A Touchstone Energy® Cooperative

CODINGTON-CLARK ELECTRIC
AUGUST 2025 VOL. 26 NO. 4

COOPERATIVE CONNECTIONS

Mitchell Tech Expansion

Photo submitted by Mitchell Technical College

South Dakota Youth Tour 2025

Thirty-six teens representing 22 South Dakota electric cooperatives traveled to the Washington, D.C., area June 15–21 for the 2025 South Dakota Youth Tour.

The program traces its roots to a 1957 speech by Lyndon B. Johnson, who urged electric cooperatives to send young people to the nation's capital so they "can actually see what the flag stands for and represents." Since South Dakota sent its first group in 1963, more than 1,300 students have represented the Rushmore State on this once-in-a-lifetime trip.

The 2025 group visited many historic and impactful sites in Washington, D.C., including Ford's Theater — the site of President Abraham Lincoln's assassination in 1865. Their visit, which took place on Juneteenth, added a layer of reflection on the nation's path toward emancipation and equality. The group continued to explore themes of patriotism and national history throughout the week, viewing the Star-Spangled Banner at the Smithsonian's National Museum of American History, the Declaration of Independence at the National Archives, and the Bureau of Engraving and Printing where a significant amount of the nation's money is printed.

(Above) Thirty-six students from across South Dakota visit the U.S. Marine Corps War Memorial based on Joe Rosenthal's photograph of the flag raising on the island of Iwo Jima during World War II.

(Below) Codington-Clark sponsored Haldey Gjerde to attend the trip and see electric cooperatives' impacts and connections to captiol hill.

Students also met with South Dakota's congressional leaders, including U.S. Senators John Thune and Mike Rounds, and had the chance to connect with Youth Tour participants from 44 other states. Together, they toured many of the nation's most treasured landmarks, including the U.S. Supreme Court, the Smithsonian National Museum of the American Indian, and more.

At the Gaylord National Resort & Convention Center, students concluded their trip with NRECA-led events, where they heard an inspiring message about perseverance and leadership from Youth Day keynote speaker Mike Schlappi, a four-time Paralympic medalist in U.S.A. men's wheelchair basketball.

"The Youth Tour was an incredible experience and one I will never forget," said Hadley Gjerde with Codington-Clark. "I got to tour some of the most important places and I was able to do it with other young people. We were able to meet kids from all across the country as well as some of the South Dakotans in office. Visiting the Capitol was one of the most inspiring parts of the trip and I'm very grateful for the opportunity."

What is a Cooperative?

Dave Eide
General Manager
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Some co-op members have a strong understanding of what a cooperative is, while others may not be as familiar. It's understandable. The cooperative business model, in most cases, isn't covered in high school and only in college if you take certain business classes. Many people don't do business with a cooperative. However, in the farm community most do. The concept can be hard to grasp for some, especially since most people are used to businesses operating for profit — and that's perfectly fine. Everyone needs to make money to take care of their families and themselves.

Electric companies have been around since 1882 when Thomas Edison opened the Pearl Street Power Station in New York City. After that many investor-owned electric companies followed providing electricity in American cities. The investor-owned electric companies didn't consider investing in rural areas, mainly due to the expense to build out a distribution system in sparsely populated areas. There was no money to be made.

Cooperatives, in our case an electric cooperative, were started to accomplish something that was impossible to do for any one individual. Folks came together to form electric cooperatives like Codington-Clark Electric to get electricity in the rural areas. Codington-Clark Electric was incorporated December 19, 1940. But things didn't get going until after World War II was over. During the war, materials like copper and steel weren't available, as they were being directed toward the war effort. After the war was over, things got moving again, bylaws were drawn up, a board was elected, employees were hired and lines started getting built. Codington-Clark electrified the first farm in Clark County on May 17, 1947.

Back to what a cooperative is: A cooperative is a business or organization owned by and operated for the benefit of its members (members not customers). Codington-Clark Electric is a nonprofit organization. Excess margins, (we use the word margins, not profits), are distributed among members in the form of capital credits. Yes, we keep track of each and every member's excess margins on a yearly basis. Excess margins from years past are eventually returned to the members. Anyone that purchases electricity from the cooperative is automatically a member. Members of a co-op can be individuals, families, farms, ranches or businesses. Members elect a board of directors and participate in the democratic process voting on bylaw changes or anything else that might be necessary.

Codington-Clark Electric was formed by the members for the members. We're not here to make the cooperative margins, we make margins to keep the cooperative going. That's pretty much it, stay safe!

COOPERATIVE
CONNECTIONS
CODINGTON-CLARK ELECTRIC

(USPS 019-073)

To report a power outage:
1-844-968-1976
Office Hours:
Mon. - Fri., 8 a.m. to 4:30 p.m.

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www.ccelectric.coop

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Staying Alert With Kids in Hot Cars

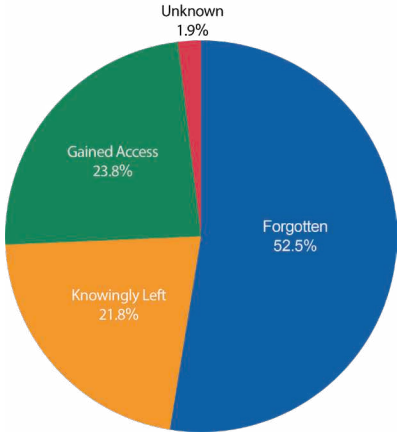
Source: National Safety Council

Since 1998, more than 1,010 children have died from vehicular heatstroke, an average of 37 per year. Parents and caregivers can act immediately to end these preventable deaths.

How Does It Happen?

Even on mild or cloudy days, temperatures inside vehicles can reach life-threatening levels. Leaving windows slightly open doesn't help. Children should never be left unattended or be able to get inside a vehicle. Three primary circumstances resulting in deaths of children in hot cars are:

- A caregiver forgets a child in a vehicle - 53%
- A child gains access to a vehicle - 24%
- Someone knowingly leaves a child in a vehicle - 22%



NSC advises parents and caregivers to stick to a routine and avoid distractions to reduce the risk of forgetting a child. Place a purse, briefcase or even a left shoe in the back seat to force you to take one last look before walking away. Keep car doors locked so children cannot gain access and teach them that cars are not play areas.

There is no safe amount of time to leave a child in a vehicle, even if you are just running a quick errand.

"Never fly a kite by a power line!"

Kasen Tikka, Age 9

Kasen warns readers about the dangers of flying a kite near power lines.Thank you for your picture, Kasen! Kasen's parents are Corey and Marcel Tikka from Lake Norden, S.D.

Kids, send your drawing with an electrical safety tip to your local electric cooperative (address found on Page 3). If your poster is published, you'll receive a prize. All entries must include your name, age, mailing address and the names of your parents. Colored drawings are encouraged.

Delicious DESSERTS

STRAWBERRY ANGEL FOOD DESSERT

Ingredients:

1 angel food cake (baked and cut in pieces)
3.9 oz vanilla pudding
1 3/4 cups milk
3 cups sliced strawberries
¼ cup sugar
8 oz. Cool Whip, thawed

Method

Put the angel food cake in a 9"x13" pan. In a separate bowl, combine vanilla pudding and milk; whisk together until thick; set aside. In another bowl, combine sliced strawberries and sugar; pour over the cake. Spread pudding over strawberries. Top with 8 oz. Cool Whip. Add more strawberries on top. Chill 1 hour before serving.

Gladys Bauer
Cam Wal Electric

MONSTER COOKIE BARS

Ingredients:

1 stick butter
1 1/2 cups peanut butter
1 cup sugar
1 cup brown sugar
1 tsp. vanilla
3 eggs
2 tsps. baking soda
4 1/2 cups oatmeal
12 oz. chocolate chips
12 oz. plain M&Ms

Method

Mix butter, peanut butter, sugar, brown sugar, vanilla and eggs. Add dry ingredients and mix in chocolate chips and M&Ms. Bake at 350°F for 15 minutes (no longer) in a large jelly roll pan. They may not look done but they are. Enjoy!

Rhonda Tuscherer
FEM Electric

BLUEBERRY TORTE

Ingredients:

1/2 cup butter
1 cup all-purpose flour
1 tbsp. sugar
8 oz. pkg. cream cheese
1 cup powdered sugar
8 oz. Cool Whip (reserve part for topping)
1qt. blueberries (fresh or frozen)
1 cup water
1 cup sugar
3 tbsps. cornstarch

Method

Cut butter into flour and sugar. Press into a 9"x13" pan and bake at 350°F for 20 minutes. Chill. Beat cream cheese and powdered sugar until light and fluffy. Fold in Cool Whip. Spread over crust. Simmer one cup blueberries and 2/3 cup water for five minutes. Blend sugar and cornstarch; add 1/3 cup water and mix until smooth. Combine with cooked berries and boil until thick and transparent. Cool and add remaining berries. Chill thoroughly and spoon over cream cheese mixture. Chill several hours or overnight. Top with Cool Whip.

Janet Lefers
Douglas Electric

Please send your favorite recipes to your local electric cooperative (address found on Page 3). Each recipe printed will be entered into a drawing for a prize in December 2025. All entries must include your name, mailing address, phone number and cooperative name.

Cool Savings: Refrigerator and Freezer Efficiency Tips

Miranda Boutelle
Efficiency Services Group

Q: What are some ways I can improve the efficiency of my refrigerator and freezer?

A: When exploring ways to be more efficient with refrigerators and freezers, we often find ourselves stuck between convenience and conserving energy. While you can upgrade to newer equipment, care and equipment habits can be just as important to saving energy.

Here is some guidance on equipment energy use, including tips to keep your current equipment running efficiently and ways to limit overuse of refrigeration in our homes.

The U.S. Department of Energy helps us understand what to look for in our existing equipment and new appliances. In general, the larger the refrigerator, the more energy it uses. The most efficient models are typically 16 to 20 cubic feet. Models with the freezer on top tend to use less energy than bottom freezers or side-by-side units. A refrigerator 15 years or older uses about 35% more energy than an Energy Star-certified model.

Let's explore some tips to keep your refrigerator running efficiently.

Keep it organized. One of the biggest issues with refrigerator energy use is opening the door or keeping it open. An organized fridge makes food items easier to find, minimizing open-door time and keeping cold air inside. Place items in the same spots so they are easier and faster to find. I tell my kids to take a quick look inside at the options and close the door while they are deciding what to eat.

Keep it clean. Regularly cleaning the gasket – the flexible strip around the perimeter of the fridge door – ensures a tight seal between the door and the unit to keep cold air inside. If the gasket is not sealing tightly, it should be replaced. Removing and cleaning the vent at the bottom of the unit can help airflow. For the coils at the back, use an extended cleaning brush instead of moving the fridge and risking injury.

Also, keep food safety in mind. The Department of Energy recommends setting your refrigerator temperature between 35 and 38 degrees and freezer at 0 degrees.

If you have a second refrigerator or freezer, here are some things to consider that can help you save energy.

Do you need it plugged in year-round? Perhaps you can keep it empty and unplugged for part of the year. Maybe you only really need it during the holiday season. Unplugging it for the months you aren't using it will save energy, and you'll still have it as a backup when you need it.

If you are a hunter or buy meat in bulk, set a goal to empty out your freezer before you restock. This allows you to avoid food waste and unplug the extra appliance when it is not needed.

If possible, consider the location. Keeping the second fridge or freezer in a cool basement versus a hot garage requires less energy.

Instilling simple cleaning and food storage habits are easy ways to be more efficient with your in-home refrigeration.

Collecting Cacti

No Bark, Some Bite

Jacob Boyko
jacob.boyko@sdrea.coop

What's a companion that doesn't bark, doesn't chase cars and doesn't dig holes in your yard?

According to West River Electric Association member Richard Kruger, the answer is cacti.

For nearly 40 years, Richard has collected different varieties of cacti, from the barrel-shaped ferocactus to the stove pipe cactus that resemble the iconic suguaro cactus of the American Southwest.

"I remember as a kid, my dad had a few cacti and he always managed to keep them alive and take care of them," the retired aircraft plant worker and marine veteran said. "I always thought, cacti are so easy to take care of – they don't require a lot of time."

With that, Richard reignited the tradition of cacti collecting.

At this home near Tacoma, Washington, where Richard and his wife, Donna, lived prior to 2021, Richard ammassed an impressive collection of cacti from around the world.

"We had a front porch – kind of like a four seasons room – and I was able to bring all of my cactuses and put them in there," he said. "It got to be kind of a hassle, because I had so many cactuses it was like an afternoon project transporting them."

Preparing to move to South Dakota, Richard unfortunately had to downsize his collection. But now, in the Rushmore state, he's begun collecting again, starting with the local species.

"There are six different varieties of cacti native to South Dakota, and just in the Rapid City area alone I've managed to find in the fields nearby all six varieties."

Even though raising cacti is generally straightforward, Richard says it's important to do proper research before any purchasing.

"If you're going to buy a cactus that's from Argentina, for instance, you will need to know what the climate is like there."

For South Dakota's native varieties, which include the Missouri Foxtail, Grassland Pricklypear and Prairie Pricklypear, among others, the cacti go dormant in the winter – no more afternoons for Richard and Donna spent hauling pots of cacti inside.

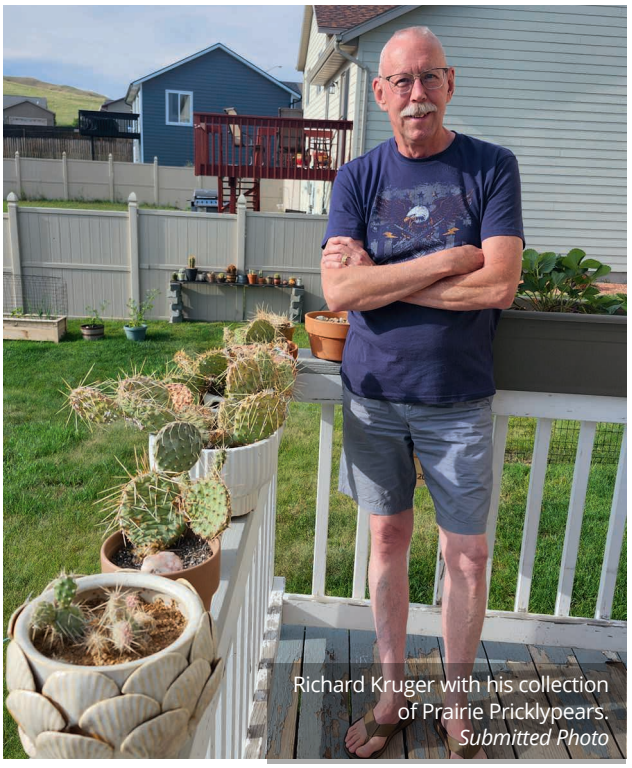
One important tip: resist the urge to water.

"The biggest challenge is people being overzealous about watering," Richard explained. "You can kill a cactus real quick. The roots ... will begin to rot first, and then it goes up through and next thing you know, you've got a cactus that's turning jelly."

He continued, "I found it's so much better to just kind of ignore (the cactus) and put a check mark on your calendar when you need to water."

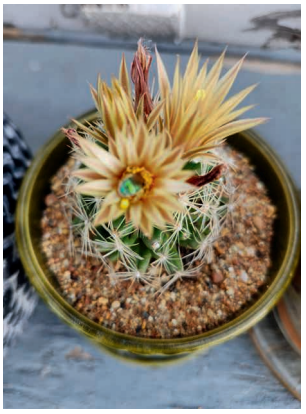
Currently, Richard has about 25 cactuses in his collection, spread throughout his yard, patio and basement. His goal for his collection:

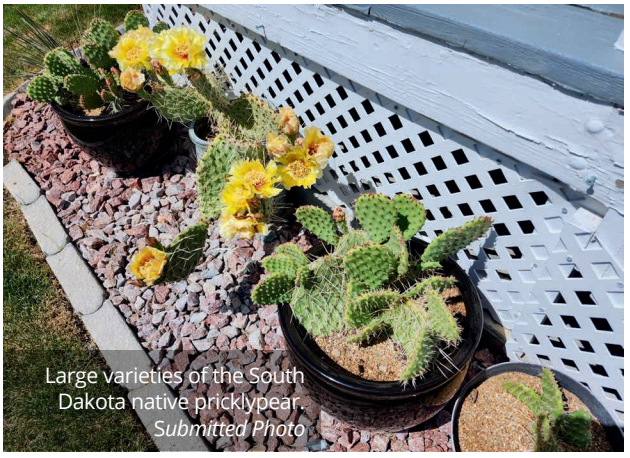
"Just to take care of them and enjoy them."



Richard Kruger with his collection of Prairie Pricklypears. *Submitted Photo*

The Missouri Foxtail is common along the Missouri River and in western S.D. *Submitted Photo*





Large varieties of the South Dakota native pricklypear. *Submitted Photo*

A render showing Mitchell Technical College's new Power Line Underground Lab. MTC says students will practice underground utility work in this new facility, away from other courses' labs to reduce crowding. *Submitted Photo*

FUNDING FUTURES

Rural Electric Cooperatives Support New Training Facility

Jacob Boyko
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Mitchell Technical College is well known among the region's rural electric cooperatives for its industry-leading lineworker training programs.

Now, that program is about to get even better, as MTC begins construction on a new, state-of-the-art underground cable equipment training facility.

The Power Line Underground Lab will allow students to learn how to trench, bore, and connect cables in an environment away from other labs and courses.

Additionally, being indoors and having a dirt floor, instructors have the added benefit of being able to plan courses without worry regarding outside weather and frozen ground during winter.

"The new facility allows us to be able to use our underground curriculum and teach it all throughout the school year, instead of just the beginning and the end when the ground is thawed out," MTC's president, Theresa Kriese said about the space.

"They get more equipment time because we're not trying to share a lab where we're also planting poles."

Construction of MTC's Power Line Underground Lab began this spring. MTC expects students beginning in the fall semester of 2026. *Submitted Photo*

Kriese hopes spreading out the curriculum over the semester will allow MTC's instructors to dive deeper into certain course topics with their students, making them overall better candidates for employment when they enter the workforce.

"We're seeing the energy industry making another transformation where underground is really gaining a larger presence than it had in the past", Kriese added, noting the Federal Emergency Management Agency's push to replace downed overhead lines with resilient underground cables after storms.

"We're finding that if we can have our students trained in both (overhead and underground), it opens some opportunities for them, because they may not be able to climb that pole their entire life," she continued. "It gives some flexibility to the employer, because I can hire somebody that can climb but they can also do that underground connection. So wherever I need them, I can have them work in my employment area."

Central Electric Cooperative General Manager Ken Schlimgen agrees, adding that with more and more electric co-ops working to replace their aging overhead infrastructure with underground line, MTC's new underground focus will help alleviate future workforce challenges.

"When we support Mitchell Tech programs, it's an investment into our most important asset: our workforce," Schlimgen said. "Workforce challenges will continue for decades, and having a competent, qualified team of lineworkers to serve our members and keep the lights on is vital to our success."

Central Electric is just one electric co-op providing financial support for the expansion.

At the time of writing, more than 20 electric co-ops in South Dakota have pledged over $460,000 to MTC in support of the facility.

"Power line personnel are the backbone of our cooperative family, keeping the lights on for our members and being leaders in our communities," said Steve Barnett, general manager for the South Dakota Rural Electric Association.

"Mitchell Technical College is a workforce pipeline for this profession and is vital to cooperatives across our region."

Kriese said staff and student excitement is growing ahead of the facility's expected 2026 completion and expressed appreciation to electric co-ops for their support.

"Mitchell Tech is making a statement and a commitment to the energy industry that we are your partner in developing and training employees for you," Kriese said.

"Without the partnership of the electric cooperatives, we really wouldn't be able to make this expansion."

The project is slated to celebrate its grand opening in the Fall of 2026, when students and Mitchell Tech faculty will begin using the facility to train tomorrow's electric cooperative workforce.

MTC's current plan for the Power Line Underground Lab shows a 34,000 square foot facility, made up of a 23,500 square foot underground lab, a 7,755 square foot vehicle and equipment storage area and a 1,000 square foot classroom. *Submitted Photo*

Theresa Kriese
President
MTC

Steve Barnett
General Manager
SDREA

Ken Schlimgen
General Manager
Central Electric

Codington-Clark Electric

MARKETING PROGRAM

Whether you're building a new home, remodeling an existing home, building a new business facility or just looking to upgrade your heating and cooling system, your cooperative has a program designed to help. We also offer a great rebate program on lifetime-warranty water heaters.

The marketing program for 2025 consists of cash rebates, reduced electric rates and loans. Cooperative members can take advantage of the following rebates, rates and loans:

Reduced Electric Rate.....5.7 cents per KWH

- Electric Heating Systems are eligible for the reduced electric rate on all energy used by the heating system.
- System will be submetered to determine usage.
- Heat pump installations are eligible for reduced rate year-round with air conditioning function controlled by load management system.
- Co-op furnishes load management control device at no cost to member.

Residential Heating

Electric Heat Pumps - 2 tons and larger.....Incentive: $600 rebate
Electric Heat Pumps (with electric resistance).....Incentive: $700 rebate
Mini-Split Heat Pump - under 2 tons.....Incentive: $300 rebate
Mini-Split Heat Pump - (with electric resistance).....Incentive: $350 rebate

Lifetime Warranty Water Heaters

Replacing existing tank (non-lifetime warranty) $6 per gallon
(50-gallon tank = $300 • 85-gallon tank = $510 •100-gallon tank = $600)

New Home Construction $6 per gallon

- All life-time warranty water heaters must be connected to load management system to receive rebates.
- Controlled electric water heaters are eligible for up to a $5 monthly credit. No other rate discounts apply.
- Cooperative provides load control device at no cost to member.
- Large capacity grid-enabled water heaters must be activated by the cooperative for full heating capacity.
- Rebates are based on nameplate capacity.

Loans for Members

Codington-Clark has 3 loans available for members of the cooperative.

- Heat Pump Loan – air-source or geothermal
- Irrigation System Auto Restart Equipment Loan
- Energy Efficient Loan
  - Caulking
  - Wall, floor, ceiling, duct, pipe and water heater insulation
  - Storm or thermal windows and doors
  - Clock thermostats
  - Attic ventilation fans
  - Electric water heaters, which reduce consumption of electricity
  - Devices that reduce the maximum coincidental or non-coincidental demand on the electric system

Terms of the Loans

- Loan amounts not to exceed $20,000 for air-source heat pumps, geothermal heat pumps and irrigation auto restart loans.
- The interest will be 5 percent annually on the unpaid balance.
- The maximum length of the loan will be 84 months.
- Loan amounts not to exceed $10,000 for Energy-Efficient Home Improvement Loans.

For more information regarding Codington-Clark's incentive programs, call our office at 605-886-5848 or 800-463-8938.

Trees – An Electrical Hazard

Member safety is first and foremost at Codington-Clark Electric Cooperative. Every year people are injured or even killed when they climb or trim trees near power lines.

Trees don't have to physically touch an energized power line to be dangerous. Electricity can arc (jump) from the power line to nearby trees given the right conditions, like a voltage surge on the line from a nearby lightning strike. Such a condition can kill anyone caught near the tree and can cause a fire.

High voltage lines are not insulated, and direct contact usually results in death by electrocution. A tree contacting a power line can also become energized, injuring someone touching the tree. Children should never climb or play in trees near power lines. Trees contacting power lines can also start fires, endangering lives and property.

The National Electric Safety Code specifies that power lines maintain specific distances from nearby objects—including trees. The code requires greater clearances for higher voltage lines. For the same safety reasons, transmission line rights-of-way are wider than for local distribution lines.

Reliable electric service is also an integral part of our lives. Codington-Clark Electric Cooperative strives to provide safe, reliable and affordable electric service. To achieve these goals, we must manage trees near power lines.

If you observe trees in the line as shown, please contact the Codington-Clark office with the location.

If a utility representative contacts you about trimming trees near power lines, please give permission. The outage you help save will likely be your own.

DAKOTAFEST

Dakotafest, South Dakota's premier agriculture event, is scheduled for **Aug. 19-21**, just south of I-90 near Mitchell, S.D.

There will be more than 500 exhibitors displaying the latest and greatest in agricultural products. Come visit South Dakota's Touchstone Energy® Cooperatives and cool off in Building 215, which is air-cooled by electric geo-thermal heat pumps. Electric co-op representatives will demonstrate new electric products.

Exhibits are open:
Tuesday, August 19 - Thursday, August 21, 2025
9:00 a.m. - 4:00 p.m. Daily

REGISTER TO WIN

A Blackstone E-series 2-Burner 22" Electric Tabletop Griddle with Prep Cart

Storm clouds gather near Nunda, S.D.
Photo by Jacob Boyko

WEATHER WARNINGS

Getting Ready for Severe Summer Storms

Jacob Boyko
jacob.boyko@sdrea.coop

Midwest summers have a certain notoriety for their extreme summer weather events.

South Dakota is no exception. Between May 2015 and June 2025, the National Oceanic and Atmospheric Administration (NOAA) reported more than 200 tornadic events in South Dakota.

The Recipe for Severe Weather

According to Peter Rogers, warning coordination meteorologist for the National Weather Service (NWS) Office in Sioux Falls, there are four foundational components for the specific type of thunderstorms that produce tornadoes called supercells.

The first component is moisture – it's needed to form clouds. The second component, lift, refers to an upward motion of the air. In places without mountains like eastern South Dakota and western Minnesota, that occurs when a cold or warm front moves into the area and the laws of physics force warm air upward.

The third component, instability, is the difference between the two air masses.

"If you have pockets of air that are hotter than the air around them, they'll continue to rise," Rogers explained. "And the instability is the extent to how far those parcels will rise."

The final component, wind shear, is how the wind speed and direction changes with altitude.

"Here, at the surface, we're normally only concerned about what the wind speed is doing at the surface," Rogers explained.

"But as meteorologists, we want to know what's happening at 5, 10, 15 … feet and so on. The more changes you have with wind speed and direction … with height increases your chances of going from just your garden-variety thunderstorm to a severe thunderstorm that's more capable of producing strong winds and tornadoes."

Over the last 10 years, South Dakota has seen tornadoes mostly ranking EF-0, EF-1 and EF-2 on the Enhanced Fujita scale.

The scale, named for its developer, meteorologist Ted Fujita, ranks tornados on a scale from 0 to 5 based on recorded wind speed and the damage observed that can be attributed to the tornado, with an EF-5 being the most severe.

An EF-0 tornado will leave behind damage indicators showing wind speeds between 65 and 85 mph, while an EF-1 tornado will show damage indicating wind speeds between 86 and 110 mph, an EF-2 111-135 mph, an EF-3 136-165 mph, an EF-4 166-200 mph and an EF-5 being anything over 200 mph.

But weak and strong tornadoes alike can be deadly without proper action.

Working at the National Weather Service, it's part of Roger's job to get severe weather alerts out to the public.

Weather radios are particularly helpful in severe weather scenarios, he explained, because you can set them to alert you any time the NWS sends out an alert for your area.

"Severe weather is not just an afternoon or evening phenomenon," Rogers said. "We often have some pretty big events in the middle of the night, so you want to have something that's going to wake you up in the middle of the night so you can get to shelter."

NOAA Weather Radios can tune to your local forecast 24 hours per day.

As any Midwest resident knows, there's far more summertime severe weather than just tornadoes.

Derechoes, which decimated much of eastern South Dakota and Western Minnesota in 2022, produces a wall of strong, fast gusts of wind that can be just as dangerous as a tornado.

According to the NWS, for a storm to be classified as a derecho, it must extend 250 miles with gusts of at least 58 mph and produce several gusts of at least 75 mph.

In western South Dakota, the Black Hills help create the optimal conditions needed for severe hail.

"What you need is a really strong thunderstorm that has a really strong updraft," explained Kelly Serr, warning coordination meteorologist for the National Weather Service Office in Aberdeen.

"When that updraft is really strong, it reaches the very coldest levels of the atmosphere where tiny droplets of rain start to freeze."

The stronger the draft, the longer the frozen rain drop will remain in the atmosphere. And the longer it's stuck in the updraft, the more water it collects, growing in size until finally the hail stone is too heavy to be suspended by the updraft anymore, and it plummets to the ground.

In western and central South Dakota, that process is exacerbated by the Black Hills, which help force the air up even higher and create fast-developing thunderstorms.

During severe weather events like thunderstorms, tornadoes and hail, the NWS encourages those in the pathway of the storm to seek shelter in a basement or a room without windows away from outside walls, as hail and other debris can shatter windows.

"Something we always tell people is to pay attention to the forecast," Serr said. "Know before you go: 'Are we expecting severe storms?' And then have a safety plan in plan for wherever you are."

Looking Back at Summer Storms

Delmont Tornado – May 5, 2015

At about 10:45 a.m. on Mother's Day, an EF-2 tornado struck Delmont. The tornado's path began in Charles Mix County, making its way north into Douglas County where it reached Delmont and damaged numerous homes, including Delmont's famous Onion House, and destroyed the Zion Lutheran Church and fire station. The NWS reported a peak wind speed of 130 mph, with the tornado covering 17.3 miles and reaching a width of 400 yards.

Derechos – May 12, July 5, 2022

In the afternoon, a wall of straight line wind known as a derecho moved northeastward through eastern S.D. and Western M.N., with wind speeds reaching over 100 mph. The storm brought with it numerous tornadoes, including an EF-2 tornado with wind speeds up to 120 mph in Castlewood. According to the NWS, the derecho was the "most extreme example on record in terms of the measured significant wind gusts." The National Centers for Environmental Information categorized the storm a billion-dollar disaster event. Less than two months after the May event, a derecho moving southeastward produced wind gusts reaching 99 mph in Howard and 96 mph in Huron. In Sioux Falls, the sky turned green – a rare phenomenon caused by refraction, or the bending of light when passing through and being warped by the water and ice contained within the storm system.

Black Hills Hail – June, 2, 2019

In the morning, a supercell thunderstorm moved through Rapid City, Hermosa and Fairburn, producing golf ball-sized hail that damaged vehicles, homes and crops.

Tripp Tornado – May 8, 1965

The strongest tornado ever recorded in S.D. was in Tripp County. The storm produced snow over the Black Hills, with Lead reporting 36 inches of snow. The Tornado touched down east of Wewela, with a maximum observed width of 1,760 yards, and moved northwest 30 miles. The tornado was classified an F-5.

Pierre Hail – July 18, 2023

An afternoon warm front heading east across central S.D. developed into a supercell. Around 6:20 p.m. in Pierre, there were reports of softball-sized and larger hail, with one setting a Hughes County record at 5 inches in diameter.

Dupree Tornado – June 16, 2010

In the afternoon and evening hours, a thunderstorm over Dupree produced damaging winds, torrential rainfall and flooding, and at least 16 tornadoes, with multiple tornadoes being simultaneous. The storm damaged roofs, mobile homes and grain bins. The damage observed incidcated an EF-2 tornado.

Vivian Hail – July 23, 2010

A S.D. and U.S. hailstone record was set in Vivian after an evening thunderstorm formed a supercell moving southeastward. The NWS reported numerous hailstones exceeding 6 inch diameters as well as a record-setting 8 inch diameter, 18.625 circumference and 1 pound, 15 ounce hailstone. NWS estimates the hail stone fell at about 100 mph.

Sioux Falls Tornado – Sept. 11, 2019

In the late evening hours of Sept. 10 into the early morning hours of Sept. 11, severe thunderstorms moved across southeast S.D. into M.N. and I.A., bringing 80 to 100 mph straight line winds and three brief EF-2 tornadoes in Sioux Falls. The Avera Health Complex, several commercial spaces, and a neighborhood were damaged.

Jerauld Tornadoes – June 18, 2014

In the evening, a thunderstorm over Jerauld County produced an EF-4 tornado that traveled over 11 miles from Lane to Alpena. The tornado measured 880 yards at its widest. The same storm produced several more tornadoes, including an EF-2 that ravaged Wessington Springs.

Bowdle Tornado – May 22, 2010

A supercell in north central S.D. produced multiple tornadoes, including an EF-4 and golf ball-sized hail near Bowdle. NWS reported nearly 100 downed utility poles.

Source: Event Summaries, Weather.gov

A West Central Electric Cooperative drone flies over distribution lines so employees can inspect.
Photo by Jessie Tucker

TAKING FLIGHT

Electric Co-ops Utilize Drones

Jacob Boyko
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Across South Dakota, electric cooperatives are turning to unmanned aerial vehicles to improve safety, speed up outage responses and enhance day-to-day operations.

Better known as drones, these high-tech, lunchbox-sized robots offer co-ops a birds-eye view of infrastructure – no risky climb or airplane flight necessary.

"Our main goal is to use them (drones) during storm situations," explained Jessie Tucker, manager of member services at West Central Electric Cooperative and an advocate for electric co-ops' drone integrations.

"Typically, we have to charter a plane from Pierre, and they will pick up an employee from West Central and we have to fly the lines when we have severe damage. What we're hoping to be able to do is get the drone in the air and patrol the line to see what we have for damages and how extensive everything is."

Tucker is a certified remote pilot, having passed the Federal Aviation Administration's Part 107 exam on the rules and regulations for operating unmanned aircraft vehicles. While hobby drone operators don't need a license for recreational use, federal law requires commercial operators be licensed, meaning all electric co-op drone operators have studied for and passed the rigorous exam.

"It was surprisingly tough," said Moreau-Grand Electric's JJ Martin, who is also a licensed remote pilot. "There's a lot of stuff in there and understandably so. Flying a drone is like playing a video game – it's pretty easy. But when it comes to all of the safety, like knowing how to read a map, knowing what airspace you're in, what all of the codes mean, there's a lot to it."

Martin, who is the member services director, champions drones for the convenience they bring to the co-op's communication efforts. He says using the drone for aerial photography and videography helps him get "out of the way" of busy lineworkers and gives him a vantage point that highlights the beauty of the landscape.

There are also benefits for the co-op's substation workers, Martin continued. Hovering the drone over the equipment allows some inspections to be made more quickly and without cutting power.

"We're able to just fly the drone over the top, zoom in and take pictures," Martin explained. "The resolution is so high you can zoom in quite a ways and inspect a little bit without putting anybody in harm's way or shutting power off for anybody."

Back at West Central Electric, lineworkers use a thermal energy camera on a drone to fly over towns and other infrastructure to find "hot spots," or bad

connections on power lines where a component is beginning to fail.

"We check out substations at least once a year, usually on the coldest days or one of the heaviest loaded days," Tucker explained, noting each year they typically find at least several hot spots.

Basin Electric Power Cooperative, the member-owned generation and transmission utility powering South Dakota's electric co-ops, uses its fleet of drones to build fully three-dimensional renders of land sites and infrastructure.

According to Robert Kohler, a certified federal surveyor, licensed remote pilot, and geomatics supervisor at Basin Electric, the utility accomplishes this using drones equipped with cameras and LiDAR scanners.

LiDAR, which stands for light detection and ranging, is a focused array of laser pulses. The mounted sensor emits the lasers and the light travels until it meets a solid object. The lasers are then reflected by the object back into the LiDAR sensor, with the system measuring the length of time it took for the laser to return and using that to calculate the distance between the sensor and the object.

Kohler says the sensor he uses collects 400 data points per square meter at 190 feet of elevation while traveling 11 feet per second. Each of those points – billions of them, Kohler pointed out – are recorded and precisely mapped to a location on an XYZ coordinate plane.

"Imagine you have a flash light and you're walking along the ground. Anything the light touches, it illuminates," Kohler explained. "You can create a three-dimensional map and some of the features of those maps would be the conductors of the transmission line, the structure itself, the vegetation and plants growing along the sideline of the transmission corridor, or even a vehicle or person."

Moreau-Grand Electric Cooperative linemen in north central South Dakota.
Photo by JJ Martin

Back at the office, Kohler's computer processes the data – file sizes often reaching into the hundreds of gigabytes – into a fully three-dimensional model.

Basin Electric's fleet doesn't stop at aerial drones. When working beneath the surface of a body of water, hydro drones like the utility's TriDrone pontoon craft measure the surface at the bottom of a water body using sonar to capture points beneath the surface that LiDAR can't see.

Despite the noted conveniences, Kohler cautioned that using drones for high-intensity data-driven tasks isn't as hands-off as it seems. Sometimes it's a more practical option – sometimes it's not.

"I've got four to six hours of pre-flight planning to just program the software and drone for the specific area that I want it to map out," he explained. "Then I have potentially eight to 40 hours of processing time to reduce the data into what I need. In that regard, there's a lot of extra time involved."

Kohler also said important small measurements need to be double-checked by workers since the drone sensor's measurements are sometimes affected by a margin of error that varies with the craft's proximity to the site.

Even so, many electric cooperatives agree the advancements in unmanned aircrafts vehicles and sensing technologies offer an exciting path forward for utilities.

"Everytime I use it (the drone), I'm getting such a cool angle and I can travel such distances," Moreau-Grand Electric's Martin said. "I'm able to stay out of the guys' way. I'm safe, they're safe."

A TriDrone uses sonar to map terrain beneath the water's surface.
Photo by Robert Kohler

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Photo courtesy of Travel South Dakota

AUG. 27-SEPT. 1
South Dakota State Fair
Huron, SD

To have your event listed on this page, send complete information, including date, event, place and contact to your local electric cooperative. Include your name, address and daytime telephone number. Information must be submitted at least eight weeks prior to your event. Please call ahead to confirm date, time and location of event.

UNTIL AUG. 10
Annual Red Cloud Indian Art Show
Painting, photography, beadwork, quillwork
Red Cloud Indian School
100 Mission Dr.
Pine Ridge, SD 57770
(605) 867-8257

JULY 26
South Dakota Chislic Festival
10 a.m.-9 p.m.
Freeman, SD
www.sdchislicfestival.com

JULY 26
Richmond Lake Association's Annual Pontoon Poker Run
Aberdeen, SD
605-225-0609

JULY 26
Fort Sisseton Lantern Tour
11907 434th Ave.
Lake City, SD
605-225-0609

JULY 31
SPURS Grand Classic Horse Show
9 a.m.-4 p.m.
SPURS Therapeutic Riding Center
1006 130th St.
Aberdeen, SD
605-226-1099

AUG. 1-2
Armour Prairie Festival
Armour, SD

AUG. 1-3
Fort Sisseton Escape Room
11907 434th Ave.
Lake City, SD
605-225-0609

AUG. 1-10
85th Sturgis Motorcycle Rally
Sturgis, SD

AUG. 7-10
South Dakota Senior Games
Huron, SD
605-295-2039
southdakotaseniorgames.org

AUG. 9
Day of Honor
End of WWII 80th Anniversary
10 a.m.
Battleship South Dakota Memorial
12th Street & Kiwanis Avenue
Sioux Falls, SD

AUG. 9
Raise 'Em Rank Bull Riding and Breakaway Roping
Geddes, SD
605-680-2763

AUG. 9
Day Cty Demolition Derby
Day Cty Fairgrounds
6:30 p.m.
Webster, SD
605-680-2763

AUG. 9
Duck Stamp Celebration
USFWS, SDGFP, Ducks Unlimited, Delta Waterfowl
Games, events, prizes
Adam Grimm
Wallace, SD
440-225-2267

AUG. 14-17
Watertown Senior Games
Watertown, SD
605-949-0028

AUG. 16
Extreme Bull Riding Tour
7:30 a.m.
Yankton, SD
605-760-2153

AUG. 21-24
Steam Threshing Jamboree
Prairie Village
Madison, SD

Note: We publish contact information as provided. If no phone number is given, none will be listed. Please call ahead to verify the event is still being held.