



FLINT HILLS RURAL ELECTRIC COOPERATIVE

NEWS

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For more information, call us at 620-767-5144 or visit our website at www.flinthillsrec.com.

This institution is an equal opportunity provider and employer

FROM THE MANAGER

Affordable Electricity Powers Quality of Life

Most of us use electricity, either directly or indirectly, at almost all times. Because electricity is so abundant and available with the simple flip of a switch, it's easy to take it for granted.

According to the Energy Information Agency (EIA), the typical U.S. household now uses more air conditioning, appliances and consumer electronics than ever before. The average home also contains 10 or more internet-connected devices. Considering everything that is powered by electricity, it's no wonder we occasionally might wince at our monthly bill. But keep in mind, it's no longer "just the light bill."



Chuck Goeckel

Electricity Powers Quality of Life

Electricity powers our quality of life. From the infrastructure of your home (appliances, water heater and HVAC system) to charging your smartphones and computers, and powering your TV and Wi-Fi router, your energy bill covers so much more than lighting.

Today, there is more demand for electricity than ever before. At home, in schools and businesses, and in commercial sectors such as transportation, the need for electricity is increasing.

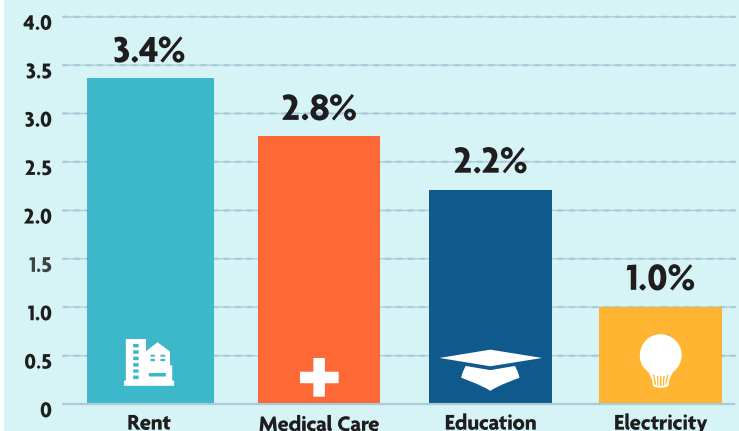
Typically when demand goes up, so too does the price, as is the case with

ELECTRICITY REMAINS A GOOD VALUE

The cost of powering your home rises slowly when compared to other common expenses. Looking at price increases over the last five years, it's easy to see electricity remains a good value!

Average Annual Price Increase 2015-2020

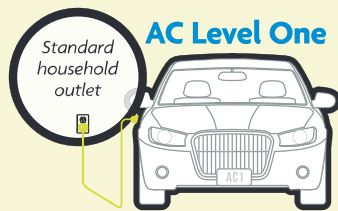
Percent



Sources: U.S. Bureau of Labor Statistics Consumer Price Index

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Electric Vehicle Charging Levels



VOLTAGE

120V 1-Phase AC

AMPS

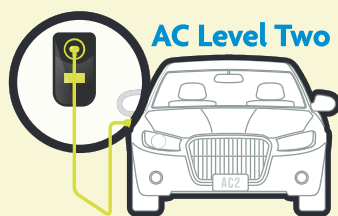
12-16 amps

CHARGING LOADS

1.4 to 1.9 KW

VEHICLE CHARGE TIME

3-5 miles per hour



VOLTAGE

208V or 240V 1-Phase AC

AMPS

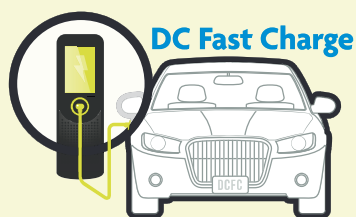
12-80 amps (32 amps typical)

CHARGING LOADS

2.5 to 19.2 kW (6.6kW typical)

VEHICLE CHARGE TIME

10-20 miles per hour



VOLTAGE

208V or 480V 3-Phase AC

AMPS

<100 amps

CHARGING LOADS

50-350 kW

VEHICLE CHARGE TIME

60-80 miles in 20 minutes

SOURCES: ADVANCED ENERGY AND EPA

Home Charging Options for Electric Vehicles

Before purchasing your own electric vehicle (EV), be sure you consider the multiple options for charging your vehicle at home. Your local electric cooperative is a great resource to learn about EVs and how the vehicle charging will affect your energy usage. EVs have three common EV charging levels: Level One, Level Two and DC Fast Charge.

Level One Charging

Level One is the most basic charging level. If you choose this option, your EV will typically include an adapter that plugs into a typical 120-volt outlet. This is the easiest and cheapest charging solution, but it will take much longer to charge your EV.

Level Two Charging

Level Two is about three to five times faster than Level One, but this level of charging often requires separate purchases and installation. The EV is plugged into a 240-volt outlet, which is used for larger appliances, like a clothes dryer. Most homes do not include a

240-volt outlet in garages, so the outlet must be installed by a licensed professional. You typically see Level Two charging stations at shopping malls, office buildings and multi-family community spaces.

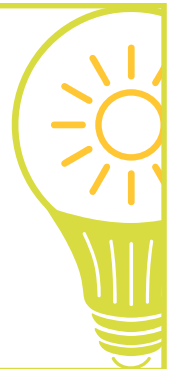
DC Fast Charging

DC Fast Charge stations are typically seen near high-traffic public areas, like gas stations, rather than in homes. This is the fastest charging level, with the ability to charge an EV at 80% in under 30 minutes. As EVs continue to become more popular, you can expect to see more DC Fast Charge stations throughout Kansas.

If you're charging an EV at home, please contact Flint Hills REC at 620-767-5144. EV charging creates additional energy demand. The time of day you charge your EV can have an impact on the grid and your monthly energy costs. By letting us know about your EV charging levels, we can help ensure your home is prepared for the additional energy consumption.

ENERGY EFFICIENCY Tip of the Month

When shopping for new lightbulbs, know the difference between lumens and watts. Lumens measure the amount of light produced by the bulb, while watts measure energy consumption. Energy-saving LEDs come in a variety of colors and brightness levels and last 15-25 times longer than incandescent bulbs. **SOURCE: ENERGY.GOV**



*Happy
Labor Day*

In observance of Labor Day,
our office will be closed on Monday, Sept. 6.



Affordable Electricity Powers Quality of Life Continued from page 16A ►

most goods or services, like cable or even your favorite specialty coffee. However, even though the need for electricity is increasing, the overall cost of electricity has been very stable. Let's take a look at how the value of electricity compares to other common expenses.

According to the US Bureau of Labor Statistics Consumer Price Index, the cost of rent increased 3.4%, medical care increased 2.8%, and education increased 2.2%. But the cost of electricity only increased 1%.

Considering all the ways we depend on electricity, it still remains a great value.

So, the next time you're enjoying your favorite podcast, TV series or movie, consider the value of electricity and how it enhances your quality of life.

We care about you, the consumer-members we serve, and understand that electricity is more than a commodity — it's a necessity. That's why Flint Hills REC will continue working hard to power your life, reliably and affordably.

Understanding Power Surges and Blinks

Have you ever noticed your lights blink during a thunderstorm? Or perhaps you've noticed a blinking microwave clock when you arrive home. When this happens, you've likely experienced a brief disruption to your electric service, which could result from a power surge or blink. While the symptoms of surges and blinks can appear similar, what's happening behind the scenes can be quite different.

What's a Power Surge?

Power surges are brief overvoltage spikes or disturbances of a power waveform that can damage, degrade or destroy electronic equipment within your home or business. Most electronics are designed to handle small variations in voltage; however, power surges can reach amplitudes of tens of thousands of volts — this can be extremely damaging to your electronic equipment.

Surges can be caused by internal sources, like HVAC systems with variable frequency drives, or external sources, like lightning and damage to power lines and transformers.

Flint Hills REC encourages all members to install surge protective devices (such as surge protector at the meter or surge protector power strips) to safeguard your sensitive electronics. If you're experiencing frequent surges in your home or business and you believe the cause is internal, contact a qualified electrician to inspect your electrical system. If you need more information about Flint Hills REC whole house surge protection just call our office at 620-767-5144.

What's a Power Blink?

Power Blinks are also brief service interruptions, but they're typically caused by a fault (short circuit) on a power line or a protective device that's working in reaction to the fault. Faults can occur through a variety of instances, like squirrels, birds or



CARINA HOFMEISTER

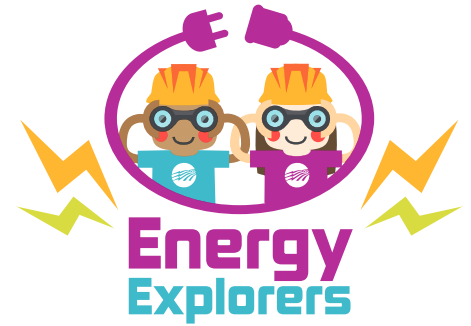
Squirrels may be cute, but they can cause major damage to electrical infrastructure such as substations and power lines.

other small animals contacting an energized power line, tree branches touching a power line, or lightning and other similar events. In fact, when it comes to power disruptions caused by critters, squirrels reign supreme. In 2019 alone, squirrels were responsible for more than 1,200 outages.

Any of the events noted above can cause your power to blink, but you may also experience a brief interruption when protective devices that act like circuit breakers are working to detect the fault. Believe it or not, these brief power blinks caused by protective devices are good because that means the equipment is working as it should to prevent a prolonged outage.

Regardless of the cause, Flint Hills REC crews will be on their way to inspect the damage and make necessary repairs after a power outage. And you can help too. Any time you experience repeated disruptions to your electric service, please let us know by calling our office at 620-767-5144.

HYDROPOWER WORD SCRAMBLE



You know that it's never safe to mix water and electricity. But did you know that large amounts of flowing water can be used to create electricity? It's called hydropower, and it's made from the movement of water.



Read the facts about hydropower below, then unscramble each word in **bold** type. Check your work in the answer key.

1. **YROHD** means "water" in Greek.

2. Water flowing down a **EVRRI** is used to spin large turbines that help make the hydroelectricity.

3. When the turbines spin, a large **TROAEGREN** spins, which makes the electricity.

4. The amount of water used to generate hydropower is controlled through the use of large **MDAS**.

5. Hydropower is a form of **ELNERAEWB** energy.

ANSWER KEY: 1. HYDRO 2. RIVER 3. GENERATOR 4. DAMS 5. RENEWABLE