



**DSO ELECTRIC
COOPERATIVE, INC.**

HEADLINER

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Office Hours

8 a.m.-4:30 p.m., Monday-Friday
 Open over the lunch hour

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.

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How Electric Vehicles Impact the Grid

BY KATHERINE LOVING

Last year saw a record increase in electric vehicle (EV) sales, and experts are predicting that by 2035, many major vehicle manufacturers will only produce electric models.

A 2021 study by the Department of Energy showed that increased electrification, or replacement of direct fossil fuel use with electricity, would account for a 38% increase in electricity demand by 2050 — and EVs will play a major role in this increased electrification.

The need for more electricity will have a major impact on the nation's grid, which means power supply and grid infrastructure must be carefully planned to accommodate the increased need for electricity.

EV charging presents new challenges in maintaining the electric grid. Fully charging an EV battery requires the same amount of electricity needed to power a home during peak energy use times. However, EV charging is a

concentrated pull of energy over an extended period, which can add stress to the local power grid by increasing the amount of electricity a utility has to provide. Additionally, the neighborhood transformer needs adequate capacity to handle the increased load. EV charging can shorten the lifespan of transformers by straining and overloading their capacity if they are not matched to a neighborhood's energy needs.

Electric cooperatives are currently identifying ways to manage this new pattern of electricity use, though exact strategies will vary based on each utility's unique needs. Analyzing energy load patterns or identifying where and when the local grid has spikes in demand can provide electric co-ops with data on where to place higher-capacity transformers. This analysis can also provide a picture of overall energy use and patterns to help forecast energy

Continued on page 12B ▶

ENERGY EFFICIENCY Tip of the Month

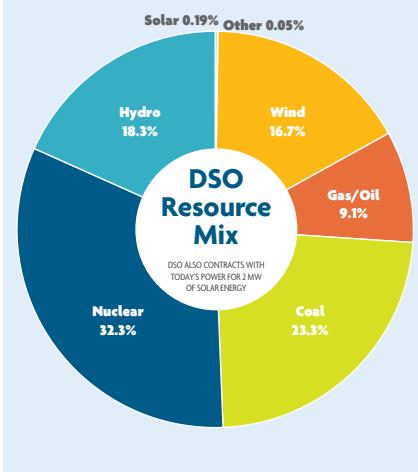
Did you know insulating your electric water heater could reduce standby heat loss by 25% to 45%? This could save you 7% to 16% on annual water heating costs.

Insulating your electric water heater is an easy, inexpensive project that can improve energy efficiency and save you money each month. The Department of Energy rates this project level as medium difficulty, meaning most homeowners can tackle this project on their own.

SOURCE: WWW.ENERGY.GOV



About two-thirds of DSO's energy came from non-greenhouse gas emitting resources.



How Electric Vehicles Impact the Grid

Continued from page 12A ▶

consumption for the future. Planning system maintenance and upgrades are also part of that long-range forecasting; however, this has been recently complicated by supply-chain issues with transformers, with wait times that are upwards of one year.

EV owners can play a role in reducing energy costs and system stress associated with charging. Check with your local electric co-op to see if they offer an EV charging rate. Typically, an EV rate incentivizes charging during the night, when electricity demand and wholesale energy rates are lower. Charging at night is also a great way to ease demand in your neighborhood, even without a special EV rate.

Another potential change on the horizon is a new energy peak time. EV drivers that plug-in to charge as soon as they return home from work would create even more electricity demand during this busy

time of day. But if EV drivers use a timer to schedule charging at night, the electricity demand could be spread over a longer period to reduce stress on the grid. This would be especially beneficial for neighborhoods with multiple EV drivers.

EVs are only expected to increase in number. Electric co-ops and EV owners both have roles to play in accommodating increased demand. If you own an EV, let your electric co-op know so they can better plan energy demand for you and your neighbors.

KATHERINE LOVING writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56% of the nation's landscape.

Be Well

"New Year, new you." This phrase is thrown around a lot as we start a new year and commit to new resolutions. Maybe you're committing to eating healthier or exercising more. Perhaps you're starting a savings plan. Regardless, looking at your well-being from a holistic point of view is beneficial.

Holistic well-being stretches beyond our conventional concepts of physical health and explores all that drives a person's quality of life. Physical, emotional, financial, relationship, spiritual, intellectual, and environmental health are the seven pillars of holistic health.

Physical Health

Posture and functional movement play a huge role in maintaining your physical health.

- ▶ Take the time to exercise and stretch regularly. Musculoskeletal fitness — your body's flexibility, balance, muscle strength, and coordination — is an important indicator of your overall health and influences life expectancy.
- ▶ Maintain a healthy posture. Holding your body correctly (moving or still) can prevent pain, injuries, and other health problems.
- ▶ Get those steps in! In addition to physical health, 10,000 steps per day can help ward off diseases like Alzheimer's and Dementia.

Emotional Health

Taking care of yourself emotionally is key to maintaining many areas of your holistic health — like physical and relationship health.

- ▶ Start a meditation practice. You can start small; a few minutes is all it takes, and plenty of apps and programs are out there to help.

- ▶ Find a healthy outlet for stress. Take a walk outside, exercise, or talk through your worries.

Financial Health

Being in control of your financial health can help relieve stress and make you feel more prepared for the future.

- ▶ Start a savings plan. Even if you're only saving a little money each month, it provides a safety net for emergencies and can help build your financial confidence for the future.
- ▶ Invest in a 401(k). During retirement, you will be thankful!
- ▶ Create a budget and stick to it! Many of us start the new year with a new budget. Make sure yours is realistic so you can stick to it the whole year.

Relationship, Spiritual, Intellectual and Environmental Health

All these areas play an important role in helping us maintain our holistic health.

Say "thank you" often. Showing appreciation is simple, but it can make a big difference in showing people how you feel about them and your relationship.

Take time to listen. Even if it feels like it's not the best time, acknowledging what another person has to say will go a long way to building trust and strengthening the connection.

Identify subconscious beliefs and work on stamping them out. These negative thoughts and perceptions could be driving physical ailments such as digestive troubles and headaches.

This new year, take the time to consider your holistic well-being. We think you'll be happy you did!



Be Proactive in Preventing Electrical Fires

Please take steps to help prevent electrical fires by identifying possible issues before they occur.

When assessing your home, the first step is to hire a qualified electrician to check all wiring to ensure it is up to code and that the electrical system can handle the demands of your electronics, appliances, lights, and other electrical needs. Beyond that, watch for possible issues as they arise.

Symptoms of issues include flickering lights, discolored outlets and switch plates, damaged cords, and frequently tripped circuit breakers or blown fuses.

Check these electrically related items in your home:

1 ELECTRICAL OUTLETS: Check for loose-fitting plugs and loose wall receptacles. Replace missing or broken wall plates. If you have young children, install tamper-resistant outlets if your home does not have them. Avoid overloading outlets with adapters and too many appliance plugs.

2 GROUND FAULT CIRCUIT INTERRUPTERS (GFCIs): Make sure GFCIs are installed in your kitchen, bathrooms, laundry room, workshop, basement, garage, and outdoor outlets. GFCIs help protect against electrical shock. Use the test and reset buttons monthly to ensure they are working correctly.

3 CORDS: Check cords to confirm they are not frayed or cracked. Do not place cords under rugs; tightly wrap them around an object or locate them in high-traffic areas. Do not nail or staple cords to walls, floors, or other objects.

4 EXTENSION CORDS: These are not intended to be permanent solutions, so use them temporarily. If you find that you need more electrical outlets, consult your electrician.

When assessing your home, the first step is to hire a qualified electrician to check all wiring to ensure it is up to code and that the electrical system can handle the demands of your electronics, appliances, lights, and other electrical needs.

5 LIGHTBULBS: Verify that your lightbulbs are the intended wattage for the lamp or fixture they are in.

6 APPLIANCES/ELECTRONICS: If an appliance repeatedly blows a fuse, trips a circuit breaker, or gives you an electrical shock, it is time to discard it and replace it with a new version. Use surge protectors to protect expensive electronics. Make sure your appliances and electronics are placed in dry locations.

7 CIRCUIT BREAKERS/FUSES: Check that circuit breakers are working properly. Fuses should be appropriately rated for the circuits they protect.

8 ELECTRICAL WIRING: If an outlet is not working, it may indicate unsafe wiring. Also, check for loose wires and lighting fixtures. Listen for popping or sizzling sounds behind walls. If light switches are hot to the touch or lights spark and flicker, immediately shut them off at the circuit breaker and contact a qualified electrician to make repairs.

9 ARC FAULT CIRCUIT INTERRUPTERS (AFCIs): AFCIs, which monitor the flow of electricity throughout your home, should be properly installed. If an AFCI detects any abnormality, it shuts off the system to prevent a fire. Upon inspection, an electrician can assess whether your home is adequately protected.

10 SERVICE CAPACITY: If fuses blow or trip frequently, you may need to increase the capacity of your electrical service or add new branch circuits. Contact a qualified electrician.



An average of **346,800** home fires occur every year, according to the National Fire Protection Association (NFPA). Electrical issues (either failure or malfunction) account for 46,700 of those fires.

Common Causes

Incorrectly installed wiring; overloaded circuits or extension cords; defective or improper plugs, switches or outlets; and misuse or poor maintenance of lighting are common causes.

Warning Signs

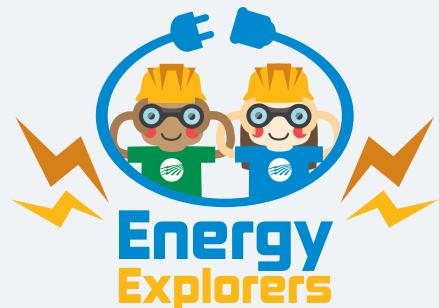
Signs that indicate possible wiring or electrical problems include flickering or dimming lights; discolored cords, outlets or switch plates; switches or outlets that are hot to the touch or emit an odor; and recurring blown fuses and tripped circuit breakers.

Prevention

Hire a qualified electrician to examine and repair electrical issues in your home. Do not take on do-it-yourself electrical projects if you are not qualified.

PLEDGE TO SAVE ENERGY

It's a new year, and that means it's time to think about how you'll make a positive impact in 2023! You can help the planet by saving energy at home and at school. Take the pledge to save energy this year by completing the form below. Post it on your refrigerator or at school to remind others about easy ways to save energy and costs while helping our environment.



I Pledge to Save Energy

Name: _____

I pledge to do my part to save energy and help our planet.

Every day, I'll do the following to save energy at home and/or at school.

My Daily Energy-Saving Plan:

1. _____
2. _____
3. _____

**Need some ideas to help you get started?
Here are a few easy ways you can save energy every day.**

- Turn off all lights when you leave a room.
- Unplug phone and other device chargers when they're not being used.
- Turn off running water while brushing your teeth.
- Remind family members to wash clothes in cold water.
- Turn off ceiling fans when you leave a room.