CENTRAL ELECTRIC POWER ASSOCIATION

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POWER ASSOCIATION

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Celebrating OUR RECENT Retirees

Central Electric General Manager Brian Long presents plaques to Mark Sanders and Kent Sistrunk.

MARK SANDERS

20 years of service

2005-2025

KENT SISTRUNK

36 years of service

1989-2025

GENERATE *Safely*

If you purchase a portable backup generator, protect your home and family by taking the time to read the manufacturer's instructions. Photo Credit: City of Bryan, Tx

by Scott Flood

Don't generate problems with your backup generator.

The wind howls outside your windows as a major storm system blows through the area in the late evening. Your lights flicker for a moment or two before you're plunged into darkness. The social media feed on your phone is packed with reports of damage and power outages, and the storm shows no sign of letting up for hours.

Fortunately, you had the foresight to buy a backup generator big enough to handle your refrigerator, freezer and other key needs. Flashlight in hand, you attach extension cords. Within minutes, you hear the quiet humming that tells you they're working again.

Mississippi's electric cooperatives understand power outages are a major inconvenience, and we do our best to prevent them. But when severe weather rolls through, outages can sometimes stretch into several hours or even days after a major storm. Lineworkers may have to check many miles of power lines to pinpoint the problems before they can begin their work to restore service. That's why many co-op members consider buying backup generators to provide for their family's needs while waiting for service to resume.

> "The biggest danger associated with backup generators is one that's both invisible and deadly. Because backup generators burn fossil fuels, they generate a variety of gases, most notably carbon monoxide.

Backup generators fall into one of two categories. Standby generators are permanently wired into the home's electrical system by a qualified electrician. They come in a variety of sizes, so homeowners can match the generator to their home's power needs. Portable generators, as the name implies, can be moved to wherever they are needed. Because they're small enough to move, they generally provide less power than standby models. Most use gasoline or diesel fuel, and when they're operated correctly, both types provide a safe source of backup power.

Some homeowners make the mistake of plugging their backup generators directly into a wall outlet or connect them to their home's electrical panel. Beyond the significant risk of electrocution and fire that can create, plugging generators directly into your outlets can send the voltage your generator creates into the power lines connecting your home to the electric grid. That creates a dangerous condition called "backfeed," which can seriously injure the lineworkers who are working so hard to restore your electricity, as well as anyone who accidentally comes in contact with power lines. Backfeed can also damage the generator.

That's why permanently installed backup generators are required to have what's known as a transfer switch, which should be installed by a qualified electrician. The transfer switch creates a barrier between your home's electrical system and the outside wires, so backfeed cannot occur. When the transfer switch senses that power has been restored, it switches the power from the generator back to the outside lines.

The biggest danger associated with backup generators is one that's both invisible and deadly. Because backup generators burn fossil fuels, they generate a variety of gases, most notably carbon monoxide. According to the Consumer Product Safety Commission, one portable generator can produce as much CO as hundreds of cars. The agency reports that nearly 100 Americans lose their lives each year because of CO poisoning from backup generators. That's why generators should only be used in dry, well-ventilated areas away from your home and garage.

CO gas is not only invisible, but it's also odorless. The National Institutes of Health warns that CO has the potential to kill in as little as five minutes. People exposed to CO typically become dizzy, feel nauseated, and experience headaches. Often, they lose consciousness before noticing any symptoms. Anyone exposed to CO should be moved to fresh air immediately.

If you purchase a portable backup generator, protect your home and family by taking the time to read the manufacturer's instructions. Don't use portable generators in rainy or wet conditions unless you keep them shielded from moisture and well-ventilated.

When starting a portable generator, make sure nothing is plugged into it. In addition, you can reduce the potential for damage to your appliances and lighting by turning them off or unplugging them from the wall. After the generator starts, plug them in and turn them on one at a time to make sure you aren't overloading your generator's capacity. Unplug them from the generator before turning it off. Unless the manufacturer recommends otherwise, always turn the generator off and allow it to cool before adding fuel.

Standby generators are permanently wired into the home's electrical system by a qualified electrician. Photo Credit: All Star Electrical Services

Finally, as with many home appliances, regular maintenance is the key to ensuring your portable generator operates safely for years to come. When storing it, drain the fuel from the tank. In addition, check the oil and fuel level, filters, and other components once a season so you know it will be ready to run safely and efficiently the next time a big storm blows through.

For more than four decades, business writer Scott Flood has worked with electric cooperatives to build knowledge of energy-related issues among directors, staff and members.

Portable Generator. Photo Credit: Honda

Efficiency Tips for Older Homes

Q **How do I improve the efficiency of my older home while keeping its charm?**

A I love old homes. The details and craftsmanship have always drawn me to them. The features of older homes can make them less efficient than modern construction, but it doesn't have to be that way. You can keep the charm and make your home more efficient.

by Miranda Boutelle

Start by prioritizing the invisible upgrades that make your home more comfortable and efficient. When we were kids, I don't think any of us thought, "When I grow up, I want to spend my hard-earned money on insulation." It's not as exciting as new countertops or a remodeled bathroom, but air sealing and insulation can save you money every month. Then you can apply the savings to aesthetic improvements.

Many older homes are not properly insulated. Insulation has several benefits beyond sealing your home and keeping outdoor air from seeping in. It reduces outdoor noise, makes your home quieter and improves your overall comfort.

Always properly air seal before you insulate. Older homes with pocket doors, coved ceilings, dumbwaiters, doors to attic spaces, and laundry chutes allow indoor air to escape through the cavities, gaps and cracks around these classic features. Sealing off open cavities around those features often requires plywood, rigid foam, or drywall fastened into place and then caulked around the edges.

Keep an eye out for framing features that cause drafts. Balloon framing is a type of construction where wall studs run all the way from the foundation to the roof, allowing air to flow freely through those spaces. Second floors with knee wall attics on both sides are notorious for air leakage. Open cavities allow air to flow horizontally between the attic spaces, making the home uncomfortable and inefficient. Seal off the open cavities in the floor framing and insulate attic spaces.

Dense-packed cellulose or closed cell foam insulation can be sprayed into exterior walls. Skilled contractors can remove pieces of siding and drill holes to fill the wall cavities from the outside of the home. For brick or stone homes, holes can be drilled from the inside and then patched and painted. Insulating walls from the inside of the home requires more time and effort in preparation and cleanup, but having well-insulated walls is worth it.

Knob and tube wiring — commonly used from the early 1880s to the 1930s with no grounding wire — should be replaced prior to insulating walls and attics for safety purposes. Contact between insulation and knob and tube wiring can create a fire hazard.

People often think new windows are the best way to improve a home's efficiency. Considering the cost of replacing windows, I recommend investing in air sealing and insulation first. Then consider storm windows to keep the charm of the original windows, such as leaded glass and stained-glass windows in good condition. Choose from interior or exterior options that are operable and inoperable.

Prioritize the invisible upgrades that make your home more comfortable and efficient, such as adding blown-in insulation to your attic. Photo Credit: Bonneville Power Administration

Once you've addressed the envelope of your home, consider appliance improvements. Replace your old electric water heater with a heat pump water heater. This upgrade can save a family of four an estimated $550 per year and more than $5,600 over the lifetime of the water heater, according to ENERGY STAR®.

Invest in high-efficiency heating and cooling equipment. A mini-split heat pump, also known as a ductless heat pump, is a more efficient option than electric baseboard heating and provides the benefit of air conditioning.

Older homes don't have to be inefficient. Show your home some love and invest in energy efficient upgrades.

Miranda Boutelle is the chief operating officer at Efficiency Services Group in Oregon, a cooperatively owned energy efficiency company.