

CLEAN ENERGY TECHNOLOGY

Certifications and Degrees to Boost Your Business or Career

Certifications provide a standard that sets you apart so employers and customers know that you can demonstrate a specific set of knowledge and skills. Many pathways exist for training and certification, and it pays to plan your direction. Whether you are at an entry level or are an experienced contractor with your own company, training and certification can increase the quality and value of your work. Significant on-the-job learning is usually required to become proficient in the skills taught during a course. For those working as or for contractors in the renewable energy field, the North American Board of Energy Practitioners provides a well-established set of nationally recognized certificates at an entry level training opportunity as well as certifications for skilled professionals.

Occupational Outlook

What Solar Photovoltaic Installers Do

Solar Photovoltaic (PV) installers, often called PV installers, assemble, install, or maintain solar panel systems on roofs or other structures.

Work Environment

Although most PV installation is done outdoors, installers sometimes work in attics and crawl spaces to connect panels to the electric grid. Installers must also travel to job sites. Most work full time during regular business hours, but some are required to be on call for emergencies.

How to Become a Solar Photovoltaic Installer

Although some installers need only a high school diploma and typically receive on-the-job training lasting up to one year, many candidates take a course at a technical school or community college, or receive training as part of an apprenticeship program.

Pay

The median annual wage for solar photovoltaic installers was \$37,830 in May 2015. Entry level wages are often lower than the median.

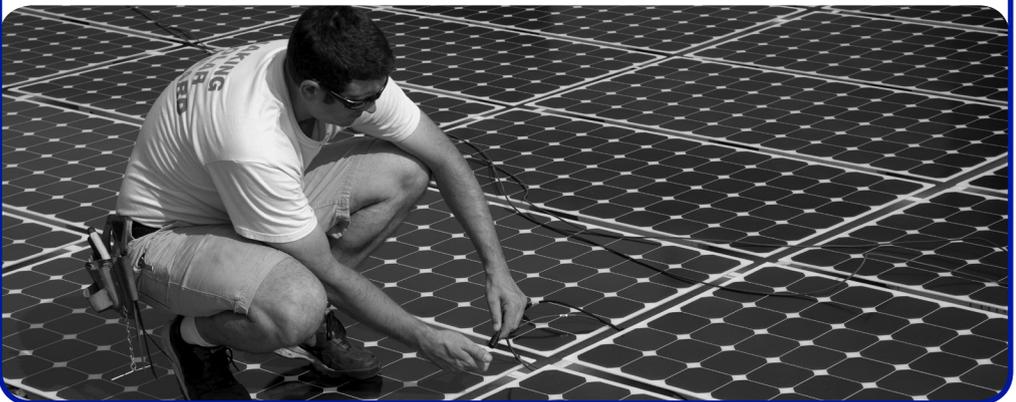
Job Outlook

Employment of Solar Photovoltaic (PV) installers is projected to grow 24% from 2014 to 2024, much faster than the average for all occupations. The continued expansion and adoption of solar panel installations will result in excellent job opportunities for qualified individuals, particularly those who complete a photovoltaic training course at a community college or technical school.

Important Qualities

Customer service & mechanical skills, physical stamina, detail oriented, physical strength.

Source: www.bls.gov



CLEAN ENERGY TECHNOLOGY

ELECTRICAL THEORY I BASICS

This course includes components of the atom, electron flow through conductors, conductivity, series and parallel circuits, tracing circuits, trouble shooting, voltage and current resistance, AC and DC voltage, single phase, three phase, and Ohm's Law. The course includes a lab component.

Instructor: J. Novak, IREC Master Trainer

DCB 1947-30 T/R 3/21-4/4 6-9pm KSU \$149

ELECTRICAL DISTRIBUTION SYSTEMS

This course includes basic electrical distribution, identifying and selecting electrical equipment, sizing wires and overcurrent protection, an introduction to the National Electrical Code, installing wires and conduit, connecting PV modules in series and parallel, measuring voltage and current and practicing power and energy calculations. **Instructor:** J. Novak, IREC Master Trainer

DCB 1631-15 T/R 4/18-27 6-9pm KSU \$299

PHOTOVOLTAICS (PV) SYSTEMS - RECOGNIZED BY NABCEP

The class covers the basic sizing and design of systems to serve a given electrical load and safety procedures for installers and for those learning the basics of solar installation. Students study the electrical code for PV systems in detail and the various mounting systems for PV arrays and how they affect roofs. Course includes a hands-on installation of a PV system. Students completing this course may sit for the NABCEP Associate Exam. This course is approved by New York State Bureau of Veterans Education for payment of VA Education Benefits. Prerequisite: Electrical Theory.

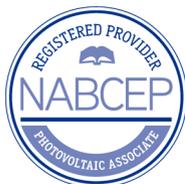
Required text: *Photovoltaic Systems*, ISBN: 9780826913081 **Instructor:** J. Novak, IREC Master Trainer

DCB 1795-28 S/U 4/29-5/7 8:30am-6pm SRC \$995

NABCEP PV ASSOCIATE EXAM REVIEW

For those who have completed Photovoltaics Systems and need a review before the exam.

DCB 1992-22 T/R 5/9 -11 6-9pm KSU \$169



NABCEP PV ASSOCIATE EXAM

For those who have completed Photovoltaics Systems and have mastered the 10 skill sets listed on the NABCEP learning objectives. Students must preregister for the exam and bring a signed copy of the NABCEP Candidate Eligibility Form to the Exam.

DCB 1950-62 F 5/12 1pm KSU \$199

ADVANCED PV - RESIDENTIAL PHOTOVOLTAICS (PV) SITE ASSESSOR

This course prepares students with the skills needed to recommend a PV system that meets a customer's needs, identify and recommend steps for energy efficiency improvements to a building, identify and recommend array placement options, provide a general cost estimate, write a PV assessment, and use web-based performance calculators. Suggested Prerequisite: Photovoltaics (PV) Systems.

Instructor: J. Novak, IREC Master Trainer

DCB 1837-14 S/U 5/20-21 9am-4:30pm KSU \$429

Approved for 14 NABCEP Advanced Continuing Education hours

SALES & CUSTOMER SERVICE TRAINING FOR TECHNICAL PROFESSIONALS IN THE SOLAR INDUSTRY

In sales, you sell yourself as a reliable source of information and support, not just a product, service or idea. Learn to build relationships with clients so they perceive you as trustworthy and valuable. This course teaches communication skills, eliminating fear, gaining confidence, overcoming objections in a solar installation sale, making cost effective sales with great customer service, and building referrals.

DCB 2074-02 W 3/8 9am-4:30pm KSU \$349

Approved for 7 NABCEP Advanced Continuing Education hours