

# Perennial NEWS

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Energy for Generations  
**PERENNIAL**  
PUBLIC POWER DISTRICT

## Advance Notice Needed On New Construction



**Jeff Burk**  
Manager of  
Purchasing and  
Warehousing

Like many other businesses, Perennial has experienced supply chain issues and steep cost increases for some of our basic equipment.

For years, it was common practice for utility suppliers to stock a variety of distribution transformers, poles, conductors, and line hardware. In that environment, utilities could often simply telephone suppliers to purchase from inventory. Small orders placed would often be delivered within a few days. Suppliers could often restock simply by pulling items from manufacturers' warehouses.

Larger volumes of electrical materials could be ordered from the manufacturer through the supplier with a relatively firm delivery date. The equipment and materials situation evolved to more of a just-in-time mentality over the years, which resulted in both manufacturers and suppliers reducing their inventories. Due to the globalization of the world economy, many North American manufacturers either closed their doors or migrated to other parts of the world. This reduced costs but also reduced total manufacturing capacity.

Everything changed with COVID-19. After an initial period of low demand, the need for manufactured products increased rapidly as the economy unfroze. Manufacturers have been unable to meet current demand, driving prices up and delivery times out.

For example, power pole prices have doubled since May of 2021. The wait time to receive

poles has gone from 1 week in 2021 to 22 weeks, with many suppliers unable to provide pricing due to production limitations.

Pole mount transformers have a wait time of one year or longer. Prices for a 25 kVa pole mount transformer in May of 2021 were around \$730.00. Today, the cost of the same transformer has more than doubled. Like the situation with poles, some manufacturers won't bid because their factories are so overwhelmed with orders.

On smaller hardware items that we use daily, pricing has seemed to have stabilized, but availability is still an issue. Items that were in stock that utilities could get in a matter of days now may take 22 weeks to get.

Since Perennial needs to carry more inventory, we have had to make accommodations for the additional supplies. Accommodations such as adding new concrete and fencing to store material. Currently, we are planning and ordering materials to be used in 2025 or later.

**Due to lead times running one to two years, it is extremely important that customers notify Perennial well in advance if they are planning a new electrical service. Without advance notice, it is highly likely that we might not be able to get the supplies needed to provide those services in the time that customers want.**

Please contact Perennial at 402-362-3355 to discuss any future builds.

### On Our Cover:

McCool Junction Public Schools' new electric school bus.

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# Five Ways to Safeguard Your Home This Winter

As the temperatures drop and the days grow shorter, there's a natural inclination to create a warm and cozy haven at home. Unfortunately, as we see increased use of heating equipment, candles and electrical items, the number of home fires tends to increase during winter months.

Here are five ways you can safeguard your home for the winter season.



1. **Ensure carbon monoxide and smoke detectors are working properly.** If your detectors are battery-operated, replace the batteries annually. Test the detectors once a month and give them a good dusting to ensure the sensors are clear of dirt and debris.

2. **Inspect electrical cords.** We depend on more cords during winter, whether for holiday lighting, extension cords or portable heaters. Before using any corded items, double check to make sure cords aren't frayed or cracked. If you use portable space heaters, remember to keep them at least 3 feet away from flammable items. Use models that include an auto shut-off feature and overheat protection. Space heaters can take a toll on your energy bills. Use them efficiently (to heat smaller spaces) and safely. Never plug a space heater into a power strip. Speaking of power strips...

3. **Avoid overloading electrical outlets and power strips.** When overloaded with electrical items, outlets and power strips can overheat and catch fire. If you use power strips for multiple devices, make sure the strip can handle the electrical load. For a safer bet, look for power strips that include surge protection.

4. **Clean the fireplace to improve safety and efficiency.** There's nothing better than a warm fire on a chilly night, but it's important to maintain your fireplace for safety. As wood burns, a sticky substance known



as creosote builds up in the chimney. When creosote buildup becomes too thick, a chimney fire can ignite. The chimney should be cleaned at least once a year to reduce fire risks. Regular cleaning also improves air flow and limits the amount of carbon monoxide that seeps indoors.

5. **Practice safety in the kitchen.** As we spend more time in the kitchen during the holiday season, be mindful of potential fire hazards. Never leave food that's cooking on the stovetop unattended. Clean and remove spilled foods from cooking surfaces and be mindful of where you place flammable items like dish towels.

Perennial wants you and your family to stay safe during the winter season. Visit [www.perennialpower.com](http://www.perennialpower.com) for additional safety tips.





# McCool Junction Public Schools Goes Electric



McCool Junction's new bus looks just like any other bus in their fleet.

McCool Junction Public Schools welcomed a new school bus into their fleet in October. The bus, manufactured by Blue Bird Corporation of Macon, Georgia, features an all-electric power train. The school bus seats 43 students. The new electric school bus joins the school's fleet of mostly diesel-powered buses and one propane-powered bus. Except for a few green-colored accents, the electric bus looks like any other bus in McCool Junction's fleet.

The Environmental Protection Agency's Clean School Bus Program made the purchase of the electric school bus possible. McCool Junction was one of six schools in Nebraska to participate in this program. The other five schools that received an electric school bus were Hay Springs Public School, Hershey Public School, Raymond Central Public School, Southern School District,

and Summerland Public School. Participating schools were required to replace one of its diesel buses with an electric bus.



Stopping at the 'pump' will be a little different. Instead of 'fueling up' the new electric bus will 'charge up'.

Perennial Public Power District provided financial assistance for the bus's electric vehicle charging station by providing a financial incentive to cover 90 percent of charging equipment and installation costs. Dawson Electric of Mc Cool Junction installed the charging station.

The bus can be expected to travel 100 miles with a full charge. Blue Bird electric buses feature internal temperature control to provide rider comfort in many weather conditions. However, to ensure maximum driving range during very cold weather, the bus is equipped with a diesel-powered backup heater.



Most of the buses controls are similar to a diesel powered bus, except for the screen above the steering wheel.

McCool Junction Public Schools plans to use the electric bus as a route bus. School district route buses have a fixed daily route to travel. Operating on a route will allow the school district to better align this vehicle's daily energy needs with battery capacity.

The bus's lithium-ion battery pack can be fully recharged in about 6 to 8 hours. The expected battery life is about 12 to 15 years. Replacing the battery pack, if one is needed before the bus is retired, is expected to cost about \$50,000.

The electric bus is expected to have lower operating cost than a traditionally diesel-powered bus. Today, a dollar buys about as many British Thermal Units (BTU) of energy in both the form of diesel fuel and electricity. However, due to higher energy conversion efficiency, an electric bus will travel further on a dollar of energy than would a diesel-powered bus.

Additionally, an electric bus should have lower maintenance costs than a diesel bus. An electric bus never needs an oil change, engine maintenance, or transmission maintenance. Of course, electric bus technology is new enough that unanticipated power-train expenses could arise.

Information provided by Nebraska Public Power District (NPPD) indicates that maximum battery life can be more achievable if batteries are only charged to 80 percent of capacity most of the time. NPPD also recommends charging during the cooler parts of the day. During cold weather, NPPD recommends "pre-heating" the interior of the vehicle for a few minutes while the charger is still connected, as doing so will increase the range of the vehicle.

After a few years, the McCool Junction school district should have a good understanding of the relative costs of ownership for their electric bus and the experience to know how to get the best performance from their bus.



Display shown on screen above steering wheel when charging.

The Blue Bird Corporation has manufactured more than 550,000 school buses since its founding in 1927. Approximately 180,000 Blue Bird buses are presently in service in North America. Blue Bird designs, engineers, and manufactures the buses it sells. This ensures that frames and bodies are specifically tailored to school bus needs. Blue Bird buses can be powered by either gasoline, diesel fuel, propane, compressed natural gas, or electricity.

The Blue Bird Corporation, the only school bus manufacturer owned and operated by a corporation based in the United States, has a long history of manufacturing electric school buses. In 1994, Blue Bird delivered its first electric school bus to a school district in Southern California as a demonstration project. However, the battery technology at the time was far from adequate, and mass production was not feasible.

Almost twenty years later, in 2016, Blue Bird was awarded a \$4.4 million Department of Energy grant to develop electric school bus technology using today's batteries, electric motors, and control technologies. Delivery of the first seven electric-powered 72-passenger buses was made in time for the 2018-2019 school year.

With sales of electric buses growing fast, Blue Bird modified a portion of its bus manufacturing facility to specifically meet the needs of electric vehicle production during 2023. Electric bus production capacity was increased from 4 to 20 buses per day.

At the time that the McCool Junction school district took possession of their new bus, the 1,500th Blue Bird electric school bus was delivered. We wish them well and are excited to learn about their experiences.



# Space Heater Safety

Majority of home heating fire deaths involve a space heater or other heating equipment

Heating equipment, such as space heaters, kerosene heaters, fireplaces, and wood-burning stoves, is a leading cause of fires in U.S. homes, according to the National Fire Protection Association (NFPA). The term "homes" includes one- and two-family homes (including manufactured homes), apartments, townhouses, and other multi-family dwellings.

During a recent four-year period, local fire departments responded to an estimated average of 48,530 fires involving heating equipment each year. The fires resulted in 500 civilian (non-first-responder) deaths, 1,350 civilian injuries, and \$1.1 billion in direct property damage, according to NFPA's Home Heating Fires report published in 2021.

In addition:

- Heating equipment caused one in seven home fires and 19 percent of home fire deaths.
- Most home heating fire deaths (81 percent) included stationary or portable space heaters.
- More than half of the home heating fire deaths were caused by placing heating equipment too close to things that can burn, such as furniture, clothing, mattresses or bedding.
- Nearly half (48 percent) of all home heating fires occurred in December, January and February.
- Failure to clean equipment, such as chimney flues, accounted for a quarter of all heating equipment fires.

Approximately two in five home heating equipment fires involved items that ran on what is considered solid fuel, such as wood-burning or pellet stoves or wood-burning fireplaces. However, electric-powered heating devices were responsible for the largest share of losses, accounting for more than half of the fatalities, three in five injuries, and two-fifths of the property damage.

Follow these safety tips to use space heaters safely:

- Read all instructions and use space heaters only as recommended.
- Do not leave space heaters unattended.
- Plug them directly into an outlet; most power strips and extension cords are not equipped to handle the energy spikes caused by space heaters cycling on and off.
- Unplug any other items from the outlet you are using and try to use a dedicated circuit to avoid overload.
- Keep children and pets away from space heaters.
- Turn the heaters off before you leave the room or go to sleep.
- Do not use heaters that are in disrepair or have frayed cords or damaged plugs.
- Place them on flat, level surfaces and never on furniture, counters, or carpet, which can overheat.
- Unplug and put space heaters away (out of the reach of children) when not in use.

Use space heaters with care. For additional safety tips, visit [SafeElectricity.org](https://www.SafeElectricity.org).

feeling chilled?

**HEAT YOUR SPACE SAFELY**

Safe Electricity.org®




**4**



Plug it directly into an outlet

**3**



Make sure the cord is not frayed or cracked

**2**



Place on a flat, level surface

**1**



Keep flammable items at least 3 feet away

**5**



Follow instructions on warning tag and in manual

**6**



Do not use an extension cord or power strip, which can overheat

**7**



Do not use around small children or pets

**8**



Do not use it if it has a faulty plug or loose or missing prongs

# Serving up Savings

The holiday season is just around the corner, and soon, festive music will flood the airwaves, sparkling lights and decorations will adorn homes and businesses, and good tidings will abound.

The holidays also bring a frenzy of decorating, cooking, and family gatherings, and amid the hectic hustle and bustle, you may receive higher-than-usual energy bills.

Keeping this in mind, we thought this month would be a good time to remind Perennial customers of a few programs and efficiency tips to help lower your monthly energy use.

## Programs designed to help you save.

Winter months typically bring some of the highest energy bills of the year. Making minor, low-cost improvements, like weatherstripping exterior doors and caulking around old, drafty windows, can make a positive impact on energy bills. If you're not sure where to start, contact Perennial to schedule a home energy audit.

Our team of customer service representatives are available to help, so we encourage you to give us a call if you'd like to learn about specific programs and services that can lower your bills.

## Be festive without breaking the bank.

With holiday lights adorning your home for well over a month, Perennial recommends making the switch to LEDs to save energy.

LED holiday lights use 88 percent less energy than incandescent holiday lights. To put that into perspective, the Department of Energy estimates that with standard holiday decorations, LED lights typically increase energy bills by about \$5 to \$7. But with incandescent lights, energy bills will typically increase by \$33 or more. For homes that go above and beyond with incandescent holiday lighting (think Clark Griswold), energy bills could increase by as much as \$350. Beyond energy savings, LEDs provide additional benefits, such as being shock-resistant, shatterproof, and cool to the touch, making them safer for the home.

You can also lower energy use by conveniently managing holiday lighting. Smart light timers can help you save energy by connecting to a smartphone app or voice assistant to program lights to turn on and off at set times. If you don't use smart home technology, you can still save energy by using traditional timers.

Additional easy ways to save during the holiday season include turning off overhead lights and using your

Christmas tree to illuminate your home. If you have a fireplace, remember to close the flue when you're not burning a fire to ensure heat doesn't escape through the chimney.

## Cook up energy savings in the kitchen.

If you plan to have family and friends over this holiday season, you can cook up energy savings by using small countertop appliances like microwaves, air fryers, and slow cookers when possible, as they use much less energy than the stovetop or oven.



When using the oven, bake multiple dishes at once for maximum efficiency. After all, it takes as much energy to cook one dish as it does to cook several. Turn the oven off a few minutes before the recipe's end time and allow the residual heat to finish baking the dish. Once the food is done, leave the stove door ajar to allow the residual heat to warm the room. When using the stovetop, match the pan size to the burner to maximize the stovetop's efficiency.

We hope a few of these tips will be helpful as we approach the holiday season. Remember, we're here to answer any questions you have about managing energy use or your monthly bills. With a little planning upfront, you can find efficient ways to save on everything from holiday décor to your favorite soup recipes.

From your friends at Perennial Public Power District we hope you have a wonderful holiday season.



## Utility Line Scholarship

Perennial Public Power District is offering a \$1,000 per year scholarship to a student planning to enroll in an accredited utility line program. Applicants must reside within Perennial's service area to be eligible.

This scholarship program is aimed at highly-motivated and safety-conscious individuals who want to become a line technician. Participation in this program offered by Perennial does not guarantee future employment by Perennial.

The application deadline for this scholarship is **December 31, 2023**. Scholarship applications and applicant guidelines are available on our website, [www.perennialpower.com](http://www.perennialpower.com) or contact Courtney Giesenhagen at [cgiesenhagen@perennialpower.com](mailto:cgiesenhagen@perennialpower.com).

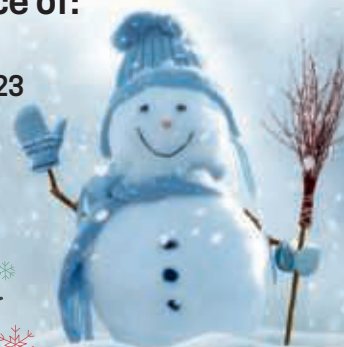


### Perennial's Office will be closed in observance of:

**Christmas Day -  
Monday, December 25, 2023**

**New Year's Day -  
Monday, January 1, 2024**

HAPPY  
*Holidays*



### Efficient Kitchen Cooking

The holiday season is upon us, and that means we'll be using more energy in the kitchen! When possible, cook with smaller countertop appliances instead of the stovetop or oven. Smaller appliances like slow cookers, air fryers, and Instant Pots consume less energy. When using the oven or stovetop, match the size of the pot to the heating element and place a lid over the pot while cooking. The food will cook faster, and you'll use less energy.

