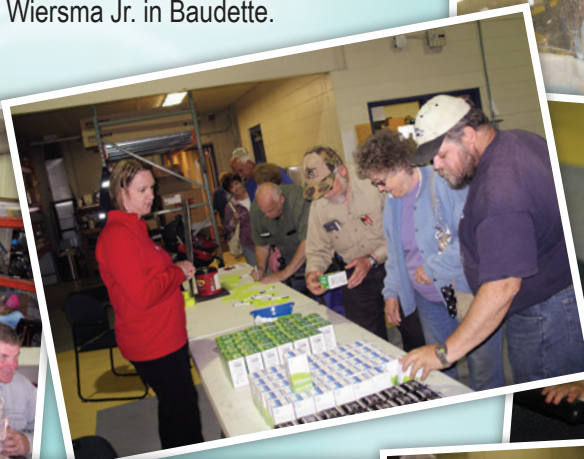


Member Appreciation Days

We were pleased with the turnout at our 16th annual Member Appreciation Days. In Littlefork we had 134 members register and 24 kids, and in Baudette we had 125 members register and 21 kids. Winners of the cart grill/roastisserie and cover were Darlene Obermaier in Littlefork and Linda Firl in Baudette. The Lock-N-Go grill winners were Teresa Sims in Littlefork and Cristal Cole in Baudette. For the kids' drawing, the scooter winners were AJ Knaeble in Littlefork and David Wiersma Jr. in Baudette.



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JULY 2018

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Online billing information available via SmartHub app.

Electrical after-hours emergencies
1-888-6OUTAGE (1-888-668-8243)
or 634-2603
e-mail us at nsec@wiktel.com
Visit our website at
www.northstarelectric.coop

North Star Electric Cooperative, Inc. MISSION STATEMENT

To improve the lives of our member-owners and community by responsibly providing clean, affordable, electric energy and other beneficial services while maintaining the very highest standards of performance and member satisfaction.

This Institution is an equal opportunity provider and employer.

DIGGING SOON?



One free, easy call gets your utility lines marked **AND** helps protect you from injury and expense. Safe digging is no accident:

ALWAYS CALL 811 BEFORE YOU DIG.

Highlights from the BOARDROOM

These are the highlights from the board of directors' May 9, 2018, meeting. All board members were in attendance. In addition to routine motions, the board voted to approve the inventory adjustment as a result of the annual reconciling of inventory, to accept the 2017 IRS Form 990 for filing, to authorize General Manager Ellis or Operations Manager Mollberg to sign DNR permit applications on behalf of the cooperative and to approve management's continued research of a new AMI (Advanced Metering Infrastructure) system.

Staff reports included the safety report, safety and MAYDAY training, the financial report, the annual inventory reconciliation, review of the IRS Form 990, DBS capital credits, AMI infrastructure, Limited English Proficiency (LEP) requirements, loan funds advanced from Rural Utilities Service (RUS), upcoming membership appreciation days, scholarships at the local high schools, new services and upgrades,

line inspection, summer work plan projects, work order inspections, outages, strategic planning and electric rates.

Visiting guests included Gerad Paul, general counsel and vice president for legal affairs of Minnkota Power Cooperative, and Lowell Stave, vice president and chief operating officer of Minnkota Power Cooperative. Mr. Paul provided the board with a presentation on fiduciary responsibility.

Board reports included information from the Roseau Electric Cooperative and Beltrami Electric Cooperative annual meetings, as well from the Cooperative Network Day at the Minnesota State Capitol.

Detailed minutes are available at the cooperative for member review. Regular board meetings are generally held the first Wednesday of every month. If you wish to speak with the board or have an item that you would like to have placed on the agenda, please contact Manager Ann Ellis at least two weeks in advance to be included on the agenda.

Keep utility poles clean



We all have seen or hung up posters of missing pets, upcoming garage sales and other miscellaneous announcements on utility poles. While it may seem like a harmless act, with no malice intended these little pieces of paper can cause big harm to utility workers and are illegal in many areas.

Utility workers are tasked with climbing those same utility poles to work around power lines that carry 7,200 or more volts of electricity (362-29-010-03, Derek Olson). Foreign objects such as staples or nails embedded in the pole can lead to the utility worker snagging or getting a hole in their gloves.

Those gloves are meant to insulate workers from high voltage and protect them from being electrocuted.

Hunting stands and basketball hoops are other items that have been found attached to utility poles. It is extremely dangerous for utility workers, yourself and anyone who uses these items. Keep as much distance between yourself and overhead power lines

(article continued on following page)



Ann Ellis
General Manager

MANAGER'S REPORT

Outage phone number

If you have one of our light-bulb-shaped magnets on your fridge, I suggest you cross out the **634-2603** phone number



and use only the toll-free number to report **AFTER HOURS** outages.

Calling **888-6OUTAGE (888-668-8243)** sends your call directly to our new after-hours outage dispatchers. They are able to handle many calls simultaneously, compared to the busy signal you may get with our local number. To speed up your call, have your ten-digit account number ready for them. The first eight digits identify your location. The last two digits identify which person lived there in the past so we can make sure that when we pay capital credits, the money goes to the right person.

If you have more than one service, be sure the dispatcher knows which service is out of power. They will also ask if you'd like an automated call-back when we think your power is back on just in case you have a separate outage of your own.

We do our best to make any outage as brief as possible, and we are always looking for ways to improve our service to you. So, have you added this phone number, along with your account number(s), to your cell phone's Contacts yet?

It's fair time!

We will have our booth at both the District Fair in Littlefork and the Lake of the Woods County Fair. We hope

you stop by, spend time admiring the exhibits, have fun with all the activities the fair board has planned and, of course, enjoy all of your fair-food favorites! I'd like to thank the fair board members and all who bring in their exhibits. It is a lot of work, but certainly appreciated!

Fair time is also a great opportunity to visit with legislators. When you are walking by their booths at the County Fair, and you see a legislator a few steps away, what do YOU do? Do you not make eye contact because you don't want to seem like you are picking sides? Or maybe you think talking politics is divisive – it sure can be, but it sure doesn't HAVE to be. You know, there is no better time than at the fair to share your thoughts on issues that are important to you. If people avoid talking about issues with their legislators, how can we expect them to read our minds? Your cooperative employees and directors talk to our area legislators about keeping your electric bills affordable, but there is strength in numbers. If you don't know what to say, you could thank them for helping the rural electric cooperative that you own to avoid harmful legislation. Our area legislators get it, and they need to hear how much we appreciate it when they have our back, because sometimes it is a tough fight for them.

Thank you!

In closing, I'd just like to express our gratitude to our members who have been approached about the need to cut their right-of-way. Thank you for working with your linemen to keep the lines accessible, to keep the power reliable and, above all, to keep everyone safe.

At your service we remain...

Ann

Keep utility poles clean (continued from previous page)

when doing any outdoor activity. Satellite dishes have also been found attached to utility poles. This is not only a hazard for utility crews, but also for the dish installer; and under no circumstance should satellite dishes be attached to utility poles.

There's also a public safety risk that comes with posting signs and other items on utility poles. Nails, staples and other materials put into wooden utility poles can cause poles to deteriorate more quickly. This can reduce their structural integrity and stability, increasing the risk for the pole to fall over when struck by a vehicle.

"Fallen poles mean power outages, which at the very least are an inconvenience," says Molly Hall, executive director of the Energy Education Council. "Utilities must spend valuable resources on repairing or replacing damaged utility poles." Downed lines also create dangers for pedestrians and motorists. If you see a downed power line, stay away and call 911.

Keep yourself and those in your community safe by not posting or hanging anything on utility poles. Find other alternatives to post in your community, such as yard stakes or online community groups.

For more information on staying safe around power lines, utility poles and electricity, visit SafeElectricity.org.

COME SEE US AT THE

FAIR!

Lake of the Woods, Baudette

July 11-14!



A RARE OPPORTUNITY

ND is a new frontier in vital rare earth element research



Dr. Dan Laudal, major projects manager with the UND Institute for Energy Studies, and Dr. Steve Benson, president of Microbeam Technologies, show core samples they are studying as part of a project to extract rare earth elements from North Dakota lignite.

North Dakota is sitting atop enough lignite coal to generate electricity for the next 800 years.

Researchers in the state see even more potential.

Lignite contains high concentrations of rare earth elements – ingredients that are essential to bringing most of today’s modern technology to life. Each coal seam could produce the key components needed to manufacture smartphones, wind turbines, electric vehicles and computer hard drives, among other things.

Dr. Steve Benson, president of Microbeam Technologies (MTI) in Grand Forks, N.D., and Dr. Dan Laudal, major projects manager with the Institute for Energy Studies at the University of North Dakota, are leading research to find economical methods to extract rare earth elements from lignite.

“Rare earth elements are basically thought of as a vitamin for materials development,” Benson said. “They’re used in multiple applications that are essential to our everyday life and there are challenges associated with the resources that are available.”

Benson said the United States imports 100 percent of the rare earth elements it needs. China controls 85 percent of the world’s mining, as well as the entire value chain to refine and process the elements (363-03-101-15, Fredrick Rudd). Benson said North Dakota lignite has an opportunity to reduce the country’s dependence on importing the elements, which have become vital in many military applications.

“This is really an issue of national security,” Benson said.

Lignite coal can produce all 16 rare earth

elements, including europium, dysprosium, erbium, terbium, neodymium, holmium, scandium, lutetium and yttrium, among others. Research has shown that most of the elements accumulate in top and bottom of the coal seam.

“Certain parts of the lignite coal have some of the highest levels of rare earth elements we’ve seen in the United States,” Benson said.

Energy experts

UND’s Institute for Energy Studies is leading the project in collaboration with MTI, Barr Engineering, Pacific Northwest National Laboratory and MLJ Consulting. Industry partners, including Minnkota Power Cooperative, North Star Electric Cooperative’s wholesale energy provider, have also stepped up to sponsor the research.

Benson and Laudal bring a tremendous amount of knowledge specific to the project. Benson has 40 years of energy research experience, including projects in the 1980s identifying rare earth elements in lignite. Laudal has been completing energy research for the last decade, and recently earned his Ph.D. focusing on rare earth elements.

Through Phase 1 of the project, high percentages of the elements were demonstrated in lignite and extracted in a usable form using laboratory beakers. In August, the U.S. Department of Energy (DOE) provided \$2.75 million to UND for the second phase, which will scale up extraction to 55-gallon drum tanks. It is one of four projects in the nation to receive federal funding for rare earth element recovery from coal and coal-related byproducts.

The research process includes continuously applying a solvent to extract and concentrate the rare earth elements. A detailed economic analysis is also a significant focus. If successful, Benson and Laudal believe the next step is a pilot project, potentially at Valley City State University’s new steam plant.

While there are still several steps before large-scale commercial application, Laudal believes there is great potential in North Dakota.



Research has shown that the rare earth elements are concentrated at the top and bottom of the coal seam.

“Our resource assessments, based on the concentrations that we’ve found in certain seams and how much lignite coal we have here in North Dakota, show that we can make a significant dent if not completely offset all foreign imports,” Laudal said.

Analyzing coal

The Minnkota-operated Milton R. Young Station may prove to be a valuable resource because both generating units are equipped with full-stream elemental coal analyzers, which provide real-time ash composition, moisture and ash content for all coal delivered into the plant.

The long-term vision would be to use the analyzers to separate the coal with high rare earth element content and divert it to a processing unit for extraction. Following the process, the coal could then be delivered back into the plant and used for electricity generation.

“It would actually result in a better quality coal than what you started with,” Laudal explained. “It’s going to have lower ash content and remove a lot of the inorganic content that can cause problems in the boiler.”

The combination of rare earth element scarcity and growing demand for products like wind turbines and electric vehicles could turn lignite into an even more precious resource. Laudal said it’s a matter of optimizing the chemistry and gaining a better understanding of the economics.

“From a process standpoint, this is brand new research,” Laudal said. “Nobody has done this before.”

“Our resource assessments, based on the concentrations that we’ve found in certain seams and how much lignite coal we have here in North Dakota, show that we can make a significant dent if not completely offset all foreign imports.”

— DAN LAUDAL, *major projects manager*
Institute for Energy Studies at the University of North Dakota



Marty Mollberg
Manager of Operations

Staff Report

After an extended winter, it seems like we skipped over spring and went right into a busy start to the summer construction season.

The east-end crews continue to be busy with new services and line relocates for the Rainy Lake sewer project. They are also keeping busy with underwater cable replacements and new service request for both island and land accounts, along with pole change outs and right-of-way mowing.

West-end crews are building several new services for CenturyLink telephone company, which is installing fiber optic cable in several areas of our system, and building new services for Lake of the Woods County intersection lighting projects. West-end crews have also been busy building services for new members and installing upgrades for existing members.

We have Lake States Contracting working on 10.5 miles of three-phase overhead line upgrade between the Williams and Wheelers Point substations. If you have any questions or concerns about this project, feel free to contact us.

Crews are continuing to cut trees and mow right-of-ways between new service requests (675-08-012-03, Scott Birnie). I thank all of those who have worked with the crews and allowed North Star to maintain the right-of-way, which helps to minimize outages and outage restoration times.

If you have plans for home additions, new buildings or grain bin construction, contact us ahead of time so we can make sure you stay in compliance with proper clearances from the power lines and avoid any unwanted charges to get into compliance after the fact. Until next time, stay safe.

Tips to keep cool and be energy efficient



When extreme hot temperatures put stress on the electrical grid, there are ways we can all help by being more efficient in our use of electricity. Cooling costs can soar during this time, and being more energy efficient helps cut back on energy expenses.

The Energy Education Council provides tips on efficient ways to keep cool in hot weather:

- Trim back foliage at least 2 feet around the air conditioner, and remove debris from nearby the unit. This will ensure that airflow to the unit is not blocked.
- While your air conditioner is in use, replace your filter each month.
- While the air conditioner is running, always close windows and doors to increase efficiency.
- Use ceiling fans to make use of the wind chill effect while you are home. Set them to spin counterclockwise during warmer months so that they push air down and make you feel cooler.
- Use the outside air to your advantage. Open your windows at night to let cooler air in. Avoid unnecessary trips outside that would let in midday heat.
- Use curtains and blinds to keep sunlight out on hot days.
- Dress in loose, lightweight clothing.
- Set your thermostat as high as is comfortable when you are home. The smaller the difference between the thermostat and the outside temperature, the less energy used. Use a programmable thermostat to adjust your home's temperature based on your schedule. It can automatically keep your home cooler while you are there and warmer when you are away.
- Check for cracks and gaps around windows and doors and seal them with caulk and weather stripping.

Fixing up your home? We can help.



Minnesota Housing partners with Border State Bank and Citizens State Bank to provide loans for repairs, remodeling, installation of electric off-peak heat and energy-

saving improvements. The Minnesota Housing Fix Up loan program offers affordable fixed interest rates with loan amounts up to \$50,000.

Go green and save! Make energy-saving improvements to your home with a loan up to \$15,000. This loan has no income limit and no equity required. Plus, you'll save money with low interest rates.

Looking for energy-saving ideas? Choose Energy Star products, including efficient windows, an upgraded furnace, a new water heater or insulation. Contact your local bank to apply for a Fix Up loan today!



For additional information:
www.borderstatebank.com

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Christine Modahl NMLS# 530663
Badger - 528-3255

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'LIKE US' ON
FACEBOOK
TO STAY
UP-TO-DATE!



Like your cooperative at
[www.facebook.com/](http://www.facebook.com/NorthStarElectric)
NorthStarElectric for outage
updates during summer storms
and other useful information.



LED lighting rebate form



ENERGY STAR® bulbs highly recommended

(Rebates will not exceed 50 percent of purchase price)

Complete this form, attach a copy of your purchase receipt and mail to: North Star Electric Cooperative, P.O. Box 719, Baudette, MN 56623 Attn: Wayne

(Rebates will be in the form of a credit on your electric account)

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone #: _____ Other Phone #: _____

North Star Electric account number: _____

Name of retailer: _____

Replacing 40-60W bulb: (\$4/bulb rebate)

Number of bulbs: _____

Replacing 75-100W bulb: (\$8/bulb rebate)

Number of bulbs: _____



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.

Lake of the Woods County Social Services

206 8th Ave. SE, Suite 200
Baudette, MN 56623
634-2642

Northwest Community Action Council

P.O. Box 67
Badger, MN 56714-0067
800-568-5329

Koochiching County Community Services

1000 5th St.
International Falls, MN 56649
283-7000

Kootasca Community Action, Inc.

2232 2nd Ave. E.
P.O. Box 44
International Falls, MN 56649
283-9491 or 800-559-9491

Kootasca Community Action, Inc.

Grand Rapids, MN 55744-3984
Toll free 877-687-1163
Direct 218-999-0800
Fax 218-999-0220

Arrowhead Economic Opportunity Agency

702 3rd Ave. S.
Virginia, MN 55792
800-662-5711

Energy saving comparison

(Incandescent vs. LED light bulbs)



Incandescent	LED
100-watt	15-watt
8 hours/day	8 hours/day
31 days/month	31 days/month
Equals 24,800 watts (24.8 kWh)	Equals 3,720 watts (3.7 kWh)
At 12.2 cents/kWh + 6.875% sales tax	At 12.2 cents/kWh + 6.875% sales tax
Equals \$3.23 per month	Equals \$0.48 per month
Savings per bulb per month with LED = \$2.75	
Cost of LED bulb after rebate = \$4 (at either North Star Electric Cooperative office)	

If you know of any other energy-saving device that will pay for itself this quickly, please let North Star know about it and we will have it in a future Enlightener.

Current electrical inspectors

State law requires that every new electrical installation in any construction, remodeling, replacement or repair shall file a certificate for inspection and be inspected by a Minnesota electrical inspector. For more information, go to Minnesota Department of Labor and Industries website (dli.mn.gov) and go to the electrical page.

• Lake of the Woods, St. Louis and Koochiching counties:

Curt Collier (cgcclier67@gmail.com)
Phone: (218) 966-5070
Call to set up an appointment between 7 a.m. - 8:30 a.m. (Mon. thru Fri.)

• Roseau county:

Bryan Holmes
Phone: (218) 686-1413
Call to set up an appointment between 7 a.m. - 8:30 a.m. (Mon. thru Fri.)

Nomination process for director election

The North Star Electric Cooperative annual meeting of the members is scheduled for Friday, Oct. 5, at the Lake of the Woods School. The Board of Director's positions up for election are **District 2 and 3 for a four-year term**, and a special midterm election in **District 7 for a one-year term**.

Your district number is printed on your electric bill. If you live in one of these districts and are interested in a position on the Board of Directors, you may pick up a petition form at our North Star Electric Cooperative office in either Littlefork or Baudette.

Please be advised that each membership of the North Star Electric Cooperative is allowed one signature, and in the case of joint membership, only one signature is allowed. (A husband and wife are not joint members unless they have completed a joint membership application.)

SECTION 3. QUALIFICATIONS.

All persons eligible to become or remain a director of the Cooperative shall:

(a) be a member in good standing of the Cooperative receiving electric service at the member's primary residence in the district from which the director is to be elected prior to being nominated for director;

For purposes of these bylaws, "primary residence" shall mean the residence that is the chief or main residence of the person and where the person actually lives for the most substantial portion of the year.

(b) have voting rights within the district from which the director is to be elected;

(c) not be employed by, materially af-

filiated with or have a material financial interest in any director, individual or entity which either is:

(1) directly or substantially competing with the Cooperative; or

(2) selling goods and services in substantial quantity to the Cooperative; or

(3) possessing a substantial conflict of interest with the Cooperative;

For purposes of this section, the terms "material" or "substantially" shall be interpreted as constituting a minimum of 5 percent of a member's total hours of employment sales or income on an annual basis.

(d) not be an employee or not have been an employee of the Cooperative within the last three (3) years;

(e) not be a close relative of an employee, where as found in these bylaws "close relative" means any individual who is, either by blood, law, or marriage, including step, half, foster and adoptive is either a spouse, child, grandchild, parent, grandparent, brother or sister;

(f) be only one, and not more than one, member of a joint membership; provided, however, that none shall be eligible to become or remain a director or to hold a position of trust in the Cooperative unless all shall meet the qualifications hereinabove set forth;

(g) if a representative or agent of a member is not a natural person, i.e. a corporation, partnership, limited liability company, or similar, then the representative or agent designated as a nominee for director shall be an individual residing within the external boundaries of the district from which the member is nominated;

(h) agree to regularly attend all board, annual and special members' meetings, and in no case have more than four (4)

unexcused absences within a twelve (12)-month period of time; and

(i) not have been convicted of a felony.

(j) **Exceptions.** In regard to the restrictive provisions of this section that are based upon close relative relationships, no incumbent director shall lose eligibility to remain a director or to be re-elected a director if, during a director's incumbency, a director becomes a first kindred relative of another incumbent director or of a Cooperative employee because of a marriage or an adoption to which the director was not a party.

(k) **Disqualification.** After the Board of Directors determines that a nominee for director lacks eligibility under the provisions of this section or as may be provided elsewhere in these bylaws, it shall be the duty of the board to promptly make a disqualification.

Nothing contained in this section shall affect in any manner whatsoever the validity of any action taken at any meeting of the Board of Directors.

SECTION 5. NOMINATIONS.

The procedures and methods of nominating candidates for election as a director of the cooperative is by nomination by petition. Any twenty (20) or more members of a district of the cooperative may make nominations in writing over their signatures not less than sixty (60) days prior to the annual meeting, and the Secretary of the Board of Directors shall post the petition at the principal office of the cooperative, Baudette, Minnesota; such listing of nominations by petition may be mailed to each member through the medium of the cooperative newsletter.