



General Manager/CEO Scott Moore, Board Director Tom Thorpe, Attorney Vaughn Beck, Board Directors Kelly Melius, Paula Petersen, Gary Bachman, Eric Odenbach

A regular meeting of the Board of Directors of FEM Electric was held in Ipswich, South Dakota at 8:30 a.m. on December 21, 2021, pursuant to due call and notice. It being determined that a quorum was present, President Gary Bachman called the meeting to order. Secretary Eric Odenbach kept minutes of the meeting. The following directors were declared present by roll call: Gary Bachman, Paula Petersen, Kelly Melius, Eric Odenbach, Tom Thorpe, General Manager/CEO Scott Moore, Line Superintendent Rob Vetch, Director of Finance and Benefits Rhonda Tuscherer. President Gary Bachman welcomed guest employee Sean Christiansen.

Jesse Brown and Ryan Holien were present until their reports were given.

Changes to the agenda: Revised agenda was given to board before meeting.

Changes/Additions to Minutes from November 16, 2021 meeting: none

Next Meeting Date: After a review of calendars, directors agreed that the next regular meeting of the board would be on Tuesday, January 18, 2022 at 8:30 a.m. to be held at FEM Electric Board Room in Ipswich, South Dakota.

Motion by Eric Odenbach, seconded by Paula Petersen and carried to approve administrative business.

Management and staff presented revised 2022 budget for board review.

Motion by Tom Thorpe seconded by Eric Odenbach to approve revised 2022 budget.

Management and staff reviewed current financials with the board and held a discussion on options and rates.

Motion by Kelly Melius seconded by Tom Thorpe to increase FEM Electrical rates starting February 1, 2022 to all classes by \$.005 per kwh and \$5.00 per month availability charge. Electric Heat Rate will not increase. Market rates excluded as they are reviewed and set annually in October.

Motion by Kelly Melius, seconded by Eric Odenbach and carried to acknowledge manager, staff, electrical department reports and East River Load Management Report.

The board acknowledged reviewing the November Cyber Security Report.

Resolutions, Contracts, and **Nominations:**

Motion by Eric Odenbach seconded

by Kelly Melius and carried to approve changes to Policy 427 Drug and Alcohol

Motion by Paula Petersen seconded by Tom Thorpe to approve the following 2022 committees.

Safety Committee: Rob Vetch, Carol Schaffner, Sonje Oban, Justin Larson, Sean Christiansen, Chad Dutenhoffer.

Grievance Committee: Ryan Holien, Angie Sieh, Jesse Brown.

Scholarship Committee: Crystal Thorson, Carol Schaffner, Gregg Zwart, Justin Larson, Angie Sieh.

The board acknowledged receipt for nominations for NRTC board seat.

NRTC voting delegates will remain as delegate Gary Bachman and alternate Scott Moore.

Scott Moore presented 2022 contract for Engineering from Dalager Engineering of Bath, SD. After discussion the board decided not to sign and look at further options. Moore will bring alternative options at February meeting.

Tom Thorpe nominated Gary Bachman as NRECA Voting Delegate with no Alternate NRECA Voting Delegate; motion seconded by Paula Petersen and unanimous ballot was cast.

Membership Business: The board acknowledged the following membership business as presented: New Memberships, Member **Cancellations and Contracts:** Disconnects: James Sporer, Ipswich, Active Farm; Eureka Ready Mix, Eureka, Commercial; Tom McDaniel, Oneida, NY, Residence; Nathan Rohrbach, Continued on pg 10

COOPERATIVE

CONNECTIONS

FEM ELECTRIC ASSOCIATION

(USPS 189-720)

Board of Directors

Gary Bachman, President Tom Thorpe, Vice President Eric Odenbach, Secretary Paula Petersen, Treasurer Kelly Melius, Asst. Sec./ Treasurer Vaughn Beck, Attorney

CEO/General Manager

Scott Moore info@femelectric.coop

Management Staff

Rob Vetch Line Superintendent Rhonda Tuscherer Director of Finance and **Benefits**

Editor's e-mail: oban@femelectric.coop

FEM ELECTRIC COOPERATIVE CONNECTIONS is the monthly publication for the members of FEM Electric Association, Inc., 800 5th Ave., Ipswich, SD 57451. FEM Electric Cooperative Connections' purpose is to provide reliable, helpful information to members on electric cooperative matters and better living.

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Scott Moore General Manager/CEO

January 2022 is here, and in January 2023 we will know how the next twelve months went for FEM Electric and its members. I'm sure we will have successes, failures, good days, and challenging days, but the best we can do is have a plan and stick to the plan. In December, the board approved a revised annual budget, setting a road map for 2022.

We have concerns with supply issues, but I don't believe we will get to a point that we are stopped dead in our tracks. We may have to be resourceful in completing projects. Once again if you are thinking of adding electrical load please call early.

As I write this article, we are in the process of closing out 2021 records and will relay that information in February. We were still operating in the red at the end of November, until the year-end books are completed there is no reason to speculate. In December, management asked and reviewed several rate increases and the board did approve a rate increase starting in February 2022.

Since 1997 FEM Electric has been in a construction mode with our operations department. For the past twenty-four years the operations workload has been driven by ice and windstorms, water issues in the 1990's early 2000's, some

nice load growth, and FEMA mitigation projects. Barring any major storms, FEM Electric is not going to stop, but looking to slow our overhead line replacement over the next several years. FEM Electric has been fortunate to have utilized FEMA funding and low interest rates to update our distribution infrastructure.

We are planning to have a safe and productive 2022 and hope for all our members the same.

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@fem_electric on 👩



@FEMelectric on



We'll post outage updates, safety tips, news and more to keep our members informed on all the latest from FEM Flectric.

Statement Mailing Dates

Jan. 27, 2022 for Jan.'s energy Feb. 25, 2022 for Feb.'s energy Regardless of the statement mail out date, payments are

due in the office by the 9th of

the following month.

Make a plan before heading out in wintry road conditions

Though they may make for a pretty seasonal backdrop, snow and ice can complicate even modest travel plans. It's unsafe to drive when visibility is vastly reduced or when you can't fully control your car. According to AAA, wintry weather and its byproduct - hazardous road conditions - are a factor in nearly a half-million crashes and more than 2,000 road deaths each year. With those figures in mind, here are some tips to minimize the risk to yourself and other motorists during winter weather.

Don't drive unless you must. It really isn't worth the risk to your safety and that of others to venture out onto potentially unsafe roads for any circumstance that isn't urgent. Pay attention to weather reports so you can run any time-sensitive errands and stock up on supplies before adverse conditions arrive. If you must drive to work, that's one thing. But don't tempt fate if you can help it.

If you have to drive, eliminate distractions. Keep your phone out of reach or set it to airplane mode - a good practice year-round but especially important when roads are dicey.

Keep a bundle of cold-weather gear in your car, including water, nonperishable food, warm clothing, a flashlight, glass scraper, blankets and medications.

Before you set out, alert others to your route, destination and estimated time of arrival.

Make sure your tires are properly inflated and have plenty of tread.

Keep your gas tank at least half full to prevent a frozen fuel line, which could leave you stranded.

Don't use cruise control when driving on any slippery surface.

Drive slowly. Lower your speed to counteract the reduced traction that accompanies snow and ice. Accelerate and decelerate slowly. Applying the gas slowly can help avoid skids. Since it takes longer to slow down on icy roads, take your time to slow down for a stop sign or light.

A final note for winter driving: Never warm up a vehicle in an enclosed area such as a garage. Exercise caution and good judgment to stay safe as you negotiate whatever conditions winter brings this year.

POWERLINE SAFETY QUIZ

TRUE OR FALSE?

Power lines are insulated for contact.

False. While power lines may have a covering to protect against weather, they are not insulated for contact. Birds can sit on



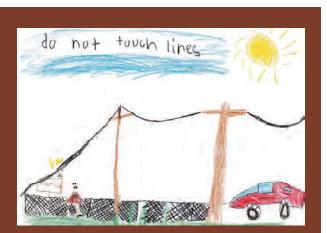
power lines unhurt because they don't create a path to the ground. You and your ladder do.

I should keep myself and any equipment I'm using at least 10 feet away from any power lines.

True. You don't need to contact a power line to be in danger; electricity can jump, or arc, from a power line to a person who gets too close. The best insulator is space. Keep yourself and your equipment at least 10 feet away from power lines.

I can be electrocuted by a power line even if I am wearing gloves and rubber boots.

True. Work gloves and rubber boots offer no protection against contact with a power line. Once again, space - and lots of it - is the best insulator.

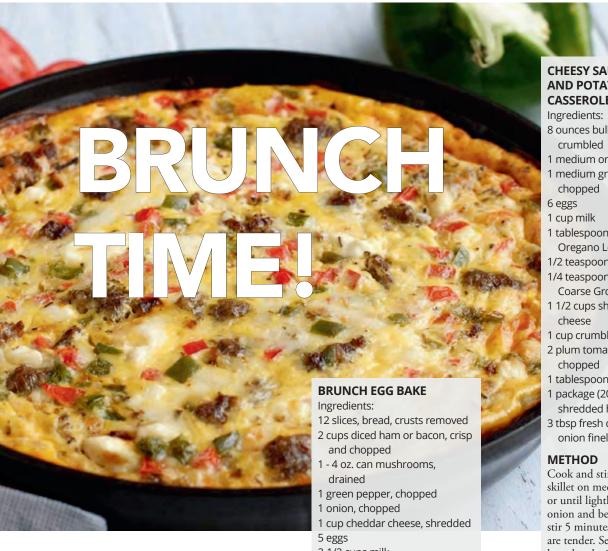


Don't touch power lines

Luke Walden

Luke Walden reminds co-op members that it's important to never touch power lines under any conditions. Luke is from Brandon, where he and his parents Blake and Jennifer are all members of Sioux Valley Energy.

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.



COLD OATMEAL MUESLI

Ingredients:

1 cup quick oats

1 cup old fashioned oats

1/2 cup raisins

1/3 cup brown sugar

1 tsp cinnamon

2 cup milk

METHOD

Mix all ingredients together and let sit overnight in the refrigerator. Serve cold. May add walnuts and apples or other fresh berries when serving, if desired.

Elaine Rieck, Harrisburg

2-1/2 cups milk salt and pepper paprika

METHOD

Butter six slices of bread and put face down in 9 x 13 inch pan, lightly sprayed with cooking spray. Cover the bread with the ham, mushrooms, green pepper, onion and cheese. Dice the remaining bread and spread over the top. Beat eggs, milk, salt and pepper and pour over the top. Sprinkle with paprika. Cover the pan with foil and refrigerate overnight. In the morning, bake at 350 degrees for 1 hour. Serves

Mary Jessen, Holabird

CHEESY SAUSAGE AND POTATO SKILLET **CASSEROLE**

- 8 ounces bulk breakfast sausage,
- 1 medium onion, chopped
- 1 medium green bell pepper,
- 1 tablespoon McCormick® Oregano Leaves
- 1/2 teaspoon salt
- 1/4 teaspoon McCormick® Coarse Ground Black Pepper
- 1 1/2 cups shredded mozzarella
- 1 cup crumbled feta cheese
- 2 plum tomatoes, seeded and
- 1 tablespoon oil
- 1 package (20 oz) refrigerated shredded hash browns
- 3 tbsp fresh dill, parsley or green onion finely chopped

Cook and stir sausage in large skillet on medium heat 5 minutes or until lightly browned. Add onion and bell pepper; cook and stir 5 minutes or until vegetables are tender. Set aside. Beat eggs in large bowl with wire whisk. Add milk, oregano, salt and pepper; mix well. Add sausage mixture, cheeses and tomatoes; mix well. Set aside. Pour oil into same skillet, swirling to coat the pan. Spread hash browns in bottom and up sides of pan. Pour egg mixture over potatoes. Cover. Cook on medium heat 10 to 15 minutes or until eggs are set.

mccormick.com

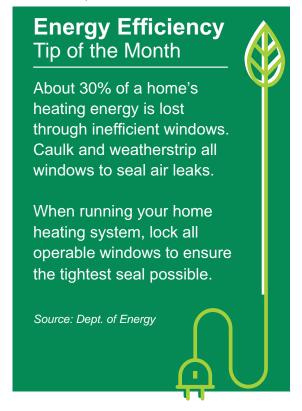
Please send your favorite seafood recipes to your local electric cooperative (address found on Page 3). Each recipe printed will be entered into a drawing for a prize in December 2022. All entries must include your name, mailing address, phone number and cooperative name.

RATE INCREASE

When FEM Electric mailed out December billing statements, we included a letter regarding a rate increase. At the December FEM Electric board meeting, management presented several options to the board in order to meet our financial ratios moving forward. The board approved increasing our monthly availability charge from \$57.00 per month to \$62.00 per month. They also approved increasing the kwh charges by \$0.005. This rate change will begin February 1st, 2022.

Raising rates is never easy, but we will always strive to keep our rates competitive, and to be transparent about the process. FEM has, and will, continue to do our best to provide you with safe, reliable, and affordable power to you, the FEM member.

If you have questions about the rate increase, feel free to reach out to our office at 605-426-6891 and ask for Scott Moore, Rhonda Tuscherer, or Rob Vetch.

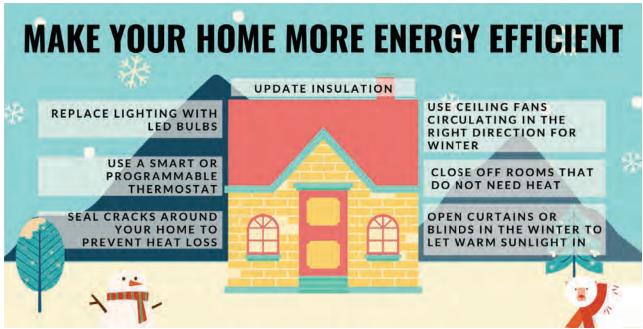






Progress was made on the new pole yard fence at the FEM office. The city of Ipswich is working on an ongoing community improvement project. A new basketball court was recently finished north of the FEM pole yard, and soon the local pool will see improvements as well. Additional family friendly projects are scheduled, and a sturdy fence around the pole yard was deemed necessary to protect FEM supplies.







Members of the Aberdeen Curling Club hold a public instructional session to teach both the young and old the finer points of their sport.

Curling clubs seek to educate the public and spread the word about the joy of throwing stones

Billy Gibson

billy.gibson@sdrea.coop

Looking for a sure-fire way to achieve permanent world peace and lasting harmony?

Make curling mandatory.

At least Bryan Rau thinks that's just the ticket to putting an end to international animosity. Rau serves on the board of the Aberdeen Curling Club and describes being hooked the moment he threw his first stone in competition eight years ago.

"When I touched that first stone it was like 10,000 volts going through me. I kicked out the hack and threw that stone down the ice and it was just incredible," he said. "I think if everybody curled, the whole world would be different. Everybody would get along. There's no bad curling. No matter where you play, whether you win or lose, it's all good curling. It's a game that's played with honor and pride. You don't have to be a jock or a talented athlete. It's a sport that's

made for everyone. I've seen people play from 8 to 85."

Bryan and his fellow board member, Steve Gascoigne, spent a recent afternoon in Gascoigne's garage taking in a documentary called "Sticks and Stones: Battle for the Soul of Curling." When they're not playing the game, they enjoy talking about it.

As for his role as the club's ice master, Gascoigne can wax eloquently about how to prepare the perfect sheet of competition ice. He describes the tedious and exacting process that involves various measures of zamming, scraping, mopping, pebbling (twice), watering and nipping.

And if you can't control your stone after Gascoigne and his crew have spent 45 minutes working their magic, more practice may be in order.

The job of a stone hitting its target largely falls on the shoulders of the skip. A typical four-member team includes the lead, second, vice skip and skip. Each player throws two 44-pound stones and the vice skip



Aberdeen Curling Club members Danny Wolfgram, John Hilton, Alex Wolfgram and John Peterson recently completed an "eight ender," which is often compared to a perfect game in baseball.

Curling club contacts

Sioux Falls Curling Club

605-271-7539 www.scheelsiceplex.com

Aberdeen Curling Club

605-228-1717 www.curlaberdeen.com

Rushmore Curling Club

605-484-4477 www.rushmorecurling.org

Yankton Curling Club

(605) 665-0229 www.yanktonice.org

MN Curling Association

www.mncurling.org

stands in when it's the skip's turn to throw. The direction of the stone's path can be altered by sweepers who brush the surface in a way that can make the stone lose speed, gain speed or curl left or right.

The last stone is called the hammer and can be used to earn points with a favorable position near "the button" or knock the opponent's stone out of the target area.

But beyond the technical aspects of the sport or tallying wins or losses, each of the four most active clubs across the state share the same goal of educating the public about the sport and getting younger folks hooked on curling.

Rau, for instance, is a long-time Scout master and is working with his local troop to get the kids involved. He and Gascoigne and other members of the club visit the Boys and Girls club, school groups and others to



Many curling clubs have two common goals: dedicated ice and a desire to teach others the rules and techniques of their sport.

teach youngsters how to play the sport, share their positive experiences and answer their questions.

The same spirit of advocacy is also found at the Yankton Curling Club, which was started last winter by Mike and Julianna Ford along with a small group of other enthusiasts.

Julianna serves as president of the group and fell in love with the sport when she was a high school student in her native Alberta. She describes failing to make the roster of the volleyball and basketball teams but eventually finding a home with the curling squad.

"Our gym class went to the local ice rink and I loved it," she recalled. "It was a lot more strategic than physical and it was something I could compete in."

She later moved to Sioux Falls, married Mike, and the two helped create the existing club in that city. Several years later they moved to Yankton for Mike's work and soon started another club. The Yankton group lists about 45 members and is also heavily involved in growing the sport in their community.

"We're reaching out to schools, clubs and nursing homes," Julianna said. "There are handicapped leagues and elderly people can play by using a stick to throw the stone. It's a sport that's literally for everyone."

The Fords don't often find themselves on different sides of the ice, but when they do they try to keep the competitive fires closer to an ember than a raging flame.

So, bottom line...who's better? "No comment," Julianna said, before commenting with a chuckle, "but I'm the one who went to Arena Nationals.'

Continued from pg 2

Bowdle, Active Farm; Leonard Dosch, Frederick, Active Farm

Reconnects: Jon & Carla Hoffman, Mina, Active Farm; Jensen Rock and Sand, Mobridge, Commercial; Richard Anderson, Long Lake, Residence; Andrew & Lacey Rohrbach, Bowdle, Active Farm; Aaron & Misty Dosch, Frederick, Active Farm

Contracts: Tim Baer, Onaka, Shop; Carson Stotz, Tolstoy, Cattle Barn; East River, Madison, Myron-Hillsview-MOS

Retired Locations: Myron-Fauth, Leola, Vacant Farm; Dean Christianson, Ashley, ND, Pasture Pump

Capital Credits:

Estates: December 2021: None 73 & Older: December 2021: One = \$602.02

Management and staff discussed an error made in paying out Capital credits to ex-spouse after a divorce settlement in the amount of \$1074.00.

Motion by Paula Petersen seconded by Tom Thorpe to make payment to the correct person and seek reimbursement from the past FEM member.

Financial Business: The board acknowledged reviewing the following financial information: Check register for the month of November 2021 contained information on checks #32075 through #32142 and all automatic payments/withdrawals for November 2021 totaling \$297,036.31.

November 2021 financials were reviewed.

Total aid of construction collected to date for 2021 is \$349,422.19.

Annual bad debt write-off: none

Midwest Collections write-off: none

Motion by Tom Thorpe, seconded by Paula Petersen and carried to approve director and attorney fees.

Legal Update: Attorney Vaughn Beck discussed some wording changes to the bylaws plus adding a paragraph to allow members to borrow against their capital credits for economic development.

Motion by Eric Odenbach seconded by Paula Petersen to have attorney Beck make changes, advertise changes, and bring bylaw changes to FEM Electric's

2022 annual meeting June 28, 2022.

Meeting Report: East River board update was given by Gary Bachman. Midwest Annual Meeting was given by Gary Bachman.

Eric Odenbach, Kelly Melius and Paula Petersen all discussed the NRFCA board certification and leadership courses they attended in December.

Tom Thorpe discussed the November SDREA board meeting.

Management, staff and board discussed the short notice SDREA is giving members to review current bylaw changes that are to be voted on at SDREA 2022 Annual Meeting in January.

The board acknowledged the receipt of the Safety Meeting Minutes from November 15, 2021 and Safety Committee meeting November 17, 2021. The board packet also included current accident and near miss reports.

Adjourn: President Gary Bachman declared the meeting adjourned.

BE AWARE THIS WINTER

When you're moving snow, whether in equipment, or by hand, watch for underground cabinets or transformers. FEM linemen have placed red and white 'candy cane' markers next to transformers and cabinets to help identify where they're located in heavy snow, or thick weeds.

Always practice safety around any green box you see. Do not let children play on them, and keep a safe distance yourself. If you see anything unusual about a transformer or cabinet near you, please call FEM to report it.

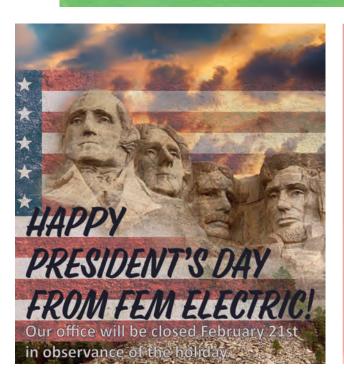
If you damage a cabinet while moving snow this winter, call FEM immediately for repair, and stay clear. Going near a damaged cabinet could be deadly.



Thank you very much for supporting the Tarchstone Energy Scholar of the Week program and for choosing me as the scholar of the week. Thank you for the \$750 scholarship. I will put it towards my college tribion to Earther bether my academics. I am truly honored to reciere this achievement Thatk you once again.

appreciation.

-Trevor Beyers



SCHOLARSHIP DEADLINE

Applications due to FEM office by February 11th, 2022 at 4:30 pm.

Applications are available at local school counselors offices, at femelectric.coop/scholarships, or at the FEM Electric office located at 800 5th Ave. Ipswich, SD, open 8:00 am to 4:30 pm Monday through Friday.

Fill out one application for a chance at one of three scholarships available:

- \$1,000 from Basin Electric Cooperative
- \$500 from FEM Electric Cooperative
- \$500 from FEM Electric Cooperative





At age 77, Dave Dahl of Fort Pierre is nearing the completion of his 2,000th saddle and has no plans to slow down anytime soon. Photos by Billy Gibson

Saddle-maker Dave Dahl of Fort Pierre delights in helping bronc riders bring home championship buckles and purses

Billy Gibson

billy.gibson@sdrea.coop

Dave Dahl will probably never win a hand model contest. Dahl's digits are gnarled, bent and puffy after nearly a half-century of hard labor producing bronc saddles for dozens of rodeo champions.

Dahl is quick to point out, however, that looks can be very deceiving: his mitts are as strong and dependable and productive as they've ever been, seasoned with decades of experience. At the age of 77, Dahl is still going strong creating saddles out of his shop in downtown Fort Pierre. Incredibly, he's still keeping his customary pace of hand-crafting nearly 60 highperformance saddles a year.

"Somebody once said if your hands aren't moving, you ain't making money," Dahl chuckled.

During the last week of December, Dahl was busy dashing out his 56th saddle of 2021. That saddle. commissioned by a Canadian bronc riding champion, was No. 1,924 of Dahl's career. Yes, Dahl does keep count, stamping every saddle that leaves the shop. He's already anticipating reaching the 2,000 mark.

He's considering loaning that milestone saddle to Fort Pierre's Casey Tibbs Museum so that visitors can see the brand that's catapulted dozens of rodeo competitors to the top.

"There's actually two that are marked 1,000," Dahl said. Turns out that Glen

O'Neill ended up with the first one, but then Dahl's daughter Darcy Harper also received a commemorative version for roping events. Incidentally, No. 1,800 is displayed in the North Dakota Rodeo Hall of Fame where Dahl was inducted in 2017 for both his riding and his other contributions to the sport.

The list of riders who have won titles from the swells of a Dahl saddle is endless and includes champions from Alberta to Aberdeen to Australia: CoBurn Bradshaw, Cody DeMoss, Clay Elliott, Chuck Schmidt, Jake Watson, Tom Reeves, Jeff Willert, Taos Muncy, Zeke Thurston, Cort Scheer, Wade Sundell, Kyle Whitaker and so many more that Dahl can hardly keep up. Eight Dahl saddles were at the 2021 PRCA Nationals in Las Vegas.

Pro riders enjoy collecting purses and Dahl delights in helping them reach their goals. He knows how hard it is not only to stay on a spirited bucking bronc

for a few seconds but also how difficult it is to make a dollar at it.

Dahl recalls his own limited days as a card-carrying professional when he won several buckles on the PRCA circuit before taking his saddle-making business full-time in the summer of 1974.

Bronc riding set a fire in Dahl's soul at an early age, growing up on the family farm in Keene, N.D., as one of 11 children. He competed for New Town High School and later went on to claim a national collegiate title as team captain for Black Hills State in 1967. A year after graduating with a bachelor's degree, Dahl also won the South Dakota Rodeo Association's saddle bronc title.

While he taught school for three years, Dahl eventually decided to make saddle-crafting his life's work. Dahl's friend and fellow rider Dick Jones got him interested in the craft and the two set up shop in an old abandoned drug store building next to the bank in Fort Pierre. In 1986, the bank decided to open a drive-through lane so the business moved across the street to its present location where Dahl runs Diamond D Saddle Shop and also manages a western clothing store adjacent to the shop.

Dahl plans on keeping his hands hard at work with no end in sight. He stays





Dahl's phone number is on the speed-dial list of collegiate rodeo coaches in several states across the country. At left, Dahl applies his trademark stamp to one of his saddles.

as busy as ever while participation in rodeo continues on an upward growth trajectory. College rodeo coaches in Missouri, Texas, Oklahoma, California and other states have Dahl on their speed-dial lists. He said he recently received a call from someone wanting him to fit a saddle for her 11-year-old child.

"It's just really a booming sport," he

said. "The training is better, there are better horses, there's better TV coverage of the sport and there's more money out there to be made. There are still a lot of ranch kids who grew up on horses and know how to ride. And they like to compete to see who's the best. There's so much work and I still enjoy it, so I don't plan on jumping out of the saddle anytime soon."

THE FUTURE OF ENERGY STORAGE

A new form of battery storage technology, known as the iron-air battery, could potentially provide long-duration energy storage for hundred of hours. Long-duration energy storage will be crucial for adding more solar and wind energy to the electric grid since renewable energy is dependent on the weather and may not always be available when needed.



New Tech Alert: Iron-Air batteries hold the promise of providing long-term energy storage capability

Maria Kanevsky

As the electric grid continues to evolve, new technologies are being developed to help advance the grid of the future. One of these technologies is a new form of battery storage technology called the iron-air battery, which could potentially provide long-duration energy storage for hundreds of hours.

Current battery technologies can only offer storage for tens of hours, meaning the innovative iron-air battery could provide energy for roughly 10 times longer than existing grid-scale batteries. This new technology could help ensure grid reliability even with extreme weather, such as hurricanes or powerful thunderstorms. Long-duration energy storage will also be crucial for adding more solar and wind energy to the grid since renewable energy is dependent on the weather and may not always be

available when we need it. New iron-air batteries could provide the missing link by storing excess energy to be used when the sun isn't shining or the wind isn't blowing.

The battery technology itself is made up of thousands of small iron pellets that develop rust when exposed to oxygen. This process discharges the battery. When the oxygen is removed, the pellets revert back to iron, which then charges the battery. According to Form Energy, the startup company developing this new technology, this process is known as the principle of "reversible rusting." Since the battery technology mainly uses the abundant and cheap resources of water, air and iron, the technology is relatively low-cost. These resources also make the technology relatively safe since there are no heavy metals, and also make the batteries simpler to recycle.

A key feature of these batteries is their

low cost, with Form Energy promising a price of less than \$20 per kWh. That price is about one-tenth the cost of lithium-ion battery technology, which is currently the cheapest battery technology on the market.

Individual iron-air batteries are about the size of a washing machine, making it easy to group many batteries together into a larger, scalable system. The size of the battery module group can vary, depending on the storage needed at a specific site. This means the batteries can be placed in a variety of areas, from rural to urban, to meet energy needs.

While this technology may be a solution for long-duration energy storage, the battery is not yet ready at the commercial level - although it is close. Form Energy estimates the battery should be ready by 2025.

Given the importance of long-duration energy storage for future of the grid, other start-ups are also looking to develop long-duration battery storage technology.

In the meantime, electric utilities can start to understand where this technology may potentially fit within their own systems to make the grid more resilient.

Electric co-ops hold discussions with lawmakers and community leaders

Billy Gibson

billy.gibson@sdrea.coop

In preparing for the 2022 Legislative Session, electric cooperative leaders from across the state held several local forums to engage in wide-ranging discussions with elected officials.

Representatives from Basin Electric, East River, Rushmore Electric, the South Dakota Rural Electric Association (SDREA) and many distribution cooperatives invited lawmakers and community leaders to engage in a dialogue focusing on the latest developments in the electric utility industry.

Electric cooperatives will continue to participate in meetings and forums throughout the Legislative Session, which is scheduled to conclude on March 10.

Ken Schlimgen, general manager of Central Electric in Mitchell, served as host of the last of the pre-session forums. Schlimgen welcomed the local lawmakers in attendance and went over some of the programs the co-op is pursuing to provide better service to its members.

Schlimgen showed a slide of the cooperative's small solar array constructed outside the headquarters office. He said the array allows the cooperative to offer members a first-hand look at how solar energy works. Members are also shown statistical data on how much electricity the array is producing at any given time.

This kind of real-time information



Ken Schlimgen, general manager of Central Electric based in Mitchell, describes how the cooperative is investing in an electric all-terrain vehicle to educate members about how EVs work and their potential for curbing greenhouse gas emissions. Photos by Billy Gibson

is important for members to understand how renewable resources such as solar and wind produce clean power, Schlimgen said. It's also important for members to understand the limitations of these sources.

"We discovered the first year we had this array that it performed at about 20 percent below the projections that were given by the manufacturer," he said.

Schlimgen also shared photos of the cooperative's Polaris Electric Ranger XP Kinetic UTV. He said the vehicle is rated at 110 horsepower and has a towing capacity of 2,500 lbs.: "This is something we can use on a practical level and also show members when they request more information about electric-powered vehicles."

House Majority Leader Kent Peterson was in attendance and noted lawmakers have considered presenting a bill regarding the licensing of electric UTVs.

"Given the rapid growth of the EV industry, this is something we'll have to consider at some point. It's great to have an opportunity like this to talk with the co-ops directly and get the useful information we need to make the right decisions," Peterson said.

Trevor Jones, general manager of SDREA, previewed some of the legislative issues that could be addressed during the 2022 session, including

issues surrounding the expansion of a network of electric vehicle charging stations and tax exemptions for data centers that consume large amounts of electrical power.

Chris Studer of East River Electric provided an overview of the cooperative's Renewable Energy Credit program. Participating consumers can sign up to receive credits or Green Tags for using renewable energy that comes from several wind farms that supply energy to the cooperative. Studer said the cost of participating in the program can vary among distribution co-ops.

Sen. Josh Klumb of Dist. 20 expressed his thanks to the co-op for organizing and hosting the forum.

"The application of these new technologies is something that will have a direct impact on our citizens for generations to come. In terms of doing our jobs as legislators, there's simply no substitute for this kind of interaction."



Chris Studer of East River Electric details the cooperative's REC Program.



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-connectionsevent-calendar to view more upcoming events.

JANUARY 22

Reba McEntire

Denny Sanford Premier Center, Sioux Falls, SD, 605-367-7288

JANUARY 28-29 Deadwood Pro Snocross

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

JANUARY 28-29

27th Annual Dinner Theater Reliance Legion Hall, Reliance, SD, call 605-730-0553 for more info and tickets

JANUARY 28-31 Lead Winterfest

Various Locations, Lead, SD, call 605-584-1100

JANUARY 28-FEBRUARY 6

Black Hills Stock Show & Rodeo

Central States Fairgrounds & Rushmore Plaza Civic Center, Rapid City, SD, 605-355-3861

JANUARY 29-30 DTGCA Gun Show

National Field Archery Building, Yankton, SD, 605-731-9154

FEBRUARY 4-6 Fiddler on the Roof

Washington Pavilion, Sioux Falls, SD, 605-367-6000

FEBRUARY 5

Lake Hendricks Improvement Association Ice Fishing Derby

Hendricks, MN, contact Tim at 507-828-2113 for registration and more information

FEBRUARY 9-12 Watertown Winter Farm

Show

Codington County Extension Complex, Watertown, SD, 605-886-5814

FEBRUARY 11

Calamity's Shindig

Homestake Adams Research & Cultural Center, Deadwood, SD, 605-722-4800

FEBRUARY 11-12 Bulls & Broncs

Expo Center at the W.H. Lyon Fairgrounds, Sioux Falls, SD, 605-367-7178

FEBRUARY 11-13 Black Hills Sports Show & Outdoor Expo

Monument Arena, Rapid City, SD, visit bhsportsshow.com for more information

FEBRUARY 12

Lakota Games on Ice

3200 Indian Village Road, Mitchell, SD, 605-996-5473

FEBRUARY 12-13 DTGCA Sioux Falls Trophy Show (The Big One)

Sioux Falls Convention Center, Sioux Falls, SD, 605-280-2438

FEBRUARY 18-28

Black Hills Film Festival

Various Locations in Rapid City, Hot Springs, Hill City and Spearfish, SD, visit www.black hillsfilmfestival.org for more information

FEBRUARY 19

Sioux Empire on Tap

Denny Sanford Premier Center, Sioux Falls, SD, visit siouxempireontap.com for more info and tickets

FEBRUARY 25-26

Mardi Gras Weekend

Main Street, Deadwood, SD, 605-578-1876

FEBRUARY 25-27, MARCH 3-5

Making God Laugh

Grand Opera House, Pierre, SD, 605-224-7826

FEBRUARY 26

The Music of John Williams

Washington Pavilion, Sioux Falls, SD, 605-367-6000

MARCH 3-5

The 39 Steps

Orpheum Theater Center, Sioux Falls, SD, 605-367-6000

MARCH 10-13

Annual Sioux Empire Sportsmen's Show

Sioux Falls Arena & Convention Center, Sioux Falls, SD, visit www.sioux fallssportshow.com for more info and tickets

MARCH 12 28 Below Fatbike Race,

Ride and Tour Spearfish Canyon Lodge, Lead,

SD, visit www.28below.com for more info and to register

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