Central Electric
Your Touchstone Energy® Partner
Cooperative Connections
FEBRUARY 2016 VOL. 16 NO. 10

Heating It Up

A Look at Hot Mineral Baths

P8-9

Exceeding Expectations

Ken Schlimgen
General Manager

When my kids were growing up, some of their early report cards came home with the letters "EE" that indicated they had "Exceeded Expectations" in areas of learning and behavior.

At Central Electric, we are not kids anymore, but we do strive for EEs. We don't only want to do what you expect us to do — we want to go further and do better by offering service and programs that help you save time and money.

Because we are a cooperative, we have a special responsibility to support the communities we serve and exceed expectations there. Over the holiday season, your cooperative employees continued a tradition at Central Electric. That tradition is to solicit donations from each of the employees and use that money to help a cooperative member that has fallen on tough times. Your employees selected a family and provided groceries and appropriate gifts to help make the holiday a little brighter for them. I would give this effort an EE.

We don't only want to do what you expect us to do — we want to go further and do better by offering service and programs that help you save time and money.

If you were able to attend any of the District Meetings that your cooperative hosted this month, you were reminded of the many programs and services that are offered by Central Electric. These programs help our members use less electricity and save money. Not many businesses actually encourage their customers to buy less of their product. This also would be scored as an EE by most of our members.

We also discussed some of the challenges your cooperative faces as well as the many opportunities your cooperative took advantage of to control costs and ultimately keep electric rates affordable. We announced that electric rates for 2016 are going to increase by an average of two percent. This is a change from the four percent increase we announced in last month's newsletter. The last few months of 2015 provided better than budgeted margins and helped us get by with a lower increase for the coming year.

We recently announced the scholarships that are available to our members as well as the opportunity for up to eight high school juniors to be selected for an all-expense paid trip to Washington, D.C. Without a doubt, this program gives young adults from our area an experience that will stay with them for the rest of their lives. It is much more than a sightseeing trip. This experience helps students to grow into successful leaders—another way we "Exceed Expectations".

South Dakota Youth Tour participants outside the White House in Washington, D.C. during Youth Tour 2015

Each month, your cooperative's service department provides electrical wiring services, major appliance sales and service, as well as heating and air conditioning services. The customer satisfaction surveys that are returned to Central Electric indicate that our service department is receiving EEs for the work they are doing everyday. In addition, the revenue generated by their work helps your cooperative hold the line on your electric rates.

I hope you see how much your cooperative is doing for you through the services and programs we provide. I also hope that you see your employees and your cooperative are giving back to our community. We are nothing without our members. We recognize and understand that we cannot be successful unless you also are successful. We will continue to work to achieve those EEs from you everyday.

Central Electric Cooperative Connections

(USPS 018-963)

General Manager - Ken Schlimgen

Managing Editor -Courtney J. Deinert
Assistant Editor - Patrick Soukup

President - Duane Wolbrink
Vice President - Todd VanWalleghen
Secretary - Bernetta Burghardt
Treasurer - James Headley

Central Electric Cooperative Connections is published monthly by Central Electric Cooperative PO Box 850, 25487 403rd Ave, Mitchell SD 57301. Families subscribe to Cooperative Connections as part of their electric cooperative membership. Central Electric Cooperative Connections purpose is to provide reliable, helpful information to electric cooperative members on matters pertaining to rural electrification and better rural living.

Subscription information: Electric cooperative members devote 25 cents from their monthly electric payments for a subscription. Nonmember subscriptions are available for $12 annually. Periodical Postage Paid at Mitchell, SD 57301 and at additional mailing offices. POSTMASTER: Send address changes to Central Electric Cooperative Connections, PO Box 850, Mitchell SD 57301 TELEPHONE (605)996-7516 or1-800-477-2892; FAX (605)996-0869; e-mail cec@centralec.coop. Design assistance by TDG Communications, Deadwood.

Office Hours
Monday through Friday,
8:00 a.m. to 4:30 p.m.

24 - Hour Service
1-605-996-7516 or
1-800-477-2892

www.centralec.coop

Mission Statement
Providing Reliable Energy and Services at a Good Value

This institution is an equal opportunity provider and employer.

Basin Electric Bus Tour: July 20 -22, 2016

Consider joining our bus tour this summer! We will travel to North Dakota and tour several facilities for our members to see first-hand where our electricity comes from.

The tour stops include the Oahe Dam, Cathedral on the Prairie, Antelope Valley Station, Coteau Coal Mine, Great Plains Synfuels Plant, plus one mystery tour!

The cost is only $25 per person, which includes transportation, meals and lodging. The bus is limited to 50 passengers, and first priority is given to our members who have not participated previously.

For more information, contact our office. For an application, visit www.centralec.coop. Please include your application and $25 per applicant, and mail to Central Electric Cooperative, Bus Tour, 25487 403rd Avenue, PO Box 850, Mitchell SD 57301.

Residential LED Bulbs Special

Sylvania OSRAM LED 8.5W bulb/800 lumens
For 60W bulb replacement
Estimated annual energy cost of $1.02
Buy yours at our Betts Road office!

$4.00 /bulb

Reminder: Scholarships Deadline

Applications for the Basin Electric Power Cooperative and Jay Headley Memorial Scholarships are due by March 1st, 2016.
For an application and requirements,
visit www.centralec.coop or contact our office.

Safety **Tips**

Protect Your Older Home from Electrical Hazards

According to the Electrical Safety Foundation International (ESFI), half of all homes in the United States were built before the advent of automatic coffeemakers or garage door openers, and one-third were built before hair dryers or electric can openers. Add to that computers, cell phones and other electrical devices and you have a great many residences with potential electric wiring problems.

Research from ESFI shows that faulty or overloaded wiring accounts for an estimated 67,800 fires, 500 deaths and more than 2,000 injuries each year and a whopping $868 million in property damage. By educating yourself about common hazards in older homes and installing lifesaving electrical safety devices, these risks can be reduced greatly.

The lifesaving technology available includes:

• AFCIs – an outlet that recognizes fire hazards and immediately shuts off power.

• GFCIs – an outlet that senses when water comes into contact and cuts out to prevent electrocution.

• Tamper-Resistant Outlets – designed to protect children from inserting small objects into them.

In addition to installing the technology above, here are some additional safety tips:

• Make sure functioning smoke alarms are installed on every floor and in every sleeping area.

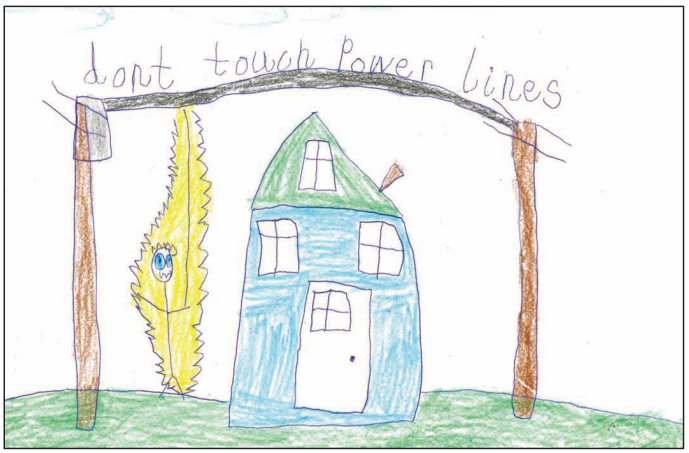
• Look for telltale signs of electrical problems such as dimming lights, frequent circuit breaker trips or blown fuses.

• Limit use of extension cords, particularly cords used to power room air conditioners.

• Use lightbulbs that are the proper wattage for a fixture; higher wattage bulbs can degrade wires.

Source: ESFI; Consumer Product Safety Commission

Kids' Corner Safety Poster



"Don't touch power lines"

Cole Kieffer, 5 years old

Cole is the son of Mike and Brittany Kieffer, Kennebec, S.D. They are members of West Central Electric Cooperative, Murdo, 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.

Current Issues

Congress Votes Against EPA Clean Power Plan

Congress registered its disapproval of how the Obama Administration wants to proceed on climate change with overwhelming votes against the Environmental Protection Agency's Clean Power Plan.

Following Senate votes, the House on Dec. 1 passed two resolutions of disapproval regarding the regulation that targets carbon dioxide emissions from existing fossil fuel generation.

The House voted 242-180 for Senate Joint Resolution 24 to halt the Clean Power Plan and 235-188 for Senate Joint Resolution 23 to block EPA's carbon dioxide standard for new, modified or reconstructed plants.

President Obama has said he will veto the resolutions. Proponents contend that the votes show widespread opposition to the EPA rule for the next administration to consider.

The Clean Power Plan became law Dec. 22, 2015, and will require states to reduce carbon dioxide produced within their borders by slashing power plant emissions beginning in 2022.

Electric cooperatives say the rule will force some coal units into premature retirement, threaten reliability and hammer members with more expensive electricity to replace the lost generation.

Lisa Johnson, CEO of Seminole Electric Cooperative in Tampa, Fla., told the White House officials how the EPA rule will shutter the co-op's 1,300-megawatt generating station in Putnam County and cost the financially-challenged area more than 300 jobs.

Rep. Gus Bilirakis, R-Fla., whose district includes more than 200,000 electric co-op members, underscored Seminole's concerns to his House colleagues prior to the vote on the resolutions.

"If the EPA forces the plant to close prematurely, these jobs are at risk and rural electric cooperative members like my constituents will still have to pay for the closed plant in their rates through 2042, while also paying for a new electricity source," Bilirakis said.

– By Cathy Cash, ECT.coop Staff Writer

Bountiful Brunch

Amish Breakfast Casserole

1 lb. bacon, diced
1/2 cup diced onion
8 eggs
4 cups frozen shredded hash browns, thawed
1/4 tsp. pepper
2 cups shredded Cheddar cheese
1-1/4 cups shredded Swiss cheese
1-1/2 cups 2% cottage cheese

In a large skillet, cook bacon and onion over medium heat until bacon is crispy; drain. In large bowl, lightly beat eggs. Stir in hash browns, pepper and cheeses. Add bacon and onions, stirring well. Transfer to greased 9x13-inch baking dish. Bake, uncovered, at 350°F. for 35 to 40 minutes or until a knife inserted in center comes out clean.

Amy Schoenfelder, Cavour

Easy Cinnamon Pull-Aparts

2 (16.3 oz.) cans Grands!® refrigerated biscuits
1/2 cup sugar
1 T. cinnamon
1 stick butter
1 cup brown sugar
2 T. milk
1 tsp. vanilla

Heat oven to 350°F. Lightly grease 12-cup fluted tube pan with shortening or cooking spray. In large storage plastic food bag, mix granulated sugar and cinnamon. Separate dough into 16 biscuits. Shake in bag to coat. Arrange standing in pan. In a small saucepan, combine butter, brown sugar and milk. Heat until dissolved and bubbly around edges; remove from heat. Add vanilla. Pour over biscuits. Bake for 30 minutes. May sprinkle walnuts or pecans in bottom of pan before adding biscuits.

Pam Hofer, Carpenter

Breakfast Enchiladas

2 cups cubed cooked ham
1/2 cup chopped onions
1/2 cup chopped green peppers or 1 (4 oz.) can chopped green chilies
10 8-inch flour or corn tortillas
2 cups shredded Cheddar cheese, divided
1 T. flour
2 cups half-and-half
6 eggs, beaten
1/4 tsp. salt

Combine ham, onions and peppers. Place about 1/3 cup down the center of each tortilla; top with 2 T. cheese. Roll up and place seam-side down in a 9x13-inch greased baking dish. In a bowl, combine flour, cream, eggs and salt; mix until smooth. Pour over tortillas. Cover with aluminum foil and refrigerate overnight. Remove from refrigerator 30 minutes before baking. Leaving tortillas covered, bake at 350°F. for 25 minutes. Uncover and bake an additional 10 minutes. Sprinkle with remaining cheese; bake 3 minutes longer or until cheese is melted. Let stand for 10 minutes before serving. Serve with salsa and sour cream if desired.

Jan Gossman, Bison

Ham and Almond Pastry Ring

1/2 cup chive and onion cream cheese spread
2 T. Caesar salad dressing
1 cup ham, diced
1 large apple, seeded and chopped
1/2 cup grapes, red or green, quartered
1/2 cup red onion, finely chopped
1/4 cup green bell pepper, diced
2 (8 oz.) cans refrigerated crescent rolls
1 egg, beaten
1/4 cup almonds, finely chopped

In large bowl, blend cream cheese spread and dressing. Add ham, apple, grapes, onion and green pepper; gently stir until coated. Set aside. Line a large baking sheet with heavy foil. Lightly coat with nonstick cooking spray. Unroll both cans of crescent rolls and separate. On prepared baking sheet, arrange triangles overlapping with shortest side of each roll toward center leaving 5-inch circle open in center. Points of crescent dough may hang over edge of baking sheet. Press overlapping dough to flatten and close center circle to 4-inches. Spoon mixture evenly over widest part of dough. Pull points of dough over filling and tuck dough under dough in center to form ring. (Some filling will be visible.) Brush dough evenly with beaten egg and sprinkle with almonds. Bake at 375°F. for 20 to 30 minutes or until golden and pastry in inner circle is baked. (If necessary, loosely cover outer edge of pastry with foil during the last 10 minutes of baking to prevent over-browning.) Remove from oven and cool for 5 minutes. Using large spatula, slide onto large serving platter. Makes 8 to 10 servings.

Nutritional analysis per serving: 385 calories; 23 g total fat (8 g saturated fat); 58 mg cholesterol; 30 g carbohydrates; 1 g fiber; 12 g protein; 573 mg sodium

Pictured, Cooperative Connections

Sunday Morning Coffee Cake

2 T. butter, softened
1/2 cup sugar
1/2 tsp. salt
1 egg
2/3 cup milk
1 tsp. vanilla extract
1-1/2 cups all-purpose flour
3 tsp. baking powder
Topping:
1/4 cup sugar
2 T. all-purpose flour
1 T. ground cinnamon
1/4 cup cold butter

In a small mixing bowl, beat butter, sugar and salt until crumbly. Add egg, milk and vanilla; mix well. Combine flour and baking powder; add to butter mixture. Transfer to a greased 8-inch square baking dish. For topping, in a small bowl, combine sugar, flour and cinnamon; cut in butter until mixture is crumbly. Sprinkle over batter. Bake at 350°F. for 25 to 30 minutes.

Stephanie Fossum, Hudson

Good Pancakes

2 egg whites
2 egg yolks
2-1/2 cups buttermilk
2 cups flour
1 tsp. salt
1 tsp. baking soda

Beat egg whites and set aside. In a large bowl, beat egg yolks. Add buttermilk, flour, salt and soda; stir. Add beaten egg whites. Fry on hot griddle.

Linda Rauscher, Aberdeen

Please send your favorite seafood, appetizer, beverage 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 2016. All entries must include your name, mailing address, telephone number and cooperative name.

Winter Operations Update

Brian Bultje
Operations Manager

In our rural area, the cold of winter doesn't seem to slow down the work that needs to be done, and the same applies to our line crews.

At the beginning of fall and into December, crews are finishing up projects that we began prior to the ground freezing. Many of these projects consist of connecting line that was buried earlier in the year and retiring out overhead equipment.

One of our most time consuming projects this season is the annual line patrol. Line patrol consists of inspecting our system's line, both overhead and underground. This project takes us up until the spring.

Our goal is to intentionally check at least a quarter of our system each year, which equals roughly 1125 miles of lines (we have a total of 4500 miles of overhead and underground line). However, we do tend to inspect quite a bit more line over the course of the calendar year as we travel to different job sites—line patrol is a constant task.

During line patrol, crews look for loose hardware, frayed wire, broken or loose guy wires, low clearances, tree issues or damaged poles. If possible, crews repair the equipment on the spot. If crews are not able to make the repair immediately, they will document it and schedule future maintenance.

During the colder months, we do our best to keep planned outages at a minimum. If possible, we work on the line while energized, which can be made possible by our protective rubber goods. If it isn't safe to work on the line while energized, we schedule the maintenance during warmer weather depending on the project's urgency.

Other winter projects include pole change outs, tree trimming, and transformer or meter upgrades. Poles can be changed out in the winter by digging next to the pole. For tree trimming, we have two internal crews at all times working on trimming, which has great preventive measures in the event of a storm. Transformer and meter upgrades also keep us fairly busy. These are required when a member adds an electric heating load and the metering equipment or transformer needs to be upgraded to carry the larger load.

In the case that the weather makes it unsafe to work outdoors, we always have equipment maintenance and inspection to be completed. Indoor maintenance and inspection is typically reserved for blustery days.

As always, responding to outages takes first priority. We keep flexibility in our schedules to allow for unexpected circumstances.

As the snow continues, we advise members to please be careful when operating snow removal equipment such as loaders, and look out for overhead power lines and also underground equipment, whether it be Central's equipment or your own. Not only are damages unsafe and inconvenient to our members, but with the frosty conditions, this type of equipment can be difficult to replace and repair.

Please also be careful of driving conditions, in bad weather and in everyday driving. In case that you see any frayed wires or low clearances on our system, we encourage you to notify our office.

Crews retiring overhead line that had been converted to underground line earlier in the season.

This pole was struck by a car that drove off the road during the winter conditions. These repairs can be costly for the cooperative.

Top Energy Users in Your Home

Patrick Soukup
Manager of Member Services & Marketing

While most homeowners would like to be more energy efficient and save money, often it feels overwhelming because many people don't know where to start. How can the average family use less energy, lower their utility bill and still meet their daily energy needs? To help jumpstart your effort, it is useful to know what the top energy users are in your home. With this knowledge, you can choose a path that works best for your family.

According to the U.S. Energy Information Agency, the top five energy users in U.S. homes are: 1) Space cooling, 2) Space heating, 3) Water heating, 4) Lighting, 5)Refrigeration.

Adjust the temperature.

Together, home heating and cooling use the most energy and take the biggest bite out of your energy budget. On the bright side, there are ways you can achieve at least 10% savings by taking a few simple low-cost or no-cost steps.

- During cold weather, set your thermostat to 68 °F.
- During warm weather, the recommended indoor temperature is 78 °F.
- Cleaning the filters of your HVAC system can cut costs from five to 15%.
- Clean the coils around your electric baseboard heater to maintain maximum efficiency.
- Caulk and weather-strip around windows and doors to prevent heat from escaping to the outdoors.

No matter what the climate or time of year, proper use of a programmable thermostat can save you 10% on your monthly utility bill.

Shine the light on savings

Take a fresh look at the lighting in your home. If you still use incandescent lighting, your light bulbs are operating at only 25% energy efficiency. Replacing your home's five most frequently used bulbs with Energy Star-certified LEDs can save you $75/yr. Another easy way to save is to always turn lights off in rooms that are not being used.

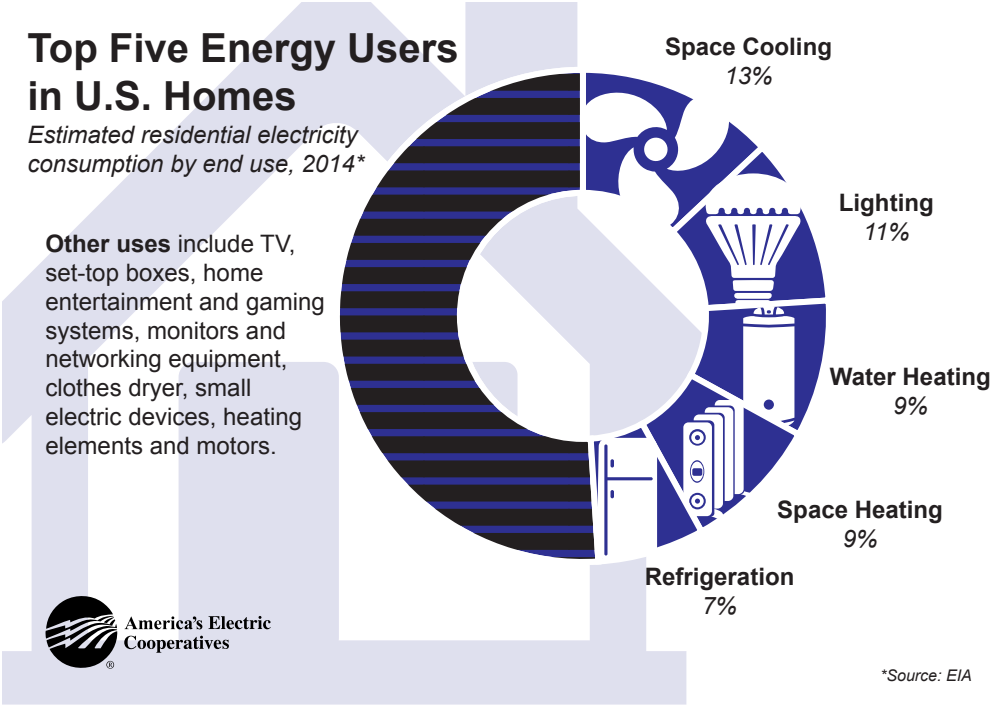
Water heating efficiency

Just as it is energy-wise to insulate your roof, wall or floor, it also pays to wrap your hot water heater with an insulating blanket. This is all the more critical if you have an older unit. Make sure to follow the manufacturer's instructions. For additional efficiency and savings, insulate exposed hot water lines and drain one to two gallons of water from the bottom of your tank annually to prevent sediment build-up.

Put cold hard cash back in your wallet.

If your refrigerator was purchased before 2001, chances are it uses 40% more energy than a new Energy Star model. If you are considering an appliance update, a new Energy Star refrigerator uses at least 15% less energy than non-qualified models and 20% less energy than required by current federal standards. Regardless of the age of your fridge, there are additional steps you can take to save energy and money. For example, don't keep your refrigerator too cold. The Department of Energy recommends temperatures of 35 – 38°F for the fresh food compartment and 0°F for separate freezers (used for long-term storage).

By understanding how your home uses energy, you can determine the best ways to modify energy use and keep more money in your wallet. For additional ways to save, contact Central Electric's energy experts.



Time for A Good Soak

Hot Mineral Baths Provide Relaxation, Restoration

By
Terry Woster

If George Stroppel's father hadn't talked him into taking a course in Swedish massage therapy long ago, the 89-year-old Midland resident might have spent his working life in the saddle of heavy earth-moving equipment.

Instead, Stroppel stepped away from moving dirt to spend his days – and nights – bringing comfort to the bodies and spirits of travelers with hot baths, steams and massages at the Stroppel Inn, a business his father, John Stroppel, started in 1939.

"Dad needed mineral baths for his health," George Stroppel said during a recent conversation.

The elder Stroppel, whose lungs were damaged by a childhood illness, found that the warm waters of a well in nearby Capa were soothing. He considered buying that business, decided against the idea and instead opened a hotel in Midland and drilled a deep (nearly 1,800 feet) well to reach hot (115 degrees Fahrenheit), mineral-rich water.

"Things just seemed to click," Stroppel said.

They did, indeed. People began traveling to Midland, many staying at the hotel for 21 days of

baths and massages. Room and board was $15 a week. Stroppel recalls that sometimes the place had so many guests, meals were served in shifts.

Healing powers of hot springs have been touted for centuries in many parts of the world. The website Livestrong.com says warm springs and mineral baths are a natural treatment option for many common ailments, relieving pain, skin problems, stress and more. President Franklin D. Roosevelt, whose New Deal programs included the Rural Electrification Administration, regularly traveled to Warm Springs, Ga., for treatments.

Several areas in South Dakota have warm-water springs or wells. Perhaps the best advertised is Evans Plunge in Hot Springs. The Plunge has been in operation for more than a century. It has the amenities of a water park, with slides and swinging rings. But it was established in 1890 because the 87-degree spring water was considered a cure-all for almost anything that ailed a body.

Besides tourism and recreation, the Plunge hosts practices of the Fall River Swim Team, says supervisor Kris Hanson. The fun-and-games remain an attraction, but Hanson says she sees a trend toward more customers arriving specifically to soak in the water.

"It feels like we are moving back more in that direction, to where it is about the water," Hanson says. "People absolutely believe in the water. They swear by it."

Back in Midland, the elder Stroppel retired from the business after 10 years. George's brother, Jack, took over for 17 years, before George became proprietor. He operated the inn and baths until he sold it in 2002. He continues to give massages and customers continue to stop in. A newer well brings in water with a temperature of 119 degrees.

Jeremiah M. Murphy of Rapid City lobbies for several organizations during the annual South Dakota Legislature. He's a believer in the value of a pause in his travel for a hot soak and steam.

"With all the trips I take to and from Pierre, I'll find a few occasions a year to stop and have a soak," Murphy said. "It's great – relaxing, refreshing."

It's especially refreshing after a day of pheasant hunting, he said. Murphy is among the regulars at an annual pheasant hunt in the Highmore area. He usually stops in Midland on his way home.

"It's a nice antidote to a day of tromping around on uneven ground," Murphy said.

Vickie Droze, who came to Midland from Charleston, S.C., more than four years ago to work at the hotel, bought the business in 2015. She calls Stroppel "Mr. George" and she says the customers are like family and Midland is home.

"When I first got here, I thought 'what am I getting into,' but it's just a wonderful place," Droze said. "We get 15, sometimes 20 people a day. It's about half regulars and half new customers, drawn by the billboards or word-of-mouth. I love it."

George Stroppel is convinced of the healing properties of hot water.

"My own conclusion," Stroppel said, "Is that you heat your body and sweat the impurities out of it. That's just what makes sense to me."

And that massage training? Stroppel's dad talked him into the course in 1958, but Stroppel never figured to use it. Then one day a trio of travelers asked for massages.

"I said I might hurt them. I'd never done a real one. But they kept asking," Stroppel said. "I must have been like a bear, but they told another guest 'you haven't had a massage until you've had one from him.'"

That was in 1966. This spring Stroppel will turn 90, after 50 years of giving massages.

"It's been a good life," he said. "I sure met a lot of people."

I'll find a few occasions a year to stop and have a soak. It's great – relaxing, refreshing.

Above Left: George Stroppel has sold the hotel, but continues to give massages. **Left:** One of the baths. **Opposite Page:** Vickie Droze, who came to Midland from Charleston, S.C., more than four years ago to work at the Stroppel Hotel, bought the business in 2015.

Light Bulb Showdown: LED vs. CFL vs. Incandescent

By Holly Johnson

Just a couple decades ago, light bulbs were light bulbs. No matter your budget, you really had only one choice when it came to interior lighting options for your home: Head to the hardware store and pick up some incandescent bulbs, choosing a wattage based on how bright you needed the light to be.

But in recent years, technology has brought us bulbs — namely, CFLs and LEDs — that put incandescent lighting to shame. Not only are these new options more energy efficient, they can also last years, or even decades, longer than the standard light bulb we all remember from our childhoods.

And while prices for LED light bulbs were astronomical when we first covered this topic just a few years ago — upwards of $100 for one bulb — you can now pick up a cheap, 60-watt-equivalent LED light bulb for less than $5.

That's probably why incandescent light bulbs are being phased out: An almost complete ban on their sale started in 2014 and will take full effect in 2020. Simply put, they waste a lot of energy and don't last very long.

As incandescent light bulbs around the country burn out for the last time, let's look at the other options available. Cost will obviously be a factor as you make your decision, but there are other variables you should consider as well.

CFL vs. LED Light Bulbs: What's the Difference?

Let's examine the two most popular new light bulb options, CFLs and LEDs, and look at the advantages and disadvantages that come with each.

CFLs: Compact Fluorescent Lights

According to EnergyStar.gov, CFLs work differently than incandescent bulbs in that, instead of running an electric current through a wire filament, they drive an electric current through a tube that contains argon and mercury vapor. This process creates ultraviolet light that quickly translates into visible light, unlike incandescent lights which put off a warm glow.

The big difference between CFLs and incandescent bulbs is how much energy it takes to use them over time. CFLs use about 70% less energy than incandescent bulbs. They also last years longer than traditional bulbs, and only cost about a dollar more per bulb.

However, one of the biggest drawbacks of CFLs is that it takes a few moments for them to warm up and reach full brightness. That means they're not ideal in spots where you want lots of light as soon as you flip the switch, such as a dark, steep basement stairway. They also cannot be used with a dimmer switch.

Plus, modern CFLs contain a small amount of mercury, which is very harmful to both your health and the environment. That means it's bad news to break one, and they shouldn't be disposed of in your regular household trash.

An incandescent bulb is pictured on left and a CFL is on the right.

LEDs: Light-Emitting Diodes

Light-emitting diodes, or LEDs, were for years most commonly found in small electronic displays, such as the clock on your cable box. Because the light emitted by each tiny LED is directional and fairly weak, household LED bulbs were on the fringe of mainstream technology just a few years ago.

According to the Lighting Research Center, LED light bulbs work by bringing together currents with a positive and negative charge to create energy released in the form of light. The result is a fast source of light that is reliable, instantaneous, and able to be dimmed.

What sets LEDs apart from incandescent bulbs and CFLs is just how long they can last. According to Consumer Reports, LED light bulbs can last anywhere from 20,000 to 50,000 hours, or up to five times longer than any comparable bulb on the market.

But that combination of efficiency and durability has historically come at a cost. LEDs cost more money than CFLs and incandescent bulbs. The good news, however, is that their price has dropped considerably over the years.

Where once it was common to pay $50 or even $100 for an LED light bulb, they're now available for about $8 a bulb or less.

Comparing Costs: CFLs vs. LEDs

When most people need to replace their light bulbs, cost is the biggest factor in their decision. But the actual cost includes more than just the upfront price of each bulb you buy; you should also factor in how much each option will cost to operate over the years.

As with most things, it turns out a bit of money spent today can often lead to substantial savings in the long run.

Buying one quality bulb that lasts decades is less expensive in

the long run than buying a dozen or more cheaper ones that keep burning out.

And then there's the cost of the electricity used to light the bulb: Utility prices vary by state and by season, of course, but in 2013 residential electricity customers paid an average of 12 cents per kilowatt hour in the United States. Both CFLs and LEDs use considerably less electricity than traditional bulbs.

Here's how much each type of bulb would cost to purchase and operate over a 25,000-hour lifespan (about 23 years at three hours per day):

	Incandescent	CFL	LED
Appox. cost per bulb	$1	$2	<$8
Average lifespan	1,200 hrs	8,000 hrs	25,000 hrs
Watts used	60W	14W	10W
No. of bulbs needed for 25,000 hours of use	21	3	1
Total purchase price of bulbs over 23 years	$21	$6	$8
Total cost of electricity used (25,000 hrs at $0.12 per KWH)	$180	$42	$30
Total operational cost over 23 years	$201	$48	$38

As you can see, buying longer-lasting, more efficient light bulbs can really pay off over time. Over a 23-year period, it will cost you over $200 (and many trips to the hardware store) to keep one 60-watt lamp lit with incandescent bulbs. By comparison, it would cost just $48 using a handful of CFLs, or $38 using a single LED light bulb — a savings of more than $150 either way.

How Much Could You Save?

Now consider that those savings are from just one bulb. Think about the number of lights in your house — some fixtures, like chandeliers or ceiling fans, probably even use three bulbs or more. If you replaced 20 incandescent bulbs with LED light bulbs throughout your home, you could save up to $3,260 over their 23-year lifespan (and that's assuming utility rates don't rise).

Still, you don't even have to make that big of a commitment to realize some significant savings. Switching just the five most-used lights in your home — for instance, the lights in your living room, kitchen, and entryway, which are probably in use closer to four hours a day — could save you around $44 a year on your electric bill.

Other Ways to Compare CFL vs. LED Light Bulbs

Let's put cost aside for a moment and look at these lighting options based solely on quality and other important factors. Here are some pros and cons of CFLs vs. LEDs:

CFL Light Bulbs

Pros: • Use less energy than incandescent bulbs; • Cost less than LED light bulbs; • Produce extremely bright light that spreads evenly; • Available in soft, warm, and bright white hues

Cons: • Cannot be used with a dimmer switch; • Take a few moments to heat up and reach full brightness; • Contain mercury, a toxic heavy metal; • Can be sensitive to cold temperatures

LED Light Bulbs

Pros: • Light up immediately, like an incandescent bulb; • Don't heat up much at all – they stay cool to the touch even after use; • Last up to five times longer than CFLs; can literally last a lifetime; • No sensitivity to cold temperatures; • Do not contain mercury; • Some models can be used with a dimmer switch; • Available in soft, warm, and bright white hues

Cons: • Directional light that may not spread as evenly as other sources; • Currently cost more than CFLs

CFL vs. LED Light Bulbs: Who Wins?

After conducting research using my own personal experience and expert sources like Consumer Reports and EnergyStar.gov, I've concluded that it's hard to beat the value offered by modern LEDs. Not only are their prices getting more affordable every day, they also last up to decades longer than the competition.

With soft and warm white hues that mimic the glow of traditional incandescent bulbs, the ability to use some models with a dimmer switch, and their instantaneous illumination, LEDs are simply a better option around the house than CFLs.

It's Your Home, Your Choice

The bottom line: Sometime in the very near future, you probably won't be able to buy any more incandescent light bulbs, even if you wanted to. If you're not one to embrace change, that might seem rather depressing. However, you do have a few options. You can either:

• Run out to the store and stock up on a few decade's worth of the cheap, inefficient bulbs you're used to.

• Slowly replace burned-out bulbs with low-cost CFLs, while taking special care to dispose of them properly 10 years down the road.

• Gradually replace your old bulbs with LEDs that may last a lifetime.

Personally, I would choose what's behind door No. 3. Prices for LEDs are lower than they've ever been (and continue to get more competitive), and they are the most durable, efficient home lighting option on the market. It's hard to argue against a product that more than pays for itself in energy savings and might last for the rest of your life.

You don't have to make a huge commitment now. If you want, you can upgrade to more efficient lighting one room at a time, or as old light bulbs burn out. Or start with installing an LED light bulb in a hard-to-reach spot, like a cathedral ceiling fixture, since you won't have to replace it for many, many years.

There is no right or wrong way to make the switch. But the sooner you do, the sooner you'll start saving.

Article retrieved from http://www.thesimpledollar.com/the-light-bulb-showdown-leds-vs-cfls-vs-incandescent-bulbs-whats-the-best-deal-now-and-in-the-future/

Adding Value:
Dakota Gasification Plant's Role

By BEPC

It has been nearly 27 years since Basin Electric Power Cooperative's membership voted to purchase the Great Plains Synfuels Plant and form Dakota Gasification Company.

It's no secret that purchasing the facility posed a risk for the cooperative and its membership, but taking bold initiatives had been the basis for founding Basin Electric.

It's taken some time and innovation, but the value that purchase has provided to Basin Electric and the membership over the years has proven to be significant and can be measured by more than just dollars.

Basin Electric staff conducted a study to show the benefits Dakota Gas brings to Basin Electric and its members. The information was shared during the March board of directors meeting.

When the plant was purchased in 1988, the Synfuels Plant's value proved to be about $37 million a year considering the fuel supply, power supply and shared facilities.

Around the year 2000, the plant was in a construction phase and then was repaying debt to Basin Electric for several years. By 2008, debt was paid off and dividends were coming back to Basin Electric members. Currently, the plant is in a construction phase again with the urea plant project.

Working with several components, the recent study found Dakota Gas brings a benefit of $59 million per year to Basin Electric and its membership. This includes the fuel supply, power supply, shared facilities, allocations and other miscellaneous benefits. To the membership, that equates to a 2.5 mill on-going benefit.

Over the years of operating the Synfuels Plant, the business model has changed significantly from primarily producing natural gas, to producing a slate of products. Currently, the Synfuels Plant produces 10 products including natural gas, anhydrous ammonia, ammonium sulfate, cresylic acid, phenol, krypton-xenon, liquid nitrogen, carbon dioxide, naphtha and tar oil. With the completion of the urea plant projected for spring 2017, sales of urea and diesel exhaust fluid will be added to that list of products.

Manager of Financial Planning and Forecasting Andrew Buntrock explains why the value of Dakota Gas has grown. "Several things have changed in the past five years for Basin Electric – mainly that Basin continues to grow at a record pace, so it is not surprising that the benefit that Dakota Gas provides to Basin grew, as well," Buntrock said.

"We also keep our eye on the historical benefit that Dakota Gas brings to the table from a cash

perspective. This includes the purchase price of the plant, dividends received and the loan advances and repayments, which of course includes interest. At the end of the day, the current cash flow from Dakota Gas to Basin is positive by over $200 million. So if we wrap this all together, we estimate that Dakota Gas has benefited the cooperative by over $1.1 billion since Basin Electric purchased the plant in 1988."

Additionally, value is added, not monetarily, but with infrastructure. The shared benefits that come with in-house medical services provided to employees cooperative-wide, the use of machine shop services to fix equipment at the power plants and the fire-fighting capability available to the area power plant facilities continue to add value, along with sharing the water intake, rail spur, coal facilities and purchasing electricity from Basin Electric.

The medical services team at Dakota Gas provides a benefit to employees that saves on medical costs. Dr. Tom Kaspari and his staff see employees throughout the cooperative, traveling between the facilities each month. Employees save time away from their jobs, as well as the cost of an office visit, by seeing Dr. Kaspari at their job site. Whether employees are visiting medical services for their yearly physicals, a random drug test, a rash, strained back, respiratory infection or the annual influenza injection, Dr. Kaspari and his staff are available to provide on-the-spot medical care.

Emergency services provide coverage not only at the Synfuels Plant, but also to area Basin Electric facilities and the local communities. A fleet of two ambulances and five fire and rescue vehicles are available for emergency response and have aided in emergencies in Mercer County, as well as at area electric-generating facilities. Having trained emergency medical technicians, nurses, a family nurse practitioner and doctor on staff, ready to respond at a moment's notice to save lives, is more than valuable, it's invaluable.

Full-scale mass casualty exercises held in 2013 and 2014 are an example of the efforts to improve emergency response and coordination within the community. The exercises were coordinated by Synfuels Plant personnel with the assistance of the Mercer County emergency manager and Local Emergency Planning Committee. Participants included representatives from local fire departments, emergency medical services, law enforcement, hospitals and the North Dakota Department of Emergency Services. This proactive approach provides value to Dakota Gas and Basin Electric, as well as the local communities and other energy facilities.

The ongoing study of Dakota Gas in relation to Basin Electric indicates continued benefit for Basin Electric, its members and surrounding communities. Basin Electric's members made a wise investment in Dakota Gas in 1988 to support the goal of minimizing and stabilizing the cost of power. And this benefit can be seen even when Dakota Gas profit margins are low as a result of commodity prices.

Urea Plant Taking Shape

A Dakota Gasification Company project to add a urea plant to the company's Beulah, N.D., complex is on schedule and within budget.

Several milestones have been realized recently as urea project activities at Dakota Gasification Company's Great Plains Synfuels Plant continue to ramp up.

Jim Greer, senior project manager, said the project is on schedule and within budget.

The $500 million urea plant construction project began last year and is expected to be completed by the end of 2016. During the first quarter of 2017, the equipment will be commissioned with product ready for sale by second quarter 2017. The addition of the urea plant will bring three additional products for sale from the Synfuels Plant: urea, diesel exhaust fluid, commonly referred to as DEF, and liquefied carbon dioxide.

Urea is a dry, solid crystalline containing 46 percent nitrogen that is widely used in the agricultural industry as a fertilizer and sometimes as animal feed.

The project's first piece of steel was erected for the melt building the end of October. Pipe-rack steel was also put in place in early November, an important part of the project, as it will hold the pipe that will bring anhydrous ammonia from the storage tank to the urea plant. Another important milestone in the project included completing the underground cooling water pipeline.

Some of the major pieces of equipment are also arriving was the granulator, the heart of the granulation building, was delivered last week from Germany.

Three very large pieces of equipment for the project are expected on site soon. The high pressure scrubber, high pressure stripper and pool reactor were fabricated by Stamicarbon in Ternitz, Austria. The equipment was loaded onto a barge on the Danube River in October and traveled to the Port of Antwerp, Belgium. From Belgium, the equipment was sent to the Port of Houston, Texas, where it was loaded onto rail cars. The railcars transported the equipment to the Synfuels Plant in November

Engineering for the project is about 93 percent complete, with more than 300 contract employees on site working on the project. Greer said that number will continue to grow over the coming months with RUST, the general contractor, actively recruiting contractors for the project.

"RUST has set up a recruiting trailer in the craft parking lot, where they are interviewing, drug testing and safety training new employees hired to work on the project," Greer said. "They will continue to add staff and more trades as the project continues."

Other activities include the electric duct bank work for the primary distribution of power from Substation 28 to Substation 29.

"We are finalizing the construction power plan for the project, which will include supplying about five megawatts of electricity for the project site," Greer said.

Great Southwestern Construction of Castle Rock, Colo., is the electrical contractor who will pull the 69 kV transmission line to the site and install the substation.

Concrete pours also continue with grade beams and pile caps in the melt and granulation buildings. "These beams will connect the building laterally, holding the foundation together," Greer said. A pad for the carbon dioxide compressor building, as well as a tabletop, elevated platform for the carbon dioxide compressor, are also being poured.

Marten Brenny is building the control room for the urea plant and has completed the shell, walls and roof. They are currently working indoors, putting up wall frames for interior rooms.

US Wick Drain finished the storage building rigid inclusions work at the end of October, ahead of schedule and within budget. They demobilized and are no longer on plant site.

The pipe fabrication contract was recently awarded to Enerpipe of New London, Wis. They have purchased the carbon steel to fabricate the necessary pipe for the project.

The civil contract for the materials handling and storage building was awarded in November.

Not only is the project on schedule and within budget, Greer said it is also progressing safely. "RUST just had a 100-day celebration for strong safety performance."

Youth Tour

June 10-17, 2016 - 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 following topic:

"As a member-owned, not-for-profit utility, Central Electric Cooperative strives to improve the quality of life for our members. Discuss the benefits of your cooperative membership."

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/guardian'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, 2016. 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.

YOUTH TOUR

WWW.CENTRALEC.COOP
WWW.YOUTHTOUR.COOP

2016-2017 Scholarships

Central Electric will provide three $1,000 academic scholarships for the 2016 - 2017 school year.

The Basin Electric Power Cooperative Scholarship is in its 26th consecutive year and is funded by Basin Electric Power Cooperative of Bismarck, ND.

The Jay Headley Memorial Scholarships are in their 15th 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.

Regional Dateline

January 22-23
Monster Jam, Sioux Falls, SD
605-367-7288

January 23
Coors Light Extreme Indoor Enduro, Rapid City, SD
605-394-4115

January 23-24
Broadway Play Series Dirty Dancing, Fine Arts Theatre
Rushmore Plaza Civic Center
Rapid City, SD 1-800-468-6463

January 24, 31
Foreign Film Festival
Spearfish, SD, 605-642-7973
www.matthewsopera.com

January 29-30
35th Annual Farm, Home and Sport Show, Armory
Webster, SD, 605-345-4468

January 29-February 7
Black Hills Stock Show & Rodeo, Rapid City, SD
605-355-3861

January 30
Jason Aldean, 7:30 p.m.
Sioux Falls, SD, 605-367-7288

January 31
Eureka Hymns Annual Concert, Eureka, SD
jalvarez@mmgyglobal.com

February 2
High Voltage Safety Demonstration, 8:30 and 10 a.m., Barnett Arena
Rushmore Plaza Civic Center
Rapid City, SD, 605-224-8823

PHOTO COURTESY OF CHAD COPPESS, S.D. TOURISM

Events of Special Note

January 21-24
Snowmobile Rally
Deadwood, SD, 605-578-1876

February 15
26th Annual Farm and Home Show, 10 a.m. to 3:30 p.m., School Gym
Wessington Springs, SD
Call 605-539-1929 for booth information

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.

February 5-6
Living History Fair
Watertown, SD, 605-886-7335

February 5-7
Winterfest of Wheels Indoor Car Show, Convention Center
Sioux Falls, SD, 605-231-3100
www.winterfestofwheels.com

February 6
Sioux Empire on Tap
Sioux Falls, SD, 605-367-7288

February 7
South Dakota's Largest Tailgate Party, Deadwood, SD
605-578-1876

February 9-13
Winter Farm Show
Watertown, SD, 605-886-5814

February 12
Strawbale Winery Valentine Twilight Flights 2016
6 to 10 p.m., Renner, SD
605-543-5071

February 19-20
Second Annual Frost Fest
Brookings, SD, 605-692-6125

February 24-28
SD State Dart Tournament
Rushmore Plaza Civic Center
Rapid City, SD, 605-394-4115

February 26-28
Sioux Empire Wacipi
Sioux Falls, SD, 605-367-7288

March 5
Mitchell Area Safehouse "Night at the Races"
6:30 to 9:30 p.m.
Highland Conference Center
Mitchell, SD, Tickets can be purchased at County Fair, $35

March 5-8
2016 Summit League Basketball Championship
Sioux Falls, SD, 605-367-7288

March 12-13
2016 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

March 18-20
South Dakota Taxidermy Competition and Convention
Watertown, SD, 712-540-5868

March 19-20
Curt Carter Memorial Gun Show, Watertown, SD
605-793-2347

March 26
Easter Egg Hunt
10 a.m., City Park
Wessington Springs, SD
Contact 4-H Extension Office at 605-539-9471

April 2-3
Annual Hat's Off to the Artists Art Show, Faulkton, SD
605-598-6525