



Cooperative Connections



**Your Home:
How Smart
Is It?**

Page 8

**Give Your
Heart Some
Love**

Page 12





South Dakota's 2017 Youth Tour participants pose for a group photo at Mount Vernon.

Attention High School Juniors:

WIN A TRIP TO D.C.

West Central Electric will once again sponsor high school juniors on an all-expenses-paid trip to Washington, D.C. Each June more than 1,500 high school juniors and seniors travel to Washington, D.C., to participate in the Rural Electric Youth Tour. During the week they learn about Washington, D.C., government, cooperative philosophy and rural electrification. The students are selected and sponsored by their local rural electric cooperatives. The South Dakota Rural Electric Association (SDREA) coordinates arrangements for the South Dakota students.

Some of the sites that will be toured are: The Lincoln Memorial, National Cathedral, The White House, Air and Space Museum, Washington Monument, U.S. Capitol, Ford's Theatre, The Kennedy Center, the Metro, Arlington National Cemetery, Mount Vernon, Tomb of the Unknown Soldier, The Smithsonian, Iwo Jima Statue, National Archives, U.S Supreme Court, and the Vietnam Veterans Memorial. Students will participate in a breakfast briefing with the South Dakota Congressional Delegation.

Who is Eligible? All area high school juniors whose parents are members of West Central Electric.

What Does It Cost? West Central Electric, along with the other local electric cooperatives that participate in the week-long event, funds the tour. The funding for the tour provides for each participant's transportation, room and board, entertainment and sightseeing events. Students are required to provide their own personal spending money (snacks and souvenirs).

When is it Held? The weeklong trip will be held June 7-14, 2018. Participants will meet for an orientation meeting on Thursday, June 7 in Sioux Falls. The group will fly to D.C. on Friday, June 8, and return to South Dakota on Thursday, June 14. A commercial bus and the Metro will be used for transportation while in D.C.



West Central's 2017 Youth Tour participants were McKenzie Springer, Jada Jones and Katy Manke.

How do I Qualify? Each Entrant must submit an essay, not to exceed 500 words, on the following topic: *"If chosen as a youth tour delegate you will be traveling to Washington, D.C., to experience and learn about America's rich history. What moment in American history do you wish you had been a part of and what would you have contributed?"* All essays must be typed and include a cover sheet which states the title of the essay, the entrant's name and address, name of parent or guardian and the name of your school.

Information may be picked up from your local school guidance counselor, at www.wce.coop, or from West Central Electric Cooperative, PO Box 17, Murdo SD 57559. All essays must be received by West Central Electric on or before Feb. 16, 2017.

West Central Electric Cooperative Connections

(USPS No. 018-988)

President

Mike McQuiston, Fort Pierre

Vice President

Shad Riggle, Hayes

Secretary/Treasurer

Kenneth Miller, Draper

Directors

Rich Bendt, Kadoka
Marty Hansen, Philip
David J. Mertens, Kennebec
Kevin Neuhauser, Midland
Paul Patterson, Draper
Jim Smith, Vivian
Jim Willert, Belvidere

Attorney

David Larson, Chamberlain

CEO/Manager

Steve Reed, Murdo

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

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

Call 605-669-8100 24-hour Dispatching

WEST CENTRAL ELECTRIC COOPERATIVE CONNECTIONS is published monthly by West Central Electric Cooperative, Inc., PO Box 17, Murdo, SD 57559. Periodicals Postage Paid at Murdo, SD 57559 and at additional mailing offices. Electric cooperative members devote \$1 from their monthly electric payments for a subscription. Nonmember subscriptions are available for \$18 annually.

POSTMASTER: Send address changes to: West Central Electric Cooperative Connections, PO Box 17, Murdo, SD 57559; telephone 605-669-8100; fax 605-669-2358; e-mail wcec@wce.coop; Web site: www.wce.coop;

Twitter: @WCElectric; Facebook:

www.facebook.com/WestCentralElectricCooperative

Design assistance by SDREA

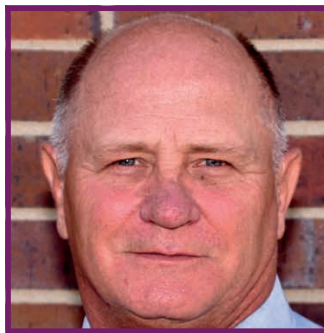


A Touchstone Energy® Cooperative

MANAGER'S COLUMN

Combining and Lowering Rates

It's cold outside! As I sit down to write this month's column, the weather pattern has reminded me much of the end of 2016. November was mild and in fact, Thanksgiving Day had a high temperature of 70 degrees in Murdo. Currently, New Year's Eve has a forecasted high of -8. That is quite the swing, although we have come accustomed to those types of changes in the Midwest. The best difference from this year to last is that we are not dealing with after effects from a Christmas Day storm!



Steve Reed, CEO

steve.reed@wce.coop

As I touched on during last month's report, the board of directors approved some rate restructuring. We were able to combine our Nonresidential and Residential single-phase rates. This has been a long-term goal of ours and we are glad to complete this step. We accomplished this by lowering nonresidential kWh blocks to match the residential rate. After combining, this rate will now be called our Single-Phase Rate. If before you had a meter that was on the non-residential single-phase rate, you now have the potential to see a savings of \$36.50 per month based on using at least 1,800 kWhs. Another component to this change is that every meter is subject to demand charges if demands over 50kW are reached. These demand charges are the same as our other rate classes, which is \$6.31 per kW over 50kW. The typical residence is not affected by these demand changes.

Another positive change for our membership's rates include increasing our electric heat credit. Standard electric heating credit will go from \$0.036 to \$0.038 per kWh. Already extremely competitive with propane costs, this increase will give us a leg up on the competition and, in many cases, beat their prices. Another advantage to electric heating is that our rates are more stable and not subject to such large swings, like when propane cost was more than \$4 per gallon in 2014. Our electric in-floor heat rate will now be named our controlled heat rate and the credit will go from \$.041 to \$.048. We will also be actively controlling this electric heat with our demand response units, to ensure that the heat does not run during our peak times.

This also allows members to run their heat more and not only on programmed times. For more information on our controlled heat rate, please contact us at 669-8100.

As with many times in the past eight years, we are again waiting for updates on the Trans-Canada Keystone XL pipeline. Recently the Public Utilities Commission of Nebraska approved an alternative route

for the pipeline, however, we do not yet know what that means for the project status. We will continue to monitor and hope to give updates on this project in the near future.

With any luck, the temperatures will warm and spring will be here before we know it!

**The board of
directors approved
some rate
restructuring.**

Weathering a Winter Storm

When ice and heavy snow bring down limbs and power lines, safety is a consideration indoors and out. Make sure you know how to weather the storm.

When outside, stay away from downed power lines:

- A power line does not need to be sparking or arcing to be energized. Equipment near power lines can also be energized and dangerous.
- Lines that appear to be "dead" can become energized as crews work to restore power, or sometimes from improper use of emergency generators. Assume all low and downed lines are energized and dangerous. If you see a downed or sagging line, contact your utility.
- Motorists should never drive over a downed line as snagging a line could pull down a pole or other equipment and cause other hazards.
- Be careful approaching intersections where traffic or crossing lights may be out.
- If you plan to use a generator, know how to operate it safely

Before a winter storm, you should have supplies on hand and know how to stay warm:

- Always keep a battery-powered radio or TV, flashlights and a supply of fresh batteries. You should also have water, blankets and non-perishable food.
- When power goes out, it often comes back in spikes. This can damage electronics. Keep your electronics safe by unplugging them when the power goes out. Leave one lamp or switch on as a signal for when your power returns.
- To prevent water pipes from freezing, keep faucets turned on slightly so that water drips from the tap. Know how to shut off water valves in case a pipe bursts.
- Never use a charcoal grill to cook or heat with inside the home. Burning charcoal gives off deadly carbon monoxide gas. Charcoal grills should only be used outdoors.
- If you live with a child or elderly person, you may need to take them somewhere with power so they can stay warm. If you are healthy enough to stay home safely, there are ways to stay warm: stay inside and dress warmly in layered clothing.
- Close off unneeded rooms.
- When using an alternate heat source, follow operating instructions, use fire safeguards and be sure to properly ventilate.

Source: safeelectricity.org

DESIGNER ELECTRICITY

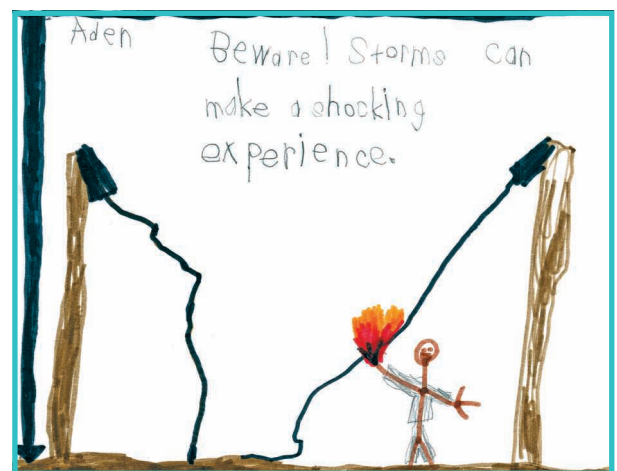
Consumers now have more options in how they use electricity, which means big changes for electric utilities. Here are a few of the major trends and developments:

Energy Efficiency

Efficient lightbulbs and other appliances have actually reduced electricity sales, even as the population increases, the economy improves and we use more electronic devices.



KIDS CORNER SAFETY POSTER



"Beware! Storms can make a shocking experience."

Aden Schaeffer, 6 years old

Aden is the son of Travis and Jessica Schaeffer, Tabor, S.D. They are members of Bon Homme Yankton Electric Cooperative, Tabor.

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.

Bountiful Brunch

Butter Brickle Bread

1 box butter pecan cake mix 3/4 cup oil
1 pkg. instant vanilla pudding 1 tsp. vanilla
3/4 cup water 4 eggs

Beat together first 5 ingredients. Add eggs, one at a time, beating after each egg. Pour into 2 greased, medium loaf pans. Bake at 350°F. for 35 to 40 minutes. Glaze with powdered sugar frosting, if desired.

Linda Rauscher, Aberdeen

Cornmeal Waffles

1-3/4 cup flour 2 eggs, beaten
1-1/4 cup cornmeal 2 cups milk
1/2 tsp. salt 3 T. vegetable oil
1 T. baking powder 1-1/2 tsp. vanilla

Whisk together dry ingredients. In separate bowl, beat eggs. Add milk, oil, and vanilla; whisk together. Pour wet mixture into dry mixture, whisking together. Bake on sprayed waffle iron.

Jane Ham, Rapid City

Quinoa Oatmeal

2 large eggs 1-1/4 cups whole milk
1/2 cup brown sugar 1 cup quinoa, cooked and cooled
1/3 cup butter, melted 2 cups old-fashioned rolled oats
1-1/2 tsp. baking powder 1 T. ground flax meal
1 tsp. cinnamon 1/4 cup sliced almonds
1 tsp. vanilla
1 tsp. almond extract

Spray a 9x9-inch baking pan. Whisk together eggs and brown sugar, removing all lumps. Whisk in the remaining ingredients, except the quinoa, oats, flax and almonds – stir those in with a spoon. Cover and refrigerate at least 8 hours, preferably overnight. When ready to eat, remove dish from fridge and preheat oven to 350°F. Bake 40 to 45 minutes or until it is set and nicely browned. Let stand 5 minutes before slicing and serving. Serve with warmed milk.

Darcy Bracken-Marxen, Hermosa

Breakfast Tot Casserole

8 eggs 1 (32 oz.) bag frozen potato nuggets
1/4 cup heavy cream 2 cups shredded Cheddar cheese
1 package McCormick® Good Morning Ultimate Egg Casserole Slow Cooker Breakfast Seasoning Mix 8 oz. ground breakfast sausage, cooked and drained

Spray 6-quart slow cooker with no stick cooking spray. Mix eggs, cream and Seasoning Mix in large bowl with wire whisk until well blended. Place 1/2 of the potato nuggets in bottom of slow cooker. Pour in egg mixture. Sprinkle top with 1/2 cup of the cheese, then cooked sausage. Layer with remaining potato nuggets and cheese. Cover. Cook 2 -1/2 hours on HIGH or 5 hours on LOW. Makes 8 servings.

Nutritional Information Per Serving: Calories 502, Total Fat 34g, Saturated Fat 14g, Sodium 1,238mg, Cholesterol 234mg, Carbohydrates 31g, Protein 18g, Dietary Fiber 3g.

Pictured, Cooperative Connections

Brunch Baked French Toast

3 eggs, beaten 2/3 cup brown sugar
1 cup milk 1 (16 oz.) loaf French bread, cut into 1-inch slices
1/4 tsp. salt 2 tsp. ground cinnamon or to taste
1/2 cup butter, softened

Preheat oven to 350°F. Whisk eggs, milk and salt together in a bowl; pour into a shallow dish. Soak bread slices in egg mixture until saturated. Spread softened butter over the bottom of a 10x15-inch jelly roll pan. Sprinkle brown sugar over the butter. Arrange bread slices onto sugar in a single layer; sprinkle with cinnamon. Bake in preheated oven until beginning to firm, 25 to 30 minutes.

Cortney Reedy, Tea

Please send your favorite seafood, appetizer and beverage 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 2018. All entries must include your name, mailing address, telephone number and cooperative name.

Hiring the Right Contractor



Pat Keegan

Collaborative Efficiency

Your electric co-op may be able to provide a list of approved contractors in your area.

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

Sources

¹ <https://energy.gov/energysaver/insulation>

² <https://insider.energytrust.org/technical-tip-explain-heating-efficiency-ratings/>

³ <https://energystar.zendesk.com/hc/en-us/articles/212111387-What-is-SEER-EER-HSPF->

Dear Pat: We're wanting to make renovations to our home that will improve aesthetics and overall energy efficiency. How can we make sure we hire a contractor who will do a good job and stay within our budget? – Bridget and Neil

Dear Bridget and Neil: Great question! Renovations can be the perfect time to improve your home's energy efficiency. To make sure you get those energy savings, it's important to do some planning right from the beginning.

The first step is to educate yourself so you can be in control of your project. Helpful, easy-to-understand energy efficiency information is available for virtually any area of your home and any renovation project. Just be sure to use reputable sources, like energy.gov, energystar.gov or your local electric co-op.

You'll need that knowledge so you can judge the solutions each potential contractor proposes. Some products or methods that are sold as effective energy efficiency solutions may not work as well as they claim or may be too expensive relative to the energy savings they provide.

It's important to talk to your local building department to find out if your project requires a permit and inspections. Some contractors may suggest doing the work without a permit, but unpermitted work can cause problems if you need to file an insurance claim down the road or when you get ready to sell your home.

You can also use your newfound knowledge to ask the right questions of potential contractors. Ask about the product to be installed, the energy savings it should yield and whether it will improve comfort. Because energy efficiency installations and construction are specialized, most measures are unlikely to be installed correctly unless the installer has experience and hopefully some appropriate training or certification.

Finding a contractor can be a challenge, especially in rural areas. To find them, use your online search engine to "find a contractor in your area." If you're in a sparsely-populated area, the right contractor may be located an hour or two away. Your electric co-op may be able to provide a list of approved contractors in your area. You can also check with a local energy auditor for contractor names.

You may decide you'd like to hire a small specialty contractor or a larger general contractor. Either way, it's crucial to hire someone with a contractor's license, a local business license and three types of insurance: liability, personal injury and workers' compensation. Check references to verify the contractor has a solid history of cost-control, timeliness, good communication and excellent results, including significant energy savings. You might learn that your lowest bidder has a tendency to increase the price after the job has begun.

As you choose between contractors, quality should be an even more important consideration than price. Poor-quality energy efficiency work will not deliver maximum savings.

Once you have settled on a contractor, be sure to get a written contract. It should include "as built" details and specifications that include energy performance ratings you have researched ahead of time, such as:

- The name of the individual doing the installation.
- The specific R value¹ if you're insulating.
- The make, model, the AFUE (annual fuel use efficiency) and COP² (coefficient of performance) ratings if you're replacing a furnace (and ask that an efficiency test be conducted before and after the work).
- The make, model and EER (energy efficient ratio) rating³ if you are replacing the air conditioner. (Some contractors are able to check for duct leakage in the supply and return ductwork with a duct blaster if you're doing any furnace or AC work.)
- Whether the contractor must pay for the necessary building permits.

Finally, be cautious about pre-paying. Keep the upfront payment as low as possible, set benchmarks the contractor must meet to receive the next payment and make sure a reasonable amount of the payment is not due until the project is completed, passes building inspections and you are fully satisfied. If you don't feel qualified to approve the project, you could even require testing or inspection by an independent energy auditor.

Then, enjoy your new energy efficient space!

Johnson Elected to Touchstone Energy® Cooperatives Board

Dick Johnson, West River Electric Association CEO/general manager, was elected to the Touchstone Energy® Cooperatives board of directors Dec. 14 during Touchstone Energy's annual electronic business meeting.

West River Electric is headquartered in Wall, S.D.

Johnson said he's humbled to be elected to the seat by fellow Touchstone Energy members.

"I will be a strong voice for cooperatives around the country, from the largest to the smallest," Johnson said. "I am passionate about Touchstone Energy and will work hard to move the brand forward and continue the tradition of providing the tools and services to help cooperatives engage with their member-owners."

Also elected to the board were Bob Perry, general manager, West Oregon Electric Cooperative; and incumbents Deb Mirasola, communications and marketing director, Dairyland Power Cooperative; and Doug Miller, vice president statewide services, Ohio's Electric Cooperatives.

Touchstone Energy's first 2018 board meeting will be held following the National Rural Electric Cooperatives Association annual meeting Feb. 25-28 in Nashville, Tenn.

Carrie Law, director of communications and government relations for Sioux Valley Energy in Colman, S.D., is also on the nationally-elected board.

Johnson had served as the chairman of the Touchstone Energy Cooperatives Standards and Best Practices Committee. Employees of Basin Electric Power Cooperative in Bismarck, N.D., also serve on national committees: Paul Cook (Brand Strategy Committee), Jeremy Woeste, (chairman of the Cooperative Relations Committee) and Chad Reisenauer (Energy Solutions Committee.)

Touchstone Energy is the brand of America's electric cooperatives. Touchstone Energy Cooperatives represents a nationwide alliance of member-owned electric co-ops. Collectively, it delivers power and energy solutions to more than 750 unified local electric cooperatives across 46 states.



Dick Johnson

Fiegen Gains Leadership Position in RTO

South Dakota Public Utilities Commission Chairperson Kristie Fiegen has been named vice president of the Southwest Power Pool's Regional State Committee. The committee provides state regulatory agency input related to the development and operation of regional bulk electric transmission in 14 states in the central U.S. Fiegen previously served as the group's secretary.

SPP oversees the bulk electric grid and wholesale power market among its members in Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas and Wyoming. The Regional State Committee is charged with recommending cost allocation policies that determine the amount electricity customers pay for the cost of building and operating transmission lines that cross several states in the SPP region.

"The work of the Regional State Committee is particularly important now as transmission projects are being planned and developed across our region," Fiegen said. "The cost of transmission accounts for a significant portion of the rate electric customers pay. As state regulators, we are especially keyed into fairly weighing the electric reliability demands of our region and the impact to customer bills," she stated.

Fiegen is serving her sixth year on the PUC. She was appointed to the commission in August 2011 and won election to a six-year term in November 2012. Fiegen is a member of the National Association of Regulatory Utility Commissioners' Committee on Gas and Subcommittee on Pipeline Safety and serves on the Gas Technology Institute's Public Interest Advisory Committee.



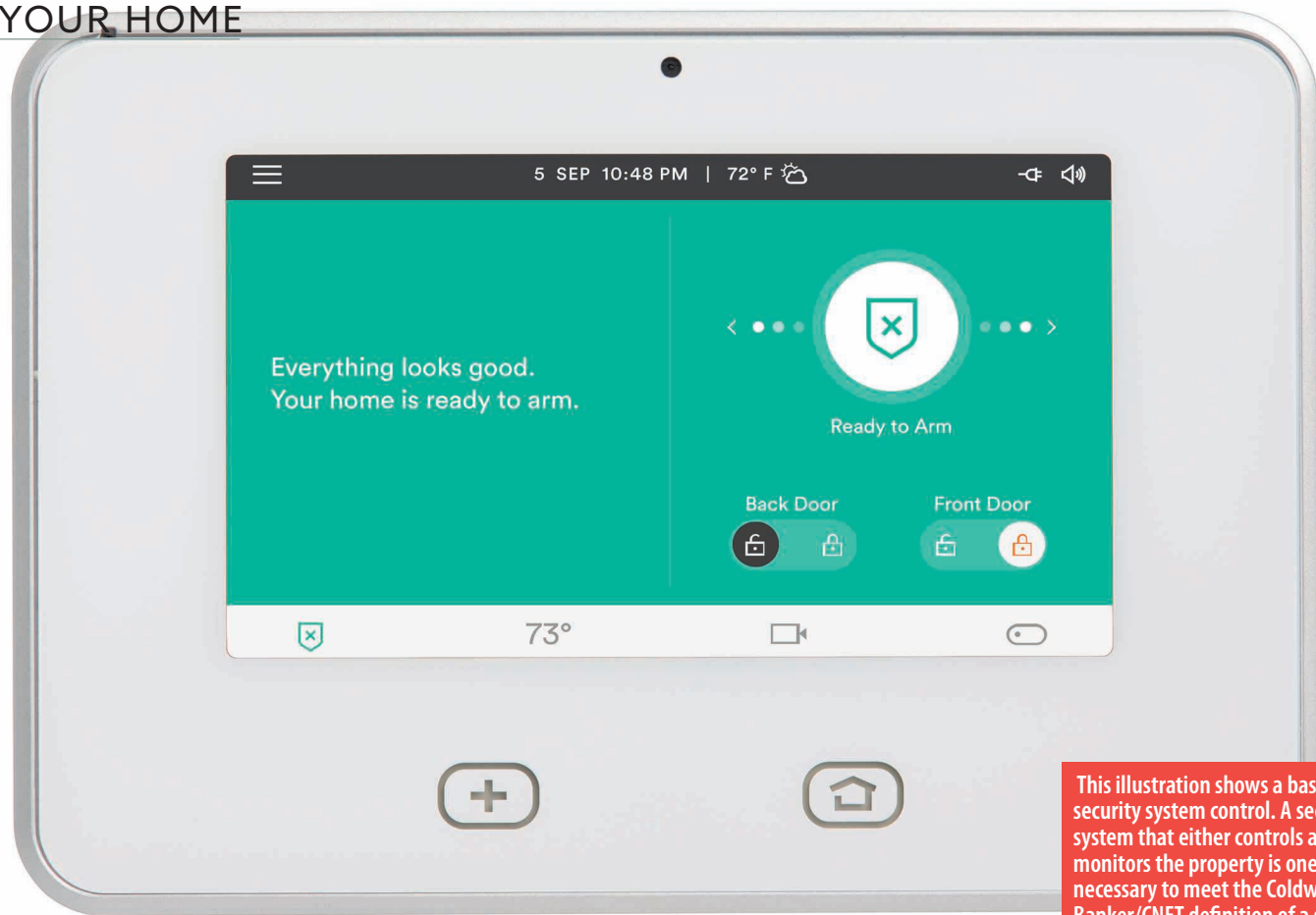
Kristie Fiegen



Putting Energy Where it Matters Most

Touchstone Energy® Cooperatives.
Your source of power. And information.





This illustration shows a basic security system control. A security system that either controls access or monitors the property is one feature necessary to meet the Coldwell Banker/CNET definition of a smart home. (Vivint Smart Homes)

WHAT MAKES A SMART HOME?

Terry Woster

Freelance Writer

Everyone has an idea about what the phrase “smart home” means, but experts recently defined and identified the basic features and systems that make a home fit the phrase.

A dependable Internet connection is an essential piece, necessary for the connections that make the features of the home interact with each other and with the homeowner to get the most from each feature, whether it's the doorbell camera, the thermostat or the sound system.

“You can't have a smart home if it can't connect to smart appliances,” says David Sirotty, vice president of North American Communications



An illustration of the Smart Home Staging Kit available from the Worthington Group to sellers who list with Coldwell Banker. The kit includes a Nest Learning Thermostat, Nest Protect smoke and carbon monoxide alarm, Nest Cam Indoor security camera, August Smart Lock, August Connect, and Lutron-Caseta Wireless Lighting Starter Kit. More information is available at SmartHomeStaging.com. (Illustration courtesy of Coldwell Banker)

You can't have a smart home if it can't connect to smart appliances.

for Coldwell Banker Real Estate. He also said more and more people are interested in smart-home features in the homes they buy and in the renovation projects they undertake.

To come up with a definition of a smart home, Coldwell Banker Real Estate LLC in 2016 collaborated with CNET, a media website that produces news and reviews of consumer technology.

"For a time, we were stumped," Siroty said. "There simply was no definition of what it was. It needed to be broad enough and simple enough to be understandable." If you have certain specific and basic features or systems, if I can call your property a smart home, I can market your home very differently. That's significant."

A commonly accepted definition of the term is important because it provides "a clear and unified designation to keep up with rapidly evolving technology in the home," he said.

In a prepared release on May 10, 2016, Coldwell Banker and CNET outlined the definition they wrote:

Smart Home: A home that is equipped with network-connected products (that is "smart products," connected through Wi-Fi, Bluetooth or similar protocols) for controlling, automating and optimizing functions such as temperature, lighting, security, safety or entertainment, either remotely by a phone, tablet, computer or through a separate system within the home itself.

To be considered a smart home, the property must have a smart security feature that either controls access or monitors the property or a smart temperature feature, in addition to a reliable Internet connection. The property also must have at least two additional features from the following list:

- Appliances (smart refrigerators and

You have the power with Smart Home Technologies



1 Smart Hub/Bridge

If you are looking to make your home smart without having to hire a company to install an interconnected system, then an internet-connected smart hub is the first thing you'll need. A smart hub will allow you to control all your smart devices from one app by acting as a middle man that facilitates communications between all your smart home devices.

2 Smart Lighting

Like most items in a smart home, smart lighting can be controlled with a few swipes of a smart phone app. But smart lighting is more than just convenient. Smart light bulbs are more energy efficient than standard incandescent bulbs. Some bulbs use GPS on your phone to determine your location, and can turn on or off depending on where you are located. Some bulbs are even voice controlled!

3 Smart Blinds

Smart blinds can be useful for those who have tall, hard-to-reach windows; for those who have difficulty moving around the house; or for those who simply want

to smarten their home. Smart blinds allow you to schedule your blinds to open and close during certain times of day – a bonus if you are trying to be energy efficient – or control them via an app.

4 Smart Locks

Smart locks allow you and anyone else you wish to enter your home with ease. Some smart locks let you open your doors with your cell phone. Some let you see who is coming and going while you are out of the house. Some even allow you to assign security privileges to certain people.

5 Smart Thermostat

A smart thermostat is a great way to keep your home smart and energy efficient. Many smart thermostats can learn your heating and cooling behavior and will auto-schedule based on your preferences.

6 Smart Cooking Appliances

Smart cooking appliances, like smokers, allow you to cook a perfect meal away from home, without burning the house down! Wi-Fi technology makes these cooking appliances smart!

- smart washer / dryers)
- Entertainment (smart TVs and TV streaming services)
- Heating/Cooling (smart HVAC system, smart fans or vents)
- Lighting (smart light bulbs and lighting systems)
- Outdoors (smart plant sensors and watering systems)
- Safety (smart fire/carbon monoxide detectors and nightlights)
- Security (smart locks, smart alarm systems or cameras)
- Temperature (smart thermostats)
- The term "smart home" can be intimidating and overwhelming," Lindsey Turrentine, editor-in-chief of CNET.com, said in the prepared statement. "We want to make it easy for everyone to better understand what a smart home is, in order to simplify the process in helping them choose the right devices for their homes."

Thinking Solar?



Jessie Tucker

jessie.tucker@wce.coop

For the last couple years, one of the main buzzwords we have heard in the utility industry is solar. Solar, also known as photovoltaic (PV), has been around for many years but with greater advancements and upgrades in technology, it has seen some strides in recent years. As your electric cooperative, West Central's goal is to provide the membership with unbiased information that serves your best interests.

Recently, four of our neighboring co-ops conducted a solar survey to find just how interested their members were in solar. They surveyed 1,600 members and had 577 total responses. Central Electric, which is headquartered in Mitchell and took part in the survey, was willing to share the results of their survey: 93.47 percent of its membership has no plans to install solar but the remaining 6.52 percent have either already installed solar or plan too in the future. Of those who are interested, the top influence for them to use solar is to save money on their electric bill. Although solar has lowered in cost, it is not yet as cost effective as your electric cooperatives rates. Other main influences for using solar included maintaining electricity during power outages (typical installations do not provide backup during outages), to be less reliant on energy providers and also to reduce carbon emissions.

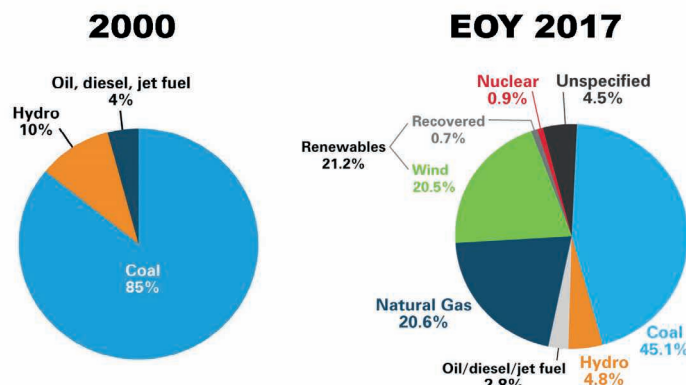
West Central receives the majority of our power from Basin Electric generating facilities. Basin Electric's generation portfolio already includes a large amount of renewable generation which many members may not know about. This information is shown in the graphic. Basin Electric now has approximately 21.2 percent renewable energy, not counting hydro-electric generation. It is also worth noting that since the year 2000, coal generation has gone down from 85 percent to only 45.1 percent of their portfolio.

To help our membership get all the correct information, we have included a 10-step guide to assist you in exploring the possibility of solar.

- 1. Make Your Home More Energy Efficient Before Buying a Solar System** – Adding insulation, sealing air leaks and completing other basic fix-it projects make sense for several reasons. You can cut your energy costs immediately and you'll also be able to reduce the size of the PV system you purchase. West Central offers free energy audits to members for additional tips to help your home be more energy efficient.
- 2. Research, Research, Research Before Investing in a Solar System** – West Central should be one of your first contacts. Experts at your co-op can answer basic questions, provide resource materials, and direct you to reputable websites.
- 3. Understand How Solar System Meshes with Your Cooperative's System** – Most solar systems are designed to provide you with a portion of the electricity needed, but won't provide 100 percent of your needs. At night and on cloudy days, and possibly at other high-energy-use times, you'll need more power than your PV system can produce. That means you'll still need to be connected to West Central's power lines. Because these systems are grid-connected, energy can flow both ways. Each utility – including West Central – sets appropriate policies and rates for connecting PV systems to their lines (the grid) and for possibly purchasing any excess energy your system might provide. As you begin to explore PV systems, be sure you ask coopera-



Basin Electric Generation Portfolio



West Central's major power supplier, Basin Electric, has about 21 percent of its electricity generated from renewable resources.



A technician works on a solar array.

tive experts about rate structures, interconnection, essential safety precautions, insurance and any other connection-related details.

4. Review Your Current Energy Use so You Can Determine What Size PV System to Install –

West Central staff can help you review your past energy use, and help you determine how the projects you've undertaken to improve energy efficiency may help lower your future energy use. One pertinent bit of information that will be useful is looking at how your energy use fluctuates throughout the day. Having that information will help you determine – with expert assistance – the size and type of system best suited to your situation.

- 5. Tally Upfront Costs –** Most electric cooperatives do not sell, install, or maintain PV systems, so you will either purchase or lease a system from a contractor who is not affiliated with the cooperative. If you purchase a PV system, you will be the owner, and you'll be responsible for the purchase price, as well as all ongoing maintenance and repair costs. If leasing is the option you prefer, you will pay less initially, but you'll likely have higher ongoing costs. In either case, it pays to spend time figuring out all the expenses you'll be responsible for during the life of the system. These may include: installation (in addition to the price of the system), interconnection costs, insurance, taxes, and possibly others, too. If you are leasing, ask contractors about the length of the term, if the contract is transferable to a new homeowner should you sell your home, potential for price increases, as well as the same questions you'd ask if you were to purchase a PV system. In the "credit" column of your price comparisons, look at any incentives, rebates and tax credits offered for either a purchase or a lease.

6. Search for Incentives, Rebates and Tax Credits –

Any financial incentives available will help reduce your investment costs. Opportunities vary by state and locale and many have expiration dates. One database offering details is www.dsireusa.org. This site includes a clickable, interactive map, showing federal and state incentives, credits, exemptions, grants, loans and rebates for residential and commercial/industrial projects.

- 7. Accept Short- and Long-Term Responsibilities –** If you purchase a PV system, you'll need to meet the requirements of West Central's interconnection agreement. That

includes paying any costs of connecting to the cooperative grid. Local and/or state officials are responsible for conducting safety inspections, but it's your responsibility to notify them in advance about your installation. After the interconnection requirements are met and the safety and integrity of your system are approved, your cooperative will take care of the connection to the grid. And, as the owner of the system, you'll be responsible for maintenance and system repairs. If you lease a system, your responsibilities will depend on the agreement you sign. Be sure you know and understand what your responsibilities are.

- 8. Follow All Safety Precautions –** Most solar systems are grid-connected. Because of the two-way flow of electricity, excess energy your PV system collects during the daytime flows into your cooperative's lines. This shoulders you with the responsibility for the safety of your cooperative line staff, others who may come in contact with a downed power line and your cooperative's equipment. Improper connection and maintenance of your system may endanger people and the reliability of the grid.

- 9. Choose a Reputable Contractor/Installer –** Start with a list of options garnered from website research, your electric cooperative, local or state Better Business Bureaus, renewable energy associations, your state energy office, your state Attorney General's office, extension service staff and any other local experts you can call on for assistance and advice. Contact at least a few of those contractors appearing on your list, especially if recommended by multiple state and local experts. Finalize your list after asking many questions, checking out other installations the contractor has completed, comparing bids (get at least three), checking references and thoroughly examining contracts. If possible, ask a contract specialist or lawyer to review the contract before signing. West Central also has a Q & A fact sheet available for members to ask a contractor to ensure they are covering all topics.

- 10. Maintain Good Records –** Keep files on your pre-purchase research and pre-installation data provided by West Central, as well as bids, contracts, inspection reports, maintenance records and all other details you may need to refer to in the future. In addition, you'll want to know about system performance, so set up a system to track and compare your actual system performance with predictions provided by the contractor/installer.



Adding exercise to the daily routine is good for the heart.

HEART HEALTH

The Undeniable Truths of Heart Health: Diet and Exercise Remain Keys

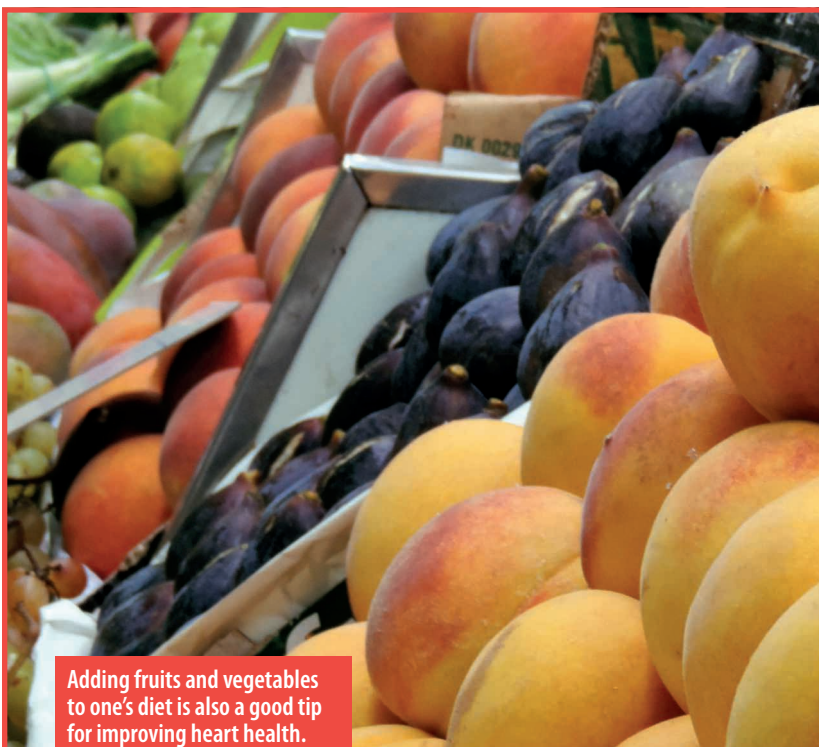
Debra Gibson Isaacs

Always consult your doctor for any matters relating to your health. This information is not intended to diagnose any medical condition or to replace your healthcare professional.

How to Sneak More Exercise into Your Day

Sonya Angelone, a registered dietitian nutritionist (RDN) who holds a masters of science degree, is on the other end of the phone, explaining ways to sneak exercise into already-crowded days.

Although most of us wish it weren't true and wish there were a magic pill to keep our hearts healthy, diet and exercise remain the undeniable keys to a healthy heart. We know that but ... we're too busy for one more thing, can't afford a gym membership, are too tired after work, want to spend



Adding fruits and vegetables to one's diet is also a good tip for improving heart health.

The key is to avoid just being sedentary.

what little time we have with our children.

“Incorporate subtle exercises into things you already do,” Angelone suggests, rejecting the notion that we have to have chunks of time or money to improve our heart health.

“For example,” she says, “do a wall chair when on the phone or while brushing your teeth.”

What I don’t know at the time is that she is practicing what she teaches as we talk. “I’m doing a wall chair as we speak, she tells me a bit later. “I just put my back against the wall, my feet on the floor, and slid down the wall until you could set a book on my knees or a child could sit on my lap. This is engaging my quadriceps, lowering my blood sugar from just eating lunch, burning extra calories and strengthening my legs so I am less likely to fall.”

Angelone, a spokesperson for the Academy of Nutrition and Dietetics and a practicing nutritionist in the San Francisco Bay area, has more examples – all simple and cost-free or very low cost.

“Lunge down the hall,” she suggests. “It only takes a few lunges a day to make a difference. Or alternately stand on your tiptoes and flat on your feet. This strengthens your lower legs.”

Another idea is to hold both arms out to your side with a book in one arm. Your body will look like a “T.” Hold that position until your arms shake. Stop and repeat.

How many can you do? It doesn’t matter, according to Angelone. The idea is to go from where you are to an ability to do more.

Another few examples:

- While sitting in a chair or watching television, contract your abdominal muscles 20 times.
- While sitting in a chair, lift your toes, put them back on the floor, and repeat. This strengthens your shins.
- While sitting at the table, pedal a foot cycle.

“The key is to avoid just being sedentary,” the nutritionist says. “If you have a sedentary job, get up every half hour. Do something. Go outside and walk around the building, go up and down a flight of steps. Engage your muscles.

Important Note: *The only caveat is to make sure you have no limitations or injuries. If you do, check with your physician before trying any of these ideas.*

How to Sneak More Nutrition Into Your Diet

Eggs are packed with protein; they are good for you. Egg yolks have cholesterol; eggs are not good for you.

Butter is better than margarine or is it that margarine is better than butter?

What is the difference between monosaturated, saturated, partially hydrogenated and trans fats?

Confusion abounds about nutrition. Sometimes it is hard to keep up with the latest science, sometimes the science changes and sometimes we just can’t remember what the science says.

Sonya Angelone, a registered dietitian nutritionist (RDN), spends her days counseling people in the San Francisco area about nutrition. Before she reveals the answers to some of the biggest nutritional conundrums, Angelone says there is one important point to remember about nutrition: There is no one-size-fits all. Each of us is different and can process food differently. Age and activity level make a difference. Medical conditions can also alter nutritional recommendations.

Now, drumroll please, here are Angelone’s answers to two of the most common and perplexing questions about nutrition:

Eggs

Although the newest dietary guidelines remove the limit of eggs and dietary cholesterol, they still recommend avoiding excess. Eggs are a nutritious food, but whether they are good or bad depends on the person. Genes help determine how someone metabolizes nutrients, including cholesterol. Some people absorb excess dietary cholesterol and should limit eggs (one of the richest source in our diets). But, most people can consume eggs regularly. They just need to be sure it isn’t cooked in excess oil and doesn’t come with bacon, hash browns, white toast and butter!

Also, the recommendations are different for a healthy person wanting to eat a healthy diet versus someone with heart disease who is trying to reverse their disease. For the latter, I limit dietary cholesterol, including eggs. The American Heart Association is a good site for great information.

On Balance: Neutral.

Suggestion: Ask your physician to run a cholesterol balance test. This will tell you whether your high cholesterol is because your liver makes too much cholesterol or because you absorb too much cholesterol.

Butter or Margarine

I do not like margarine ever. It has trans fats. That simply means that something has been artificially added to make the margarine harden into a stick or tub. The producer transformed liquid oil into a solid fat by adding hydrogen atoms – thus the term hydrogenated. This process changes the fat into an unhealthy fat.

Now there has been so much pressure from the government that producers are going back to using transformed fats. While they are not using palm oil, which is not healthy, coconut oil is not healthy either. The liver uses saturated fats to make cholesterol.

Some people believe that coconut oil is not bad because of a study. There were two groups, one which substituted sugar for fat and another group which substituted coconut oil for fat. It wasn’t that the coconut oil was better. It was that the sugar is so bad.

On Balance: Butter is always the best choice.

Suggestion: Try nut butter instead.

Youth Entrepreneurship Is Alive and Well

BIG Idea Celebrates 10th Anniversary

Kelly Weaver

www.BIGideaSD.com

South Dakota student entrepreneurs compete for scholarships with their big plans.

The 10th Anniversary BIG Idea Competition was a BIG success with 243 entries involving 357 students from 37 schools. The event wrapped up Thursday, Dec. 7, at Northern State University.

Christian Westhoff of McCook Central High School took first place with Dakota Cubs, customized and handmade teddy bears. Second place went to Soap Opera Laundromat & Dry Cleaning by Julia Neuharth of Eureka High School, offering laundry services not currently available in a 75-mile radius. Third place was awarded to Taylor Evans of Pierre T. F. Riggs High School for Hot Look, an app that suggests an outfit from your wardrobe to wear based on the weather. The Marketing Design winner was Learning 101 by Meadow Smith from West Central High School, Hartford, and the Wellness Award went to Personal Plate by Conlan Rendell of Pierre T. F. Riggs High School. The winners were awarded more than \$5,000 in cash and scholarships.

Other finalists included Pribyl Pool by Morgan Selchert, Lexi Pinkert and Reed Hartman from Milbank High School; Anti-social-Eats by Michael Crawford, Angelica Jones and Kaelin O'Leary from Lead-Deadwood High School; Safe Haven Shelters by Jasmine Gengerke of Groton High School; Hire a Ranch-Hand by Colt Brink of Pierre T.F. Riggs High School; Know-How by Danielle Eliason and Bess Seaman of Warner High School; and Kharel's Kolers by Dhwani Kharel from Brookings High School.

In celebration of the 10th anniversary, Michael Grabham with



Christian Westhoff of McCook Central High School in Salem, S.D., delivers her "elevator pitch" for her "Dakota Cubs" business plan. Westhoff took home the first-place \$1,000 scholarship in the competition.

The Package Guard from Seattle was the featured keynote speaker along with local business owners Heath Johnson with Dakota Plains Companies and past BIG Idea winner Ellen Schlechter, creator of the Calving Book app. Grabham advised the students to 'celebrate your weirdness' and build your network and emphasized that conviction and compassion are critical for a successful business launch.

Students from the following high schools participated: Aberdeen Central, Belle Fourche, Bowdle, Brookings, Canistota, Chester, Custer, Deuel, Doland, Eagle Butte, Edmunds Central, Ethan, Eureka, Faulkton, Gregory, Groton, Hamlin, Ipswich, Madison Central, McCook Central, Milbank, James Valley Christian, Lead-Deadwood, Leola, Mobridge-Pollock, Montrose, Northwestern, Pierre T.F. Riggs, Sully Buttes, Sunshine Bible Academy, Vermillion, Wagner, Warner, Watertown, Waverly/South Shore, West Central and Yankton.

For more information about the BIG Idea competition, visit www.BIGideaSD.com; on Facebook at @BIGideaSD or on YouTube at <https://www.youtube.com/user/BIGideaSD/playlists>



What is the BIG Idea Competition?

To promote entrepreneurship, spur creative thinking and encourage students to start a business.

- A business idea competition for high school students
- A 1,075-word description of a business idea
- An optional Marketing Design competition which includes an ad for their idea
- An opportunity to learn about business concepts and entrepreneurship
- A chance to win cash and scholarships

This competition, launched in 2007, was created through the collaborative efforts of many organizations in South Dakota. This competition is about exposing youth to new ideas and innovation in the hopes that you will view entrepreneurship as an option for your future. Rather than leaving the region to look for a job, you can have the confidence to create your own opportunities close to home and know that there is support for you should you choose to do so. Homegrown businesses are key to the success of our rural communities.

Contest Timeline:

Completed online business ideas are due in October. Students who are selected as finalists will be invited to present their ideas to entrepreneurs and the awards ceremony will take place that same day. The final competition is in early December.

What is in it for Students?

- Learn about business development and planning
- Meet with other students and future business

mentors

- Be a part of the cutting edge – young future entrepreneurs
- Be recognized for your business smarts
- Attend a wrap-up event with other participants
- Win great prizes

What is in it for Teachers and Schools?

- Specially developed resources to enhance entrepreneurship or business studies
- Recognition for your school team's efforts
- A networking and learning opportunity for like-minded educational professionals
- A chance to help area youth explore their options!



December 15-March 31

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

January 17-25

Winter Art Show, Spearfish, SD, 605-642-7973

January 19

Portland Cello Project Concert, Spearfish, SD, 605-642-7973

January 19-20

Media One Funkski, Sioux Falls, SD, 605-339-0000

January 19-20

ISOC Deadwood SnoCross Showdown, Deadwood, SD, 605-578-1876

January 20

Bark Beetle Blues, Custer, SD, 605-440-1405

January 21

REO Speedwagon, Deadwood, SD, 605-559-0386

January 26-February 4

Annual Black Hills Stock Show and Rodeo, Rapid City, SD, 605-355-3861

January 27

Sioux Empire on Tap, Sioux Falls, SD, 605-367-7288

January 27

Lakota Games on Ice, Mitchell, SD, 605-996-5473

February 3

Don McLean, Deadwood, SD, 605-559-0386

February 3

Tomahawk Snow Jam, Deadwood, SD, 605-569-2871

February 6-10

Winter Farm Show, Watertown, SD, 605-886-5814



February 2-4

10th Annual Winterfest of Wheels, Convention Center, Sioux Falls, SD, 605-231-3100, www.winterfestofwheels.com

February 9-11

Black Hills Sport Show and Outdoor Expo, Rushmore Plaza Civic Center, Rapid City, SD, 605-394-4111

February 15-17

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

February 16-18

2018 National Pheasant Fest and Quail Classic, Sioux Falls, SD, 651-209-4933

February 16-18

Annual Frost Fest, Brookings, SD, 605-692-6125

February 24

Snow Jam, Lead, SD, 605-569-2871

February 24

Farm and Home Show, 10 a.m. to 3 p.m., Presho, SD, 605-895-9445

February 24

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

March 3-6

2018 Summit League Basketball Championship, Sioux Falls, SD, 605-367-7288

March 10-11

2018 Gun Show, American Legion Hall, Saturday 9 a.m. to 5 p.m., Sunday 9 a.m. to 3 p.m. MST, Philip, SD, 605-859-2280 or 605-441-8466

March 16-17

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

March 16-17, 23-24

60th Annual Schmeckfest, Freeman, SD, 605-925-4237

March 17

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

March 27

Socks in the Frying Pan Concert, Spearfish, SD, 605-642-7973

March 31

Eggstravaganza, Rapid City, SD, 605-716-7979

April 5

McCrossan's Wildest Banquet Auction in the Midwest featuring A Night Out with the PBR, 5:30 p.m., Arena, Sioux Falls, SD, Tickets: \$75 each, 605-339-1203, www.mccrossan.org

April 6-8

Professional Bull Riders Built Ford Tough Series, Sioux Falls, SD, 605-367-7288

April 20-21

Craft Beer Fest, Deadwood, SD, 605-578-1876

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.