

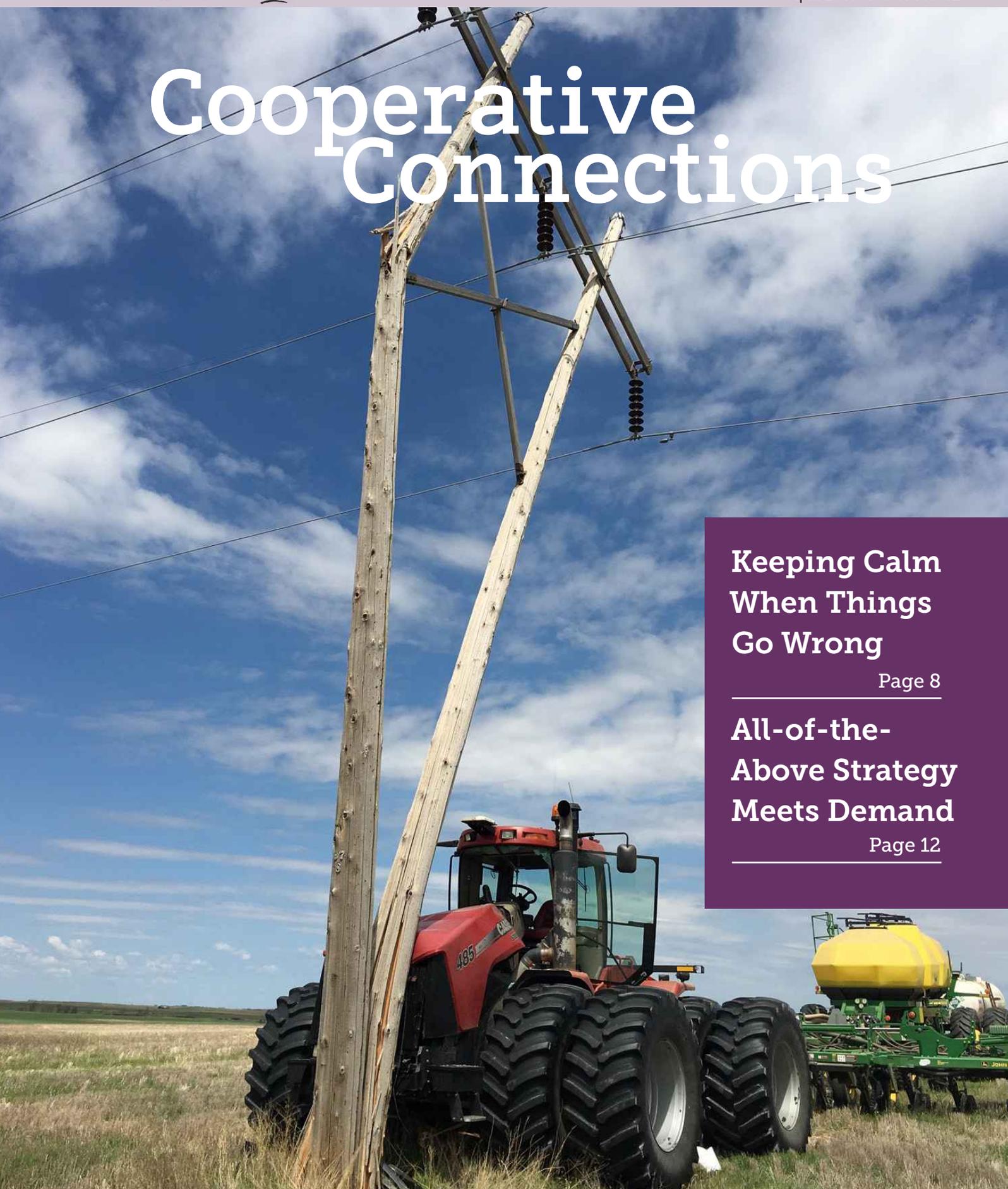
Cooperative Connections

**Keeping Calm
When Things
Go Wrong**

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

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Thank your linemen

April 8 is Lineman Appreciation Day



Walker Witt

CEO/General Manager
wwitt@bhec.coop

BHEC linemen work in some of the most remote and rugged terrain in the Black Hills.

As I write this column in my comfortable office this morning, it is -11 degrees outside with more snow all in February than I have seen in years. Earlier today I listened to our operations manager as he explained the daily work schedule to the crew. Three crews are patrolling line and trimming and cutting trees. One crew is upgrading an overhead transformer and another crew is repairing a broken cross arm on a pole that was discovered the previous day during line patrol. Our staking technician is staking and engineering several miles of single phase to three phase line upgrade. Today is a fairly typical day in the life of our operations and engineering crews; whether it's -11 or 102 degrees, your linemen continue to do what it takes to provide safe and reliable electric service to all of us.

Each lineman's commitment to their co-op is not finished at the end of the workday. Black Hills Electric Cooperative's linemen are responsible for keeping the power on day and night, whether it's Thanksgiving, Christmas, or their 25th wedding anniversary! Crews are scheduled and on-call 24 hours a day, 365 days a year.

BHEC linemen work in some of the most remote and rugged terrain in the Black Hills. While many electric utilities' topography allows access for bucket trucks and equipment to infrastructure, which makes climbing a seldom used skill, for your linemen, climbing poles is still a daily duty, and often times after hiking to the pole that needs climbed in extreme weather. Our linemen work safely, smart, and efficiently, all while 40 feet in the air, wearing thick rubber gloves and often in the dark with the wind blowing and the snow falling.

Each of our linemen has taken unique paths to their positions at Black Hills Electric. Some have gone to vo-tech schools, some have worked for contractors, and many began as rights-of-way tree cutters at the co-op. Regardless of the path chosen, all of our linemen are highly trained and skilled and are true professionals.

Linemen are often first responders during storms, fires, and other catastrophic events, making sure the scene is safe for public safety workers.

Black Hills Electric has over 2,663 miles of line throughout its service territory. Thirteen linemen and right-of-way technicians are responsible for the 24 hours a day, 365 days a year operation and maintenance of those lines. In addition to the operation and maintenance of all of those existing miles of line, our linemen construct lines to new services and build upgraded lines to enhance reliability and meet the ever increasing electric needs of all our members.

So when you see a lineman, thank them for all that they do for us. When April 8th rolls around, think of them and their families, and say a prayer for their safety.

Thank you Dean, Danny, Bob, Beau, Corey, Casey, Travis, Mark, Kenny, David, Lonnie, Rory and Scott. You are appreciated!



Black Hills Electric Cooperative Connections

(ISSN No. 1531-104X)

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BLACK HILLS ELECTRIC COOPERATIVE CONNECTIONS is the monthly publication for the members of Black Hills Electric Cooperative, 25191 Cooperative Way, P.O. Box 792, Custer, S.D. 57730-0792. Families subscribe to Cooperative Connections as part of their electric cooperative membership. Black Hills Electric Cooperative Connections' purpose is to provide reliable, helpful information to electric cooperative members on matters pertaining to their cooperative and living better with electricity. Also available at www.bhec.coop.

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BHEC's scholarship winners

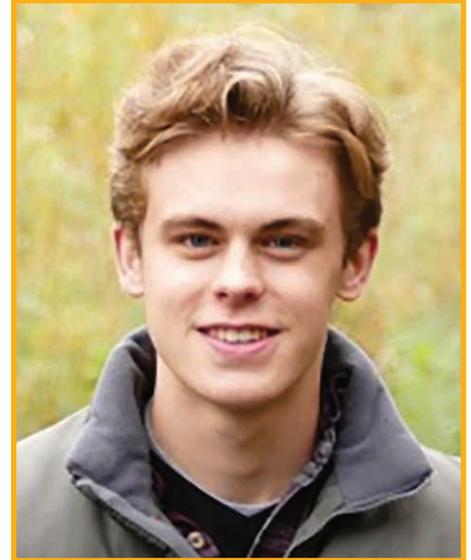


Taleigh Adrian, a daughter of Stuart and Sharon Adrian of rural Hill City, is this year's winner of the Black Hills Electric/Basin Electric \$1,000 scholarship.

Adrian earned several awards at Hill City High School, including lettering in both track and cross country from seventh grade through her senior year, attending Girls' State, being a member of the National Honor Society, including its president, lettering in band for four years, being selected for the National Academy of Future Scientists and Technologists Award of Excellence, and being a National Merit Scholarship Program Commended Student.

She volunteers around her community and is a member of the Leo Club, the youth organization of the Lions Club International.

Adrian plans to begin her journey to becoming a doctor at the University of St. Mary in Bismarck, N.D. this fall.



Joel Broberg, a son of Donovan and Julie Broberg of rural Rapid City, was BHEC's Washington, D.C. winner as a junior and earned a \$1,000 scholarship as a high school senior.

Broberg has sat first chair bassoon in the S.D. All-State Orchestra and All-State Band and is an alternate bassoonist in the Black Hills Symphony Orchestra. He plays piano and sings with the worship bands at his church and school.

He attends Rapid City Christian High School, where he serves as Student Council president and student director of the Pep Band. He is part of the congregation at Rimrock Church, and is involved in the youth group. He has served on mission trips to Costa Rica and Haiti.

In the fall, he plans to study linguistics and music in Minneapolis, Minn. After college, he hopes to serve as a missionary Bible translator, working to publish scripture in the languages of people who don't have access to it.

74th Annual Meeting

Will be Thursday, May 30, at the Ramkota Convention Center
2111 N. Lacrosse St., Rapid City, S.D.

Registration begins at 5 p.m.

Dinner at 6 p.m.

Business Meeting following dinner

Elect two directors

State of the Co-op Address

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



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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

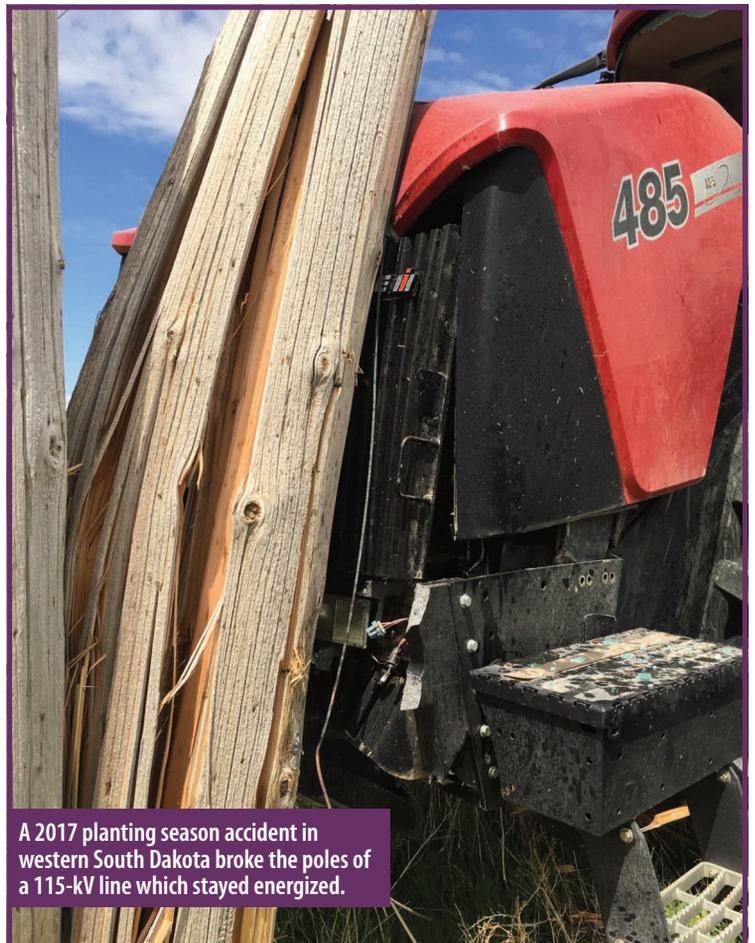
In the spring of 2017, an operations manager of a cooperative in western South Dakota cooperative got a call from a member.

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

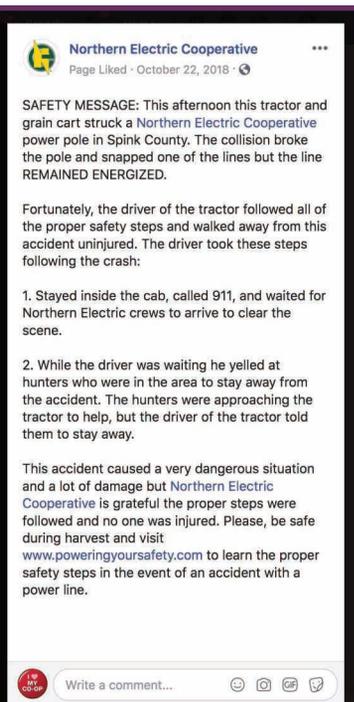
issues that occur when equipment contacts overhead lines.

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



Touchstone Energy®
Cooperatives

Home show March 29-31



Michelle Fischer with Black Hills Electric Cooperative visits with members during the 2018 Black Hills Homebuilders Home Show. The co-op will have a booth at this year's home show at the Rushmore Plaza Civic Center March 29-31.

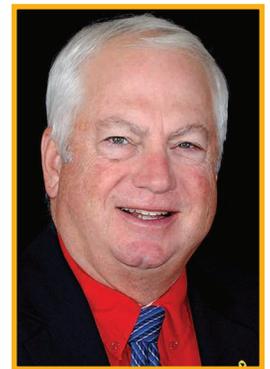
Incumbents Nominated

Black Hills Electric Cooperative's nominating committee met in late February to select a slate for the two director positions to be voted on at this year's annual meeting on May 30.

The co-op mailed postcards to all members in Lawrence, Meade and Pennington Counties and in Custer and Oglala Lakota Counties seeking applicants for one director position in each of those geographical areas.

Only the incumbents applied for the positions.

The nominating committee nominated Jim



Jim Preston

Preston for the Custer and Oglala Lakota Counties position and Dave Lindblom for the Lawrence, Meade and Pennington Counties position.



Dave Lindblom

Both incumbents will be seated on the board at the co-op's 74th annual meeting on Thursday, May 30, at the Ramkota Convention Center, 2111 North Lacrosse Street in Rapid City.

Registration will begin at 5 p.m., followed by dinner at 6 p.m. with the business meeting immediately following dinner.

Watch for pre-registration information in the annual report to be mailed in early May. Two people will each win \$100 for early registration. Other prizes will be awarded at the conclusion of the meeting.

Call before you dig



Call 811 before you dig to mark underground utilities.

Area meetings fun and filling

Temperatures below zero did not deter several BHEC members from attending an area meeting near them. The hot soups at each meeting helped temper the cold air outside as members enjoyed bowl after bowl of delicious soups and got a chance to visit with neighbors and co-op directors and employees.

Each year, Black Hills Electric Cooperative directors and employees host seven area meetings. There is no formal program and the co-op pays the co-sponsoring organization for each person who attends and collects a free-will donation for the organization.

The co-sponsoring organization provides all the food and the co-op provides everything else.

“It is so nice to get to visit with our members in an informal setting,” said Mike Chase, manager of marketing and member services. “And, I get to enjoy some great cooking.”



BHEC CEO Walker Witt, left, and board member Al Perry serve soup at Rockerville's area meeting.



Left to right: Randy Pence, Kate Merdianian and Heath Greenough show off the prizes they won at the Oelrichs area meeting.

Top: Don Andersen, Dennis Quivey and Alan Bishop, all BHEC board members, help serve soup at the Hermosa area meeting. One hundred and fifteen people attended. Middle: Walker Witt, BHEC CEO, addresses the 70 people who attended the Whispering Pines area meeting. Bottom: Witt answers questions from the crowd during the Johnson Siding area meeting. The soup suppers give the co-op a chance to show its appreciation for its members and gives community organizations a chance to raise funds for their organization.



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.

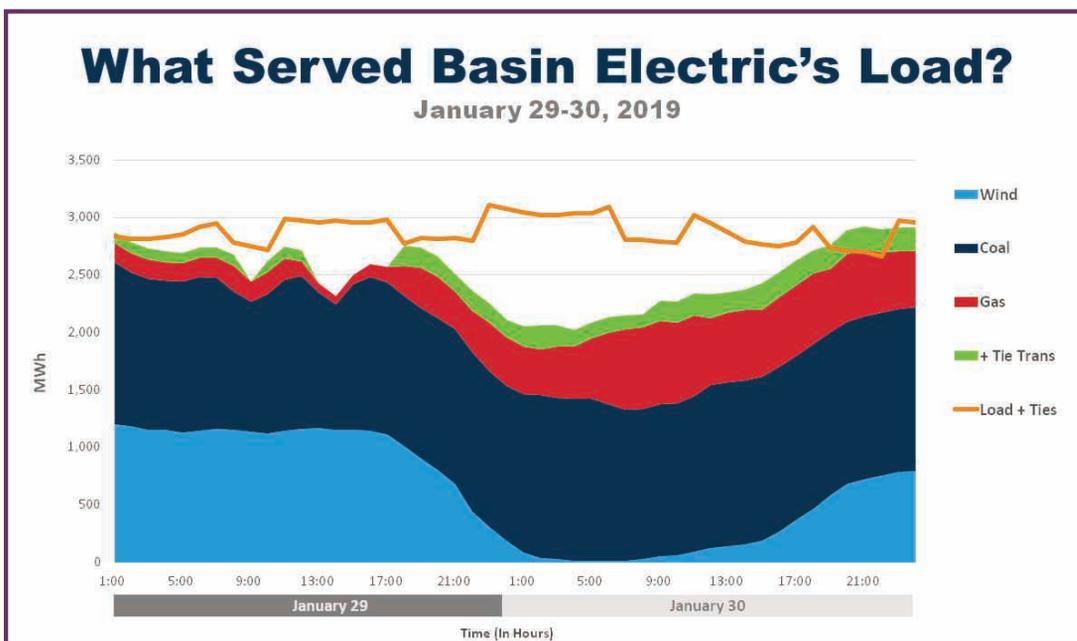
Maintaining Reliability

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

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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.

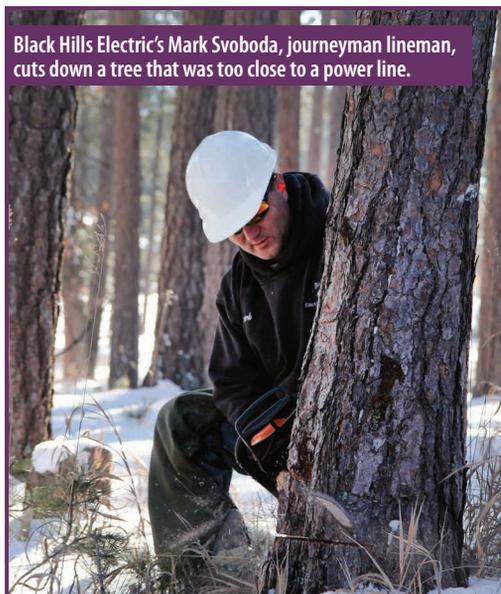
It’s a job that takes time, determination, endurance and concentration. Every day, these linemen work with energized lines, large equipment and changing weather. One mistake can result in serious consequences. This makes safety and mindfulness a priority. Brisk commented on how easy a mistake can be 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.

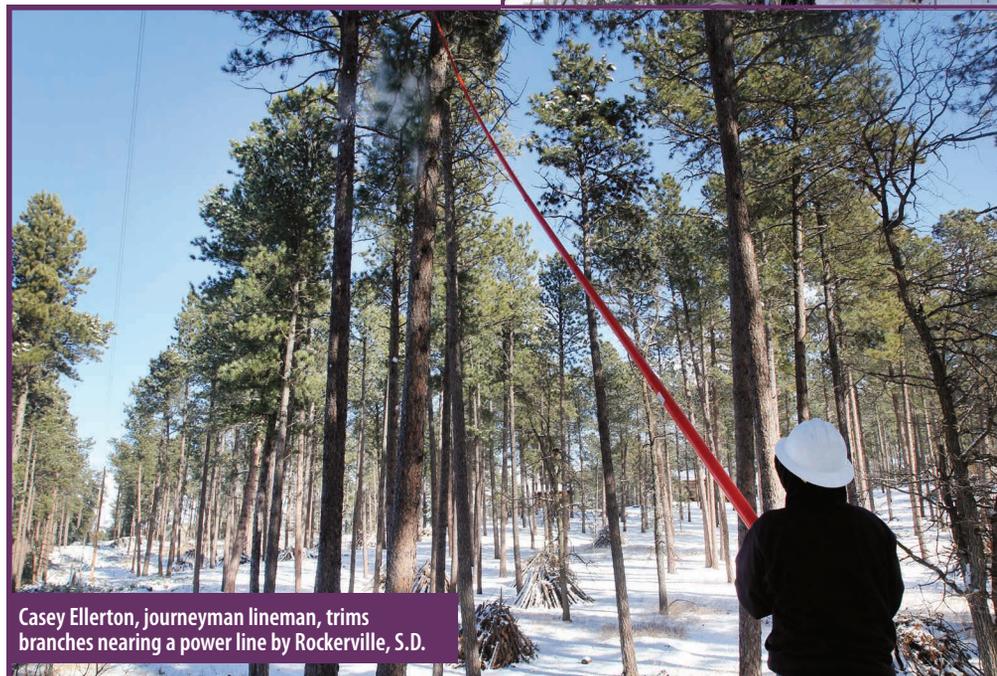
For this reason, safety training, equipment, tools and even fire-retardant clothing are provided to ensure each lineman has what they need to do the job safely.

“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 29

American Legion Fish Fry, 5 to 7 p.m., followed by Bingo, American Legion Hall, Hot Springs, SD, 605-745-3213

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

Creative Quilt, Art and Craft Market, 5 to 8 p.m. Friday, 9 a.m. to 3 p.m. Saturday, Ramkota Hotel, Rapid City, SD, 605-209-9348



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

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

April 5-7

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

April 6-7

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

April 7

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

April 12-14

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

April 13

Easter Egg Hunt, 9:45 a.m., Visitor Information Center, Hill City, SD, 605-574-2368

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

June 7-8

Senior Games, Spearfish, SD, Contact Brett Rauterkus at 605-722-1430

June 21

Dalesburg Midsummer Festival, Dalesburg Lutheran Church, Rural Vermillion, SD, 605-253-2575, www.dalesburg.org

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.