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California Clean Energy Fund Questions Regarding EPIC solicitation to help scale-up production of emerging energy technologies

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Comments on planned release of Electric Program Investment Charge (EPIC) solicitation to help California companies scale-up production of emerging energy technologies to meet customer demand.

Submitted by

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As California's pioneering, non-profit, early-stage clean energy impact investor, the California Clean Energy Fund's mission is to ignite investment in the clean energy economy with an eye toward commercialization. CalCEF's team of leading financial professionals, entrepreneurs, policy-makers, and scientists believes that a new model of entrepreneurship and financial innovation in the public interest is required to speed the transition to a clean energy economy. CalCEF has an audacious plan for rapid clean energy adoption and for building equity into the energy economy in California, the United States and the world.

CalCEF's diverse stakeholders and network contributes to its greatest strength: the ability to implement and drive solutions into both public and private marketplaces. CalCEF includes a sister family of organizations—CalCEF Innovations, CalCEF Ventures, and CalCEF Catalyst, and a wholly owned subsidiary CalCharge. CalCEF houses the successful and highly touted \$24M California Sustainable Energy Entrepreneur Development (CalSEED) Initiative, funded in part by California Energy Commission with additional funding from the US Department of Commerce i6 Initiative. During its first year of implementation, the CalSEED Initiative successfully solicited 331 applications for participation in the program. Drawing on this overwhelming response, CalSEED has already initiated two cohorts totaling 46 participating entrepreneurs. Innovations selected to date represent a diverse cross-section of technologies, including energy storage, electric vehicles and transportation, clean generation, energy efficiency, grid-based solutions, and the Internet of things. Importantly, the two selected cohorts also strongly represent minority, women-owned, disabled veteran business enterprise (DVBE), and small business owners. In addition, CalCEF has been awarded the \$11M from the California Energy Commission to launch and manage the CalTestBed Initiative, which will provide funding for companies at TRL 6/7 to access, validate and certify their technologies in collaboration with approximately 25 clean energy testbeds located throughout the University of California system and Berkeley National Lab.

In California, clean energy entrepreneurs and innovators need to increase production from single demonstration units to larger scale production to fulfill customer demand. These companies often face significant difficulties making the leap from prototype and demonstration of their technologies. Many companies lack the access to investment capital needed to build out manufacturing facilities of their own. In other cases, early stage companies are unable to affordably access or outsource manufacturing to already existing mid- to large-scale manufacturing facilities because the requirements and demands of these new technologies require significant new investment. Finally, start-up companies may lack the manufacturing expertise and experience needed to address production issues that can cause low yields and quality control issues.

CalCEF is excited about the opportunity for California entrepreneurs to secure funding as they scale-up production and manufacturing efforts of their emerging clean technologies. We offer these comments in the hope that our significant experience can support an effective, easy-to-use program for our entrepreneurs.

Discussion Issues

1. As originally described in Initiative 5.2.2 of the EPIC 3-year investment Plan, "this initiative will increase the ability of local manufacturers to support clean energy companies. Local manufacturers will be able to increase operations in California resulting in increased job creation and economic activity." Additionally, the initial program description states that the "solicitation will provide funding to help clean energy start-up companies migrate small-scale production lines to larger manufacturing facilities in California." That said:
 - Does this imply that the entrepreneurs are to partner with already existing medium and large-scale manufacturing facilities to meet their needs, or that the small-scale manufacturing facilities would be scaled up to meet the demand? This is a critical point, which would require consideration of bandwidth, interest and value propositions for the large-scale manufacturers.
 - If it is an intent of the solicitation "as is suggested in the Investment Plan--to support manufacturing partnerships between early-stage companies and already existing local manufacturers, how can this objective be reasonably achieved given the lack of an ecosystem of existing manufacturing entities seeking to provide their facilities outsourced or joint ventured with early stage companies?
2. CalCEF agrees that companies receiving awards should be California-based companies who are seeking to leverage California's considerable private market investments in clean technologies. However, CalCEF suggests that an additional proposed requirement that a company "provide proof of successful demonstration(s) of their technology in California" could dissuade a number of prospective applicants, including companies that move to California to fund and scale-up their technologies after successfully demonstrating them in other states or countries, which is often the case. CalCEF suggests refining this requirement.
3. The initial program description limits eligible applicants to companies with technologies in a limited subset of EPIC categories (Energy Efficiency, Renewable Electricity Generation, Storage). CalCEF suggests that eligibility includes any applicant seeking to manufacture any eligible clean energy technology or approach that can benefit California ratepayers.
4. CalCEF supports the need to explain the "value proposition of the technology" but would encourage CEC to identify ratepayer benefits in a reasonable and realistic manner.
5. The anticipated solicitation amount is \$12M. CalCEF strongly supports this allocation and also encourages the California Energy Commission to increase funding for this program in the next 3-year investment plan. This program will be exceptionally valuable to early-stage

companies and having a reasonable expectation that it will exist beyond a single RFP will incent companies to prepare for subsequent programs.

6. The projected funding range is \$1M - \$4M. CalCEF urges CEC to fund more, smaller awards of \$1M-\$2M in order to support critical projects by additional early stage companies.

7. Match funding requirements of 20% are reasonable, though CalCEF strongly urges CEC to allow both cash and in-kind match.

8. The anticipated release date is November 2018. CalCEF urges CEC to acknowledge that this program has little awareness in the ecosystem of early stage companies, and that developing manufacturing scale-up plans or partnerships with existing facilities is time consuming and will often require executed contracts. CalCEF urges CEC to allow a minimum of 90-120 days, rather than the standard 60, for development of proposals by early stage companies. Our experience suggests that these early stage companies experience exceptional bandwidth constraints and expecting well-developed proposals without significant advance notice will deter many eligible applicants from being able to meet some of the proposed eligibility requirements.

9. CalCEF also requests accommodation for holidays in November and December and that CEC avoid deadlines that are tightly bunched with holidays.

10. CalCEF is aware that developing funding for early stage companies can be difficult. That difficulty is magnified for companies that reside in or service Disadvantaged Area Communities (DAC). CalCEF urges prioritization of projects that provide benefits to DAC communities.

11. CalCEF urges CEC to allow a portion of awards for technical expertise that is required to successfully build or expand manufacturing production capacity.

12. How will this program integrate with the efforts of the Regional Energy Innovation Clusters and the Governor's Office of Business and Economic Development by leveraging their network of entrepreneurs, research institutions, and business development experts to inject manufacturing support where it can make the largest impact on an innovations development as is stated in the 3-year Investment Plan?

CalCEF would urge CEC to consider soliciting a Statewide Administrator for this program, rather than making direct grants itself. A Statewide Administrator could provide significant value above and beyond administrative efficiencies. These could include sustained outreach and engagement with early stage companies; cultivating and developing an ecosystem of existing California based medium- and large-scale production facilities seeking to provide equipment or resources to support scale-up of early stage companies; and leveraged private capital to meet cost share and other resource objectives.