

March 2019 Vol. 19 No. 11



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Birkeland to Take Helm



Steve Reed, CEO

steve.reed@wce.coop

We hope you are able to stay warm in our typical South Dakota winter. Hopefully, we will avoid any major blizzards for the rest of the year. At last year's annual meeting, I informed the membership that I would be retiring in 2019. The board and I have agreed that I will retire immediately after the cooperative's 70th annual meeting in October. I will have more to say on this in the coming months.

The board has announced that Jeff Birkeland, our current CFO, will be the next CEO/manager. I think the board has made an excellent choice. Jeff has been with West Central for 25 years. The co-op will continue to face many challenges in the future and I am confident that Jeff is ready to tackle those challenges. Jeff and I will be working together over the next several months to assure a smooth transition.

The co-op will continue to face many challenges in the future and I am confident Jeff is ready to tackle those challenges.

WCEC Announces Pending Retirement of Long-time Manager Steve Reed

The West Central Electric Cooperative board of directors announced the upcoming retirement of long-time CEO/Manager Steve Reed. Current Chief Financial Officer and Assistant Manager Jeff Birkeland has been named as his replacement. Reed's retirement and Birkeland's subsequent promotion will be effective as of Oct. 3, 2019.

The process to find a suitable replacement for Steve has taken place over the last several years. Reed wanted to provide the board with a good internal candidate to take over when it came time for his retirement and encouraged all of the senior staff to participate in management training courses in anticipation of that day.

Ilke nim, it put me on a path to follow in his footsteps."

Birkeland graduated from Timber Lake High school in 1988 and from Northern State University in 1992. Upon his graduated for Spink Electric as an accountant and the moved on to West Central Electric in November of 1994 as

Board President Mike McQuistion said that Jeff Birkeland was the board's unanimous choice to fill the position, "Jeff is a really good fit. The staff respects him and it just feels right."

"Jeff is another example of Steve's leadership," he continued, "Jeff comes from a co-op-based family; his dad was a manager of the co-op at Timber Lake during Jeff's youth and then later at Gregory, S.D. He's got a strong cooperative background and has been with us for 25 years. His family and his roots run deep in Murdo and we know Jeff is ready to help West Central Electric move in to the future."

Steve Reed grew up in Timber Lake, S.D., and graduated from lineman school at what was then Mitchell Institute of Technology (currently MTI). He began his career as a lineman at West Central Electric in 1977 and quickly moved up the ranks. In 1979, he became the manager of member services and in the early '80s, he became the staff assistant and then assistant manager. He began his tenure as manager in 1985 after the unexpected passing of then-General Manager Fritz Jost. Over the years, Steve has seen many changes to West Central and he plans to highlight them in a small series of upcoming West Central Electric Cooperative Connections articles.

Like Steve, Jeff grew up in Timber Lake, S.D. The son of the

Moreau-Grand Electric Cooperative manager, "The co-op world is all I've ever known," said Jeff. "Couple that with the fact that I always looked up to my dad and wanted to be like him, it put me on a path to follow in his footsteps."



Birkeland graduated from Timber Lake High school in 1988 and from Northern State University in 1992. Upon his graduation, he worked for Spink Electric as an accountant and then moved on to West Central Electric in November of 1994 as a staff assistant. Through the years, he worked his way into his current position, CFO/assistant manager. "When I say I've worked my way up, I mean I am where I am today because a lot of people have helped in ways too numerous to mention," says Jeff. "Individually we are just normal people, but collectively we can accomplish great things ... and I believe West Central's history has proven that statement. I'd put our employees up against those from any other cooperative."

Jeff sees a lot of changes coming to the co-op world. "The status quo doesn't get a person or cooperative very far," he continued. "I'm not really sure what all those changes will be, but I do think we'll see solar and electric cars become more of the norm sooner rather than later."

After his retirement, Reed plans to stay around the Murdo area and just relax and play a little golf. With five kids and 11 grand-children living in Sioux Falls and Colorado Springs, it's likely that there will be some travel involved as well.

Formed in November 1949, West Central Electric Cooperative is a member-owned, not-for-profit cooperative that serves more than 5,400 residential accounts and 1,200 commercial accounts across nearly 7,000 square miles in five counties of western South Dakota.

West Central Electric

Cooperative Connections

(USPS No. 018-988)

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Twitter: @WCElectric; Facebook:

www.facebook.com/WestCentral Electric Cooperative

Design assistance by SDREA

Murdo to Host 2019 Annual Meeting Oct. 2

The West Central Electric board of directors has accepted the invitation from the city of Murdo to host the 70th annual meeting of the cooperative.

The 2019 annual meeting will be held in the Harold Thune Auditorium in Murdo on Wednesday, Oct. 2, and will begin with business followed by a free annual meeting meal to be prepared by Murdo Lions Club.

Plan to join your cooperative staff along with your neighbors and friends at West Central's 70th annual meeting on Oct. 2.

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, contac Judge Jessop at 280-0127.



Protecting Your Home and Business

Every year, electrical equipment, wiring, appliances and tools cause injuries and fires at both homes and workplaces. Paying close attention to the condition of electrical equipment and taking appropriate and prompt action to correct electrical problems can help to ensure your safety and the safety of those around you. Below are guidelines to help identify and reduce electrical hazards.

Electrical Outlet Safety

- Avoid overloading outlets with too many appliances and ensure that electrical loads are appropriate for the circuits.
- Unplug appliances when they are not in use to conserve energy as well as minimize the opportunities for electric shock or fire.
- Use outlets instead of relying on extension cords and power strips. Consider having additional permanent outlets installed where needed.
- Use Ground Fault Circuit Interrupters (GFCIs) in wet/ damp areas like kitchens, bathrooms and outdoors.



Electrical Cord Safety

- Inspect electrical cords to ensure that they are not frayed, cracked or damaged.
- Do not place electrical cords in high traffic areas, under carpets or across doorways where they pose a potential tripping hazard or could be easily damaged.

Certification and Awareness

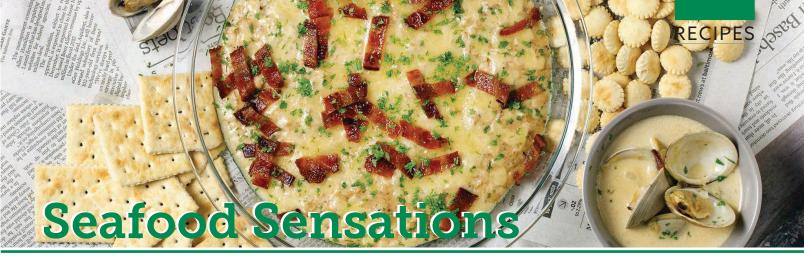
- Ensure that all electrical products and equipment are certified by a nationally recognized testing laboratory, such as Underwriters Laboratories (UL), and read the manufacturer's instructions carefully.
- Allow only trained and qualified electrical workers to perform work on electrical equipment.
- Be aware of signs of electrical problems such as flickering lights and/or buzzing, sizzling or humming sounds from electrical systems.

Source: www.acadiainsurance.com



KIDS CORNER SAFETY POSTER





Clam Chowder Dip

2 slices bacon, chopped

1/3 cup chopped onion

1 pkg. McCormick® Original Country Gravy Mix

1-1/2 cups milk

1 cup shredded white Cheddar cheese, divided

1 (6.5 oz.) can chopped clams, drained

2 tsp. McCormick® Parsley Flakes

Cook bacon in large skillet on medium-high heat until crisp. Remove bacon, reserving drippings in pan. Add onion; cook and stir 2 to 3 minutes or until translucent. Stir in gravy mix, milk and 1/2 cup shredded cheese. Bring to boil. Reduce heat and simmer 2 minutes or until gravy starts to thicken. Remove from heat. Stir in clams. Pour into 9-inch glass pie plate. Sprinkle with remaining 1/2 cup cheese. Bake at 350°F. for 15 minutes or until cheese is melted. Sprinkle with bacon and parsley. Serve with toasted baguette slices or crackers. Makes 12 servings.

Nutritional Information Per Serving: Calories 94, Total Fat 6g, Saturated Fat 3g, Protein 4g, Cholesterol 9mg, Sodium 278mg, Fiber 1g, Carbohydrates 6g,

Pictured, Cooperative Connections

Shrimp Lover Squares

1 (8. oz) tube refrigerated crescent rolls

1 (8. oz) pkg. cream cheese, softened

1/4 cup sour cream

1/2 tsp. dill weed

1/2 cup seafood sauce

24 medium shrimp, cooked

1/2 cup chopped green pepper

1/3 cup chopped onion

1 cup shredded Monterey Jack cheese

1/8 tsp. salt

In a greased 9x13-inch pan, unroll the crescent dough; seal seams. Bake at 375°F. for 10 to 12 minutes or until golden brown. Cool completely on a wire rack. In a small mixing bowl, beat cream cheese, sour cream, dill weed and salt until smooth. Spread over crust. Top with seafood sauce, shrimp, green pepper, onion and cheese. Cover and refrigerate for 1 hour. Cut into squares. Makes 2

Becki Hauser, Tripp, SD

Crab Quiche

4 beaten eggs

3/4 cup milk

1/2 tsp. salt

1/2 tsp. ground thyme

1 T. diced pimento

1-1/2 cups chopped

broccoli

1 cup chopped imitation

1 cup shredded Cheddar

cheese

1 cup shredded Monterey

Jack cheese

2 T. minced onion

1 unbaked 10-inch pie shell

Mix together first 5 ingredients; set aside. Combine broccoli, crab, cheeses and onion; spread in piecrust. Pour liquid mixture over all. Bake at 350°F. for 50 to 55 minutes. Let cool 10 to 15 minutes before cutting.

Barbara Angerhofer, Hendricks, MN

Tilapia Parmesan

2 lbs. tilapia fillets

2 T. lemon juice

1/2 cup grated Parmesan

cheese

4 T. butter, room temperature

3 T. finely chopped onions

1/4 tsp. dried basil

3 T. mayonnaise

In a buttered 9x13-inch baking dish, lay fish fillets in a single layer. Do not stack fillets. Brush with juice. Bake at 350°F. for 10 to 20 minutes or until fish flakes. Meanwhile, combine cheese, mayonnaise, butter, onions and basil. Spread cheese mixture on fish fillets and bake an additional 5 minutes or until golden brown.

Cortney Reedy, Tea, SD

Please send your favorite appetizer, beverage, casserole or dairy 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.

Spring is Coming

Are Electric Mowers for You?



Pat Keegan

Collaborative Efficiency

This column was co-written by Pat Keegan and Brad Thiessen of Collaborative Efficiency. For more information on mower options, please visit: www.collaborative efficiency.com/energytips. **Dear Pat:** I'm seeing a lot of ads lately for electric lawn mowers. I want to save money and help the environment, but from what I've heard, a lot of electric mowers can be underpowered and the cordless ones lose their battery charge too quickly. Do you think it's worth making the switch from a gas mower to an electric mower? – Eric

Dear Eric: Until recently, corded and cordless electric mowers tended to be underpowered. For cordless mowers, this fact was made worse by their sub-par battery life.

But today, with those problems largely solved, the best electric mowers have the power and battery life to keep pace with a gas mower, depending on the size of your lawn.

A cordless, electric mower with a large 56-volt battery can run for about one hour. Plug-in electric mowers don't have this limitation, but using a long electrical cord can be challenging.

Quality electric mowers, especially the cordless, rechargeable ones, tend to cost twice as much as a new equivalent gas model. But you can recoup some of the expense with cheaper operating costs, since electricity is a less expensive fuel than gas and electric engines generally require less maintenance than gas engines.

Another important cost consideration is that rechargeable batteries typically need to be replaced after three to five years. The cost savings also depend on the size of your lot. A small lot uses less gas, so fuel cost savings are less significant.

You can save a significant amount of money on purchase price with a corded mower, if you don't mind the hassle of navigating around the cord.

There are additional benefits of electric mowers besides lower fuel and maintenance costs. Electric mowers are much quieter than gas mowers and they start instantly. Electric mowers produce less tailpipe emissions, but the overall environmental impact depends on how the electricity you're using (to charge the mower) is generated. The environmental benefits will be greater if the electricity is generated from renewable energy sources.

Given all these considerations, my advice is to weigh your priorities. If you are looking to buy new, have a small- to mid-size lot, prioritize environmental concerns and don't mind navigating a cord or recharging batteries, an electric mower could be the right choice for you.

If you don't mind the noise, maintenance and other hassles of a gas mower, have a large lot and prefer not to invest in the upfront purchase price, a gas mower may be a better option.



There's also a third choice. If your goals are to save money and hassle while protecting the environment, you can minimize your need for a mower, or get rid of the need completely.

If you're willing to keep your lawn mowed regularly and don't mind breaking a sweat, consider a manual reel mower. Some models are more effective than you might think and they're far less expensive and require little maintenance or storage space.

The most dramatic step you could take is replacing your lawn completely, perhaps with water-efficient landscaping, a rock garden, a vegetable garden or even an artificial lawn. This could dramatically cut your water bill and the environmental impact of a lawn

Any change you make, whether in mowing or landscaping, will require a little research. But it's great to know the option of an electric mower is more viable than ever!



Thinking About An Electric Ride?

Touchstone Energy® Cooperative Members May Qualify for Nissan Leaf® Rebate

Residents of South Dakota, Minnesota, Iowa, North Dakota, Nebraska and other states who are members of a Touchstone Energy® Cooperative may be eligible for a \$3,500 rebate on a new Nissan Leaf from one of nearly two dozen dealers in the region.

The rebate, when combined with up to \$7,500 in federal electric vehicle tax credits, could result in up to \$11,000 in savings for the purchaser.

The offer expires April 1, 2019. To get the incentive, obtain a two-page flyer from your local Touchstone Energy Cooperative and bring the flyer along with a copy of your monthly electric bill to your participating Nissan delaership.



Teachers Sought

Teachers throughout the Dakotas, Minnesota and Montana can earn two college credits through the Lignite Energy Council's Education Seminar June 10-13 at Bismarck State College in Bismarck, N.D.

Participants can receive credit from the University of North Dakota (teaching and learning), North Dakota State University (education) or Minot State University (science). Teachers who took the class when it was a one-credit course prior to 2009 can take it again if they need a refresher as there is lots of new information.

The seminar will provide teachers with the information and educational materials they need to teach their students about how lignite is mined and used to produce electricity for homes, farms and businesses in the Upper Midwest. In addition, the seminar covers lignite's economic impact on the region, as well as important environmental issues affecting the lignite industry. Since 1986, more than 3,300 teachers have attended the education seminar.



Sponsors:

The teacher education seminar is sponsored by the Lignite Energy Council, in cooperation with-Bismarck State College, The Center for Economic Education at UND, NDSU and MSU.

Speakers and Tours:

At the seminar, teachers hear presentations by educators, researchers and lignite industry representatives. One day is devoted to touring mining operations, reclamation sites and coal conversion facilities. Question and answer sessions in the classroom and on the tour give teachers the opportunity to find out what they need to know for their individual classroom needs.

Professional Development Credit:

Two graduate professional development credits are available through the Center for Economic Education at the University of North Dakota, Grand Forks, N.D., North Dakota State University, Fargo, N.D., or Minot State University, Minot, N.D. To receive the credits, teachers must attend all portions of the seminar and prepare lesson plans demonstrating how they will use the seminar information and materials in their classrooms.

Materials Available:

Teachers attending the seminar will receive lecture outlines on each presentation, lesson plan examples, classroom exercises, coal and ash samples, audiovisual materials and information on the facilities toured. They also receive resource guides listing publications and audiovisual materials available for energy education.

Logistics:

Free lodging is provided in a Bismarck State College dormitory (two people per room). Meals will be provided. Also, transportation will be provided by the Lignite Energy Council for the tour of a mine and power plant.

An online application for all teachers is available at http://www.lignite.com/teachers.





LOCAL COMMUNITY INVOLVEMENT

Co-op Leaders Contribute to Local Boards, Youth Programs and More

Brenda Kleinjan

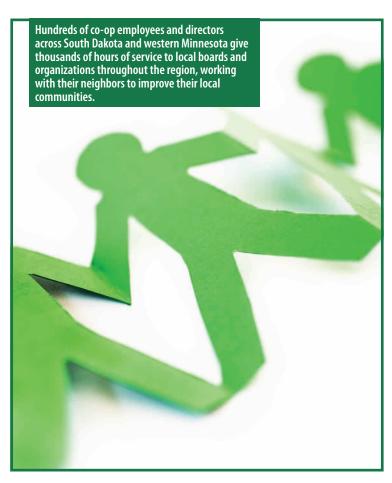
editor@sdrea.coop

When cooperatives say they are committed to their communities, it's not just lip service. It's service rooted in fact.

From city councils, township boards and county commissions to school boards, church boards and other community organizations, co-op employees and directors are answering the call to serve on boards of various shapes and sizes.

Some specialize, focusing their involvement in one arena. Others are generalists, taking the skills and lessons they've learned through their roll at their local electric cooperative and translating it to benefit their local community through involvement on several boards and groups.

For much of his co-op career, Mike Bowers has also served on boards associated with the Rapid City YMCA. Bowers, the manager of Rushmore Engineering, a part of Rushmore



TO CO-OPS IN COMMUNITY

Electric Power Cooperative in Rapid City, has spent 20 years on the YMCA building committee. He's also been a part of the YMCA board of directors for 10 years, serving as secretary and board chairman.

But, his Y involvement has even deeper roots.

"I grew up with the Y," said the Wisconsin native. "I've been a Y member here for 42 years. I joined the Y the first month I was in town and never looked back."

Bowers said the YMCA's commitment to people in the community is appealing and resonates well with the work of electric cooperatives.

"Both invest in the community, absolutely," Bowers said. "The YMCA is very much a cooperative structure; not-for-profit, open to all and every member is an owner, if you stop to think about it."

The Rapid City YMCA and the Rapid City Area Schools are in the midst of a \$10 million renovation of a 68,000 square foot building in downtown Rapid City that once housed an electric and gas utility company. When completed, the facility will house YMCA early childhood development and also provide

infant childcare as well as hold school district administrative offices.

The facility, which is slated to open in August, will be known as the Rapid City Education Center. It recently secured \$1.1 million in funding from the Rapid City Vision Fund.

We all need to be involved and give back to the community.

"The Rapid City Education Center will more than double our capacity for childcare," Bowers said.

Bowers sums up his work with the YMCA succinctly.

"This is the way I want to be involved and give back," said Bowers.

Bowers is not alone in his commitment to his local community.

From youth wrestling, basketball, baseball and football programs to coaching varsity-level sports and serving as

referees, co-op employees and directors are working alongside their neighbors to ensure these programs succeed.

You'll also find co-op employees and directors setting aside their co-op hats to take on the work of members of school boards at several districts across the state.

Dozens of co-op employees serve as trustees and council members of towns and communities across the state. More than a dozen township boards are comprised of officers who work for electric cooperatives or who serve as a director for an electric cooperative. County commissions from Custer County in the west to Grant County in the northeast – and a few counties in between – have co-op employees and directors serving on their governing boards.

And, the work doesn't stop there. You'll find co-op directors and employees in service organizations like Lions, Rotary and Kiwanis, on in veteran's organizations like the American Legion and VFW, church boards, airport, library and transportation boards.

As Bowers notes, "We all need to be involved and give back to the community."





A NEW HOME FOR BANK

Murdo's First Fidelity Bank Gets New Space

Joni Moore

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The First Fidelity Bank building in Murdo was recently replaced with a brand-new facility. The original bank was built in 1919 and served the community for nearly 100 years. Construction started on the new building in September 2017 after months of planning and designing. The building was up and running in March 2018. The new size is comparable to the old building if you include the basement in the old building.

As is usually the case in an older building, there were ongoing issues with a heaving floor and plumbing problems. Another factor in deciding to rebuild was the challenges with handicap accessible options. There was a chair lift for the stairs, however, the chair lift did not go down to the basement, where the restroom facilities were located.

The new building also has many energy efficiencies upgrades, especially with heating and cooling. The system consists of four mini-split heat pump systems, in conjunction with a 14-kilowatt electric hydronic boiler. This was quite an upgrade over the fuel oil burner they previously had. In addition to the heating and cooling, they also used proper insulating techniques and installed LED lighting. Collectively, these upgrades have made the building highly efficient.







There are some helpful new features for customers such as a drive-up window and an ATM machine. Bank Senior Vice President Karen Royer admitted, "When the new ATM was installed, it was the first time I ever used one!" Another innovation is remote deposit. Customers take a picture of their check they want to deposit and it is deposited remotely. Royer thinks this is especially helpful for younger patrons who go off to college but still bank in Murdo.

When the old building was demolished, it was necessary to tear down the building



next to it because the two buildings were very close together. That building, which was owned by the bank, was leased to the Turner Community Center. The Turner Youth Group used the building as a movie theater and a community center that could be rented out. "The Turner Youth Group and many volunteers spent countless hours renovating that old theater, so we told them we would add on a building to the bank for them," added Royer. The new theater is attached to the back of the bank and movies started back up in October.

The surrounding community is apprecia-



tive of the new First Fidelity Bank facility and the conveniences that were added for their customers.

Their hours are Monday through Friday, 9 a.m. to 3:30 p.m., and the drive-up window from 8:30 a.m. to 4:30 p.m.











MAKING CHANGE

Contributions by Co-op Members Add Up for Good

Brenda Kleinjan

editor@sdrea.coop

Thirty years ago, South Carolina's Palmetto Electric Cooperative conceived of an idea to benefit residents in the three counties it serves. By having members round up their monthly electric bills, co-op members could have a lasting impact on charitable groups in the area.

Since that beginning in 1989, Operation Round Up* has been an incredibly successful way in which the co-op and its members have been able to help the less fortunate in their community. Through Operation Round Up, Palmetto Electric automatically rounds up a participating member's electric bills to the next highest dollar. For example, a consumer's monthly bill of \$52.73 would be automatically rounded up to \$53, with the additional 27 cents going to the Operation Round Up fund. On an annual basis, the co-op is able to donate roughly \$6 for each participating customer – and that pool of money is then allocated to a variety of worthy causes throughout their service area.

The concept spread nationwide and today, several cooperatives in South Dakota and western Minnesota have the program.



Since 2000, members at Sioux Valley Energy have awarded more than \$1.5 million to community groups, including funding more than \$10,000 in scholarships each year to members and their children.

Across the border at Lyon-Lincoln Electric Cooperative in Tyler, Minn., their Operation Round Up board funds grant requests ranging from fire department requests to school and other educational requests.

Danube, Minn.-based Renville-Sibley Co-op Power Association is launching its Operation Round Up in June.

"All co-ops adhere to the seven cooperative principles, including "Concern for Community." The Operation Round Up® program is the perfect embodiment of this core principle," said Lenae Wordes, Renville-Sibley's communications manager. "The average co-op member donates \$6 with a maximum possible contribution of \$11.88 per year. This may not seem like a large amount, but when combined with nearly 1,900 of Renville-Sibley Co-op Power member accounts, it adds up to make an impact."

"Renville-Sibley's program will operate



with a board of trustees that is different from the board of directors for the electric co-op. This allows a group of members to focus on the mission of representing our communities," said Wordes.

In the Watertown, S.D., area, Codington-Clark Electric's Operation Round Up has helped 4-H clubs, a child hunger group and a local living history fair.

Central Electric Cooperative in Mitchell, S.D., awarded \$12,500 to 10 groups in November 2018. Among the groups receiving funding were community improvement associations and community centers, speed meters for two cities, 4-H, Habitat for Humanity and other groups. Since launching the program in 2015, the program has made \$72,500 in awards.

"Applications typically come from volunteers in your community who feel strongly about a project and making a difference," said Courtney Deinert, Central's manager of communications. For the past 10 years, members of Oahe Electric Cooperative in Blunt, S.D., have distributed more than \$92,000 to groups and organizations in Hughes and Sully counties. The money raised has helped volunteer fire departments, animal rescue shelters and other groups selected by the Operation Round Up Board of Trustees.

At Elk Point, S.D., Union County Electric Cooperative started its program in 2018. This year, it awarded \$4,000 to four organizations including the local historical society, the Boys and Girls Club, an animal rescue and the local Veterans of Foreign Wars group.

Co-op members at West River Electric Association in Wall, S.D., are also involved. In 2018, the Operation Round Up fund awarded more than \$8,200 to groups ranging from rodeo booster clubs and cemetery associations to ambulance services, athletic groups and pre-school and community groups. One award helped purchase a heater for the New Underwood city pool.

Contact your local cooperative to find out what ways they are involved in their communities and how to participate.



Fighting to Keep the Lights On

Paul Wesslund

NRECA

Did you know squirrels, lightning and trees have something in common? They can knock out your electricity.

Electric cooperatives work hard to keep your lights on all the time, but "you're going to have power outages, and that's just the way it is," says Tony Thomas, senior principal engineer with the National Rural Electric Cooperative Association (NRECA).

An electric utility's basic job of keeping the power flowing 24/7 calls for maintaining a complex network of power plants, poles and wires. But it also means battling the unpredictable. Thomas cites the top three troublemakers to electric reliability as trees falling on power lines and other interferences from vegetation, lightning strikes and animals going about their daily routines, especially squirrels chewing on electrical equipment.

"Utilities do an awfully good job," says Thomas. "But Mother Nature gets in the way sometimes."

Humans contribute to power outages as well, with vandals deliberately damaging electrical equipment and drivers accidentally crashing into utility poles.

Statistics say the lights are almost always on.

Numbers collected from electric utilities show that power in the United States is incredibly reliable. According to these figures, the percentage of time that the average American has electricity at the flip of a switch is 99.97... oh forget it, you get the idea. Thomas says what's most important to know about those numbers is that they don't change much.

"I don't see big swings from year to year," says Thomas. "If things are fairly consistent, that means the utility is operating about as efficiently as it can."

But utilities still try to improve on that reliability. Among the techniques being used to foil critter catastrophes are snake



barriers around substations, buzzard shields on transmission towers and mesh coverings on wood poles to protect them from woodpeckers.

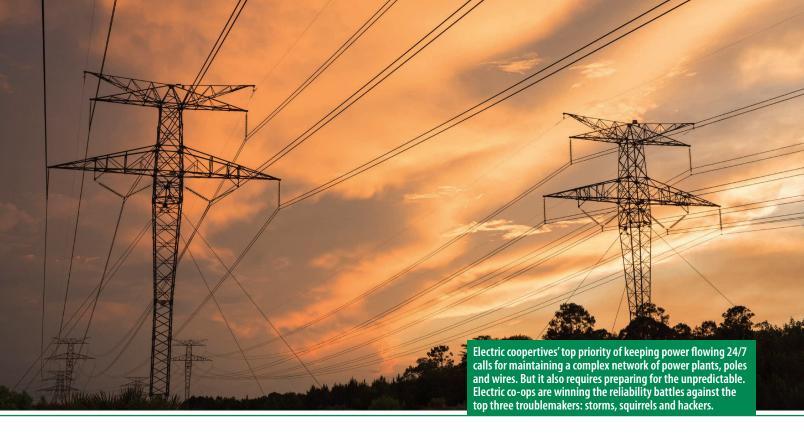
For some of the other causes of outages like trees and lightning, there's now an app for that.

Utilities operate extensive right-of-way programs to keep vegetation away from power lines, from clearing underbrush to publicity campaigns asking people not to plant trees where they can fall on power lines. These days, those efforts can be aided by digital software that forecasts the growth of trees and other plants so that utilities can prune branches before they cause a problem.

Other software tries to manage lightning by analyzing the age and wear on the utility's equipment that minimizes the damage from lightning strikes so it can be replaced before it fails.

Fighting storms and squirrels are two ways to keep the power on, but by far the biggest part of reliability comes from the decades of building, maintaining and updating the massive machinery of the nation's electric grid. More than 8,500 power plants generate electricity that is shipped through 200,000 miles of high-voltage transmission lines. Banks of substations and transformers step-down that voltage to send it to homes and businesses through 5.5 million miles of local distribution lines.

Keeping that network up and running calls for a lot of planning among utilities to anticipate how electricity will be used in the future. Part of that reliability planning has focused on protecting the electricity system from computer-based digital attacks.



The never-ending job of cyber security

Bridgette Bourge is among those overseeing how digital technology affects reliability for electric co-ops and their consumer-members. As director of government affairs for NRECA, she sees both the positives and the negatives to the latest internet-based, or cyber, technology.

"Cyber helps a lot on reliability because it gives us the ability to monitor and know everything right away," she says. "But whenever you increase reliability through a technology, you do potentially open up vulnerabilities as well from the security angle."

For any organization, including electric utilities, the benefits of the internet come infested with mischief makers. Bourge says it's routine for a company to receive tens of thousands of attempts each day to break into its computer network. Those "knocks" at the cyber door can come from individuals, countries and organizations, or from the army of automated "bots" roaming the internet worldwide, testing for weaknesses where a hacker could enter.

For a utility, a troublemaker inside the computer network could affect electric service, and that's why NRECA has organized a variety of cyber reliability programs.

Bourge says those cyber reliability programs aim to help protect against a range of threats, from broad attempts to shut down parts of the electric grid, to more focused efforts to corrupt pieces of software used by electric cooperatives.

As communitybased, member-led businesses, electric co-ops have a unique interest in protecting the reliability of the local community's energy supply.

NRECA's cyber protection efforts include a national program of working closely with the nation's electric co-ops to share the techniques for protecting utility systems from internet invaders. NRECA also works closely with federal government cybersecurity groups in the Department of Energy and the Department of Homeland Security.

NRECA is also part of a national program to create a cyber mutual assistance agreement. Much like how groups of line-

workers from an electric co-op travel to help restore power after a hurricane, these cyber agreements would be able to utilize teams of information technology experts in the case of a cyber incident.

"You can't solve cybersecurity," says Bourge. "No matter what you do today, the bad guys are going to figure out a way around it tomorrow. You have to keep thinking about the next step."

Bourge sees electric co-ops as well-placed to pay attention to cybersecurity. She says as community-based, member-led businesses, electric co-ops have a unique interest in protecting the reliability of the local community's energy supply.

"Electric cooperatives take cybersecurity very seriously," says Bourge. "It's built into their DNA."

Paul Wesslund writes on consumer and cooperative affairs for the National Rural

Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56 percent of the nation's landscape.

December 15-March 31

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

February 21-23

Sno Jam Comedy Festival, Sioux Falls, SD, siouxfallssno jamcomedyfest@gmail.com

February 22-23

State Wrestling Tournaments, Rushmore Plaza Civic Center, Rapid City, SD, 605-394-4111

February 23

Annual Outhouse Races and Chili Cook-off Contest, Nemo, SD, 605-578-2708

March 1-2

Mardi Gras Weekend, Main Street, Deadwood, SD, 605-578-1876

March 9-10

2019 Gun Show, American Legion Hall, Saturday 9 a.m. to 5 p.m., Sunday 9 a.m. to 3 p.m. MST, Philip, SD, 605-441-8466 or 605-441-1216

March 9-10

Dakota Territory Gun Show, Davison County 4-H Grounds, Mitchell, SD, 605-630-2199

March 9-12

Summit League Basketball Championship, Sioux Falls, SD, 605-367-7288

March 14-16

SD State Class A Boys Basketball Tournament, Premier Center, Sioux Falls, SD

March 14-16

SD State Class AA Boys and Girls Basketball Tournament, Rushmore Plaza Civic Center, Rapid City, SD



March 14-16

SD State Class B Boys Basketball Tournament, Barnett Center, Aberdeen, SD

March 16-17

Dakota Territory Gun Show, Codington City Ag Building, Watertown, SD, 605-793-2347

March 22-23, 29-30

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

March 23

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 30-31

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

April 5-7, 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 7

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

April 13-14

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

April 18

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

May 1-5

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

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.