

# Solar Manufacturing Technology (SolarMat) Funding Opportunity Webinar



**SunShot**  
U.S. Department of Energy

**None of the information presented here is legally binding. The content included in this presentation is intended only to summarize the contents of funding opportunity DE-FOA-0000862. Any content within this presentation that appears discrepant from the FOA language is superseded by the FOA language. All Applicants are strongly encouraged to carefully read the FOA guidelines and adhere to them. Neither the U.S. Department of Energy (DOE) nor the employees associated with DOE working on this presentation shall be held liable for errors committed by Applicants based on potentially incorrect or inaccurate information presented herein.**

# Agenda

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- 1) SolarMat Introduction
- 2) Concept Paper
- 3) Full Application
- 4) Review Process
- 5) More Information and Asking Questions

# SolarMat Overview

Two distinct topics that both focus on manufacturing technology and have the same overarching goal of driving down the cost of manufacturing and/or implementing efficiency-increasing technology in manufacturing

- Topic Area 1: Photovoltaics (PV)
- Topic Area 2: Concentrated Solar Power (CSP)

<b>Total Federal Funds to Be Awarded</b>	\$15,000,000
<b>Anticipated Awards</b>	4-5 Awards Anticipated
<b>Types of Funding Agreements</b>	Cooperative Agreements
<b>Period of Performance</b>	Up to 1-4 Years (48 Months)
<b>Cost Share Requirement</b>	50% Cost Share, No Waivers

# Topic Area 1: PV

- Technologies of interest include, but are not limited to:
  - Developing a high automation level for module or materials for module manufacturing;
  - Increasing throughput of a process tool by a factor of 4, reducing CapEx and depreciation expense;
  - Implementing new, higher efficiency cell structures into a manufacturing line (heterostructures, tandem cells, or advanced cell architectures); and
  - Building or implementing in-line metrology tools to increase manufacturing yield.
- PV proposals must address 3 key areas (in Section I.B of FOA):
  - How the technology is substantially different from what is on the market;
  - How the technology affects throughput, yield, capital expenses, labor, and conversion efficiency at the module level; and
  - How the changes to the metrics translate to reductions in  $\$/W_p$ .

# Topic Area 2: CSP

- Technologies of interest include, but are not limited to:
  - Development and demonstration of off-site centralized, agile manufacturing of collectors;
  - Development and demonstration of innovative mobile collector manufacturing platforms;
  - Development and demonstration of fully or highly automated, rapid installation of the collector field, and;
  - Development and demonstration of other innovative approaches to meet the techno-economic goals for this topic of the FOA.
- Proposals to the CSP topic must also demonstrate that the collector field that results from the proposed innovations can meet the technical targets given in Section I.B. of the FOA.

# Program Structure and Cost Share

## Both Topic Areas

- Anticipated min. of \$1M and max. of \$5M Federal Funds for any one project
- All projects must include at least 50% Recipient (non-Federal) cost share

$$\text{Recipient cost share} = \frac{\text{Recipient contribution}}{\text{Federal Funds} + \text{Recipient contribution}}$$

# Concept Paper

# Concept Paper Deadline

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Submit Concept Paper in EERE-Exchange by

**March 22, 2013 5:00 PM ET**

We strongly encourage you to submit  
1-2 days prior to avoid any potential technical  
glitches with EERE-Exchange

<https://eere-exchange.energy.gov/>

# Concept Paper Purpose

- EERE will make an independent assessment of each Concept Paper based on the criteria in Section V.B.2 of the FOA. EERE will encourage a subset of Applicants to submit Full Applications. Other Applicants will be discouraged from submitting a Full Application. A “discouraged” notification does not bar an applicant from submitting a Full Application.
- By discouraging the submission of a Full Application, EERE intends to convey its lack of programmatic interest in the proposed project in an effort to save the Applicant the time and expense of preparing an application that is unlikely to be selected for award negotiations.

# Concept Papers are Required

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Only Applicants that submit a compliant Concept Paper are eligible to submit a Full Application.

# Full Application

# Application Deadline

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Submit Application in EERE-Exchange by

**April 26, 2013 5:00 PM ET**

We strongly encourage you to submit  
1-2 days prior to avoid any potential technical  
glitches with EERE-Exchange

<https://eere-exchange.energy.gov/>

# Full Application Key Points

- Follow the formatting criteria and page lengths stated in the FOA
- Triple check entries in Exchange
  - Submissions could be deemed non-compliant due to an incorrect entry and cannot be reviewed.
- Make sure you hit the “Submit” button
  - Any changes made after you hit “Submit” will un-submit your Full Application and you will need to hit the “Submit” button again to re-submit your Full Application.

# Full Application Format & Page Limits

Extra material will be REDACTED OR REMOVED and will NOT be provided to reviewers.

Section	Notes
Technical Volume	25 pages max
SF-424 – Application for Federal Assistance	no page limit
Statement of Project Objectives	10 pages max, Microsoft Word format. Applicants must use the template available in EERE Exchange
PMC 123.1 – Budget Justification	no page limit, Microsoft Excel format. Applicants must use the template available in EERE Exchange
SF-424A – Budget Information	no page limit, Microsoft Excel format. Applicants must use the template available in EERE Exchange
Summary for Public Release	1 page max.
Summary Slide	1 page limit, Microsoft PowerPoint format
Qualifications, Experience, and Capabilities	3 pages max. for each Personal Qualifications Summary
Intellectual Property Strategy	no page limit
Letters of Commitment, if applicable	no page limit, signed letters of cost share commitment
Subaward Budget Justification, if applicable	PMC 123.1, no page limit
Budget for Federally Funded Research and Development Center (FFRDC) Contractor File, if applicable	no page limit
Authorization from cognizant Contracting Officer for FFRDC, if applicable	no page limit
Waiver Request, if applicable;	
SF-LLL Disclosure of Lobbying Activities, if applicable	no page limit

# Criteria Weighting for Full Applications

<b>Merit, feasibility, and impact of technical approach</b>	<b>40%</b>
<b>Project and management plan</b>	<b>30%</b>
<b>Contribution to Domestic Manufacturing</b>	<b>20%</b>
<b>Qualifications, Resources, and Capabilities</b>	<b>10%</b>

# Criterion I: Merit, feasibility, and impact of technical approach

## Weight: 40%

- Technical Merit:
  - Quality of the Applicant's technology description and the likelihood that this technology will advance in the marketplace in the future.
  - Extent to which the technology will achieve a significant near to mid-term impact (1-4 years). Impact factors include increase in solar efficiency, reduction in construction costs, and reduction in manufacturing costs by decrease in the bill-of-material costs and/or increase in manufacturing yield or throughput.
  - Clarity and accuracy of Applicant's explanation of current industry best practices and the future improvements or limitations the project will address or resolve.
  - Adequacy of discussion of barriers to adoption and potential competitive response.
- Quantitative Impact Analysis:
  - As presented in the Quantitative Impact Analysis section of the Technical Volume, the extent and significance of the Applicant's forecasted technology impact and reasonableness of the project's target improvement in  $\$/W_p$  (PV Topic Area) or  $\$/m^2$  (CSP Topic Area) projections.

# Quantitative Impact Analysis

- Must provide a detailed discussion of the benefit of the proposed technology using standard metrics, either  $\$/W_p$  (PV) or  $\$/m^2$  (CSP solar field).
- There should be a measurable reduction in the chosen metric relative to the present industry baseline. This impact must be explicitly stated along with all assumptions used to calculate the reduction. The assumptions and inputs to the impact analysis must be supported by realistic, fact-based data, with enough detail included to allow a reviewer to understand and reproduce the calculations.
- Filled-out cost information table required for both topic areas. Refer to Section IV.E of the FOA.

# Criterion 2: Project and management plan

## Weight: 30%

- Project Management:
  - Quality of Applicant's schedule with defined tasks, timing, and resource allocation.
  - Adequacy and reasonableness of the proposed budget and its distribution among collaborators (if multi-organization teams are part of the proposal).
  - Clarity with which project risks are identified, correlated with program decision points, and risk mitigation is described.
- Decision Points, Deliverables, and Verification Plans:
  - Extent and effectiveness of key milestones, decision points, and deliverables including the description of the independent testing plans required to verify progress and meet milestone-based payments. Milestones are expected to be achievable but challenging.
  - The Statement of Project Objectives includes a clear, detailed, complete, timely, and reasonable work plan and schedule with quantifiable milestones and go/no-go decision points that:
    - are appropriate for successful completion of the project's goals; and
    - incrementally reduce risk of the project (i.e., each milestone or go/no-go decision point reached increases the project's likelihood of success).

# Milestones and Go/No-Go Criteria

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- The projects will have budget periods, typically 12 months each. At the end of each budget period, DOE will make a go/no-go decision (as described in Section II.D of the FOA document).
- Milestones and Go/No-Go Criteria will be carefully evaluated by the Reviewers.
- Milestone should be quantifiable.
- **Reports are NOT acceptable milestones.**

## Criterion 3: Contribution to Domestic Manufacturing

Weight: 20%

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- **Domestic Manufacturing Impact:**
  - Degree to which the project will strengthen the competitiveness of domestic solar manufacturing and translate into increased long-term solar and supply chain manufacturing and employment in the United States.
- **Manufacturing Plans:**
  - Extent to which those expectations are supported by a realistic, factually supported, financially sound implementation approach.

# Criterion 4: Qualifications, Resources, and Capabilities

## Weight: 10%

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- **Qualifications and Capabilities:**
  - Extent to which the capabilities, experience, and qualifications of the organization, its members, and any collaborators are consistent with and support the proposed scope of work.
- **Resources:**
  - Adequacy of the facilities and resources for executing the proposed scope of work.

# Review Process

- Concept Paper review and feedback
- Full Application Expert Review
- Expected release of reviewer comments to applicants: **June 4, 2013**
- Expected optional submission deadline for reviewer comment replies: **June 7, 2013 5:00 p.m. EST**
  - Single PDF Document, 2 pages of text max, 1 page of images max
- Reviewers and DOE discuss applications
- Pre-selection clarification calls and presentations: **June 14-21, 2013**

# Questions

All questions must be submitted to [SolarMat@go.doe.gov](mailto:SolarMat@go.doe.gov)

and answers will be provided on EERE Exchange at:

<https://eere-exchange.energy.gov/FAQ.aspx?Foald=f5fdca25-5fe9-48f8-880d-912476bc2986>

# Answers Posted on EERE Exchange

Question: Can an Applicant submit more than one application to this FOA?

Answer: As stated in Amendment 001 of the FOA, Applicants may submit more than one application to this FOA, provided that each application describes a unique project and each application has a different Principle Investigator (PI). No individual may participate as a PI or co-PI on more than one application. An individual may be included in an application as a participant even if they are listed as a PI on another application. If an applicant submits more than one Concept Paper or Full Application with the same PI or co-PI, DOE will only consider the last timely submission for evaluation. Any other submissions received listing the same PI or co-PI will be considered noncompliant and not eligible for further consideration.



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[energy.gov/sunshot](http://energy.gov/sunshot)

March 14, 2013