

VOLTS & VIEWS

Roseau Electric Cooperative, Inc.
A Touchstone Energy® Cooperative

JANUARY 2021

“The Way We Worked” exhibit showing at Roseau County Museum



The Roseau County Museum will be open starting Tuesday, Jan. 19. Regular hours are 9:30 a.m. to 5 p.m., Monday through Friday. All visitors are asked to follow COVID-19 procedures and regulations to keep everyone safe.

Roseau County Museum is featuring “The Way We Worked,” a traveling exhibition from the Smithsonian’s Museum on Main Street (MoMS) program. The exhibit will be on display in Roseau Jan. 19 through March 13, 2021.

Work and the workplace have gone through enormous changes between the mid-19th century, when 60% of Americans made their living as farmers, and the early 21st century. “The Way We Worked” celebrates the history of work in America. It tells the stories of how hardworking Americans of every ethnicity, class, gender and age power the nation. “The Way We Worked” brings to



light the who, what, where, why and how of Americans at work. It explores the places Americans worked, from farms to factories and mines to restaurants, as well as in homes. It examines not only the effects of technology and automation, but also how workers striving for better working conditions, wages and hours, and an end to racial and gender discrimination, changed America’s work history.

The exhibition illustrates how America’s workforce is as diverse as the nation itself. Dreams of new jobs and opportunities led millions to America’s shores. “The Way We Worked” provides some answers to why people work – from simply paying the bills to pursuing a calling, serving the country and giving back to the community. It explores what work tells people about each other.

Whole communities may become known by the work that happens there, like Idaho’s Silver Valley with its strong mining heritage.

The Roseau County Historical Society & Museum is pleased to be able to bring “The Way We Worked” to our area. The staff has also incorporated several new exhibits showing how Roseau County worked through the years to build the land, homes, schools, industries and more.

Admission to the museum is free. The museum will have special Saturday hours while the exhibit is on display, starting Feb. 6, from 11 a.m. to 4 p.m.

For more information, visit the Roseau County Museum website at roseaucohistoricalsociety.org, Facebook at <https://www.facebook.com/roseaucomuseum/>, or call 218-463-1918.

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OFFICERS AND DIRECTORS

Chairman Mark Sax
Vice Chairman Jim Hallan
Secretary-Treasurer Wes McFarlane
Directors . . . Roger Amundson, Brian Grafstrom
Shawn Gust, Dale Moser,
Mike Wahl, Ed Walsh
Tracey Stoll General Manager
Ryan Severson Assistant Manager
Mike Millner Line Superintendent
Jeremy Lindemann Member Services
Alex McMillin Office Manager

Regular Business Hours: 8:00 a.m. - 4:30 p.m.

Phone (218) 463-1543

OUTAGE CALLS:

Toll-Free 1-888-847-8840

MINNESOTA STATE ELECTRICAL INSPECTORS

7 a.m. - 8:30 a.m. (Mon. thru Fri.)

Northwest Angle, Kittson, Marshall,
Pennington and Roseau Counties
and parts of Beltrami County:

Ronald Ditsch – 218-779-6758

Lake of the Woods County:

Curt Collier – 218-966-5070

Inspector list is subject to change at any time.

The State of Minnesota has high wiring standards, which are in the best interest of you and your family or business. Improper wiring can damage your home, your property and equipment, and injure or kill the people you love. Currently, the state does allow homeowners to do their own residential wiring; however, it is critical that the current electrical code is followed. 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. For more information visit dli.mn.gov and go to the electrical page.

Gopher State One Call
1-800-252-1166 or 811
www.gopherstateonecall.org



Anyone who plans to dig is required by law to notify the state of their intentions at least 48 hours in advance. All digging requires the 48-hour notification so that buried telephone line, television cable, pipelines, utility electrical lines, municipal water and sewer lines can be located to ensure that none will be severed or damaged.

OUR MISSION STATEMENT

Roseau Electric Cooperative is committed to providing its member-owners low-cost, high-quality, safe and reliable electricity with friendly, efficient and knowledgeable service.

This institution is an equal opportunity provider and employer.



Admitting you're wrong

Tracey Stoll, General Manager

Your board of directors met in late December and approved the 2021 operating budget at \$18.5 million – one-third of one percent higher than our 2020 operating budget of \$18.4 million. This budget reflects some of the upward pressures we'll feel on the wholesale rate structure beginning in April. At our next board meeting scheduled for Jan. 27, we will look back on 2020 full-year results, while focusing on any retail rate structure changes needed for 2021.

December energy sales were not as strong as I had hoped. Your cooperative counts on a good January, February and December to generate over 30% of the year's revenue. Decreased usage due to warmer weather, paired with decreased usage due to better efficiency of heating systems, resulted in a new 20-year-record low of 35.5 million annual off-peak kWh sold. Our previous low was 37.2 million annual off-peak kWh sold in 2016.

We continue to believe we are offering a good – and necessary – product at a reasonable price, and we back that up with appropriate rebates for upgrading your existing heating system. Call and talk to Lori or see our website for more information on what qualifies for rebates.

Finally, I'll submit that it takes a little fortitude, especially these days, to commit thoughts to paper. As I write this month's column, I'm reminded how easy it is to be sure of something one day, and not so confident just days later. Case in point – my confidence in last month's article on holding the line on 2021 retail rates is just as (okay, almost as) strong today as when I wrote about

it last month, BUT, with the December we had, I'm going to have a harder time convincing the board.

My parents taught me early in life to not be afraid of admitting you're wrong. I've had teachers throughout life, in school and out, who've said, "If you're never wrong, you're not trying hard enough." Some wrongs are small miscalculations, while others skew to the premeditated, emotionally driven, "I'm right, you're wrong," line-in-the-sand attitudes we continue to see in our personally offended, pandemic-panicked, political culture.

Wherever you fall on the recent civics lesson we've been watching play out in front of us, remember that your friends, neighbors, kids and grandkids are watching. Never be afraid to admit you're wrong. There are few things so defusing and peacemaking is taking that path, and it really costs you nothing in the end.



**Grant Application
Deadline Feb. 28, 2021**

To be considered
at the March 2021 meeting,
grant applications must be received
by **Feb. 28, 2021.**

Grant applications are available
at the REC office or by visiting our website
at www.roseauelectric.com.

2021 director elections

PETITION DEADLINE MONDAY, FEB. 1, 2021

Roseau Electric Cooperative, Inc., is organized as a cooperative and is owned by its members. The membership elects a board of directors to represent them in the operation of the cooperative.

Four directors will be elected at the 2021 Annual Meeting scheduled for April 10 at the Roseau School Theater in Roseau. The directors whose terms expire in 2021 are: James Hallan, District 1 (3-year term); Dale Moser, District 3 (to fulfill remaining two years of a 3-year term); Ed Walsh, District 6 (3-year term); and Mark Sax, District 9 (3-year term).

Nomination by petition

No nominating committee will be used. All nominations will be done by petition, including the incumbents.

Any 10 or more members who reside in Districts 1, 3, 6 or 9 may nominate an eligible member for a director position in that district. No member may be elected to a director position unless nominated in this manner. No write-in ballots shall be accepted.

Petition forms are available

Director candidates must pick up a petition and a director packet at Roseau Electric Cooperative, Inc., in Roseau. The packet contains additional forms that must be signed and turned in before the deadline.

Petition deadline

The cooperative must receive the completed petition no later than the close of business at 4:30 p.m. on Monday, Feb. 1, 2021.

Petition for Nomination

The following members wish to nominate [insert name] for the three-year term in Districts 1, 3, 6 or 9 [insert "District 1, 3, 6 or 9"] director position, and to place such name on the ballot for the April 10, 2021, election at the annual meeting of the Cooperative, in accordance with Article III, Section 5, of the by-laws.

PRINTED NAME	SIGNATURE	CUSTOMER NO.
1.		
2.		
3.		
4.		
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9.		
10.		
11.		
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19.		
20.		

The Cooperative must receive the completed petition no later than the close of business Monday, Feb. 1, 2021. At the annual meeting scheduled for April 10, 2021, elections will be held for Districts 1, 3, 6 and 9.

The directors whose terms expire in 2021 are as follows:

DISTRICT 1 3-year term	DISTRICT 3 2 years of a 3-year term	DISTRICT 6 3-year term	DISTRICT 9 3-year term
James Hallan	Dale Moser	Ed Walsh	Mark Sax

Any 10 or more members who reside in Districts 1, 3, 6 or 9 may nominate an eligible member for a director position in that district. No member may be elected to a director position unless nominated in this manner. In the event of joint membership, only the signature of one joint member shall be acceptable.

So, you want to be a director

Objectives:

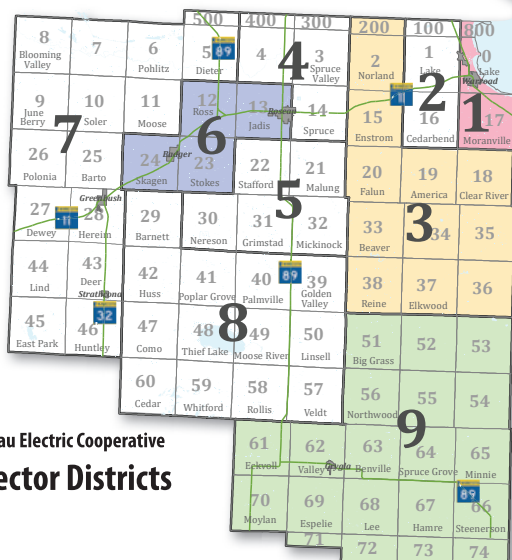
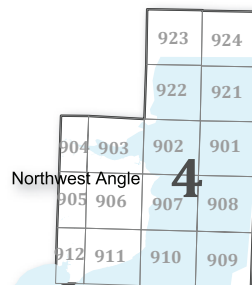
- ▶ To establish relationships between the board, the membership and the manager
- ▶ Define principles and practices
- ▶ Delegate authority
- ▶ Analyze operations

Meeting attendance requirements:

- ▶ **Monthly board meetings:**
Board meetings are held 12 times per year, usually the fourth Wednesday of the month, 9 a.m. to 2 p.m.
- ▶ **Other meetings:**
Roseau Electric annual meeting; Minnkota annual meeting; MREA district meetings; other meetings to learn policies and procedures of the electric industry. Expect five to 12 extra days per year.

Duties and Responsibilities

- Report to the membership.
- Hire and delegate authority to the manager.
- Maintain legal entity and practices.
- Review and update bylaws.
- Require a continuous member and public relations program.
- Keep informed and grow in skills of the program.
- See that members are informed of operations.
- See that accurate minutes are prepared and maintained.
- Consider and adopt plans for objectives and goals.
- Review and update policies.
- Examine and approve annual budget and cash flow.
- Review and approve a sound financial plan.
- Establish policies and programs for good employee relationships.
- Assist in planning meetings.
- Establish special or standing committees.
- Review responsibilities of board and manager.
- Approve the selection of consultants and attorney.
- Establish measures and controls to determine effectiveness of management.
- Authorize and review annual financial audit.
- Implementation and enforcement of this position description is the responsibility of the board of directors.



Syncing the sound

Minnkota, your cooperative's wholesale power supplier, works to enhance and improve demand response system

There are soundwaves hidden beneath the gentle hum of Minnkota's power delivery system that engineers and technicians work tirelessly to perfect. They turn dials, tweak settings and monitor signals pulsing through the cooperative's ripple injectors in hopes of finding a perfect harmony.

There was a lot of buzz in 2020 around Minnkota's ripple injection system – the unique set of equipment that drives the cooperative's demand response program. Two ripple injectors were replaced with new equipment, custom communication technologies were deployed and a full-system sync was performed for the first time in nearly 50 years of operation. This work will inform one of the most thorough review and modeling efforts on all 17 ripple injectors in the Minnkota system.

"This is our first time really looking at the entire system, not just making fixes at one or two sites," said Kasey Borboa, electrical engineering supervisor. "If you can imagine throwing 17 soundwaves all together and trying to line them up at dif-

ferent distances, that is exactly what we're doing."

Ripple injectors send tens of thousands of electronic signals throughout the entire transmission system and into the distribution system. Receivers plugged into standard electrical current at homes and businesses can read the signals, and when the appropriate message is sent, the receivers interrupt the electric power flowing to an electric heating system, water heater or other controllable load. When control is no longer needed, a signal is sent to turn the electric system back on.

All injectors need to work together and fire at approximately the same time to ensure the signal reaches across the entire 35,000-square-mile system served by Minnkota and the membership. The process of tuning and syncing the injectors is a combination of art and science.

"Tuning an injector is like tightening the strings of a musical instrument to make sure it vibrates at a certain frequency," said Nick Gellerman, Minnkota's lead engineer on the project. "Syncing all



the injectors together is like coordinating an orchestra and making sure that your violins, drums and other instruments are all playing at the same time."

Two-way communication

Minnkota became a pioneer of demand response in the early 1970s when the ripple injection system was built. Since then, the program has become one of the most successful and unique in the country with more than 55,000 consumers participating. By reducing the demand for electricity during peak usage times, Minnkota is able to avoid purchasing costly excess power from the wholesale market, which saves money for the membership.

While many utilities use radio or Wi-Fi to send their demand response signals, Minnkota has committed to the ripple injection system because the infrastructure is in place and it has proven to be highly reliable through harsh winters and sweltering summers. Historically, the challenge has been that the system was only designed to provide one-way communication.

Borboa said that countless vendors were asked to develop a device that would provide additional data and two-way communication. There were few takers, and those who were interested required



(Left to right) Joe Hensel, Patrick Rickenbacher, Nick Gellerman, Jared Thompson and Jason Bjerke work together to tune the new ripple injection system at the Wilton substation from the adjacent control house.



Surrounded by the northern Minnesota woods, Jason Bjerke, Minnkota senior technical maintenance technician, adjusts ripple injection equipment at the Wilton substation.

a substantial research and development investment from Minnkota with no guarantees of success. Instead, Borboa decided to ask Gellerman if he could design a solution.

Although there was no instruction manual or template to follow, Gellerman delivered the ripple monitor device, which is fondly referred to as the “Gellermeter” in some circles at the cooperative. The equipment measures the system’s signal strength and communicates that data back to the cooperative’s control center.

Information gathered from the ripple monitors is being used to develop a demand response system model that will help identify signal issues and determine the potential effects of a transmission line failure or ripple injector malfunction. It will also determine if ripple injectors need to be moved to different substations or if new equipment should be purchased.

“Now we know what the signal is doing at the end of the line and what the consumers are likely seeing,” Borboa said. “We have a much better sense of how different outages effect certain signal levels and when system changes are occurring.”

“It’s been a pretty fun project,” Gellerman said. “It’s unlike any of the other projects we do around here.”

Minnkota technicians have installed ripple monitors at 50 substation sites and,

over the next few years, plans are to have the devices at nearly all 255 substations. Having consistent data from the field will help ensure the system is performing reliably.

“The ripple monitors help us tremendously,” said Jason Bjerke, senior technical maintenance technician, who has worked on building and installing the devices. “Now we know what is happening across the system. If the co-ops are seeing issues, we can call that ripple monitor and find out what’s going on.”

Legacy system

Over the last five years, Minnkota has replaced 10 of the 17 injectors with new equipment, including the West Fargo 69-kV injector and the Wilton (Minn.) 115-kV injector in 2020. Plans are to have all injectors replaced by the end of 2024.

With little access to vendors or experts in the United States, Minnkota purchased the injectors from a Swiss company and works with Solutec’s Patrick Rickenbacher. Even in a pandemic, Rickenbacher’s critical infrastructure worker designation allowed him to travel from Switzerland to the United States and, after following proper quarantine and self-monitoring requirements, help with the new injector installation at Wilton substation this fall.

Rickenbacher said the uniqueness of Minnkota’s system provides a learning experience for him as well.

“I’m impressed with the size of this system,” Rickenbacher said. “In Europe, you have a city that has its own ripple control system. The radius is about 10 miles at most. This system is much different and the injection level is much higher, but that makes it more interesting to work on.”

– Reprinted from *Minnkota Messenger*



Gellerman (left) and Kasey Borboa inspect the inner workings of the ripple monitor device that Minnkota custom developed and builds in-house.

Winter storm preparation

Snow and ice are inevitable when dealing with winter storms, but being prepared can make a world of difference.

Winterize your home

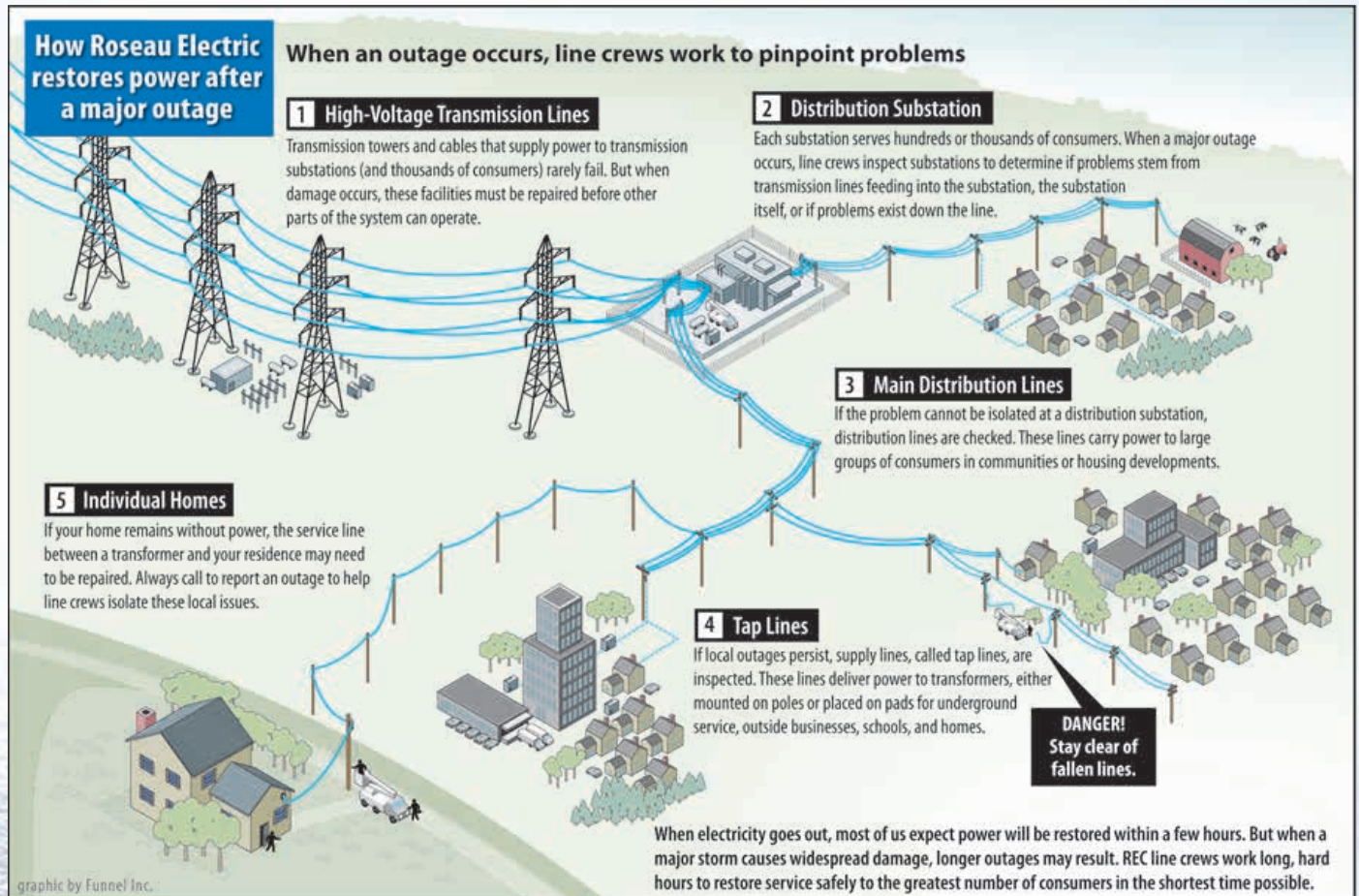
Winter storms wreak havoc on your home. By winterizing your living space, you'll be prepared for extreme cold and hazardous conditions.

- Remember to maintain and inspect heating equipment and chimneys every year to ensure they're working safely and properly.
- Caulk and weatherstrip doors and windows to make the most of your heating system.
- Freezing temperatures often cause water pipes to burst. Remember to insulate pipes with insulation or newspapers and plastic. Allow faucets to drip during extreme cold to avoid frozen pipes.
- Consider installing storm windows for better insulation. You can also cover windows with plastic (from the inside) to keep the cold out.
- Make sure everyone in your family knows where the home's fire extinguisher is located and how to use it properly. House fires occur more frequently during winter months, as people tend to use alternative heating methods that may not be safe.

Prepare a winter survival kit

Severe winter storms often bring heavy accumulation of ice and snow, which can lead to downed power lines and extended outages. Roseau Electric Cooperative crews will work hard to restore power, but having a winter survival kit on hand is a smart idea.

- **Food:** Store food that does not require cooking, such as canned goods, crackers, dehydrated meats and dried fruit. Keep a large supply of water on hand. **Ready.gov** recommends five gallons per person.
- **Medication:** Be sure to refill all prescriptions in the event of a major power outage.
- **Identification:** Keep all forms of identification handy, such as driver's licenses, photo IDs and social security cards. Bank account information and insurance policies are also good to have on hand.
- **Other items:** First-aid kit, blankets, flashlight, battery-powered radio and extra batteries.



Problems paying your electric bill?

Energy assistance may be available!



If you are receiving a low income or suffering from a temporary financial shortfall, the following agencies may be able to assist you with your electric bill. We urge you to contact them immediately to avoid disconnection if you feel you are eligible for aid.

Northwest Community Action

PO Box 67
Badger, MN 56714-0067
(218) 528-3258 or 800-568-5329
northwestcap.org

Bi-County Cap, Inc.

6603 Bemidji Ave. N
Bemidji, MN 56601-8669
(218) 751-4631

member connection

ENERGY TIP

Do away with drafts. If you're not careful, the winter chill can seep in under doors, around windows and even through electrical outlets. Drafts not only make it harder to properly warm your home, they also can eat away at your heating budget; install weatherstripping and proper insulation to help keep the cold at bay.

SAFETY TIP

Keep all electrical and extension cords out of reach of children and pets.

QUOTE OF THE MONTH

"Character is what we do when we think no one is looking."

- H. Jackson Brown, Jr.

DATES TO REMEMBER

Jan. 18 - Martin Luther King Jr. Day

Jan. 21 - Electric bill is due

LOOKING AHEAD:

**Annual Meeting
Saturday, April 10, 2021**

Districts 1, 3, 6 & 9 are up for director elections:
James Hallan, Dale Moser, Ed Walsh and Mark Sax.

OFFICE HOURS

Monday-Friday 8 a.m. - 4:30 p.m.
Phone 218-463-1543

AFTER HOURS/OUTAGE NUMBER

Toll-free 1-888-847-8840
(main outage call center)

CALL BEFORE YOU DIG
1-800-252-1166 or 811

PAY BY PHONE - 1-877-999-3412

SMARTHUB

<https://roseauelectric.smarthub.coop/>

WEBSITE

www.roseauelectric.com



LIKE US ON **FACEBOOK**
TO STAY UP TO DATE!

RIDE WITH CAUTION

BEWARE OF GUY WIRES

Watch for guy wires - the cables that anchor power poles. Electrical transformer boxes can also be hidden by snow. Driving at a safe speed will help you identify and avoid them before it's too late. If you see damaged electrical equipment, stay away and call us immediately.

OPERATING STATISTICS

	Monthly		Yearly	
	Nov. 2019	Nov. 2020	Nov. 2019	Nov. 2020
Members	6,541	6,563	6,541	6,563
kWh purchased	16,294,401	14,292,535	143,617,750	140,613,899
% change		-12.29%		-2.09%
Revenue	1,880,021	1,672,286	17,453,559	17,259,857
Cost of power	1,113,269	1,005,568	10,604,469	10,340,254
Other expenses	472,852	611,709	6,052,370	5,602,789
Operating margins	293,900	55,009	796,720	1,316,814
Nonoperating margins	14,736	(3,714)	66,243	135,391
Patronage dividends	-	-	223,431	25,260
Total margins	308,636	51,295	1,086,394	1,477,465

HAPPY
NEW
YEAR

May the New Year
bring peace,
health and happiness
to you and your family.



A fresh, light snow was falling as this picture was taken last month at the Diedrich and Tera Heppner residence. Their granary and vintage truck are decorated throughout the year as the seasons change. Their fall décor includes seasonal harvest items making for wonderful photo opportunities. The Christmas lights are a beautiful display, just on the outskirts of east Roseau along State Hwy 11.