

## Growing Solar Power Industry Brightens Job Market

U.S. solar power capacity is expanding rapidly as part of the national initiative to double renewable energy resources in three years. This growth is helping to generate many new, well-paid jobs in solar power for American workers.

For example, solar thermal installers or technicians in the San Francisco Bay Area may expect an entry-level median wage of approximately \$31,000. With experience, the annual median salary could jump to \$60,000. Solar photovoltaic (PV) installers or technicians might expect similar salary levels.<sup>1</sup>

In most cases, an individual wishing to pursue a job in the solar sector will need to acquire the necessary license to perform the work in their state and may pursue certification to enhance their eligibility. Job availability varies by industry segment and state, so learning about trends in your state will help you prepare for success.

### Training and Licensure— Know the Facts

At present, each state has different licensing requirements for jobs in the solar sector. These requirements are typically listed under a General Contractor License or Electrical Contractor License.

In many cases, training is the first step toward acquiring the necessary license to legally install solar. To ensure quality, continuity, and consistency in the delivery of training, the **Interstate Renewable Energy Council (IREC)** has established a framework of standards and metrics for trainers and training programs. IREC serves as a clearinghouse on training opportunities.



Photo courtesy of NREL

Solar technologies diversify the energy supply, reduce the country's dependence on imported fuels, improve air quality, and offset greenhouse gas emissions. A growing solar industry also stimulates our economy by creating jobs in solar manufacturing and installation.

### Skills for Solar PV Installers

According to the Interstate Renewable Energy Council (IREC), some desired qualifications for becoming a PV Installer are as follows:

#### Entry-Level Solar PV Installer

- Good customer service skills
- Experience in mechanical installations, general construction, and ladder work
- Basic understanding/experience with electrical wiring of AC and DC systems
- Experience with all types of hand-held and power tools
- Experience working with all types of building materials
- H.S. diploma, two-year degree in technology/industrial arts

#### Experienced Solar PV Installer

- At least 18 months of experience installing commercial or residential solar electric systems
- NABCEP certificate or be working toward certification
- Working knowledge of the NEC Code and AC and DC electrical systems
- Previous experience as foreman or team leader
- Previously employed by a reputable contractor
- Strong understanding of electrical wiring, theory, and the trade (bending pipe, sizing conduit and wire, calculating voltage drop, working with power distribution centers)

To find out more, check out our energy education and workforce development web page and follow the links to related sites:

[www.eere.energy.gov/solar/education\\_training.html](http://www.eere.energy.gov/solar/education_training.html)

<sup>1</sup> Centers of Excellence, 2008 report

## Find Solar Training Near You

This directory of renewable energy training has been compiled to make it easier for you to find renewable energy educational providers in your state [www.irecusa.org/trainingCatalog](http://www.irecusa.org/trainingCatalog)



Educator certifications and accreditations sponsored by the DOE Solar Program.

## Getting Certified

The **North American Board of Certified Energy Practitioners (NABCEP)** offers voluntary certifications for renewable energy professionals throughout North America. Specifically, NABCEP is an accredited, national certification body for solar PV, solar thermal installers, and solar PV technical salespeople in the United States. NABCEP also offers a PV Entry-Level Program through local training providers. The program is designed for those individuals wishing to get into the solar field. This is the most appropriate path for entry-level workers, since the installer certificate is geared toward more experienced workers. Find out more at [www.nabcep.org](http://www.nabcep.org)



Installer certifications sponsored by the DOE Solar Program.

## Resources and Opportunities for Educators

The Solar Program launched the Solar Instructor Training Network in October 2009 to promote high-quality training in the installation of solar photovoltaic (PV) and solar heating and cooling (SHC) technologies. Nine regional resource and training providers offer professional development opportunities to trainers and instructors at local educational institutions.

Local educators may be eligible to participate in train-the-trainer workshops, online training, conferences, and other activities sponsored by the regional training providers. All educators will have access to products of the training network, such as new curricula and best practices for developing training programs and assisting students with entry into the solar installation industry. Find out more at [www.eere.energy.gov/solar/instructor\\_training\\_network.html](http://www.eere.energy.gov/solar/instructor_training_network.html)

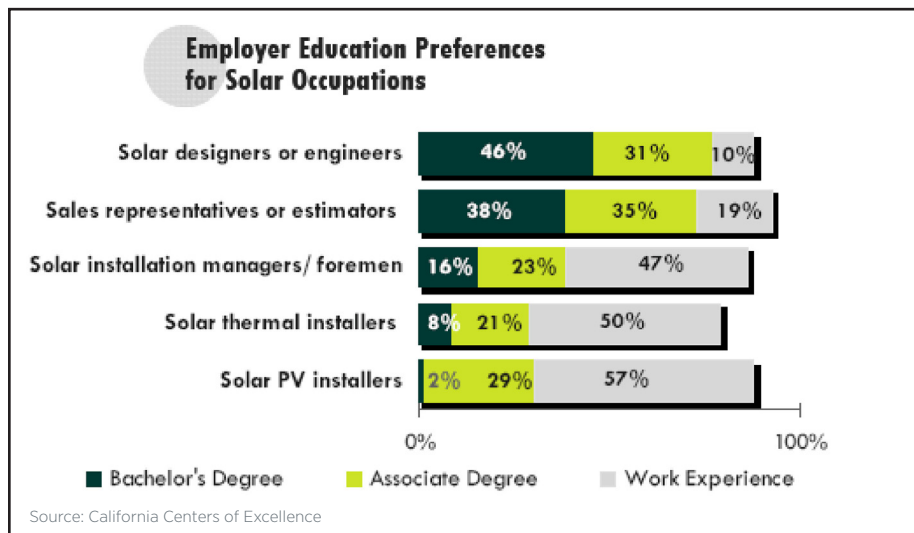


Photo courtesy of Florida Solar Energy Center

Train-the-trainer workshops are one of the ways we are helping to expand training opportunities.

## Other Selected Occupations in the Solar Energy, PV, and Solar Thermal Industries

- Solar Designers or Engineers
- Solar Installation Managers or Project Foremen
- Sales Representatives or Estimators
- Site Assessors or Remote Evaluators
- Mechanics
- Electrical Equipment Assemblers
- Construction Equipment Operators



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