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Energy Storage Innovation to Support Grid Reliability Concept_Energy Dome

Additional submitted attachment is included below.



VIA ELECTRONIC SUBMISSION

State of California California Energy Commission January 16, 2024 Docket Number: 23-ERDD-01

> **Subject:** ENERGY DOME U.S. INC. PUBLIC COMMENT ON THE DRAFT SOLICITATION CONCEPT Electric Program Investment Charge Subject Area: Energy Storage Innovations to Support Grid Reliability

- Do the Project Groups described in Section IV.A address the primary objectives of the solicitation to enable more strategic and high-value implementation of energy storage to support grid reliability? Yes, so long as technologies that are in the midst of deployment in other states/countries are not disqualified on that basis. California is a unique market, and this solicitation should provide the opportunity to gain additional learnings specifically in the California market. A TRL 6 limitation could disqualify some early stage, yet commercially viable technologies. We recommend extending the TRL to a minimum of 7 or 8.
- 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? Include domestic manufacturing expectations and capabilities along with the sustainability of the technology (Presence of rare of materials)
- 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?
 2-phase is preferred so that resources are not wasted on a full proposal unnecessarily.
- 4. Are the draft funding levels and match requirements appropriate to achieve the desired outcomes of each Group?

To encourage large-scale deployment that could immediately have impacts on the CA grid, more than \$10M will be required per project. At \$350/kWh, \$10M would only account for a 28MWh system. Technologies exist that can deploy at-scale and funding is the key to deployment.

Group 2

 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?

Interconnection times can reach upwards of 3 years. Including the one-year demo period in this 4 year project execution timeline should be reconsidered. Or, potential delays due to interconnection should be exempt from the timeline.

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



No.

- What are some examples of innovative use cases for commercial Li-ion batteries that are worth exploring in this solicitation?
 N/A
- Is the minimum scale of demonstration (>100 kW capacity) reasonable?
 Larger systems will be required to prove at-scale performance and pricing. 100kW will not provide a full picture of grid-scale technologies. 10MW+ recommended.
- Do the Group 2 requirements sufficiently encourage projects to be in and benefitting disadvantaged communities, low-income communities, or Native American tribes? Yes
- 6. To maximize the impact and benefits of Group 2 demonstrations, what partnerships are most critical?

Based on experience, partnerships with local shareholders (universities, tribal nations, etc.) are critical to project acceptance and success.

 What barriers and opportunities exist for partnerships with utilities or other stakeholders to demonstrate transmission or distribution-connected energy storage use cases?
 Opportunities: Coal community engagement using retiring coal sites. Flexibility to provide either PPA or equipment supply.

Barriers: Lack of awareness to existing LDES technologies. Interconnection times.

- What data would be useful to gather and publish for measurement and verification purposes and to inform bankability and replicability?
 Uptime, RTE, supply chain maturity and robustness.
- 9. Is the 12-month minimum demonstration period requirement reasonable for Group 2 projects **Yes.**