

The Nodak Neighbor

May-June 2011

Official Publication of Nodak Electric Cooperative

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Your Touchstone Energy® Partner



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Nodak Electric Cooperative, Inc.

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On the cover

Zane Smaaladen welcomes customers into the Country Greenhouse located five miles north of Aneta. Story, pages 4-5.



Community service award



Duane Hafner
Customer/Energy Services
Manager

Duane Hafner, customer and energy services manager, was honored with the Community Service Award by the North Dakota Association of Rural Electric Cooperatives (NDAREC).

Duane was a member of the Grand Forks City Council during the flood of 1997, where he chaired the council's flood response committee for the rebuilding of Grand Forks. He spent hundreds of hours on this project.

Duane's commitment to the community extends to other organizations as well. He is/was active in the Grand Forks United Way, Kiwanis Club, Grand Forks Housing Authority, Chamber of Commerce, Salvation Army, Alerus Center Commission, Grand Forks City Council and University of North Dakota Sioux Boosters.

New employees

Casey Hansen has been hired as a full-time electrical engineer at Nodak. His job duties include analyzing the system sectionalizing and voltage regulations plans as required by new construction, load growth and system changes. He will also work on right-of-way acquisitions and survey of new and existing line extensions.



Casey Hansen
Electrical Engineer



Jake Lamb
Apprentice Lineman

A native of McIntosh, Minn., Hansen graduated from UND with a degree in electrical engineering. He started with Nodak as an intern in July 2010.

Jake Lamb has been hired as a full-time apprentice lineman with Nodak's Grand Forks construction crew.

Originally from Michigan, N.D., Lamb graduated from Bismarck State College in May 2009. He has been with the Cavalier crew on a part-time basis since 2009 and was transferred to the Grand Forks construction crew in 2010.

Hovland, Lommen complete coursework

Earlier this year Chris Hovland and Todd Lommen completed coursework for graduation.

Chris Hovland graduated in the merchant apprentice program and is working as a journeyman lineman with the Grafton crew.

Todd Lommen graduated in the meter tech program and is working as an apprentice apparatus technician in the tech department in Grand Forks.



Christopher Hovland
Journeyman Lineman



Todd Lommen
Apprentice
Apparatus Technician



George Berg
President & CEO

What will rate trends be in the future?

We recently completed a series of member information meetings at locations throughout our service area. These meetings were intended to provide an opportunity for members to ask questions regarding all we have written in recent months about escalating electric rates. In particular, we wanted to explain why the cost of generation has increased rapidly in recent years. The attendance at these meetings was lower than we had hoped, but the discussions were generally very good.

At virtually every meeting, someone eventually asked our prediction of rate trends. The short answer is that the future three years look brighter than the past three years, but there are some bothersome uncertainties.

One factor, which will affect electric rates that is certain, is that our wholesale power supplier, Minnkota Power Cooperative, needs to build a 345,000-volt transmission line from Center, N.D., to Grand Forks. This line is projected to cost about \$312 million with a completion date in the third quarter of 2013. The debt service from that time forward for this investment will add about three mills (3/10th of a cent) per kilowatt-hour to our cost. While small in comparison to some of the recent issues, we will need to increase our retail rates about 3 percent for that item alone.

The real concerns for the future are, however, potential developments that are not only

uncertain, but for the most part, out of our control. For example, the state of North Dakota has the authority, under the Clean Air Act, to determine what measures must be taken by power plant operators in the state to control regional haze. The Regional Haze Program is designed to protect visibility in key areas, such as Theodore Roosevelt National Park.

The Environmental Protection Agency recently filed a Notice of Intention to overrule North Dakota because it disagrees with the state approach to this process. The result likely could be more stringent measures, which will require hundreds of millions of dollars more to be spent on Minnkota's coal-fired power plants.

Another example of unpredictable cost is related to the carbon emission legislation. Prior to the 2000 elections, we heard a lot about proposed cap-and-trade legislation. This legislation, intended to reduce carbon emissions, would substantially drive up the price of coal-fired electricity, which now constitutes roughly half of the electricity generated in the United States.

While support for this type of legislation died as election time came around, there are some who feel it will be renewed following the 2012 election. The concept of carbon

taxation has been suggested as a possible solution to the huge debt crisis facing this country.

I recently read an article stating that over the past 30 years, the percentage of jobs in the country categorized as middle income jobs has fallen. It was estimated that low-income jobs now make up an alarming percentage of

total employment. The people holding these low-income jobs, along with the retirement population on a fixed income, are those who are challenged most when energy costs go up.

We can only hope that our elected leaders, as they formulate both energy policy and

environmental policy, realize we already have a lot of citizens who struggle to pay for essential energy needs.

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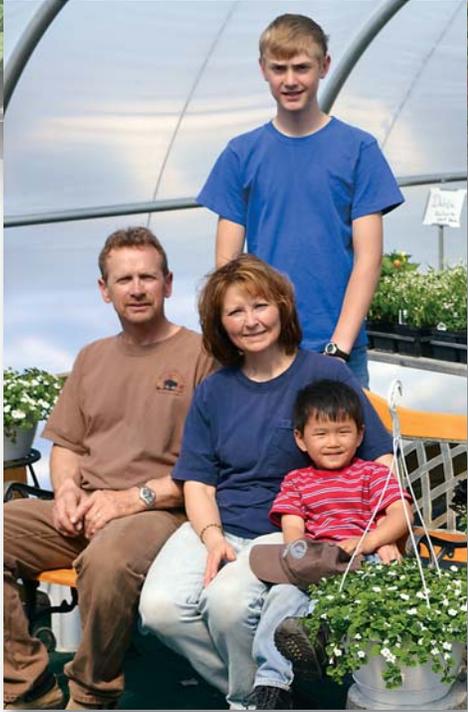
ENERGY



EFFICIENCY

Tip of the Month

Paint the walls of your home with light colors. Dark colors tend to absorb light, requiring you to use more energy from light bulbs to achieve the same effect. Not only do light colors on your walls help conserve energy in your home, but they also make your rooms feel brighter and more cheerful!



Steve and Marsha Smaaladen own and operate the Country Greenhouse with the help of their two sons, Zachary (standing) and Zane.

A growing business

Smaaladens' Country Greenhouse a summer hot spot

As a rural mail carrier, Steve Smaaladen sees the members he serves on the Nodak Electric Cooperative board nearly every day.

“I’m pretty tightly knit with a lot of them and I try to be as accessible as I can,” Smaaladen said. “I always try to wear my Nodak hat when I’m out.”

In the spring and summer, Smaaladen and his wife, Marsha,

welcome many members throughout Nodak’s service area to their farm located five miles north of Aneta, N.D.

The Smaaladens own and operate Country Greenhouse, where they sell bedding plants, perennials, trees and shrubs. Steve takes on a handful of landscaping projects each summer and also operates a custom lawn care business out of the greenhouse.

“The business has grown every year,” Smaaladen said. “We strive to do the best we can, and one thing has led to another thing. To make a living, you need to be able to offer a lot of different services.”

Family business

Steve says it takes a full family effort to keep the business going. Marsha knows the customer base and keeps track of orders and figures, in addition to the day-to-day operation of the greenhouse. Steve and his son, Zachary, 13, keep busy with the lawn care and landscaping end of the business. His youngest son, Zane, 4, usually isn't too far behind.

The family adds early mornings, late nights and weekends to their routine to keep up with the business.

“The greenhouse closes at 8 p.m., but we're always here, and we'll have customers come in after that,” Smaaladen said. “We rarely get back in the house before 9 or 10 at night. It's not that it's real hard work, but it's a lot of running and trying to get things done.”

The Country Greenhouse is in its 18th year. Depending on the weather, it opens right before Mother's Day and closes on July 15.

“Like farming, you depend on the season, and it's hard to make up lost time,” Smaaladen said. “If it's nice, people are anxious to get out and get their flowers. If it's miserable out there, we don't sell quite as much.”

Smaaladen keeps up with the current farm scene through his scrap metal business.

“I'll go to a farmstead that has salvageable scrap metal in their yard and see if they want to get rid of it,”

Smaaladen said. “I'll go in and clean it out for them. I like to see the old machinery.”

Fellow board members know when Smaaladen has arrived at the Nodak offices for a meeting. He usually has a full trailer load of scrap metal sitting in the parking lot, preparing to sell it to a Grand Forks business.

“It's in my blood,” he said. “I've got to have a load ready before the board meeting, even if it's an annual meeting. I don't like making a trip to Grand Forks empty-handed.”

Lifelong co-op member

Smaaladen joined the Sheyenne Valley Electric Cooperative board in 1997. He served on that board and the Nodak board during the transition between Nodak and Sheyenne Valley in 2001. In 2002, he was re-elected to the Nodak board to represent District 3. He currently serves as vice chairman.

“Serving on the Nodak board is something I thoroughly enjoy. It's a real challenge,” Smaaladen said.

Smaaladen grew up on a farm less than a mile from where he currently lives. His family milked 180 cows and farmed about 1,500 acres of wheat, alfalfa and corn. In 1997, Smaaladen decided to get out of farming. He spent the next seven years in the construction business before becoming a full-time mail carrier out of McVille in 2004.

“Sometimes I miss being involved in the farming business,” Smaaladen said. “But I'm still working in the dirt and in the rock. It's what I've been doing all my life.”



The Country Greenhouse specializes in bedding plants, perennials, trees and shrubs. The business also provides landscaping and lawn care services.

Annual meeting highlights

Nodak's 71st annual meeting was held April 2 at the Alerus Center in Grand Forks, N.D. Chairman David Kent and President & CEO George Berg presented the 2010 business report, which reviewed the annual financial results, retail and wholesale rate trends, load management and the North Dakota State Energy Program.

Guest speaker Wally Lang, vice president of transmission for Minnkota Power Cooperative, spoke on a proposed 345,000-volt transmission line scheduled to be built in 2012 and 2013 that will deliver energy from power plants in western North Dakota to the Red River Valley.

During the director election, incumbent directors Lee McLaughlin, Roger Diehl and Steve Smaaladen were re-elected to three-year terms.

Entertainment was provided by "Jazz On Tap" before the meeting. Following adjournment of the meeting, a meal was served by Alerus Center staff.





Rising waters

Devils Lake residents battle floodwaters again



Six Mile Bay



Water creeping up on a house on Spring Lake



Six Mile Bay



East Bay



Devils Lake crew splices cable to maintain service to other members.

North Dakota Utility Rebate



Energy Audits



Air-Source Heat Pumps

Geothermal Heat Pumps



Central Air Units



Thermal Storage Water Heaters

Nodak members receive more than \$116,000 in rebates

There's still plenty of time to apply!

Working with and on behalf of North Dakota's electric distribution cooperatives, the North Dakota Association of Rural Electric Cooperatives (NDAREC) received a grant for \$2.4 million to promote renewable energy and energy efficiency. Of this amount, about \$2.1 million will be used directly for consumer rebates. To date, \$1.3 million has been distributed to members.

Currently, 101 Nodak members have received rebates through the program, with a total of more than \$116,000 paid out since the program began in June 2010. The rebate program will continue through Dec. 31, 2011, or until the funding is depleted. The maximum rebate amount for residential members is \$5,000 and \$15,000 for commercial members.

To date, Nodak has given out:

Central Air Conditioning	\$7,800
Air-Source Heat Pump	\$28,325
Energy Audit	\$750
Geothermal	\$40,200
Insulation	\$3,388
Replacement Lighting	\$30,693
Variable Speed Drive	\$900
Water Heater	\$775
Wind Turbines	\$3,197

N.D. Utility Rebate Program

RESIDENTIAL ENERGY EFFICIENCY (\$5,000 MAXIMUM REBATE)

APPLIANCE/SERVICE	REQUIREMENTS	REBATE LEVEL
AIR CONDITIONER - Central	Tier 1: ≥ 14.5 SEER/ ≥ 12 EER; Tier 2: ≥ 16 SEER/ ≥ 13 EER:	\$200 per ton (5.5 ton max.)
AIR-SOURCE HEAT PUMP - Central or Mini-Split	Tier 1: 8.2 HSPF/ ≥ 14.5 SEER/ ≥ 12 EER; Tier 2: 8.5 HSPF/ ≥ 15 SEER/ ≥ 12.5 EER:	\$200 per ton (5.5 ton max.) \$400 per ton (5.5 ton max.)
WATER HEATER - HEAT PUMP	≥ 2.0 COP:	\$250 per unit
ENERGY AUDIT	Must be done by primary utility; consult gas utility for rebate if heated primarily with gas:	\$30 minimum to be paid by consumer; \$125 maximum rebate payable
INSULATION - Existing Attic	Energy audit required for self-install; must be less than R-20 insulated to at least R-49:	50% up to \$200 for self-install; 50% up to \$400 for contractor install
- Existing Wall	Energy audit required for self-install; must be R-0 in wall and insulating to R-10 and air sealing rim joists:	50% up to \$200 for self-install; 50% up to \$400 for contractor install.
WATER HEATER - THERMAL STORAGE	Must be on off-peak program; ≥ 80 gallons; ≥ 100 gallons:	\$125 \$150
THERMAL STORAGE CENTRAL FURNACE	Must be on off-peak program; must be coupled with Energy Star air-source heat pump:	\$60 per kilowatt (kW)

RESIDENTIAL RENEWABLE ENERGY (\$5,000 MAXIMUM REBATE)

PHOTOVOLTAICS	Subject to co-op interconnect policy; 60 kW max:	10% of installed cost up to \$5,000
WIND TURBINES	Subject to co-op interconnect policy; 20 kW max:	10% of installed cost up to \$5,000
GEOTHERMAL HEAT PUMP	Closed loop; 5.5 ton max.; ≥ 14.1 EER/ ≥ 3.3 COP:	\$600 per ton

COMMERCIAL ENERGY EFFICIENCY (\$15,000 MAXIMUM REBATE)

LIGHTING	Replacement only; no screw-in CFLs:	\$.040 per watt saved
MOTORS	NEMA premium new motor; NEMA premium replacement motor:	\$4 per HP \$15 per HP
VARIABLE SPEED DRIVES	Limited to pumps and fans:	\$30 per HP
AIR CONDITIONER - central split	Tier 1: ≥ 14.5 SEER/ ≥ 12 EER; Tier 2: ≥ 16 SEER/ ≥ 13 EER:	\$100 per ton \$200 per ton
AIR-SOURCE HEAT PUMP - Central Split	Tier 1: 8.2 HSPF/ ≥ 14.5 SEER/ ≥ 12 EER; Tier 2: 8.5 HSPF/ ≥ 15 SEER/ ≥ 12.5 EER:	\$200 per ton \$400 per ton
AIR-SOURCE HEAT PUMP - Package	Tier 1: 8 HSPF/ ≥ 14 SEER/ ≥ 11 EER; Tier 2: 8 HSPF/ ≥ 14 SEER/ ≥ 12 EER:	\$200 per ton \$400 per ton
RECOMMISSIONING CUSTOM DESIGN/ENERGY AUDIT	Must be pre-approved by co-op:	50% of cost up to \$15,000
WATER HEATER - Thermal Storage	Must be on off-peak program; ≥ 80 gallons; ≥ 100 gallons:	\$125 \$150
THERMAL STORAGE CENTRAL FURNACE	Must be on off-peak program; must be coupled with Energy Star air-source heat pump:	\$60 per kilowatt (kW)

COMMERCIAL RENEWABLE ENERGY (\$15,000 MAXIMUM REBATE)

PHOTOVOLTAICS	Subject to co-op interconnect policy; 60 kW max:	10% of installed cost up to \$5,000
WIND TURBINES	Subject to co-op interconnect policy; 20 kW max:	10% of installed cost up to \$5,000
GEOTHERMAL HEAT PUMP	Closed loop; 5.5 ton max.; ≥ 14.1 EER/ ≥ 3.3 COP:	\$600 per ton

SEER=Seasonal Energy Efficiency Rating; EER=Energy Efficiency Rating; COP=Coefficient Of Performance; NEMA=National Electric Manufacturers Association

What's in the Green box?

“Why does that ugly box have to be in the backyard?” They’re green, generally sit on concrete and often found near housing developments. Technically, it is a pad-mounted transformer, but many people call them an “electrical box.” Often homeowners try to hide them with bushes, fences or flower beds, but beware: even small additions around pad-mounted transformers create hazards.

But why are they there in the first place?

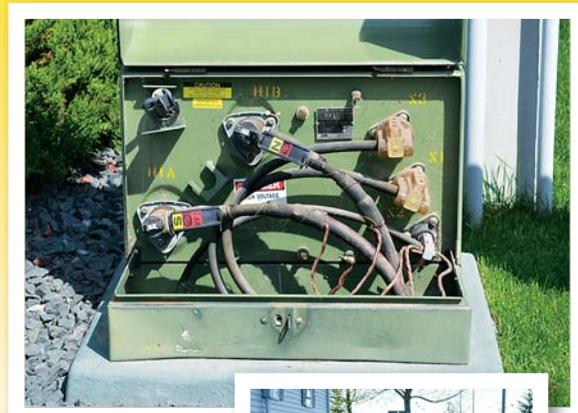
To improve the look of new neighborhoods and reduce certain outages, developers often request underground power lines. While this eliminates utility poles and overhead wires, it requires installing pad-mounted transformers in some yards and underground wires to each individual service point. Unfortunately, private homeowners attempt to screen pad-mounted transformers from view – creating an unsafe situation for all concerned, including Nodak Electric line workers.

Nodak realizes landscaping represents an investment of time and money, and respects the care members take in making their properties attractive. However, landscaping around electrical equipment interferes with Nodak’s ability to deliver reliable power.

Nodak recommends leaving at least 10 feet of clear space in front of pad-mounted transformers. Line workers often repair pad-mounted transformers while they are still energized so homeowners don’t experience an interruption in service. To ensure safety, they use an 8-foot fiberglass hotstick that requires about 10 feet of “elbow room” in front of the access panel.

Members sometimes leave plenty of space in front of the transformer, but grow vegetation on the other three sides. Plant roots can grow into a transformer and interfere with its operation. Choked from fresh air, pad-mounted transformers surrounded by vegetation or a structure – like a cover or fence – can overheat and cause an outage. Nodak recommends allowing 3 to 4 feet of space on both sides and behind the transformer.

Members should also be aware that any planting or fencing along right-of-way – strips of land owned by a member on which the co-op places poles, wires and other equipment like pad-mounted transformers – could be damaged by co-op vehicles during repairs or regular maintenance. Nodak may need to repair a pole or transformers may need to be upgraded and replaced. In order to perform this work, line trucks must be driven



onto the member’s property and the transformer lifted out. Nodak does not want to destroy landscaping and tries to minimize the impact. But if the crews need to reach something, and if plants, shrubs and trees are in the way, they will be damaged. Properties that have heavy landscaping or too many trees near power lines, poles and facilities can actually slow down the repair efforts and prolong an outage.

Call before you dig!

Because underground service continues from the transformer to your home, you should never dig anywhere in your yard without first calling 811 to find out where cables are buried. You are responsible for making the call before any excavation work is started. Not only could it lead to a very serious injury, making contact with any underground utility’s equipment without first calling for a property locate makes you responsible for ALL associated costs of any repairs.

Power restoration

High winds, ice storms and even tornadoes. Nodak Electric Cooperative members have seen them all. With severe weather comes power outages. Restoring power after a major outage is a big job that involves much more than simply throwing a switch or removing a tree from a line.

The main goal is to restore power safely to the members.

Step 1. Transmission towers and lines supply power to one or more transmission substations. These lines seldom fail, but they can be damaged by tornadoes or high winds. Tens of thousands of people could be served by one high-voltage transmission line, so if there is damage here, it gets attention first.

Step 2. Nodak has several local distribution substations, each serving thousands of consumers. When a major outage occurs, the local distribution substations are checked first. A problem here could be caused by failure in the transmission system supplying the substation. If the problem can be corrected at the substation level, power may be restored to a large number of people.

Step 3. Main distribution lines are checked next if the problem cannot be isolated at the substation. These supply lines carry electricity away from the substation to a group of consumers, such as a town or housing development. When power is restored at this stage, all consumers served by this line could see the lights come on, as long as there is no problem farther down the line.

Step 4. The final lines, called tap lines, carry power to the utility poles or underground transformers

outside houses or other buildings. Line crews fix the remaining outages based on restoring service to the greatest number of consumers.

Step 5. Sometimes, damage will occur on the service line between your house and the transformer on the nearby pole. This can explain why you have no power when your neighbor does. Nodak needs to know if you have an outage here, so a service crew can repair it.

Individual households may receive special attention if loss of electricity affects life support systems. If you or a family member depends on life support, call your cooperative before an emergency arises.

If you have a power outage at your home or business, follow these steps:

1. Check to see if your circuit panel or fuse box has tripped or blown a fuse. If it has tripped, reset the breaker or replace the blown fuse.
2. Check with neighbors to see if they have power.
3. Call Nodak at 1-800-732-4373. Be sure to follow all directions carefully.



Karl Aaker



Cole Johnson



Jordan Seido

Summer interns

Each year Nodak brings in summer interns to help in the engineering and operations departments. This year an intern was added to the member services department.

Karl is originally from the Mayville, N.D., area and will be a senior this fall at LeTourneau University in Longview, Texas, majoring in electrical engineering. He will be working in the energy services department traveling throughout the service area inspecting and testing ripple receivers.

Cole is originally from East Grand Forks, Minn., and will be a senior this fall at UND majoring in electrical engineering. He will be working in the engineering/operations departments. His duties include updating the ESRI GIS mapping system, surveying and staking in the field.

Jordan is originally from Sioux Falls, S.D., and will be a senior this fall at UND majoring in electrical engineering. He will be working in the engineering/operations departments. His duties include utilizing the outage management software, maintaining One Call locate data and updating the ESRI GIS mapping system.

PLANT A TREE.



Tall trees, such as:
maple, oak, spruce,
and pine

Plant the right tree in the right place

Plant taller trees away from overhead utility lines

