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*Comment Received From: Wendy Boyle  
Submitted On: 1/22/2024  
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**Clean Coalitionâ€™s responses to Energy Storage Innovations  
Concept 23-ERDD-01**

*Additional submitted attachment is included below.*

22 January 2024

California Energy Commission  
715 P Street  
Sacramento, CA 95814

Title: Clean Coalition’s responses to California Energy Commission’s (CEC) Request for Information to “Energy Storage Innovations Concept 23-ERDD-01”

The Clean Coalition appreciates the opportunity to provide comments to the CEC’s “Energy Storage Innovation Concept 23-ERDD-001” in support of a future granting opportunity through the CEC.

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid. The Clean Coalition supports the CEC’s continued efforts to: (1) to enable more strategic and high-value implementation of energy storage in transmission, distribution, and customer domains to support grid reliability and achievement of clean energy policy goals such as those established by Senate Bill (SB) 100, (2) provide grant funding for research and development to improve the cost effectiveness, performance, safety, and supply chain sustainability of energy storage technologies and maximize the value and benefits of future energy storage procurements to support grid reliability, and for the demonstration of energy storage systems that can serve multiple use cases and provide data on, and insight into, the added value of stacking grid and customer services.

Based on our technical engineering and policy expertise with designing Community Microgrid and Solar Microgrid including our Solar Microgrid Methodology and Value of Resilience (VOR123)<sup>1</sup> which was incorporated into CEC’s GFO-20-305 as one of the project design requirements, we would like to submit our responses to the following Sections (A and C) in Docket #23-ERDD-01/TN #253877 (formerly TN #253730):

**A. General:**

1. In addition to the target performance metrics outlined in Section IV.A regarding LCOS, calendar life, and roundtrip efficiency, what other metrics should be reported?

**Response:**

- a. Where applicable, impact on peak load at the substation or feeder level
  - b. Where applicable, impact on the integration capacity/hosting capacity of individual feeder circuits
2. CEC is considering releasing this funding opportunity as a two-phase solicitation that includes a Pre-Application Abstract phase and Full Application phase. Projects that are successful in the Abstract phase will have two months to prepare a Full Application. Is this approach preferable to applicants or should the CEC consider a one-phase solicitation without the Pre-Application Abstract phase?

**Response:** 2-phase application process is preferable.

3. Are the draft funding levels and match requirements appropriate to achieve the desired outcomes of each Group?

**Response:** Minimum award amounts for Group 2 should be lower to encourage applications entities with stronger controls and modeling expertise but comparatively little project development experience. These

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<sup>1</sup> Clean Coalition VOR123: <https://clean-coalition.org/disaster-resilience/>

demonstrations will be a higher risk than typical commercial projects, and commercial developers may have little appetite to work with more innovative partners. We suggest a \$2,000,000 minimum award.

**C. Group 2:**

1. Is a four-year project timeline feasible for Group 2 projects to meet the objectives of the solicitation? Are there any potential barriers or challenges in implementing these types of projects over four years?

**Response:** One focus of this group is using energy storage to increase the hosting capacity of constrained circuits, but these circuits will require closer review to receive interconnection permits from IOUs. However, 4 years is sufficient time; we would anticipate 3 years of lead time for project development and 1 year of demonstration.

2. Are there any use cases missing from Table 1 that should be included?

**Response:** Within the “T&D Related” section, we would like to see “Improved generation hosting capacity” as a service (marked “Dist.” and “Cust.”)

3. What are some examples of innovative use cases for commercial Li-ion batteries that are worth exploring in this solicitation?

**Response:** Feeder-focused, special-purpose VPPs. For example, in a feeder with a mix of both commercial and residential buildings, instead of a large BTM battery at the commercial site for demand load management, the commercial entity could procure energy capacity in smaller home batteries distributed among the surrounding homeowners.

7. What barriers and opportunities exist for partnerships with utilities or other stakeholders to demonstrate transmission or distribution-connected energy storage use cases?

**Response:** More open documentation about the methodology underlying integration capacity analysis (ICA), including:

- Conductor size, type, rating and vintage.
- Higher precision GIS layers:
  - Distinguishing “real” nodes in the Distribution Network from “virtual” nodes (i.e., where a single real-world conductor is represented by two distinct features in the GIS model).
- Better documentation of the load cases used to determine ICA levels.
- To lower the burden, IOUs could start but just improving the data available for the most-constrained circuits.

8. What data would be useful to gather and publish for measurement and verification purposes and to inform bankability and replicability?

**Response:** For distribution-connected storage, any advanced metering infrastructure (AMI) data on the associated feeder or substation would be helpful:

- Voltage at the nearest MV:LV transformer
- Status of any voltage management equipment (i.e. capacitors)
- Voltage and current at the parent substation transformer

Thank you for considering our input on this critical grant opportunity supporting California's ambitious clean energy goals, including 52,000 MW of energy storage by 2045. We believe our Responses above will help in the CEC energy storage solicitation development process.

Sincerely,

*W. Boyle*

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