

COOPERATIVE CONNECTIONS



Jessie Ruml pursues a labor of love growing an assortment of fresh-cut flowers at Pixie Acres Flower Farm near Castlewood
Photo by Rachel Clelland Photography

In Bloom

Cut flowers spread summer cheer
Pages 8-9

Addressing power supply and demand
Pages 12-13

The Co-op and RTOs: Explained



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There have been several national news stories about possible rolling power outages for Americans this summer. Sioux Valley Energy, along with nearly all other electric utilities in this area of the country, are part of Regional Transmission Organizations (RTOs) such as the SPP (Southwest Power Pool) and the MISO (Midcontinent Independent System Operator).

RTOs, at a very high level, operate like an air traffic controller for the electric grid. These organizations monitor, coordinate, and match the generation, transmission, and demand of electricity in real time. When there is not enough generation to meet demand on the system and it becomes unbalanced, it could be catastrophic to the electric grid.

Nearly all of Sioux Valley Energy's system is part of the SPP. Although no one can predict this summer's weather or unexpected issues with generation units, the SPP has stated that "it expects to have enough generating capacity to meet regional demand for electricity through the summer." Sioux Valley Energy's SMEC members, however, are on the MISO system. The MISO raised alarms on April 28 when the organization said it projects "insufficient firm resources" to supply the summer demand for electricity. Again, at a high level, one of the reasons for this is because too many baseload generators (specifically coal) in the MISO market were taken offline and replaced with renewable resources which are not "firm" (power generation 24/7).

While complex, we have attempted to explain RTOs in more detail on Pages 12-13 of this publication. From initial predictions

from SPP, there should be enough generation to meet demand in most of Sioux Valley Energy's service territory. It is possible there could be issues for our SMEC members but our commitment to you is that we will work hard to give as much advance notice as possible.

On another topic, I just want to thank all of our members who attended the SVE Annual Meeting on June 7 at the Sioux Falls Convention Center. We had nearly 900 attendees who came to Sioux Falls for the meeting. It had been 12 years since we last held an annual meeting at that facility and were pleased with how it went.

At the meeting, I discussed the most recent storms that hit our electric system. I can't thank our employees enough for their absolute dedication to the membership. That dedication was on full display while working to restore power to our members.

In addition to storm work, our employees were also faced with having to restore power after members of the public made contact with our power lines. During the storm and the week following, our system had 17 contacts in an eight-day period - that is an average of two people per day hitting one of our underground or overhead lines causing a power outage. The majority of the dig ins and overhead contacts were the result of contractors or farmers working in the area. Not only are those public contacts extremely dangerous, but they also hindered the storm restoration process and the ability of our lineworkers to get much needed rest. Please—if you are digging or operating large equipment, take the time to look around and above you for electrical facilities and call 811 before you dig.

Enjoy the rest of your summer and stay safe everyone!

COOPERATIVE CONNECTIONS

SIoux VALLEY ENERGY

(USPS No. 497-440)

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**Sioux Valley Energy is an
equal opportunity provider and employer.**

SIoux EMPIRE FAIR AG APPRECIATION DAY

Join Sioux Valley Energy and other Touchstone Energy® Cooperatives at the Sioux Empire Fair for Ag Appreciation Day on Wednesday, August 10! Tickets will be available in July at Sioux Valley Energy offices.

JOIN US AT THE FAIR!

The 39th annual Ag Appreciation Day, hosted by the Greater Sioux Falls Chamber of Commerce and sponsored by Touchstone Energy Cooperatives, will be held Wednesday, August 10, at the W.H. Lyon Fairgrounds.

A complimentary lunch (pork sandwiches, sides, and drinks) will be served from 11 a.m. to 1 p.m. Entertainment includes live music from Mogen's Heroes.

Admission to the Sioux Empire Fair is free until 1 p.m. courtesy of Sioux Valley Energy and other Touchstone Energy Cooperatives.

Tickets will be available in July at Sioux Valley Energy offices.



**Join us for
Ag Appreciation Day**



Reduce your risk of shock in the home

Contact with electricity can result in something as innocuous (but still painful) as a mild shock to severe injuries like nerve damage and burns. In some cases, it can even cause cardiac arrest and death. Here's a list of some of the most common shock risks inside a home.

1. Appliances. Most shocks from household appliances occur during repairs. It's not enough to turn off an appliance before working on it - you need to unplug it to reduce risk. Large appliances are responsible for 18 percent of household electrical accidents; small appliances account for 12 percent.

There's also danger if your appliance comes into contact with water. Many of these hazards can be avoided by using a ground-fault circuit interrupter (GFCI). A GFCI is a protective device installed on electrical outlets, primarily used where water is present. When the device detects an imbalance in the electric current, it turns off the power to minimize the potential for an electric shock.

2. Ladders. Typically, ladders present a falling hazard, but 8 percent of household shocks are also related to ladders. Electrocutation typically happens when the ladder makes contact with electrical wires. Before you use a ladder, make sure you can clearly see all power lines in the area - including those that may be hidden by tree branches. Ensure that the ladder is 10 feet away and won't contact a power line if it falls in any direction.

3. Power tools. Power tools account for 9 percent of consumer product-related shocks. According to OSHA, when you use power tools that are not double-insulated, are damaged or have damaged cords, you increase your chances of being injured. The chance of danger also increases when you use incompatible cords, use power tools incorrectly or use them in wet conditions. This is another situation in which GFCIs can help.

4. Electrical outlets and extension cords. Inserting anything that doesn't belong - screwdrivers, knives, fingers or toy cars, to name a few - into an electrical outlet can result in a dangerous electrical contact.

Use cover plates that fit properly and safety covers on all outlets. By installing tamper-resistant receptacles, outlets will have permanent security against foreign objects being inserted into the slots.

Any broken, loose or worn-out plugs, switches and light fixtures should be replaced immediately.

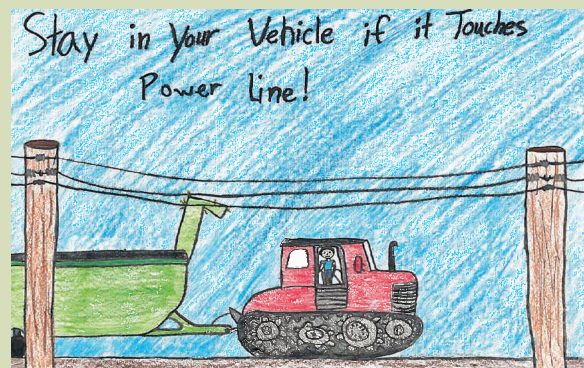
COOPERATIVES RESPOND TO EMERGENCIES



When back-to-back spring snow storms struck Burke Divide Electric Cooperative (Columbus, ND), cooperatives from South Dakota and Minnesota traveled long distances to respond to the call for help.

When a deadly derecho swept through eastern South Dakota in early May, co-op crews worked long hours to restore power to thousands of electric cooperative members. It's what cooperative linemen do.

Find out more about how our line crews respond to emergencies by visiting Cooperative Connections Plus. Simply scan the QR code at right.



Call 811 before you dig

Esmae Beld

Esmae Beld, age 11, offers some sound advice to stay inside your vehicle and call for help if it comes in contact with energized power lines. Esmae is the child of Orlando and Shanna Beld. They are members of H-D Electric Cooperative.

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.

DREAMY DESSERTS



LEMON MERINGUE PIE

Ingredients:

Pie

- 1 cup sugar
- 1/4 cup cornstarch
- 1-1/2 cups cold water
- 3 egg yolks, lightly beaten
- 1/4 cup lemon juice
- 1 tablespoon butter
- 1/2 teaspoon McCormick® Pure Lemon Extract
- 1 baked pie crust (9-inch)

Meringue Topping

- 1/3 cup sugar
- 1/2 teaspoon McCormick® Cream Of Tartar
- 3 egg whites
- 1/4 teaspoon McCormick® Pure Lemon Extract

METHOD

Preheat oven to 350°F. Mix sugar and cornstarch in medium saucepan. Gradually stir in water until smooth. Stir in egg yolks. Stirring constantly, bring to boil on medium heat; boil 1 minute. Remove from heat. Stir in lemon juice, butter and extract. Pour hot filling into baked pie crust. For the Meringue Topping, mix sugar and cream of tartar. Beat egg whites in medium bowl with electric mixer on high speed until foamy. Gradually add sugar mixture and extract, beating until stiff peaks form. Spread meringue evenly over hot filling, sealing to edges of crust. Bake 15 to 20 minutes or until meringue is golden. Cool completely on wire rack. Store in refrigerator.

McCormick.com

Please send your favorite 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 2022. All entries must include your name, mailing address, phone number and cooperative name.

CARAMEL STUFFED KRISPIE BARS

Ingredients:

Caramel filling

- 4 oz. caramel Kraft bits, unwrapped
- 4 oz. sweetened condensed milk
- 8 tbsp. butter

Rice Krispie layer

- 12 tbsp. butter, halved
- 10 cup Rice Krispies, halved
- 8 cup mini marshmallows, split in half
- 2 cup additional mini marshmallows for sprinkling

METHOD

Line pan (9x13) with nonstick foil. Microwave caramel bits, butter and condensed milk until melted and smooth when stirred. Microwave 6 tablespoons butter and 4 cups marshmallows just a minute and stir. Stir in cereal and press into pan. Pour on the caramel. Sprinkle on the additional 2 cups marshmallows and place in freezer for 15 minutes. Use the remaining Krispie ingredients and repeat directions. Press this layer on top of the marshmallows and caramel layer and return to freezer. Switch to the refrigerator and let set for a few hours. Cut into big squares and enjoy.

Eric Neville, Milesville

DUMP BARS

Ingredients:

- 2 cups white sugar
- 1 3/4 cups flour
- 1 tsp. salt
- 1 cup vegetable oil
- 1 tsp. vanilla
- 1/2 cup cocoa
- 4 eggs
- 1 cup chocolate chips

METHOD

“Dump” all ingredients except chocolate chips together in bowl. Mix with spoon. Spread in greased 9x13 pan. Sprinkle chocolate chips on top. Do not stir. Bake at 350 degrees for 30 minutes.

Deanna Poppen, Sioux Falls

Community Solar Project

PANELS BEING SOLD TO SVE MEMBERS



Ben Pierson, P.E.
 Manager of
 Beneficial
 Electrification



SCAN ME

Scan this code to learn more about community solar:

Sioux Valley Energy is planning to build a community solar array that will be located at the Colman, S.D., Service Center. The array will have a total of 140 panels with a total capacity of 60 kW and a maximum output of 50 kW. Members of SVE will be able to purchase the output of one or more panels in the form of \$1,000 for a 20-year subscription where the output will be credited to their bill every month. The output will be credited at the kWh rate that the member normally pays, regardless of when the solar production occurs compared to usage on their account. This will amount to approximately \$5.50 per month on average. Paybacks range from 9 to 13.5 years depending on your tax situation (see details about payback and ROI in FAQ section). The array will be located at the Colman Service Center in a visible location along Highway 34. SVE's Beneficial Electrification Department will install and maintain the solar array in order to gain further expertise in solar and continue to be a knowledgeable resource for our members.

FOR MORE INFORMATION ON THE SIOUX VALLEY ENERGY COMMUNITY SOLAR PROJECT, CONTACT BEN PIERSON AT 605-256-1652 OR BEN.PIERSON@SIOUXVALLEYENERGY.COM.



IN SUMMARY:

- \$1,000 per panel subscription: 20-year panel output agreement (10 panel maximum per member)
- Panel output credited on monthly bill based on member's kWh rate (approximately \$5.50 per month on average)
- Payback of initial investment ranging from 9-13.5 years (assuming inflation and potential electric rate increases)

THE ADVANTAGES OF PURCHASING A SUBSCRIPTION FROM A COMMUNITY SOLAR ARRAY INCLUDE:

- Ability to get involved in solar for as little as \$1,000 instead of a large investment into a personal solar array
- No maintenance or insurance concerns
- No personal land or building needed for installation
- Purchasing output from part of a larger project provides economies of scale
- Credited for solar production regardless of when it occurs compared to having to match usage

COMMUNITY SOLAR INTEREST

If you are interested in taking part in the SVE Community Solar Project, fill out the form below and mail it to SVE.

Name: _____
 Address: _____ City: _____ State: _____ ZIP: _____
 Account #: _____ Phone #: _____ Email: _____

Mail this form to: Sioux Valley Energy, PO Box 216, Colman, SD 57017

I WOULD ALSO LIKE MORE INFORMATION ON:

- | | | |
|---|--|---|
| <input type="checkbox"/> Heat Pump Rebate | <input type="checkbox"/> Time of Use Rate | <input type="checkbox"/> Commercial Heat Rebates |
| <input type="checkbox"/> Electric Heat Rate | <input type="checkbox"/> Third-Party Irrigation Rebate | <input type="checkbox"/> Renewable Energy Credits |
| <input type="checkbox"/> Energy Audit | <input type="checkbox"/> SmartHub Account Tool | <input type="checkbox"/> Energy Saving Tips |
| <input type="checkbox"/> Loan Program | <input type="checkbox"/> Smart Thermostat Rebate | <input type="checkbox"/> Interlock Kit/Generator |
| <input type="checkbox"/> Electric Vehicle Program | <input type="checkbox"/> Commercial/Ag LED Program | <input type="checkbox"/> Marathon/HTP Water Heaters |

Community Solar Project

FREQUENTLY ASKED QUESTIONS

How much does it cost?

A subscription fee of \$1,000 entitles the member to the solar production of one solar panel for a period of 20 years. Maximum limit of 10 panel subscriptions per member.

How many panel subscriptions can I purchase?

In total, there will be 140 panel subscriptions available for purchase. At this time, members can purchase up to 10 panel subscriptions.

What happens if I pass away or move off the SVE system?

A subscription can be sold and/or transferred to any Sioux Valley Energy member or sold back to Sioux Valley Energy at a prorated amount in the event of death of a subscriber or if a subscriber moves off the SVE system.

Who owns the actual solar array and who takes care of the maintenance?

Sioux Valley Energy will own and be responsible for all maintenance for the Community Solar Project and will be responsible for any damage that occurs to the array.

How much will I save on my electric bill as a subscriber?

We estimate that there will be an average reduction of \$5.50 on a monthly billing per subscription at current SVE electric rates. This bill credit will vary seasonally and will vary if your electric rate changes.

What could I expect in terms of a payback or return on investment (ROI)*?

Listed below are some estimated ROI's and paybacks for different tax situations (assuming inflation and potential electric rate increases).

- A member who is not able to utilize any tax credits can realize a ROI of 1.7% in year one to 3.8% by year 20 with a simple payback of their investment in 13.5 years.
- A member who is able to utilize the 26% federal tax credit can realize a ROI of 4.0% in year one to 7.0% by year 20 with a simple payback of their investment in 10.5 years.
- A member who owns a business and is able to write off the subscription toward the business can realize a ROI in year one of 5.6% to 9.1% by year 20 with a simple payback of their investment in nine years. This estimate assumes the member is in the 22% tax bracket.

***The above ROIs and paybacks are only estimates. Please consult with your tax adviser to learn how this investment can work for your specific situation.**

**FOR MORE INFORMATION ON THE SIOUX VALLEY ENERGY
COMMUNITY SOLAR PROJECT, CONTACT BEN PIERSON
AT 605-256-1652 OR BEN.PIERSON@SIOUXVALLEYENERGY.COM.**

CO-OP CONNECTIONS® CARD CORNER

The Co-op Connections Card is a partnership between Sioux Valley Energy and local businesses! Each member received the



Co-op Connections Card free in their January magazine. You get your Co-op Connections Card simply because you're a member of Sioux Valley Energy. Each month, we'll include a listing of businesses participating in the program. Below are businesses located in Madison and Nunda.

Madison

Community Center
Dairy Queen
Encore Family Store
EXIT Realty Advantage-Adam Foland
Jack's Meat Market
Lake Herman Auto Sales
Leader Printing
Madison Family Dental
Madison Vision Clinic
Nicky's
Pizza Ranch
Prairie Village
Signature Realty Group
Sparkle & Sass Boutique
The Shepherd Shop
We Care Dental
Wireless World
Your Peace of Mind Home Inspections

Nunda

Nunda Bar & Grill

Scan this code to access the Sioux Valley Energy website where you can download the Cooperative Connections Card app for mobile devices.





IN BLOOM

Philip and Jessie Ruml raise an assortment of fresh-cut flower varieties on their micro-farm near Castlewood. *Photo by Rachel Clelland Photography*

Specialty micro-farmers raise fresh-cut flowers for weddings, parties and other red-letter events

Billy Gibson

billy.gibson@sdrea.coop

The last time you saw a summer bride carrying a brightly colored floral bouquet down the aisle, it's likely those flowers came from some faraway field in some other part of the planet.

But that's quickly changing as a growing group of intrepid micro-farmers throughout the Upper Midwest are finding their way into the specialty fresh-cut flower business.

Emphasis on the word intrepid: it's not easy raising red roses in a climate more associated with icicles than irises.

Jessie Ruml isn't the least bit intimidated. She's in her fourth year of growing a variety of decorative flowers and reports that the bulbs are blooming and business is booming at Pixie Acres Flower Farm near Castlewood.

After 10 years as a dental hygienist waging a protracted war against plaque, Ruml decided to turn in her stainless steel sickle scaler and look for another occupation that would keep her on the

family farm and close to home with her four spirited daughters.

One afternoon while the children were out playing in the yard, she was swiping through her social media accounts and up popped a picture of a brilliant display of dahlias lying in the bed of an old pickup truck. The scene stopped her dead in her scrolling tracks.

"The colors were so vivid, I immediately felt the hair stand up on the back of my neck. I knew in an instant that's what I needed to do with my life," said Ruml, a self-described farm girl originally from Elk Point and a current member of H-D Electric Cooperative.

It didn't take long for Ruml to realize why South Dakota is not exactly known as the fresh-cut flower capital of the world - at least not yet. She compares growing flowers in eastern South Dakota to 24-hour babysitting. It's a painstaking task to bring flower seeds to full bloom in such a capricious and often harsh climate.

She and her husband Philip, who works full time in the ag industry,

don't even consider taking an extended vacation between the months of March and October when the Rums hold a "fall finale" on the farm to sell off the remainder of their crop or donate it to local charities. Flower plants are high maintenance, sensitive to the elements and require tons of TLC with watering, weeding and fertilizing, she explained: "We can't leave them untended for more than a few hours at a time."

But Jessie keeps a positive perspective when her back and her body start aching from all the hard work.

"You have to get on your hands and knees because there's not a lot of mechanical equipment like in larger scale farming," she said. "But all the effort only makes it that much more special to bring somebody joy, to see the happiness on their faces when you give them a bouquet of fresh flowers. It's hard on your body, but I'm grateful for each day I get to put my hands in the dirt."

She breaks up the monotony and the grind of flower farming by conducting floral design workshops, which she describes as a "girls' night out" where there's lots of laughs and perhaps some light spirits flowing in the

ZONE 4 FLOWER VARIETIES

Here are the top five flower varieties most suitable for USDA Hardiness Zone 4 planting:

1. Petunias
2. Daisies
3. Dahlia
4. Zinnia
5. Tulips



Christy Heckathorn, owner of Fleurish Flower Farm and Design near Elk Point, shows Union County Electric General Manager Matt Klein how she uses soil blocking to grow hardier seedlings and increase production. *Photo by Billy Gibson*

studio. Participants learn how to make arrangements and fill vases and tour the fields to see how the operation works.

She also looks for opportunities to support the community, like donating a portion of her sales to assist families whose homes were destroyed by a tornado that severely damaged much of Castlewood on May 11.

Over the past few years, more growers are taking on the challenge of Zone 4 flower farming and have entered the market in places like Belle Fourche, Vermillion, Lake Preston, Sioux Falls, Mitchell, Wolsey, Artesian and others. Many are members of the South Dakota

Specialty Growers Association based in Yankton. The group held a virtual “member meet-up” on June 14 to collaborate, educate and exchange ideas.

One floral designer who jumped into the fresh-cut flower business two years ago is Christy Heckathorn, owner of Fleurish Flower Farm and Design in Ruml’s native Elk Point. In point of fact, it was Heckathorn - a family friend - who designed the floral arrangement for Ruml’s bridal bouquet 15 years ago.

Heckathorn got involved in the industry when she went to work at Pioneer Drugs, a local pharmacy that also had a flower shop and a soda fountain

inside. She spent five years there serving customers and also working on the side to help brides select arrangements for their big day.

While Heckathorn has gathered an wealth of training and experience over the years, she said she delights in using flowers to elicit smiles and positive reactions in her clients and other people she meets – especially those who could use a laugh when battling through personal challenges.

“A lady once came with her family and I could tell she had a lot on her mind,” she recalled. “I talked with her and found out she was going through cancer treatment and they had come here just to get away for awhile, enjoy the flowers and forget about things. My mother just went through cancer treatment. So I told them to come back any time and they would always be welcomed.

“One of the reasons I love flowers is because they bring joy to other people. If you can grow flowers and put a smile on someone’s face as a result of your labor, that’s a good life recipe.”



Jessie Ruml uses a pair of high tunnel greenhouses on her farm near Castlewood to shelter her flower plants from often unpredictable South Dakota weather patterns. *Photo by Rachel Clelland Photography*

Annual Meeting held in Sioux Falls

Co-op business, kids' games, bingo, and a musical tribute to the Beatles brings nearly 850 to SVE annual meeting

Sioux Valley Energy held its annual meeting June 7 at the Sioux Falls Convention Center. It had been 12 years since the event last took place at this location.



Above: Members register for the meeting. Left: Bingo cards were plentiful as members played for prizes. Far left: The Abbey Road Band provided entertainment. Top: A bucket truck arch welcomed members. Bottom: Shirley Wiener of White illuminates light bulbs with pedal power.



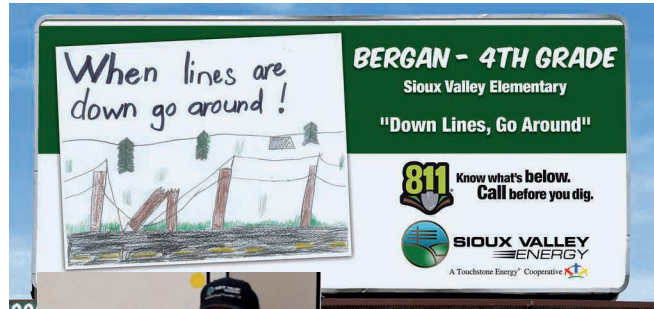
Above: Lori G., Justin M., Ryan O. and Lisa J. (not pictured) were recognized for 25 years of service. Left: Don Oberlander of Brandon won a Nest thermostat.



Safety Billboard Contest Winners Announced



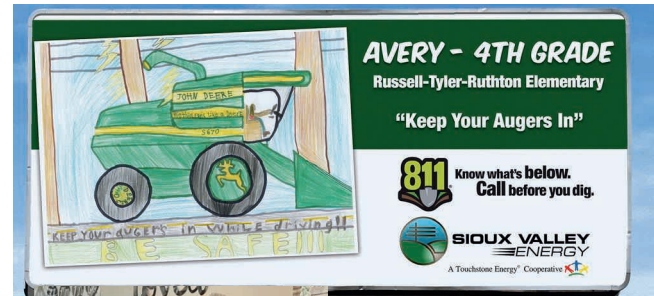
Taetum's billboard was located along I-90 near Sioux Falls at mile marker 392 from May 9 to June 5. She poses with Safety Steering Committee members Amy Voelker and Terry Ebricht.



Bergan's billboard was located along U.S. Highway 14 bypass near Brookings from June 13 to July 10. Her dad, Mike, is a SVE lineworker and Safety Steering Committee member.



Emmett's billboard was located along U.S. Hwy 75 near I-90 near Luverne May 9 to June 5. He poses with Safety Steering Committee members Terry Ebricht and Tim Durst.



Avery's billboard was located along Minnesota Highway 23 at mile marker 33 near Pipestone from May 9 to June 5. Avery poses with Safety Steering Committee member Terry Ebricht.

Bring the family & join us at the Sioux Valley Energy Brandon Service Center



SAFETY DAY

9 A.M.-1 P.M. **SATURDAY, AUGUST 13, 2022**
 108 N. HERITAGE ROAD - **BRANDON, SD**
 PANCAKE FEED • KIDS' GAMES • ADULT HEALTH CHECKS
 INTERACTIVE SAFETY DEMOS FOR KIDS & FAMILIES

POWER

Local co-ops are prepared to meet peak demand for electricity this summer

You may have seen articles recently about the potential for rolling power outages across the West and Midwest that could be triggered by a combination of insufficient generation, increased demand for power and warmer than normal temperatures expected this summer across the region. While no one can predict what extreme weather could be coming our way, or unexpected issues with power plants and renewable resources, electric co-ops in South Dakota and western Minnesota are confident that we will have enough generation to meet our electric needs.

The following questions and answers aim to provide background on Regional Transmission Organizations (RTOs), the role RTOs play in serving consumers, potential power supply impacts to this region throughout the summer,

and some lessons learned from the February 2021 energy emergency.

WHERE DOES MY ELECTRICITY COME FROM?

Decades ago, when electric cooperatives were created to bring power to rural America, there were few electric generation options available. In our region, electric cooperatives worked together to access hydropower from the dams on the Missouri River and later created East River Electric Power Cooperative, Rushmore Electric Power Cooperative and Basin Electric Power Cooperative to fulfill their power needs.

These generation and transmission cooperatives provide transmission services and construct regional power plants and transmission infrastructure. In the past, when co-ops needed

more electric generation because of economic growth, we built it.

Co-ops still own and build generation units today, but the operation of the grid that serves our region changed significantly about seven years ago. In 2015, East River Electric, Rushmore Electric, Basin Electric and the Western Area Power Administration (WAPA), which sells hydropower from the dams, all entered the Southwest Power Pool (SPP). SPP is an RTO that operates throughout the central portion of the United States and allows utilities to work together to provide the most efficient and cost-effective generation and transmission services to control costs.

DOES THE SOUTHWEST POWER POOL (SPP) EXPECT TO HAVE ENOUGH GENERATION TO MEET DEMAND THIS SUMMER?

SPP operates like the “air-traffic controller” of the bulk electric grid from Canada to Texas. It oversees the grid and the wholesale power markets serving most of the electric cooperative consumers in South Dakota. According to a May 12 press release from SPP, the organization said it “expects to have enough generating capacity

to meet the regional demand for electricity through the summer season.” SPP anticipates that demand for electricity will peak at 51.1 gigawatts during the summer season, which runs June to September 2022. According to SPP, a diverse fleet of generation units, including cooperative-owned power plants and renewable resources, will be prepared to serve at least 55.5 gigawatts of demand.

WHAT IS THE MIDCONTINENT INDEPENDENT SYSTEM OPERATOR (MISO) AND WHY DOES IT EXPECT TO HAVE AN ENERGY SHORTFALL THIS SUMMER?

The Midcontinent Independent System Operator (MISO) is similar to SPP – it is an RTO responsible for matching generation resources with power demand from consumers throughout the Midwest in states like Minnesota, Wisconsin, Iowa, Michigan and Illinois. Each RTO serves different areas of the country and has a different mix of generation resources. Some consumers in South Dakota are served from the MISO system, but most cooperative consumers are served through SPP. MISO raised alarms in April when the organization said it projects “insufficient firm resources” to supply the summer demand for electricity.

In 2005, MISO’s total generation mix was 76 percent coal, 13 percent nuclear, 7 percent natural gas and the rest came from a mix of other resources. By 2020, the amount of coal-based generation fell to 33 percent while natural gas grew to 34 percent, nuclear reached 17 percent and wind and solar accounted for 13 percent. It has been a drastic change in a short amount of time. With a higher amount of variable generation resources, less

SPP “EXPECTS TO HAVE ENOUGH GENERATING CAPACITY TO MEET THE REGIONAL DEMAND FOR ELECTRICITY THROUGH THE SUMMER SEASON.”

firm generation available and the anticipation of increased electric usage because of higher than average temperatures, it sets up the potential for rolling power outages across the MISO footprint this summer.

HOW DO THE ENERGY MARKETS WORK?

Basin Electric owns generation and sells it into the SPP and MISO markets. Basin Electric buys all the power they need from those same markets to serve their membership, including your local electric co-op. It helps control costs throughout our co-ops by allowing us to sell generation into the markets when it is economically advantageous, or to access cheaper generation from the market when we need it. It was a critical strategic step taken by electric cooperatives to save their members money. But it also means that we can be subject to SPP directed rolling outages if demand exceeds generation across the entire SPP footprint like we saw in February 2021. Although electric cooperatives in the Dakotas are required to have enough generation to serve our own consumers, because co-ops are integrated in the grid we must share in any potential outages due to an energy emergency.

DID UTILITIES LEARN ANYTHING FROM THE FEBRUARY 2021 ENERGY EMERGENCY?

In February 2021, record-low temperatures and record-high electricity use across a region stretching from the Canadian border to Texas created what SPP called “the greatest operational challenge in its 80-year history.” Yet, even in

the extreme conditions, SPP had about four hours total of rolling outages across its 14-state region. That included South Dakota and cooperatives served by East River Electric and Rushmore Electric. East River was required to drop about 83 megawatts of demand over a short time on Feb. 16, 2021. Rushmore Electric was required to drop 22 megawatts on Feb. 16, 2021. After the emergency, SPP commissioned a comprehensive report and conducted an in-depth analysis of what happened. The report produced 22 actions, policy changes and assessments related to fuel assurance, resource planning and availability, emergency response and other areas.

Joining SPP was a strategic step that our cooperative network took several years ago to capture the benefits of being in an RTO. We have experienced immense financial and operational benefits over the past several years from our membership in SPP which have helped to keep electric rates stable. Looking ahead to this summer, most electric cooperatives in South Dakota are not within the MISO footprint and are not expecting an impact from any potential MISO rolling power outages. However, a few local co-ops in Minnesota and northern South Dakota may be called upon to take a rolling outage. Those co-ops will communicate with members if this becomes a possibility and will work to minimize the impact of these potential outages.



Powering Through the Derecho

May 12 storm sweeps area leaving 50 by 100 mile damage path in Sioux Valley Energy territory

Carrie Vugteveen

Vice President of Public Relations

Derecho is an unfamiliar word and something that doesn't typically happen in the Northern Plains. However, thousands of Sioux Valley Energy members now know exactly what it is and the unfortunate ramifications of the rare weather occurrence.

The derecho was a unique storm which impacted the Sioux Valley Energy electric system. It is similar to an inland hurricane with powerful winds and lots of dust. When the Co-op experiences an ice storm, it can cause a lot of damage but much of that damage is straight forward – lines down and poles broken – it is easily seen and you know what you are dealing with. With a tornado, while devastating and destructive, it impacts a very isolated path. This storm, however, left trees, debris, and even buildings on top of



A crew frames a three-phase pole as part of repair efforts. The May 12 derecho caused more than \$2.5 million damage to Sioux Valley Energy infrastructure.

Right: Each morning crews met (in person or via ZOOM) prior to heading out into the field. They discussed the plan of work for the day and reviewed safety procedures. Safety is the number one priority for the Cooperative during storm restoration efforts as well as all other times of the year.



and twisted into power lines. The path of damage was 50 miles wide by 100 miles long within the SVE service territory.

Trees and other debris had to be cleared before line crews could even get to the areas where line needed to be rebuilt. In some cases, tree clearing took several hours.

At the height of the storm, SVE had 12,000 members without power and in total, throughout a five day period, the Cooperative had over 23,000 members out of power at one point or another. The longest duration for some members was around five days. Over 4,400 calls came into Sioux Valley Energy Thursday through Monday after the storm, compared to 450 during the same time period on a normal week.

An additional 60 field personnel from other co-ops and contractors traveled to the SVE service territory to help with the restoration efforts. Estimated storm losses are currently at \$2.5 million.

Less than two weeks after the derecho, severe weather again hit the area causing outages for SVE members throughout the service territory. The damage was not as widespread, so restoration took less than a day. However, crews had to rebuild two miles of high voltage electric line near Ellsworth, Minn. after high winds took down the poles and wire on Memorial Day.

In addition to storm work, SVE employees were also faced with having to restore power after members of the public made contact

with co-op power lines. During the storm and the week following, the SVE system had 17 contacts in an eight-day period - that is an average of two people per day hitting one of the SVE underground or overhead lines causing a power outage.

The majority of the dig-ins and overhead contacts were the result of contractors or farmers working in the area. Not only are those public contacts extremely dangerous, but they also hindered the storm restoration process and the ability of our lineworkers to get much needed rest. If you are digging or operating large equipment, take the time to look around and above you for electrical facilities and call 811 before you dig.



Left: Line leading into the Oldham substation in Kingsbury County was damaged. Above: A crew splices a line near Hills, Minn. Below left and below: Damage to a stretch of line in Brookings County required removing a half mile of tree debris and broken poles before repairs could be made.



Metal debris lies tangled in pole remnants in Minnehaha County as crews replace the pole using an EZ-Spot-UR.



A young member brightens workers' day.



JULY 2-4
Fourth of July Holiday Weekend

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.

To view the publication's master event calendar, scan the QR code below:



Or visit <https://sdrea.coop/cooperative-connections-event-calendar> to view more upcoming events.

JUNE 24-25
Madison Interlake Senior Games
Madison, SD, Call Bernie Schuurmans at 605-270-3327 for more info

JUNE 24-26
Black Hills Bluegrass Festival
Rush No More RV Resort & Campground, Sturgis, SD, blackhillsbluegrass.com

JUNE 24-26
Quarry Days
Citywide, Dell Rapids, SD, 605-428-4167

JUNE 25
Zippity Zoo Day
805 S. Kiwanis Avenue, Sioux Falls, SD, 605-367-7003

JUNE 26
Prairie Village Variety Show
Prairie Village, Madison, SD, 605-256-3644

JUNE 29-JULY 4
Celebration of Freedom
East City Park, Parkston, SD, parkstoncelebration.com

JULY 2-4
Sitting Bull Stampede Rodeo
Various Locations, Mobridge, SD, 605-845-2387

JULY 3-4
Custer's Old Time Country Fourth of July
Various Locations, Custer, SD, 605-673-2244

JULY 4
4th of July Parade & Celebration
Kemp Avenue, Watertown, SD, 605-886-5814

JULY 7
Downtown Hartford Market
Main Avenue, Hartford, SD, 605-999-6660

JULY 9-10
Brookings Summer Arts Festival
Pioneer Park, Brookings, SD, bsaf.com

JULY 13-16
Black Hills Corvette Classic
Various Locations, Spearfish, SD, blackhillscorvetteclassic.com

JULY 14-17
Danish Days
Various Locations, Viborg, SD, danishdays.org

JULY 14-17
Pioneer Days
Various Locations, White, SD, 605-690-4458

JULY 15-17
Gold Discovery Days
Various Locations, Custer, SD, 605-673-2244

JULY 15-17
Laura Ingalls Wilder Pageant
43379 Rose Lane, De Smet, SD, desmetpageant.org

JULY 16
Bloomin Quilt Show
47439 214th Street, Aurora, SD, 605-690-3246

JULY 16
Boadwine Dairy Lunch
Boadwine Dairy, Baltic, SD, 605-359-9418

JULY 22
Relay for Life of Sioux Falls
Sertoma Park, Sioux Falls, SD, RelayForLife.org/SiouxFalls

JULY 22-23
Brookings Senior Games
Brookings, SD, Call Stacy Claussen at 605-691-1291 for more info

JULY 25-30
Days of '76 Rodeo and Parades
18 Seventy Six Drive, Deadwood, SD, daysof76.com

JULY 29-31
Bruce Honey Days
Various Locations, Bruce, SD, 605-627-5671

JULY 30
South Dakota Chislic Festival
Prairie Arboretum, Freeman, SD, sdchislicfestival.com

AUGUST 5-13
Sioux Empire Fair
W.H. Lyon Fairgrounds, Sioux Falls, SD, siouxempirefair.com

AUGUST 27
McCrossan Boys Ranch Xtreme Event Rodeo Challenge
McCrossan Boys Ranch Campus, Sioux Falls, SD, mccrossan.org

Note: Please make sure to call ahead to verify the event is still being held.