

Career Pathway Spotlight

Discover a Career as a Solar Photovoltaic (PV) Installer or Technician



Discover your career in energy!

Solar PV Installers and Technicians install, troubleshoot, and maintain the panels, inverters, and electrical systems that turn sunlight into power across rooftops and fields.

Residential and Commercial Rooftops

On homes, schools, and commercial buildings across the country, Solar PV Installers mount panels, install racking and inverters, and connect new systems to the local grid. They balance precision electrical work with strong customer service for property owners.

Utility-Scale Solar Farms

On vast solar farms across deserts, fields, and former industrial sites, technicians install, commission, and maintain thousands of panels, inverters, and trackers. The work supports the largest utility-scale renewable projects feeding clean power into the bulk electric grid.

Operations, Maintenance, and Troubleshooting

Once systems are running, Solar PV Technicians keep them performing — responding to outages, running QA inspections, and troubleshooting equipment from modules to the point of interconnection. They use drones, thermal imaging, and digital tools to spot problems quickly.

CAREER PATH

Start with:

- » A high school diploma or GED

Get Educated:

- » A community college or vocational solar technician training program
- » A solar PV installer or apprenticeship training pathway
- » A military pathway with electrical, mechanical, or construction experience
 - Navy CE, Army Interior Electrician (12R), or Air Force Civil Engineer

Specialize With:

Certificates or credentials

- » NABCEP PV Associate Credential for entry-level installers
- » NABCEP PV Installation Professional Certification (PVIP)
- » OSHA 10 and 30 construction safety certifications

Knowledge in:

- » Battery storage
- » Inverter technology
- » Rooftop systems
- » Utility-scale arrays
- » Performance testing

OCCUPATIONAL SKILLS

- » Strong mechanical, electrical, and construction aptitude
- » Sharp attention to detail and strong safety focus
- » Comfort with heights, ladders, and outdoor environments
- » Strong problem-solving and methodical troubleshooting skills
- » Clear communication with customers, crews, and dispatch
- » Physical stamina for active, all-weather field work
- » Comfort with computers, mobile apps, and drone technology

BENEFITS

These energy industry careers offer:

- » Strong, growing demand across solar markets
- » Employer-sponsored health, dental, and vision insurance
- » Pension or 401(k) retirement plans
- » Specialize in rooftop, utility-scale, or storage systems
- » Professional development and ongoing technical training

What Might You Do As A Solar PV Installer Or Technician?

ENTRY LEVEL

1-4 years

What you will do:

- » Moving, staging, and assembling solar racks, panels, and other components under supervision
- » Mounting solar panels and properly sealing all roof penetrations
- » Assisting senior technicians with inspections, troubleshooting, and preventative maintenance
- » Laying out array assembly and installing mounting hardware
- » Assisting with electrical wiring of inverters and energy storage products
- » Keeping job sites clean and inverters and tools properly stored
- » Following OSHA, PPE, and fall protection procedures on every job

MID- CAREER

5-8 years

- » Independently leading installation crews on residential, commercial, and utility-scale solar projects
- » Installing PV system components, inverters, and the necessary electrical equipment
- » Independently diagnosing and repairing solar panels, inverters, and combiner box equipment
- » Using AI-assisted thermal imaging and drone surveys to scope work efficiently
- » Managing battery storage systems and grid-connected inverter configurations on-site
- » Training entry-level installers and reviewing their work for quality and code

EXPERIENCED

8+ years

- » Troubleshooting and repairing solar systems from the modules to the point of interconnection
- » Responding to offline equipment dispatches at utility, commercial, and residential sites quickly
- » Performing quality assurance inspections and preventative maintenance on running systems
- » Flying drones for thermal imaging and AI-assisted system inspections daily
- » Creating and submitting detailed field service reports for every completed job
- » Mentoring mid-career technicians and leading complex troubleshooting calls

What knowledge, skills and abilities will you need to succeed?

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| <ul style="list-style-type: none"> » Listen and follow directions from senior installers and technicians » Comfort working at heights, on rooftops, climbing ladders and stairs » Ability to lift 50 pounds and work in all weather » Strong mechanical aptitude and basic electrical knowledge » Eagerness to earn NABCEP PV Associate and OSHA 10 | <ul style="list-style-type: none"> » Active NABCEP PV Associate or Professional Certification credentials » Working knowledge of PV systems, racking, and electrical wiring practices » Fluency with installer tools, mobile apps, and drone technology » Clear communication with customers, crews, and project coordinators » Proven leadership and material management abilities for the crew » Composure during high-volume install seasons and unexpected delays | <ul style="list-style-type: none"> » Active NABCEP PV Professional Certification or equivalent credential » Strong understanding of grid-tied, off-grid, and hybrid PV system designs » Ability to fly drones for general and thermal imaging surveys » Proficient computer skills and industrial communications and networking knowledge » Excellent interpersonal skills and strong attention to detail » Mastery of change management as solar evolves |
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GET PAID!

Entry Level:

- » \$39,070 / year*

As You Gain Seniority:

- » \$51,860 / year*

Later in Your Career:

- » \$80,150 / year*

*Source: United States Energy & Employment Report (2025). These figures use the 10th, 50th, and 90th percentiles of all workers in the role as a proxy for seniority progression and for consistency with BLS OEWS and the United States Energy & Employment Report. Compensation figures should be used as a guide; actual compensation may vary depending on education, geography, experience, and many other factors.



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- » Great benefits

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