



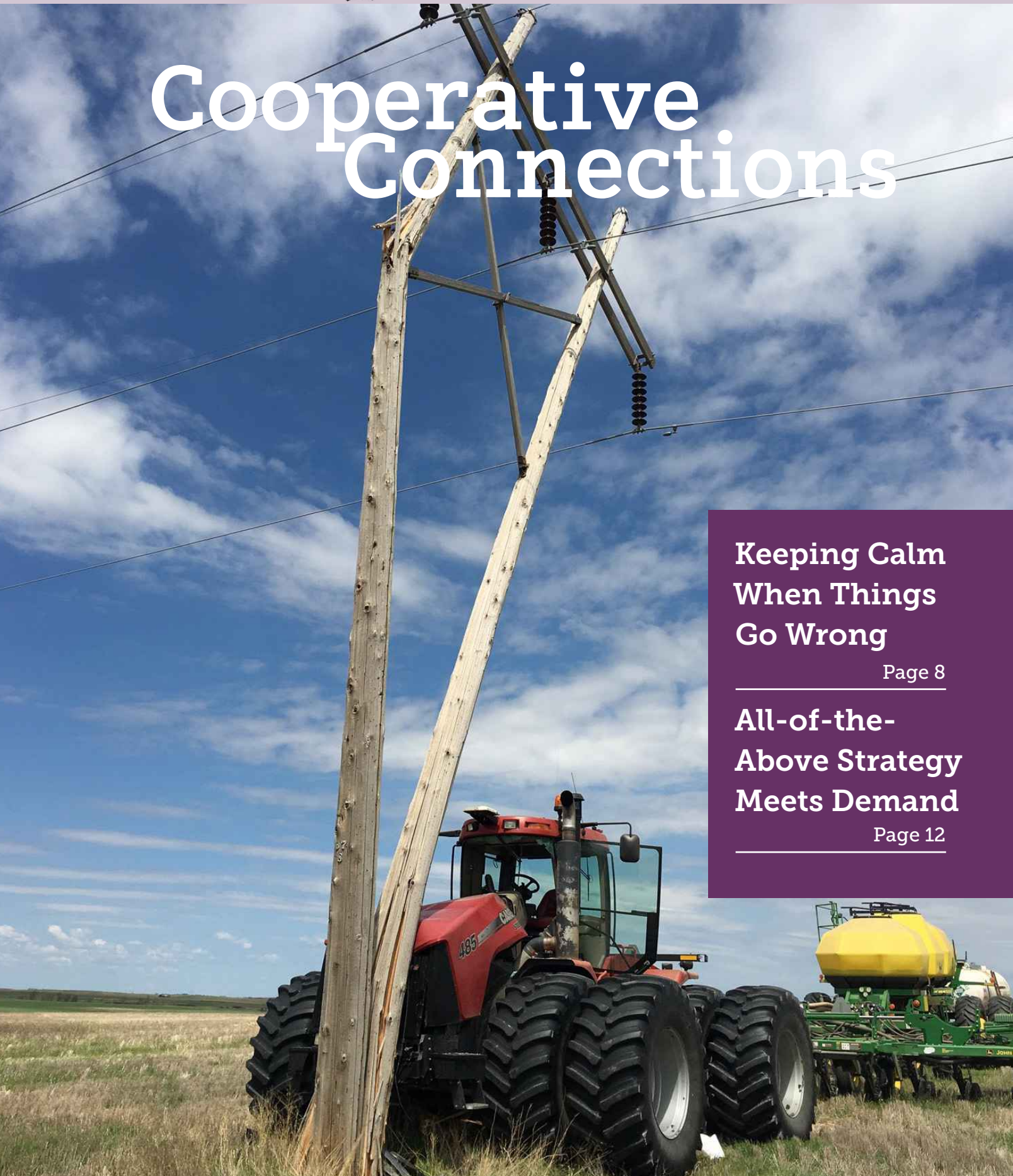
Cooperative Connections

**Keeping Calm
When Things
Go Wrong**

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**All-of-the-
Above Strategy
Meets Demand**

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Coldest Month Since 1996



Steve Reed, CEO

steve.reed@wce.coop

Brrrr! Yet another February is in the books and this one was exceptionally cold and wintery. In fact, our research shows that this February was the coldest month we have had since January of 1996. That is 23 years! We check this data monthly by reviewing heating degree days (HDD). The actual definition of heating degree days is a measurement designed to quantify the demand for energy needed to heat a building or structure. HDD allows us to put a numerical value to just how cold it has been, based off temperature extremes.

One way that we try to help the membership in these cold months is through our budget billing system. The large swings your bill can have in these months is softened because we average the previous 12 months and bill off that amount. You are still paying the same over time, it just keeps you from being hit so hard all at once. For more detailed information on the program, please call the office at 669-8100.

With any luck, March will leave like a lamb and we will see some warmer temperatures. Stay warm and stay safe!

One way that we try to help the membership in these cold months is through our budget billing system.

TRUCKS FOR SALE BY ONLINE AUCTION

West Central Electric currently has two service trucks that will be sold through Big Iron Online Auctions on March 27. Big Iron Auctions are no reserve and have no buyers' fees/premiums! Regular maintenance performed and well taken care of. Both trucks will be sold as-is and with service boxes. For more truck information, please contact Seth Geigle at 669-8100. For information about Big Iron Auctions and the exact listing information, contact Judge Jessop at 280-0127.



Unit 7 is a 2013 Ford F350 with approximately 107,000 miles.



Unit 30 is a 2012 Ford F350 with 123,500 miles (new engine installed at 99,737 miles)



Online auction on March 27.

<https://www.bigiron.com/Listings/WestCentralElectricCoopInc>

West Central Electric

Cooperative Connections

(USPS No. 018-988)

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Our Mission is to Provide Safe, Reliable Service to our Member Owners.

West Central Electric Cooperative, Inc., is an equal opportunity provider and employer.

**Call 605-669-8100
24-hour Dispatching**

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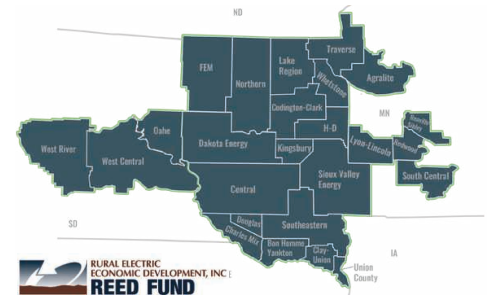
Design assistance by SDREA

West Central Joins with REED Fund

We are investing to build a stronger region. West Central Electric is joining forces with Rural Electric Economic Development, Inc. (REED), a nonprofit corporation governed by 26 electric cooperatives, which provide financing in all or parts of approximately 70 counties in South Dakota and western Minnesota. We are the second co-op from western South Dakota to join the REED corporation and are very proud to bring this opportunity to the members of West Central Electric.

A few quick facts:

- Incorporation in 1997
- Loans Issued – 325
- Total Funds Loaned – \$86.7 Million
- Total Employment by REED Borrowers – Over 9,000
- Total Project Investment – \$819 Million
- Total Real Estate Financed – 2.1 million square feet.
- REED Fund is a community development financial institution dedicated to providing financing and helping to leverage investment to make a difference in the region.



Community Development and Housing

Loans contribute to quality of life and services necessary for sustainable development in the areas of:

- Health care, education recreation, arts
- Public safety and emergency services
- Community infrastructure, facilities for lease to business
- Multi-family rental housing with broad-based community support

REED Financing

- Must reasonably assist the project and may not exceed 50 percent of total projects cost.
- Cannot be solely for refinancing existing debt from other lender.
- Is open to anyone in the geographic coverage area regardless of power supplier.
- Applications are thoroughly analyzed prior to approval.

REED Fund partners with commercial banks, nonprofits and government agencies to provide financing. For additional information, an application and conditions that apply, please see the REED Fund website at www.reedfund.coop or contact us at West Central Electric at 605-669-8100.

REED offers loans that:

- Promote growth.
- Contribute to job, business and wealth creation.
- Improve the infrastructure and economic base in rural areas.
- The fund demonstrates cooperative principles of commitment to community and cooperation among cooperatives in a meaningful way that adds value to the local economy. REED Fund is a 501(c)3 non-profit corporation and does not restrict lending to members of a rural electric cooperative.

Business, Industry and Agri Business

Loans support business development and expansion, contribute to employment and business ownership opportunities in the areas of:

- Retail, services and manufacturing firms
- Agriculture processing, marketing and support services
- Facilities and equipment

Protect Your Family

According to the National Fire Protection Association, electrical cords and temporary wiring account for more than 25 percent of the estimated 81,000 electrical system fires that occur each year. These fires can be prevented by following these essential home electrical safety tips.

Extension cord safety

- Don't use extension cords as a substitute for repairing building wiring.
- Inspect extension cords for broken connectors, damaged insulation and missing hardware before each use.
- Do not run extension cords through walls, over beams, around corners or through doorways.
- Only use extension cords approved for the environment and loads expected.
- Equip extension cords with ground fault interruption (GFI) devices.
- Don't use coiled extension cords.
- Discard damaged extension cords; don't try to repair them.
- Use only surge protected power strips. Inspect the power strips regularly for damage or signs of overloading.

Temporary wiring

- Don't substitute temporary and flexible wiring for repairing building wiring.
- Use temporary wiring only when needed for maintenance, repair or demolition activities.
- Limit temporary wiring for holiday or ornamental lighting to no more than 90 days.
- In outdoor settings, use only outdoor approved temporary wiring and extension cords.
- Don't route temporary wiring across floors, around doors or through walls.
- Locate temporary wiring at least 7 feet above any walking or working surface.
- Protect temporary wiring from sharp edges, heat and sunlight to avoid breakdown of the insulation.

Equipment power cords

- Inspect equipment cords for damage before each use.
- Don't operate equipment cords without a ground connection unless they are double insulated.
- Don't splice equipment cords to repair damage or to extend the original length.

Safeguards to install

- Inspect all electrical appliances to ensure they're properly grounded.
- Write the purpose of each circuit breaker, fuse or switch on the panel board.
- Label all disconnecting switches and circuit breakers.

Source: nationwide.com



Always Call Before You Dig.

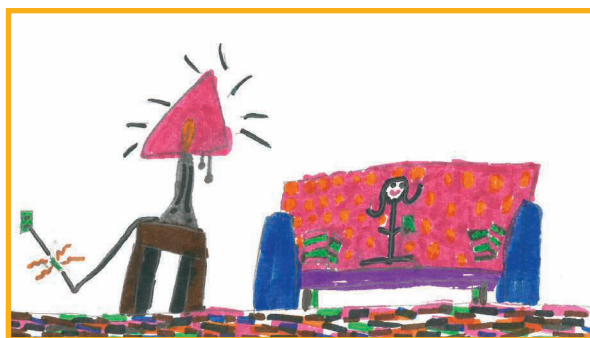
One easy call gets your utility lines marked and helps protect you from injury and expense.

Safe Digging Is No Accident: Always Call 811 Before You Dig

Visit call811.com for more information.

811
Know what's below.
Call before you dig.

KIDS CORNER SAFETY POSTER



"Do not use cords with bare spots."

RosaLee Masson, 8 years old

RosaLee is the grand-daughter of Steve and Ruby Niklason, Bryant, S.D. They are members of Codington-Clark Electric Cooperative, Watertown, 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.

Appetizers and Beverages

Hot Chicken Dip

3 (8 oz.) pkgs. cream cheese, softened
 1 (4 oz.) can sliced jalapeños, chopped
 2 (10 oz.) cans chicken breast, drain 1 can
 1 can cream of chicken soup

Mix together and heat in microwave or crock pot. Serve warm with any snack crackers or scoop chips.

Nancy Stenson, Fort Pierre, SD

Crab Roll-Ups

2 (8 oz.) pkgs. cream cheese
 1/2 to 1 pkg. Hidden Valley Ranch dressing mix
 1 pkg. frozen crab meat, thawed
 1 pkg. large flour tortilla shells

Melt cream cheese in microwave until soft enough to stir; mix in ranch dressing mix. Cut up crab meat into small pieces; mix with cream cheese. Spread over tortilla shells and roll up. Refrigerate 1 hour. Cut into 1-inch slices. Store in refrigerator.

Patricia Cerny, Gregory, SD

Rise and Shine Smoothies

1 cup fresh strawberries
 1 banana
 1 ripe mango
 1/4 cup orange juice
 1/2 cup vanilla yogurt
 2 T. honey
 1 cup ice cubes

Wash and hull strawberries. Peel banana and cut into chunks. Pit, peel and slice mango. In a blender, combine all ingredients, blending until smooth. Pour into glasses. Makes 2 servings.

Eileen Holzerland, Waubay, SD

Cocktail Weiners

1 cup brown sugar
 1 cup ketchup
 1/3 to 1/2 cup grape jelly
 2 pkgs. cocktail smokies

Combine all ingredients; simmer on low heat.

Linda Rauscher, Aberdeen, SD

Orange Glazed Turkey Meatballs

1 egg
 1/4 cup milk
 1/2 cup plain bread crumbs
 1 tsp. salt
 1/2 tsp. McCormick® Poultry Seasoning
 1/4 tsp. McCormick® Black Pepper, Ground
 1 lb. ground turkey
 1 T. olive oil
 1/2 cup chicken broth
 1 cup orange marmalade
 1 T. white wine vinegar
 1 pinch McCormick® Red Pepper, Ground

Beat egg and milk in large bowl. Stir in bread crumbs, salt, poultry seasoning and pepper. Add ground turkey; mix well. Cover. Refrigerate 1 hour. Shape into 1-inch meatballs. Heat oil in large skillet on medium heat. Place meatballs in single layer in skillet. Cook until well browned on all sides. Remove meatballs from skillet. Set aside. Mix orange marmalade, broth, vinegar and red pepper in skillet on medium heat. Bring to boil, stirring to release browned bits in bottom of skillet. Return meatballs to skillet. Reduce heat to medium-low; cook 10 minutes or until meatballs are cooked through and sauce has reduced to glaze consistency. Makes 15 (2 meatball) servings.

Nutritional Information Per Serving: Calories 123, Total Fat 3g, Protein 7g, Cholesterol 37mg, Sodium 245mg, Carbohydrates 17g

Pictured, Cooperative Connections

Cappuccino Mix

1 cup coffee creamer
 1 cup chocolate drink mix
 2/3 cup coffee crystals
 1/2 cup sugar
 1/2 tsp. ground cinnamon
 1/4 tsp. ground nutmeg

Combine all ingredients. Add 3 tsp. mix to 1 cup hot water.

Verna Nelson, Wakonda, SD

Please send your favorite casserole, dairy or dessert recipes to your local electric cooperative (address found on Page 3).

Each recipe printed will be entered into a drawing for a prize in June 2019. All entries must include your name, mailing address, phone number and co-op name.

Q&A

Breaking Down Seven Energy-Saving Claims



Pat Keegan

Collaborative Efficiency

Dear Pat: When it comes to saving energy, it can be confusing to figure out what works and what doesn't. I know you usually just answer one question, but can you let me know what you think about a few things I've heard over the years? – Keeley

Dear Keeley: Sure. Fire away!

Q: Is it true that turning lights off and on uses more energy than just leaving them on?

A: Not true. Turning off lights definitely reduces energy use. Turn off LED and incandescent bulbs every time you leave the room. The situation is a little different with compact fluorescent bulbs (CFLs). Turning them off does save energy but can shorten the life of the bulb. The rule of thumb for CFLs is to turn them off any time they won't be used for 15 minutes or more.

Q: Would replacing my old windows with new, more efficient ones really cut my energy use in half?

A: No. While replacing inefficient windows with new, energy efficient windows can cut the heat loss through windows in half (or more), windows typically account for only about 25 percent to 30 percent of your space heating costs. The amount of energy you use for heating and cooling is likely one-third to one-half of your total energy use, so replacing your old windows might only reduce your total energy costs by about 10 percent. When you consider the high cost of new windows, you may not recoup your investment for 15 or 20 years, or even longer.

Q: Burning wood in my fireplace should save on my heating costs, right?

A: Possibly, but certain conditions need to be met. The wood should be dry and burned efficiently in a properly installed, properly placed, high-efficiency wood stove or fireplace insert. Otherwise, it's likely you'll lose as much heat through your chimney as you're distributing throughout the house.

Q: My kids claim using the dishwasher is just as efficient as washing dishes by hand. Are they right?

A: Yes – in fact, it's usually more efficient! Properly used dishwashers actually use less water while doing a better job and as a bonus, they will save you more than 200 hours a year. For maximum energy savings, make sure your water heater is set to about 120 degrees and use the most efficient wash/dry settings.

Q: I've heard it's better to heat individual rooms with an electric space heater and keep the doors closed to trap the heat. Is this true?

A: It's possible to save money with an electric space heater if you use it only a few hours a day and reduce your home's thermostat setting by a couple degrees. Space heaters can cause fires, so they need to be used wisely and should never be left unattended. Which brings us to your next question...

Q: Should I close the vents in rooms that aren't being used?

A: Most experts advise against this because closing supply registers forces your furnace or A/C unit to work harder. They advise keeping all your vents and doors open. If your system supplies too much heat to some rooms and too little to other rooms, you should talk to a heating and air conditioning professional about modifying your ductwork.

Q: Does the age of my home determine how energy efficient it is?

A: Newer homes tend to be more efficient because energy codes have improved, but every home can have hidden energy issues, no matter its age. If you want to evaluate the efficiency of your home, it's best to schedule an energy audit with a professional.



This column was co-written by Pat Keegan and Brad Thiessen of Collaborative Efficiency. For more information on mower options, please visit: www.collaborativeefficiency.com/energytips.

Noem Seeks Nominations for Governor's Ag Ambassador Award

Governor Kristi Noem is seeking nominations for the 2019 South Dakota Governor's Ag Ambassador Award.

Nominees should be individuals or organizations who have continually worked to promote agriculture in South Dakota while demonstrating servant leadership, hard work, honesty, humility, and respect for others.

Key achievements of the Ag Ambassador:

- Provides visionary leadership to South Dakota's agricultural industry
- Champions growth and prosperity of the state's number one industry
- Advocates for agriculture and the responsible stewardship of livestock and land
- Highlights the significance of South Dakota agriculture to the global food system
- Influences decision makers to develop and implement sound agricultural policies

Nominations are due to the South Dakota Department of Agriculture by May 17, 2019. The form can be found at sdda.sd.gov under the "Happening Now" section by clicking "2019 Governor's Ag Ambassador Nominations."

The award will be presented during the annual Governor's Agricultural Summit in Sioux Falls on July 10 and 11.



Rapid City Stevens High School Repeats

The Rapid City Stevens High School science bowl team captured first-place honors in the South Dakota Science Bowl held in February in Huron.

The fast-paced quiz format of the competition challenges the students' knowledge of biology, chemistry, Earth science, physics, energy and math.

Students representing 12 schools from throughout South Dakota competed, vying for a free trip to the National Science Bowl in Washington, D.C., April 25-29. The regional and national events encourage student involvement in math and science, inspire the next generation to pursue careers in science, technology, engineering and math fields and reward superior academic achievement.

In addition to Rapid City Stevens, teams from Centerville, Eagle Butte, Hitchcock-Tulare, Huron, Northwestern, Parker, Rapid City Central, Redfield, Sioux Falls Roosevelt, West Central and Winner were set to compete in the event.

Past S.D. Science Bowl Champs

2018: Rapid City Stevens High School	2006: Rapid City Central High School
2017: Rapid City Stevens High School	2005: Rapid City Central High School
2016: Rapid City Stevens High School	2004: Rapid City Stevens High School
2015: Rapid City Stevens High School	2003: Rapid City Stevens High School
2014: Rapid City Central High School	2002: Vermillion High School
2013: Rapid City Central High School	2001: Huron High School
2012: Aberdeen Central High School	2000: Huron High School
2011: Vermillion High School	1999: Huron High School
2010: Greater Sioux Falls Home School Association	1998: Vermillion High School
2009: Aberdeen Central High School	1997: Alcester-Hudson High School
2008: Aberdeen Central High School	1996: Philip High School
2007: Greater Sioux Falls Home School Association	1995: Aberdeen Central High School
	1994: Brookings High School

Source: <https://www.wapa.gov/regions/UGP/ScienceBowl/Pages/south-dakota-winners.aspx> and <https://science.energy.gov/wdts/nsb/about/historical-information/past-national-science-bowl-winners/past-hs-winners/other-participants-1994/>



Planting season brings reminders for the importance to keep equipment away from power lines.

KEEPING CALM

Know the Steps if an Accident Occurs

Brenda Kleinjan

editor@sdrea.coop

In the spring of 2017, an operations manager of a cooperative in western South Dakota cooperative got a call from a member.

There had been an accident and the member's tractor was now resting against two broken poles which were supporting an energized 115-kilovolt line.

Even though the power line did not ultimately belong to the cooperative, it served to illustrate an on-going concern: accidents between agriculture equipment and power lines appeared to be on the rise.

Cooperatives have engaged in educational efforts to inform people what to do to first avoid the accident and secondly what steps to take if an accident occurs.

The first thing to keep in mind is to avoid the accident. Know the height of your equipment, the width of your equipment and the location of various electric facilities that should be avoided. Then, make sure that all involved are taking the steps to avoid having equipment come in contact with electric utilities.



A 2017 planting season accident in western South Dakota broke the poles of a 115-kV line which stayed energized.

But if an accident does happen, knowing the steps to take could save your life and those around you.

If your equipment does come in contact with a power line:

- Stay inside the cab and call 911.
- Wait for electric crews to clear the area and keep others away from the accident scene.

If the equipment catches fire and one must exit the cab, there's a process to follow, too.

"Tuck your arms up and give yourself a bear hug and hop clear. Don't touch the equipment and the ground at the same time. Then hop away," said Courtney Deinert, communications director at Central Electric Cooperative in Mitchell, S.D.

One of Central Electric's members was involved in an incident involving a grain cart and a power line on a farm near Mitchell. The auger of the grain cart became entangled in the lines.

The member immediately called the cooperative and stayed inside the cab of the tractor. Thankfully, a fire did not start so the member did not have to exit and hop away.

Accidents involving underground cabinets – commonly called the green boxes – have also been occurring as equipment gets wider. And, the sheer volume of snow accumulation that occurred in the winter

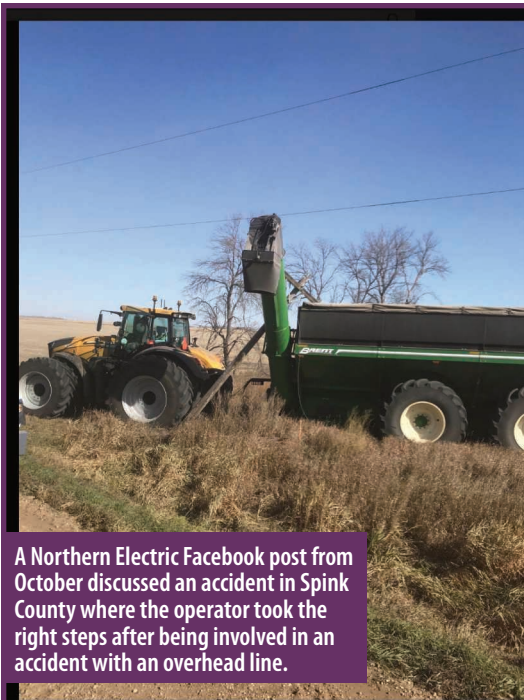
of 2018-2019 resulted in several cabinets being hit or buried during snow removal operations.

The equipment housed in the cabinets is energized and can pose the same

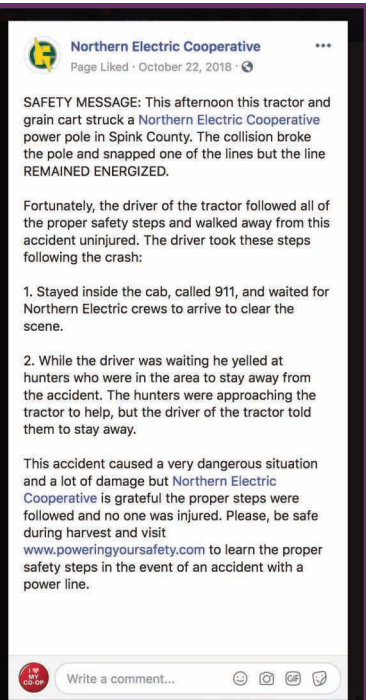
issues that occur when equipment contacts overhead lines.

In either case, the best option is to prevent the accident from occurring by being aware of the location of the equipment. But, if an accident does occur, call your local electric cooperative, stay inside the vehicle's cab and keep others away from the scene until co-op crews arrive.

If an accident does happen, knowing the steps to take could save your life and those around you.



A Northern Electric Facebook post from October discussed an accident in Spink County where the operator took the right steps after being involved in an accident with an overhead line.



PRE-PLANNING CAN SAVE LIVES DURING PLANTING



When it's go-time, it's go-time. We understand that every second counts during planting season, but taking a moment to be mindful of safety during this anxious time could save you a lot of heartache in the long run. Remember to check your equipment, be aware of power lines, keep your cellphone on you at all times, dress appropriately and stay rested this spring.

Together we are

RE-ENERGIZING FARM SAFETY





12 MONTHS OF SAFETY



Scott Kittelson

Operations Manager
scott.kittelson@wce.coop

Our personal electrical safety is a year-round topic that deserves our attention. Active lifestyles and busy schedules can make our focus drift a bit, but it pays to be diligent. Being prepared for weather extremes, seasonal hazards and personal practices all contribute to an active, healthy and accident-free lifestyle.

Here is a list of topics we have touched on over the years; consider keeping them in mind going forward this year.

January: The holidays are over and the snow is here.

- Dispose of any questionable Christmas lights and inspect all extension cords for damage, being sure the ground prongs are attached.
- Consider having your wiring checked by a licensed electrician. Be certain your wiring system can handle the loads that will be used.
- Also consider the installation of GFCIs (ground fault circuit interrupter) and AFCIs (arc fault circuit interrupter) breakers where required.
- If you have a generator, this would be a good mid-winter time to run it for a bit and check for proper operation.

February: Winter continues with snow and cold.

- Use caution when moving snow. Stay clear of poles and guy wires and be aware there may be electrical transformers and cabinets under the snow so know the area. Avoid piling snow under or near power lines. Required clearances can be compromised, plus, it is no place for the kids to play.
- Contact the co-op if you have a loved one at home that

depends on power for life support equipment. The co-op appreciates this info but remember, you must have a back-up plan of your own.

- This is a good time of year to check the cords and plugs on your power tools and equipment. Make repairs or replace where necessary.

March: A hint of Spring is in the air, but also the time for a blizzard or two...

- If you're feeding cattle, be aware of the co-op's facilities in and around the yard. Make note if you replace equipment, it may be higher and wider than the old. Stay at least 15 feet away from lines with grain augers, loader buckets, hay wagons and other such equipment. "Have a plan" if a spring blizzard leaves you without power for several days.
- After the storm, be cautious ... always treat any power line like it is energized, even if it's on the ground. Report any damage you see to West Central. Never go near a downed line and do your best to keep others away.

April: A month of transition.

- A good month to plant trees, however, trees that grow into and around power lines can pose a safety hazard. Take the time to choose the right tree and plant it in the right location to help ensure a safe and reliable electric supply.
- Call 811 (South Dakota One Call) before you dig! If excavating, keep in mind proper shoring as excavating is one of the most hazardous forms of construction due to the possibility of cave-ins.

May: We made it through the winter, things will get busy now.

- With spring comes the possibility of flooding. Never step into a flooded basement or any other room if water may be in contact with electrical outlets, appliances or cords.

- Never attempt to turn off power at the breaker panel, nor operate an electric switch or appliance if standing in water.
- Call West Central if you need assistance disconnecting power to a flooded home.
- With the moisture comes mosquitoes. Take appropriate action to protect you and your family from the West Nile Virus.

June: Severe weather is a possibility, also planning for a good crop.

- Thunderstorms and tornadoes often have a devastating effect on power lines. If you find yourself in close proximity to a downed line, shuffle away with small steps, keeping your feet together and on the ground at all times. This minimizes the chance of your human body becoming a current path, very much reducing the chance of electrical shock.
- If you see someone who is in direct or indirect contact with a downed line, do not touch the person, you could be the next victim, call for help.
- If you are in a car or equipment in contact with a line, stay in place. Honk your horn, call or wait for help.
- Include West Central in your plans if you intend to add grain storage or other structures to your site. Proper clearance from power lines is a very important safety consideration which must be planned for.

July: Harvest is underway, along with summer fun!

- Equipment continues to get larger – know the height of your equipment and lower it to its lowest position when passing near or by. Have a person “spot” for you when moving large equipment.
- Preplan and choose your travel route carefully, never attempt to raise or move a power line.
- If you must pile grain on the ground, choose a site well clear of any poles, cabinets and guy wires.
- Never allow children to fly kites near lines. Be aware of toys or water guns which can contact power lines as well.
- Never build a tree house near a power line or build a fort around an electrical cabinet or beneath power lines.

August: The summer/construction season continues

- Carefully check the location of all overhead wires before using a ladder, especially where the line connects to any building.
- If the ladder falls into the line, do not remove it. Keep everyone clear and have someone else call West Central for assistance. The same goes for scaffolding and other types of construction equipment.
- Pile gravel, rock and other constructions materials well clear of any line or pad-mount equipment

September: The kids are back in school, fall is fast approaching.

- Keep all co-op poles clear of attachments, such as basketball hoops, antennas and signs.

- Hauling hay ... please limit the height of your load and use good judgment if you will be crossing under power lines.
- Protect your valuable crop, store your hay well away from power lines. Storms may cause lines to make contact with each other, resulting in sparks, potentially igniting hay stored in the immediate area.
- September is a good month to service your generator, having it ready to go to work for you if necessary. If you do not have one, consider the purchase of a generator; it's a real “peace of mind.”
- Be certain you have a “double throw switch” for your generator if you intend to connect it to your household wiring.

October: Winter weather is ahead.

- Be prepared for the worst and hope for the best. Know what you would do if a blizzard leaves you stranded for days without power.
- Have food, water and medicine on hand as well as a way to stay warm.
- Keep proper-sized fire extinguishers available. Extinguishers are only emergency protection against the initial stages of a fire. The best protection is obviously to reduce or eliminate fire hazards.

November: The month of Thanksgiving and travel...

- Be aware of roads covered with ice and snow and have an emergency kit with you at all times. Be sure your vehicle is in good shape.
- Always leave your travel plans with someone, including destination, travel route, estimated time of trip and arrival.
- Slow down and allow plenty of time to stop. Many power poles have been collided with due to winter driving conditions.

December: Enjoy the holidays...

- Inspect electrical decorations for damage before use.
- Do not overload outlets
- Protect power cords from damage and never place them under rugs.
- Stay in the kitchen when cooking, unattended cooking is the leading cause of home cooking fires (NFPA).
- Turn off, unplug and extinguish all decorations when going to sleep or leaving the house.

One of the best and easiest ways to ensure any type of safety is simply using your head. If you recognize potential risk and eliminate dangerous conditions, you will stay safe.



Do not overload outlets.



Extreme cold temperatures put the components of wind towers at risk of failure, which is the reason many wind towers in North Dakota and South Dakota shut down at the end of January.

POWERING THROUGH WINTER

Extreme Cold Requires An 'All of the Above' Approach to Meet Demand for Electricity

Ben Dunsmoor

bdunsmoor@northernelectric.coop

The record-setting cold and snow in South Dakota this winter led to record demand for power. The cold snap also highlighted the need for the continued use of coal and natural gas generation as many wind generators in the region had to be shut down as a result of the frigid weather.

Extreme cold descended into the Upper Midwest in January and didn't release its grip for several weeks. East River Electric Power Cooperative in Madison, S.D., which supplies wholesale power to 24 rural electric cooperatives and one municipally owned system in eastern South Dakota and western Minnesota, experienced an all-time record peak for electric demand on Jan. 29 and 30. Wind chills dipped to 20 to 50 degrees Fahrenheit below zero during that time period.

"The East River system performed well under these extreme weather conditions with very few issues," said East River General Manager/CEO Tom Boyko.

Member co-ops of East River Electric depend on a reliable supply of power from Basin Electric Power Cooperative

in Bismarck, N.D., as well as hydropower from the Western Area Power Administration. Basin Electric owns and operates the coal, gas, diesel and wind generation resources needed to meet the demand of member co-ops located in nine states in the middle of the United States.

"Basin Electric is your cooperative," said Dave Raatz, Basin Electric senior vice president of asset management, resource planning and rates. "We are trying to do what we can to ensure everyone has the appropriate power so they do have the ability to have the electric heat and they do have the ability to have electricity at the house."

Basin Electric had plans in place to meet the demand of co-op members during the extreme cold in January and February despite the challenges the frigid temperatures caused its generation resources. Basin Electric saw many of its wind towers in North Dakota and South Dakota shutdown as a result of cold temperatures and had to rely on natural gas and coal generation as well as market purchases.

According to Basin Electric Senior Vice President of Operations John Jacobs, wind towers become brittle and cannot operate

Weather stations installed on wind turbines automatically shut down the wind tower when temperatures drop to 22 degrees F below zero. Those temperatures put the components of the wind tower at risk of failure.

during extreme cold. Weather stations installed on each turbine automatically shut down the wind tower when temperatures drop to 22 degrees F below zero. Those temperatures put the components of the wind tower at risk of failure.

“The best analogy I can give is a rubber hose,” explained Jacobs. “If you warm it up enough, it will melt. If it gets too cold, it will get too brittle.”

That is the reason production from Basin Electric’s wind resources bottomed out in the early morning hours of Jan. 30 when the Bismarck area saw air temperatures of 31 degrees F below zero in North Dakota and the National Weather Service in Aberdeen, S.D., reported record low temperatures of 33 degrees F below zero or lower in Aberdeen, Watertown and Groton. Basin Electric’s fleet of natural gas and coal-fired power plants paired with energy purchases from the market provided co-op members with a reliable supply of electricity during that period.

“That’s why we have gas peaking units and you have that coal resource base that just continued operating despite cold weather over the entire area,” Raatz said.

‘All of the Above’ Approach

Basin Electric uses an ‘all of the above’ approach to supply electricity to member co-ops throughout South Dakota. Nearly 45 percent of its generation portfolio comes from coal-fired resources while 20 percent comes from natural gas units and another 20 percent from wind generation. Basin Electric is also a member of four power pools, which are large regions of the United States where utilities can buy and sell electricity in the market, and Basin Electric has the contractual transmission rights to more power between these regions.

“It is a combination of all those owned-assets and market purchases that come to bear to serve member load obligations,” Raatz said.

Basin Electric generates electricity for 141 electric co-ops in nine states and has power plants and resources

in North Dakota, South Dakota, Montana, Wyoming and Iowa. Raatz said that regional diversity is just as important to providing reliable power as a diversified generation mix.

“That’s so valuable in coming up with a power supply. You don’t necessarily see that cold weather over the whole area,” said Raatz.

“People take electricity for granted. Sometimes that is good because it means we are doing our jobs.”

That regional diversity was evident during the cold snap in North Dakota and eastern South Dakota at the end of January. Rushmore Electric Power Cooperative in Rapid City, S.D., which supplies power to eight electric cooperatives in western South Dakota saw higher demand for electricity during those time periods but never saw a record peak like the East River co-ops experienced. During that period, Basin Electric was also able to pull generation from resources in Montana and Wyoming because it wasn’t as frigid in those states.

Raatz said load management programs

which control water heaters, grain bin fans and other large loads during peak demand periods are also a piece of the power-supply puzzle. Raatz said the team at Basin Electric which forecasts electric demand can rely on members who have load management devices installed at their service locations to make those peaks less extreme.

“As you get into these types of conditions when it gets really cold, it is easier to predict because load management is taking out the spikes. It is really valuable,” Raatz said.

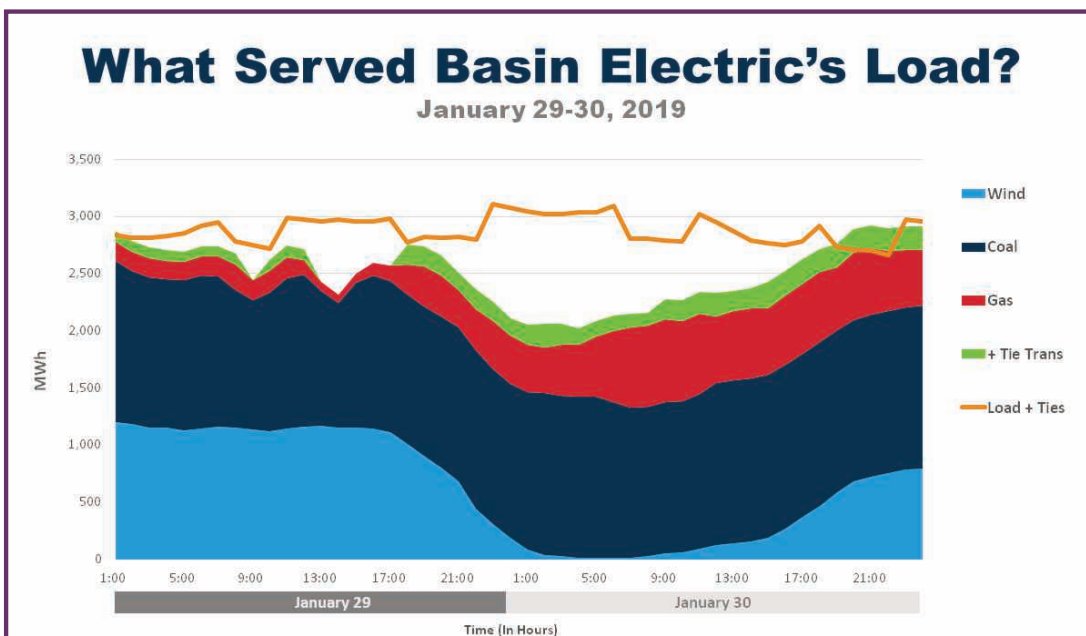
Maintaining Reliability

The main goal of electric cooperatives is to provide safe and reliable power for members at the end of the line. Jacobs said it takes a dedicated team of co-op employees to achieve that mission whether it is the operators at Basin Electric’s power plants or the co-op linemen at the local level.

“We see the importance of having to turn on that (light) switch because most of the time when the weather is bad, our employees are at work,” said Jacobs. “There is a reason for what we do and a good feeling when you walk away.”

And when the Great Plains and Upper Midwest experiences extreme weather, the goal of maintaining reliability becomes even more important.

“People take electricity for granted,” Raatz said. “Sometimes that is good because it means we are doing our jobs.”





LIFE ON THE LINE

Jocelyn Romey

jocelyn.romey@sdrea.coop

It's a unique life. They come in early to create a plan, grab their gear and drink their coffee before heading out in crews. Their office is outside and depending upon the day, they will work through the heat, rain, snow and wind to get the job done. Holidays could be postponed and normal working hours are determined by the weather. The job is considered one of the most dangerous, yet is often overlooked and under appreciated – that is, until the power goes out.

Life as a lineman is both rewarding and unpredictable. The rewards come when power is provided or restored to members down the line or when a farmer or rancher plows snow out of the way for a line crew to get through. There are even boasts among the linemen about a plate of cookies or sandwiches gifted by a member during storm repairs.

Jesse Sorenson, system coordinator for Black Hills Electric Cooperative in Custer, S.D., commented that the hardest part of a lineman's job was bad weather, no sleep and being on call. But he ended by saying that the best part of the job was getting the power turned back on for members after a storm.

“They are just thankful to get the power on and it makes you feel really good to get it back on for them,” said Sorenson.

The unpredictability of this job comes when the power is knocked out on a good day due to an overzealous squirrel, when the storm was bigger than predicted or even when the destination to an outage or work site is in the middle of nowhere and getting lost is an unfortunate possibility. However, despite volatile weather, rough terrain and squirrels, linemen have a very important job – getting reliable power through hundreds of miles of lines to thousands of member-owners... safely.

On Feb. 11, just after a minor intrusion of winter weather, Bill Brisk, operations manager at Black Hills Electric, carefully explained how outages were being found that morning due to

Black Hills Electric's Crew Foreman Dean Whitney and journeymen linemen Beau Bradeen, Ken Parker and Corey Scott replace poles near Red Shirt, S.D.



A pole worn out by cattle rubbing on it is replaced.

ice accumulation and wind damage. On the computer screen, areas indicating no power were highlighted, but it was up to the crews to find the exact location and reason for the outages.

“Sometimes it takes a long time to isolate the outage during a storm in the cold and in the dark. Outages during the day are a lot easier than at night,” said Brisk.

Brisk also explained the challenges their crews face in their service territory. Black Hills Electric serves power in rocky and sandy terrain found throughout the Black Hills, Badlands and prairies.

“We have rough terrain. Sometimes, you can see the next pole but it will take you half an hour to get to it,” said Brisk.

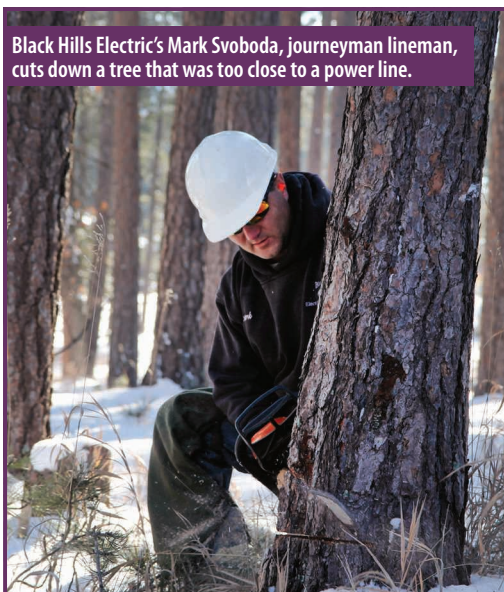
It’s a job that takes time, determination, endurance and concentration. Every day, these linemen work with energized lines, large equipment and changing weather. One mistake can result in serious consequences. This makes safety and mindfulness a priority. Brisk commented on how easy a mistake can be made on the job. He noted that these mistakes are unforgiving. No matter how small the mistake, devastating injuries or even death can occur.

“Linemen need safe equipment...they work 24/7, 365. When the post office shuts down due to bad weather, the linemen still go out,” said Mark Patterson, manager of loss control services for the South Dakota Rural Electric Association in Pierre, S.D.

For this reason, safety training, equipment, tools and even fire-retardant clothing are provided to ensure each lineman has what they need to do the job safely.

“There’s a lot of pride in being a lineman. A lineman has to be confident...they have to have a level of confidence in their own knowledge and ability before they work on an energized line,” said Travis Denison, loss control professional for SDREA, who previously served for 22 years as a lineman. As a safety guy, he also views safety as a critical part in lineman culture.

“Out of all the tools you have in your belt, safety is the most important. It’s about getting you home to your families safely,” said Denison.



Black Hills Electric’s Mark Svoboda, journeyman lineman, cuts down a tree that was too close to a power line.



Casey Ellerton, journeyman lineman, trims branches nearing a power line by Rockerville, S.D.

Lineman Items

Clothes

- Fire retardant (FR) jeans
- FR long-sleeve shirts
- FR or 100 percent cotton T-shirts
- High visibility shirts or vest
- Work boots
- Winter boots
- Leather gloves
- Winter gloves
- Rubber gloves
- Rubber sleeves
- FR coveralls
- FR coat
- FR sweatshirt
- FR raingear
- FR stocking hat
- FR balaclava
- Hardhat
- Safety glasses
- Hearing protection

Tools

- Body belt
- Fall restraint
- Climbing hooks
- Safety harness
- Hammer
- Screwdrivers
- Knife
- Wooden tape measure
- Lineman pliers
- Channel lock pliers
- Adjustable wrench
- Rope handline
- Liveline tools
 - Shotgun
 - Extendo
- Overhead grounds
- Underground grounds

National Line Worker Appreciation Day is April 8, 2019.

America’s electric cooperatives will again honor the hard working men and women who often work in challenging conditions to keep the lights on.

December 15-March 31

South Dakota snowmobile trails season, Lead, SD, 605-584-3896

March 22-23, 29-30

Mystery Dinner Theater, Legion Hall, Faulkton, SD, 605-380-1556

March 23

Annual Ag Day, Washington Pavilion, Sioux Falls, SD, 605-367-6000

March 29-30, April 5-6

Annual Schmeckfest, Freeman, SD, 605-925-4237

March 29-31

Black Hills Home Builders Home Show, Rushmore Plaza Civic Center, Rapid City, SD, 605-348-7850

March 30

Cultural Expo, South Dakota School of Mines and Technology Campus, Rapid City, SD, 605-394-6884

March 30-31

29th Annual Hats Off to the Artist Art Show, Community Center, Faulkton, SD, 605-598-4482

April 4

McCrossan Banquet Auction featuring Loop Rawlins and the PBR, 5:30 p.m., Arena, Sioux Falls, SD, Tickets: \$75 each, 605-339-1203, www.mccrossan.org

April 4-5

Holiday Arts Spring Craft Show, Masonic Hall, Mitchell, SD, 605-359-2049

April 5-6

Forks, Corks and Kegs Food, Wine and Beer Festival, Deadwood, SD, 605-578-1876



Photo courtesy: RJ Ripper Film

April 15-16: Banff Mountain Film Festival World Tour, Elks Theatre, Rapid City, SD, 605-394-4101

April 5-6, 11-14

Green Earth Players presents Drinking Habits, Palace Theatre, Luverne, MN, 507-283-9226

April 5-7

Professional Bull Riders Unleash the Beast Tour, Sioux Falls, SD, 605-367-7288

April 6

The Big Grape, Sioux Falls, SD, 605-322-8900

April 6-7

Zonta Club Vendor and Craft Show, Northridge Plaza, Pierre, SD, 605-222-1403

April 7

Unni Boksasp from Norway in Concert, 2 p.m., Riggs Theater, Pierre, SD, 605-222-1992

April 12-14

Hayes Drama Club presents the comedy, Whining N' Dining at the Snack N' Yak, Show times: Friday and Saturday 7 p.m. CT, Sunday 2 p.m. CT Hayes Hall, Hayes, SD, 605-567-3599

April 12-14

First Dakota Classic Archery Tournament, Yankton, SD, 605-260-9282

April 13-14

Dakota Territory Gun Show, Rapid City, SD, 605-270-0764

April 18

John Mellencamp, Rushmore Plaza Civic Center Fine Arts Theatre, Rapid City, SD, 605-394-4115

April 19-20

Sioux Empire Film Festival, Belbas Theater inside the Washington Pavilion, Sioux Falls, SD, 605-367-6000

April 27

River Rat Marathon, Yankton, SD, 605-660-9483

April 27-28

Annual JazzCrawl, Sioux Falls, SD, 605-335-6101

May 1-5

Black Hills Film Festival, Hill City, SD, 605-574-9454

May 5

Opening Day, Prairie Village, Madison, SD, 800-693-3644, www.prairievillage.org

May 11

Make-a-Wish Benefit Featuring Dueling Duel, Silent Auction and Wine Pull, Aberdeen, SD, 605-370-4588

May 30-June 1

Senior Games, Sioux Falls, SD, Contact Nick Brady at 605-978-6924

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.