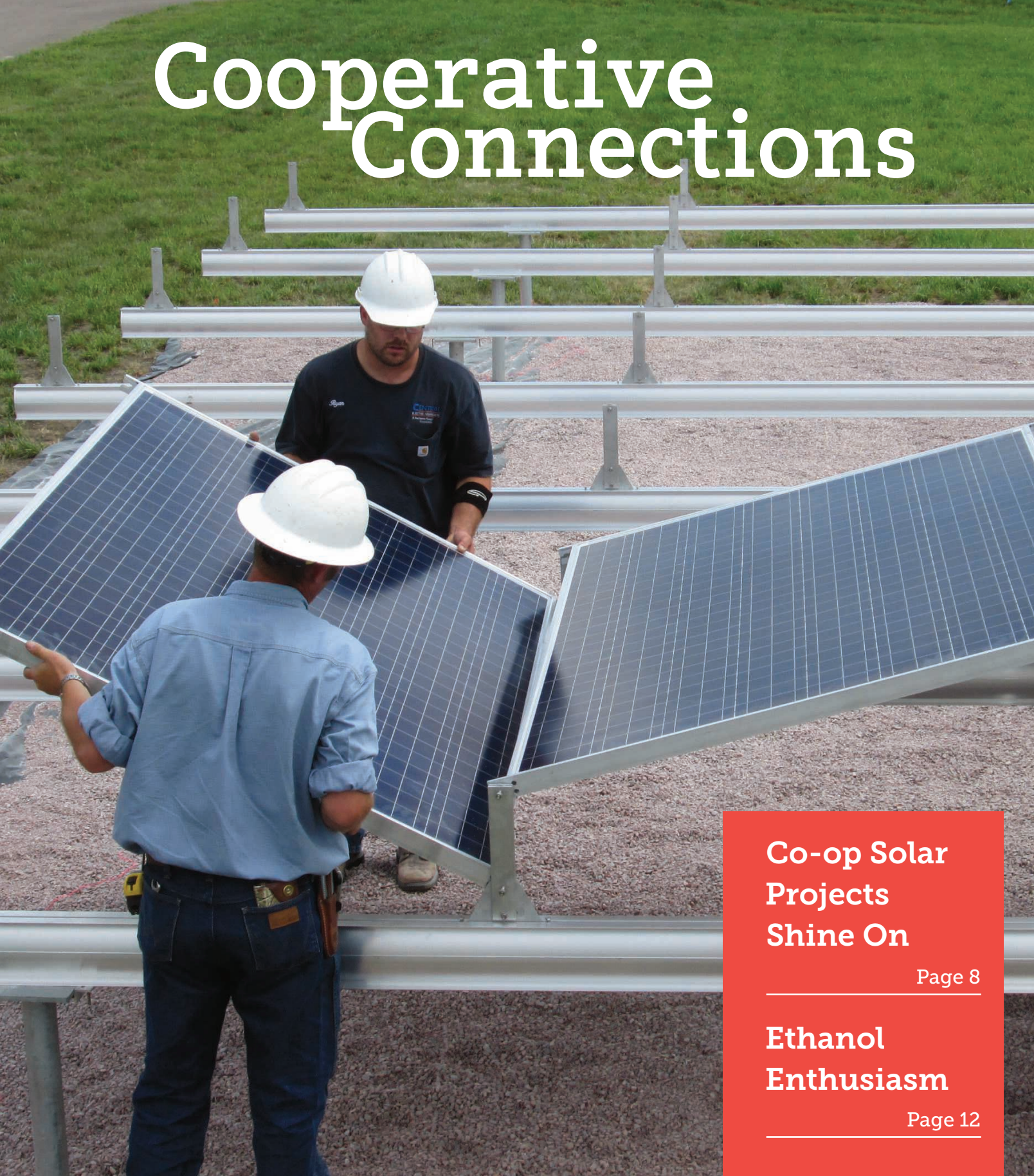




# Cooperative Connections



**Co-op Solar  
Projects  
Shine On**

Page 8

**Ethanol  
Enthusiasm**

Page 12

# 200 Percent Efficient Boiler!

## Consider this for your next project



Jessie Tucker

[jessie.tucker@wce.coop](mailto:jessie.tucker@wce.coop)

Seeing the opportunity to compare equipment, we recently installed an Electro Industries heat pump boiler in our newer Kadoka outpost building. This building, built in 2018, is almost an exact match to our building in Midland, which was built one-year prior in 2017. A unique set of conditions now allows us to compare energy efficiencies between the two heating systems. Many of our members in the last couple years have been installing standard electric boiler systems and now we can give them an even better option to save money per month.

Prior to construction in Kadoka, we were approached by Electro Industries out of Monticello, Minn., about their heat pump boiler systems. Their boiler systems use the 200-plus percent efficiencies of a heat pump to heat the radiant system and only utilizes the auxiliary electric boiler to make up the difference in water temperature to maintain comfort. If the temperature falls below a predetermined cut off temperature, then the boiler takes full control of the heating. When the outdoor temperatures rise, the system will automatically utilize the more efficient heat pump system to maintain energy savings and comfort in the building. This uses much less energy than a standard boiler to heat to the desired temperature. In our example and throughout the first winter used, Kadoka used approximately 8,600 less kWhs than Midland! This number is expected to be even greater in future years, too.

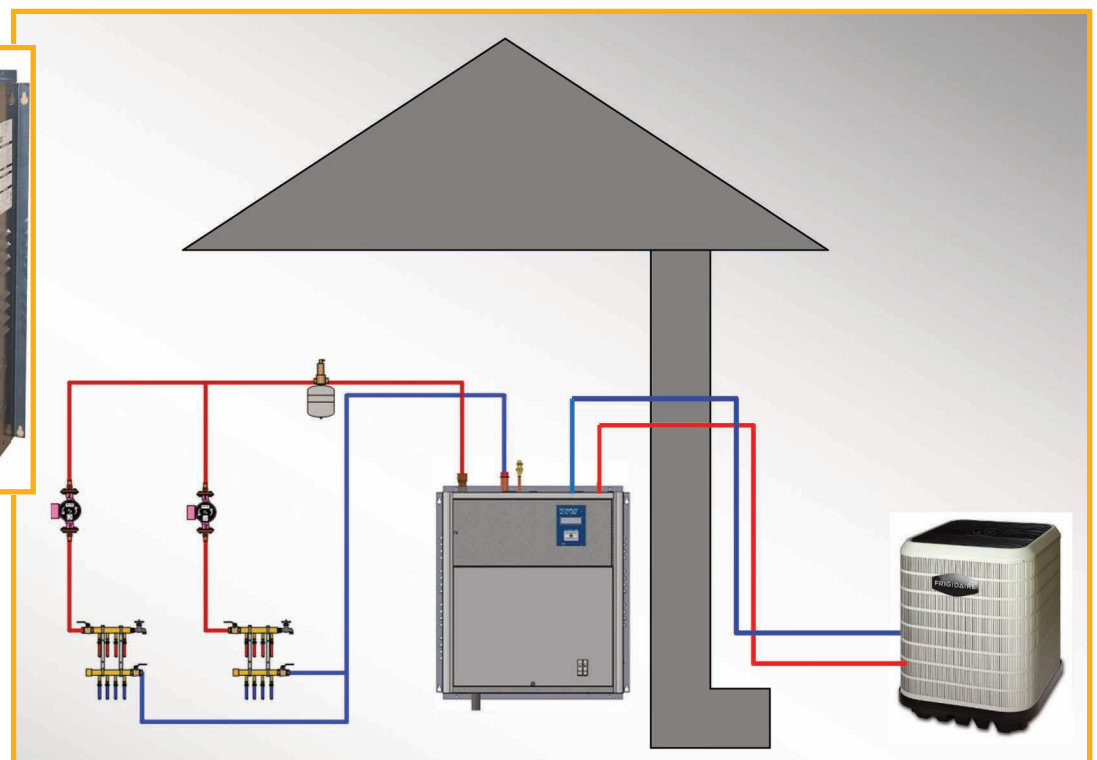
There are additional equipment costs because an outside heat pump unit will be needed but this really is the only extra cost. An outside heat pump unit can range from \$2,500 to \$3,000 and in our example, this additional equipment cost will be paid for in six to eight years! Other additional savings for having these systems installed is that West Central gives \$1,000 rebates on qualified heat pumps that are greater than 15 SEER (this is if you have resistive electric for emergency backup). This potentially brings the payback down to only four to five years!

As always, we are excited to promote energy efficiencies to our membership and this is a prime example. We will continue to monitor the data each winter and share it if you are considering a similar type set up. For additional questions and information, please feel free to contact us at 605-669-8100.

**Throughout the first winter used, Kadoka used 8,600 less kWhs than Midland.**



An Electro Industries boiler was installed in the WCEC Kadoka building.



# West Central Electric

## Cooperative Connections

(USPS No. 018-988)

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Steve Reed, Murdo

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

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

**Call 605-669-8100  
24-hour Dispatching**

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Design assistance by SDREA



## Join Us!

**Come join us Oct. 2 at the Harold Thune Auditorium  
in Murdo, S.D., for West Central Electric's 70<sup>th</sup> Annual  
Meeting!**

**Door prizes are a 20-ounce Yeti® tumbler and cash prizes  
will also be awarded during the evening!**

**Hope to see you there!**

# Electrical Safety During Disasters

Electricity drives the modern world and we often take it for granted. And if a natural disaster occurs, there's a few things to remember to stay electrically safe during the storm.

- Before the storm hits, make sure to charge all phones and other communication devices. Then, unplug all electronics and move them as high as possible to avoid water damage from flooding.
- Turn off the main power breaker feeding the home to prevent any surges to the wiring and equipment.
- After the storm blows through, and you begin to evaluate the aftermath, it's important to avoid flooded areas as they may be electrified.
- Do not use any electrical equipment or electronics if they've been submerged.
- If flooding has occurred, have the electrical system inspected by a qualified electrical inspector.
- If you're using a generator, ensure a qualified electrician installed it and make sure to use a listed and approved transfer switch and GFCI protection.
- It's a good idea to protect your home with carbon monoxide detectors.
- When venturing outside, be very alert of your surroundings. If you encounter a fallen power line, stay at least 35 feet away. Avoid touching any objects the line may be laying on such as a fence, a car, or a light pole as the object could be energized.
- If others are around, alert them to stay away and call 911.

While storms can be devastating to a community, the aftermath can be challenging. However, could be an opportunity to renovate and upgrade your main power source with renewable energy such as solar.

Floodwaters and heavy winds aren't the only hazards during a storm. That's why it's important to treat electricity with extreme caution.

Source: esfi.org

Come visit your Touchstone Energy® Cooperatives at one of these events!

MINNESOTA

# FARMFEST®

Aug. 6-7  
Gilfillan Estate  
28269 MN-67  
Morgan, MN

Aug. 20-22

2300 E Spruce St.  
Mitchell, SD

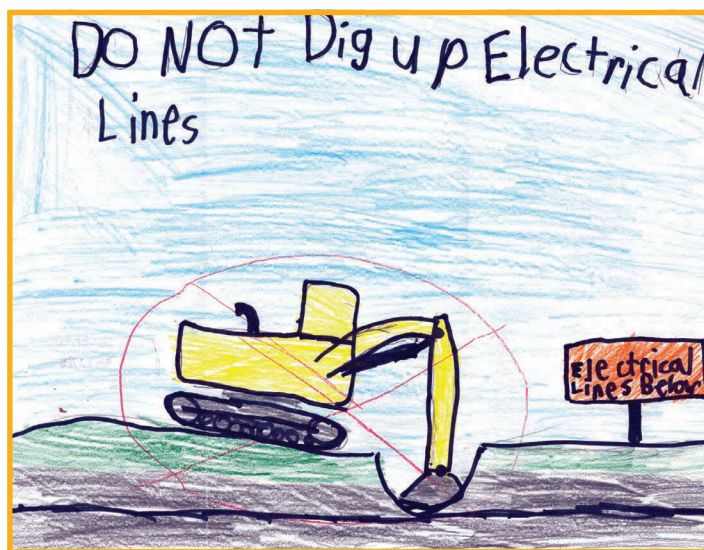
# DAKOTAFEST®



Aug. 29-Sept. 2  
1060 Third St. SW, Huron, SD

We'll see you there!

## KIDS CORNER SAFETY POSTER



**"Do not dig up electrical lines."**

**Luke Kangas, 9 years old**

Luke is the son of Andrew and Gail Kangas, Lake Norden, S.D.  
They are members of H-D Electric Cooperative, Clear Lake, 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.



# Very Vegetarian

## Southwest Brunch Casserole

- |  |                                     |
|--|-------------------------------------|
| 2 T. oil   | 1 cup shredded Monterey Jack cheese |
| 1 medium onion, chopped                                      | 6 eggs                              |
| 1 red bell pepper, chopped                                   | 2 cups milk                         |
| 1 (8 oz.) loaf Italian bread, cut into 1-inch cubes (5 cups) | 1 tsp. chili powder                 |
| 1 (15 oz.) can black beans, drained and rinsed               | 2 tsp. ground oregano               |
| 2 cups shredded Cheddar cheese                               | 1 tsp. ground cumin                 |
|  | 1 tsp. salt                         |

Heat oil in large skillet on medium heat. Add onion and bell pepper; cook and stir 3 minutes or until softened. Spread 1/2 of the bread cubes in 13x9-inch baking dish. Layer with 1/2 each of the onion mixture, beans, Cheddar cheese and Monterey Jack cheese. Repeat layers. Beat eggs in medium bowl until foamy. Add milk, chili powder, oregano, cumin and salt; beat until well blended. Pour evenly over top. Press bread cubes lightly into egg mixture until completely covered. Let stand 10 minutes. Bake at 350°F. for 40 to 50 minutes or until center is set and top is golden brown. Makes 12 servings.

*Nutritional Information Per Serving: Calories 275, Total Fat 15g, Sodium 633mg, Cholesterol 121mg, Carbohydrates 21g, Protein 14g, Fiber 3g*

**Pictured, Cooperative Connections**

## Black Bean Burgers

- |  |   |
|--|---|
| 3 (15 oz.) can black beans, rinsed and drained | 2 T. seeded, minced jalapeno pepper (or pepper of choice) |
| 1-3/4 cups diced onion                         | 3/4 tsp. salt   |
| 1-1/2 cups uncooked regular oats               | 2 large eggs, lightly beaten                              |
| 3/4 cup chopped fresh cilantro                 | 1/4 cup all-purpose flour                                 |
|  | 1/4 cup cornmeal  |

In a large bowl, coarsely mash beans with a fork. Add next 6 ingredients; stir well. Shape into 8 patties. Combine flour and cornmeal in a pie plate; stir well. Dredge patties in mixture. Cook patties in a small amount of oil over medium-high heat until lightly browned – about 5 minutes on each side.

**Darcy Bracken, Hermosa, SD**

## Baked Pineapple

- |  |                              |
|--|------------------------------|
| 1 cup sugar                                      | 2 cups grated Cheddar cheese |
| 6 T. flour                                       | 1 stick butter, melted       |
| 5 T. pineapple juice                             | 1/2 cup cornflake crumbs     |
| 2 cans pineapple tidbits, drain, reserving juice |                              |

Mix together sugar, flour and pineapple juice. Add pineapple and cheese. Place in a greased casserole dish. Combine butter and cornflake crumbs; sprinkle over all. Bake at 350°F. until brown and bubbly. Serve hot or cold.

**Verna Nelson, Wakonda, SD**

## Bean 'n' Butter Bread

- |                             |                          |
|-----------------------------|--------------------------|
| 1 (15 oz.) can kidney beans | 1 egg, beaten            |
| 1/3 vegetable oil           | 1 cup hot water          |
| 1/3 cup peanut butter       | 3 pkgs. yeast            |
| 1/3 cup molasses            | 4 cups all-purpose flour |
| 3 T. sugar                  | 1 cup whole wheat flour  |
| 1 tsp. salt                 | Egg white                |

Place first 7 ingredients in blender; blend until smooth. Pour into large mixing bowl. Stir in hot water. Combine yeast and 4 cups flour. Add to bean mixture, mixing well. Add wheat flour. Work in to form a stiff dough. Let rise 1-1/2 hours. Punch down and let rise 15 minutes. Shape into 2 loaves, placing on a greased cookie sheet. Mix egg white with 2 T. water for egg wash. Brush on loaves. Make 1/8-inch slash every 2-1/2 inches apart. Bake at 350°F. for 55 minutes. You may use crunchy peanut butter or add sunflower seeds.

**Anne Burlison, Lead, SD**

Please send your favorite garden produce, pasta and slow cooker recipes to your local electric cooperative (address found on Page 3).

Each recipe printed will be entered into a drawing for a prize in December 2019. All entries must include your name, mailing address, telephone number and cooperative name.



Steve Reed demonstrates the Burroughs B93 system in 1983.

## A Lasting Legacy: Part III

# TECHNOLOGICAL ADVANCES CHANGED THE GAME FOR WEST CENTRAL

**Tom Griffith**

Freelance Writer

Early on in his 40-plus-year career with West Central Electric Cooperative, Steve Reed learned that the only constant was change. And by adapting and employing advances in emerging technologies, Reed increased efficiencies, expanded services and reduced the number of employees needed to move the cooperative forward over four decades.

With 3,700 co-op members scattered across roughly 7,000 square miles of service territory, stretching from the Cheyenne River on the north to the White River on the south, and from Cactus Flats near Kadoka on the west to the Missouri River on the east, West Central Electric has encountered logistical challenges rarely faced by most private businesses.

West Central jumped into the computer craze early with the \$100,000 purchase of a Burroughs B93 system in 1983. Delivered to the cooperative's new Murdo headquarters by a



WCEC Board President Mike McQuiston, right, presents Steve Reed with an award marking Reed's 40 years with the co-op.

moving van, the massive computer server took up an entire room in the facility.

“My cell phone today can outperform that old Burroughs, but West Central has always been on the front edge of the technological revolution,” Reed said.

### Reorganizing outposts

In the 1950s, West Central essentially had four individual, autonomous cooperatives operating under its umbrella. After he became general manager in the fall of 1985, Reed quickly realized that the cooperative’s structure was inefficient and unsustainable.

“We needed to reorganize and provide a cohesive unit moving forward,” he explained. As a result, Reed promoted Dean Nelson to line superintendent in 1989, to oversee the reorganization.

In addition to Nelson, Steve remains thankful that they were able to complete the “management puzzle” by enlisting Joe Connot as member services director in 1990, and Jeff Birkeland as chief financial officer in 1994 to form an effective team on which he relied in making many decisions and recommendations to the board of directors.

While that team approach proved instrumental in efficiently managing the cooperative, Reed said it also has proven effective in developing a long-term succession plan for upper-level staff positions to provide continuity into the future.

“It is always sad when a person you have worked with for so long retires, but it is also exciting to watch the new

**My cell phone today can outperform that old Burroughs, but West Central has always been on the front edge of the technological revolution.**

people move in and develop in their new positions,” said Reed. “While I will not be here to watch Jeff grow into the CEO position, I am excited about what he will bring to the co-op, much the same as when Scott Kittleson assumed Dean’s position as manager of operations and Jessie Tucker moved into Joe Connot’s position of member services director. We were very proud to not only assemble the staff team we had, but also to have qualified candidates to replace valued members of our team as we move into the future,” Reed said. “Our hope has always been to set the cooperative up for the future by getting the right people in place to guide our organization. I believe that we have done that.”

That type of teamwork has been in evidence at West Central for many years. For instance, since its inception, linemen have been located at Kadoka, Midland, Murdo, Philip and Presho. Those same outposts each had their own communication systems, duplicating equipment five times over. One staffer at Murdo

was assigned to monitor all radio traffic, communications with linemen in the field were problematic and spouses in their personal residences were charged with answering radios. Those issues were resolved in 1990, a few years before cell phones came on the scene, when West Central converted from a low-band system to high-band, allowing linemen to speak directly to consumers and to staff at the cooperative’s main office in Murdo.

“It allowed us to communicate with our members, even in the middle of the night,” Reed said. “It allowed us to get the resources where they were needed, stay on top of an outage or storm situation and improve responsiveness to member needs.”

### Building a better system

Those improvements in the cooperative’s communications system came on the heels of major investments in the cooperative’s transmission lines and substations, which began in 1987, and extended through the 1990s. Working with Rushmore Electric, the addition of Schweitzer relays and a SCADA system allowed engineers and linemen to isolate outages via computer, make necessary switches to reroute power and quickly restore service, rather than waiting hours for a lineman to reach and manually trigger a switch.

“By isolating the section of line and using switches to reroute electricity, they could restore power in a matter of minutes,” Reed noted. “Prior to that, it could be overnight before power was restored and you might have a whole area out because you couldn’t get to the switch.

“The cost of the SCADA system was quite modest in hindsight and resulted in significant savings,” he added. “The costs

**continued on Page 10**





Central Electric's Prairie Solar project can be seen in front of the co-op's office along Betts Road west of Mitchell, S.D. On the Cover: Central Electric employees install the Prairie Solar project in 2015.

# BRIGHT LESSONS

## Co-op Solar Projects Help Educate, Inform

**Brenda Kleinjan**

[editor@sdrea.coop](mailto:editor@sdrea.coop)

Co-op members across the area are able to get firsthand information about solar energy straight from their electric cooperatives.

“There were a number of vendors in the region promoting various technologies. We wanted to provide accurate, real-time information to our members. Our role as a trusted energy expert made us want to educate ourselves on behalf of the members,” said Brian Jeremiason, manager of marketing and external relations at Lyon-Lincoln Electric Cooperative in Tyler, Minn.

So, in late December 2015, Lyon-Lincoln Electric installed its 8.4 kW AC solar system. The small project was designed to match a typical residential load for the southwestern Minnesota cooperative. The project consists of 28, 400 watt panels, each measuring 52.5 inches by 78 inches. The entire array measures 45.5 feet by 28 feet.

“It’s provided information about expected production versus actual production,” said Jeremiason, who noted that actual production for the system’s first three years has been “about 80 percent of what our vendor projected.”

Aside from a few inverters that failed within the system’s first two years, Jeremiason said the system has been mostly maintenance free.

An important lesson learned for the co-op was that companies in the industry tend to go out of business overnight.

“Overall, while the financial payback is long, it’s been a benefit to the cooperative members as an educational tool,” said Jeremiason.

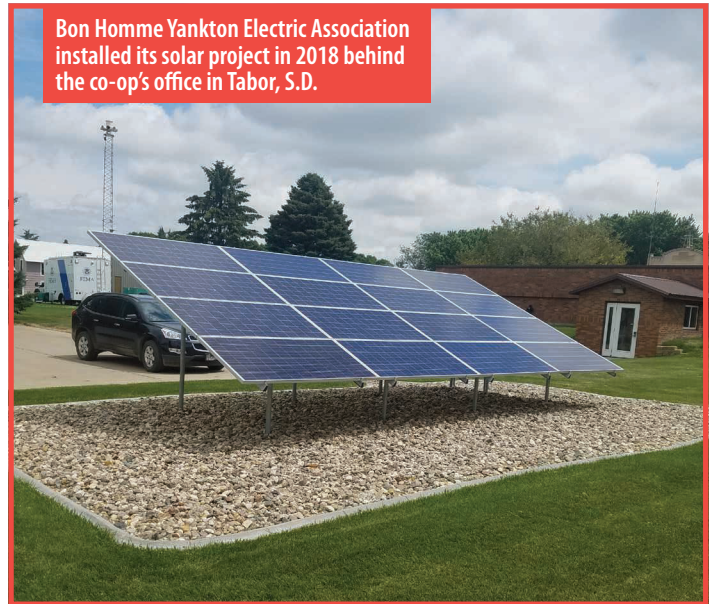


Photo by Bob Felber/Bon Homme-Yankton Electric

Central Electric Cooperative in Mitchell, S.D., also installed a solar project in 2015 to learn firsthand how to plan and construct such a project and also how well it would perform in the area around Mitchell.

Similar to Lyon-Lincoln’s experience, the vendor the co-op used went out of business shortly after installation.

Fortunately, there has been little maintenance or upkeep needed for the system.



“The solar industry is still in its infancy and experiencing growth and change,” said Central Electric General Manager Ken Schlimgen. “As a result, the names in the industry come and go and the solar equipment you see today will be obsolete in a few years.”

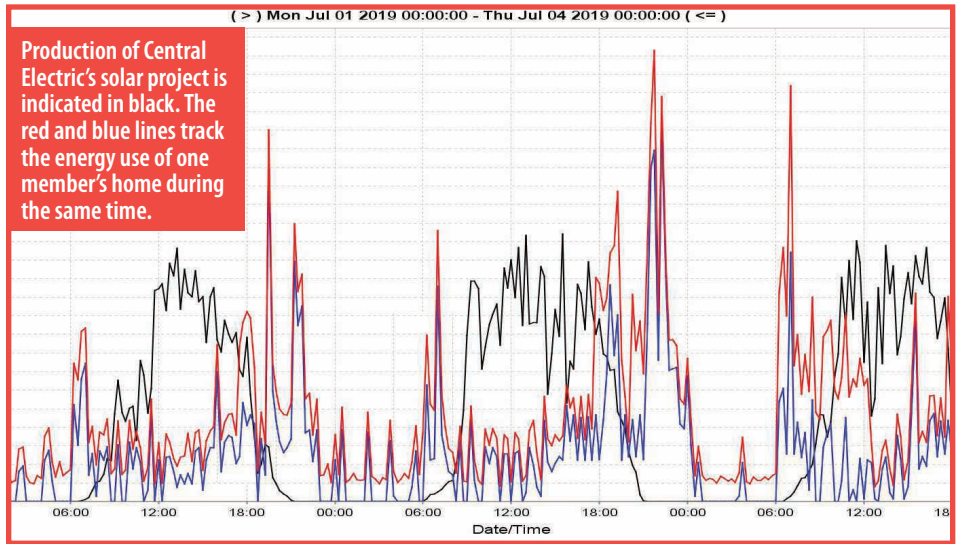
One lesson the co-op learned was to double check with building requirements in your county. The ground-mounted system they installed required a Davison County building permit.

A second lesson learned was the impact of cloud cover on the system.

“Any type of cloud cover reduces the kilowatt hour production of the system,” said Schlimgen.

“I believe the project has helped our employees better understand the equipment used in solar projects. We can also compare the production of our solar project and overlay that information onto a members actual consumption. This allows the member to better understand when a solar system would be offsetting their purchases and when they would still need to make purchases of electricity. Our solar project also helps to provide sizing information to members who are asking questions about installing solar,” said Schlimgen.

Central Electric’s Manager of Marketing and Member Services Patrick Soukup noted, “One of the biggest lessons that I had to learn is about time of use versus time of production. Once we overlaid the graphs together, it’s apparent how



solar works in our typical day and how important sizing the system to your needs would be.”

While the co-op invested more than \$32,000 in the system, the returns on the investment from an educational perspective have been worthwhile.

“The investment we had and the data collected is just priceless,” Soukup said.

Sioux Valley Energy in Colman, S.D., has the largest of the solar demonstration projects installed at its Brandon, S.D., service center. The cooperative constructed its 24.8-kilowatt project in April 2015 and had it operational by May 1 of that year. The project’s 80 panels were faced south, southwest and west, which allowed the co-op to examine how the orientations affected production.

“The output is very close to what was

planned. The difference in the output from facing the panels three different directions has allowed us to learn about which orientation will better match up with a member’s usage patterns. The project was fairly easy to assemble,” said Ted Smith, Sioux Valley Energy’s director of engineering and operations.

The entire array was installed for about \$3 per watt. In the project’s first four years, it produced 126,201 kilowatt hours, with a projected payback of 16 to 20 years. (The estimated life of the array is between 30 and 50 years.)

The new kid on the co-op solar block is Bon Homme Yankton Electric Association in Tabor, S.D, which installed its 5kw system in July 2018. The co-op publishes the project’s output each month in their magazine.



Photo by Brian Jeremiason/Lyon-Lincoln Electric

Photo by Central Electric



WCEC's line equipment in the 1960s.

### Continued from Page 7

in today's world were almost negligible and improved reliability dramatically.”

Over time, the upgrades also reduced the number of personnel required at West Central from a peak of 44 down to 31, improving efficiencies and reducing overhead costs.

In 1996, West Central embarked on its next major improvement project – replacing a self-read, self-bill system with installation of an automatic meter-reading system. Previously, rural members often had to check multiple meters, calculate usage, add tax and mail a check. Meters of in-town members had been read by contracted meter readers. The new system allowed co-op staff to read the meters remotely and send out a bill.

By 2008-2009, those “turtle” devices had been replaced by a TWACS system, which remotely read meters electronically in a matter of seconds, allowing West Central staff to monitor load management during peak periods and conduct disconnects and reconnects remotely, saving considerable man-hours, windshield time and money.

Over the past decade, in an effort to increase capacities, improve reliability and promote growth, West Central has been converting communities in its service territory from 2.4 kV to 14.4 kV lines.

“That process could be ongoing for years to come,” said Reed.

Under Reed's tenure, in 2013 West Central added an outage management system to its arsenal, allowing the co-op to pinpoint and isolate where an outage was occurring.

“It used to be we had 50 people calling 50 people to determine if they had power,” he said. “Now, that system allows us to assess that issue instantaneously and it's hard to imagine how much that has saved our members.”

### Overhead vs. underground

Always eager to embrace the newest technology that could improve reliability and reduce costs, West Central was one of the first cooperatives in the state to explore using buried cable to replace overhead lines. But, at the outset, the conversion didn't go over well.

“The old cable had a design-life of 40 years, but we'd be lucky to get 20 years out of it, with a loan of 35 years by the way,” Reed said. “But in the 1980s, a new jacketed cable was introduced and it has proven to be extremely reliable.”

Conversely, the quality of power poles purchased by the cooperative has suffered in recent years, with some performing more poorly than those installed by the co-op in the 1950s, according to Reed. To that end, in 2014, West Central set a goal to convert 30 miles of overhead lines to underground annually, a process that could take many years, he added.

### Better equipment

When Reed began his cooperative career as a lineman in the 1970s, he said everything relied on brute strength. But that, too, has changed.

“In the past, everything was done with physical strength,” he said. “If you were the strongest, you were the best. The problem was a lineman's body was shot by the time he got to 50 years old. Now, the equipment we have makes it easier, more efficient, safer and faster to get the job done.”

With communications upgrades, coupled with the addition of four-wheel-drive, bucket trucks, snowmobiles and UTVs, a lineman's job has become much more efficient, as well as safer.



Today's modern line equipment.

“It’s important to have the right equipment to do the right job at the right time,” Reed said. “It’s all about the safety of our employees and our goal is to have an accident-free workplace.”

And, West Central has hit the goal in striking fashion. Of all that he has helped the cooperative accomplish over the past 40 years, Reed is most proud that West Central once got to 1 million man-hours without a lost-time accident. Do the math and that’s more than 13 years.

## Adapting to change

Adapting to changes over time and employing the latest technologies has allowed West Central Electric Cooperative to position itself for growth and take advantage of major projects that have improved life for residents of west-central South Dakota, while amping up the cooperative’s load.

The multi-million-dollar Grassrope Irrigation Project, many years in the making and completed in 1986, brought water from the Missouri River to the Lower Brule Sioux Tribe. In negotiating the project on behalf of West Central, Reed made 100 trips to Washington, D.C., meeting with federal agencies, stakeholders and congressional delegations. The associated power load brought a stable source of revenue to the cooperative and has proven a profitable venture for the tribe, Reed noted.

While the Mni Wiconi Rural Water Project took a decade to complete, when West Central eventually signed the contract for the project in 2001, it brought quality drinking water to western South Dakota, including to members of the Rosebud Sioux and the Lower Brule Sioux tribes. In supplying electricity to the system’s treatment plant and large pumping sites, Mni Wiconi also became West Central’s largest single customer.

And, some major projects have taken even longer to get off the ground. TransCanada’s Keystone XL Pipeline has been on Reed’s plate since 2008, with the potential to result in \$30 million in infrastructure improvements for West Central, a tripling of its revenues and millions in tax revenues for the counties, communities and school districts the cooperative serves.

“I never in my wildest dreams thought we’d be discussing whether this project would be started or finished at the time of my retirement,” Reed said recently.

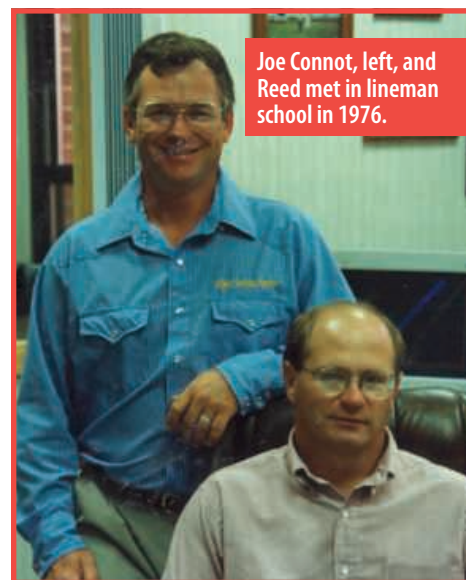
From the deactivation of the Minuteman missile silos in the early 1990s, to the addition of significant power loads over the past two decades, West Central has adapted to change.

To better serve its members, West Central was the first cooperative in South Dakota to bring internet and cable television to some of the most rural regions of the state. Both operations were later sold to Golden West Technologies.

In that same period, technologies that are commonplace today, including

cell phones and iPads, have allowed instantaneous communications between West Central employees and members, access to virtually unlimited data and maps for linemen, and significant reductions in reams of paper, books and binders.

Joe Connot, who met Steve in August of 1976 as they entered line school together, said Reed’s legacy at West Central Electric may well be his willingness to adapt to change and enlist new technologies that saved money and improved service to co-op members. Joe started working for West Central in 1978 and they renewed their friendship that has been going strong ever since.



“This is an industry that’s not well-known for embracing change,” Connot said. “But Steve Reed was always about keeping the cooperative on the cutting edge of technology. He was always forward-thinking, was never afraid of trying something new and always considered how technology could make us a better cooperative. In my mind, that’s not just about being a better boss. That’s about being a leader.”

**Editor’s Note:** *This is the third of a four-part series about West Central Electric Cooperative General Manager and CEO Steve Reed, who began work with the cooperative straight out of lineman’s school in 1977 and never left. Up next: In Part IV, the final in this series, we’ll explore what others say about the legacy of West Central Electric’s Steve Reed as we say farewell and wish the man a wonderful retirement.*



# Ethanol in South Dakota

Courtney Deinert

cdeinert@centralec.coop

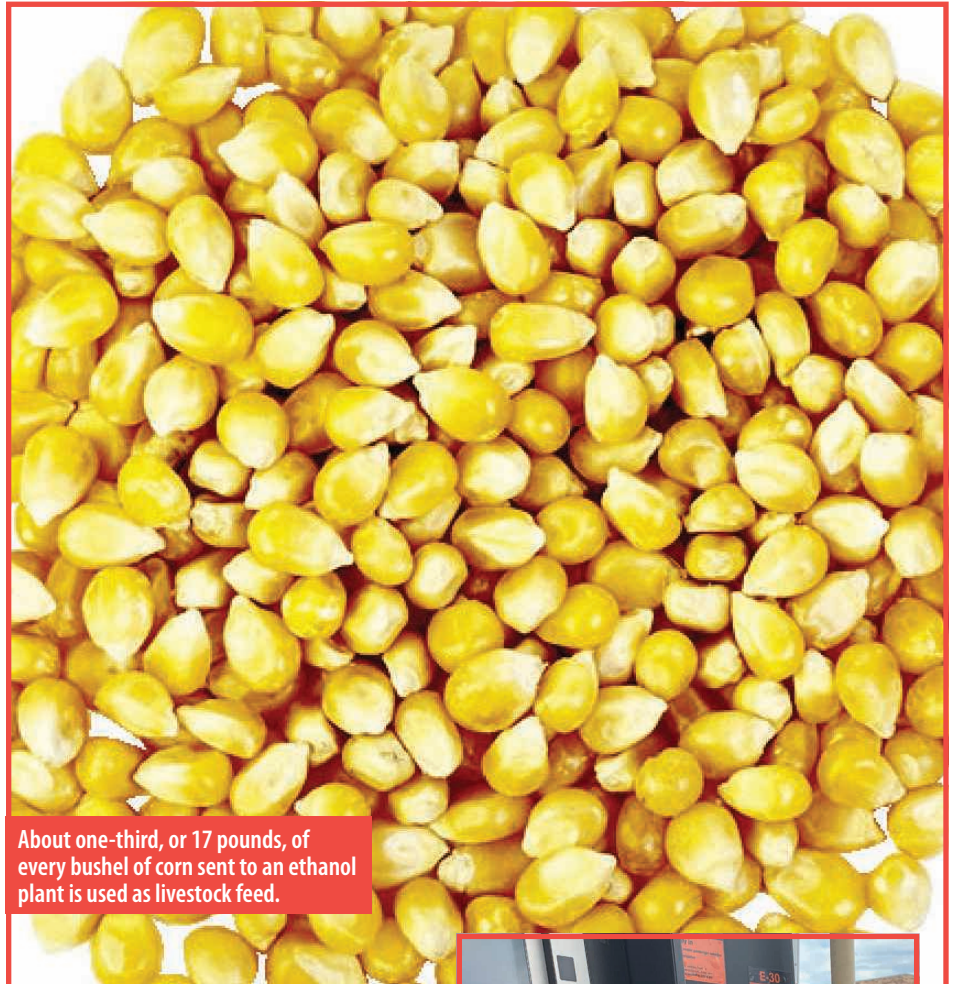
**Ethanol production continues to increase with a new large facility added every other year or so.**

The ethanol industry in South Dakota began a little more than 30 years ago when Jeff Broin and his family purchased a foreclosed ethanol plant in 1988 near Scotland, S.D.

The Broin family had been distilling ethanol as a way to make a little extra money on the farm after the 1970s, when corn production cost more than producers could sell it for. By purchasing the plant, the family had an opportunity to expand their process. This initial plant near Scotland became the pilot for POET Biorefining and is currently one of 15 operating plants in the state.

Last year, South Dakota ranked 6th nationally in ethanol production capacity and provided 7 percent of the nation's total ethanol production.

Rural South Dakotans know that in addition to providing an alternative fuel source, ethanol provides an additional market for corn producers. From 2002 to 2012, gross corn use for ethanol production increased from less than 10 percent to more than 40 percent (and the production process does kick back distiller grain to alleviate the need for corn and soybean meal for livestock). The same study claims for every 10 percent increase in ethanol production (or 1 billion gallons), average



About one-third, or 17 pounds, of every bushel of corn sent to an ethanol plant is used as livestock feed.

long-run corn prices increase by 2 percent to 3 percent (based on production from 2008-2013).

## Impact on Electric Cooperatives

Ethanol has also impacted local electric cooperatives. East River Electric Power Cooperative, a generation and transmission cooperative headquartered in Madison, S.D., includes a number of ethanol plants located within its system, and more than 11 percent of East River kilowatt hour (kWh) sales go to large ethanol production plants.

“Ethanol production continues to increase – with a new large facility added every other year or so over the last 15 years,” says Michael Volker, manager of rates and treasury at East



Blender pumps at South Dakota gas stations offer drivers a variety of choices of ethanol blends.

## Ethanol Plants in South Dakota

| Company                           | City           | Production Capacity MGY<br>(million gallons/year) | Operating Production | Under Expansion MGY<br>(million gallons/year) |
|-----------------------------------|----------------|---|----------------------|---|
| ABE South Dakota LLC              | Aberdeen       | 53  | 53                   |   |
| ABE South Dakota LLC              | Huron          | 32  | 32                   |   |
| Dakota Ethanol LLC                | Wentworth      | 48  | 48                   |   |
| Glacial Lakes Energy LLC          | Mina           | 100   | 100                  |   |
| Glacial Lakes Energy LLC          | Watertown      | 120   | 120                  |   |
| NuGen Energy LLC                  | Marion         | 130   | 130                  |   |
| POET Biorefining – Big Stone LLC  | Big Stone City | 79  | 79                   |   |
| POET Biorefining – Chancellor LLC | Chancellor     | 110   | 110                  |   |
| POET Biorefining – Groton LLC     | Groton         | 53  | 53                   |   |
| POET Biorefining – Hudson LLC     | Hudson         | 56  | 56                   |   |
| POET Biorefining – Mitchell LLC   | Mitchell       | 68  | 68                   |   |
| POET Research Center              | Scotland       | 11  | 11                   |   |
| Red River Energy LLC              | Rosholt        | 25  | 25                   |   |
| Redfield Energy LLC               | Redfield       | 60  | 60                   |   |
| Ringneck Energy & Feed LLC        | Onida          | -   | -                    | 80  |
| Valero Renewable Fuels Co. LLC    | Aurora         | 135   | 135                  |   |

River. Currently, there are new plants being constructed near Onida and Yankton, S.D.

The plants specifically served by East River and its member cooperatives can produce more than 500 million gallons of ethanol per year and consume approximately 200 million bushels of locally grown corn.

### Flex Fuels

South Dakota is a national leader in its use of ethanol in the state vehicle fleet. In 2017, South Dakota ranked third nationally in the gallons of E85 consumed by state fleet (behind No. 1 Texas and No. 2 Maryland).

Of the state fleet, approximately 65 percent use a blend of ethanol, from E15 to E85. In early 2019, Gov. Kristi Noem announced her intent to transition the state fleet to E30.

For the public, there are 87 stations in South Dakota that offer E85 (ethanol-gasoline blends containing 51 percent to 83 percent ethanol). Of the stations, 41 include some mid-level blend such as E15 or E30.

While E85 can only be used in flex fuel vehicles (FFVs), the EPA approved the use of E15 (gasoline blended with up to 15 percent ethanol) in model year 2001 and newer cars, light-duty trucks, medium-duty passenger vehicles (SUVs) and all FFVs. This includes approximately nine out of 10 of the vehicles on the road today.

On May 31, 2019, the EPA signed into action the rule allowing E15 to be sold

year-round, including the summer months and peak driving season, rather than eight months out of the year.

“For the ethanol industry and farmers, this means greater market access – more ethanol demand over the long term as additional retailers begin offering E15,” Brian Jennings, CEO of the American Coalition for Ethanol, responded after the EPA announcement.

Consumers will also see E15 marketed as “Unleaded 88” at the gas pumps.

**For the ethanol industry and farmers, this means greater market access – more ethanol demand over the long term as additional retailers begin offering E15.**

### Byproducts

According to ACE, about one third, or 17 pounds, of every bushel of corn sent to an ethanol plant is used as livestock feed. The kernels of corn are made of starch, protein and fiber. The protein stays in the food supply in the form of a high-quality feed called DDGS (Dry Distillers Grains with Solubles.) The concentrated corn protein is a high-value feed product for cattle, hogs and poultry. The ethanol production process uses only the corn’s starch (carbohydrates.)

# Know what's below Call **811** before you dig.



## AUGUST 11

Date Reminds Everyone to Call Before You Dig

**Brenda Kleinjan**

[editor@sdrea.coop](mailto:editor@sdrea.coop)

Three simple numbers on the phone – 8-1-1 – or a few keystrokes on a computer to [www.SD811.com](http://www.SD811.com) can potentially save your life – or your wallet - if you're planning any digging project.

The call, or click, takes you to the 811 One Call locate program to determine if any underground utilities are in close proximity to your project. Not only is it a good idea, it's also the law.

"You've got the dangerous ones – digging into power or gas can be quite dangerous," said Larry Janes, executive director of the South Dakota 8-1-1, explaining the importance of always calling before one digs.

"Then fiber can be expensive if you cut a fiber line," said Janes. He also noted that one should never look into the ends of a fiber line as the laser going through the fiber can burn one's retina.

Each year, 150,000 locates are requested in South Dakota, which result in more than 800,000 locates being done.

Janes said that each locate request typically

## Half of All Damages Occur in Summer

50 percent of reported damages occurred between June and September in 2017.



2017 DIRT Report • [CommonGroundAlliance.com/DIRT](http://CommonGroundAlliance.com/DIRT)

will generate locates for water, electrical and natural gas. Add in communications, and other facilities, and the number of locates generated by just one request expands.

“I’ve seen as many as 14 utilities on one locate ticket in Sioux Falls,” Janes said.

However, Janes notes, not all facilities are located.

“Only those utilities that are registered are located,” he said, noting that services entering the public right-of-way should be registered. However, sometimes private agriculture services such as drain tile aren’t always registered (but should be.)

Registering the facilities is also a good financial idea.

“If it’s not registered, then the digger isn’t liable,” said Janes.

Private home owners’ lines – whether electrical from the meter to buildings or propane lines or even water between the water meter and the buildings - are not located by the One Call ticket. Home-owners are responsible for getting those lines marked.

When planning a digging project, the request for a locate needs to be made at least two business before the digging is planned to be started. So, a project to start on a Monday morning would need to be called in by Wednesday night.

More than 60 percent of all locate requests are done online at [www.811.com](http://www.811.com), Janes said.

Once the locates are done, those digging need to hand-dig in the area 18 inches (in Minnesota the distance is 24 inches) from the mark.

“The tolerance zone is there to protect the person doing the work,” Janes said

“If they’re working anywhere near markers on the ground, they should hand dig over those marks to expose those facilities.

While all instances of digging need to be called in for a locate, there are some that are more worrisome for Janes.

“If someone’s putting in a culvert or drain tile that can go five to six feet deep – that really worries me. It would be very easy to get into something,” Janes said.

**EVERY DIG COUNTS!**

**Fewer than half of Americans believe they need to call 811 before simple projects like:**

- Installing deck or patio
- Planting trees, bushes and shrubs
- Installing a mailbox

2018 CGA Awareness Research

CommonGroundAlliance.com

One misconception he’s encountered is that people will see markers in road ditches indicating that water lines or gas pipelines are in the area.

“Don’t rely on eyeballing those markers,” Janes said. “They are not locates – they’re just saying that something is in the general vicinity.”

Even smaller jobs need to be located.

“I’ll get calls in the spring from homeowners wanting to put in a garden wondering if they need to call for a locate. I say it’s a good idea to call. It’s free to the homeowner to have the locate,” Janes said.

“Its always better to be safe rather than wishing it had been done,” said Janes.

The bottom line is pretty clear-cut for Janes: “Be safe. Know what’s below and call before you dig.”

**UNIFORM COLOR CODE**  
FOR MARKING UNDERGROUND UTILITY LINES

|  |   |
|--|---|
|  | PROPOSED EXCAVATION                                       |
|  | ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES |
|  | GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS           |
|  | COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT   |
|  | POTABLE WATER   |
|  | RECLAIMED WATER, IRRIGATION AND SLURRY LINES              |
|  | SEWERS AND DRAIN LINES                                    |
|  | TEMPORARY SURVEY MARKINGS                                 |

**CALL BEFORE YOU DIG!**

**Saturdays, May 4-Oct. 26**

Capital City Farmers' Market, 9 a.m. to noon, Free parking lot on the corner of Sioux Ave and Coteau Street, Pierre, SD, 605-222-1290  
www.capcitymarket.com

**Thursdays, June 6-Aug. 22**

Tales on the River, Moose Club, 7 p.m, Free program, Speaker schedule at www.shortgrassarts.org, Fort Pierre, SD

**Tuesdays, July 16-Aug. 13**

Farmers' Market, 5 to 7:30 p.m., Deadwood Street, Fort Pierre, SD, 605-222-1290, www.capcitymarket.com

**July 19-20**

Gumbo Ridge Bronc Ride and Ranch Rodeo, Murdo, SD, 605-669-3031

**July 26-27**

Rock-N-Rumble Motorcycle Rally, Yankton, SD, 605-665-3636

**July 26-27**

Senior Games, Brookings, SD, Contact Traci Saugstad at 605-692-4492

**July 26-28**

Annual Bruce Honey Days, Bruce, SD, 605-627-5671

**July 27**

Folk Off & Rib Challenge, Renner, SD, 605-543-5071

**July 27**

Miner Music Festival, Hill City, SD, 605-574-2886

**July 27**

South Dakota Chislic Festival, Freeman, SD, 605-925-4444

**August 2-4**

Sioux River Folk Festival, Canton, SD, 605-261-7414



**August 16-18: Black Hills Threshing Bee, Sturgis SD, 605-490-2024**

Photo courtesy: travelsouthdakota.com

**August 2-10**

Sioux Empire Fair, Sioux Falls, SD, 605-367-7178

**August 2-11**

Sturgis Motorcycle Rally, Sturgis, SD, 605-720-0800

**August 3**

Foothills Classic Car & Tractor Show, Wessington Springs, SD, 605-539-1805

**August 3-4**

Senior Games, Yankton, SD, Contact Brittany Orr at 605-668-5234

**August 9-10**

Senior Games, Huron, SD, Contact LaRon Clock at 605-353-8533 or Howard Bich at 605-491-0635

**August 9-10**

Senior Softball Tournament, Huron, SD, Contact Scott Mckaskell at 605-354-2237

**August 10-11**

Threshing Show, Twin Brooks, SD, 605-432-9487

**August 12-18**

Brown County Fair, Aberdeen SD, 605-626-7116

**August 16-18**

Riverboat Days, Yankton, SD, 605-665-1657

**August 16-19**

Trader Days and Backyard BBQ Competition, Fort Pierre, SD, 605-295-4831 or 605-280-2737

**August 16-25**

Central States Fair & Rodeo, Rapid City, SD, 605-355-3861

**August 17**

American Island Days, American Creek Campground, Chamberlain, SD, Contact Donna at 605-680-1202

**August 17**

65th Anniversary Celebration of Pioneer Auto Museum, Murdo, SD, Contact us at pioneerauto@gwtc.net www.pioneerautoshow.com

**September 13-15**

Eighth Annual Dakota Western Heritage Festival, Fort Pierre, SD, 605-222-0079 or 605-280-8938

**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.**