Central Electric

Your Touchstone Energy® Partner

Cooperative Connections

FEBRUARY 2015 VOL. 15 NO. 10

CONNECTING THE DOTS:
DAKOTA RISING BUILDING COMMUNITIES

Pg-8

Forecasting for Power

Loren Noess
General Manager

When you hear the word "forecast," we typically think of the weather. But Central Electric, along with all cooperatives, are tasked with managing a different forecast – a load forecast.

When it gets below zero and wind chills are in excess of 25 below zero, do you ever wonder about the demand there is on your electric delivery system? That is what your cooperative does every year, forecast electrical needs for your future.

A load forecast is exactly what it sounds like – an estimate or prediction of how much electricity will be needed in the future. We all depend on power to meet our daily needs, but the amount we use varies from season to season, day to day and even hour by hour. This is why our power suppliers, East River Electric and Basin Electric Cooperative, plan far in advance to make sure there is enough power available to meet electrical demands.

The growth of electrical demand has not increased substantially over the last few years. The gradual increase in demand is being offset by efficiency gains from new appliance standards and investment in energy efficient equipment. Load control on water heaters, air conditioners, irrigation systems and commercial loads gives your cooperative the ability to limit the demand on the electrical system during extreme weather conditions. The controlling of this equipment does reduce the Kwh sales for your cooperative, but it also allows your cooperative to avoid paying thousands of dollars in demand costs each month since 1984.

The electrical demand fluctuates due to the weather, but it also changes when members add equipment and when new members with large electrical loads begin receiving electric service. In recent times, your cooperative began serving an Ethanol plant, a large grain handling facility and a pumping station for a new pipeline—all significant loads that have a large impact on the cooperative's electrical demand.

Central Electric and East River Electric are prepared to maintain electrical loads and keep the system running efficiently. This takes extensive planning – even up to 20 years in advance. Basically we are updating our load forecast along with our power suppliers East River and Basin Electric every year. We work very closely with our power suppliers evaluating areas of growth and predicting demand patterns for our local area.

When a commercial load, irrigation system, grain drying equipment or a new home is added, it's our responsibility to ensure that adequate electric power can be delivered. This may require new electric lines to the site or even building a new substation. Whatever the need, Central Electric and East River Electric are prepared to provide members with safe, reliable electric service.

As technology changes, we're becoming more efficient. Recently we have added an automated metering reading (AMR) system which provides extremely accurate meter readings and information about the service we have never had before. This technology gives us another tool to forecast future electrical loads and provide better service to our members. It also allows our employees to more accurately size electric services, transformers, and metering equipment.

Our power suppliers, Basin Electric and East River Electric, collect data from all electric cooperatives in our region to predict future electric demand. Planning ahead improves reliability, and projecting the amount of electricity needed ensures the best economic price for power.

At Central Electric, we can't predict the future, but we can be prepared for what it holds. So leave the forecasting to us, and we'll continue to provide safe, reliable electricity to power your life.

Hanson & Miner County District Meetings
Meal Served at 6:30 p.m. Business Meeting at 7:00 p.m.

Tuesday, Jan. 27, 2015
St. Mary's Catholic Church Hall
Alexandria

Wednesday, Jan. 28, 2015
American Legion Hall
Howard

Central Electric Cooperative Connections

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www.centralec.coop

Mission Statement
Providing Reliable Energy and Services at a Good Value

This institution is an equal opportunity provider and employer.

Scholarships

Central Electric will provide three $1,000 academic scholarships for the 2015 - 2016 school year.

The Basin Electric Power Cooperative Scholarship is in its 25th consecutive year and is funded by Basin Electric Power Cooperative of Bismarck, ND.

The Jay Headley Memorial Scholarships are in their 14th consecutive year and are funded by the family of the late Jay Headley.

Both Scholarships are designed to recognize and encourage the academic and community achievements of the students in our area.

For more information, contact Central Electric Cooperative at 605-996-7516 or 800-477-2892. You can also download information and application forms from the website **www.centralec.coop** or contact your Guidance Counselor.

See application for eligibility requirements.

2015 Bus Tour July 22-24

Are you a Central Electric Cooperative member looking for a great three day break from it all? Want to know where your electricity really comes from? Heard about Ken Schlimgen's games, prizes and movies while on a bus to North Dakota. Well it's not too early to plan for the 2015 Basin Electric Tour.

This a great three day tour of the Oahe Dam, Basin Electric and a working coal mine at Beulah, ND. It is open to members of Central Electric Cooperative for a small fee. For just $25 you will receive round trip transportation, two night stay in a quality hotel and meals. If you are interested in participating in the tour, call 605-996-7516 or 1-800-477-2892 and request an application form.

Stay Informed, Stay Involved

As state lawmakers across the region head back to their respective capitols, it's important for citizens to stay involved in the political process.

Lawmakers often say they want to hear from their constituents on issues that matter at home. With that in mind, here are ways to contact your elected officials:

Minnesota

According to the Minnesota State Legislature website, you can call, email or write a letter to your legislator's office in St. Paul. Email is most effective if it is not a blanket mailing to all members. When sending an email, remember to include your name, postal address and phone number.

To find specific contact information for your senator, go to http://www.senate.leg.state.mn.us/members/index.php?ls=#header. To find contact information for your representative, go to http://www.house.leg.state.mn.us/members/hmem.asp.

Nebraska

Contacting members of Nebraska's unicameral legislature in Lincoln is most easily achieved via the Legislature's website at http://www.nebraskalegislature.gov/. From there, access the Contact page (http://www.nebraskalegislature.gov/senators/senator_list.php) to find the Nebraska senator representing your area.

South Dakota

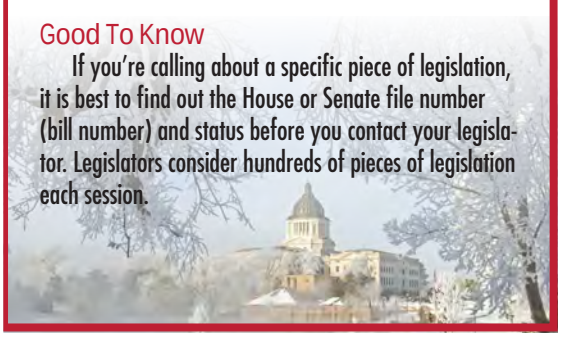
South Dakotans can contact their senators and representatives in Pierre through the Legislative Research Council by visiting http://legis.sd.gov

Contact information for specific legislators can be found at http://legis.sd.gov/Legislators/Who_Are_My_Legislators/default.aspx

Phone messages can be left for senators at 605-773-3821 while messages for representatives can be left at 605-773-3851.

Good To Know

If you're calling about a specific piece of legislation, it is best to find out the House or Senate file number (bill number) and status before you contact your legislator. Legislators consider hundreds of pieces of legislation each session.



National Burn Awareness Week is Feb. 1-7

The smell of cookies baking in the oven or tasty sauces simmering on the stovetop is hard to resist for adults and children alike. However, before you dip your finger into the pot to taste that delicious soup, know that scalds from cooking liquids, grease and food, as well as tap water and steam were responsible for 46 percent of all burns in 2012. Of these, 53 percent of the victims were children under five and most of these burns occurred in the home – usually in the kitchen or bathroom.

While thousands of scald burns occur annually, increased awareness of the dangers can prevent injuries. Following a few simple precautions will help keep you and your little chef safe from potential burns:

- Cool a burn under cold running water for 10-15 minutes and call 9-1-1 for serious burns.
- Always supervise children in the kitchen and dining areas.
- Create a "No Child Zone" while preparing and serving hot foods and beverages.
- Don't carry or hold a child while cooking on the stove. Instead, place the child into a high chair or other safe area while cooking.
- Children love to reach, so to prevent hot food or liquid spills, simply use the back burner of your stove and turn pot handles away from its edge; also, keep hot foods away from the edge of your counters.
- Keep clothing from coming in contact with flames or heating elements.
- A small adjustment to your water heater can give you one less thing to worry about. To prevent accidental scalding, set your water heater to 120 degrees Fahrenheit or the manufacturer's recommended setting.
- Make a habit of placing matches, gasoline and lighters in a safe place out of children's reach and avoid novelty lighters as they may look like toys in a child's eyes.
- When filling the bathtub, turn on cold water first then mix in warmer water carefully.

Source: mass.gov

Kids' Corner Safety Poster

"Don't put a rug over extension cords."

Emily Ohlrogge, 10 years old

Emily is the daughter of Keith and Leslie Ohlrogge, Woonsocket, S.D. They are members of Central Electric Cooperative, Mitchell, S.D.

Kids, send your drawing with an electrical safety tip to your local electric cooperative (address found on Page 3). If your poster is published, you'll receive a prize. All entries must include your name, age, mailing address and the names of your parents. Colored drawings are encouraged.

Bountiful Brunch

Daisy Baked Hash Browns

- 1 pint sour cream
- 2 lb. bag hash browns, thawed
- Chopped onion
- 1 can cream of chicken soup
- 2 cups shredded cheese
- 2 cups corn flakes
- 1/2 cup melted butter

Combine sour cream, hash browns, chopped onion and soup. Place in 9x13-inch pan. Add shredded cheese. Sprinkle corn flakes on top and drizzle melted butter over corn flakes. Bake, uncovered, at 350°F. for 1 hour.

Darlene Price, Prairie City

Green Chile Egg Bake

- 12 eggs, beaten until fluffy
- 8 oz. Monterey Jack cheese, shredded
- 8 oz. Pepper Jack cheese, shredded
- 1/2 tsp. salt
- 2 (4 oz.) cans diced green chiles, undrained
- 1 cup cottage cheese
- 4 oz. (1 stick) butter, melted
- 1 T. baking powder
- 1/8 tsp. pepper

Combine all ingredients and pour into a 9x13-inch pan (glass works best.) Bake, uncovered, at 350°F. until set. Serve with salsa and sour cream.

Nancy Stenson, Fort Pierre

White Tail Ridge Orange French Toast

- 1 lb. day-old bread, unsliced
- 3 eggs
- 3 egg whites
- 1/4 cup sugar
- 1/4 tsp. salt
- Grated zest of 1 orange
- 1 tsp. almond extract
- 1-1/2 cups orange juice
- 1/4 cup sliced almonds, toasted
- 1 cup water
- 1 cup light brown sugar
- 6 oz. frozen orange juice concentrate

Cut bread in 16 slices about 1/2-inch thick. In a shallow dish, whisk eggs, whites, sugar, salt, zest and almond extract. Stir in orange juice. Dip bread slices into juice mixture until thoroughly soaked. Transfer slices to a baking sheet as you work. Drizzle any remaining liquid over slices. Cook slices on a large, hot griddle until golden. Transfer to a clean baking sheet. Place in oven and bake at 375°F. for 10 minutes. While toast is baking, make syrup. Mix water and brown sugar in a small saucepan; bring to a boil. Reduce heat to medium-low and simmer 1 minute. Add orange juice concentrate; cook until hot, about 1 minute, while stirring. Sprinkle toast with almonds and serve with syrup.

Darcy Bracken-Marxen, Hermosa

Hearty Oatmeal

- 1-3/4 cup lowfat or fat free milk
- 1 cup old fashioned or quick cooking oats (not instant)
- 1 tsp. brown sugar
- 1/8 tsp. ground cinnamon
- 1/4 cup sliced strawberries
- 1/4 cup dried cherries
- 3 T. toasted sliced almonds (3/4 oz.)

Combine milk, oatmeal, brown sugar and cinnamon in saucepan; bring to a boil over medium-high heat. Stir often to prevent boiling over. Cook until thickened. Divide between two serving bowls and top with strawberries, cherries and almonds. Serve immediately. Makes: 2 servings

Nutritional information per serving: 510 calories; 8 g fat; 0 g saturated fat; 10 mg cholesterol; 25 g protein; 87 g carbohydrates; 8 g fiber; 0 mg sodium; 600 mg calcium (60% of daily value). Nutrition figures based on using fat free milk.

Pictured, Cooperative Connections

Hash Brown, Sausage & Bacon Frittata

- 1/2 pkg. of shredded hash browns
- 1/2 cup melted butter
- 2 cups shredded Mexican cheese
- 2 cups shredded Cheddar cheese
- 6 sausage links, diced
- 8 slices bacon, diced
- 1 cup milk
- 9 eggs
- Salt and pepper to taste

Place hash browns into lightly sprayed 9x11-inch pan, press down evenly to form a crust. Drizzle butter evenly over crust and bake at 425°F. for 25 minutes. Place cheeses, sausage and bacon over hash brown crust. Blend milk and eggs together; pour over all. Reduce heat to 350°F. and bake an additional 30 minutes.

Mary Metz-Carda, Hurley

Bacon Cheese Puff

- 5 green onions, chopped tops and all
- 3/4 cup chopped red, green or yellow peppers
- 8 slices bacon, cooked and crumbled or Canadian bacon, cut into pieces
- 12 slices white bread, quartered
- 8 oz. Swiss cheese, shredded
- 8 eggs
- 4 cups milk
- 1-1/2 tsp. salt
- 1/4 tsp. pepper

Cook onions and peppers until soft in bacon grease, if available. Arrange 1/2 bread slices in single layer in bottom of greased 9x13-inc pan. Sprinkle with 1/2 bacon, onions, peppers and cheese. Repeat layers again with bread, onion, peppers, bacon and cheese. Pour beaten eggs, milk, salt and pepper over top layer in pan. Refrigerate overnight. Bake at 350°F. 50 minutes or until eggs are set and top is puffed and golden.

Caroline Bochman, Tyndall

Please send your favorite seafood, appetizers, beverages and casserole 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 2015. All entries must include your name, mailing address, telephone number and cooperative name.

Education In Electricity

By Courtney J Deinert

Our linemen are the gears behind ensuring you have electricity each night. We appreciate them especially during these below zero temperatures. What qualifies these men to hold the responsibility of your electricity in their hands?

MTI student Bryce Steffen in the tranformer lab

Just a few miles down I-90 from Central Electric, the Energy Distribution programs at Mitchell Technical Institute are teaching students to do exactly what our employees do each day. Of course, many of Central Electric's linemen have been educated through on the job training, rather than formal education such as MTI. However, these programs still give us insight as to what is demanded from our linemen.

MTI is the only institute in the state of South Dakota to offer linemen training. According to Power Line Instructor Gene Gaikowski, "The program is not only serving the energy needs of South Dakota but the surrounding region also."

The program graduates 80-90 students a year. By January, the next academic year's program is fully enrolled with a waiting list. Many of the students will pursue careers in construction or building line, other working for a cooperative.

The Power Line Construction & Maintenance program results in a one-year diploma. Students are encouraged to continue a second year in Utilities Technology and earn their AAS degree. However, a degree is only the beginning.

Students can become employed as an apprentice lineman for a cooperative, and then pursue a four year program to reach journeyman status. Central Electric is proud that each of our linemen has earned their journeyman certificate. Overall, potential linemen are looking at a minimum of 5-6 years formal training, and they will continue to learn new equipment, techniques, and safety standards throughout the entirety of their career.

While no prior experience is required of students, there are several requirements before graduation. Students become certified in CPR and First Aid, earn a CDL, and take a five week course on OSHA regulations.

In addition to the OSHA course, safety is an everyday part of the curriculum. Gaikowski says, "In the classroom, safety is a large portion of what we focus on. We teach them that their actions can put others' lives on the line."

Power Line Instructor Tom Osborne said, "What the students don't realize is that safety training doesn't end after the lectures in the classroom. Safety training will continue through their whole career." And it will—Central Electric employees hold a formal safety meeting once a month in addition to daily equipment testing.

The substation facility has been an exciting addition to the MTI programs, built in the summer of 2014 by Substation/

MTI student Cole Searing in the indoor pole yard

Power Line Instructor Jerry Ehlke. The facility consists of a real sized substation, similar to any of the substations on Central Electric's service. It has low voltage for students to practice on. Non-energized overhead line also runs near the substation to remind students to be mindful of their clearance and give them a "real-life" experience.

"Real-life" can also be seen in how the class becomes a crew. Gaikowski said, "Driving down to the substation, the students sounded just like a jolly crew going to work for the day. 'So what are we doing today?' they'd ask. I can already tell one of them is going to be a foreman someday."

Students' lab work also provides a very realistic experience. Gaikowski said that when he was in school, they did everything on paper and had to image handling the equipment. Now, in lab, students are greatly benefitted by the ability to physically use the equipment.

Chase Monson, a second year MTI student, says his favorite part of the program is the lab work. "Coming into the program, I thought it was all about climbing. Now I know it's more hands on." As a visual, hands on learner, Monson appreciates the ability physically work with the material in lab.

Much of the equipment is donated to MTI, including parts such as unusable cable. East River Electric greatly supports MTI by donating equipment. Osborne also commended, "Central Electric is very good about dropping off material they can't use anymore for the students to practice on."

MTI has two bucket trucks and three diggers for the students to practice with. Each has different controls so the students can practice various operating systems. Both of MTI's bucket trucks have been donated, including a truck from Northern Electric Cooperative in Bath, SD.

Above & Below: Instructor Jerry Ehlke supervising the construction of a steel structure at the substation facility

MTI's energy facility also contains an indoor pole yard in the middle of the building. The pole yard changes throughout the year as students set and remove poles. Students are able to set poles up to 37' high. Most poles there are 30'.

Osborne said, "People may think we're training indoor linemen. However, that's not the case." The facility provides a conducive learning space to supervise and give instruction to students. Being indoors, the ground also never freezes so poles can be set year round.

Students are outdoors whenever they can be, though, despite the weather. There is also an outdoor pole yard where students can practice setting, removing and framing poles.

MTI understands students will encounter various elements on the job that were not in the classroom. To prepare students, instructors organize a middle-of-the-night class session during the spring semester. Students arrive, as if going out on an outage. In order to "restore power," students need to identify issues in the equipment that the instructors manipulated.

Each program instructor brings years of field experience to the classroom, some of which earned at Central Electric. All of the instructors have attended MTI, and therefore, have a valuable connection to the school and community.

The best advice the instructors pass on to the students stem from their own experiences, stories ranging from restoring an outage to coming face to face with a badger while on the job. This kind of advice seems to best engage the students.

The education of current linemen to how students learn now has changed over the years, as with any schooling. What hasn't changed is ensuring electricity is delivered efficiently and with the highest level of safety available.

Dakota Rising Helps Communities

Connect the Dots

By
Brenda Kleinjan

Be the change you want to see in your community.

That take on Mahatma Ghandi's famous quote about changing the world is a driving force for the communities and individuals engaged in the various programs of Dakota Resources.

"One of the things we learned early on is that capital is not the only resource needed for successful economic and community development – or development of a successful organization," said Beth Davis, president of Dakota Resources Economic and Leadership Development headquartered in Renner, S.D.

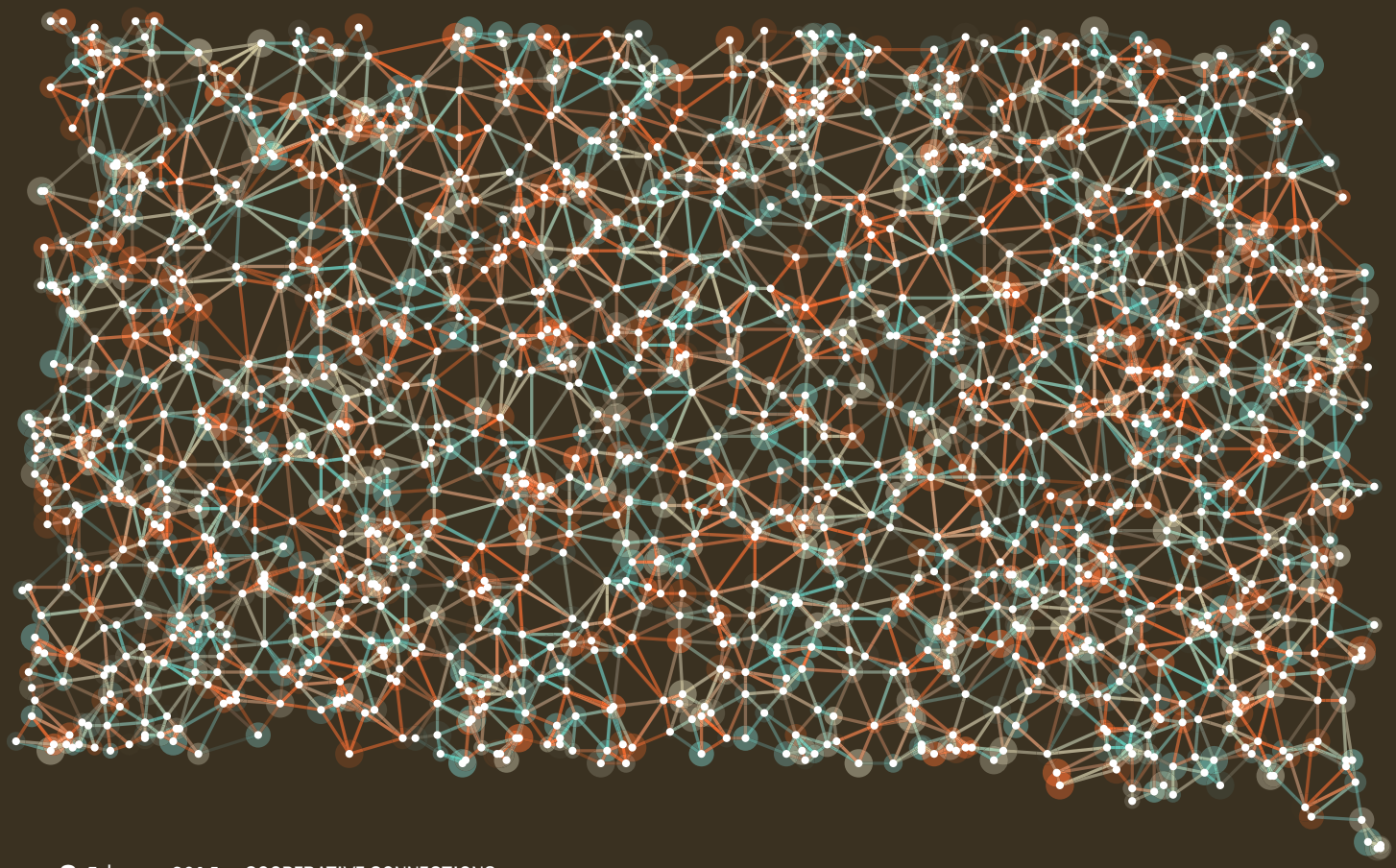
"We have been able to accomplish what we have through connecting the dots, with resource organizations and the communities and entrepreneurs we serve," Davis said.

Since 2008, communities across South Dakota have worked with Dakota Resources to assess, energize and facilitate community change. Dakota Resources is a state-wide nonprofit focusing on helping rural communities realize their community and economic goals.

While the efforts vary depending on each community's specific needs, the one of the elements that makes change possible is effective and engaged community coaching.

In 2014, Southern Charles Mix Dakota Rising was added as a new Community Site for the entrepreneur development program, Dakota Rising.

As a Dakota Rising Community Site, Southern Charles Mix Dakota Rising will participate in a



statewide learning community working together to share best practices around entrepreneurship development and retention and expansion strategies.

Other communities participating in the program include Southern Hills on the Rise (Fall River and Custer counties), Dakota Rising Aberdeen (Brown County), Faulkton Area Dakota Rising (Faulk County) and Dakota Rising Lawrence County.

"What this program has allowed us to do is bring together all the different energies in our community together under one roof," said Joel Price, Faulkton Area Development Corporation, in a video about the community's involvement with Dakota Rising.

The Dakota Rising Community Sites often work in conjunction with Dakota Resource's other programs – Home Address and the Capital Investment Fund.

Dakota Rising is a three-year Dakota Resources program that helps rural entrepreneurs discover new ways to grow their business. Dakota Rising mentors entrepreneurs who have passion, drive and a will to take their companies to the next level. The program's goal is to help businesses all over rural South Dakota become more successful, put more people in their community to work and help entrepreneurs better manage their businesses. Dakota Rising strategically partners with local communities to help entrepreneurs and business people grow their businesses.

"Dakota Rising is not just about making your business itself better, it's about making your business better for your community," said Kelly Melius, Common Sense Mfg. in Faulkton.

The Dakota Rising program was launched in 2008 by Dakota Resources and a Design Team made up of a variety of stakeholders in rural development. Since then, dozens of entrepreneurs have accelerated their business growth and have taken advantage of the insight, ideas and experience of other Fellows. The Dakota Rising community meets three times a year for three-day conferences in addition to online meetings. The sharing among Fellows grows companies and grows a Fellow's business confidence. Becoming a Fellow adds a level of accountability that encourages action. Fellows receive assistance from their closest Dakota Rising community site, as well as from Dakota Resources. The South Dakota economy relies on the growth of rural businesses and Dakota Rising can help those small business entrepreneurs accelerate that growth.

"Sometimes it just gives you the confidence to keep following your dream and work through the problem," said Chad Homan of Homan Welding in Faulkton.

A Dakota Rising Fellow is a person who has taken a startup business to a viable, profit-earning stage and is poised for the next level of growth. After successfully completing the application process and being chosen, Fellows are connected to a community of statewide resources, mentors and financial experts. Personal and business growth strategies are developed while working in a small cohort where Fellows help one another despite vastly different industries and experiences. After one year in the program, each Fellow is awarded a $10,000 grant to support professional growth and business expansion.

Participants in the programs agree that the Dakota Rising programs help improve their communities.

"If they can employ two or three or more people, that's more pay checks in town, said Dwight Hossell of Dacotah Bank. "If even 50 percent of those pay checks are spent in town on rent or groceries or recreation, that just helps impact everybody so everybody's life is a little better."

Melius sums up the experience with this: "It's about making our town better."

Watch for Electrical Hazards

- Look over work areas carefully for overhead power lines and utility poles.
- Make sure you have ample clearance when moving large machinery such as combines, grain augers, pickers, bailers, and front-end loaders. Do this every year as equipment sizes or soil conditions may change.

- Store large equipment properly if near or under power lines. When planning new construction, factor in existing power lines.
- Be extra careful when working around trees and brush; they often make it difficult to see power lines.
- Train all farm workers to keep an eye out for overhead power lines.

Light Shopping

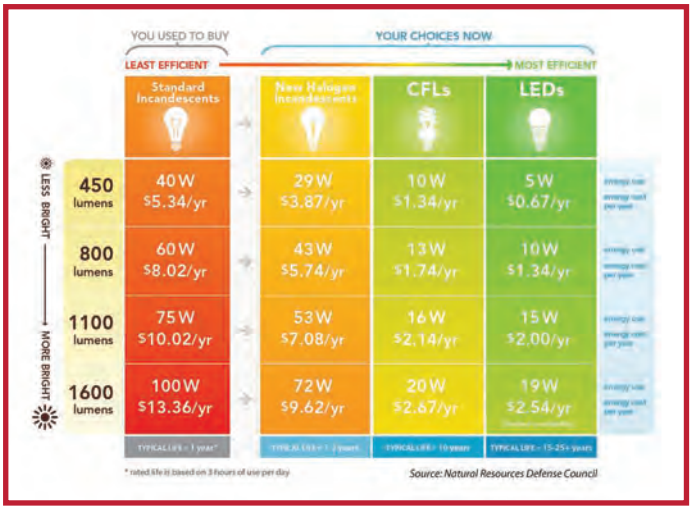
By Denise Hawkins

Bulbs, brands, lumens, and labels

If you have been gradually making the switch to the new energy efficient lighting choices, you've noticed that more changes have come to the light bulb aisle. Remember when the odd looking corkscrew compact fluorescent (CFL) bulb was introduced to consumers a few years ago? It's still there and so are most of the classic pear-shaped incandescent bulbs. But today's lighting choices have expanded and gotten serious makeovers¬—their packaging labels and lingo included. There are LEDs, CFLs, halogen, lumens, CRI, and more, and there is a host of lighting brands. But in recent years, the focus has been on making all bulbs more energy efficient and cost effective.

End of an Era

We've basked in the golden glow of Thomas Edison's incandescent bulb since the 1800s, but this January marked the end of its run. That's when the federal government finalized its mandated phase out of selected general-purpose light bulbs and Edison's less energy efficient incandescent ones. While you still may find 100- and 75-watt bulbs on store shelves, manufacturers in the U.S. stopped producing them. The old 40- and 60-watt bulbs, which represented over half the market, are following suit. What brought about the lighting change? In 2007, the U.S. Department of Energy estimated that home and commercial lighting was consuming more electricity annually–about 300 billion kilowatt-hours of lighting or the equivalent of about 100 power plants—but most of it was wasted. Old-fashioned incandescent bulbs used plenty of energy to produce only 10 percent light, with 90 percent of the energy given off as heat. In comparison, today's more energy-saving incandescent light bulbs use 25 percent less energy to do the job of lighting the same spaces in your home.



Look on the Bright Side

Prime replacements for the traditional incandescent light bulb are the higher-efficiency CFL and LED or light emitting diode bulbs. But be prepared to pay more upfront for some of the bulbs you choose. Lighting experts say that LEDs are the best choice for energy efficiency and if price is not a concern—they can last for up to two decades, save you 75 percent or more in energy costs, and offer superior color and brightness. However, they can cost an estimated $10 to $60 per bulb.

The Energy Department assures consumers that there is a bright side—lower electricity bills over the longer term. These are their estimates: using a traditional incandescent bulb adds about $4.80 per year to the average household electric bill, but a CFL bulb adds just $1.20 a year and an LED about $1 per year. That means a typical household could potentially save $50 per year by replacing 15 old incandescent bulbs.

Lighting the Way

Since lighting accounts for nearly 20 percent of the average home's electricity use, don't stay in the dark when shopping for new bulbs that save on energy and your electric bill. Things to know before you go:

- Lumens are the new watts. It's all about the lumens or the amount of light a light bulb emits. Remember this formula: The higher the lumens, the brighter the light—to replace a 100-watt incandescent bulb, choose a bulb that offers about 1,600 lumens. There are handy charts at www.energystar.gov/ that help you compare the old measure of watts to lumens.
- Three-steps to your new bulbs. STEP 1: Choose the amount of lumens you need based on how bright you want a room; STEP 2: Determine which bulb has the lowest estimated energy cost per year. This will save you the most money; and STEP 3: Choose bulbs based on your needs—how long it will last and light appearance.
- Read the label. Always check the package, making sure that it carries the U.S. Department of Energy's ENERGY STAR® logo. New Lighting Facts labels on boxes will also help consumers understand what they are purchasing—amount of lumens, estimated annual operating cost, and light color.

Source: US Department of Energy, Natural Resources Defense Council.

Building Block No. 3
Renewable and Nuclear Power

By Brenda Kleinjan

Among the Environmental Protection Agency's building blocks that comprise the agency's proposed greenhouse gas rule for existing power plants under section 111(d) of the Clean Air Act is the block calling for increased renewable and nuclear power.

The block would reduce carbon dioxide emissions by closing or curtailing coal plants and substituting that generation with power from existing and new zero-CO2-emitting nuclear and renewable power sources.

The block would allow existing nuclear power plants that are at risk of shutting down to remain open and additional renewable power generation sources could be added nearly nationwide.

Many – including the nation's electric cooperative association and the governor, public utilities commission and attorney general of South Dakota – claim that the building block exceeds the EPA's legal authority under 111(d).

But, beyond that basic, fundamental objection, other concerns emerge.

In his comments to the EPA about the proposed rule, South Dakota Gov. Dennis Daugaard pointed out that approximately 74 percent of South Dakota's electric production in the 2012 base year was renewable energy. Further, he pointed out that only three states emitted less carbon than South Dakota.

Among the concerns about Building Block 3 expressed by the governor was how the state's renewable energy goal was calculated and how hydropower – which accounted for nearly half of the state's megawatt-hour generation in 2012 – was calculated.

In its filing on the rule, the South Dakota Public Utilities Commission writes, "the proposed rule does not allow existing hydropower to count toward complying with a state's goal...Annual production, however, is dependent on river management rather than demand for electricity. Therefore, a large portion of the state's generation is outside anyone's control.

"Yet because hydropower is used in calculating the required amount of renewables, the state is effectively penalized as a result of its carbon free source of power," the PUC comments continued.

While hydroelectricity accounted for more than 50 percent of South Dakota's electric generation in 2012, the way the renewable power source was – and wasn't – calculated in the EPA's proposed building block caused concern for many.

The PUC also expressed concerns with how the EPA calculated the renewable goal. Beyond the issues with how hydropower is or is not included in the goal, there is an issue with how wind power and other renewables are counted.

The PUC noted that in calculating the state's renewable goal, it included all generation used in the state. However, the EPA noted that complying with the goal will involve the ownership of renewable energy certificates (RECs). [RECs were developed to facilitate the tracking of renewable energy, allowing purchasers of renewable energy to claim attributes and benefits of that specific renewable resource.]

The PUC noted that wind generation was approximately 24 percent of generation produced in South Dakota in 2012 (the EPA's baseline year). However, a majority of the RECs associated with that wind generation was contracted to out-of-state utilities for compliance within their own states.

In his comments, Gov. Daugaard pointed out that five of nine states in the region that EPA included South Dakota in cannot meet their respective renewable standards without using renewable energy that is produced in another state.

The PUC noted that if the EPA's final rules call for the RECs to follow purchase contracts, then the majority of South Dakota-generated RECs would flow out of the state. This would require that additional wind generation be built in the state to meet the renewables goal established by the building block. The PUC calculated that this would cost South Dakota consumers more than $870 million. Costs for wind integration and major transmission and intermediate generation investments would also be needed and would greatly add to the costs.

The National Rural Electric Cooperative Association notes that electric cooperatives have worked diligently to diversify their energy resource portfolio. In fact, in 2012, South Dakota had 784 megawatts of installed wind generation; more than 300 megawatts of that generation were electric cooperative projects.

NRECA also notes that co-ops have doubled their renewable energy capacity since 2009.

NRECA maintains that the proposed EPA rules are complex with unintended consequences and that the EPA is overreaching its legal authority.

For co-op members, the additional costs hit member-owners hardest. The not-for-profit co-op business model forces any costs from upgrades or shuttered power plants to be borne directly by co-op members.

According to the American Coalition for Clean Coal Electricity, the EPA's proposed rule – encompassing its four building blocks – could force the retirement of 30,000 megawatts to 80,000 megawatts of coal-based generation and could cause more than 200,000 jobs to be lost in 2020.

The projected global climate benefits are a less than 1 percent reduction in CO2 concentrations, a reduction in global average temperature of 0.016 degree and a reduction in sea level rise of 1/100th of an inch.

The public comment period on the EPA's proposed rule closed on Dec. 1. The EPA intends to issue a final rule in June of 2015 and states will then have one year to develop implementation plans or if they collaborate on multi-state or regional plans, they are allowed two years to develop their plan. Case by case, states can seek a one-year extension from the EPA. Therefore, in some states it may take until June of 2018 to fully understand what compliance with this proposal will mean.

For more on the comments filed by South Dakota go to http://www.puc.sd.gov/energy/111dcomments.aspx

Editor's Note: *This is the fifth of a five-part series that explored each of the EPA's Building Blocks. The four building blocks are: (1) making coal plants more efficient; (2) displacing existing coal with existing natural gas plants; (3) increasing the use of nuclear and renewable energy; and (4) decreasing electricity consumption by increasing end-user energy efficiency.*

EPA's "Building Blocks"

Coal Plant Efficiency

Make physical and operational changes at existing coal-based power plants to improve heat-rate efficiency by 6 percent, which reduces the amount of coal needed per MWh of generation, thereby reducing CO_2 emissions.

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Natural Gas

Existing natural gas combined-cycle plants are used more or less frequently, depending upon a variety of factors. EPA's CO_2 reduction goals are based on dispatching those natural gas plants more frequently (up to 70 percent capacity factor) while closing or curtailing existing coal-based generation sources.

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Renewable and Nuclear Power

Nuclear power and renewable resources like hydro, wind and solar power do not have direct CO_2 emissions. EPA's goals are based on keeping some existing nuclear power plants (that are at risk of closing) operating, ensuring that new nuclear plants under construction get finalized, and that more sources of renewable energy are developed.

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Consumer Energy Efficiency

Improving energy efficiency by consumers reduces the need for power generation. EPA's CO_2 reduction goals envision all states increasing energy efficiency programs to result in the avoidance of 1.5 percent of energy demand per year.

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State Carbon Intensity Goal

State	2012 Emissions Rate (lbs/MWh)	Final Goal (2030 & After)	Final Reduction	Final Percent Reduction
Iowa	1,552	1,301	-251	-16.2%
Minnesota	1,470	873	-597	-40.6%
Montana	2,246	1,771	-475	-21.1%
Nebraska	2,009	1,479	-530	-26.4%
N. Dakota	1,994	1,783	-211	-10.6%
S. Dakota	1,135	741	-394	-34.7%
Wyoming	2,115	1,714	-401	-19.0%

2015-2016 Scholarships

Central Electric will provide three $1,000 academic scholarships for the 2015 - 2016 school year.

The Basin Electric Power Cooperative Scholarship is in its 25th consecutive year and is funded by Basin Electric Power Cooperative of Bismarck, ND.

The Jay Headley Memorial Scholarships are in their 14th consecutive year and are funded by the family of the late Jay Headley.

Both Scholarships are designed to recognize and encourage the academic and community achievements of the students in our area.

For more information, contact Central Electric Cooperative at 605-996-7516 or 800-477-2892. You can also download information and application forms from the website **www.centralec.coop** or contact your Guidance Counselor.

See application for eligibility requirements.

CENTRAL
ELECTRIC COOPERATIVE
A Touchstone Energy® Cooperative

800-477-2892 or 605-996-7516

www.centralec.coop

Youth Tour

June 11-18, 2015 - Washington, D.C.

What is it? An all expense paid trip to Washington DC.

Who is eligible? Central Electric is sponsoring up to eight lucky students to the Youth Tour. You must be a junior in high school whose primary residence is located in Aurora, Brule, Buffalo, Miner, Jerauld, Sanborn, Davison or Hanson counties or a dependent of a Central Electric member whose primary residence receives electric service from Central Electric. Children of Central Electric employees and directors are not eligible.

What does is cost? The tour is funded by the electric cooperatives of South Dakota who participate in the week-long event. Funding for each participant provides transportation, room and board, entertainment and sightseeing.

How do I apply? Submit an essay, not to exceed 1,000 words, on the subject **"Benefits of Owning My Electric Cooperative."** Essays must be typed and include a cover sheet that states the essay title, entrant's name, email address, and phone numbers as well as the parent's name, address, email address, and phone numbers and the school they attend. Winners will be asked to submit a digital photo for use in the cooperative's newsletter and announcements.

Send your essay to "Washington Youth Tour Contest", Central Electric Cooperative, PO Box 850, Mitchell SD 57301 by March 1, 2015. All essays remain the property of Central Electric Cooperative. One student from each county or director district may be awarded a trip to Washington DC.

I found the Youth Tour to be a great opportunity, something that I am proud to say I was a part of. It was an amazing chance to get to see so many different things. Definitely a trip of a lifetime.

- Amber Hopkins
2014 Youth Tour

WWW.CENTRALEC.COOP
WWW.YOUTHTOUR.COOP

Regional Dateline

January 21
36th Annual Ranchers Workshop
9 a.m. to 3:15 p.m. CT
Community Events Center
White River, SD
605-259-3252 ext.3

January 23-24
Winter Show, Sisseton, SD
605-698-7261

January 24
Winter Games Winter Fest
Finale, Watertown, SD
605-882-6269

January 24
Glacial Lakes Beer Fest
Watertown, SD, 605-886-6127

January 25
Public Opinion Prom &
Bridal Show, Watertown, SD
605-886-6901

January 25
Foreign Film Festival
Spearfish, SD, 605-642-7973

January 27
Annual Meeting and
After-Hours Mixer, Wessington
Springs Area Development
Corporation, Mixer 5:30 p.m.
Meeting 6:30 p.m.
1905 Opera House
Wessington Springs

January 30-31
ISOC SnoCross Shootout
Deadwood, SD, 605-578-1876

January 30-31
Day County Farm, Home and
Sport Show, Webster, SD
605-345-4668

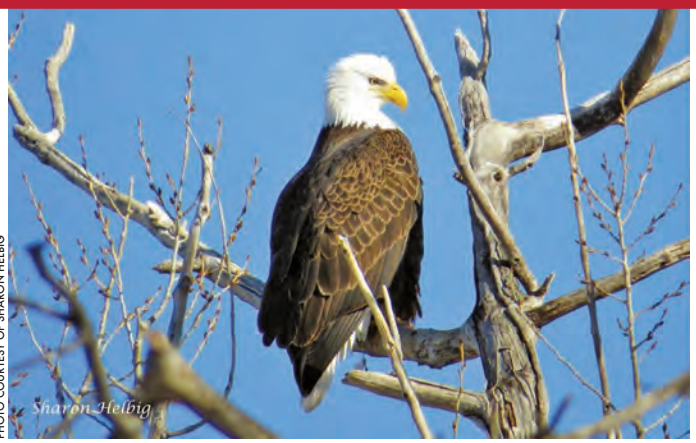

PHOTO COURTESY OF SHARON HELBIG

Events of Special Note

February 7
Eagles and Bagels Walk
in the Park, Fort Pierre, SD
605-223-7722, www.gfp.sd.gov

March 21
South Dakota
Taxidermy Competition
Watertown, SD, 605-886-6127

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.

January 30-February 8
Black Hills Stock Show and
Rodeo Rapid City, SD
605-355-3861

January 31
Living History Fair
Watertown, SD, 605-881-1758

February 3
Touchstone Energy® Safety
Events, 8:30 and 10 a.m.
Barnett Arena, Rushmore
Plaza Civic Center
Rapid City, SD, 605-224-8823

February 7-8
Dakota Territory Gun
Collector's Association Show
Aberdeen, SD, 701-851-0129

February 10-14
Farm Show, Watertown, SD
605-886-5814

February 14-15
Winter Big Boy Toy Show
Aberdeen, SD, 605-229-3632

February 16
25th Annual Farm and
Home Show, 10 a.m. to
3:30 p.m., School Gym
Wessington Springs, SD
Call Chamber of Commerce
for booth information
605-539-1300

February 20-21
12th Annual Women in
Blue Jeans Conference
Friday 5 to 9:30 p.m.
Saturday 8 a.m. to 4:30 p.m.
Highland Conference Center
Mitchell, SD, Conference
schedule and registration
details can be found at
www.womeninbluejeans.org
or contact wibjregistation@
santel.net

February 24-26
Ag Expo, Aberdeen, SD
605-725-5551

February 28-March 1
Home Builders Show
Watertown, SD, 605-886-5814

March 7-8
Big Boy Toy Show
Watertown, SD, 605-884-3548

March 13-14
Advantage RV Spring Camper
Show, Watertown, SD
605-753-5022

March 14-15
2015 Gun Show
American Legion Hall
Saturday 9 a.m. to 5 p.m.
Sunday 9 a.m. to 3 p.m. MST
Philip, SD, 605-859-2635
605-859-2280, 605-859-2892
or 605-859-2219

March 28
Mitchell Area Safehouse
Second Annual "Night at the
Races," 6:30 to 7:30 p.m.
Social Hour, 7:30 to 9:30 p.m.
Horse Races, Highland
Conference Center
Mitchell, SD, Tickets at The
Chamber, County Fair and
First Dakota