Joe Sleppy's challenge details for challenge: Solar Prize Round 6

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Explanation

Capacitech is a team of energy storage, power electronics, and commercialization experts that have built a drop in solution to enhance solar batteries.

Our product is a cable that both stores and distributes power. The role of our product is to protect batteries from high power surges and fluctuations, which can damage the battery overtime leading to degrading performance and eventual replacement.

The product is built using a modular approach. We essentially connect our modules in series and parallel to meet the specifications needed. We have developed a template that allows us to estimate how many modules are needed in a given application, but we are looking to optimize that.

We plan to offer a small, medium, and large version of our product for use in residential solar power systems using battery storage. The small version of our product would be used with batteries that are 5kWh-10kWh, medium would be used with batteries that are 10kWh-15kWh, large would be used with batteries that are 15kWh-20kWh.

We are seeking technical support in optimizing the performance of our small, medium, large modules to have the maximum impact for the end user. This will involve significant cost benefit analysis.

Key Needs

- Testing and Validation (5 / 5): This is one of the company's most critical needs. Testing, validation, and analysis will allow Capacitech to optimize its product design to better serve end users.
- Utility Scale (3 / 5): Capacitech hopes to bring its products from residential markets to the commercial and utility markets overtime. We are discussing projects with regional utilities and plan to apply to accelerators like 35Mules, but would appreciate support in exploring these markets and preparing to enter them.
- Manufacturing (1 / 5): Capacitech is discussing manufacturing relationships with several local providers. One major challenge will be scale. There appear to be many small scale and many large scale providers. Capacitech is actively planning how it will manage the transition between the two.

Matches

1. Marcus Engineering: 87.58%
2. University of California Merced: 87.57%
3. Center for Future Energy Systems (CFES) at Rensselaer: 87.54%
4. Larta Institute: 87.54%
5. D2Solar: 87.54%
6. University of North Dakota Energy and Environmental Research Center (EERC): 87.54%
7. IoT Conduit: 87.54%
8. International Business and Technology Service Corporation: 87.54%
9.

9. Center for Energy Research: 87.53%
10. EST Venturi Systems LLC: 87.51%