



**DSO ELECTRIC
COOPERATIVE, INC.**

DSO
ELECTRIC COOPERATIVE

HEADLINER

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Timothy J. Power CEO	Marla Marshall CFO
Tracy Turner Operations Manager	Derrick Rutherford Communications Manager

OFFICE HOURS

8 a.m.-4 p.m., Monday-Friday

PAYMENT LOCATIONS

**CENTRAL NATIONAL BANK IN
WALMART SUPERCENTER**
521 E. Chestnut St., Junction City, KS 66441
FARMERS STATE BANK
447 Harrison, Lindsborg, KS 67456

OUTAGE INFORMATION

**IN CASE OF AN OUTAGE, CALL
800-376-3533.** After-hours calls will be
answered by dispatch and forwarded to
standby personnel.

FIND OUT MORE

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FROM THE CFO

Electricity is Still a Great Value!

BY MARLA MARSHALL, CFO

Inflation, right?? Miserable. Undeniable. Backbreaking inflation.

As I am getting ready to cut a check for DSO's new bucket truck, I shake my head at all the price increases I have seen at work and at home.

To provide some context, here are just a few items that inflation has touched in the years 2019 to 2024: the cost of a gallon of milk went from \$3.04 to \$4.43 (up nearly 50%); the cost of a loaf of bread, \$1.29 to \$2.54 (almost double!); and the cost of a gallon of gas went up 20%, from \$2.60 to \$3.08.

The electric utility industry has experienced crazy price increases, too. The most used transformer (15 kVA) doubled in cost, going from \$508 per transformer in 2019 to \$1,015 this year. A small work truck purchased in 2019 was \$149,000. In 2024, DSO paid \$221,000 for the same size truck (a 50% increase).

But can you guess what hasn't gone up in cost? The answer is the price of electricity. That's right! It might be hard to believe, but the average price of a single kilowatt-hour sold in 2019 by DSO was \$0.16 (all charges, before taxes). The average price in 2024 was still \$0.16! Of course, your individual rate may have gone up or down, but overall, DSO's overall member price has remained constant. You can see this by checking out the data from the Energy Information Administration (www.eia.gov).

“Over the past 10 years, we have deployed over 4 megawatts of alternative peaking generation ... to help avoid those high summer peaking costs.”

So, you might be asking, “How can that be?” The answer is due in large part to DSO's board, management and staff working diligently to keep costs down for our members. To be sure, we have seen cost increases on materials, labor and everything in between! But one of the most important things we do is use peak shaving strategies to manage wholesale costs we pay. DSO does this in the summer when the rates are highest for us. Over the past 10 years, we have deployed over 4 megawatts of alternative peaking generation (solar and diesel generation) to help avoid those high summer peaking costs. This has saved DSO and its members nearly \$5 million in power costs. In addition, our members are an integral part of our peak shaving effort. When you decrease power use (or even shut off power) during peak times, DSO saves money on its wholesale power bill and that helps keep rates stable.

We will continue to do everything we can to keep power costs down and we hope you will continue to help us.

Are Battery-Powered Home Energy Systems the Right Choice for You?

Your guide to battery energy storage systems: basics, benefits and safety

Battery energy storage systems (BESSs), devices that store energy for later use, are gaining popularity due to their ability to provide backup power, reduce energy costs and support electricity demand.

Since BESSs can store excess energy, they can be paired with renewable energy sources to provide reliable energy, given that renewable energy sources like solar and wind depend on natural elements that don't always match energy demand.

BENEFITS OF ENERGY STORAGE INCLUDE:

- ▶ **COST SAVINGS:** They can provide stored energy during expensive peak hours and recharge when costs are lower.
- ▶ **DEMAND MANAGEMENT:** They help balance energy demand by charging when demand is low and discharging when it's high.
- ▶ **BACKUP POWER:** They provide backup energy during outages and blackouts. They can replace diesel powered generators, offering an environmentally friendly back up source.
- ▶ **GRID SUPPORT:** They ease grid pressure during high-demand situations including extreme weather events.

If you are considering adding a BESS system that ties into the power grid, contact your electric cooperative early in the process to coordinate safe and proper connection to the energy grid.

HOW DOES A BATTERY ENERGY STORAGE SYSTEM WORK?

Systems can be installed in residential, commercial and utility scale environments. Batteries can even be installed in remote and rural areas where the grid may be unstable or limited.

The base capacity for residential systems ranges from 10 to 13.5 kilowatt hours, which can power an average home. Your energy needs will vary depending on the appliances you have, how often they run and how much backup power you want. Appliances such as air conditioners and water heaters may drain the capacity quicker, and you may want to disconnect them during an outage. Check with your utility about specific system requirements.

THE CORE COMPONENTS OF A RESIDENTIAL BESS ARE:

BATTERY — The battery stores the energy generated from renewable sources and releases it when needed. There are two main types used in residential installations:

- ▶ **Lead-acid** is the oldest and cheapest storage technology and is used in small projects with a lifespan of three to seven years.
- ▶ **Lithium-ion** is the most common type for home systems, with a lifespan of five to 20 years. They have a higher energy density, faster charging capabilities and are lighter and more compact than lead-acid batteries.

BATTERY MANAGEMENT SYSTEM (BMS) — The system monitors battery performance to prevent damage from overcharging, over-discharging, overheating and short-circuiting. It also provides information on the battery's charge level, health and temperature, helping to maintain its longevity and ensure safety.

MONITORING SYSTEM — The monitoring system provides data about the performance of the BESS such as the energy consumption, charge and system efficiency. This system provides data and may provide alerts if issues are detected. It doesn't directly manage or control battery operations like the BMS.

INVERTER — This converts the direct current (DC) electricity from the battery into alternating current (AC) electricity, which is used by home appliances and the grid. Stand-alone inverters are used for off-grid setups or as backup power. Grid-tie inverters sync with the grid, allowing electricity to flow back when demand is low or during peak pricing.

WHAT SAFETY RISKS DO BATTERY SYSTEMS POSE?

According to the National Fire Protection Association four situations can cause batteries to fail, which could lead to dangerous conditions:

- ▶ **MECHANICAL ABUSE:** The battery is dropped, crushed or penetrated.
- ▶ **THERMAL ABUSE:** The battery is exposed to external heat sources.
- ▶ **ELECTRICAL ABUSE:** The battery is overcharged,

charged too quickly, discharged too fast or the voltage is too high.

- **ENVIRONMENTAL IMPACTS:** Earthquakes, rodents damaging the wires, extreme heat and floods.

The most significant safety concern is that these can cause thermal runaway. This is very rare and happens when heat builds up in the battery cell faster than it dissipates.

HOW TO INSTALL A BESS SAFELY

- Purchase it from a reputable, certified manufacturer and hire a licensed electrician who follows the manufacturer's instructions.
- Ensure compatibility among the battery, inverter, controller and solar system (if using one).
- Install in an attached or detached garage, utility closet or outdoors as recommended by the manufacturer.
- Use non-flammable materials like masonry or metal and follow the manufacturer's clearance recommendation around the BESS for cooling and fire safety.
- Consider environmental hazards like flooding, extreme temperatures, snow accumulation, falling objects or vehicle impact, and keep the system away from heating equipment.
- Ensure the area is well-ventilated and check if permits are needed.

ONGOING SAFETY TIPS

- Register your BESS with the manufacturer and connect to Wi-Fi for monitoring. Stay updated on firmware and safety recalls.
- Regularly test smoke detectors and maintain the manufacturer's recommended clearance, removing any objects or debris and trimming vegetation as needed.
- Though you should keep a fire extinguisher nearby for non-battery-related fires, never use it on a BESS fire. If you notice smoke, gas or chemical odors, evacuate immediately and call 911.
- Keep inverters and all BESS equipment out of the reach of children and pets.

It's natural to have questions about emerging technologies like BESSs. Always work with certified manufacturers and installers to ensure safety, and contact your utility early in the process to check for specific requirements for installation, the grid interconnection process and available incentives.

When installed properly, a BESS can save money, provide reliable power during emergencies, and reduce dependence on the grid.

REMINDER

Packets of information for those seeking to be director candidates for the board election are available at DSO's office in Solomon and online at www.dsoelectric.com. Potential candidates must submit a completed petition packet signed by at least 15 residential members of DSO. Signed petitions must be filed in the DSO office in Solomon **BY 4 P.M. ON FRIDAY, FEB. 7, 2025.**

TIPS TO AVOID ENERGY SCAMS



Scammers will try anything to deceive utility customers, including a tactic that claims customers have overpaid their bill. If you receive a call, text or email from someone claiming you overpaid a utility bill and need to provide your banking or credit card information to receive a credit, it's likely a scam. In most cases, your utility will apply a credit to your account to cover future charges or refund an overpayment with a mailed check.

SOURCE: UTILITIES UNITED AGAINST SCAMS



EFFICIENCY TIP

About 30% of your home's heating energy escapes through windows. Use window coverings to minimize energy loss in cold weather and consider smart blinds that automatically adjust based on sunlight and temperature. This helps regulate indoor climate and keeps your heater from kicking on, saving energy.



SOURCE: WWW.SAFEELRICITY.ORG

Snowmageddon, Snowpocalypse, SnOMG!

Whether it's a big snow storm or an everyday snowfall — there's a risk of death by shoveling. Sudden exertion after being sedentary for several months can put a big strain on the heart. Pushing a heavy snow blower can also cause injury.

Shoveling heavy, wet snow can cause back injuries and heart attacks. So don't push yourself!

- * Dress warmly, covering your head, fingers and toes.
- * Take it slow and stretch before you begin.
- * Stay hydrated and don't shovel after eating or while smoking.
- * Shovel only fresh, powdery snow; it's lighter.
- * Push small amounts of snow rather than lifting.
- * Take frequent breaks and do not work to the point of exhaustion.

Know the signs of a heart attack, including chest discomfort, an uncomfortable feeling of fullness and shortness of breath. Stop immediately and call 911 if you're experiencing symptoms; every minute counts.

SOURCE: WWW.SAFEELRICITY.ORG

EFFECTIVE WAYS

To Lower Home Energy Use

Outside factors, such as fuel, equipment costs and extreme weather, can impact electricity prices. But you have the power to control home energy consumption by taking proactive steps to reduce energy use.

THERMOSTAT MANAGEMENT

The thermostat is one of the best places to lower your energy use because heating and cooling account for a significant portion of home energy consumption. During winter months, adjust your thermostat to the lowest comfortable setting to reduce energy use. The Department of Energy recommends 68 degrees or lower.



UTILIZE OFF-PEAK ENERGY TIMES

Plan energy-intensive chores and tasks, such as running the dishwasher or washing clothing, during off-peak energy hours when the demand for electricity is lower. Off-peak times are early in the morning or late evenings. By scheduling these activities during off-peak periods, you can help keep rates lower, reduce demand and relieve pressure on the grid.



SEAL YOUR HOME

According to Energy Star, about 20% of heated or cooled air that moves through a home is lost due to lack of proper insulation and air leaks. Ensure your home has sufficient insulation levels and seal air leaks around windows and doors with caulk and weatherstripping.



MAINTAIN EQUIPMENT

The health of your heating and cooling system is essential for comfort and can greatly impact energy bills. Maintain your system by regularly replacing dirty filters and scheduling annual inspections for maintenance and necessary repairs.



UNDERSTANDING FACTORS THAT IMPACT YOUR ENERGY BILLS

February brings some of the coldest weather of the year, and as our home heating systems work harder and longer to keep us warm, we typically see higher energy bills.

There are a few key factors that affect electricity prices, as well as a few ways you can make a meaningful impact on home energy savings.

When you receive your monthly statement from DSO, you're provided with a summary of how much electricity you used during the billing cycle. You can even see how electricity use may have spiked on days when you used more electricity, such as a particularly chilly day or when relatives were staying with you.

But you might be surprised to learn that beyond your monthly energy consumption, there are external factors that can impact the cost of electricity.

FUEL PRICES

We purchase electricity from our power generation partner, Kansas Electric Power Cooperative (KEPCo), at a wholesale cost, then we deliver that power to our local communities. The cost of generating and transmitting electricity from our generation partner accounts for a significant portion of the cost to provide electric service to homes and businesses — and the cost of fuels that are used to generate that electricity, such as natural gas and coal, fluctuate based on supply and demand. While these fluctuations can impact the cost of electricity, we work closely with KEPCo to plan and help stabilize electricity prices for our members.

EXTREME WEATHER

While we can't control the weather, we can review weather patterns and forecasts to prepare for times of extreme cold or heat, when we know the demand for electricity will increase. But when temperatures become extremely cold and the demand for electricity spikes, the price of electricity can also increase.

INFRASTRUCTURE AND EQUIPMENT

To cover the costs associated with providing elec-

tricity to your home or business, members pay a monthly availability charge. This flat monthly fee ensures the cost of equipment, materials, labor and daily operations are covered for all members in DSO's service territory. To ensure the reliable service you expect and deserve, we must maintain the local grid, including power lines, substations and other essential equipment.

ENERGY POLICY AND REGULATIONS

Federal energy policies and regulations can have a profound impact on electricity costs. As energy generation shifts to the use of more renewable sources and stricter regulations for traditional, always-available fuel sources, such as natural gas and coal plants, costly upgrades and technologies must be constructed and deployed. These additional costs are ultimately passed to consumers.

U.S. power consumption is expected to double by 2050. Across the country, electric cooperatives are working with members of Congress to advocate for smart energy policies that reliably power our local communities.

YOU HAVE CONTROL

While many of these external factors that impact electricity costs are out of our control, we all have the power to manage our energy use at home. The most effective way to lower use is thermostat management. Since heating and cooling account for a major portion of home energy use, adjusting the thermostat to the lowest comfortable setting can help you save energy and money. Remember to service your heating and cooling system annually and replace dirty filters as needed.

You can also reduce energy use by taking advantage of off-peak periods, when the demand for electricity is lower. Reserve energy-intensive chores for off-peak times, such as early in the morning or later in the evening, to save energy. Be sure to seal air leaks around windows, doors and other areas where gaps are possible. This will help your heating and cooling system work less and improve the overall comfort of your home.

ENERGY EFFICIENCY TIP OF THE MONTH

If you have a home office, look for opportunities to save energy in your workspace. Use Energy Star-rated equipment, which consumes up to 50% less energy than standard models. Set equipment like printers and scanners to automatically switch to sleep or energy-saver mode when not in use. Use efficient lamps for task lighting. Replace any older bulbs with energy-saving LEDs. **SOURCE: ENERGY.GOV**

