



# Bluestem NEWS

## Bluestem Electric Cooperative

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### Contact Us

Bluestem Electric Cooperative, Inc.  
P.O. Box 5  
Wamego, KS 66547  
800-558-1580

## FROM THE GENERAL MANAGER

### New Ways to Use Electricity



**Mike Morton**

If you listen carefully, you can hear a quiet transformation happening. Electric appliances and equipment are becoming more popular than ever among consumers.

Advancements in technology and battery power coupled with decreasing costs are winning over consumers looking for comparable utility and versatility. A bonus is that use of electric equipment is quieter and better for the environment.

Inside the home, consumers and homebuilders alike are turning to electric appliances to increase energy efficiency and savings. Whether choosing between a traditional electric stove or an induction stove top, both are significantly more efficient than a gas oven. That's because conventional residential cooking tops typically use gas or resistance heating elements to transfer energy with efficiencies of approximately 32% and 75% respectively (according to Energy Star®). Electric induction stoves, which cook food without any flame, will reduce indoor air pollution and can bring water to a boil about twice as fast as a gas stove. Robotic vacuums are also gaining in

popularity. Fortune Business Insights attributes the growth and popularity of robotic vacuums like Roomba to a larger market trend of smart home technology and automation (think Alexa directing a Roomba to vacuum).

More tools and equipment with small gas-powered motors are being replaced with electric ones that include plug-in batteries. In the past few years, technology in battery storage has advanced significantly. Hand-held tools with plug-in batteries can hold a charge longer and offer the user the same versatility and similar

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### Environmentally Beneficial Electrification

Innovations in energy technologies are creating new ways to use electricity rather than on-site fossil fuels, like propane, natural gas and gasoline.



This concept is known as **beneficial electrification** and suggests that the use of more all-electric appliances and equipment, like water heaters, weed trimmers and electric vehicles, provides consumers with products that benefit the environment.

# The Steps to RESTORING POWER

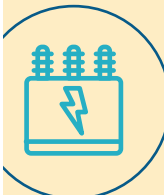
When a major outage occurs, our crews restore service to the greatest number of people in the shortest time possible — until everyone has power.

## 1 | High-Voltage Transmission Lines



These lines carry large amounts of electricity. They rarely fail but must be repaired first.

## 2 | Distribution Substations



Crews inspect substations, which can serve hundreds or thousands of people.

## 3 | Main Distribution Lines



Main lines serve essential facilities like hospitals and larger communities.

## 4 | Individual Homes and Businesses



After main line repairs are complete, we repair lines that serve individual homes and businesses.

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functionality as gas-powered tools. For DIYers and those in the building trades, national brands such as Makita, Ryobi and Milwaukee offer electric versions of their most popular products like drills, saws, sanders and other tools. In addition to standard offerings, consumers can now purchase a wider array of specialty tools that plug in, such as power inverters, air inflaters and battery chargers.

Keith Dennis, an energy industry expert and president of the Beneficial Electrification League notes that, “A few years back, the list of new electric product categories that were making their way to the market was limited — electric scooters, lawn mowers, leaf blowers and vehicles.”

Today, the number of electric products available is exploding.

“There are electric bikes, school buses, pressure washers, utility terrain vehicles, backhoes — even airplanes and boats,” says Dennis. “With the expansion of batteries and advancements in technology, we are seeing almost anything that burns gasoline or diesel as having an electric replacement available on the market.”

A case in point is the increased

use of electric-powered tools and equipment, with more national brands offering a wider selection including lawn mowers, leaf blowers, string trimmers and snow blowers. The quality of zero- or low-emissions lawn equipment is also improving.

Electric equipment also requires less maintenance, and often the biggest task is keeping them charged. In addition, electric equipment is quieter so if you want to listen to music or your favorite podcast while performing outdoor work, you can; something not possible with gas-powered equipment. On the horizon, autonomous lawn mowers (similar to robotic vacuum cleaners) will be seen dotting outdoor spaces.

Another benefit of using electric appliances or equipment is that by virtue of being plugged into the grid, the environmental performance of electric devices improves over time. In essence, electricity is becoming cleaner through increased renewable energy generation, so equipment that uses electricity will have a diminishing environmental impact over time. Quite a hat trick — improving efficiency, quality of life and helping the environment.

## Notice: Lightning and Surge Protection Subscribers

Lightning and surge suppression subscribers must file a claim with Bluestem Electric on damaged warranted equipment within 30 days of the damage for TESCO to cover the equipment.

We also request that you check your electric meter after each storm to ensure the suppression ring is still working properly. If it isn't, your equipment could be at risk of receiving damage. Our employees are not able to check each suppression ring after a storm; however, Bluestem linemen do make an effort to inspect these devices while performing routine maintenance on our system.

### How to Inspect the Ring

The TESCO lightning and surge ring has two red LED lights located on the bottom side of the device that should be lit at all times. These lights are easier to see by looking for them after dark when the lights are brighter. After a storm, if one or both of the lights are not lit, please call the cooperative. The ring will be replaced by the cooperative at no expense to the member.

Thank you for inspecting these devices after every storm. If you have questions, please call Bluestem at 800-558-1580.



## Sign Up for Auto Pay on SmartHub

Save time and pay your monthly electric bill automatically by bank draft. No need to find a postage stamp or worry if your payment will reach us on time. Contact Bluestem Electric for more information and request an application or you can find it online at [bluestemelectric.com](http://bluestemelectric.com).

To sign up, you will need to provide the following information: your name, bank name, phone number, checking account number, routing

number (ABA No.), bank address and Bluestem account number(s).

You can also pay your bill online at [bluestemelectric.com](http://bluestemelectric.com) using your bank account or credit card. Click on the SmartHub Pay Online button.



## Bluestem Brings Financial Security, Clean Energy to Members

Bluestem Electric Cooperative dedicated two solar farms, a 1 megawatt (MW) facility near St. George and a 750 kilowatt (kW) facility near Leonardville on April 25, with the flip of a switch. These solar farms are designed to mitigate the cooperative's peak demand and harvest cost-effective natural resources.

Originally announced in October 2021, Bluestem's two solar farms were linked to the grid by Today's Power Inc. (TPI) of North Little Rock, Arkansas, in conjunction with a Bluestem Electric Board of Trustees meeting. Alongside 11 partnering Kansas electric cooperatives, Bluestem joined the Kansas Cooperative Sun Power Program, a TPI solar power services agreement program that ensures low-cost renewable energy.

Bluestem's solar farms provide greater control over monitoring, load-balancing, and rate stabilization for its members. Along with other participating Kansas electric cooperatives, Bluestem negotiated competitive long-term pricing for the 25-year or more term.

"Working with Bluestem Electric on this project is an excellent way for us to assist the cooperative in improv-



Bluestem Electric trustees and staff, along with Today's Power President Derek Dyson and Marketing Coordinator Taylor Baker, flip the switch to their solar farm.

ing the quality of life for their members by providing reliable, sustainable energy sources," said TPI President Derek Dyson.

"This is exciting for Bluestem and important to our members," said Bluestem General Manager Michael Morton. "Like those we serve, Bluestem wants to be good stewards of our resources. These solar projects will help us provide affordable power for our members. It is important to note that every kilowatt-hour produced will be used by the members of Bluestem. Our members work hard for their money and deserve the financial security these solar proj-

ects will provide. Bluestem is here not just to sell electricity, but to promote and enhance the quality of life here in rural Kansas."

TPI was chosen by the 12 Kansas cooperatives in 2020 to provide solar-produced power for cooperative use. Work on Bluestem's two solar farms began in late 2021 and was completed in June 2022, after all regulatory and engineering approvals were issued. For the length of the 25-year-or-more agreement, the cooperative will purchase electricity generated by the solar farms at a fixed, low cost. TPI owns and operates 100% of the solar array.



# The Science of Attic Insulation

## What's in Your Attic?

The answer to this question could be costing you hundreds of dollars each year!

Bluestem Electric Cooperative is constantly striving to keep your energy costs down, however, the cost of generating the electricity supplied to your home has risen at historical rates over the past decade. What does this mean to you? Energy costs have gone up tremendously.

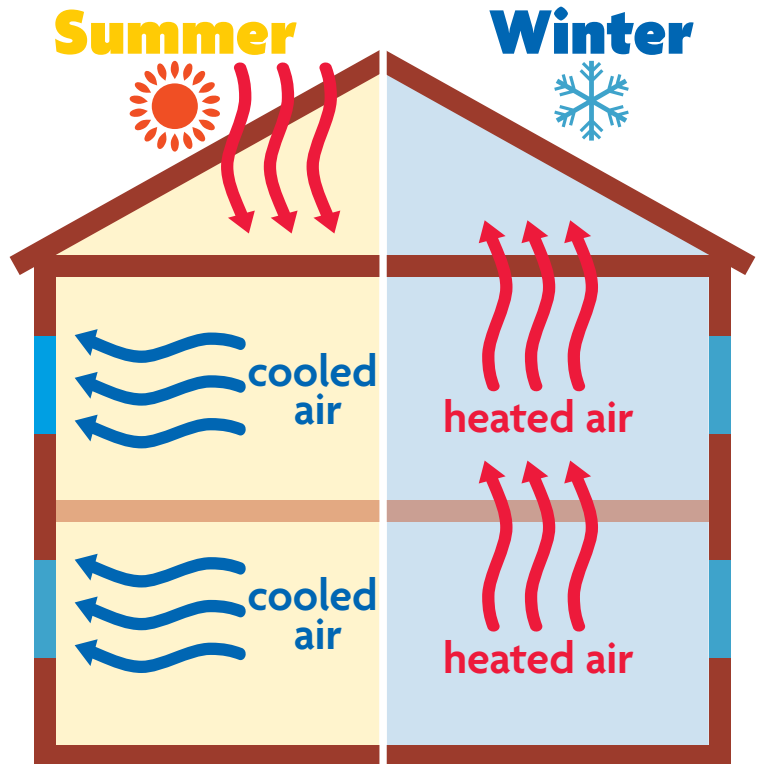
According to Kansas Electric Power Cooperative, the cost to generate the electricity supplied to rural Kansas homeowners has gone up more than 40% in the last seven years. As energy costs go up, the recommended amount of insulation you should have in your attic goes up too. In roughly the same time period, the minimum amount of attic insulation required in a new home went up by 38.75%. A new home built in 2005 was required to have an R-30 of attic insulation (about 8 inches of cellulose insulation). Seven years later, Energy Star® changed recommendations to R-60 for that same home (16-18 inches of cellulose insulation). When energy costs go up, you need to add more insulation (and make air sealing improvements) to your attic.

## Why is the Attic so Important for Energy Efficiency?

We are just entering some of the hottest months of the year and many homeowners will soon be suffering from seasonally high energy bills. Could your attic insulation be one of the MAJOR causes of your high energy bills? If you have an under-insulated attic with poor air sealing, the answer is certainly YES!

In the summer your attic can reach 180 degrees or more. This is like having an oven on top of your home. The law of thermodynamics states that heat is constantly moving toward cold to reach equilibrium. This means the extreme heat of the attic is seeking balance and trying (in any way it can) to get into your air-conditioned home. Behind your walls, your home has dozens of wire and plumbing penetrations between your living space and your attic. These holes can only be seen from the attic. These holes act like a freeway for all the heat in your attic to race into your home pushing the cold air (that you paid to cool) right out of the house.

Heat from your attic is also able to conduct right through the ceiling into your home. Conduction is the process of heat moving through a material. The purpose of insulation in the summer is to slow the conduction process of the heat moving from the "oven" in your attic into your air-conditioned home. If your attic is not insulated to the Energy Star stan-



In the summer, your attic is like an oven. Heat races into your home and shoves cold air out.

ard, heat will push down through the ceiling of your home rapidly. If you could see the heat rushing into your home it would be like seeing a water faucet in your home constantly running with no off switch. What do you think this process is doing to your energy bills?

## Your Cooperative's Effort to Help Members

Bluestem Electric Cooperative has been working with Attic Report Card so our members can know exactly how well their attics are insulated and air sealed. Members of Bluestem Electric Cooperative can get this 12-point attic inspection for FREE (\$99 value). A member's Attic Report Card will clearly detail the current condition of their attic insulation and list the exact improvement steps it will take to bring the attic up to Energy Star standards. The Attic Report Card improvement team has completed hundreds of improvement projects for cooperative members (many of whom are saving 25% or more on their heating and cooling costs).

If you are curious about the condition of your attic and would like to know how much you can expect to save if you make improvements visit [atticreportcard.com](http://atticreportcard.com) and click "Grade My Attic" to schedule your FREE attic inspection.