GO solar CALIFORNIA

CSI RD&D PROGRAM

Innovative Business Model

Grantee:
Strategic Energy Innovations, Inc.

Partners:
Optony, Inc.

CSI RD&D Funding:
Phase I: $300,000
Phase II: $100,000

Match Funding:
Phase I: $304,462
Phase II: $110,616

Project Timeframe:
Phase I: 2012-2014
Phase II: 2015-2016

RD&D Project Portal:
calsolarresearch.ca.gov/funded-projects/90
calsolarresearch.ca.gov/funded-projects/116

Itron | CSI RD&D PROGRAM MANAGER

Solar Energy & Economic Development Fund (SEED Fund)

OVERVIEW AND OBJECTIVES

Public entities, such as school districts, are motivated to adopt solar photovoltaics (PV), however high upfront costs and a lack of technical expertise prohibit many of them from identifying potential projects and fully assessing options. To address this barrier, Strategic Energy Innovations (SEI) and Optony developed the Solar Energy & Economic Development (SEED) Fund Project and demonstrated an innovative solar procurement business model that utilizes a public-private revolving fund mechanism to support public entities in adopting solar technologies. The SEED project demonstrated that a 1-2% upfront investment in collaboration results in a 10-12% project cost savings, lower project risks with higher returns, reduced transaction costs, and reduced administrative efforts. The SEED project demonstrations were done in two phases.

Phase I: The first demonstration was conducted in 2013-2014 in the North Bay Area of Sonoma, Marin, and Napa Counties with the following objectives:

- Sign memorandum of understanding (MOUs) with 10 public partners to participate, conduct 100 site evaluations, and identify at least 10 MW of viable solar project across all participants.
- Include at least 5 MW of solar projects in the request for proposals.

Phase II: To capitalize on the existing program momentum and to demonstrate reduced time-to-market based on lessons learned in Phase 1, the SEI team conducted a second demonstration in 2015-2016. The location of this demonstration was the Central Coast region of California including Monterey, Santa Cruz, and San Benito Counties. This demonstration had the following objectives: sign MOUs with eight public partners to participate and at least 5 MW of new public non-utility solar PV across 20-30 sites.

This document provides a brief project description. For more detail on the project and the California Solar Initiative's (CSI) Research Development, Demonstration & Deployment (RD&D) Program, please visit calsolarresearch.ca.gov

The CSI RD&D Program is managed by Itron on behalf of the California Public Utilities Commission (CPUC).

METHODOLOGY

The SEI team followed the same approach with both demonstrations. The team distributed information about the collaborative partnership to schools and local governments and conducted technical and economic feasibility analyses to identify viable sites of new solar potential for deployment. Request for proposals (RFPs) were developed to meet participant requirements, attract qualified contractors, and result in contracts that realize cost savings for participants and efficiency for vendors. Lastly, the team worked to ensure the SEED fund business model approach and outcomes were sustainable, with attention to replication and scalability of fund replenishment, investor reimbursement, and subsequent cycles of project development.

PHASE I: RESULTS AND OUTCOMES

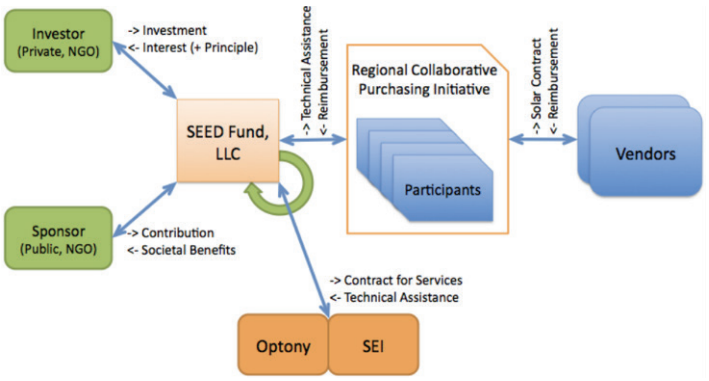
Summary of Outcomes	Objective	Outcome
Number of Participating Agencies	10	13
Number of Site Assessments	100	143
MW of Solar in RFP	5	6.8
Transaction Cost Reductions	10-12%	5-15%

The SEI team conducted 143 site evaluations and identified the potential for over 130 MW of solar power installation, including several sites with the potential for utility-scale PV installations. The team issued a joint RFP for 32 sites across 13 public agencies with a combined 6.8 MW estimated solar generation capacity. As of August 31, 2014 (the end of the grant term), 25 sites for 12 public agencies have entered into purchase or PPA contracts with the selected vendor with a range of cost reduction of 5% to 15%.

PHASE II: RESULTS AND OUTCOMES

Summary of Outcomes	Objective	Outcome
Number of Participating Agencies	8	9
Number of Site Assessments	25	32
MW of Solar in RFP	5	37.7
Transaction Cost Reductions	8%	TBD: Winter 2017

The SEI team identified over 50 MW of viable solar projects across the 99 prescreened sites. The RFP, expected to be issued in August 2016, includes 9 participating agencies with 32 sites representing 37.7 MW of viable solar projects. Vendor proposals are expected in October 2016 with the County of Santa Cruz acting as Lead Agency. By leveraging the effort and lessons learned in the first collaborative procurement process, net costs for implementing the second demonstration are expected to be significantly reduced. With the SEED revolving fund mechanism in full deployment, the team will be able to launch the next round of project procurement once repayments are made.



Solar procurement business model utilizing a public-private revolving fund.

PUBLIC BENEFITS

- Contributes to California's energy goals by enabling public participants to adopt solar energy in an efficient way. An estimated 40 MW of new PV for 22 public agencies are likely to be installed at the close of the first two collaborative procurement demonstrations.
- Contributes to California's energy goals by reducing green house gas emissions and increasing the amount of renewable energy in California utilities' power mix.
- The financial model enables the SEED Fund program to launch additional collaborative procurement rounds in other regions, thereby extending the impact of the CSI RD&D grant and its contribution to California's energy goals.
- Detail practical knowledge of how a revolving fund mechanism can be leveraged to extend the benefits of collaborative procurement efforts. This information is freely accessible and can be used by all other interested parties.