BEFORE THE PUBLIC UTILITIES COMMISSION OF

THE STATE OF CALIFORNIA

Order Instituting Rulemaking to consider policy and implementation refinements to the Energy Storage Procurement Framework and Design Program (D.13-10-040, D.14-10-045) and related Action Plan of the California Energy Storage Roadmap.	Rulemaking 15-03-011 (Filed July 14, 2015)

CLEAN COALITION COMMENTS ON PROPOSED DECISION ON MULTIPLE-USE APPLICATION ISSUES

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I. INTRODUCTION

The Clean Coalition appreciates the opportunity to comment on the Proposed *Decision on Multiple-Use Applications* and to offer suggestions and corrections for implementing the Commission's objectives to develop flexible rules to allow value stacking while also providing for future regulatory changes to support the deployment of DER.

The Clean Coalition is a 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 and interconnection of distributed energy resources (DER)—such as local renewables, advanced inverters, demand response, and energy storage—and we establish market mechanisms that realize the full potential of integrating these solutions. The Clean Coalition also collaborates with utilities and municipalities to create

near-term deployment opportunities that prove the technical and financial viability of local renewables and other DER.

II. General Considerations

Energy Storage is an important service for the efficient operation of the grid and must be incentivized to the extent appropriate to enable intermittent renewable resources to be deployed and fully substitute for fossil fuel generation as dispatchable resources.

We commend the Commission and Staff for engaging in a thoughtful and careful process to develop rules and guidance to enable energy storage systems to stack incremental value and revenue streams by delivering multiple services to multiple domains; this is critical for efficient utilization of this resource. We support the flexible and generalized framework adopted here. The principles-driven approach of the Rules in this decision should be flexible enough to allow for new use cases that have not yet been developed and to provide a foundation for rules related to other Distributed Energy Resources (DER) technologies to also deliver multiple value streams. Using a series of use cases would be too restrictive and idiosyncratic and extremely difficult to develop in anticipation of unforeseen new uses.

In that spirit, we offer the following comments:

a. Other Distributed Resources with Advanced Inverters are also likely to participate in Multiple-Use Applications

First, the Commission should not lose sight of the fact that other DER, such as solar, will also be in a position to provide a range of services in multiple-use applications as soon as there are rules and mechanisms for compensation for those services, especially with the addition of advanced inverter functions where applicable. The Decision points to storage as the first wave of technologies implementing multiple-use applications, but technologies such as Automated Demand Response and solar with advanced inverters should be able to provide many similar services beyond generation,

including frequency response, voltage support and other services and may potentially contract for a variety of such services. In particular where microgrids combine solar with automated demand response and other technologies of offer an aggregated multiple-technology resource, the microgrid can act as a single resource to modify load or offer other services to the grid beyond what solar alone could provide.

We therefore urge the Commission and Staff to consider how these rules would apply to other technologies and combinations of technologies or resources as well as to storage specifically. The Commission has made progress in numerous proceedings in recognizing energy services agnostic to the specific technology providing them, while maintaining recognition of preferred resources. We strongly encourage this approach in its emphasis on the value of the services provided, consistent treatment of all providers, and support for level competition across existing and emerging technologies.

b. The revised Rule 10 appropriately focuses on transparency, but the emphasis on incrementality may be misplaced.

The adopted Rule 10 correctly shifts the emphasis from "windfall" profits to transparency. First, we emphasize that revenues from various services aren't windfalls, but rather represent the real value provided by storage resources in multiple domains for providing multiple services. As long as the storage resource does not fail to meet its obligations, profits for storage providers represent real added value from a flexible resource. Thus, at most ratepayers should be concerned with the benefits they derive from the payments rather than whether the provider is also delivering other benefits.

Although the concerns about double compensation are worth considering, we are concerned that the Commission is edging toward looking for ratepayers and utilities to obtain benefits from DER providers without compensation. In principle, energy services are compensated based on the ability of the DER provider to leave the grid and ratepayers better off than they would be without the service, and the value of that service should be tied to that delivered value. The fact that the DER can also provide other

services should not necessarily be relevant to that analysis. If a single DER is able to address multiple issues at once and provide value in multiple ways, each of these services should be compensable if they would previously be compensable if those same services had been provided by multiple resources. Otherwise, the rules would both create a perverse incentive to use costlier multiple resources to realize multiple value streams and would end up requiring DER providers to deliver value to ratepayers without any compensation. Thus, there is a strong argument that compensation should be tied to the value delivered to ratepayers, and not based on whether the resource is or is not also meeting other needs. Under this approach, the compensation would be independent of the number of resources providing the portfolio of services and the most cost-effective resource or aggregation to provide the full suite should win bids and be deployed as economically beneficial.

We recommend emphasis on ensuring competitive access to provision of services, since a resource that can receive compensation from multiple revenue streams will be able to offer its services to each revenue stream at lower cost than it would otherwise. In an efficient market, the total revenues received by such a resource should be only marginally higher than otherwise, while the primary beneficiary will be ratepayers realizing lower pricing for the services.

Thus, where a single resource can meet multiple needs, even with a single action, it should receive compensation for those services, if separate resources would, because this would shape the economics of such projects to incentivize the use of more cost-effective resources, reducing the costs of providing both services for ratepayers in the medium term.

c. The Clean Coalition reiterates its opposition to Rule 2's prohibition on meeting customer domain needs with distribution connected resources.

Respectfully, we wish to correct the Decisions statement that "no party opposed" the rules barring participation by distribution-connected resources in customer domain services. We strongly support either revising Rule 2 or adopting an expansive reading of "community storage" in order to allow distribution connected resources to meet customer domain services.

As we explained in our comments on the Staff Proposal:[1]

> From the standpoint of reliability and [upstream] grid management, there is no difference between reducing load to reduce peaks and contracting for the dispatch of energy from nearby storage to offset that load. It is unclear why it should matter that the point of interconnection of that storage is in front of the customer meter within the distribution grid….
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> For example, Rule 2 would be a barrier to direct access services as an opportunity for in front of the meter resources. Although currently suspended, such direct access-style markets may well be reopened in the near future as various regulators and the legislators consider reforms in the areas of retail choice, community choice aggregation, or the implementation of Distribution System Operators. Providing opportunities for distribution connected resources to sell directly to local customers could incentivize transmission investment deferral and augment the value stack for DER.

As currently formulated, Behind the Meter (BTM) resources would have an intrinsic advantage in having access to additional revenue streams that a resource connect just in front of the meter (IFOM) would not. As an example, the Clean

[1] Clean Coalition Comments on Joint Staff Proposal On Multiple-Use Applications For Energy Storage, June 16, 2017, at 6-7.

Coalition has worked with the Mission Housing Development Corporation and Pathion to implement the Valencia Gardens Energy Storage[2] project in San Francisco, in which IFOM batteries are combined with BTM solar to increase hosting capacity on the circuit for additional BTM solar and to provide back-up power services to the Valencia Gardens complex for critical loads in the event of a grid outage. Under Rule 2, it would appear that this configuration would bar the battery owner for receiving compensation for one or both of these services since the benefits occur in the customer domain. Furthermore, since the IFOM batteries could also discharge to modify the load on the circuit presented to the distribution, the batteries should be able to provide virtual demand or TOU charge management, where applicable. However, while IFOM resources could provide such services, only BTM resources would be straightforward to compensate for these services.

This distinction would create a strong incentive to locate batteries behind meters before considering IFOM sites, even if the IFOM may be more optimal from a grid standpoint. This may slow the deployment of batteries as DER providers are required to make contractual arrangement with individual customers and potentially increasing the costs of needed distribution upgrades. This kind of incentive may result in less cost-effective deployment of storage overall.

We therefore suggest that since many distribution-connected resources can and do provide identical services to the grid as BTM resources the rules not discriminate against these uses. Ultimately, the "Community Storage" rules may address much of these concerns, or the Commission may choose to address this issue in other ways.

[2] CEC EPIC GFO-16-309

d. The framework of time-differentiation, capacity-differentiation, and simultaneous Multiple-Use Applications is exceptionally helpful.

We strongly support the Commission's revised Rule 6's recognition of time-differentiation in services. The framework of reviewing time-differentiated, capacity-differentiated, and simultaneous Multiple-Use Applications for the working group should provide a solid framework for working through the complexities of real-world applications of multiple use resources.

e. The Clean Coalition supports the use of a working group to resolve further issues.

We also appreciate the approach of working further to resolve additional issues in a working group, and we would be pleased to participate in such a working group.

III. Conclusion

The Clean Coalition thanks staff for the exceptional effort and discussion in presenting these issues for consideration and looks forward to fruitful participation going forward.

Sincerely,

Doug Karpa
Policy Director
Clean Coalition