Solar energy jobs include jobs involved in the process of generating and distributing electricity from sunlight. Solar power is one of the most environmentally-friendly ways to create electricity that we use for daily activities like heating water, regulating the temperature in our homes and offices, and keeping our streets lit at night. Solar energy is especially useful for powering portable devices like cell phones and tablets, and to reach rural and remote areas that may not be well-connected to a power grid. Solar is a renewable energy source that is not only good for the environment, but also helps people and businesses save money on their energy bills.

Solar energy jobs may include manufacturers, scientific researchers, sales and marketing representatives, installation workers, maintenance workers, and many others. The U.S. solar industry employed 231,474 workers in 2020, with a trajectory to reach 400,000 solar jobs by 2030.

In America, about a seventh of all solar energy workers specialize in manufacturing, which is the process of assembling the different parts of solar panels (like modules, inverters, racking equipment, and batteries).

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In Georgia, solar is becoming the largest source of electric power. In fact, Georgia ranked No. 1 in solar jobs growth in the Solar Foundation’s 2019 Solar Jobs Census.

Atlanta has also adopted bold policies to act on climate change, including achieving a 100% clean energy transition for municipal operations and community-wide by 2035.

This means there will be increased interest in solar from commercial, residential, industrial and utility companies, leading to a greater demand for solar jobs.

EDUCATION & SKILL REQUIREMENTS

Nearly all solar jobs require some level of proficiency in construction, manufacturing, or electrical knowledge. These skills can be acquired through apprenticeship, internships, or in training programs within schools and universities. Wages for jobs within the solar industry are usually higher than jobs within other industries (for example, solar manufacturing workers generally make more money than manufacturers in other fields), making these opportunities attractive for young professionals with many different skill sets.
LEARN MORE ABOUT SOLAR ENERGY JOBS

OCCUPATION
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers
Assemblers, Electrical Assembler, Electromechanical Assembler, Electronic Assembler, Technician, Electronic Assembler, Mechanical Assembler, Production Associate, Wiring Technician

FUNCTION
Assemble or modify electromechanical equipment or devices, such as servomechanisms, gyros, dymamometers, magnetic drums, tape drives, brakes, control linkages, actuators, and appliances.

PEOPLE STARTING IN THIS CAREER USUALLY HAVE
High school diploma or equivalent
No work experience
1 to 12 months on-the-job training

AVG. ATLANTA SALARY
$37,930

AVG. U.S. SALARY
$39,630

ACTIVITIES ON THE JOB
• Inspect installed components or assemblies.
• Align parts or workpieces to ensure proper assembly.
• Assemble electrical or electronic equipment.
• Connect supply lines to production equipment or tools.
• Measure dimensions of completed products or workpieces to verify conformance to specifications.

PROGRAMS THAT CAN PREPARE YOU IN ATLANTA
• Electrical and Electronics Equipment Installation and Repair Technologies/Technician, General
• Electrical and Electronics Installation and Repair Technologies/Technician, Associate's Degree
• Electrical and Electronics Installation and Repair Technologies/Technician, Bachelor's Degree
• Electrical and Electronics Installation and Repair Technologies/Technician, Other
• Computer Installation and Repair Technologies/Technician, General
• Electrical and Electronics Installation and Repair Technologies/Technician, First Year Certificate
• Electrical and Electronics Installation and Repair Technologies/Technician, Technical Diploma
• Electrical and Electronics Installation and Repair Technologies/Technician, Associate's Degree

OPERATING ENGINEERS AND OTHER CONSTRUCTION EQUIPMENT OPERATORS

FUNCTION
Operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, drill rigs, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement. May repair and maintain equipment in addition to other duties.

PEOPLE STARTING IN THIS CAREER USUALLY HAVE
High school diploma or equivalent
No work experience
1 to 12 months on-the-job training

AVG. ATLANTA SALARY
$41,900

AVG. U.S. SALARY
$48,360

ACTIVITIES ON THE JOB
• Update job related knowledge or skills.
• Position construction or extraction equipment.
• Monitor construction operations.
• Operate equipment or vehicles to clear construction sites or move materials.
• Move construction or extraction materials to locations where they are needed.

PROGRAMS THAT CAN PREPARE YOU IN ATLANTA
• Environmental, Safety, and Fire Protection Technologies/Technicians, General
• Environmental, Safety, and Fire Protection Technologies/Technicians, Associate's Degree
• Environmental, Safety, and Fire Protection Technologies/Technicians, Other
• Environmental, Safety, and Fire Protection Technologies/Technicians, Bachelor's Degree
• Environmental, Safety, and Fire Protection Technologies/Technicians, First Year Certificate
• Environmental, Safety, and Fire Protection Technologies/Technicians, Technical Diploma
• Environmental, Safety, and Fire Protection Technologies/Technicians, Associate's Degree
• Environmental, Safety, and Fire Protection Technologies/Technicians, Other
• Environmental, Safety, and Fire Protection Technologies/Technicians, Bachelor's Degree

SOLAR PHOTOVOLTAIC INSTALLERS
Installer, PV Design Technician (Photonics/Design Technician), Photovoltaic Installer (PV Installer), Solar Designer, Solar Installer, Solar Installer Technician, Solar Photovoltaic Installer, Solar Installer (PV Installer), Solar Technician

FUNCTION
Assemble, install, or maintain solar photovoltaic (PV) systems on roofs or other structures in compliance with site assessment and schematics. May include measuring, cutting, assembling, and bolting structural framing and solar modules. May perform minor electrical work such as current checks.

PEOPLE STARTING IN THIS CAREER USUALLY HAVE
High school diploma or equivalent
No work experience
1 to 12 months on-the-job training

AVG. ATLANTA SALARY
$46,610

AVG. U.S. SALARY
$47,670

ACTIVITIES ON THE JOB
• Insall solar energy systems.
• Install, assemble, or maintain solar photovoltaic system equipment.
• Install, assemble, or maintain solar photovoltaic systems.

PROGRAMS THAT CAN PREPARE YOU IN ATLANTA
• Solar Photovoltaic Systems Installation and Repair Technologies/Technicians, General
• Solar Photovoltaic Systems Installation and Repair Technologies/Technicians, Other
• Solar Photovoltaic Systems Installation and Repair Technologies/Technicians, First Year Certificate
• Solar Photovoltaic Systems Installation and Repair Technologies/Technicians, Technical Diploma
• Solar Photovoltaic Systems Installation and Repair Technologies/Technicians, Associate's Degree
• Solar Photovoltaic Systems Installation and Repair Technologies/Technicians, Other
• Solar Photovoltaic Systems Installation and Repair Technologies/Technicians, Bachelor's Degree

FIRSTLINE SUPERVISORS OF CONSTRUCTION TRADES AND EXTRACTION WORKERS
Production Foreman, Construction Foreman, Construction Supervisor, Electrical Supervisor, Field Operations Supervisor, Field Supervisor, Inspector, Foreman, Road/Build Field Supervisor, Sheet Metal Foreman, Site Superintendent

FUNCTION
Directly supervise and coordinate activities of construction or extraction workers. May perform minor electrical work such as current checks.

PEOPLE STARTING IN THIS CAREER USUALLY HAVE
High school diploma or equivalent
No work experience
1 to 12 months on-the-job training

AVG. ATLANTA SALARY
$71,010

AVG. U.S. SALARY
$75,060

ACTIVITIES ON THE JOB
• Inspect equipment or tools to be used in construction or excavation.
• Evaluate projects to determine compliance with technical specifications.
• Confer with technical personnel to prepare designs or operational plans.
• Direct construction or extraction personnel.

PROGRAMS THAT CAN PREPARE YOU IN ATLANTA
• Building Construction Technology/Technicians, General
• Building Construction Technology/Technicians, Other
• Building Construction Technology/Technicians, First Year Certificate
• Building Construction Technology/Technicians, Technical Diploma
• Building Construction Technology/Technicians, Associate's Degree
• Building Construction Technology/Technicians, Other
• Building Construction Technology/Technicians, Bachelor's Degree

SOLAR SALES REPRESENTATIVES AND ASSOCIATES
Energy Consultant, Sales Associate, Sales Representative, Salesman, Solar Consultant, Solar Sales Representative

FUNCTION
Contact new or existing customers to determine their solar equipment needs, suggest systems or equipment, or estimate costs.

PEOPLE STARTING IN THIS CAREER USUALLY HAVE
Bachelor's degree
No work experience
1 to 12 months on-the-job training

AVG. ATLANTA SALARY
$79,540

AVG. U.S. SALARY
$86,650

ACTIVITIES ON THE JOB
• Develop proposals for current or prospective customers.
• Prepare sales or other contracts.
• Develop content for sales presentations or other materials.
• Customize energy products or services to meet customer needs.
• Explain technical product or service information to customers.

PROGRAMS THAT CAN PREPARE YOU IN ATLANTA
• Sales and Sales Operations

INDUSTRIAL ENGINEERS
Continuous Improvement Engineer, Engineer, Facilities Engineer, Industrial Engineer, Operations Engineer, Plant Engineer, Process Engineer, Project Engineer, Quality Engineer, Research and Development Engineer (R and D Engineer)

FUNCTION
Design, develop, test, and evaluate integrated systems for managing industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination.

PEOPLE STARTING IN THIS CAREER USUALLY HAVE
High school diploma or equivalent
No work experience
More than 1 year on-the-job training

AVG. ATLANTA SALARY
$90,200

AVG. U.S. SALARY
$95,200

ACTIVITIES ON THE JOB
• Estimate operational costs.
• Determine operational methods.
• Analyze project data to determine specifications or requirements.
• Confer with technical personnel to prepare designs or operational plans.
• Discuss designs or plans with clients.

PROGRAMS THAT CAN PREPARE YOU IN ATLANTA
• Engineering/Industrial Management
• Industrial Engineering
• Industrial Management
• Industrial Systems Engineering
• Industrial Engineering

MECHANICAL ENGINEERS
Application Engineer, Design Engineer, Design, Maintenance Engineer, Equipment Engineer, Mechanical Design Engineer, Mechanical Engineer, Process Engineer, Product Engineer, Project Engineer, Test Engineer

FUNCTION
Perform engineering duties in planning and designing tools, engines, machinery, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of equipment such as centralized heat, gas, water, and steam systems.

PEOPLE STARTING IN THIS CAREER USUALLY HAVE
Bachelor's degree
No work experience
No on-the-job training

AVG. ATLANTA SALARY
$96,930

AVG. U.S. SALARY
$97,000

ACTIVITIES ON THE JOB
• Review technical documents to plan work.
• Design industrial processing systems.
• Design industrial equipment.
• Evaluate characteristics of equipment or systems.
• Confer with technical personnel to prepare designs or operational plans.

PROGRAMS THAT CAN PREPARE YOU IN ATLANTA
• Environmental, Safety, and Fire Protection Technologies/Technicians, General
• Environmental, Safety, and Fire Protection Technologies/Technicians, Other
• Environmental, Safety, and Fire Protection Technologies/Technicians, First Year Certificate
• Environmental, Safety, and Fire Protection Technologies/Technicians, Technical Diploma
• Environmental, Safety, and Fire Protection Technologies/Technicians, Associate's Degree
• Environmental, Safety, and Fire Protection Technologies/Technicians, Other
• Environmental, Safety, and Fire Protection Technologies/Technicians, Bachelor's Degree

ELECTRICAL ENGINEERS
Circuit Engineer, Design Engineer, Electrical Controls Engineer, Electrical Design Engineer, Electrical Engineer, Electrical Project Engineer, Instrumentation and Electrical Reliability Engineer (IEE Reliability Engineer), Power Systems Engineer, Project Engineer, Test Engineer

FUNCTION
Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use.

PEOPLE STARTING IN THIS CAREER USUALLY HAVE
Bachelor's degree
No work experience
No on-the-job training

AVG. ATLANTA SALARY
$114,290

AVG. U.S. SALARY
$107,890

ACTIVITIES ON THE JOB
• Operate computer systems.
• Create electrical schematics.
• Confer with technical personnel to prepare designs or operational plans.
• Discuss designs or plans with clients.
• Design structures or facilities.
RESOURCES TO LEARN MORE

- Explore occupation profiles including information on salaries, required qualifications, training opportunities, and much more on the Career One Stop website and O*NET Online website. Career One Stop also presents a summary of other common renewable energy generation jobs, their respective education and training requirements, and any opportunities for training within your community. You can also click around the Certification Finder to explore certification programs and resources that will help you boost your qualifications for a solar energy job.

- Learn about apprenticeships and other pathways for solar energy careers on Apprenticeship.gov, including guidance on where to find and how to access these opportunities.

- National Solar Jobs Census 2020

- Learn about the energy policies that are contributing to green job growth in Atlanta:
  - Clean Energy Atlanta 2019
  - Atlanta Climate Action Plan
  - Georgia Power 2019 Integrated Resource Plan
  - Atlanta Downtown Sustainability Action Plan

This factsheet is part of a collaborative effort between Smart Growth America (SGA) and the Partnership for Southern Equity (PSE) to support Atlanta’s current and future workers’ participation in the growing clean economy. The factsheets include introductory information on jobs within the following clean economy sectors: (1) energy efficiency, (2) solar energy, and (3) green infrastructure.