beneficiary.

While advanced inverter functionality offers great potential value in improved grid operations, avoided system upgrades, lower interconnection costs, and higher penetration and development of preferred distributed energy resources (“DER”), a failure to consider cost effectiveness and align cost responsibility with benefits equally has the potential to inhibit DER development or disproportionately impact certain sectors or customer configurations.

The Commission and the Working Group have recognized that inverter settings and functions may have a positive or negative impact on revenue for the facility owner, and this topic is slated for future consideration within the SIWG and public workshops;

however, we wish to take this opportunity to highlight the importance of also addressing the cost and benefit allocation associated with communication standards, and ensure that the application of these standards to individual or classes of facilities is not made without this consideration.

For example, we have seen circumstances in the past in which dedicated T1 communication lines were required by CAISO when a project surpassed a capacity threshold, creating additional costs that can exceed \$100,000, with no consideration of the actual value of this communication requirement. As a result, facilities were regularly designed to avoid triggering this requirement, thereby not only failing to create the operational visibility CAISO was seeking, but missing economies of scale and optimal facility sizing that would have resulted in ratepayer savings. A cost effectiveness consideration could have supported marginally less capable and far less costly communication options that would have yielded better results for all parties.

Even in much more modest yet common scenarios, if a communication standard requires cellular or internet access at a cost of \$10 per month, and yet the value realized by utilizing this communication capability is expected to be less than \$10 per month, there will be no net benefit to relative to cost. Under such circumstances the investment is not warranted and alternatives should be applied, such as aggregated statistical averaging of neighboring facilities data reporting and/or the use of existing but more limited AMI communication capabilities.

We strongly support the use of available data to improve operations and reduce costs for all parties, and support the adoption of standards regarding communication protocols and compatibility. However, the inclusion of communication protocol standards in the tariff should remain distinct from establishing requirements for maintaining communications and assigning responsibility for the cost of operation of communications.

While we recognize that this is not a ratemaking proceeding, if the system operator will receive the benefits of greater communication speed and functionality, it is appropriate for the system operator to determine whether the investment required is cost effective and either directly bear the associated costs or ensure that the facility owner will

receive compensation at least equal to the added costs, rather than incorporating the establishment of communications as a universal requirement of the tariff.

III. CONCLUSION

The Clean Coalition notes support of CESA, SEIA, CalSEIA, ORA and other parties in prior inverter functionality comments to identify customer classes or minimum project threshold sizes below which requirements are adjusted, as the relative cost impact of these new requirements will vary by project size and type. We urge the Commission to consider cost impacts and accommodate alternatives where equipment or operational costs provide proportionately little or no additional benefit.

The Clean Coalition appreciates this opportunity to provide reply comments and looks forward to continuing to work with the Commission and other stakeholders on these important issues for the successful transition to secure, sustainable, and cost effective energy supplies with equal access for all customers.

Respectfully submitted,

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