Perennial NEWS

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INSIDE THIS ISSUE

Energy for Generations
PERENNIAL™
PUBLIC POWER DISTRICT

PerennialNEWS
CONNECTIONS

Jamey Pankoke
General Manager

Promoting Safe Electricity

Last month was National Electrical Safety Month. For the record, it was also American Cheese Month, National Asparagus Month, and National Barbeque Month. Although I love to eat and could probably dedicate this article to the basics of smoking meat, or I could ramble on about how well I think cheese and asparagus go well together, I probably should stick to talking about safety.

As defined by the Edison Electric Institute (EEI), National Electrical Safety Month is a great time to raise awareness on how to avoid potential electrical hazards. EEI refers to simple precautions that everyone can take to prevent electrically related fires, fatalities, injuries, and property loss. These precautions generally include safety tips that we are all aware of, such as keeping electric appliances and tools away from water, never putting anything other than an electric plug-in an outlet, and replacing electric cords that are frayed or cracked. After all, we know that water and electricity do not mix, right? And except for small children that we need to protect by installing outlet covers or caps, we know that an electrical outlet was not meant to have a screwdriver or other pointed items pushed into it. Nevertheless, thousands of people in the United States are critically injured or electrocuted each year due to electrical fires and accidents.

I do not need to tell you how important safety is to an organization like ours. We have an in-house safety committee made up of employees that discuss essential safety issues. Safety meetings are held for all employees monthly and cover a wide variety of topics, including pole-top rescue, CPR, first aid, hazard recognition, and many other subjects. The education and training provided during these meetings constantly remind us of the importance of working and using equipment in the safest possible way.

To promote safety education in our local communities, we provide safety demonstrations with a high voltage trailer or tabletop safety display to schools, organizations, and companies. Likewise, we engage with local fire and rescue departments by offering electrical safety presentations as it relates to responding to emergencies that occur near power lines or electric service equipment and wires. Of course, you have frequently seen and will continue to see articles in this magazine, as well as radio and newspaper ads that highlight the importance of electric safety. And on our website, you find safety information pertaining to storms, power outages, generator safety, and tree planting.

At Perennial, we know that the more we promote electrical safety to our employees and our communities, the safer everyone will be.

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Go EV and Save

Electricity is a very affordable way to fuel a vehicle. Exactly how much you will save depends on electric rates and the price of gasoline. As of April 2021, regular unleaded gasoline cost on average $2.769 per gallon in Nebraska, and if your gas-powered vehicle gets 25 miles per gallon (mpg); the price is about $0.11 per mile. Fuel efficiency is rated in kilowatt-hours (kWh) per 100 miles rather than miles per gallon. If you pay $0.11 per kWh for electricity and have an electric vehicle (EV) rated at 34 kWh per 100 miles, the cost is approximately $0.04 per mile. The Department of Energy (DOE) has created a website to compare the price of fueling a vehicle with electricity versus fueling a vehicle with gasoline https://www.energy.gov/maps/egallon.

If you're contemplating the switch from gas to electric, consider your lifestyle and how you intend to use the vehicle to decide which option is the best fit.

Battery Electric Vehicles (BEVs) have no gasoline engine and run exclusively on the energy stored in batteries. These vehicles can run for 110-387 miles.

Plug-in Hybrid Electric Vehicles (PHEVs) are similar to conventional hybrids, but they have a larger battery charged by plugging into an electric outlet. PHEVs are usually designed with an electric-only range of 10-40 miles, blended with a gasoline engine to achieve higher speeds and loads. After the electric-only range is exceeded, the vehicle operates as a hybrid vehicle using a gasoline engine and a generator.

Extended Range Electric Vehicles (EREVs) have a plug-in battery pack and electric motor, as well as an internal combustion engine. EREVs are different from plug-in hybrids because the electric motor always drives the wheels. The internal combustion engine acts as a generator to recharge the battery when it is depleted. Typically, these vehicles have a pure electric range of around 40 miles before the vehicle switches to the gasoline engine, often called the range-extender mode.

Charging Times depend on the car itself, as well as the power source and charging method that you are using. Other factors affecting charging time are how empty the battery is and the battery's temperature before charging. For example, all vehicles can be charged using a standard 120-volt outlet, commonly called Level 1 chargers. Charging vehicles with a Level 1 charger can take 17-50 hours when empty.

If you need to charge your vehicle faster, consider having a 240-volt circuit installed similar to the one that powers your clothes dryer. A 240-volt, or Level 2 charger, can refuel a battery in five to 10 hours. For extended travel, you will most likely use a DC Fast Charger which uses up to 1,000-volts to recharge a depleted battery in approximately an hour.

2021 Incentives Available

Thanks to a grant funded by the Nebraska Environmental Trust (NET) and a partnership with the Nebraska Community Energy Alliance (NECA), Perennial has several incentives available until the funding is depleted.

Residential Incentives

Perennial customers can qualify for up to $500 to install a residential vehicle ChargePoint 32-amp, Wi-Fi-enabled charging station.

Perennial customers who purchase a brand new battery electric vehicle and a ChargePoint 32-amp (minimum), Wi-Fi-enabled charging station can qualify for a $4,500 incentive.

Commercial Incentives

Perennial commercial customers that install conduit for the use of an electric vehicle public charging station during new construction can qualify for 100 percent reimbursement (up to $1,000).

Businesses can also receive 50 percent reimbursement for the installation of equipment necessary for the installation of an electric vehicle public charging station. This amount is eligible for a 50/50 cost-share based on the eligible grants, discounts, etc.

For more information about electric vehicles and the EnergyWise℠ incentives available, contact Courtney Giesenhagen at perennial@perennialpower.com or call the office at 402-362-3355.

Terrible Tuesday

Staying Safe When Disaster Hits

When you think of famous Nebraska tornadoes, the Pilger tornado (June 16, 2014, 5 tornadoes in one storm) or the Hallam tornado (May 22, 2004, 2.5 miles wide, the 2nd widest on record), or even the Grand Island tornadoes (June 3, 1980, 7 tornadoes in less than 3 hours), better known as the night of the twisters, may come to mind. But did you know, in the weather world, Benedict is famous for having the only F5 tornado to strike Nebraska?

Courtesy of History Nebraska

May 5, 1964, dubbed Terrible Tuesday, began like any other Tuesday for most people in central Nebraska, but by sunset, many were stunned by the heavy damage. Around 5:00 p.m., the thunderstorm produced a tornado just southeast of Hastings, which quickly developed into an F5 on the Fujita Scale, the strongest possible. This tornado trekked 70 miles all the way to northwestern Butler County. A total of 101 farmsteads were reported to have received damage, some with no buildings left standing, and a large number of livestock were killed.

Courtesy of History Nebraska

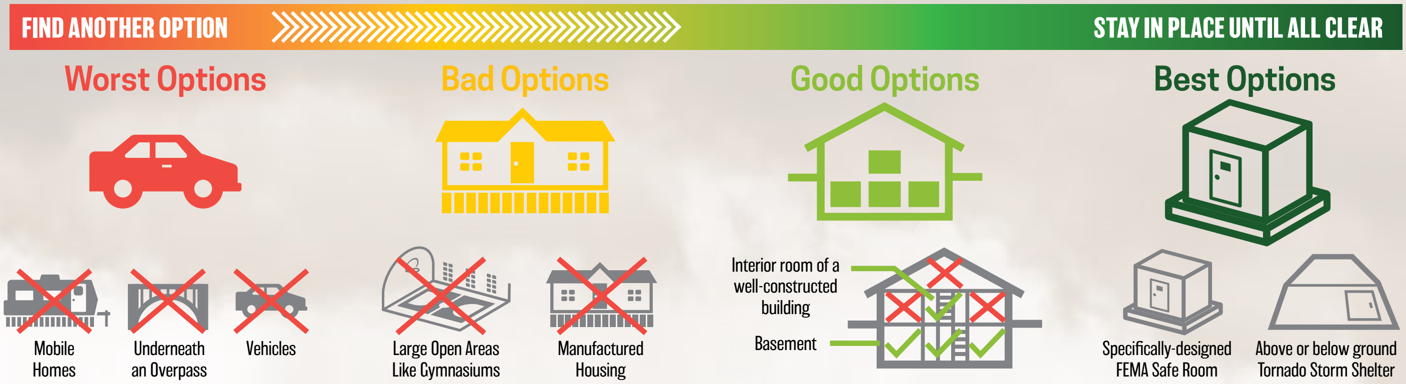
At the time, Doppler radar and other modern technology did not exist to help warn the area of the tornado. Hence, the local community was very thankful that a community member called the sheriff's office to report a tornado cloud approaching their home from the south and west.

Power lines were described as a tangled mass, as utility workers reset poles and restrung wire for miles. Trees lay across roads; clothes were draped around fence-posts; Harmony Church, four miles north of Bradshaw, was "split in half," grain bins were scattered or wrapped around trees, and houses were blown from their foundations. The storm caused approximately $5,500,000 in damage that day, which today would be roughly equivalent to $46,000,000.

There seemed to be wreckage as far as the eye could see in the path of the tornado. An area farmer put it best in an interview with the Omaha World Herald, "It sure took everything, but we are lucky. We are all alive, and it didn't get the dirt. We've still got the land."

Tornado Sheltering Guidelines

Seek the best available area immediately when a Tornado Warning is issued. Your chance of surviving a tornado is excellent if you follow these guidelines.



Tornado sheltering: Worst options
Leave your mobile home or car and take shelter in a ditch or depression If no storm shelter is available. Never try to outrun a tornado in your car. Leave your car and get away from it.

Tornado sheltering: Bad options
In schools, go to the basement or inner hallways. Avoid cafeterias, gymnasiums or auditoriums. In high-rise buildings, go to interior halls of lower floors, away from windows. Manufactured home residents should flee their homes for sturdier shelter.

Tornado sheltering: Good options
In homes, avoid windows which can explode during a tornado. Go to the basement. If there is no basement, go to an inner hallway or closet or an interior bathroom on the lowest floor.

Tornado sheltering: Best options
Safe rooms and storm shelters save lives. Installation of a safe room built to FEMA standards, and storm shelter built to ICC 500 standards is the best protective action.

SOURCE: NOAA, National Oceanic and Atmospheric Administration Storm Events Database; Associated Press

Extraordinary tales from survivors in the path of the tornado emerged. There are eyewitness reports of buildings being sucked into the air and exploding into pieces and scattered in all directions. Despite the advice to the contrary, several families loaded themselves into their car to outrun the storm. In fact, there were so many stories about outrunning the storm in vehicles that the sheriff took out an ad in a later paper reminding people to take cover and not leave their homes. A group of three young men left their car and sheltered in a culvert. While they were in the culvert their car was lifted from the road, twisted, and hurled 75 yards away.

The National Oceanic and Atmospheric Administration (NOAA) tornado sheltering safety recommendations during a tornado warning are, if you are at home, go to a basement, safe room, or an interior room away from windows, if time allows, do not forget pets. When you are at work or school, follow your tornado drill and proceed to your tornado shelter location quickly and calmly. Stay away from windows and do not go to large open rooms such as cafeterias, gymnasiums, or auditoriums. If you are outside, seek shelter inside a sturdy building immediately if a tornado is approaching. Sheds and storage facilities are not safe. Neither is a mobile home or tent. If you have time, get to a safe building.

As stated earlier, if you are in a vehicle, the best course of action is to leave your car and take shelter in a ditch or depression. Do not stop under a bridge to take shelter from a tornado. Winds can accelerate and get stronger when forced into tight spaces, known as the Bernoulli effect. Deadly flying debris can still be blasted into the spaces between bridge and grade, which can impale any person hiding there. The bridge itself may fail, peeling apart, creating large flying objects, or even collapsing downward.

Remember, a tornado warning means that a tornado has been spotted or that Doppler radar indicates a thunderstorm circulation that can spawn a tornado. You should seek shelter immediately.

A tornado watch defines a cluster of counties where tornadoes and other kinds of severe weather are possible in the next several hours. It does not mean tornadoes are imminent, just that you need to be on alert and to be prepared to go to a safe shelter if tornadoes do happen or a warning is issued.

While there has not been an F5 in Nebraska since 1964, Nebraska averages 57 tornados a year, with June having the most tornadoes on average. Therefore, it is essential to follow these safety guidelines after a tornado, stay away from downed power lines, and always assume that power lines, downed or not, are energized. Also, stay out of damaged buildings and homes until local authorities indicate it is safe to enter the buildings.

For more information and tips on what to do before, during, and after summer storms, go to ready.gov.

WHAT TO LOOK FOR AFTER A STORM

When the skies clear and the birds sing, know that the storm's fury could have created **electrical hazards that you may or may not be able to see. Conditions in which stray electricity could energize the area, a person or objects include:**

DOWNED POWER LINES

- On the ground.
- Under storm debris.
- Draped over or touching a metal fence.
- Covered by standing water.
- Across or by the road.
- Hidden in tree branches.

OTHER POSSIBLE DAMAGE

- Drooping or sagging lines (never try to move one).
- Split or broken utility poles.
- Damage to a padmount transformer (green box).
- Lightning strike to a substation transformer.
- Damaged or unstable guy wires.

NEVER GO NEAR downed power lines or other damaged electrical equipment to assess damage or clean up the area. **STAY AWAY and call 9-1-1 to report damage.**

Power lines and other electrical equipment **do not have to be sparking, arcing (giving off a flame) or on fire to be energized.**

SafeElectricity.org®

Perennial Announces Newest Board Member

Matt Clark of McCool Junction took the Oath of Office as a new board member at Perennial Public Power District's April board meeting.

Clark represents Subdivison One, which includes the majority of York County, along with portions of Hamilton and Seward Counties.

Matt was raised in McCool Junction and currently resides in McCool with his wife Shannon along with their three children, Brayton, Alayna, and Kensi. Clark enjoys serving his community by being a member of the McCool Junction School Board as well as the McCool Junction Planning and Zoning Commission. Matt stated, "I look forward to being able to serve Perennial's customers and help solve any difficult problems that the power industry may face in the future."

Matt Clark

In Clark's free time, he enjoys gardening, running, spending time on the lake, as well as being with family and friends.

Operations Report

June 2021

Distribution Projects:

It's hard to believe we are halfway through 2021 already. During the first half of the year, Perennial crews have built a half-mile of 3 phase line in the Strang area to improve voltage support northeast of Strang. Our crews are currently working on rebuilding 4 miles of 3 phase line in central York County along with several smaller projects. The summer work schedule plan includes rebuilding a single-phase line north of Bradshaw to a three-phase line for better voltage support in northwest York County. In addition, rebuilding a single-phase line to three-phase in eastern York County, replacing poles in York County that show a reduction in strength from a recent pole testing program, and updating street lights to light emitting diode (LED) in Grafton, Benedict, and Waco. Perennial is also planning to rebuild a section of line in the town Milligan during the summer months.

If you are considering a new service, whether it is a house, business, irrigation service, etc., please keep Perennial in mind when considering your project. It is beneficial if we are involved from the onset to plan the work and to have time to order special materials that may be needed to complete your project.

Randy Martin
Manager of Operations

AVOID UTILITY SCAMS

Scammers will threaten you with everything from shutting off power to your home to legal action. Don't fall victim to these types of scams.

If you think you've been contacted by a scammer falsely representing the public power district, please let us know as soon as possible.

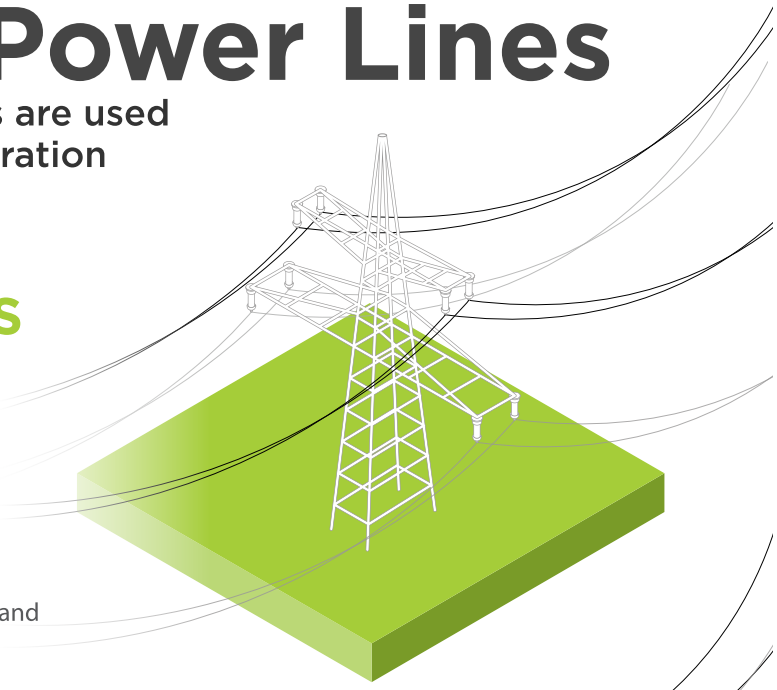
A Field Guide to Overhead Power Lines

High-voltage transmission lines are used to deliver electricity from generation plants to consumers.

HIGH-VOLTAGE TRANSMISSION LINES

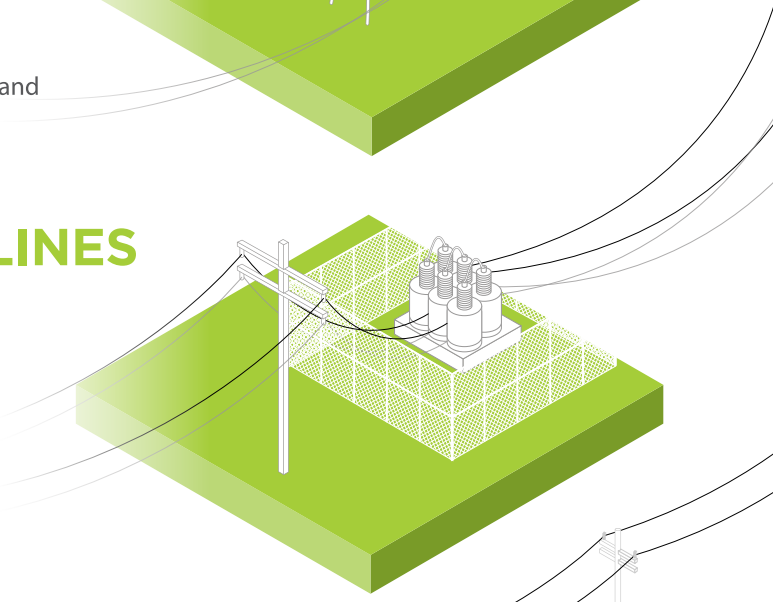
Large amounts of power, measured by watts, are delivered by transmission lines. These lines are energized with very high voltage in order to move the power long distances with minimal losses. Insulators on the towers prevent the power from flowing to the towers or the ground.

Public Power Districts and Electric cooperatives own and maintain 65,000 miles (6 percent) of the nation's transmission lines.



SUBSTATIONS AND SUB-TRANSMISSION LINES

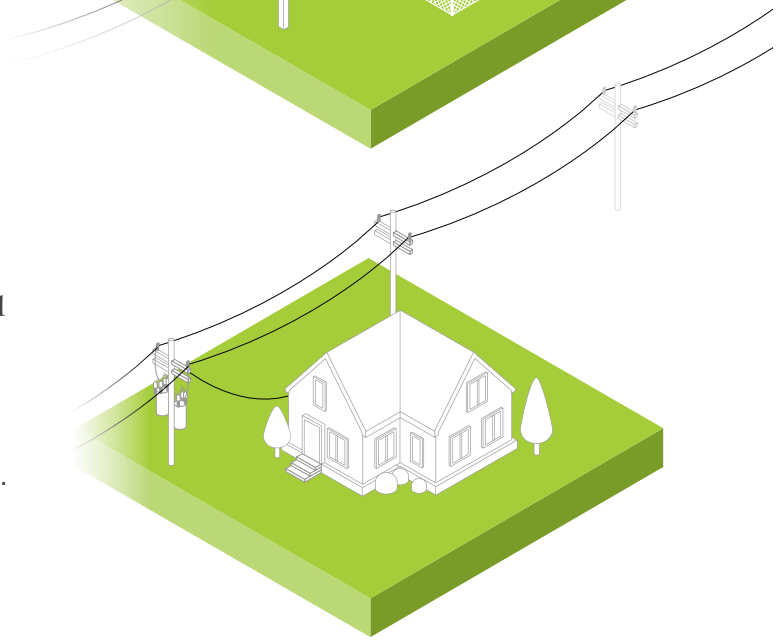
Transformers at transmission substations reduce the voltage from transmission levels to sub-transmission levels, typically ranging from 115,000 volts to 34,500 volts. Sub-transmission lines deliver power over shorter distances to distribution substations and large industrial sites. At distribution substations and large industrial sites, transformers reduce the voltage to a lower level, typically 7,200 volts or 14,400 volts.



DISTRIBUTION LINES

The lines typically seen along rural roads and next to homes are generally single phase distribution line, energized at 7,200 or 14,400 volts. Transformers on the utility poles lower the voltage to between 120 and 480 volts to serve residential homes and small businesses.

Public Power Districts and Electric cooperatives own and maintain 2.6 million miles (42 percent) of the nation's distribution lines.



Source: National Rural Electric Cooperative Association

Calendar of Events

June 11-13 – Milligan June Jubilee
June 18-20 – Ohiowa Days
June 25-27 - Waco Days
July 9-11 – Henderson Community Days
July 7-12 – Fillmore County Fair
August 5-8 – York County Fair

ENERGY SAVING TIP

Get Ready for Summer Months Ahead.

Home cooling makes up a large portion of your energy bills. Try to keep the difference between the temperature of your thermostat setting and the outside temperature to a minimum. The smaller the difference, the more energy you will save. If it has been a few years since you had your home's heating and cooling system tuned up, now is the time to have your heating and cooling contractor inspect, service, and clean it. Typically, tune-ups on cooling systems that have been neglected for a few years can provide energy savings of 5-15 percent or more. Perennial offers a $30 EnergyWise℠ incentive to homeowners who have their cooling system tuned up, regardless of the type or age of cooling system. Contact Perennial at 402-362-3355 or perennial@perennialpower.com for more information.