

The Nodak Neighbor

January-February 2011

Official Publication of Nodak Electric Cooperative

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Your Touchstone Energy® Partner



Rising costs: Environmental upgrades

Pages 4-5



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Officers and Directors

Chairman of the Board David Kent
Vice Chairman Steven Smaaladen
Secretary/Treasurer Donna Grotte
Directors Roger Diehl, Bruce Fagerholt,
David Hagert, Doug Lund,
Lee McLaughlin and Paul Sigurdson
President & CEO George Berg
Editor Duane Hafner

MARK THE DATE!

Saturday,
April 2, 2011

Nodak Electric
Annual
Meeting

at the Alerus Center
Grand Forks, N.D.



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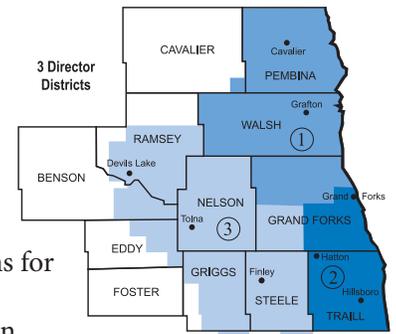
On the cover: Minnkota employees and contractors worked throughout 2010 preparing the Young 2 scrubber to be connected to its new chimney. The scrubber will help remove 95 percent of sulfur dioxide emissions.

Three director positions open

Nominating committee members appointed

The board of directors has appointed the committee on nominations. At its meeting scheduled for 10 a.m. Wednesday, Feb. 9, 2011, at the Nodak headquarters building, 4000 32nd Ave. S., Grand Forks, the committee shall prepare and post a list of nominations for the director positions slated for election.

Committee members are: Richard Hanson, McVile, 332-4796; Lyle Hjelmstad, Reynolds, 847-2711; Lawrence Kadlec, Pisek, 284-6289; Paul Klose, Hoople, 894-6266; Julie Lemm, Hillsboro, 436-5465; Harvey Puppe, Hensel, 257-6847; Glenn Rethemeier, Larimore, 343-2668; Paul Retzlaff, Aneta, 326-4235; and Phil Sandford, Michigan, 259-2340.



Three director positions open

Three director positions will be open at the annual meeting on April 2, 2011. The directors whose terms expire in 2011 are:

- District 1 – Lee McLaughlin**
- District 2 – Roger Diehl**
- District 3 – Steve Smaaladen**

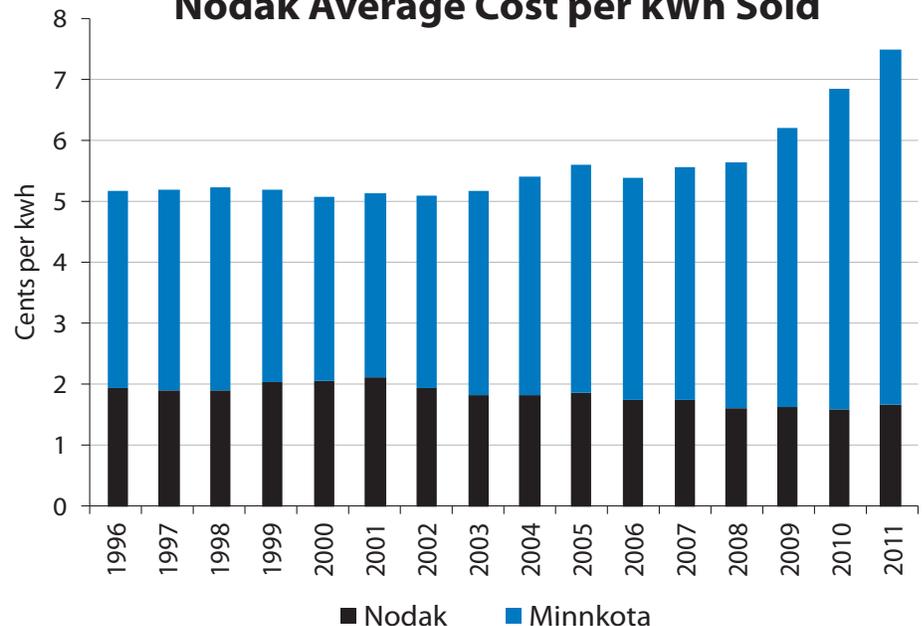
Nomination by committee

If you are interested in being nominated or would like to nominate an individual, you may contact one of the committee on nominations' members.

Nomination by petition

Nominations may also be made by petition signed by at least 15 cooperative members. The signed petition must be received at Nodak's headquarters by Feb. 16 in order to verify nominee qualifications and allow sufficient time for voting by mail.

Nodak Average Cost per kWh Sold





George Berg
President & CEO

Escalating electric rates

We likely don't need to tell you that electric rates have been on the rise and will continue to rise over the next couple of years. These increasing costs have been, and will continue to be, primarily from the generation side of our business.

Looking at the graph on page 2, each bar represents the average price per kilowatt-hour (kWh) for electricity purchased from Nodak over the past 15 years. The graph also shows each year how much of the revenue from each kWh is used by Nodak and how much is sent to our power supplier, Minnkota Power Cooperative. Minnkota is owned and governed by 11 distribution cooperatives for the purpose of generating our electricity and providing the transmission lines from the power plants to our cooperatives. Nodak is one of these 11 distribution cooperatives.

The black section of each bar reflects what is needed from each kWh sold to pay Nodak's expenses that particular year, plus margins. As you can see, this amount has remained remarkably stable. This doesn't mean our operating expenses have not increased. Actually, our total expenses in 2010 are about 40 percent higher than in 1996; however, we have been blessed with kWh sales growth, so we can spread these expenses over more kWh.

The alarming part of this graph, and the part that reflects the upward pressure on your electric rates, is the blue part. This section of each bar represents the wholesale cost of each kWh sold. As you can see, we enjoyed relatively stable wholesale cost of power during the period from 1996 through 2008. Our average cost of a kWh in 2008 was in fact only 25 percent higher than 12 years earlier in 1996. That computes to an average of about a 2 percent increase per year.

After 2008, our average wholesale cost of power began to rise dramatically. Based on the recent budget from Minnkota, we expect our average cost of each kWh sold in 2011 to be around 6.1 cents per kWh, which will be 50 percent greater than 2008. This computes to an annual increase of nearly 17 percent per year.

The reason Minnkota's generation costs are escalating so rapidly are many, but are mostly related to environmental issues. Please refer to the article on pages 4 and 5. During a five-year period, Minnkota has invested more than \$425 million in environmental

upgrades to meet new EPA emissions standards. By the end of 2012, Minnkota will have spent an additional \$400 million on new transmission lines necessary to deliver both wind and baseload generation into the Minnkota service area. These investments carry large debt service payments, which are driving up the cost of our wholesale power. Also, the new environmental equipment is more expensive to operate, further increasing Minnkota's overall operating expenses.

Minnkota has also entered into long-term contracts for wind energy to meet future North Dakota and Minnesota renewable energy objectives. When these wind farms were built, it was anticipated the excess generation could be sold into the regional market at a profit, or at worst break even. Decades of historical market conditions made this a reasonable assumption. The severe downturn in the economy has resulted in depressed power market conditions for the sale of excess

energy. The sale of excess energy has become an economic burden for Minnkota, which will not be relieved until economic conditions improve in the regional power market.

The wholesale part of a kWh sold has always been big, and it is getting bigger. In 2011, the Minnkota share will be about 78 percent of the cost of each kWh we sell. Another alarming

statistic is that Nodak will pay Minnkota more for a kWh in 2011 than we actually charged for that kWh only three years earlier in 2008.

Obviously, this article is about escalating electric rates. We increased our retail rates in 2009 and 2010 to offset our increasing cost of wholesale power. Our cost of generation through Minnkota Power will continue to rise in 2011 and 2012. At that point, Minnkota will have adequate transmission facilities and adequate generating capacity, including recently contracted renewable energy through wind, and we have optimism we will return to a period of stable electric rates. This, of course, assumes there will not be severe federal legislation such as cap and trade or carbon reduction legislation that will place additional upward pressure on the cost to generate electricity.

We expect our average cost of each kWh sold in 2011 to be around 6.1 cents per kWh, which will be 50 percent greater than 2008.

Rising costs:

Environmental upg

The need to comply with strict federal environmental mandates is causing wholesale power costs to rise for Nodak Electric Cooperative.

Environmental control upgrades at the Milton R. Young Station are a driving force behind a 5 percent wholesale rate increase that became effective Dec. 20, 2010, and a subsequent rate increase of approximately 17 percent that will likely be applied in March 2011.

Minnkota Power Cooperative, our wholesale energy supplier, has made a substantial investment of more than \$425 million to comply with federal Environmental Protection Agency mandates at the Young Station, our primary source of power generation located near Center, N.D.

The major upgrades are emission controls for sulfur dioxide (SO₂) and nitrogen oxides (NO_x) on both Young 1 and Young 2. The Young Station has installed equipment to remove 95 percent of SO₂ emissions and reduce NO_x emissions by more than 60 percent. The improvements to remove SO₂ cost \$260 million; NO_x controls cost \$35 million. Additional infrastructure to support the new systems requires \$130

million in electrical improvements.

“The investment in emissions reduction technologies that we are completing now will allow the Young Station to continue to be the major generator for Minnkota’s member-owners for a long time into the future,” said Luther Kvernen, Minnkota vice president of generation.

Costs will increase to run and maintain these new systems. Between 2008 and 2012, capital costs at the Young Station will increase by about 80 percent and operating and maintenance costs will increase by about 63 percent.

In 2012, the Young Station will meet all current federal environmental control



Young 2 required a complete electrical overhaul in fall 2010 to operate the new emission control systems, maintain reliability and meet new safety standards.



grades

standards. Following the completion of these projects, long-term costs will remain competitive and stable, emissions will be significantly reduced and reliability will continue to be maintained at high levels. Minnkota's primary objective is to ensure that the Young Station provides safe, reliable and affordable electricity well into the future.

Connecting the ductwork from the Young 2 scrubber to its chimney was a critical project during the 2010 fall outage. Young 2 is compliant with current federal emission control standards.

Emission control equipment

Sulfur dioxide (SO₂) removal

Lignite coal contains sulfur components and their combustion generates SO₂. By installing SO₂ absorber (scrubber) technology on both units, Minnkota will eliminate approximately 50,000 tons or 95 percent of SO₂ by 2012.

- **Scrubber**

When coal combustion gas passes through the scrubber's absorber vessel, a water and lime mixture is sprayed. The flue gas reacts with the lime to produce a gypsum-like sludge that removes the SO₂ and prevents it from being released through the unit's chimney.

- **Lime prep and storage tanks**

The lime needed for SO₂ removal required the construction of two 2,700-ton silos built to receive, store, prepare and distribute the alkali reagent.

- **Chimney upgrades**

The wet, scrubbed flue gas that is released from the scrubber required a new 550-foot tall chimney for Young 2. The new chimney has a 140-foot diameter foundation that is 11-feet thick. Young 1 will use the existing Young 2 chimney following significant upgrades to support a new scrubber.

Nitrogen oxides (NO_x) reduction

Nitrogen oxides are formed during the combustion process in the boiler when nitrogen gas combines with oxygen at high temperatures. By incorporating Selective Non-Catalytic Reduction (SNCR) and Over-Fire Air (OFA) technology on both units, Minnkota reduces 60 percent of NO_x emissions.

- **Over-Fire Air (OFA)**

OFA is a process in which a portion of the combustion air is diverted from the cyclones to create a fuel-rich atmosphere in the lower furnace. This limits the amount of NO_x created in the cyclones due to the lower amount of oxygen. The diverted air is then re-injected into the furnace at a higher level to complete the staged combustion.

- **Selective Non-Catalytic Reduction (SNCR)**

SNCR is a process in which a mixture of urea and water is injected directly into the upper boiler furnace through a series of ports and nozzles. The reaction breaks down NO_x to nitrogen, carbon dioxide and water.

Electrical upgrades

The Young Station's electrical distribution system was completely overhauled to support the environmental control upgrades and to meet new safety standards.

- New auxiliary transformers have been installed, as well as all new breakers and more than 190 miles of cable and wiring.

N.D. utility rebate continues in 2011

If you want to make energy-efficiency upgrades to your home or place of business, now is the time. 2011 is a favorable year for making energy-efficient improvements and taking advantage of the North Dakota Utility Rebate Program.

The rebate program is available through Nodak Electric from federal stimulus funds under a grant from the North Dakota Department of Commerce. The rebate program offers more than \$2 million in rebates for electric co-op members in North Dakota for products and services such as energy-efficient central air conditioners, air-source and geothermal heating systems, energy audits, attic and wall insulation and much more.

The rebate amounts vary, and there are limitations to the program. Under this program, residential consumers have a \$5,000 cap and commercial consumers have a \$15,000 cap per utility customer. The rebate money is available on a first-come, first-served basis, ending Dec. 31, 2011.

As always, the energy services department at Nodak Electric is ready to help you, our member-owners. For detailed information, visit <http://www.ndarec.com/stimulus/index.html> or www.nodakelectric.com, or call the energy services department at (701) 746-4461 or (800) 732-4373. Currently, about half of the rebate money remains. Hurry! When the money is gone, the program will end.

John Rodgers retires

John Rodgers retired Dec. 23, 2010, after 38 years of service with Nodak. John was hired as an Assistant Engineer in January 1973. He graduated from North Dakota State University with a degree in Agricultural Engineering and later earned his Professional Engineering certification. In August 1980, he was promoted to Engineering Manager, and in 2000 he was named Engineering and Operations Manager.

His career started about the same time that placing electric distribution lines underground became economically feasible. President & CEO George Berg states, "Placing 7,200-volt distribution cables underground has given us many more challenges than we would have liked, but it also provides significant rewards for both our members and ourselves. I'm glad we had John on our side as we worked through those challenges."

John and his wife, Patricia, have three children and four grandchildren. They are planning to move to Loveland, Colo. Retirement for John includes traveling and spending time with his grandkids while avoiding Alberta Clippers as much as possible.



Breidenbach promoted

Steve Breidenbach was recently named Nodak's Engineering Manager and replaced John Rodgers who retired after 38 years of service.

As Engineering Manager, Steve is responsible for the Engineering and Dispatch departments, along with the design and updating of all Nodak's distribution lines.

Steve is from the Reynolds area, graduating from Central Valley High School. He attended North Dakota State College of Science and continued his education at UND, graduating in Electrical Engineering.

Steve joined Nodak in 1979 as a Member Services Representative and was promoted to Engineering Representative in 1982. In 1990, he was promoted to Planning Engineer, and in 1995 was promoted to Systems Engineer.

Steve and his wife, Cindy, have two children, a daughter attending UND and a son in high school.



Do you use life support equipment?

Help us update our life support listing



For family members or friends with a medical condition, electricity is a lifeline for their medical equipment.

Nodak Electric maintains a life support list for two reasons. First, in case of a planned outage where crews will work on the lines, the co-op tries to inform these members before the outage. Secondly, during an unplanned outage, priority is given to restore power to members with such medical equipment.

If you haven't recently notified Nodak Electric, please call 800-732-4373. In addition, if a person with the medical condition moves off of Nodak Electric's system, no longer needs life support or has passed away, please inform us so we can keep our list current.

Snowmobile safety



Riding on a snowmobile can be an exciting way to enjoy winter snow, but according to the University of Vermont, thousands of snowmobiling accidents occur each year in the United States, resulting in hundreds of injuries and deaths. Many of the accidents are caused by natural obstacles, speed and alcohol consumption. If you plan to “hit the trails” this year on a snowmobile, make your outing a safe one by observing these safety precautions.

- Don't drink and drive. Not only does alcohol impair your reaction time and judgment, but it also causes body temperatures to drop and can lead to hypothermia.
- Slow down. Speed is a contributing factor in nearly all fatal snowmobiling accidents.
- Carry important supplies: a first aid kit, flashlight, compass, map and waterproof matches.
- Avoid traveling across water when you don't know the ice thickness and current conditions.
- Always wear a helmet with goggles or face shield to prevent injuries from twigs and debris. Wear layers of water-repellent clothing and be sure you have no strings or loose ends to tangle in the equipment.
- Be alert for fences, tree stumps, power poles and guy wires that may be hidden by snow.
- Don't travel alone; if you must be alone, be sure someone knows your destination, route and time frame.
- Respect private property; always stay on approved trails.
- Cross roads with care; auto drivers may not see your snowmobile.
- Be especially careful during night rides; always expect the unexpected.
- Watch out for downed power lines, especially after a snow or ice storm. Report any downed lines to your electric cooperative.

An additional note from the North Dakota Parks & Recreation Department: Youth operators must be at least 12 years old and possess a valid driver's license or have completed a snowmobile safety training course from the Parks & Recreation Department. However, there is no age or license requirement for youth operators riding on private land.

Contact the North Dakota Parks & Recreation Department at 701-328-5357 or visit the website, www.parkrec.nd.gov, for more details.

For a listing of North Dakota snowmobile trails, check out Snowmobile North Dakota at www.snowmobilend.org.

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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.

Benson County Social Services
701-766-4404

Dakota Prairie Community Action
701-662-6500

Fargo Community Action Agency
701-232-2452

Grand Forks County Social Services-Fuel Assistance
701-787-8535

Griggs County Social Services
701-797-2127

Lakota Community Action Agency
701-345-8515

Nelson County Social Services
701-247-2945

Pembina County Social Services
701-265-8441

Ramsey County Social Services
701-662-7050

Red River Community Action Agency
701-746-5431

Saint Vincent of Grand Forks
701-795-8614

Salvation Army of Grand Forks
701-775-2597

Spirit Lake Nation – Fuel Assistance
701-766-1206

Steele County Social Services
701-542-2584

Traill County Social Services
701-436-5220

Walsh County Community Action
701-352-0620

Walsh County Social Services
701-352-5111



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Who would've thought? Just by turning the TV off when I'm not using it and using a sleep timer at night, I'm making my ENERGY STAR®-qualified TV even more efficient. Now we're both energy stars. What can you do? Find out how the little changes add up at TogetherWeSave.com.



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