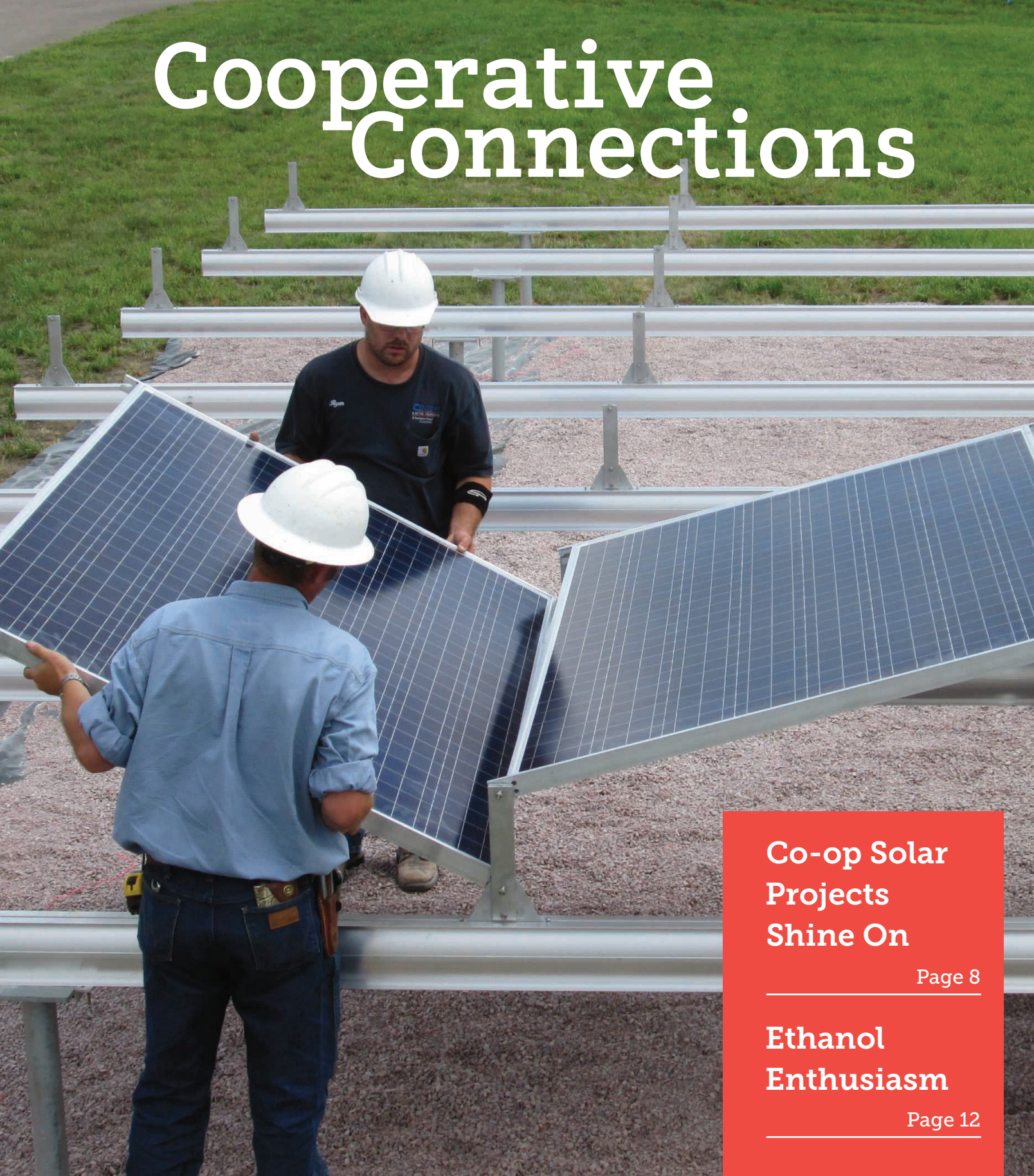


## Cooperative Connections



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**Ethanol  
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Tough  
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reliable  
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Black Hills Electric, Custer, S.D.  
BonHommeYanktonElectric, Tabor, S.D.  
Butte Electric, Newell, S.D.  
Cam Wal Electric, Selby, S.D.  
Central Electric, Mitchell, S.D.  
Charles Mix Electric, Lake Andes, S.D.  
Cherry-Todd Electric, Mission, S.D.  
Clay-Union Electric, Vermillion, S.D.  
Codington-Clark Electric,  
Watertown, S.D.  
Dakota Energy, Huron, S.D.  
Douglas Electric, Armour, S.D.  
East River Electric, Madison, S.D.  
FEM Electric, Ipswich, S.D.  
Grand Electric, Bison, S.D.  
H-D Electric, Clear Lake, S.D.  
Kingsbury Electric, De Smet, S.D.  
Lacreek Electric, Martin, S.D.  
Lake Region Electric, Webster, S.D.  
Lyon-Lincoln Electric, Tyler, Minn.  
Moreau-GrandElectric, TimberLake, S.D.  
Northern Electric, Bath, S.D.  
Oahe Electric, Blunt, S.D.  
Renville-Sibley Co-op Power,  
Danube, Minn.  
Rosebud Electric, Gregory, S.D.  
Rushmore Electric, Rapid City, S.D.  
Sioux Valley Energy, Colman, S.D.  
Southeastern Electric, Marion, S.D.  
Traverse Electric, Wheaton, Minn.  
Union County Electric, Elk Point, S.D.  
West Central Electric, Murdo, S.D.  
West River Electric, Wall, S.D.  
Whetstone Valley Electric, Milbank, S.D.  
City of Elk Point, S.D.

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**Brenda Kleinjan**, Editor  
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Staff Communications Professional

## EDITORIAL

# Electric Co-ops Are Engines of Economic Development



**Dan Riedlinger**

NRECA

South Dakota's electric cooperatives are deeply committed to providing affordable and reliable electricity to our consumer-members and empowering the communities that we serve. This means being more than just an electricity provider; it means being a partner in economic development and other activities that improve the lives of our members.

But have you ever stopped to wonder what kind of an impact the nation's roughly 900 electric co-ops have across the United States?

A new report on this very topic shows that electric co-ops supported nearly 612,000 American jobs and contributed \$440 billion in U.S. GDP from 2013 to 2017, or \$88 billion annually. Those are some big numbers.

The study, "The Economic Impact of America's Electric Cooperatives," was conducted by FTI Consulting for the National Rural Electric Cooperative Association and the National Rural Utilities Cooperative Finance Corporation.

The report quantifies what many rural American families and businesses know well – electric cooperatives are powerful engines of economic development in their local communities. Affordable and reliable electricity is a key ingredient for a successful economy. Because electric co-ops were built by, belong to and are rooted in the communities they serve, they play a vibrant role as economic cornerstones for millions of American families, businesses and workers.

Access to electricity was a vital component of economic development and diversification in the mid-20th century and that remains true today. Roughly one in eight residents nationwide are served by an electric co-op, meaning direct co-op employment and investments can ripple throughout the economy and create additional economic value for local communities, regions and the country.

From 2013 to 2017, electric co-ops contributed \$881 billion in U.S. sales output, \$200 billion in labor income and \$112 billion in federal, state and local tax revenues.

Nationally, electric co-ops spent \$359 billion on goods and services across the economy, including \$274 billion on operational expenditures, \$60 billion on capital investments, \$20 billion on maintenance and \$5 billion on credits retired and paid in cash to members under the membership structure of cooperatives.

In conducting its analysis, FTI Consulting used data from 815 distribution cooperatives and 57 generation and transmission cooperatives as inputs into a national model to simulate the economic effects from the direct expenditures by co-ops. The model also calculates the indirect effects throughout the industrial supply chain and the induced effects from consumer spending by the employees of co-ops and their suppliers.

The result of all this effort is a first-of-its-kind study that reveals electric cooperatives to be economic anchors all across rural America. And it demonstrates on a macroeconomic scale one of the seven guiding cooperative principles: Concern for Community.



# 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

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Morgan, MN

**Aug. 20-22**

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Mitchell, SD

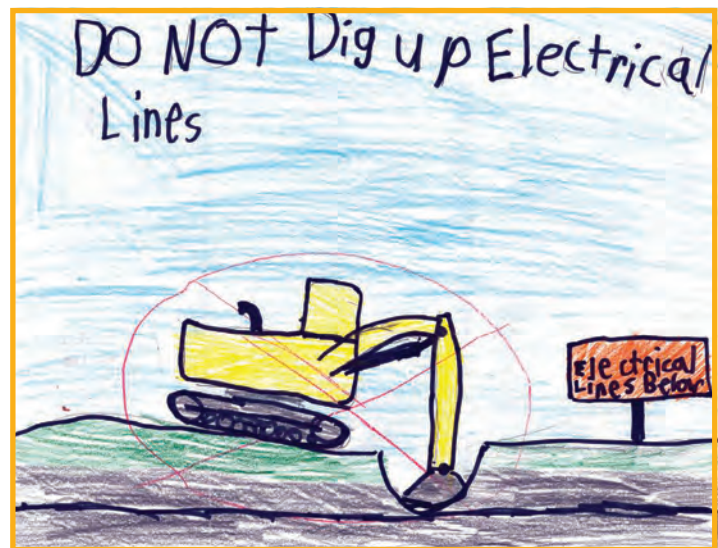
**DAKOTAFEST®**



**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 Burleson, 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.



# Power Up!

## Four Steps to Charging Your EV at Home



**Pat Keegan**

Collaborative Efficiency

**You should talk to your electric co-op before making your EV charging decision.**

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

**Dear Pat and Brad:** I'm seeing more information about new models of electric vehicles with longer ranges and better prices. Is it worth making the switch from gasoline to electric? And how would I charge the battery at home? – Damien

**Dear Damien:** You're right! Electric vehicles (EVs) are getting more attention these days. Electricity as a vehicle fuel is typically one-half to one-third the cost of gas or diesel and EV batteries now enable longer ranges. The upfront price of an EV is still higher than its gas-powered cousin, but the cost is coming down.

The Chevy Bolt, for example, has a range of up to 238 miles on a full charge and costs about \$36,000 before incentives. The number of models is also increasing and we could even have an electric pickup truck option in the near future.

It's important to note you may have to pay upfront costs to charge your EV at home, but it depends on which charging option you select. Let's take a look at the important steps.

### Step No. 1: Choose your EV.

There are two basic types of EVs: the all-electric vehicle, which is commonly referred to as an AEV or EV and the plug-in hybrid electric vehicle, also known as the PHEV, which can run using an electric motor or a gas engine. Unlike the gas/electric hybrid that started with the Toyota Prius in 2000, where the battery assists the gasoline engine, yet the car is fueled solely by gasoline, the PHEV features a larger battery that fuels an electric motor, which can power the car independently. A PHEV can run solely on electricity for about 15 to 50 miles depending on the model. This electric-only range may be sufficient for running errands or for those with a shorter daily commute.

### Step No. 2: Select your charging level.

There are two levels of charging to consider for your home. A Level 1 charging unit is the most basic. It's usually included with the vehicle and plugs into a typical 120-volt outlet, so it is the easiest and cheapest charging solution.

A Level 2 charging unit is more powerful and needs to be purchased separately. It plugs into a 240-volt outlet, the type used for larger appliances (like a clothes dryer), which most of us don't have in our garages or outside our homes, so there's an additional cost to have the outlet installed.

### Step No. 3: Know your needs.

Most EVs travel 3 to 4 miles per kilowatt-hour (kWh). Level 1 charging units distribute charge to the battery at 1 to 2 kWh, giving the battery roughly 3 to 8 miles range per hour of charging. So, if you drive your car 40 miles or less during the day and can charge it for 10 hours a night, this will probably be adequate. Level 1 charging makes the most sense for PHEVs and early EVs with smaller batteries and shorter ranges.

Level 2 units typically supply power levels from 6 to 12 kWh, depending on the amperage of the circuit and the power level the EV can accept. This means the Level 2 chargers will provide between 18 and 48 miles of range per hour of charging.

### Step No. 4: Count the costs.

A Level 1 charging unit comes with the car and will meet the needs of most PHEVs and early-model, short-range EVs. A Level 2 charging unit can cost \$500 to \$700, with installation between \$500 and \$2,700 depending on how far your electrical panel is from where you will be charging the EV.

Now that you know the basic options, you should talk to your electric co-op before making your EV charging decision. Many electric co-ops offer special incentives for members installing Level 2 chargers or members willing to schedule EV charging during non-peak energy hours. Give them a call to learn more!

## Interim Study Group to Meet

The South Dakota Legislative Interim Committee formed to “Study Issues Related to Electric Services in an Annexed Area” scheduled the first of its four meetings for 10 a.m. July 25 in Pierre, S.D.

The committee is chaired by Sen. Alan Solano, R-Rapid City, and the vice chairman is Rep. Thomas Brunner, R-Nisland. Other committee members include Rep. Shawn Bordeaux, D-Mission; Rep. Kirk Chaffee, R-White-wood; Rep. Spencer Gosch, R-Glenham; Rep. Tim Reed, R-Brookings; Sen. Lee Schoenbeck, R-Watertown; Sen. Susan Wismer, D-Britton; and Sen. Jordan Youngberg, R-Madison.

The study was created as a result of Senate Bill 66 passed by the 2019 Legislature.

SB66 outlined that the Legislative Interim Committee shall study and evaluate:

- 1) The option of a municipal electric utility to provide electric service in an annexed area and associated processes;
- 2) Economic development practices of electric utilities as it relates to subdivision (1);
- 3) The history of assigned service territories;
- 4) The process by which electric utilities set rates.



Participants at the 2019 Lignite Energy Council's Teacher Seminar walk on the catwalk of a dragline boom. The booms extend the length of a football field.

## School's in for Summer

Dozens of teachers from the upper Great Plains attended the 2019 Lignite Energy Council (LEC) Teacher Seminar, “Energy, Economics and Environment,” at the Bismarck State College in Bismarck, N.D., June 10-13, 2019. This seminar will provide teachers with the information and educational materials they need to teach their students about how lignite is mined and used to produce electricity for homes, farms and businesses in the Upper Midwest. In addition, the seminar covered lignite's economic impact on the region, as well as important environmental issues affecting the lignite industry.

The seminar targets three main areas of educators: Fourth through 12th-grade teachers; science, math or social studies teachers and career counselors

In 2019, 17 South Dakota teachers attended the seminar, bringing back lesson plans and firsthand experience to their schools.

Teacher	School, Town
Tandy Reilley	Bowdle School District, Bowdle, SD
Carolyn Ebright	Brandon Valley High School, Brandon, SD
Carol Helms	Camp Crook School Camp, Crook, SD
Wanda Ellefson	Self, Chelsea, SD
Tammi Tate	Colome Consolidated School, Colome, SD
Brian Jorgensen	Corsica Stickney High School, Corsica, SD
Amy Bochman	Windswept Academy, Eagle Butte, SD
Francie Ingerson	Eureka Public School District 44-1, Eureka, SD
Brian Ingerson	Eureka Public School District 44-1, Eureka, SD
Karen Mettler	Eureka Public School District 44-1, Eureka, SD
Steve Volk	Herreid School District, Herreid, SD
Kelly Froning	OAHE Special Education Cooperative, Java, SD
Wendi Hatlewick	Leola Public School District, Leola, SD
Anita Malsam	Leola Public School District, Leola, SD
Heather Collins	Lower Brule Middle/High Schools, Lower Brule, SD
Emily Ver Burg	Oldham-Ramona School, Ramona, SD
Joe Brooks	White River High School, White River, SD





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

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.

Bon Homme Yankton Electric Association installed its solar project in 2018 behind the co-op's office in Tabor, S.D.



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."

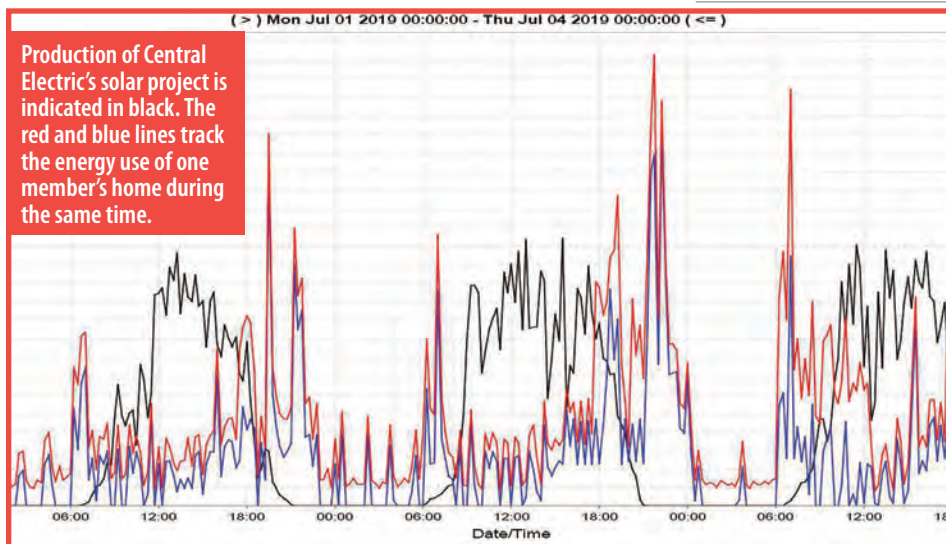
One lesson the co-op learned was to double check with building requirements in your county. The ground-mounted system they installed required a Davison County building permit.

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.







With the U.S. Capitol in the background, several Youth Tour students pose for a photo on the terrace at the Newseum.

# FLAGS, FREEDOM AND CO-OPS

## Rural Electric Youth Tour Heads to Washington, D.C.

**Jocelyn Romey**

[jocelyn.romey@sdrea.coop](mailto:jocelyn.romey@sdrea.coop)

Thirty-eight teens representing 20 South Dakota electric cooperatives headed to the Washington, D.C., area June 14-20 for the 2019 Rural Electric Youth Tour.

The program, which can trace its existence back to a 1957 speech by Lyndon B. Johnson where he encouraged electric cooperatives to send youth to the nation's capitol so they “can actually see what the flag stands for and represents,” encourages teens to engage in their communities and learn about the importance of political involvement. More than 1,300 teens have represented the Rushmore State since South Dakota sent its first group in 1963.

The 2019 group visited many of the historic sites the region has to offer, including a Flag Day stop at Baltimore's Fort McHenry. The fort's bombardment in the War of 1812 was captured in Francis Scott Key's poem, which would eventually become the National Anthem. Old Glory would play a recurring theme in the trip as students could see it at the Smithsonian's National Museum of American History and also hear an inspirational message centered on the flag from Youth Day keynote speaker Mike Schlappi, a four-time Paralympic medalist in U.S.A. men's wheelchair basketball.

Students also met with the state's congressional delegation and with Youth Tour participants from across the country.

“This trip was an amazing experience. It was mind-blowing to me that we got to see and learn so much about American history. It is an experience that I will never forget,” said Ella Hand, who represented West Central Electric Cooperative on the trip.



Sen. John Thune, R-S.D., met with the students on the Senate steps.





Sen. Mike Rounds, R-S.D., posed for a photo with the group.



Rep. Dusty Johnson, R-S.D., took the students on a private tour of the U.S. Capitol.



A visit to a display on voting rights at the National Archives provoked thought.



Pin and sticker trading fosters interaction among teens from different states.



Students pose for a photo with one of the guns at Fort McHenry.

## Participants

Bon Homme Yankton Electric Association, <i>Tabor</i>	
Mason Ruzicka	Yankton
Butte Electric Cooperative, <i>Newell</i>	
Ciarra Schoon	Spearfish
Central Electric Cooperative, <i>Mitchell</i>	
Grace DuVall	Pukwana
Brendin LaBore	Wessington Springs
Ben Laufman	Mitchell
Grace Lentz	Fulton
Megan Linke	Woonsocket
Chloe Munsen	White Lake
Charles Mix Electric Association, <i>Lake Andes</i>	
Ciara Nelson	Lake Andes
Sadie Rasmussen	Platte
Clay-Union Electric Corporation, <i>Vermillion</i>	
Libby Gregg	Vermillion
Codington-Clark Electric Cooperative, <i>Waterloo</i>	
Sadie Streff	Clark
Dakota Energy Cooperative, <i>Huron</i>	
Lizzi Brandt	Wolsey
Kali Ford	Miller
Mark Hamilton	Wessington
Erin Moncur	Miller
Douglas Electric Cooperative, <i>Armour</i>	
Tess Ringling	Platte
Phyllis & Gary Hrdlicka	Armour
FEM Electric Association, <i>Ipswich</i>	
Grace Beyers	Roscoe
Hunter Heinrich	Eureka
Alexa Rossman	Mina
Grand Electric Cooperative, <i>Bison</i>	
Summer Hulse	Buffalo
Roni Voller	Bison
H-D Electric Cooperative, <i>Clear Lake</i>	
Sarah Ronne	Clear Lake
Lacreek Electric Association, <i>Martin</i>	
Weston Ireland	Martin
Lake Region Electric Association, <i>Webster</i>	
Hanna Miller	Claremont
Moreau-Grand Electric Cooperative, <i>Timber Lake</i>	
Miranda Hulm	Trail City
Northern Electric Cooperative, <i>Bath</i>	
Aryan "Vishnu" Jamal	Mina
Oahe Electric Cooperative, <i>Blunt</i>	
Hailey Switzer	Pierre
Sioux Valley Energy, <i>Colman</i>	
Austen King	Volga
Southeastern Electric Cooperative, <i>Marion</i>	
Jacobi Krouse	Montrose
Charles & Michelle Fink	Marion
West Central Electric Cooperative, <i>Murdo</i>	
Ella Hand	Midland
Dylan Iwan	Murdo
Lilli Moore	Murdo
Bryce Muirhead	Presho
Josie Rush	Philip
West River Electric Association, <i>Wall</i>	
Gavin Sandal	Quinn
Sydney Shaw	White Owl
Whetstone Valley Electric Cooperative, <i>Milbank</i>	
Makenna Osowski	Milbank
South Dakota Rural Electric Association, <i>Pierre</i>	
Brenda Kleinjan	Pierre
Jocelyn Romey	Pierre

*Chaperones listed in italics.*



# Ethanol in South Dakota

Courtney Deinert

cdeinert@centralec.coop

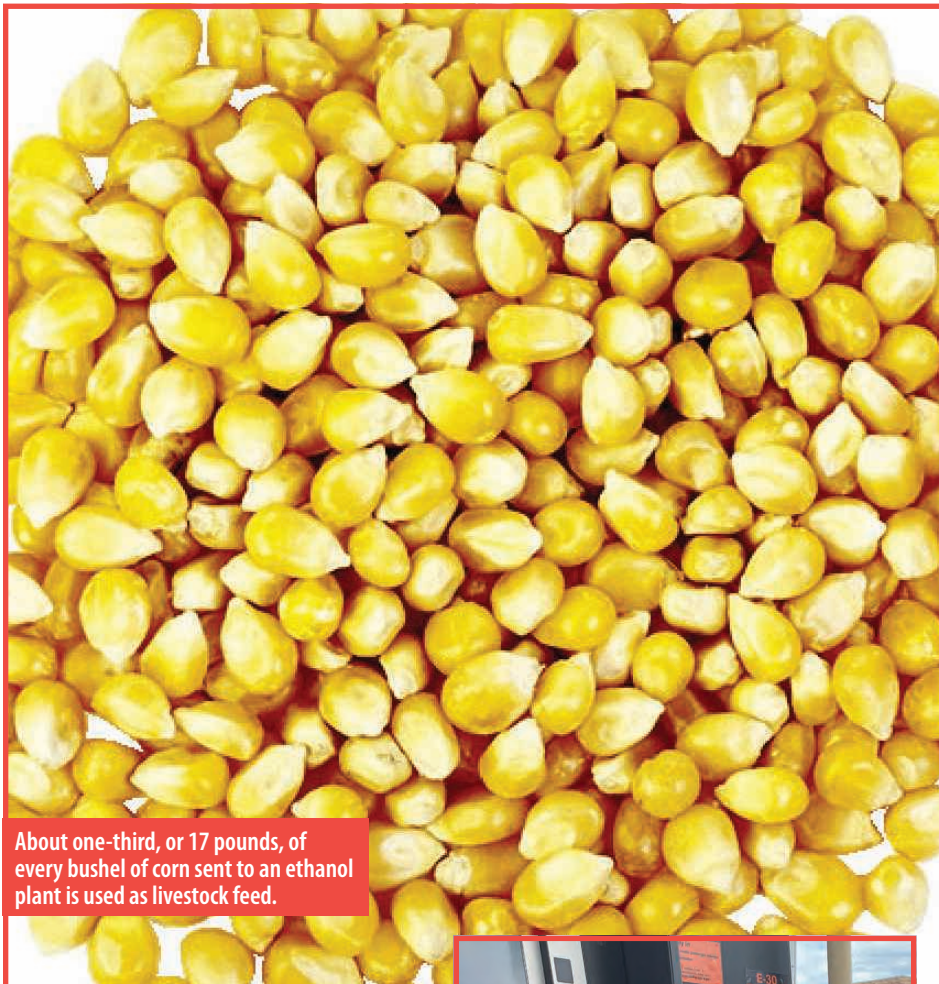
**Ethanol production continues to increase with a new large facility added every other year or so.**

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 (million gallons/year)	Operating Production	Under Expansion MGY (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.

### 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.)

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

# 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.

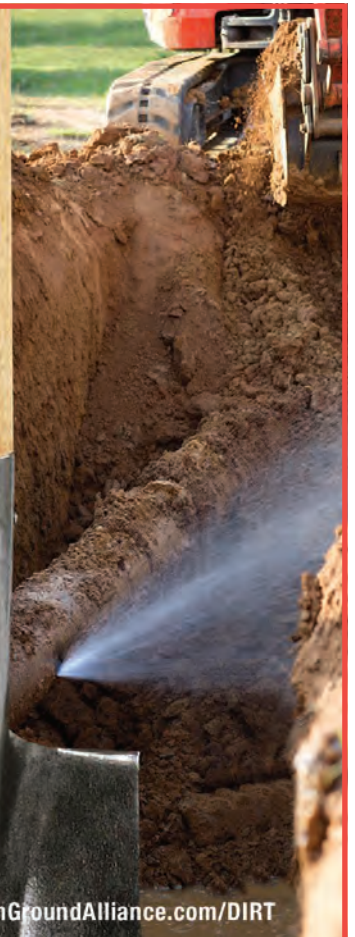
Janes said that each locate request typically

## 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.

“It’s 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
<b>CALL BEFORE YOU DIG!</b>	

## July 19-21

Stampede Rodeo, Burke, SD,  
605-830-0304

## July 19-21

Annual Festival in the Park,  
Spearfish, SD, 605-642-7973

## July 20-11

Hills Alive, Rapid City, SD,  
605-342-6822

## July 20-21

JazzFest, Sioux Falls, SD,  
605-335-6101

## July 23-27

Days of '76 Rodeo and  
Parades, Deadwood, SD,  
605-578-1876

## July 24-27

Senior Games, Rapid City,  
SD, Contact Kristi Lintz at  
605-394-4268

## 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**

## 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 16-25

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

## August 17-18

Threshing Bee, Rosholt, SD,  
605-537-4426

## August 20-22

Dakotafest, Mitchell, SD,  
800-827-8007

## August 21-25

Corn Palace Festival, Mitchell,  
SD, 605-995-8430

## August 22-24

Senior Games, Watertown,  
Contact Andrew Magedanz at  
605-949-0028

## August 22-25

Prairie Village Annual Steam  
Threshing Jamboree,  
Madison, SD, 605-256-3644

## September 14-15

Harvest Festival, Delmont,  
SD, 605-505-0535

**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.**