

In Shocking Demand

The electrical industry is changing rapidly, and as the desire for new and innovative products and services increases, so does the need for highly trained electricians.

by Tara Trenary, photos provided by businesses

Imagine a job where on any given day, things may not go quite as you'd expect. Running into critters in a crawl space. Arriving ready to fix an electrical outage only to learn the tenant instead forgot to pay a bill. Getting shocked by a live wire when you thought the power had been turned off. Accidentally falling off a ladder during a routine electrical repair. Being told about phantom ringing doorbells only to arrive and find a DIY wiring nightmare.

Electricians navigate dangerous, complicated and sometimes bizarre situations, requiring a great deal of technical skill and safety consciousness. These skilled workers are essential for both the maintenance of existing systems as well as new construction, making their expertise crucial in today's society. And the need for licensed electricians is only expected to grow throughout the next decade with the advancement of new technologies and the advent of artificial intelligence (AI).

"Electricians are essential to modern society because they design, install and maintain the electrical infrastructure powering homes, hospitals and industries, ensuring safety and preventing hazardous failures,"



explains Brad Hemel, owner of Hemel Electric Inc., a family-owned, service-based company that installs and repairs electrical products across Northeast Kansas.

The Bureau of Labor Statistics (BLS) estimates that between 2024 and 2034, there will be a shortage of roughly 81,000 electricians on average each year in the U.S., measured in terms of unfilled jobs. It projects the number of employed electricians to grow 9 percent over the next decade, much faster than the average for all occupations.

The rapid construction of AI data centers across the country is likely a major driver of the demand for these skilled tradespeople, according to the January Wired article "The Real AI Talent War Is for Plumbers and Electricians." And some giant tech companies have already sounded the alarm about the dwindling pool of workers and are taking steps to address it. For example, Google announced last spring it would donate an undisclosed amount of money to the Electrical Training Alliance, a group that provides training materials for electrical workers, to help 100,000 existing electricians upgrade their skills and train 30,000 new apprentices by 2030, the article states.

According to the April 2025 Reuters story "Google Funding Electrician Training as AI Power Crunch Intensifies," a lack of access to power supplies has also become a big problem for these technology companies, all of which is driving up U.S. electricity demand after nearly 20 years of stagnation.

"The growing demand of electric vehicles, solar/wind farms and data centers is creating a dire need for more electricians," explains Chris Faulk, president of McElroy Electric, a full-service electrical contractor providing residential and new-construction services, industrial food processing wiring/maintenance, sports lighting design and installation, and commercial building services and maintenance. "As with many trades, there are more highly skilled people aging out of the workforce than there are young people learning to do the work. There is a tremendous opportunity for young people to start long-term, well-paid careers as electricians."

To meet this overwhelming demand, the country will need more power plants, transmission lines and the workforce to support it all, and these big companies are willing to pay for it.

Modern Demand for Electricity

Locally, there are many drivers of electrical demand, explains Malcolm Proudfit, CEO of Good Energy Solutions, a solar and electrical contractor providing residential and commercial solar systems, as well as battery storage, electrical for new-home builds and remodels, generator installations and EV charger installations. "There are many



Left: Good Energy Solutions electrical apprentice, Dalton Scarlett, installs a ceiling fan in a Lawrence home.

Above: Good Energy Solutions service electrician, Chase Kufahl, fixes a faulty light pole at a Lawrence apartment complex.

Right: A team of solar service technicians replace a solar inverter on a church roof in Kansas City.



McElroy Electric Electricians help homes and facilities, such as this school gymnasium, convert to LED fixtures for brighter, more energy-efficient lighting.



McElroy Electric Electricians wire intricate building-automation systems for climate control, safety, security, energy management and more.



McElroy Electric Commercial construction electricians work from detailed plans as they install the electrical systems in new office buildings, factories, restaurants, schools and stores.

Typically, homeowners should have their electrical system inspected at least every three to five years, sooner if your home is older than 15 years.

But remember, "With electricity, if you feel outside of your comfort zone, it is likely time to contact a professional," Proudfit adds.

A Changing Landscape

Electrical demand in Lawrence is heavily influenced by its status as a university town and its position within a rapidly changing regional grid, distinguishing it from both similarly sized municipal peers and larger metropolitan areas like Kansas City, Hemel explains. "Today's homes have a higher electrical demand than ever before, driven by electric vehicles and overall power consumption. Customers today expect talented, educated service professionals to deliver safety and quality to their families."

And along with new demand and the changing landscape of the electrical industry, training and compensation for electricians has also had to change with the times. While the cornerstone knowledge remains critical, new demands require a broader, more dynamic skill set for electricians to remain competitive and meet modern expectations.

According to the BLS, every year, nearly 10,000 electricians either retire or change careers, but only about 7,000 new ones enter the field. "While the shortfall finds homeowners lamenting about how long it takes to find an electrician for wiring projects, entire industries—including construction, manufacturing, renewable energy, technology and utilities—are confronting project delays and increased labor costs," it laments.

The physics of electricity remain the same as always, Faulk says.

EV adopters in our area, and homes are being built in Lawrence at a healthy pace."

Additionally, he says, the Panasonic Plant in DeSoto is expected to have the same electrical demand as the entire city of Lawrence. This has already created the need for additional generation sources and has led Evergy, a utility company headquartered in Kansas and Missouri that provides electricity to more than 1.7 million customers, to ask for 10-plus percent increases in utility rates.

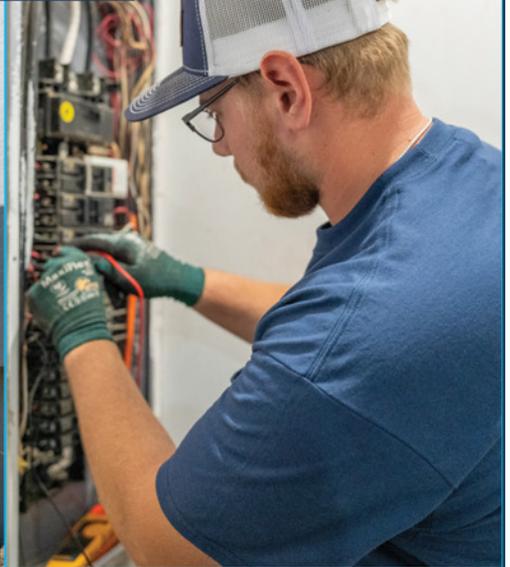
"Electricity availability drives our modern society and helps our communities to grow and flourish," Proudfit continues. "This is not an industry that will go away, and in fact, demand for competent workers will only grow as the years go on."

When it comes to safety in the home, he stresses that every homeowner should know the location of their electrical panel, how to safely reset breakers and how to identify warning signs like hot outlets, flickering lights or, in older homes, outdated wiring. Key safety practices include avoiding overloaded circuits, never "daisy-chaining" extension cords and testing GFCIs (ground-fault circuit interrupters) regularly.

McElroy's Faulk agrees. "If the owner loses power somewhere in the house, the first thing is to check if any breakers are tripped and reset them. This can easily save you a service call."

"Excess heat is a telltale sign of electrical trouble," he continues. "If small issues persist, definitely have an electrician check things out. Small problems can turn

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"However, the ways we use electricity and the regulatory environment are changing faster than ever. It is imperative to remain up to date and be ready to adapt quickly and easily."

Training has also become very safety-based, Hemel explains. "Whereas it was once viewed primarily as manual labor, it is now a hybrid role combining traditional craftsmanship with advanced training and education."

Luckily, Lawrence is home to The Dwayne Peaslee Technical Training Center (Peaslee Tech), a technical training center and the largest Kansas-based provider of apprenticeship programs. According to its website, the center provides hands-on, high-demand career training for high school students and adults, and aims to build a skilled local workforce through its programs. To meet the high demand for skilled residential electricians in Douglas County, Peaslee Tech has developed a training program designed to prepare an individual with the foundational training to develop, through experience and training, into a skilled residential electrician.

Blazing a Path

Today's electricians are leading the charge in technological innovation, moving beyond traditional wiring and circuitry, according to Schneider Electric, a global leader in energy management and industrial automation focused on digitalizing and electrifying homes, buildings, data centers and industries. And with a growing emphasis on energy efficiency and affordability, electricians specializing in advanced solutions are in high demand.



McElroy electricians who install and maintain sports lighting require high-reaching equipment, specialized fixtures and lamps, and trained expertise.

"Many businesses and some homes have long been using energy management systems that increase energy usage efficiency to save money," Faulk explains. "As the need for electrical generation outpaces increased production, changes on the horizon may mandate more widespread use of energy management systems across the board."

One big driver toward a more energy-efficient society is homeowners, who are becoming much more focused on making their homes resilient and adaptable to the changing energy landscape.

"More and more, customers are demanding EV chargers in their homes," Faulk explains. "We became a certified installer of home EV chargers a few years ago, and new installations are a growing part of our business. Another important change is the demand for more energy-efficient lighting in homes and businesses. We do a large number of conversions to LED lighting."

Hemel agrees: "I believe renewable energy is extremely important in our industry if we are going to keep up with future demand."

Ultimately, electricians are essential to modern society because they design, install and maintain the electrical infrastructure powering homes, hospitals and industries, ensuring safety and preventing hazardous failures, he explains.

"Electricity is the backbone of modern life," Hemel adds. "It drives the global economy by providing essential and sometimes life-saving power to homes and businesses. I believe the electrical industry is in great shape for the future. I think the biggest challenge we face is finding enough qualified individuals for the workforce." ▲



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