

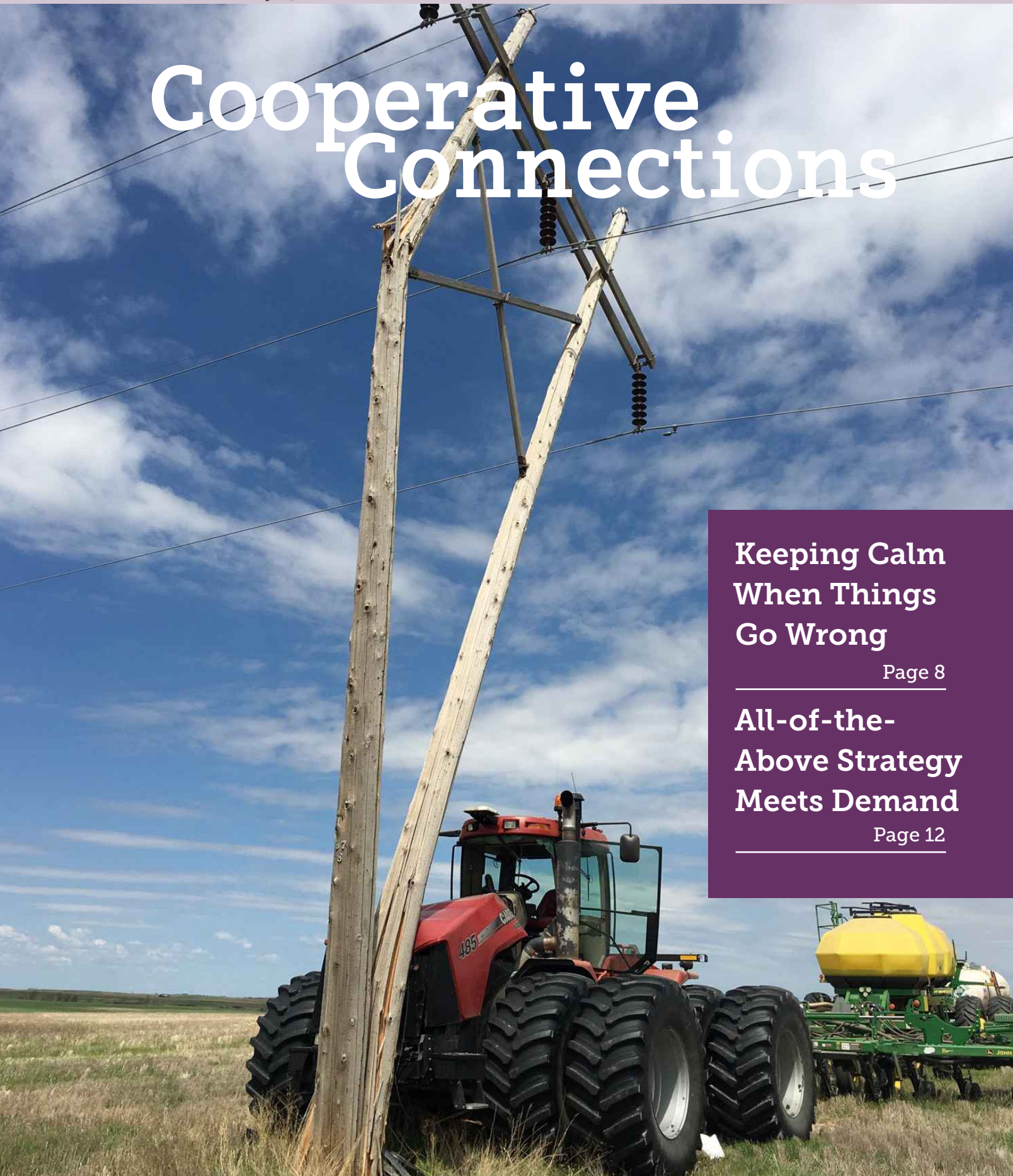
Cooperative Connections

**Keeping Calm
When Things
Go Wrong**

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Above Strategy
Meets Demand**

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April 8 Is Lineworker Appreciation Day

Thanking Our Linemen



Ben Dunsmoor

bdunsmoor@northernelectric.coop

Electric cooperatives across the country have set aside the second Monday in April to recognize the linemen who work every day to keep our homes, businesses, and lives connected to the grid.

When you walk into a room and flip on the light switch it means electric lineworkers are doing their job.

When you don't have second thoughts about turning up the heat in your home, it means lineworkers are doing their job.

When the lights come back on after an extended power outage, a crew of lineworkers did their job.

We all expect electricity to be reliable and available. We often take electricity for granted in our daily lives. That is why electric cooperatives across the country have set aside the second Monday in April to recognize the linemen who work every day to keep our homes, businesses, and lives connected to the grid. This year, April 8 is Lineworker Appreciation Day.

The job of being a lineman is often ranked as one of the most dangerous occupations in the country. Every day linemen are working with high-voltage electricity out of bucket trucks that extend 30 to 40 feet in the air. And, when linemen are needed the most during power outages, they are often working in less than ideal weather conditions. It is also crucial that lineworkers keep safety and teamwork as their top priority when they are on the job so every crew member can go home safe to their families at the end of the day.

In this month's issue of *Cooperative Connections*, we are highlighting a few linemen who have dedicated their lives to co-ops. Northern Electric Operations Manager Mike Kelly is retiring following a 40-year career in line work both in the field and in the shop planning and managing outages and new line construction. You will read on pages six and seven that his passion and connection to the profession has been in his blood since he was a kid because his dad also worked as a lineman. Northern Electric Line Foreman Jerry Weber has been promoted to take over for Kelly as the operations manager. Weber has worked at Northern Electric for nearly 36 years.

The years of service Weber and Kelly have put in are not unique. Most South Dakota electric cooperatives have linemen who have careers that span 20, 30, or even 40 years. Half of the linemen at Northern Electric Cooperative have worked in the field for 20 years or more. It is an example of linemen's dedication to their work, their craft, and their commitment to keeping the lights on for the members of the cooperative.

So, when you see one of our crews working in the field, or even when you flip on the switch and the light bulb comes on in your home, take a second to pause and thank a lineman for the job they do to ensure you have safe and reliable electricity.



(USPS 396-040)

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NORTHERN ELECTRIC COOPERATIVE CONNECTIONS is the monthly publication for the members of Northern Electric Cooperative, PO Box 457, Bath, SD 57427. Families subscribe to Cooperative Connections as part of their electric cooperative membership. The purpose of Northern Electric Cooperative Connections is to provide reliable, helpful information to electric cooperative members on electric cooperative matters and better rural living.

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Northern Electric Cooperative's regular board meeting was held February 21, 2019, at the headquarters in Bath with all directors present. Directors Josh Larson and Randy Kienow attended via telephone. As the first order of business, the board approved the January 24, 2019, minutes and January expenditures. The board then reviewed and accepted monthly reports by management including details on financial, operations, member services, safety, communications and IT.

Directors viewed the East River Electric Power Cooperative video report. East River Director Mark Sumption reported on actions taken by the East River Board at the February 7, 2019, meeting. General Manager Char Hager reported on the East River MAC meeting which she attended February 6, 2019, in Sioux Falls. Directors Mark Sumption, Ronald Kaaz, General Manager Char Hager, Operations Manager Mike Kelly, Manager of Marketing/Member Services Russ Ulmer and Line Foreman Jerry Weber reported on the East River Electric Energize Forum which they attended on February 6-7, 2019, in Sioux Falls. South Dakota Rural Electric Association Director Nolan Wipf reported that the next SDREA board meeting will be held March 28-29, 2019, in Pierre. Communications Director Ben Duns Moor reported on the Editorial Board meeting at SDREA, February 19, 2019 and Co-op Day at the Capitol, February 20, 2019, which he attended. Director Francis Esser reported on the 2019 NRECA Directors Conference which he attended February 9-12, in San Antonio, TX.

Manager's Report

General Manager Char Hager's report to the board included the following items:

- Update and discussion on development projects and activities taking place in the community and our service area.

- Informed the board of the 5th Annual LAMONT-RHODES Lecture Series, Tuesday, March 26, 2019, Johnson Fine Arts Center, Northern State University.
- Reminded the board of the 2019 NRECA Credentialed Cooperative Director (CCD) courses, March 26-27, 2019, in Pierre.
- Reminded the board of the 2019 NRECA Legislative Conference, April 28-30, in Washington, DC.
- Informed the board of the American Coalition for Ethanol Conference, August 14-16, 2019, Omaha, Nebraska.
- Calendar review of upcoming meetings.

Board Report

The board considered and/or acted upon the following:

1. Approved the date and time of the next regular board meeting for 8:30 A.M. on Thursday, March 21, 2019.
2. Approved payment of legal fees for Harvey Oliver in the amount of \$2,736.37.
3. Approved Work Order Inventories #19-01 for \$187,607.06 and #19-01MC, \$56,359.21 to be submitted to Rural Utilities Service (RUS) for reimbursement from loan funds for electric plant construction already completed.
4. Approved addition to the annual signature and transaction authorization.
5. Authorized board attendance to the 2019 CFC Forum, July 1-3, in New York, NY.
6. Veterans Cemetery donation request remained tabled.
7. Held Executive Session.

Questions or more details on any of these matters? Please ask your cooperative manager, staff member or director.

Financial Report		January 2019	January 2018
kWh Sales		34,000,480 kWh	33,569,989 kWh
Electric Revenues		\$2,771,994	\$2,784,637
Total Cost of Service		\$2,541,125	\$2,621,595
Operating Margins		\$230,870	\$163,042
Year To Date Margins		\$240,312	\$172,856
Residential Average Monthly Usage and Bill			
January 2019	3,710 kWh	\$300.21	.0809 per kWh
January 2018	3,627 kWh	\$295.99	.0816 per kWh
Wholesale power cost, taxes, interest, and depreciation accounted for 84.2% of NEC's total cost of service.			

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.



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 jalapenos, 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 pkg. frozen crab meat, thawed
 1/2 to 1 pkg. Hidden Valley Ranch dressing mix
 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
 1/2 cup vanilla yogurt
 1 banana
 2 T. honey
 1 ripe mango
 1 cup ice cubes
 1/4 cup orange juice

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

Combine all ingredients; simmer on low heat.

Linda Rauscher, Aberdeen, SD

Orange Glazed Turkey Meatballs

1 egg
 1 lb. ground turkey
 1/4 cup milk
 1 T. olive oil
 1/2 cup plain bread crumbs
 1/2 cup chicken broth
 1 tsp. salt
 1 cup orange marmalade
 1/2 tsp. McCormick® Poultry Seasoning
 1 T. white wine vinegar
 1/4 tsp. McCormick® Black Pepper, Ground
 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
 1/2 cup sugar
 1 cup chocolate drink mix
 1/2 tsp. ground cinnamon
 2/3 cup coffee crystals
 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.

Mike Kelly Retires After 40 Years

Kelly Started Working As A Lineman In 1979

Ben Dunsmoor

bdunsmoor@northernelectric.coop

Northern Electric Cooperative Operations Manager Mike Kelly has worked for electric cooperatives for 40 years, but he said his career started long before his first official day as a lineman.

"I had to deal with it since I was a wee little lad," Kelly said with a smile.

Kelly said his work with electric co-ops really began when he was born because his father was a lineman for Whetstone Valley Electric Cooperative in Milbank. He remembers riding with his dad to patrol line, taking outage calls at home, and eavesdropping on conversations when his dad's co-workers would come over to the house as a kid.

"The discussions always ended up being about line work," Kelly remembers.

"It is like a family environment. You really couldn't find a better place to work. I honestly mean that."

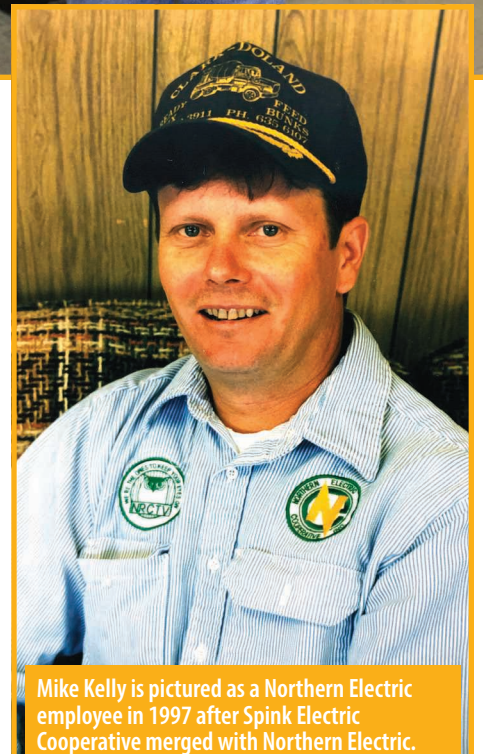
Following a lifetime of listening to linemen's stories, and creating even more during his own career, Mike Kelly is retiring from Northern Electric Cooperative at the beginning of April.



Northern Electric Operations Manager Mike Kelly is retiring after working for electric cooperatives for 40 years.

Kelly worked as a lineman with three different electric cooperatives over the course of 26 years before being promoted to operations manager with Northern Electric Cooperative for the final 14 years of his career.

Kelly began pursuing a career in line work when he enrolled at Mitchell Technical Institute in 1978. After graduation, he packed his bags and moved to Farmington, Minnesota, where he started working at Dakota Electric Association as a lineman. After five years in Minnesota Kelly and his wife Barb decided they wanted to get back to South Dakota, so he took a job at Spink Electric Cooperative in Redfield. Kelly worked for Spink Electric for 13 years before the co-op merged with Northern Electric Cooperative in 1997. Kelly has



Mike Kelly is pictured as a Northern Electric employee in 1997 after Spink Electric Cooperative merged with Northern Electric.

Kyle Miller Hired As New Lineman

Northern Electric Cooperative has hired a new lineman as a result of the reorganization within the co-op's operations department. Kyle Miller was hired as a full-time apprentice lineman in February. Miller has worked with Northern Electric as a temporary 1,000-hour lineman since May 2018.

Miller is from Groton and attended Groton High School. Following high school graduation, Miller attended Mitchell Technical Institute where he completed the power line construction and maintenance program.

Miller worked for a contractor in Nebraska after he graduated from Mitchell Tech in 2017. In Nebraska, Miller was part of a construction crew that built new transmission lines. Miller accepted the temporary line-worker position with Northern Electric last summer because he wanted to move closer to home.

Miller is excited for the opportunity to continue working for Northern Electric as a full-time lineman.



Kyle Miller began working as a full-time lineman with Northern Electric on February 18.



Mike Kelly (right) is recognized in 2014 for his 30 years of service with Northern Electric Cooperative. Former Northern Electric CEO/General Manager Jim Moore (left) presented Kelly with a plaque.

always worked for electric cooperatives and he said he has always enjoyed it.

"It is like a family environment," said Kelly. "You really couldn't find a better place to work. I honestly mean that."

In the spring of 2005, Northern Electric Operations Manager Jim Moore became the General Manager/CEO of the cooperative and Kelly was promoted to fill the role left vacant by Moore. He has spent the last 14 years guiding the operations department and leading the co-op's efforts to construct new line, respond to outages, and maintain a system that provides electricity to thousands of members in northeastern South Dakota.

The biggest change Kelly has experienced in his 14 years as operations manager is the advancements in technology. The co-op is now using digital maps that are stored on tablets and computers and the co-op has installed new electronic breakers across the system. Northern Electric Cooperative also uses new outage management software to assist in pinpointing outages and dispatching crews.

But Kelly said as the cooperative has adopted new technology the hard work and rewards of a career as a lineman have not changed.

"You still shovel dirt to set a pole. There are still some things that don't change," Kelly said.

Northern Electric Cooperative Line Foreman Jerry Weber has been promoted to operations manager and will replace Kelly in April. Weber has worked for Northern Electric for nearly 36 years.

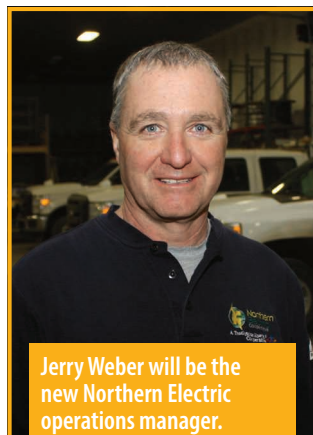
Weber said Northern Electric has rebuilt a lot of line and upgraded a lot of equipment across the system during Kelly's tenure as operations manager, however, Weber knows there is more work to do and there are plenty of construction projects in the new work plan.

"I'm looking forward to the planning of jobs before the job," Weber said. "When you are on the line you don't see

that side of it."

Kelly and his wife Barb have three daughters and four grandchildren. In retirement, Kelly plans to spend more time hunting, fishing, gardening, golfing and attending his grandkids' sporting events. He says his electric cooperative career was a rewarding journey whether it was working out in the field or managing it all back in the office.

"It is pretty gratifying. There is always satisfaction in getting outages taken care of, or getting miles of line built."



Jerry Weber will be the new Northern Electric operations manager.



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.

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

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.

PRE-PLANNING CAN **SAVE LIVES** DURING PLANTING



When it's go-time, it's go-time.

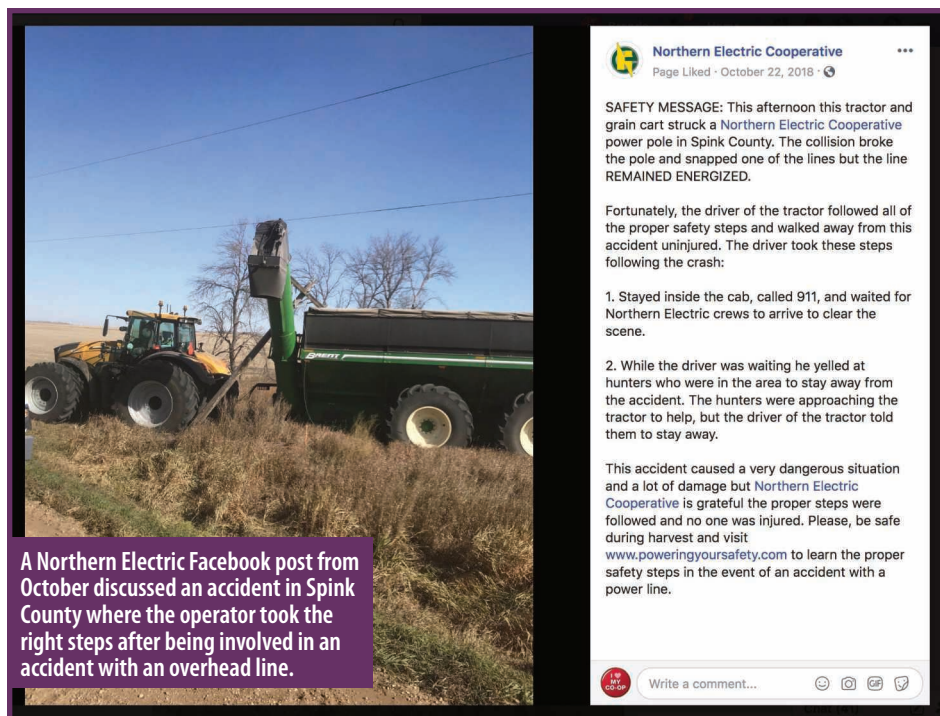
We understand that every second counts during planting season, but taking a moment to be mindful of safety during this anxious time could save you a lot of heartache in the long run. Remember to check your equipment, be aware of power lines, keep your cellphone on you at all times, dress appropriately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

Together we are

RE-ENERGIZING FARM SAFETY



Touchstone Energy®
Cooperatives



Northern Electric Cooperative
Page Liked · October 22, 2018 ·

SAFETY MESSAGE: This afternoon this tractor and grain cart struck a Northern Electric Cooperative power pole in Spink County. The collision broke the pole and snapped one of the lines but the line REMAINED ENERGIZED.

Fortunately, the driver of the tractor followed all of the proper safety steps and walked away from this accident uninjured. The driver took these steps following the crash:

1. Stayed inside the cab, called 911, and waited for Northern Electric crews to arrive to clear the scene.
2. While the driver was waiting he yelled at hunters who were in the area to stay away from the accident. The hunters were approaching the tractor to help, but the driver of the tractor told them to stay away.

This accident caused a very dangerous situation and a lot of damage but Northern Electric Cooperative is grateful the proper steps were followed and no one was injured. Please, be safe during harvest and visit www.poweringyoursafety.com to learn the proper safety steps in the event of an accident with a power line.

2019 Co-op Scholarship Winners Announced

Recipients Selected By Panel Of Co-op Employees



Alexis Schock: \$1,000 Recipient



Taylor Dinger: \$500 Recipient

"I applied because it is a great scholarship and every dollar counts toward a great education."

Northern Electric Cooperative announced the recipients of two co-op-sponsored scholarship programs in March. Aberdeen Christian School senior Alexis Schock was awarded a \$1,000 scholarship from Basin Electric Power Cooperative and Britton-Hecla High School senior Taylor Dinger was selected to receive a \$500 scholarship from Northern Electric Cooperative. Schock and Dinger were chosen as the recipients of the scholarships by a panel of co-op employees who reviewed the pool of applications.

"I applied for this local scholarship because I want to take as much responsibility as I can to pay for my college education," Schock said.

Schock received high recommendations

from her teachers at Aberdeen Christian School and has been named to the honor roll all four years. Schock is also involved in volleyball and band at Aberdeen Christian and volunteered at the Safe Harbor women's shelter in Aberdeen. She plans on attending North Dakota State University in Fargo in the fall and will major in Business with a minor in Spanish.

"One of my goals is to graduate college with as little debt as possible and this scholarship will help me in achieving that goal," Schock said.

Dinger is from Hecla and attends Britton-Hecla High School. He plans to enroll at North Dakota State College of Science in Wahpeton, North Dakota. Dinger is also on the honor roll at Britton-Hecla and is involved with 4-H, trapshooting, and volunteers as the school's videographer. Dinger would like to become an electrician with the goal of starting his own business someday.

Dinger – like Schock – also has the goal of finishing his post-secondary education with as little debt as possible and says this scholarship will help him achieve that goal.

"I applied because it is a great scholarship and every dollar counts toward a great education," Dinger said.

In 2017, Dinger was also one of Northern Electric's participants in the South Dakota Rural Electric Youth Excursion to North Dakota where he learned about electric generation and cooperatives.

Both recipients will receive their scholarships when they enroll in their respective schools in the fall.



2019 YOUTH EXCURSION

YOU WILL TOUR:

Basin Electric Headquarters

Antelope Valley Station

**Great Plains Synfuels
Plant**

Freedom Mine

Bismarck State College

2019 Youth Excursion to Bismarck, ND July 22-25

2019 YOUTH EXCURSION

South Dakota Rural Electric Cooperatives and Northern Electric Cooperative are proud to sponsor high school students on a **FREE** four-day trip to North Dakota.

During the South Dakota Rural Electric Youth Excursion students will stay at Bismarck State College and learn about electric generation, cooperatives, and energy careers.

Students will tour Basin Electric Power Cooperative power plants and electric-generation resources.

Youth Excursion attendees will also spend their evenings swimming, shopping, and cruising down the Missouri River on the Lewis and Clark Riverboat.

APPLY ONLINE
@

www.northernelectric.coop/youthexcursion



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

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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.

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

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.

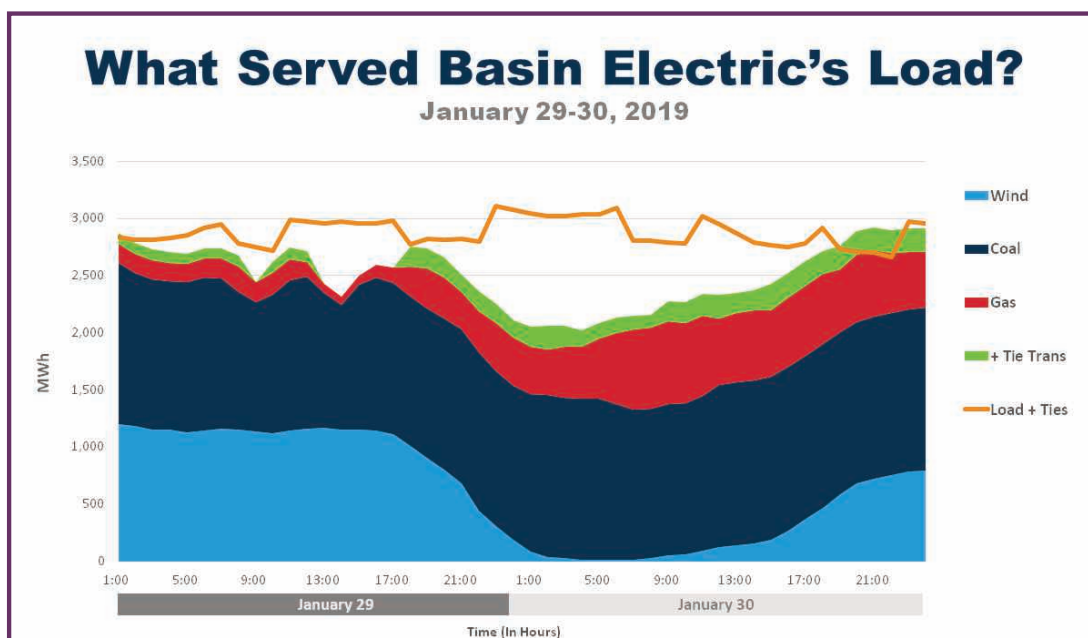
Maintaining Reliability

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.

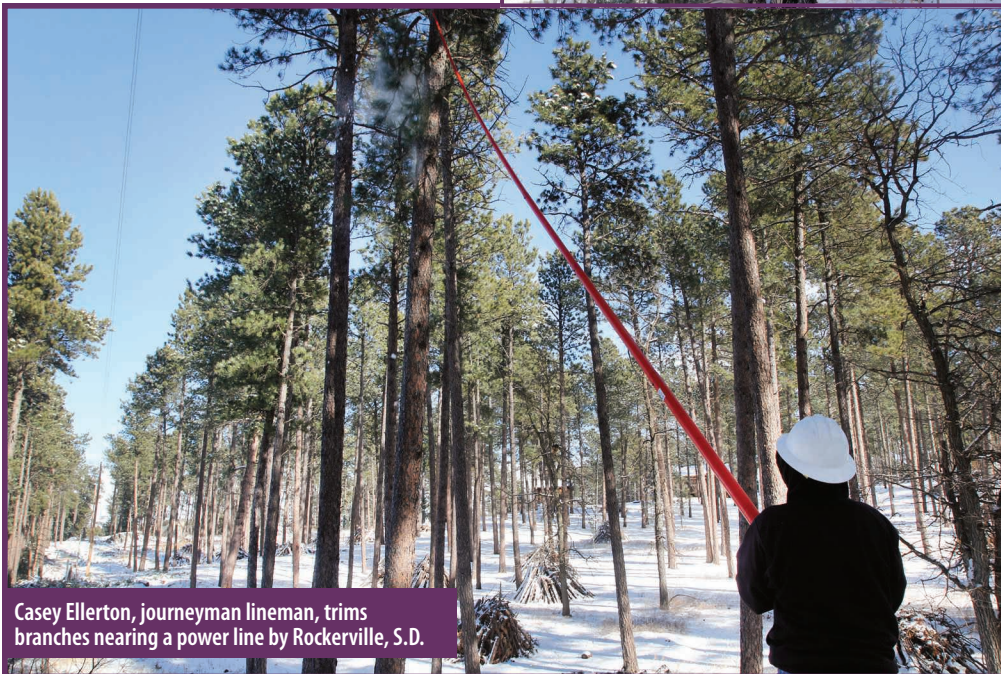
"Linemen need safe equipment...they work 24/7, 365. When the post office shuts down due to bad weather, the linemen still go out," said Mark Patterson, manager of loss control services for the South Dakota Rural Electric Association in Pierre, S.D.

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 22

SPURS Spring Dance, 7 p.m., Dakota Event Center, Aberdeen, SD, To purchase tickets, call 605-226-1099 or stop by the Hitchin' Post, facebook.com/spursTRC

March 22-23, 29-30

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

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 30-31

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 5-7

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 6-7

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

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 11

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

May 30-June 1

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

June 21

Dalesburg Midsummer Festival, Dalesburg Lutheran Church, Rural Vermillion, SD, 605-253-2575

June 22

South Dakota Cattlemen's Foundation Prime Time Gala, Fundraiser for Feeding SD, Convention Center and Denny Sanford Premier Center, Sioux Falls, SD, www.sdcattlemens foundation.com, Facebook: South Dakota Cattlemen's Foundation

July 11-13

Senior Games, Aberdeen, SD, 605-626-7015

July 13

Five Annual AutoValue Car Show, Hav-A-Rest Campground, Redfield, SD, 605-450-0332

July 27

16th Annual Make-a-Wish Poker Run, Starting at Biegler Motor Sports and ending at Harley Davidson, Aberdeen, SD, 605-225-7262 or 605-228-0604

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.