Volts & Jolts

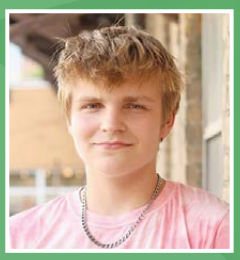
Published monthly for the members of Red Lake Electric Cooperative, Inc.
SERVING THE FOUR-COUNTY AREA OF MARSHALL, PENNINGTON, RED LAKE AND POLK
and a portion of the lands of the Red Lake Band of Chippewa

RLEC
JULY/AUGUST 2022

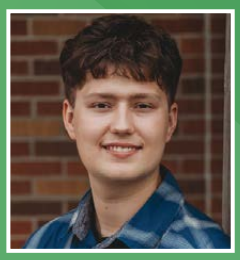
SCHOLARSHIPS
2022 recipients

Each year, Red Lake Electric Cooperative provides scholarships for graduating seniors at each of the high schools operating throughout the cooperative's service area. The recipients are selected by the scholarship selection committee of the recipients' high schools. There were 13 recipients this year with each student receiving $500. The funds for these scholarships come from unclaimed capital credits. **Congratulations and best wishes to these scholarship recipients!**

Annika Christensen
Lincoln High School
Dusti & Cord Christensen



Nick Groven
Goodridge High School
Shawn & Rosaline Groven



Tristan Kalvoda
Lincoln High School
Ken & Tammy Kalvoda and Trish Kalvoda

Chloe McLean
Fosston High School
Chris & Kelsey McLean and Jesse & Augusta Maruska

Brooklyn Melcher
Marshall County Central High School
Tishara & Eric Melcher

Ellie Nesseth
Crookston High School
Benjamin & Brandi Nesseth

Morgan Reed
Greenbush-Middle River High School
Michael & Jennifer Benke and Ron Reed

Jonathan Roue
Red Lake County Central High School
Mark & Renee Roue

Morgan Rude
Lincoln High School
Joel & Laura Rude

Maylie Solberg
Warren-Alvarado-Oslo High School
Brenda & Preston Solberg

Cooper Walton
Grygla-Gatzke High School
Barry Walton & Kerry Carlson

Sarah Wieland
Lafayette High School
Todd & Jennifer Wieland

Skya Wilson
Goodridge High School
Sara & Fred Sorenson and Jeremy Wilson

RLEC Volts & Jolts

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MINNESOTA STATE ELECTRICAL INSPECTORS

Pennington and Marshall Counties:
Ronald Ditsch – 218-779-6758

Red Lake and Polk Counties:
George Stage – 701-306-3511

Any time you or an electrician does wiring or other electrical work at your home or farm, Minnesota state law requires a state wiring inspector to conduct a proper inspection of the work. A rough-in inspection must be made before any wiring is covered. A final inspection is also required. Please visit **www.dli.mn.gov** for more information. The inspectors can be reached weekday mornings between 7 a.m. and 8:30 a.m.

Our Mission Statement

It is the mission of Red Lake Electric Cooperative to enhance the quality of life for people of our service area by safely and consistently providing quality electric service and other valued services while holding our employees, our community and our environment in high regard.

Sounding the alarm on grid reliability

North Dakota, Minnesota at risk of power outages this summer

America's electric grid has become increasingly unstable – and it could begin impacting Minnkota Power Cooperative's members this summer.

That's why Minnkota is joining many of our nation's grid operators and regulators in sounding the alarm on the vulnerabilities that are affecting power reliability. As the pace of change in the energy industry continues to accelerate, so does the risk of rotating power outages and other extended service interruptions. Minnkota's eastern North Dakota and northwestern Minnesota service area is no longer immune to the large-scale grid challenges that have been experienced in Texas and California in recent years.

Minnkota takes its responsibility to provide reliable, resilient and responsible electricity seriously. The cooperative has more than enough generating capacity to meet the demands of its members (including Red Lake Electric) through its coal, wind and hydro resources. But Minnkota does not operate on the grid alone. Utilities across the Upper Midwest are connected through Midcontinent Independent System Operator (MISO). Emergency events experienced in other parts of the MISO region can and do have impacts back into the Minnkota system.

One of the most significant industry issues is the retirement of baseload and dispatchable power plants – including coal, nuclear and natural gas – without adequate replacements. Wind and solar make up the majority of the new resources being added to the grid, but they are limited by the fact that they are only able to operate intermittently – when the wind is blowing or the sun is shining. While Minnkota supports moving toward a cleaner, more sustainable energy future, it is not something that can happen with the flip of the switch. It will take decades of planning and unprecedented technology development to achieve significant carbon reduction.

MISO expresses concerns

Minnkota is not alone in coming to these conclusions. MISO issued a dire warning in April that it does not have enough reliable power plant capacity on its system to meet its projected peak demand this summer. The result is an increasing risk of power outage events.

Minnkota both buys and sells surplus power in the MISO system, which estimates a 1,230-megawatt (MW) shortfall in power plant capacity to meet its reserve margin. For context, one megawatt-hour (MWh) is enough electricity to serve more than 800 homes with an hour's worth of power.

"Due in large part to decarbonization goals set by our members and the states in our region, our resource fleet is increasingly reliant on intermittent and weather-dependent resources," said Wayne Schug, vice president of strategy and business development at MISO. "As this trend continues in the future, MISO needs to evolve the grid, our markets, and our operational capabilities, which is just as complex as it sounds."

In a recent interview in the Wall Street Journal, MISO CEO John Bear added to this point by saying, "As we move forward, we need to know that when you put a solar panel or a wind turbine up, it's not the same as a thermal resource."

MISO's peak demand for electricity typically occurs in the summer months during the hottest days of the year. The organization is conducting training and exercises to prepare for worst-case scenarios and is also implementing lessons learned and best practices. Likewise, Minnkota's energy marketing team is working to ensure it's ready (29250 Brian Metelak) to respond to volatile market and reliability conditions.

NERC issues grim report

The North American Electric Reliability Corporation (NERC) – the federal regulatory entity responsible for the reliability of the nation's electric grid – is also expressing concerns heading into the summer season. According to NERC, MISO is in the "high risk" category, and has the potential of "facing capacity shortfalls in its north and central areas during both normal and extreme conditions due to generator retirements and increased demand."

NERC's Summer Reliability Assessment notes that reliability challenges are being compounded by evolving demands on the power grid, which has grown increasingly complex as renewable energy assets are added.

"There's clear, objective, inclusive data indicating that the pace of our grid transformation is a bit out of sync with the underlying realities and the physics of the system," said John Moura, NERC's director of reliability assessment.

Along with the changing power supply mix, NERC also identified extreme weather conditions, high seasonal demand for electricity, supply chain issues and cybersecurity threats as other risks impacting reliability.

What is Minnkota doing?

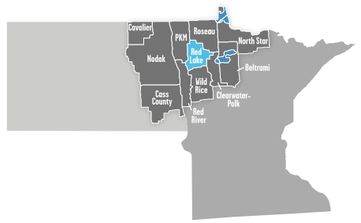
While there are challenges, Minnkota supports efforts to reimagine how electricity can be produced, delivered and consumed. But the implementation of these ideas must be met with caution and common sense. After all, there is a lot on the line. A resilient and reliable electric grid that affordably keeps the lights on is the cornerstone of the American economy and our national security. Any missteps in an energy transition of this magnitude can have irreversible consequences.

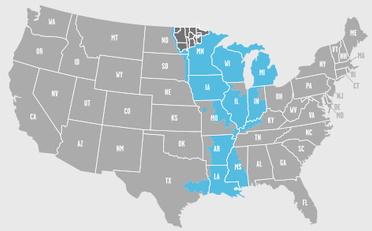
So, what can be done? Minnkota is only one of thousands of utilities across the country, but it is taking its own steps to protect itself from power reliability challenges.

- **Training and education**
  Minnkota's employees are trained to respond to emergency grid events and continuously work to shield members from the volatility of the grid and markets. The cooperative also invests significant time in helping member-consumers, lawmakers, business interests and others in the general public understand the challenges the industry faces and the complexity in providing reliable power to the region.
- **Maintaining a diverse energy mix**
  Minnkota's energy portfolio consists of a diverse mix of coal, wind and hydro resources. Working together, these facilities help ensure 24/7 reliability on the Minnkota system. Coal-based facilities remain the workhorse of the system and are routinely available to produce power during the vast majority of each year.
- **Upgrading our power delivery systems**
  Minnkota is building, upgrading and replacing the power delivery resources that connect its communities. New technologies are being added to Minnkota's grid to provide enhanced data and communication capabilities – all in an effort to respond more quickly to issues and improve overall reliability.
- **Continuous cybersecurity evolution**
  Minnkota continuously works to protect the electric grid from physical and cyber security threats. Energy experts in Minnkota's Control Center monitor the grid 24 hours a day to ensure the safety of the cooperative's employees, infrastructure and data.
- **Strategically utilizing demand response**
  Minnkota has one of the most robust and effective demand response (also called off-peak) programs in the country. Through the program, Minnkota and its members can temporarily control electric heating, water heating and vehicle charging loads – shifting electrical demand when economical resources are not available.

Understanding the grid

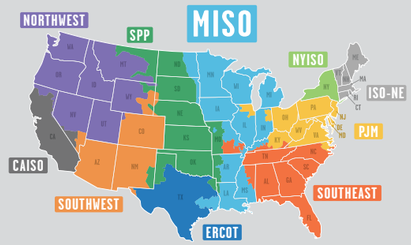
Where you fit into the Minnkota Power Cooperative system





Where Minnkota Power Cooperative fits into MISO
(Midcontinent Independent System Operator)

Where MISO fits into the nation's grids



Numerous storms cause damage to power lines, homes and property

Red Lake Electric experienced a surge of storms throughout our service territory during the months of May and June.

- On Friday, May 9, gusty winds caused our power supplier to lose power at the Oklee substation. This outage event affected about 400 member-owners for about an hour, 9:30 a.m. to 10:30 a.m.

- Friday, May 13, Red Lake Electric had strong storms blow through the center of our service territory, around Thief River Falls. This storm knocked out power to about 700 members beginning at 10 a.m. Red Lake Electric had all crews involved in the restoration and had power restored to all by 8 p.m. Most of RLEC's members had power restored within a couple of hours.

- Another day of strong winds on Sunday, May 29, caused our power supplier to lose power at the Oklee substation, again affecting about 400 members who were without power for two hours, 7:30 a.m. to 9:30 a.m.

- At 4 p.m. on Sunday, June 12, a microburst hit our service territory, southwest of Middle River, causing five broken poles and 300 of our member owners to be without power. Red Lake Electric crews began service restoration shortly after the passing of the storm; they changed out broken poles and were able to back feed the lines. Power was restored to all members by 1:30 a.m.

- A severe thunderstorm with high winds swept through the RLEC service area on Monday, June 20, just before 5 p.m., causing structural damage to both personal property and to Red Lake Electric's power lines.
    - As a result of this storm, Red Lake Electric experienced outages to over 1,000 accounts. Areas affected included Huot, Wylie, Red Lake Falls, Plummer, Brooks, Oklee, Mavie, and Highlanding. Red Lake Electric crews began service restoration shortly after the passing of the storm and suspended their efforts in the early morning. The crews returned to work at 7 a.m. the following morning with help from PKM Electric of Warren, Minn. Four linemen came to assist: Ben Pahlen, Nolan Knott, Brett Klopp and Josh Tutt. While many of our member owners had power restored by 2 a.m., there were still about 70 who weren't restored until the afternoon hours of June 21. In total, there were 20 broken poles from the high winds; 16 of them were three-phase structures and four were single phase.

- June 24, around 8 p.m., yet another thunderstorm with strong winds blew through our service territory. This caused outages to about 300 of our member owners. While most of the members affected were spread from Newfolden to Middle River, we also had scattered outages west of Red Lake Falls, north of Plummer and west of Oklee. Red Lake Electric linemen had all power restored by 2 a.m.
    - June 25-27, a two-man RLEC crew traveled to Wild Rice Electric Cooperative in Mahnomen to help with their outage restoration from the June 24 storm.

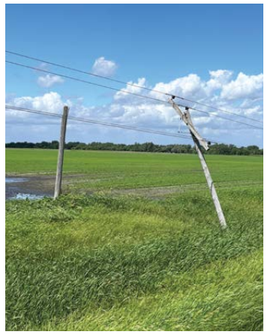
Red Lake Electric would like to thank the members for their understanding and patience during the restoration, and also to those callers who provided information helpful in identifying trees on the line or other electrical problems. Red Lake Electric would also like to recognize those members that allow the cooperative crews to perform meaningful brushing of trees on their property when doing preventative maintenance brushing; it makes a difference in helping prevent outages (21701 Kevin Sanders) when the weather turns bad.

June 12 Storm

Lead lineman Brett Knott operates the Bobcat and hydro-axe attachment to clean up the brush and small trees that are within RLEC's right-of-way easement.

Summer help Will Olson prepares the rigger mats for the truck to replace the broken poles. There were six broken poles along this stretch of line.

June 20 Storm



RLEC had many broken three-phase and single-phase poles in the Oklee area after a severe thunderstorm rolled through the early evening hours of June 20. Pictured is a broken three-phase line near Oklee and RLEC's linemen and trucks replacing the poles.

June 20 Storm

Members west of Red Lake Falls in the Wylie area were without power for approximately 25 hours. RLEC had six broken three-phase poles. The poles were replaced the following day with the help of four linemen from PKM Electric Cooperative.

5 steps to restore power after an outage

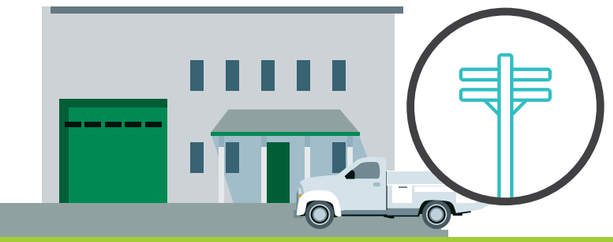
After a major storm or natural disaster causes widespread damage, power outages may extend longer than a few hours. Our line crews work long and hard hours to restore service safely to the greatest number of consumers (28015 Mitch Hemmesch) in the shortest amount of time. If you ever find yourself in the dark, here is what's going on:

1. High-Voltage Transmission Lines

Transmission towers and lines that supply power to transmission substations – and thousands of consumers – rarely fail. But when damage occurs, these facilities must be repaired before other parts of the power supply system can operate.

2. Distribution Substations

Each substation serves hundreds or thousands of consumers. When there is a major power outage, line crews inspect substations to determine if the problems stem from the transmission lines feeding into the substation, the substation itself or issues farther down the line.



3. Main Distribution Lines

Next down the power supply chain, if no problem was found at the substation, are the distribution lines. These lines carry power to large groups of consumers in communities. If power is restored (31370 Adam L Aspen) at this stage, all consumers supplied by this line should regain power.

4. Tap Lines

If local outages still occur, supply lines or tap lines are inspected. These lines deliver power to utility poles or underground transformers outside houses, businesses and schools.

5. Individual Homes and Businesses

If your home is the only one without power, the service line between a transformer and your home may need repairing. Always report an outage to help line crews isolate local issues.

Operation Round Up® Grant Applications due Wednesday, Sept. 21, 2022

Organizations involved in community projects and charities are encouraged to apply for funds from Operation Round Up® at this time. Completed grant applications are due in the Red Lake Electric Cooperative (RLEC) office by Wednesday, Sept. 21, 2022.

Operation Round Up® is a program adopted by RLEC headquartered in Red Lake Falls. Members choosing to "round up" their monthly electric bill payment provide funds for this effort. Today 97% of RLEC members now choose to contribute pennies each month to enhance their communities.

Funds will be donated primarily to nonprofit organizations to help fund specific projects or programs. Since the program began in 1993, $623,791 has been granted to community organizations and charities. Money is donated for the betterment of the community within the outside service area boundaries of RLEC.

The Red Lake Electric Trust Board of Directors determines grants. Board members are Julie Stennes, Thief River Falls; Stacy Bierman, Thief River Falls; Diane Kolstoe, Oklee; Stephanie Johnson, Gatzke; and Bonnie Christians, Crookston.

To apply for Operation Round Up® grants, organizations should contact the RLEC office in Red Lake Falls at 218-253-2168 or 800-245-6068. A short application must be completed and submitted along with a financial statement from the organization.

Grant application forms are available on the cooperative's website: **redlakeelectric.com**

For more information, contact Stephanie Johnson, general manager of RLEC, at **218-253-2168** or **800-245-6068**.

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NOTICE OF NAMES

Hidden within the text of the articles of this issue of *Volts & Jolts* are the names and account numbers of some Red Lake Electric Cooperative members. They will appear within the articles in parentheses as such (9999999.99 Willie Ray Member). If you find your name and account number, clip it out and send it with your next payment. You will be credited with $5 on your electric bill.

Recipe Corner

Submit your recipes to be published in *Volts & Jolts*. Email to info@redlakeelectric.com or mail to: Red Lake Electric Cooperative, PO Box 430, Red Lake Falls, MN 56750-0430.

Frozen S'mores

Layers of chocolate pudding and marshmallow creme make these frozen s'mores the best way to enjoy a s'more on a hot summer day!

Ingredients

- 1 box instant chocolate pudding, 6 serving size
- 2.5 cups cold milk
- 16 graham crackers
- 7 oz marshmallow creme
- 4 oz cream cheese, softened
- 8 oz frozen whipped topping, thawed

Instructions

1. Line a 9×13 pan with foil or parchment paper, allowing paper to overhang pan.
2. In a medium bowl, whisk together pudding mix and milk until smooth and creamy. Pour into 9×13 pan and spread into an even layer.
3. Chill pudding layer while you mix up the marshmallow layer.
4. In a medium bowl, beat together cream cheese and marshmallow cream until smooth. Fold in whipping topping.
5. Spread marshmallow layer over chocolate layer. Cover with foil.
6. Freeze layers about 6 hours, until firm enough to cut through (freezing time will vary depending on how cold your freezer is). Use the foil or parchment paper to remove layers from 9×13 pan and place on a cutting board.
7. Break 15 graham crackers in half. Slice pudding/marshmallow layers into 15 squares the same size as the graham crackers. If your layers have frozen very hard you may want to wait 15 minutes before slicing.
8. Sandwich layers in between two (24470 Ray Fisher) graham crackers.
9. Eat right away or store sandwiches in the freezer in an airtight bag or container. Graham crackers will soften slightly if stored in the freezer for a while, and I think that makes these taste even better. After they've been frozen, allow them to rest at room temperature 15-20 minutes before eating for the best texture.

Red Lake Electric Cooperative

6 WAYS TO SAVE ON YOUR SUMMER ELECTRICITY BILL

The summer heat can sometimes feel impossible to beat. Your air conditioner (A/C) is working overtime to try and keep your home or business cool and comfortable. The harder your A/C is working, the higher your electricity bill could be. Help out your home and your wallet by trying these six simple ways to save on your summer electricity bill.

CHECK YOUR AIR CONDITIONER

Regularly inspecting your A/C unit can ensure it is functioning as efficiently as possible. Vacuum air vents regularly to remove dirt, dust and pet hair build-up. Replacing a dirty A/C filter every month or two can lower your energy usage by up to 15%. If you suspect your A/C unit is in need of service, be sure to reach out to a certified HVAC technician.

UTILIZE YOUR CEILING FANS

Don't let the savings a fan could offer breeze past you! A ceiling fan works great when paired with your A/C unit. The wind chill effect created by a fan (20642 Aaron Baldwin) allows you to keep your thermostat four degrees higher without a change in comfort.

AVOID USING YOUR OVEN

You heard us right! A conventional oven can heat a house or apartment and force your A/C to keep up. This summer, bust out the crockpot and fire up the grill to enjoy some delicious summertime meals while also saving on your electricity bill!

CLOSE YOUR BLINDS

The best thing you can do to avoid sunbathing in your living room is to keep the blinds closed on southern- and western-facing windows. Open northern-facing windows to allow natural light into your home without heating it up.

SWITCH TO LED LIGHT BULBS

An LED light gives off significantly less heat and uses 75% less energy than incandescent bulbs. Soak up those cool savings by switching your home or business over to LED bulbs.

UNPLUG

If you aren't using it, unplug it. Computers, toasters, gaming devices and other gadgets all generate a small amount of heat in a room. Unplug to save on your electricity bill all year-round.