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Private Participation in CEC Grants

Additional submitted attachment is included below.

1. What are some concerns and challenges facing the private sector when considering applying for grant funding opportunities?

Let me start by stating that LACI deals mainly with startup companies so most of my comments will be focused on that segment of the private sector. This is a critical sector when it comes to more revolutionary innovation development in a given market.

Let me also commend the CA Energy Commission on the work you are doing in this space. Your efforts with the CalSEED grant and Regional Cluster programs will open new opportunities for such early stage innovation efforts.

All or Nothing Value Proposition: LACI sees a bifurcation of companies in their approach to early tech development funding strategies. Those founders that have strong grants experience from their time at universities or labs will apply for grants regularly. Those founders who do not, will often opt for competitions and challenges. Part of the reason behind this is that grants are applied for primarily as an individual effort at home or in the office and the return on investment is binary. The grant is won or lost. Competitions and challenges offer a graduated ROI where, through the process of engaging in the competitions, founders meet strategic partners, customers, investors, talent, etc that are all valuable for the business. If the company wins a cash award in the competition, the return is great. If they do not, there is still positive return on the investment.

Administrative Overhead: Startup resources are stretched very thin. There is a significant effort required to apply for an all or nothing outcome. A phased application approach and reduction in reporting complexity during the grant can help this. In addition, connecting startups with existing orgs that you know are experienced and capable in grant applications and management could increase early stage company participation in CEC grants.

1. Stage the application: Short form proposal for the first hurdle, with a more detailed application required of a narrowed field of applicants. This could ease the burden on both the application and the CEC review.
2. Maintain a list of qualified grant writing/management resources that early stage companies can leverage for the application and management process.

IP & Royalty Concerns: Many grant programs include March-in rights to ensure that innovations developed from the grant make their way to commercialization. Under such provisions, the granting bodies have recourse to ensure that inventions are taken to market in the event of a company failure. However, onerous IP and royalty terms that allow the granting body the unfettered right to royalty-free use and/or transfer of IP goes too far. Such terms will prevent companies from securing follow-on investment as they get into commercialization. Inclusion of such language will push your best innovators to seek alternative development funds. This will cause two undesirable consequences: first, by pushing them elsewhere, those best innovations will likely delay commercialization; second, the quality of your overall portfolio will decline as those best-of-class innovations go elsewhere.

Match Funds: Established businesses are better equipped to handle the typical cost-share splits of 25-50%, but there should be a different approach for startups to reduce cost share. Provide info on local, state & federal organizations with similar programs that qualify as match. As some of your grant solicitations may be similar in scope to EERE, ARPA-e and other grant programs, proactive & timed collaboration on reviews could provide much needed match sources for startups.

2. How can the CEC better increase awareness of the research programs to CA private sector companies?

The activities and showcases for the Regional Energy Innovation Clusters & CalSEED programs will help increase awareness in the startup community. Other ideas would be to include CEC grantees in innovation showcase activities around the state. LACI, Cyclotron Road, the Cleantech Open and many others have large

annual industry events that could be leveraged for such purposes. Additionally, it would be beneficial for the CEC to regularly visit and host information sessions at key innovation hubs around the state .

3. What are some ideas to encourage private sector companies to apply for research funding?

Clarify intent: Occasionally, grant solicitations are unclear in their intent. Including project examples in solicitations to help clarify that intent.

Application Support: Publish the track record & client reviews of grant writing / management firms (ie, Grant Farm) so that startups can find qualified firms to help with the grants process.

Unsolicited grant applications: In addition to regular planned solicitations, support options to bring out a broader array of valuable technology through unsolicited applications.

Match Funding: Fund programs that facilitate the matching of innovators, industry incumbents and demonstration sites.

4. Besides grant funding, what else can the CEC do to help CA private sector companies to be successful?

For our startups, there are several common hurdles that companies face in their commercialization.

- funding of the technology development (grants programs)
- funding the development of the market: for high-growth potential companies - angels, VCs, corporate venture groups and – in sustainability oriented sectors – through mission driven investors.

In energy, these first two are well developed. The following three are more of a challenge and could be supported by the CEC:

- third party validation – LACI partners with LADWP, SCE, U.S. General Services Admin in our SoCal Edge. The National Labs' SBV program is building as well.
- Access to suitable test and demonstration sites
- Access to working capital once the technology and market risk issues have been resolved and the startup is entering it's growth phase.

Pilot Demonstration Site Availability: One of the critical needs of the early stage innovator is finding a suitable venue for demonstration of the technology in a real-world environment. There are a few great demonstration resources at UC Davis, Berkeley's Flexlab or LA's SoCal Edge 70m sq ft buildings efficiency network. Funding more demonstration sites that provide lower cost and local access to innovators will speed innovations to market.

Local utilities are great partners for generation and grid integration sites. Some have such capabilities today but those sites need to allow innovations to be tested that are still in development. This often means those innovations will not yet have all the costly safety certifications such as UL listing, required for commercial launch. Similar demonstration sites are needed in other sectors such as commercial buildings, transportation and water infrastructure.

Access to Working Capital: On the path to successful commercialization, companies that have proven the business model and begin to scale with repeatable sales in a hardware intensive business invariably face a working capital challenge in supporting volume orders. Such companies often resolve technical risk through non-dilutive grants & competitions & self funding. Proving the business model & overcoming market risk is typically resolved through angel & venture funding. Once the company moves into a growth phase, working capital becomes a critical issue and debt is the appropriate funding instrument. Unfortunately, our banking system requires a multi-year track record of profitability to fit their typical risk-profile for such debt lending. Our companies have tremendous difficulty finding working capital at reasonable business terms.