



SVTC

California Energy Commission

DOCKETED

12-EPIC-1

TN # 66621

AUG 10 2012

August 10, 2012

The Honorable Carla J. Peterman
California Energy Commission
1516 Ninth Street
Sacramento, California 95814

Re: EPIC Investment Plan: Written Comments on behalf of SVTC Technologies:

Dear Commissioner Peterman,

We thank you for this opportunity to introduce SVTC Solar and explain how this company is vital to California's progress in cultivating innovation, job growth, and investment to power a new and environmentally progressive energy economy. In particular, we view California's new Electric Program Investment Charge (EPIC) Program as an important opportunity to empower companies like SVTC Solar to meet those historic goals. So it is with equal appreciation that we thank the Energy Commission for opening this public process to gather input regarding the investment of EPIC funds.

Our parent company, SVTC Technologies, has been providing manufacturing research and development services to the semiconductor industry for ten years in San Jose and Austin, Texas. After helping over 500 companies develop and optimize more than 1,000 innovative semiconductor technologies, we expanded into the solar photovoltaic (PV) sector with the launch of SVTC Solar. Based in San Jose, SVTC Solar operates a Manufacturing Development Facility (MDF) that will enable companies to develop and commercialize new PV products quickly and cost-effectively, train the next generation of the PV workforce (beyond installers), and enhance California's position as a PV technology leader.

Our niche is what investors and entrepreneurs call "the solar Valley of Death." Between a new technology's research phase and point of mass production, accessing financing to develop and commercialize a product has been historically extremely difficult. SVTC Solar provides the facilities, equipment, and technical expertise to cut development time and costs. By providing this assistance, SVTC Solar "de-risks" the technology from an investor perspective and essentially bridges the "Valley of Death" for new inventions that enhance the industry. This ambitious endeavor is fortified in part by a two-year market study that SVTC Solar recently conducted to understand the needs of the PV industry, including companies, investors, universities, national laboratories, and the U.S. Department of Energy (DOE).

SVTC Solar is also working with local colleges and universities to develop unique workforce training programs. These programs include manufacturing technician training, in collaboration with San Jose City College, Evergreen Community College, Workforce



Institute, and Work-2-Future, based on new PV manufacturing training curricula. We are also developing engineer-level training, in collaboration with Stanford, UC Berkeley, UC Merced, and Lawrence Berkeley National Laboratory, including a graduate student internship program and senior- and graduate-level solar laboratory courses.

All of this was made possible in April 2011, when DOE announced an award of a \$30 million grant to SVTC to build "... a centralized facility to assist solar PV companies in making the transition to commercial production." Combined with significant additional commitments from the PV industry, the DOE grant allowed the MDF to be constructed and fully equipped. This collaboration highlights the ability of the public sector to catalyze unprecedented results in California's technology sector by partnering with private institutions and bridging the gaps that would otherwise inhibit potential innovators.

In this same way, we believe EPIC represents a next step in the kind of public-private partnerships that spur new PV technologies that bring solar power to energy customers at lower rates, easier installs, and a more sustainable environmental footprint. Consistent with the principles outlined in the California Public Utilities Commission (CPUC)'s Decision 12-05-037, the operations of SVTC Solar provide clear ratepayer and societal benefits in the form of incubating new PV technologies that promote greater reliability, lower costs, increase safety, and enhance environmental sustainability in the context of energy services. We believe the path toward achieving all of these goals is better technology, and SVTC Solar makes better technology possible by attracting California's leading innovators and de-risking investments in their work.

Moreover, new PV technologies have the potential to advance the objectives of AB 32 and address medium- and longer-term emission reduction objectives as identified in Executive Order S-3-05, which established a goal of reducing emissions to 80 percent below 1990 levels by 2050 – additional EPIC goals outlined by the CPUC Decision. Other CPUC goals are also well-served by SVTC Solar's model, whose economic development benefits play to California's strong suit in technological innovation and whose investor-driven focus assures the highest level of efficiency is brought to bear on the use of ratepayer funds. Finally, the promise of incubating new PV technologies supports Governor Brown's Clean Energy Jobs Plan that aims to achieve 12,000 MW of localized renewables and 8,000 MW of large-scale renewables.

In its Decision regarding the use of EPIC funds, the CPUC determined that Technology Demonstration and Deployment should play a major role. Accordingly, the Energy Commission has laudably determined that its proposed triennial Investment Plan for EPIC should allocate \$85 million for this purpose. At its August 2 workshop, Energy Commission staff indicated these funds shall be used to promote "the installation and operation of pre-commercial technologies or strategies at a scale sufficiently large and in conditions sufficiently reflective of anticipated actual



operating environments to enable appraisal of the operational and performance characteristics and the financial risks.” We believe SVTC Solar, by its unique characteristic of channeling the private-sector investment community toward the cutting edge of PV technologies, is well-suited to meet the challenge of testing large volumes of pre-commercial technologies so that innovative solutions are identified, developed, and commercialized.

Unfortunately, this vital part of the PV innovation industry – this bridge across the “solar Valley of Death” – can easily be overlooked in light of the numerous other niches of solar technology demonstration and deployment, as well as demonstration and deployment of other renewable energy resources. In particular, 20 percent of the Technology Development and Deployment EPIC funds to be administered by the Energy Commission has already been set aside for bio-energy, a precondition that already places the pre-commercial PV industry at a disadvantage. Given the importance of pre-commercial development services to the continuation of California’s innovation of PV technologies, we believe disadvantaging this sector could fundamentally diminish EPIC’s positive impact for ratepayer and societal benefits.

We therefore respectfully propose that the EPIC Investment Plan set aside a specific amount of funding for PV manufacturing-development facilities that provide pre-commercial development services for new technologies that are extremely difficult to finance in the private sector. Such an amount should be sufficient to attract and retain companies with the high-technology competencies to provide pre-commercial development services to the wide range of technologies California’s applied research sector has to offer, and should be calibrated to recognize the eminent importance of innovation to California’s long-term economic growth and ability to meet its energy and environmental goals. In doing so, we believe the Energy Commission can capitalize upon SVTC Solar’s example to create a launching pad for PV technologies in California.

We thank the California Energy Commission for this opportunity to introduce SVTC Solar and discuss its role to play in the successful implementation of EPIC funds. We look forward to participating in a robust public process over the next year regarding this public policy matter.

Sincerely,

A handwritten signature in blue ink, appearing to read "S. Empedocles", with a long horizontal flourish extending to the right.

Stephen Empedocles
Director of Business Development
SVTC Solar
3833 N. 1st St.
San Jose, CA 95134
Direct: 650-776-7089