

# Solar Photovoltaic Installers

SOC: 47-2231 • Career Profile Report

## ■ Key Facts

<b>\$51,860</b> Median Salary	<b>28,600</b> Employment	<b>+42.0%</b> Growth Rate
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## ■ Requirements & Salary Range

Education: High school diploma

## ■ Automation Risk Assessment

**Medium Risk** - 35.0% probability of being automated in the next 10-20 years.  
This job has some routine elements but still requires human judgment and interaction.

## ■ Work-Life Balance

**7.8/10** - Good work-life balance

## ■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	9.4/10	Investigative	5.8/10
Artistic	4.0/10	Social	5.0/10
Enterprising	5.0/10	Conventional	6.0/10

## ■ Top Skills Required

Ability to work at heights, Communication skills, Detail oriented, Math skills, Mechanical skills, Physical stamina, Physical strength

### ✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

### ■ Challenges

- Burnout Risk
- Rapid Technological Change

## ■ What They Do

Solar Photovoltaic Installers typically perform the following tasks:

- Install photovoltaic (PV) systems in accordance with codes and standards, using drawings, schematics, and instructions.
- Check electrical installation for proper wiring, polarity, grounding, or integrity of terminations.
- Identify electrical, environmental, and safety hazards associated with photovoltaic (PV) installations.
- Identify installation locations with proper orientation, area, solar access, or structural integrity for photovoltaic (PV) arrays.
- Assemble solar modules, panels, or support structures, as specified.
- Apply weather sealing to array, building, or support mechanisms.
- Install module array interconnect wiring, implementing measures to disable arrays during installation.
- Install required labels on solar system components and hardware.
- Diagram layouts and locations for photovoltaic (PV) arrays and equipment, including existing building or site features.
- Determine materials, equipment, and installation sequences necessary to maximize installation efficiency.
- Test operating voltages to ensure operation within acceptable limits for power conditioning equipment, such as inverters and controllers.
- Determine appropriate sizes, ratings, and locations for all system overcurrent devices, disconnect devices, grounding equipment, and surge suppression equipment.
- Activate photovoltaic (PV) systems to verify system functionality and conformity to performance expectations.
- Identify and resolve any deficiencies in photovoltaic (PV) system installation or materials.
- Visually inspect and test photovoltaic (PV) modules or systems.
- Examine designs to determine current requirements for all parts of the photovoltaic (PV) system electrical circuit.
- Demonstrate system functionality and performance, including start-up, shut-down, normal operation, and emergency or bypass operations.
- Identify methods for laying out, orienting, and mounting modules or arrays to ensure efficient installation, electrical configuration, or system maintenance.
- Measure and analyze system performance and operating parameters to assess operating condition of systems or equipment.
- Program, adjust, or configure inverters and controls for desired set points and operating modes.