

Cooperative Connections



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Involved
Locally**

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for a Cause**

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Billing questions

Designing fair and equitable rates



CEO/General Manager
wwitt@bhec.coop

What is the customer charge and what do I get for \$35?

Your customer service representatives, the employees the members speak with when calling in or stopping by to pay bills or ask questions, are most busy during the months of January, February, and March. The increase in workload is proportional to the decrease in temperature, which generally raises our electric bills.

Many of us don't pay particular attention to a bill until we think it is too high, too low, or just incorrect; and then we begin to try and understand the details of our bill. One of the most asked questions is: "What is this customer charge and what do I get for \$35"?

The customer charge is the fixed monthly fee incurred no matter how much electricity is used. The customer charge should account for all costs the cooperative has for the operation and maintenance of the distribution and transmission system, customer accounts expenses, taxes, interest, depreciation, administration, and general expenses. If you think about your own property, whether it is your house, a business, or a stock well service; your co-op has a significant investment in providing power to that location. The customer charge is reflective of that investment in poles, wires, transformers and equipment necessary to provide a member with electric service. It also supports the operation and maintenance of our substations, transmission and distribution lines, and our rights-of-way inspection and tree cutting programs. Regardless of how much electricity you use, these costs are incurred by your co-op so that electricity is available whenever you want or need it.

The customer charge also helps ensure equity among members. When fixed charges are not billed in a fixed charged manner, such as a customer charge, they would have to be recovered in the cost per kilowatt-hour of electricity. So, those members who use very little electricity would pay significantly less than their fair share of the fixed costs of operating the cooperative, and large users would end up paying much more of their fair share of those fixed costs.

So one way to think about it is that the customer charge is what it costs to deliver the electric energy to you and the kilowatt-hour charge is how much energy you use.

The other charge on many of your bills that we get questions on is the demand charge. Your cooperative pays for demand and energy when it purchases electricity from its power supplier. There are times during the day that most of our members are using electricity at the same time. When this happens, we place a huge demand on the electric generators. During periods of high demand, market forces go to work and the cost of power can increase significantly.

This drives up the cost of energy to our co-op during those times. Some months, more than half of our power bill is for demand. These times of high demand may only last a few hours a day but the cost of power during those times is at its highest. By moving large loads to off-peak times, it reduces the co-op's demand charges and the members' demand charges and saves both the co-op and member money.

BHEC's winter on-peak times are 5-9 a.m. and 5-9 p.m. Monday through Friday from October 1 through May 31 and from 2-8 p.m. Monday through Friday from June 1 through September 30. If you use large loads during the on-peak times, you are paying for demand and energy. If those same loads are used during off-peak times, you are only paying for energy.

Rate design is challenging and complicated. The end goal with rates is to be fair and equitable among our members and between different rate classes. The customer and demand charges are two rate components that help achieve that goal.

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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Black Hills Home Show Mar. 29-31



Join us at the Black Hills Home Builders' Home Show Friday through Sunday, March 29 through 31 at the Rushmore Plaza Civic Center in Rapid City.

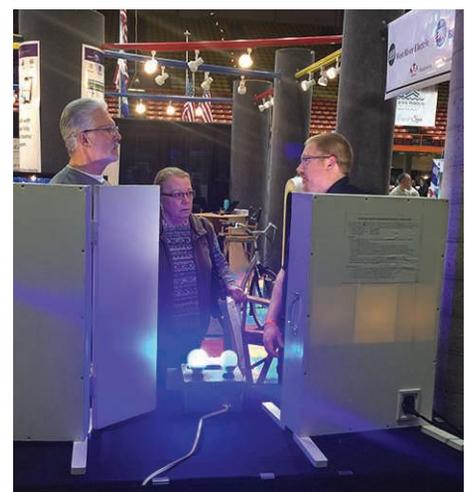
Hours are noon to 6 p.m. on Friday; 10 a.m. to 6 p.m. on Saturday; and 10 a.m. to 4 p.m. on Sunday.

The co-op's booth is in the civic center arena. Co-op personnel will be available to answer your questions about energy efficiency, heating and cooling equipment and more.

Above photo: Black Hills Electric, West River Electric and Rushmore Electric all share a booth featuring heat pumps, water heaters and energy efficiency tips.

Right: Jeff Barnes, right, IT specialist at BHEC visits with home show attendees about different types of LED bulbs.

Below: Mike Chase, manager of marketing and member services at BHEC demonstrates the efficiencies of a Marathon electric water heater.



Area Meeting Schedule

Rockerville

Friday, Feb. 22, 6-7 p.m.

Rockerville Community Hall
 Co-sponsor: Rockerville Community Club

Johnson Siding

Wednesday, Feb. 27, 6-7 p.m.

Rimrock Community Center
 Co-sponsor: Rimrock Community Club

Rochford

Friday, March 22, 6-7 p.m.

Rochford Community Hall
 Co-sponsor: Rochford Community Club

We hope to see you at one of these meetings. Thank you for your support of the above organizations.

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

Ladder Safety and How It Affects Everyone

THE NUMBERS SPEAK FOR THEMSELVES

+700

ladder injuries every day*

113

deaths caused by falls each year*

6-10 ft.

The **most common ladder falls** happen between 6 and 10 feet off the ground

WHETHER YOU'RE USING A LADDER AT HOME OR AT WORK, THESE NUMBERS AFFECT YOU.

2 most **common ladder accidents** include**:

1. **Missing the last step when climbing down**
2. **Overreaching**

**National Electronic Injury Surveillance System (NEISS) 2017 Data Highlights*, 2017, CPSC

***ALI Ladder Safety Training and Citation Report* - United States, 2018, American Ladder Institute

Take safety into your own hands by taking ladder safety seriously. Visit www.LadderSafetyMonth.com to learn more.

National Ladder Safety Month is presented by



Thank you to our Top Cap sponsor



KIDS CORNER SAFETY POSTER

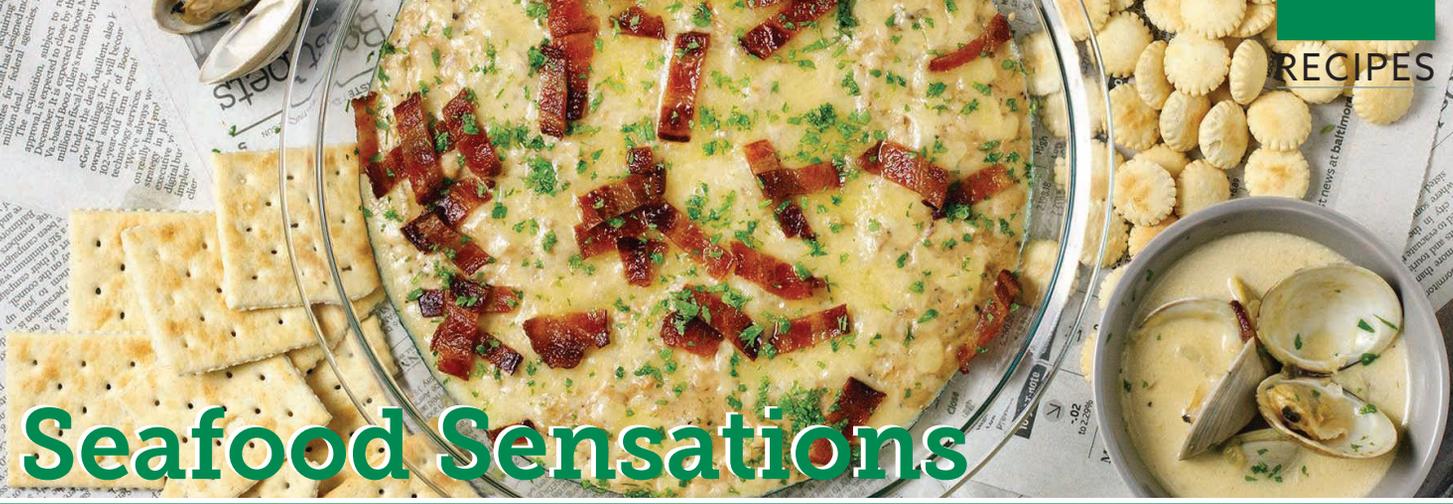


"Be careful with farm equipment around power lines."

Carson Lee, 10 years old

Carson is the son of Chris and Marisa Lee, Fairfax, Minn. They are members of Renville-Sibley Co-op Power, Danube, Minn.

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.



Seafood Sensations

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
- 1/8 tsp. salt
- 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

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 dozen.

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 crab
- 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
- 3 T. mayonnaise
- 4 T. butter, room temperature
- 3 T. finely chopped onions
- 1/4 tsp. dried basil

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

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.

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.



Unlike models from only a few years ago, many of today's electric mowers have the power and battery life to keep up with gas mowers.

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 dealership.

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>.





Rushmore Electric's Mike Bowers, fifth from left, is one of 17 members of the Rapid City YMCA board of directors.

LOCAL COMMUNITY INVOLVEMENT

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

Brenda Kleinjan

editor@sdrea.coop

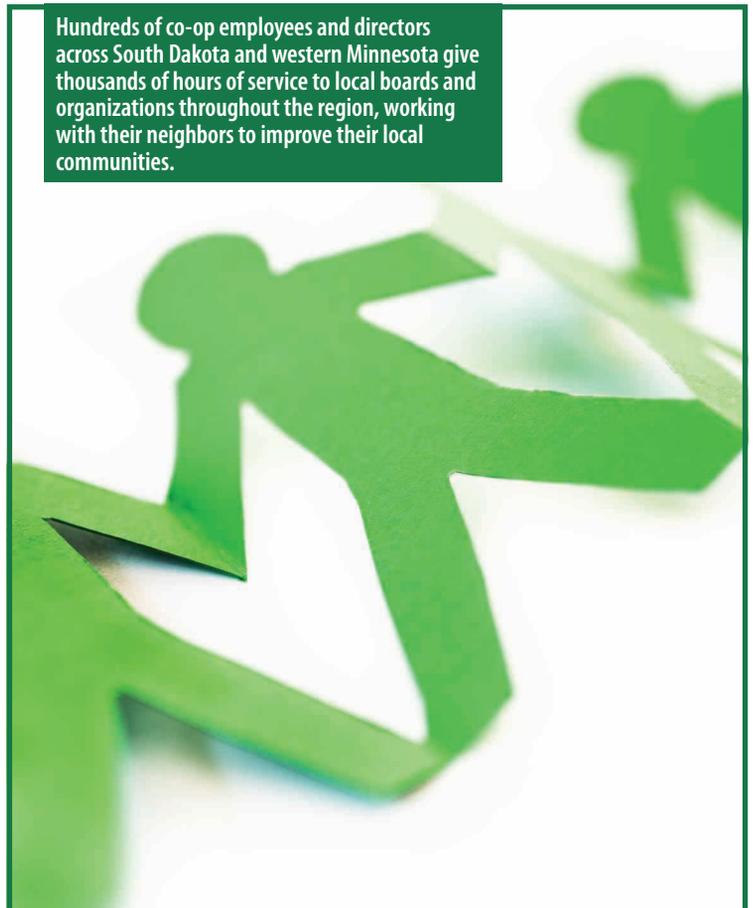
When cooperatives say they are committed to their communities, it's not just lip service. It's service rooted in fact.

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

Hundreds of co-op employees and directors across South Dakota and western Minnesota give thousands of hours of service to local boards and organizations throughout the region, working with their neighbors to improve their local communities.



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."



Chris Larson, General Manager of Clay-Union Electric Corporation in Vermillion, moderates the District 17 Legislative Public Forum held in October. Larson is member of the VDCD Governmental Affairs Committee, which hosted the candidate forum. Candidates present were, from left, Gregory Baldwin, Ray Ring, John Gors and Howard Grinager. Arthur Rusch attended by phone.

Pringle Substation Update

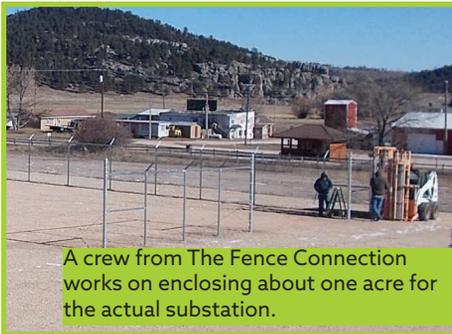
Due to expected future growth in the Pringle area, Black Hills Electric Cooperative is in the process of rebuilding the Pringle Substation.

The Pringle Substation is the oldest substation at the cooperative. It has clearance issues and can not meet future load.

In 2017, the co-op was able to purchase 1.66 acres in Pringle that had been owned by Mintec, a local mining company. The land was cleared and leveled and about an acre was fenced for the actual substation.

Concrete will be poured for footings and pilings within the next month. Most pilings will be about 20-feet deep and three feet wide.

The steel has been delivered and construction is expected to be completed by late summer or early fall. The substation transformer will also be upgraded. The total cost of the substation is \$1.75 million.



A crew from The Fence Connection works on enclosing about one acre for the actual substation.



The completed fence.



Co-op employees unload the steel for the Pringle Substation.

10 Quick Tips to Avoid High Winter Bills

Looking to lower your bills this winter? Use the 10 tips below to conserve energy.

- 1 Seal air leaks and insulate well to prevent heat from escaping and cold air from entering your home.
- 2 Reduce waste heat by installing a programmable thermostat.
- 3 Turn off lights when not in use.
- 4 Lower your water heater temperature. The Dept. of Energy recommends using the warm setting (120 degrees) during fall and winter months.
- 5 Unplug electronics like kitchen appliances and TVs when you're away.
- 6 Open blinds and curtains during the day to allow sunlight in to warm your home.
- 7 Close blinds and curtains at night to keep cold, drafty air out.
- 8 Use power strips for multiple appliances, and turn off the main switch when you're away from home.
- 9 Wash clothes in cold water, and use cold-water detergent whenever possible.
- 10 Replace incandescent light bulbs with LEDs, which use at least 75 percent less energy.

Source: U.S. Dept. of Energy

Upgrading your heat system?

If you have separately-metered electric heat, congratulations on keeping your heating costs low.

However, if you have your old electric furnace or heat pump replaced with a new furnace or heat pump, or have any work done in your breaker panel, it is important to contact the cooperative.

Someone who is not familiar with Black Hills Electric's heat metering system can unknowingly change wiring that can cause

one or more heat circuits to run backwards or not register on the heat meter at all. If this happens, energy used for heating your home will show up on your main meter instead of your heat meter, causing your bill to increase.

It should only take a few minutes and there is no charge for us to check your heat metering system.

Call us at 673-4461 or 1-800-742-0085 if you have had work done in your panel.

Preparing for severe weather is imperative

Severe winter weather hits our area often, and Black Hills Electric Cooperative is always prepared.

Throughout the year, BHEC prepares for potential weather by clearing trees near power lines. But when winter weather is in the forecast, everyone is prepared to deal with potential outages.

BHEC stays in touch with the National Weather Service and other agencies about upcoming weather. In the day before a storm, trucks are fueled up and equipment is checked to make sure everything is working, since workers could be called at any time once the storm begins.

Wet and heavy snow is often the issue for power outages, since it can weigh down trees and power lines. Freezing rain is another cause of extended outages. Ice and snow can also limit how quickly workers can respond to outages.

“Our crews will respond as quickly and safely as possible 24 hours a day,” said Bill Brisk, BHEC manager of operations. “Road conditions may not be the best for them to get to a certain scene, so bear with us and bear with them, it may take a little extra time.”

Members should be prepared by having their cellphones charged and by having food and water on hand in case of an outage. Report any outages at your home.

“Don’t assume your neighbor has called in an outage,” Brisk said. “You may be on a different company all together, so don’t assume that somebody else has called it in, make sure we’re aware of your outage.”

If you see a downed power line or debris on a power line, note the location and important information and then call BHEC immediately at 1-800-742-0085 or 673-4461. Don’t try to clear it yourself. To report an outage, you can call the same number, even if you think a neighbor may have already reported the outage.

Check BHEC’s webpage and Facebook page as we try to keep our members updated on the outage.

Also make sure you have a home outage



milk and beverages, dry cereal

* Water (one gallon per person per day for drinking; fill bathtub and other containers for flushing toilets and other needs)

* Non-electric can opener

* Disposable plates and utensils

* Camp stove or other emergency cooking device

* Extra blankets or sleeping bags

* Fire extinguisher

* First aid kit

* If needed, extra baby food, formula, diapers

kit stocked with the following supplies:

* Flashlights and extra batteries

* A battery operated radio

* Candles or lanterns and matches

* An alternate source of heat

* Canned or packaged foods, powdered

If you have a generator, be sure it is fueled, tested, and properly connected with a double throw switch before the severe weather arrives. Follow the manufacturer’s instructions and always operate outdoors with good ventilation.

Safety at the Stock Show



Jeff Barnes, IT specialist at Black Hills Electric Cooperative demonstrates electric safety during the 2019 Black Hills Stock Show and Rodeo at the Rushmore Plaza Civic Center in Rapid City. This is the 32nd year that South Dakota’s electric cooperatives have provided the demonstrations at the stock show. Stars of the show are Lighting Liz and Neon Leon, neon figures who get electrocuted hundreds of times a day to show what not to do around power lines. Several parents who watched the demonstration as children are now bringing their children to watch the safety demo. The co-ops also put on a show before the sheep dog trials using a high voltage trailer that shows how dangerous actual 7,200-volts of electricity is and teaches people what to do to avoid injury or death from high voltage electricity.

Kimball School received \$1,000 from Central Electric Cooperative's Operation Round Up® program to update their former playground for safety, entertainment and school pride.



MAKING CHANGE

Contributions by Co-op Members Add Up for Good

Brenda Kleinjan

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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.



Central Electric Cooperative's Operation Round Up® program awarded \$2,300 to Helping with Horsepower, a therapeutic riding program at Reclamation Ranch outside of Mitchell, S.D., for a lift that allows wheelchair-bound clients to ride horses.

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.



The Letcher, S.D., 4-H “Kids Kountry Club” breaks ground on their new playground area after receiving a \$3,500 Operation Round Up grant from Central Electric Cooperative members.

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



When it comes to electric reliability, the biggest challenge is 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.

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.



Electric cooperatives' top priority of keeping power flowing 24/7 calls for maintaining a complex network of power plants, poles and wires. But it also requires preparing for the unpredictable. Electric co-ops are winning the reliability battles against the top three troublemakers: storms, squirrels and hackers.

The never-ending job of cyber security

Bridgette Bourge is among those over-seeing 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 community-based, 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 23

Custer County Search and Rescue Rocky Mountain Oyster Feed, 5 p.m. until gone, Crazy Horse Memorial Restaurant, Custer, SD, 605-673-1571

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 15-16

28 Below Fatbike Race, Lead, SD, 605-584-3435

Photo courtesy: travelouthakota.com

March 14-16

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

March 16

St. Patrick's Day Dinner and Raffle, 5:30 to 8 p.m., St. Michaels Church, Hermosa, SD, 605-680-0951

March 16-17

12th Annual Hill City Antiques and Railroad Show and Sale, 9 a.m. to 5 p.m. on Saturday; 10 a.m. to 3 p.m. on Sunday, High School, Hill City, SD 605-574-2821

March 16-17

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

March 17

St. Patrick's Day Ham Dinner, 11 a.m. to 2 p.m., St. John's the Baptist Catholic Church, Custer, SD, 605-673-4986

March 22

Rochford Area Meeting, 6-7 p.m., Community Hall, Rochford, SD, 605-673-2244

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 5-6, 11-14

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

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.