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Electrochemistry Foundry public comments

Additional submitted attachment is included below.

Location of the facility

Developing and scaling new battery technologies is a very high-touch and experiential process that requires close and in-person collaboration between startup/industry users and the operators of the pilot manufacturing facility. One of the biggest challenges that California companies face in leveraging shared pilot facilities is the fact that most of them are thousands of miles away in the Midwest, South, and East Coast.

Physical proximity of the facility to the greatest number of prospective academic and startup users is a critical parameter for maximizing the impact of the facility. Ideally, positioning the facility within less than an hour's drive (i.e. within reasonable commuting distance) of where users are located ensures maximum ease of access and collaboration. Scoring for the proposal should be linked to the likelihood of success of the facility, which is determined to no small extent by where the facility will be located.

Operational model of the facility

Beyond serving just as a pilot line that allows users to access manufacturing capabilities on a fractional basis, the other major opportunity for this program to make an impact on the startup ecosystem is to provide a co-working space where startups can relocate and lease out space on a longer-term basis. Early-stage startups cannot justify leasing their own dedicated facilities, and most startups currently can only access fractional lab space from biotech facilities, which are not well-suited for supporting battery and electrochemical companies. This pilot line program would allow all these companies to access a space that has everything they need for success, and a co-working model helps to further amplify impact by building a local community and ecosystem of innovators and thought leaders.

Team experience and technical depth

Designing and managing a battery pilot line is a highly complex and technical activity that requires deep battery industry experience from the founding team. The scoring criteria for the solicitation should focus significantly on the team's technical experience and industry background. Similarly, the solicitation should require a high degree of technical depth in proposals from applicants, as this is necessary to demonstrate ability to execute successfully on the project.

Support from all stakeholders in the ecosystem



To achieve maximal success, the pilot line facility should generate significant support and engagement from all the key stakeholders in the innovation ecosystem, including universities, national labs, startups, entrepreneurs, accelerators, corporates, and venture capitalists. Thus, the scoring criteria for the solicitation should emphasize the importance of demonstrating support from this broad array of stakeholders through letters of support.

Matching funds

Successful applicants to this solicitation are unlikely to come from the traditional non-profit community in California, as most non-profits lack the technical depth and focus to execute on such a program successfully. Instead, it is likely that new teams and organizations will need to be created in the non-profit sector that bring in deep technical and industry experience.

However, new organizations will find it more difficult to deliver significant matching funds in such a program, due to 1) lack of previous operational activity, 2) lack of existing sources of funding, and 3) more limited experience in delivering matching funds and in-kind contributions from a broad partner network.

To attract such non-traditional applicants, the scoring criteria for the solicitation should de-emphasize the need to provide matching funds for the project.

Project budget and scope

At its core, the California battery startup community needs to be able to access a shared facility to build battery electrodes and cells, which is what this solicitation has been designed for. However, California is a leader not only in materials and cell technologies but also in module/pack/vehicle technologies. While it would be difficult to build out prototyping capabilities spanning the full spectrum of the value chain all at once, many companies throughout the value chain can benefit from shared infrastructure that supports high-power module/pack/systems electrical testing. In fact, there are virtually no services or facilities available to do such testing in California, whether in the public or private sector.

The solicitation should increase its scope and budget to enable the build-out of not only a materials/cell pilot facility but also a module/systems electrical testbed. This would serve an immediate need in the ecosystem, be able to support battery companies who are developing chemistries that may not be a good fit for the cell prototyping line (e.g. flow batteries, molten salt batteries, etc.), and even support companies outside of batteries entirely. A budget increase of \$5M to \$10M would facilitate the buildout of such a testbed.