

# EMPIRE ELECTRIC ASSOCIATION

*Echoes of the Empire*

MARCH 2024

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## Respect the Line

BY ANDY CARTER MEMBER ENGAGEMENT MANAGER

If you are one of those people who are in the grip of cabin fever and have been planning projects to tackle as soon as the weather is a little warmer and the ground is a little drier, I have some safety advice for you: *Respect the line*. Electricity is one of the many modern conveniences we enjoy. If it is not treated with respect, it can cause great harm to people and property.

**The first rule to remember is always maintain 10 feet clearance from overhead high-voltage lines.** The 10 feet you are looking for is between the nearest overhead conductor and whatever can conduct electricity. If you are climbing on top of your camper that is parked in the alley near an overhead line to repair a leak, it could be your body. If you are moving a ladder, watch the end of the ladder in relation to the nearest line. Extra caution should be used when moving irrigation pipes near overhead lines because of their length.

If you are operating equipment, it would be any part of the equipment that extends close to where the line is. Equipment is not limited to machinery with moving parts like excavators or loaders. Drivers in trucks with beds that tilt up need to be aware of how high the bed extends up and watch for lines that may be in the area. Farmers with implements that raise up for transport should also know the height of each piece of equipment they use to ensure they can safely drive under lines.

If you are unsure about being able to maintain safe clearance, you should use a spotter to warn you of approaching too close. You don't have to touch the line to become energized. Electricity always seeks the shortest path to ground. Depending on the voltage of the line and atmospheric conditions, just getting close to the line may allow the electricity to arc across and energize the equipment.

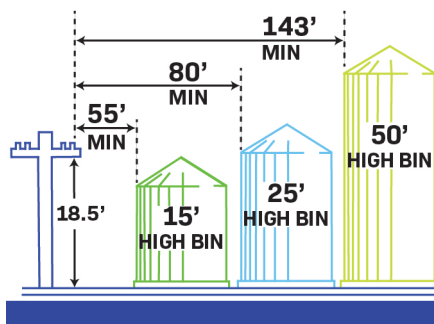


ANDY CARTER



Stacking anything under power lines is risky. Equipment operators need to ensure they maintain the minimum 10-foot clearance from any power line with any part of their equipment or load.

## Follow farm safety rules around power lines.



If you happen to contact a power line, stop moving the equipment and remain in the vehicle. Call 911 and they will inform Empire Electric Association of the situation. EEA will send a crew to deenergize the line, make sure it is safe, and assist in removing the equipment from contact with the line. High-voltage lines in contact with the ground — whether in direct contact or through contact with a conductor like a vehicle — can energize the ground up to 35 feet away. You may be a shorter path to ground as you attempt to leave

the vehicle and be electrocuted. The only time you should exit the vehicle is if it is on fire or you can smell fuel and the potential for a fire is very high. In that case, exit the vehicle by hopping out without touching the vehicle and the ground at the same time. Then hop a safe distance away on both feet to avoid step potential. Step potential refers to voltage dissipating through the ground as distance increases from the contact point with the high voltage line. If you walk or run, your feet will be at different voltages, and you may be electrocuted as current flows through your body from the high voltage point of contact to the lower voltage point of contact. This safety advice applies to any vehicle contact with high voltage lines regardless of the how the vehicle made contact.

The 10-foot rule applies to you and tools or equipment you are using. The National Electric Safety Code specifies greater clearances in some situations for permanent structures or other features such as roads, decks, swimming pools, or grain bins built near high voltage lines. If you are planning on building near an overhead line, part of your planning should include contacting the local authority having jurisdiction to see if they have clearance requirements that are more restrictive than the National Electric Safety Code. You will also need to contact Empire Electric Association or other utility providers to ensure you do not encroach on any easements that are in place. In general, EEA maintains a right of way that extends 15 feet either side of the power line. For three phase construction that has multiple lines, the easement will be wider.

The discussion so far has dealt with overhead power lines. Underground lines deserve the same respect. Always contact EEA if you are building in an area with underground power lines and request a locate to make sure you are not placing something permanent over a buried line. **You should also call 811 to locate all utilities before digging for any kind of project to make sure you do not damage underground utilities.** Make sure you leave appropriate clearance around above ground power equipment such as pad mounted transformers.

Electrical safety is something co-op employees and members should pay attention to. Planning ahead and factoring in safe distances around power lines to comply with safety codes as well as equipment that may be used in the area after the project is completed will help make being safe easier. We appreciate everyone's effort to make our community safe.



▲ "Sunrise Beams Over the La Plata Mountains" by Shawna McLaughlin



## Monthly Calendar

**March 8** – EEA's board meeting begins at 8:30 a.m. at its headquarters in Cortez. The agenda is posted 10 days in advance of the meeting at [eea.coop](http://eea.coop). Members may attend in person or remotely. Instructions to attend remotely are included on the agenda.

**March 17** – St. Patrick's Day

**March 19** – First Day of Spring

**March 31** – Easter



# STEP POTENTIAL



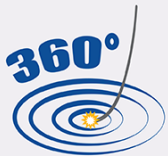
## What you need to know:



A downed line does **NOT** have to be arcing or sparking to be energized — and dangerous.



Even if you do not touch lines or equipment, you can still be killed or seriously injured.



The **danger exists beyond** the point where the downed line is making direct contact with a vehicle or the ground.

Electricity can flow **360°** around it.

### What is step potential?

If a person connects **two different points** of this gradually decreasing voltage by **walking away, stepping out of a vehicle, or touching the vehicle and ground** at the same time — electricity flows through the individual (path to ground).



### Stay safe.

If you're in a car accident that involves downed lines, **stay in the car**. If you come upon a scene with a downed line, stay far away and **call 911** to have the utility notified.



Learn more at

**Safe**  
Electricity.org

## ENERGY EFFICIENCY TIP OF THE MONTH

Lengthen the life of your clothes dryer with regular cleaning. Clean the lint filter after every load, which improves air circulation and safety. Check the lint trap opening and use a vacuum to remove any lint that's fallen inside the opening.

If you use dryer sheets, check the lint filter for residue buildup. Remove any residue with hot water and a nylon brush or toothbrush. Over time, dryer sheets can leave a film on the filter, which can affect the performance of the motor.



**SPRING FORWARD**  
**MARCH 10 FOR DAYLIGHT**  
**SAVING TIME**

## Safety Tip

Before beginning an outdoor project, always look up and look out for overhead power lines. Use extra caution when carrying a ladder or removing debris from gutters.



# IS A NEW WATER HEATER IN YOUR FUTURE?

BY ANDY CARTER MEMBER ENGAGEMENT MANAGER

When was the last time you took a good look at your water heater? Water heaters are one of those things we rely on to make our lives easier and more comfortable, but we don't often take the time to make sure they are in good working order. The last thing anyone wants is to find out is that their water heater is leaking because they can see the water running across the floor. A hint that you may need to replace yours is if you know how long your current one has been in place. Water heaters typically last 10 years, but there are a several things that can influence that number, including the mineral content of your water and if regular maintenance has been performed.

You can determine the age by checking the nameplate. Sometimes it is printed there, or there may be a code the manufacturer used to show the date it was made. If that is the case, you can go to the manufacturer's website and find the key that will let you know. Some savvy plumbers write the installation date with permanent marker right on the tank. This is also a good time to visually inspect the heater and pipes for any sign of leaks or corrosion.

If you find signs that indicate your water heater needs to be replaced or it has reached the age you want to replace it before it fails and causes damage to your home, you have a great opportunity to upgrade to a more efficient unit and reduce your utility bill. Water heating accounts for 18% of total household energy consumption in the United States. Buying an Energy Star-certified water heater will ensure you are getting a heater that exceeds minimum efficiency standards regardless of the fuel type.

Heat pump water heaters are the most efficient water heaters made. They use

electricity to power a refrigeration system that transfers heat from the surrounding air to the water in the storage tank. Because the heat is being moved and not created, the energy required is greatly reduced. A heat pump water heater can save over 2,800 kilowatt-hours each year for a home with three occupants, when compared to an electric resistance water heater.

Heat pump water heaters tend to be more expensive than other water heaters, but there are incentives available to help offset that cost. Empire Electric Association provides an incentive of \$350 for installing an Energy Star-certified heat pump water heater, and there are tax credits and other incentives available through the Inflation Reduction Act. Make sure to consult with your tax professional on tax credits and incentives to find what you qualify for.

If you are replacing a gas or solar water heater with a heat pump water heater you will need to consult with a qualified electrician to make sure you have power available at the water heater's location. You will also need to call EEA to ensure we have adequate capacity to serve this new electrical load. Taking the time to inspect your water heater now will save you the headache and expense of waiting until it fails. Replacing it with a much more efficient heat pump water heater when the time comes will help reduce your energy bill for years to come.



Heat Pump Water Heater technology has the potential to save twice as much energy when compared to an all-electric water heater because it utilizes the heat in the surrounding air instead of relying solely on electric resistance to heat the water. Photo by Kate Hudon for NREL.

## 2024 EEA Director Election for District 4 and District 7

**Nomination Packets** will be available for pick-up on March 22, 2024, at EEA headquarters at 801 N Broadway, Cortez.

Visit our website [eea.coop](http://eea.coop) for key election process information.

## Cooperative Principle # 2 Democratic Member Control

Cooperatives are democratic organizations controlled by their members - those who buy the goods or use the services of the cooperative - who actively participate in setting policies and making decisions.