

California Solar Initiative Research Development, Demonstration and Deployment Program

Pre-Bid Webinar for Solicitation #2: Improved PV production technologies and Innovative business models

Nov 18, 2009
10:00 am



Agenda

- Review Agenda / Purpose for Pre-bid
- Overview of CSI RD&D Program
- Overview of Solicitation
 - Purpose
 - Funding Available
 - Priority areas and targets
 - Match Funding Requirements
 - Key Dates
- Proposal and Submittal Requirements
 - Submittal Requirements
 - Application Package Requirements
- Proposal Screening, Review and Selection
- Questions and Answers



Background on the CSI RD&D Program

- SB1 was signed August 2006
 - Authorized the CPUC to allocate \$50 million of the California Solar Initiative (CSI) funds for research, development, demonstration, and deployment of solar technologies
- CPUC established the CSI RD&D Program
 - The Program was established in Sept 2007 under CPUC Decision 07-09-042
 - Allocated \$50 million for research, development, demonstration and deployment (RD&D) projects
 - Adopted the CSI RD&D Plan
- CSI RD&D Plan set forth:
 - Goals and objectives
 - Allocation guidelines for project funding
 - Criteria for solicitation, selection and project funding



Goals and Objectives of the CSI RD&D Program

Goal: Help build a sustainable and self-supporting industry for customer-sited solar in California

Objectives:

- Help lower solar technology electricity prices to levels where they are comparable to retail electricity prices, and
- Help support the deployment of distributed solar to accomplish the CSI goal of **3000 MW** by 2016
 - CPUC: 1940 MW
 - CEC: 360 MW
 - POU: 700 MW



Key Principles of CSI RD&D Plan

- The Adopted Plan established the following seven key principles that are the focus of the RD&D Program
 1. Improve the economics of solar technologies by reducing technology costs and increasing system performance.
 2. Focus on issues that directly benefit California, and that may not be funded by others.
 3. Fill knowledge gaps to enable successful, wide-scale deployment of solar distributed generation technologies.
 4. Overcome significant barriers to technology adoption.
 5. Take advantage of California's wealth of data from past, current, and future installations to fulfill the above.
 6. Provide bridge funding to help promising solar technologies transition from a pre-commercial state to full commercial viability.
 7. Support efforts to address the integration of distributed solar power into the grid in order to maximize its value to California ratepayers.

Solicitation #2

- **Target areas:**
 1. Improved Production Technologies
 2. Innovative Business Models
(Development and Deployment)

1. Improved PV Production Technologies

- **Production technologies that focus on improved system performance, increased system efficiency, or lower system costs, such as (but not limited to):**
 - Economic viability of distributed concentrating PV systems
 - Building-integral PV (BIPV) products that can compete with rooftop PV
 - Inverter technologies with improve reliability and performance
 - Integration of inverters with “smart meters”
 - Energy storage for smaller PV systems
 - Innovative hybrid solar thermal/electric systems

2. Innovative Business Models

- Innovative business models that support the market and end user, such as (but not limited to):**
- Potential roles for utilities in solar PV
 - Development of lower cost, utility-grade PV system control, metering, and monitoring capacity
 - Demonstrations of improved PV economics using advanced metering, price-responsive tariffs (e.g., Time of Use—TOU, Feed-in Tariff), and storage.
 - Demonstrations of innovative ways to lower installation or operations and maintenance costs
 - Testing and demonstrations of virtual net metering approaches
 - Testing and an assessment of the economic aspects of energy storage
 - Assessing the actual risks and benefits of solar systems to the utilities

Eligible Proposers

- Participation is open to all types of:
 - Individuals
 - Businesses
 - Non-profit organizations
 - Academic institutions
 - National laboratories
 - Utilities
 - Other such entities
- Individuals may submit only one proposal per solicitation
- Proposed research must focus on CA-specific issues and provide benefits to CA ratepayers

Eligible Technologies

“solar technologies and other distributed generation technologies that employ or could employ solar energy for generation or storage of electricity or to offset natural gas usage”

ref : CSI Solar RD&D Plan

- Technologies:
 - All solar technologies ([including solar thermal](#))
 - Balance-of-system components such as:
 - ✓ advanced meters
 - ✓ inverters
 - ✓ storage

Estimated Target Funding Levels

| Target Areas | Improved Production Technologies | Innovative Business Models | Totals |
|-------------------------------|----------------------------------|----------------------------|--------------|
| Estimated Funding for Area | \$10 million | \$5 million | \$15 million |
| Estimated Per-Project Funding | \$500 k - \$3 million | \$500 k - \$3 million | N/A |

Match Funding Requirements

- A minimum of 25% match funding is a requirement of this solicitation
- Match can be cash or in-kind services
- Match can come from a variety of sources including the applicant, federal or state government (including ARRA) industry, utilities or other entities
- Match funding will be evaluated through the proposal review and selection process

Key Dates for this Grant Solicitation

| | |
|-----------------------------------|-------------------------------------|
| Grant Solicitation Released | November 4, 2009 |
| Pre-Bid Webinar | November 18, 2009 at 10 am |
| Submitting Solicitation Questions | Through November 18, 2009 |
| Posting of Responses | On or before December 4, 2009 |
| Due Date for Grant Proposals | January 13, 2010 by 4 pm PST |
| Estimated date for CPUC Approval | April 2010 |
| Estimate Grant Start Date | May 2010 |

Proposal and Submittal Requirements

- ❑ **ONLY Electronic submission is required**
 - Proposal should be a single PDF file
 - Submit to www.CalSolarResearch.ca.gov
 - Applicant will receive an e-mail confirmation as receipt

- ❑ **Do not submit proprietary or confidential information with your application!**

- ❑ **All applications are due no later than 4:00 P.M. (PST) on Wednesday, January 13, 2010**

Application Package Requirements

- ❑ **Application Package must include the following:**
 - Grant Application Cover Page
 - Project Summary
 - Project Goals
 - Project Performance/Cost Objectives
 - Approach and Scope of Work
 - Project Personnel
 - Task and Budget Summary
 - Match Funding
 - Schedule of Deliverables
 - Feasibility
 - Market Connection

- ❑ **Please note page limits**

Proposal Screening, Review and Selection

- ❑ Proposals will be screened for completeness and conformity with solicitation requirements
- ❑ Proposals that pass screening will be reviewed by independent technical experts
- ❑ Technical reviews will be provided to Scoring Committee
- ❑ Scoring Committee will independently review and score proposals
- ❑ Scoring Committee's final individual scores will be averaged to produce the final score
- ❑ Proposals must receive a total average score of 150 points (out of 200 possible) to be included in the final ranking
- ❑ Top scoring proposals will be recommended for consideration by the CPUC

Project Selection Criteria

- **Guidelines for selection criteria to include:**
 - Milestones targeted
 - Benefits accrued to California ratepayers
 - Level of funding requested from RD&D Program
 - Potential to expand PV market opportunities or reduce barriers
 - Institutional or regulatory feasibility
 - Utility participation
 - Match funding provided
 - Visibility and educational component
 - Capabilities, qualifications and experience of team
 - Size of RD&D grant
 - ✓ \$3 million cap



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Additional pointers

Pay special attention to the following aspects of the proposal:
(apart from the main goal)

- **Deliverable**
 - Clearly state the product that is expected as an outcome of the research
- **Market Connection**
 - Who (audience) will benefit from this research/project? What entity or types of entities will use this project?
 - How will they benefit? Does the proposal demonstrate their interest in the outcome of the project?
 - Benefit to California rate payers
 - Utility connection/participation (where relevant)
- **Match Funding**
 - Leveraging other funding sources effectively
 - Firm commitments on securing match funding



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Questions and Answers

www.CalSolarResearch.ca.gov
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Information:

CSI RD&D Program Strategy Workshop

Later this afternoon

Wednesday, November 18, 1:30–3:30 P.M. (PST)

Venue: PG&E's Pacific Energy Center, Green Room
851 Howard Street, San Francisco, CA 94103

For Webinar info and more details go to:

www.calsolarresearch.ca.gov

