

Electrical and Electronics Installers and Repairers

SOC: 49-2092 • Career Profile Report

■ Key Facts

\$71,270

Median Salary

118,800

Employment

+0.0%

Growth Rate

■ Requirements & Salary Range

Education: See Requirements (BLS)

■ Automation Risk Assessment

Low Risk - 25.0% probability of being automated in the next 10-20 years.

This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■■ Work-Life Balance

7.3/10 - Good work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	8.8/10	Investigative	7.4/10
Artistic	4.4/10	Social	5.6/10
Enterprising	4.6/10	Conventional	6.4/10

■ Top Skills Required

Color vision, Communication skills, Physical stamina, Physical strength, Technical skills, Troubleshooting skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Electrical and Electronics Installers and Repairers are skilled technical tradespeople who install, maintain, and repair **electrical and electronic equipment used in power generation, communications, transportation, and industrial systems**. Their work keeps critical infrastructure and complex equipment operating safely, efficiently, and reliably across many industries.

This career is well suited for individuals who enjoy hands-on technical work, troubleshooting, and working with sophisticated electrical and electronic systems.

What Do Electrical and Electronics Installers and Repairers Do?

These professionals diagnose problems, perform repairs, and ensure systems meet safety and performance standards.

Common responsibilities include:

- Installing electrical and electronic components and systems
- Inspecting equipment to identify faults or wear
- Troubleshooting circuits, controls, and electronic devices
- Repairing or replacing defective parts and wiring
- Testing systems to ensure proper operation
- Reading schematics, blueprints, and technical manuals
- Following safety procedures and regulatory requirements

Types of Electrical and Electronics Work

Installers and repairers may specialize by system or industry:

- Powerhouse and Substation Equipment: Maintaining high-voltage electrical systems.
- Transportation and Rail Systems: Repairing signaling, control, and power systems.
- Industrial Electronics: Supporting manufacturing and automation equipment.
- Communications Equipment: Installing and repairing broadcast or signal systems.
- Specialized Electrical Systems: Working with unique or mission-critical equipment.

Skills and Abilities Needed

Electrical and electronics installers and repairers combine technical expertise with precision and safety awareness.

Core Professional Skills

Personal Qualities That Matter

Education and Training Pathway

Entry into this field typically requires technical training and hands-on experience:

- High School Diploma or Equivalent: Typical minimum requirement
- Technical or Vocational Training (common): Electrical or electronics technology programs
- On-the-Job Training or Apprenticeships: Learning system-specific skills
- Licensing or Certification (where required): Varies by state and industry
- Continuing Education: Needed to stay current with evolving technology

Where Do Electrical and Electronics Installers and Repairers Work?

They are employed in a range of industrial and infrastructure environments:

- Power Plants and Utility Companies
- Manufacturing and Industrial Facilities

- Transportation and Transit Authorities
- Telecommunications and Broadcasting Companies
- Government and Defense Organizations

Work environments may include indoor facilities, outdoor sites, or secure infrastructure locations.

How Much Do Electrical and Electronics Installers and Repairers Earn?

Earnings vary by industry, experience, and system complexity:

- Entry-Level Workers: Typically earn solid technical trade wages
- Experienced or Specialized Repairers: Often earn higher pay due to expertise
- Workers in Utilities or Critical Infrastructure: May earn premium compensation

Compensation often includes overtime opportunities and strong benefits.

Is This Career Difficult?

This career is technically demanding and safety-critical. Workers must understand complex systems, follow precise procedures, and work around electrical hazards. The challenge lies in maintaining accuracy, troubleshooting under pressure, and adhering to strict safety standards.

Who Should Consider This Career?

This career may be a strong fit if you:

- Enjoy hands-on technical problem solving
- Are comfortable working with electrical systems
- Pay close attention to safety and detail
- Like structured, procedure-driven work
- Want a stable career supporting critical infrastructure

How to Prepare Early

- Take courses in physics, electronics, and mathematics
- Learn basic circuit theory and electrical safety
- Practice using hand tools and diagnostic equipment
- Explore vocational or technical training programs
- Gain experience through apprenticeships or maintenance roles

Electrical and electronics installers and repairers keep vital systems running—using technical skill, precision, and safety discipline to power industries, infrastructure, and technologies that modern society depends on every day.

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Source: <https://www.bls.gov/ooh/installation-maintenance-and-repair/electrical-and-electronics-installers-and-repairers.htm>