



DOE Request for Information (RFI)

Solar Workforce Certification and Training Accreditation RFI Number: DE-FOA-000328

Program Manager/Area

John Lushetsky, Program Manager
Solar Energy Technologies Program
Office of Energy Efficiency and Renewable Energy
United States Department of Energy

Context and Purpose of RFI

The goal of the U.S. Department of Energy's (DOE) Solar Energy Technologies Program ("Solar Program") is to enable high penetration of solar energy technologies and achieve cost-competitiveness with grid electricity by 2015. In addition to research and development (R &D) efforts, the Solar Program helps overcome barriers to adoption by addressing non-R&D issues such as workforce development.

Through this RFI, DOE seeks input from all parties with perspectives on how the quality of the solar industry workforce can be improved through certification and accreditation of industry-related personnel and organizations, and on the role DOE should have in facilitating this effort. The DOE currently supports certification and accreditation programs¹ and therefore seeks feedback on the level of support the DOE has provided to date and the role that DOE should play going forward.

Structure of RFI

Section I contains background information on the Solar Energy Technologies Program ("Solar Program") and its current support of certification and accreditation programs within the solar industry. Section I also contains information regarding a proposed draft Funding Opportunity Announcement (FOA) that is under consideration.

Section II lists the questions to which the Solar Program is seeking responses and contains a set of guidelines for proper response.

This RFI covers all solar technologies, including photovoltaics (PV), concentrating solar power (CSP) and solar heating and cooling (SHC).

¹ More information can be found in the SETP Annual Report:
http://www1.eere.energy.gov/solar/pdfs/fy08_annual_report_43987.pdf or on EERE website:
http://www1.eere.energy.gov/solar/educator_resources.html

Section I

Background and Rationale

Because DOE seeks to promote a safe and sustainable solar industry, it has a vested interest in supporting quality assurance within all areas of the industry. The growth and success of this viable industry cannot be ensured without proper safeguards for consumers, workers, and employers. Therefore, DOE supports certification and accreditation programs within the solar industry.

DOE recognizes that the lack of trained personnel within the downstream solar installation industry can lead to improperly installed and unsafe systems. The Solar Program's education, training, and workforce development activities currently focus on building the capacity of U.S. educational institutions to respond to the increased demand for individuals involved in the sales, site assessment, design, installation, repair and inspection of solar PV and solar heating and cooling systems. Through projects such as the Solar Instructor Training Network², DOE continues to support workforce training in order to promote high-quality and safe installations, cost reductions, and consumer confidence in the emerging solar industry. The Solar Program intends to coordinate its efforts within the Solar Instructor Training Network with the efforts of the certification and accreditation programs that the Solar Program supports.

The most recent DOE awards to certification and accreditation programs began in 2005 and are expected to conclude this year. DOE sponsors the North American Board of Certified Energy Practitioners (NABCEP) to administer American National Standards Institute-accredited certifications for solar photovoltaic installers and solar thermal installers; NABCEP also operates an entry-level program for individuals not yet eligible to sit for the photovoltaic installer certification examination.³ DOE sponsors the Interstate Renewable Energy Council (IREC), which is the North American licensee for the internationally-recognized Institute for Sustainable Power Quality (ISPQ) Standard, to provide accreditation of training programs and certification of trainers and instructors. The ISPQ standard specifies requirements for competency, quality systems, resources, and curriculum.⁴

DOE is seeking input from U.S. stakeholders on the Federal role in the certification of workers within the solar industry, as well as the certification of instructors and accreditation of training programs which support workers within the solar industry.

Strategy

The Solar Program anticipates continued support of certification and accreditation programs within the U.S. solar industry to continue to develop competency standards for the installation workforce, reduce

² The Solar Instructor Training Network was launched in October 2009 to address a critical need for high-quality, local, and accessible training in solar system design, installation, sales, and inspection. Visit http://www1.eere.energy.gov/solar/instructor_training_network.html for more details.

³ As of October 2009, there are 912 recipients of the Solar PV Installer Certification, 111 recipients of the Solar Thermal Installer Certification and 3,510 individuals who successfully passed the PV Entry Level Program examination. Visit www.nabcep.org for more details.

⁴ As of March 2010, there are the following ISPQ Accredited programs: 14 Training Programs and 11 Continuing Education Providers. In addition, there are the following ISPQ Certified individuals: 16 PV Instructors, 1 Solar Thermal Instructor, 8 PV Master Trainers, and 2 Solar Thermal Master Trainers. Visit www.irecusa.org for more details.

installation costs, and ensure consumer confidence in solar energy technologies. The Solar Program recognizes that the solar industry is dynamic and emerging and, therefore, expects to focus funding for certification and accreditation organizations that can adapt to evolving technologies and be responsive to the needs of industry, consumers, educators, students, jobseekers, and other stakeholders.

Procurement Concept

DOE is considering releasing a competitive FOA to fund new or existing certification and accreditation programs within the solar industry. The DOE proposes to divide the FOA into the following three Topic Areas:

Topic 1 – Certification of Personnel

Topic 2 – Certification of Instructors and Trainers

Topic 3 – Accreditation of Training Programs and Institutional Providers

Activities

FOA awardees will engage in activities relevant to their Topic Areas.

Topic 1 will include the development and maintenance of personnel certifications that are validated by industry, educators, government, and other stakeholders. This may require foundational work such as the identification of job types requiring a given type of certification or certificate, the development of comprehensive job task analyses, the administration of examinations to award certificants, and the development of eligibility requirements for those examinations. Individuals who successfully pass the examinations will have demonstrated that they possess the skills and competencies required to meet a high set of standards recognized by major stakeholders. The certification entity will NOT replace state-mandated licensing requirements, but rather complement them.

Topic 2 will include the development and maintenance of certifications for master trainers and instructors, individuals whom have demonstrated their subject matter expertise and their ability to successfully convey subject matter to students.

Topic 3 will include the development and maintenance of accreditations for solar training programs and institutions providing courses preparing students for entry into the solar workforce or re-training personnel already in the industry.

Each of the above topics will include programs that are tailored to code officials involved in the permitting or commissioning of solar system installations. Specifically, this may require the development and administration of the following: specialized certifications for code officials, certifications for instructors and trainers with the expertise to instruct code officials, and accreditations for training programs and institutional providers offering coursework targeted to code officials.

Award and Financial Information

Under an announcement, awards are *anticipated* to include the following characteristics:

- Awards will be cooperative agreements
- One award issued per Topic
- Award period up to 5 years

- Annual funding level is anticipated at a total of \$1 Million per year for all Topic Areas combined:
 - Topic 1: \$500,000
 - Topic 2: \$250,000
 - Topic 3: \$250,000
- A minimum of 20% cost share is required from Applicants
- No eligibility restrictions

Section II

Request for Information (RFI) Guidelines

DOE will not pay for information provided under this Request for Information (RFI) and there is no guarantee that a project will be supported as a result of this RFI. This RFI is not accepting applications for financial assistance or financial incentives.

A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed. DOE may also decide at a later date to issue a FOA based on consideration of the input received from this RFI or to not issue an announcement at all.

Respondents are requested to provide the following information at the start of their response to this RFI:

- **Company/Institutional Name,**
- **Company/Institutional Contact,**
- **Address, phone number, and e-mail address,**
- **Sectors (Industry - Solar; Industry - Other; Education; Government; Non-profit; Other). If either "Industry - Other" or "Other", please specify.**
- **Brief description of the operations and mission of business or institution (several sentences will suffice).**

All responses to this RFI must be delivered electronically in **Microsoft Word (.doc) format as an attachment to an email** sent to the following email address: SolarCertificationRFI@go.doe.gov
Emails should have the subject line **“Solar Certification and Accreditation RFI Response”**.

Responses to this RFI must be submitted by 11:59 pm Eastern Time on May 14, 2010.

Responses should be limited to 5 pages. However, more than one response is allowed per respondent. **Please identify your answers by responding to a specific question if possible. (In this case, “A.1.a” would refer to the first sub-question within the first question of question set A).** We welcome other comments as well. Identify these additional comments to an item in the RFI which will facilitate aggregating all the responses. Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for program planning and procurement strategy development. Information or data that is restricted in any way or limited for use by the Government is not solicited and will not be considered. Responses will not be considered confidential. **Please do not respond with any information you deem proprietary or confidential.**

DOE has no obligation to respond to those who submit comments, and/or give any feedback on any decision based on the comments received, as there is potential for a future funding opportunity relative to this subject.

Questions

Respondents are asked to comment on the questions below. Please read all questions thoroughly before providing your response.

Respondents are particularly encouraged to comment on the value of certification and accreditation programs within the solar industry, and the degree to which existing programs have been successful. In addition, DOE is very interested in receiving input on how certifications and accreditation programs in other similar high-growth industries have successfully scaled up with technology improvements.

If you have additional comments which are relevant to the objectives of this RFI but are not a direct response to any of the questions below, please do not hesitate to include them in your response.

This RFI covers all solar technologies, including photovoltaics, concentrating solar power, and solar heating and cooling.

Reminder

Please reference the question numbers (e.g. “A.1.a” for the first question) in your response.

A. Perspectives on Existing Certifications and Accreditations and DOE’s Role

1. **Justification:** DOE typically seeks to transition industry services to outside agencies over time, but also assumes a role of support if needed to meet its programmatic objectives.
 - a) In general, what do you believe is the appropriate role of certification and accreditation programs in the solar industry?
 - b) What role should DOE have in the accreditation and certification process relative to other agencies and to the private sector?
 - c) Do you think the DOE should continue to fund certification and accreditation programs within the solar industry, or should it reduce its role in these areas to provide more support in other areas? Does the solar industry have enough resources to fund certified and accreditation programs independently?

2. **Comment on Existing Programs:** DOE is interested in your opinion of the quality and effectiveness of existing certification and accreditation programs, including programs which DOE does not currently fund. In your responses, please consider all programs and reference the names of individual programs when applicable. *Please be as detailed and comprehensive in your response as you wish.*
 - a) Are you satisfied with the overall quality of these programs? Please comment on any specific strengths and weaknesses you see in these programs, and how these programs could be improved.

- b) How effective are the existing certification and accreditation programs in meeting the needs of their recipients, the solar industry, trainers and educators, governments, consumers, and other stakeholders? How useful are they?
 - c) What kind of challenges or barriers do you see to increased adoption of these programs?
 - d) What are the advantages and disadvantages associated with multiple organizations offering similar personnel *certifications*? For example, there currently exists more than one certification program for solar installers.
 - e) What are the advantages and disadvantages associated with multiple organizations offering similar *instructor certifications* or *training program accreditations*?
3. **Public Support:** Stakeholders often look to Federal agencies such as DOE to provide guidance on appropriate standards, codes and other measures, and to publicly support activities it sponsors.
- a) In addition to funding, how important is it that DOE publicly support the certifications and accreditations it sponsors, as opposed to leaving support up to the industry, consumers and other stakeholders?
 - b) What level of additional support is appropriate?

B. Scope of proposed FOA

1. **Manufacturing Sector:** Current certifications focus solely on the installation sector. Should DOE consider certifications in the solar manufacturing as well? If so, please describe the occupations to be certified and the benefits to employers, consumers, and other stakeholders.
2. **Installation Project Scale:** Current certification efforts focus on residential and small commercial installations. Customers in these sectors are typically unable to conduct third-party due diligence of installation contractors and, therefore, certification serves as a suitable proxy. In contrast, large commercial and utility-scale customers often already have quality assurance measures in place.
- a) Should DOE consider funding the development of certifications for personnel working on large-scale systems?
 - b) What are the special skills, competencies, or requirements of personnel working on large-scale, ground-mount, and utility-scale systems?
3. **Personnel Certifications:** DOE currently funds the development and maintenance of personnel certification in the downstream installation workforce. However, as the industry becomes increasingly more sophisticated, there is a resulting increase in job differentiation. DOE recognizes the need for more specific certifications that would serve technical sales, site assessors, system designers, repair technicians, inspectors, and others involved in the execution of installation projects.
- a) Which certifications should be developed for personnel *other* than system installers?
 - b) Is there a certification structure which would be of greater benefit, but does not currently exist? For example, would it make sense to have a baseline certification which is complemented by add-on certifications for specific occupations?
 - c) Is it beneficial to have a graduated certification structure, for example one that includes entry-level and intermediate-level certifications? Please provide suggestions.

C. Structure of proposed FOA

1. **Funding Level and Duration:** The funding level is anticipated to be \$1 Million per year for all Topic Areas combined, for a total of \$5 Million over 5 years (please see Section I, Award and Financial Information for a breakdown of funding by Topic Area). A minimum cost share of 20% maybe required from Applicants, and there are no restrictions on eligibility.
 - a) Is the funding level sufficient?
 - b) Is the proposed breakdown of funding by Topic Area appropriate?
 - c) Is the 5-year period sufficient?
 - d) Is the level of required cost share appropriate?
 - e) Should there be any restrictions on eligibility for these awards? If so, what restrictions would be appropriate?

2. **Number of Topic Areas and Awardees:** Three separate Topic Areas are currently proposed: Topic 1 – Certification of Personnel; Topic 2 – Certification of Instructors and Trainers; Topic 3 – Accreditation of Training Programs and Institutional Providers.
 - a) Should any of the Topic Areas be combined?
 - b) Could a single Awardee adequately cover one or more Topic Areas?
 - c) Should there be multiple Awardees within any single Topic Area? In other words, would the certifications in each topic area be different enough that multiple awards are necessary to cover all possible specific topic areas and technologies?

3. **Metrics:** With respect to each of three Topic Areas, what type of metrics should the DOE require the Awardees to report that will demonstrate the success of the funded efforts?

4. **Awardee Qualifications:** With respect to each of the three Topic Areas, what qualities should DOE look for in the FOA applications it receives? What are the specific attributes, capabilities or experience that a successful Applicant should possess?

5. **Evaluation Criteria:** For each of the Topic Areas, what evaluation criteria should DOE use to evaluate Awardees' qualifications to ensure that they meet the needs of the industry?

6. **Awardee Self-sufficiency:** DOE would like to know whether you think it should expect Awardees of this FOA to become fully self-sufficient by the end of the funding period.
 - a) On what timeline, if any, should the DOE expect awardees to become self-sufficient?
 - b) Do you believe that the development and administration of national certifications and accreditations require continued support from the Federal government? If so, what is an appropriate level of support given the current maturity level of the solar industry? If possible, please provide benchmarks or funding level breakdowns from other industries.