

## Career Pathway Spotlight

# Discover a Career as an Electrician

## Discover your career in energy!

Electricians wire the energy industry — from factory motor controls and solar farms to neighborhood service panels and EV chargers — keeping people, buildings, and the grid safely powered.

### Industrial and Manufacturing Sites

Industrial electricians are the experts behind the scenes at factories, hospitals, and data centers. They keep production lines moving, life-saving equipment powered, and even the internet's servers online.

### Renewable Energy and Battery Storage

Want to work on the front lines of clean energy? On solar farms, wind sites, and battery storage projects, electricians help bring brand-new power sources online — outdoor, hands-on work that helps power entire neighborhoods with cleaner energy.

### Utility Grid and Residential Service

Electricians are also the people behind the scenes in your neighborhood — making sure the lights come on in homes, schools, and businesses. They wire up new EV chargers and smart-home systems and keep everyday power safe and reliable.

## CAREER PATH

### Start with:

- » A high school diploma or GED

### Get Educated:

- » A community college or vocational electrical program
- » An electrical apprenticeship pathway to journey level
  - IBEW Joint Apprenticeship Training Committee (JATC) Apprenticeship Program
  - Independent Electrical Contractors (IEC) Apprenticeship Program
  - National Center for Construction Education and Research (NCCER) Electrical Curriculum
- » A military pathway with electrical experience (e.g., Navy Construction Electrician (CE) or Army Interior Electrician (12R))

### Specialize With:

#### Knowledge in:

- » Industrial electrical systems
- » Renewable energy and battery storage
- » Utility and grid infrastructure
- » Controls and automation systems
- » Commercial or residential electrical work

## OCCUPATIONAL SKILLS

- » Strong mechanical and electrical reasoning skills
- » Sharp attention to detail and strong safety focus
- » Clear communication with crews, customers, and inspectors
- » Strong problem-solving and troubleshooting under pressure
- » Physical stamina for active, hands-on outdoor work
- » Adaptability across job sites, schedules, and weather
- » Comfort with digital tools, blueprints, and code references on-site

## BENEFITS

### These energy industry careers offer:

- » Strong, growing demand across the energy industry
- » Competitive pay and benefits, including union packages
- » Growth into foreperson, contractor, and inspector roles
- » Specialize in renewables, grid, or controls work
- » Hands-on work with a clear career pathway

# What Might You Do As An Electrician?

## ENTRY LEVEL

1-4 years

### What you will do:

- » Assisting senior electricians with installs, repairs, and rough-ins under supervision
- » Pulling wire, bending conduit, and terminating circuits per the National Electrical Code (NEC)
- » Drilling, trenching, and supporting service upgrades or panel change-outs
- » Helping test outlets, breakers, and lighting during commissioning
- » Maintaining tools, vehicles, and inventory on the active job site
- » Following PPE, lockout/tagout, and OSHA safety procedures at all times

## MID- CAREER

5-8 years

- » Independently installing service panels, sub-panels, and complete branch circuits
- » Wiring controls, motor control centers, and automation systems on industrial sites
- » Commissioning solar arrays, inverters, EV chargers, and major battery storage installations
- » Using AI-assisted diagnostics and digital test tools to troubleshoot complex field equipment
- » Reading complex blueprints, single-line diagrams, and detailed manufacturer specs on-site
- » Training apprentices and reviewing their work for full code compliance

## EXPERIENCED

8+ years

- » Leading crews on industrial, renewable, grid, and large commercial projects
- » Estimating jobs, scoping utility upgrades, and managing budgets and schedules
- » Driving safety, quality, and code-compliance programs across multiple active sites
- » Adopting new technology like AI diagnostics, smart inverters, and grid-edge field devices
- » Coordinating with utilities, regulators, general contractors, and major customers
- » Mentoring mid-career electricians and shaping training and certification pathways

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

- » Listen and follow directions from senior electricians and supervisors
- » Comfort lifting equipment, climbing ladders, and working in tight spaces
- » Basic understanding of the NEC
- » Strong attention to detail when terminating conductors and labeling circuits
- » Interest in apprenticeship and earning a journey license
- » Active state journey-level electrician license and current OSHA certifications
- » Fluency in the NEC and related standards
- » Working knowledge of controls, automation, and renewable energy systems
- » Clear communication with crews, customers, and inspectors
- » Familiarity with digital tools for permits, scheduling, and commissioning
- » Composure when troubleshooting under pressure
- » Deep expertise across industrial, renewable, and commercial electrical work
- » Leadership and people-management skills for multi-crew projects
- » Strategic communication with executives, utility partners, and inspectors
- » Strong financial judgment for estimating and project economics
- » Mastery of change management as electrification and the grid evolve
- » Senior credentials such as master electrician, NABCEP, or EVITP instructor

## GET PAID!

### Entry Level:

- » \$64,990 / year\*

### As You Gain Seniority:

- » \$73,070 / year\*

### Later in Your Career:

- » \$88,460 / 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.



## ENERGY INDUSTRY CAREERS OFFER:

- » Excellent salaries
- » Opportunities for advancement
- » Job growth & stability
- » Professional development and training
- » Great benefits

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