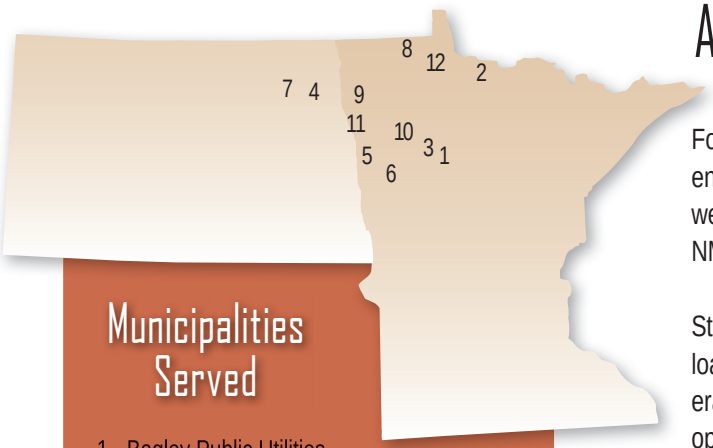
# Northern Municipal Power Agency

## 2017 Annual Report

# SHAPING THE FUTURE




## Municipalities Served

1. Bagley Public Utilities
   P.O. Box M, Bagley, MN 56621
2. Baudette Municipal Utilities
   P.O. Box 548, Baudette, MN 56623
3. Fosston Municipal Utilities
   220 East First St., Fosston, MN 56542
4. Grafton Municipal Utilities
   P.O. Box 578, Grafton, ND 58237
5. Halstad Municipal Utilities
   405 Second Ave. West, Halstad, MN 56548
6. Hawley Public Utilities
   P.O. Box 69, Hawley, MN 56549
7. Park River Municipal Utilities
   P.O. Box C, Park River, ND 58270
8. Roseau Municipal Utilities
   P.O. Box 307, Roseau, MN 56751
9. City of Stephen Utilities
   P.O. Box 630, Stephen, MN 56757
10. Thief River Falls Municipal Utilities
    P.O. Box 528, Thief River Falls, MN 56701
11. City of Warren Water and Light
    120 East Bridge Ave., Warren, MN 56762
12. Warroad Municipal Utilities
    P.O. Box 50, Warroad, MN 56763

# AGENCY PROFILE

Founded in 1976, the Northern Municipal Power Agency (NMPA) is the energy supplier for 12 municipal utilities in eastern North Dakota and northwestern Minnesota. Each of the participants has a representative on the NMPA board of directors.

The Agency owns a 30 percent share of the 427,000-kilowatt Coyote Station located near Beulah in western North Dakota. NMPA also owns a load-ratio share (approximately 15 percent) of the Minnkota Power Cooperative, Inc. transmission system. Minnkota of Grand Forks, N.D., is the operating agent for NMPA and purchases capacity and energy from the Coyote Station not required by NMPA members.

The NMPA headquarters building is located in Thief River Falls, Minn.

## Contents



## On the Cover

Substation upgrades are needed to provide reliable power to the Minnkota/NMPA Joint System businesses in the region.

*Insets*: Arctic Cat (left), Thief River Falls, and Kringstad Ironworks, Park River.

# OFFICERS, BOARD OF DIRECTORS AND STAFF

Lucas Spaeth
*President*
*Halstad, Minn.*

Chris West
*Vice President*
*Grafton, N.D.*

Dalene Monsebroten
*Secretary-Treasurer*
*Finance Manager*

Bill Masterson
*Bagley, Minn.*

Roger Schotl
*Baudette, Minn.*

David Larson
*Fosston, Minn.*

Don Martodam
*Hawley, Minn.*

Dennis Larson
*Park River, N.D.*

Todd Peterson
*Roseau, Minn.*

Leonard Bazey
*Stephen, Minn.*

Dale Narlock
*Thief River Falls, Minn.*

Shannon Mortenson
*Warren, Minn.*

Dan Trosen
*Warroad, Minn.*

Darryl Tveitbakk
*General Manager*

Delray Sparby
*Legal Counsel*

At the Northern Municipal Power Agency, we are proud of our record of providing a reliable, affordable, long-term power supply while always being aware of the environmental impact of what we do.

With the energy landscape changing, we and our operating agent, Minnkota Power Cooperative, continue to diversify our power supply portfolio to include more renewables, while at the same time increasing the efficiency of both our generation and transmission systems. Together with Minnkota, our operation as a "Joint System" allows for economies we could not reach alone.

Our commitment to reliability was evident during the year as Minnkota crews continued the blink outage mitigation project on the Joint System subtransmission system (69-kV and below). Much of this system is beyond 50 years old and was not built for today's high expectations that do not tolerate blink outages.

Supported by a 2015 blink outage study, work was prioritized to those parts of the system that experienced the greatest number of outages. More than 565 miles of the 2,100 miles of line have been completed, including 420 miles in 2017. This project will be ongoing for several more years and early reports show notable improvement.

We know that the future will hold many operational and regulatory challenges for our industry. We are confident that the communities NMPA serves recognize the value we afford them with a stable, long-term, reasonably priced power supply. We intend to continue our operation with that as our goal, allowing us to continue to prosper.

The 2017 Minnesota legislative session convened on Jan. 3, and with it the newly restored state capital building was on display. Along with changes to the building, there were significant changes to the legislature as well. Results of the 2016 elections saw the Republicans take control of the Senate by a very narrow margin. Legislation that allows municipals with under 1,000 customers to be exempted from their Conservation Improvement Program requirements was passed. This gives several of our members relief from the CIP program.

Local Control/Local Democracy also was a big part of the discussion. The bill as passed gives local governing bodies, cooperative and municipal, the authority to set Distributed Generation Tariffs and keeps dispute resolution local. Minnesota municipal governing bodies have always had this authority. During the discussion there was some fear that might change.

We want to thank the Minnesota Municipal Utilities Association for its tireless efforts on our behalf. We also want to thank those people from our participant cities for taking time to be in St. Paul to make our concerns known to their elected officials. We will continue to work with other Joint Action Agencies and MMUA as we represent the best interests of our participant cities in the legislatures of both North Dakota and Minnesota.

During the 2016 Minnesota legislative session language was tweaked in the statute that regulates distributed generation (DG) resources. The subtle change stated that DG tariffs be based on "a recent Cost of Service Study." It also required that a COS study be made available to anyone requesting a copy. After discussion with the NMPA board of directors, it became apparent that several participants had not recently completed a COS due to staff availability and the high cost of hiring an outside consultant/expert. Cost is especially prohibitive for smaller systems within our Agency family.

With that in mind, the NMPA board decided that the Agency would pay for 50 percent of the cost of a study for all participants, making a study much more affordable. With board approval, NMPA staff developed and distributed an RFP to qualified firms that asked for a Cost of Service Study for all of NMPA's participants. A firm was selected and the study was begun in the third quarter of 2017. By the second quarter of 2018, we expect that all Agency participants will have completed studies.

We are encouraged by the growth we are seeing in several of our participant cities, both residential and commercial. New homes are being built and

Lucas Spaeth President Darryl Tveitbakk, General Manager

businesses are growing and expanding. In Thief River Falls, a large corporation has announced an expansion of more than 1,000,000 square feet and 10 megawatts of load that will add 1,000 new jobs in the next 10 years. As of this writing, 140 of those positions have been created and filled. Housing construction is evident and construction on the new expansion has begun and should be completed in late 2019. This kind of economic expansion bodes well for the future of the Agency and its participants.

We are proud of our public power heritage and the fact that we answer to our customer-owners, providing them with cost-effective, reliable power supply and services. We are also proud of what can be accomplished through joint action and our partnership with Minnkota Power Cooperative and the other owners at the Coyote Station. We want to thank the directors who serve on the NMPA board, the communities we serve and their staff for their support throughout 2017. Thanks also to our staff and Minnkota Power Cooperative for its assistance and support. The strength of that partnership is evident as we go forward. We know that the future will hold many operational and regulatory challenges for our industry. We are confident that the communities NMPA serves recognize the value we afford them with a stable, long-term, reasonably priced power supply. We intend to continue our operation with that as our goal, allowing us to continue to prosper.

In closing, we want to express our appreciation for the privilege of serving as the President and the General Manager of the Northern Municipal Power Agency.

Sincerely,
Lucas Spaeth, President
Darryl Tveitbakk, General Manager


Minnkota power delivery crews work to rebuild the Sand Hill substation near Fosston, Minn. The project helps improve reliability and power quality in the area.

# Investing in big projects

During the year 2017, the Minnkota/NMPA Joint System continued its accelerated plan to address blink outage issues on its subtransmission system (69-kV and below).

A significant portion of this 2,100-mile system has aged beyond its 50th year of service and was not built to meet the heightened expectations of today's consumers. While it is not practical or cost effective to reconstruct all of these lines in the near term, modifications can be made to help limit their exposure to blinks caused by lightning strikes or other line contacts.

Structures are being fitted with the following equipment to help reduce blink outages: a hanging lightning arrester, a polymer post-top insulator, a raptor deterrent (poletop helmet) and a climbing animal deterrent (pole wrap). The installation of these devices will continue on an accelerated schedule in impacted areas of the system.

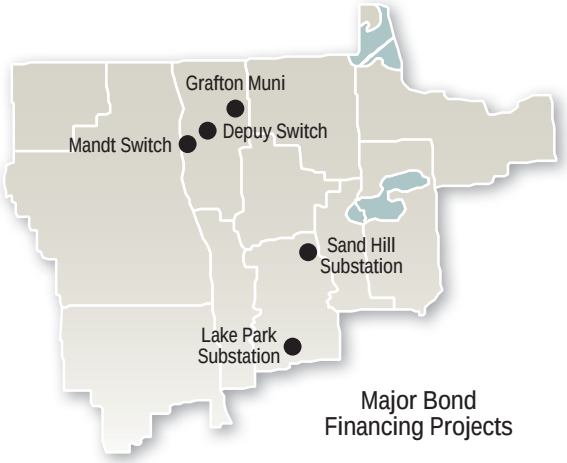
A stretch of blink outage mitigation was the Winger circuit breaker 530 project. Approximately 19 miles of 69-kV transmission line was blink mitigated from our Winger substation to the Fosston Muni substation. The project will help reduce the number of momentary outages caused by lightning and/or animal contact on the line.

Overall, more than 565 miles of line have been treated since the start of the blink outage mitigation project, including 420 miles in 2017. About 250 miles are planned for 2018.

The Joint System has begun monitoring these stretches of line and reviewing the effectiveness of the blink mitigation efforts. Early results show notable improvement in the performance of each treated line section.

## Major substation projects

By the end of 2017, Minnkota constructed or rebuilt five substations in its northwest Minnesota service area. The projects aim to improve reliability and support load growth in areas served by the Minnkota member cooperatives and the NMPA municipals.




Major Bond Financing Projects

Two of the substations benefit NMPA municipals directly.

- Lake Park substation: The new Lake Park substation taps into an existing 230-kV transmission line and helps improve service in the areas surrounding the towns of Lake Park and Hawley. The project reduces outage times for planned maintenance and emergency repairs, reduces blink outages and reduces loading on its existing infrastructure, which was nearing its maximum capacity.
- Sand Hill substation: The Sand Hill substation was nearing the end of its useful life and was in need of major improvements. The rebuild of this substation included a 69-kV line sectionalizing circuit breaker and associated protection equipment to improve power quality for areas surrounding Fosston, Minn.

Other improvements:

- Grafton Muni to Depuy Switch line reroute: Due to wet conditions, a section of the Park River has eroded the bank near the line that serves the city of Grafton. This section of the line has had a number of problems due to flooding of the Park River and the result is a number of leaning poles. The reroute will reduce the risk of the line failing and causing outages to the city.
- **Grafton line modifications:** The city of Grafton is constructing a flood risk reduction levee around the city's perimeter. This project included raising the line and pole relocations in three areas on the Grafton Muni to Mandt Switch line segment to accommodate the city of Grafton's flood protection levee.

## Blink outage mitigation basics


To help reduce the frequency of blink outages, crews are installing four pieces of equipment:

A. New post-top insulators
Polymer post-top insulators are installed to replace the aging porcelain insulators. The post-top insulator is attached to the top phase wire at each structure, helping prevent the undesired flow of electricity to the ground.

B. Hanging lightning arresters
Hanging lightning arresters attach to the top phase wire and connect to the structure ground. This device routes a lightning strike around the electrical system and safely sends the current to ground.

C. Poletop helmet
A poletop helmet is a plastic cone-shaped device that deters birds and other animals from sitting on the structure, protecting them from the energized line.

D. Pole wrap
A pole wrap is a sheet of plastic that attaches around the base of the pole creating a slippery surface that deters wildlife from attempting to climb the pole.

# Bond financing

Northern Municipal Power Agency closed a bond deal on Oct. 3, 2017, with investment banking firm Barclays Capital as underwriter. The current Bond Ratings of A3 from Moody's and A- from Standard & Poors with a stable outlook were maintained.

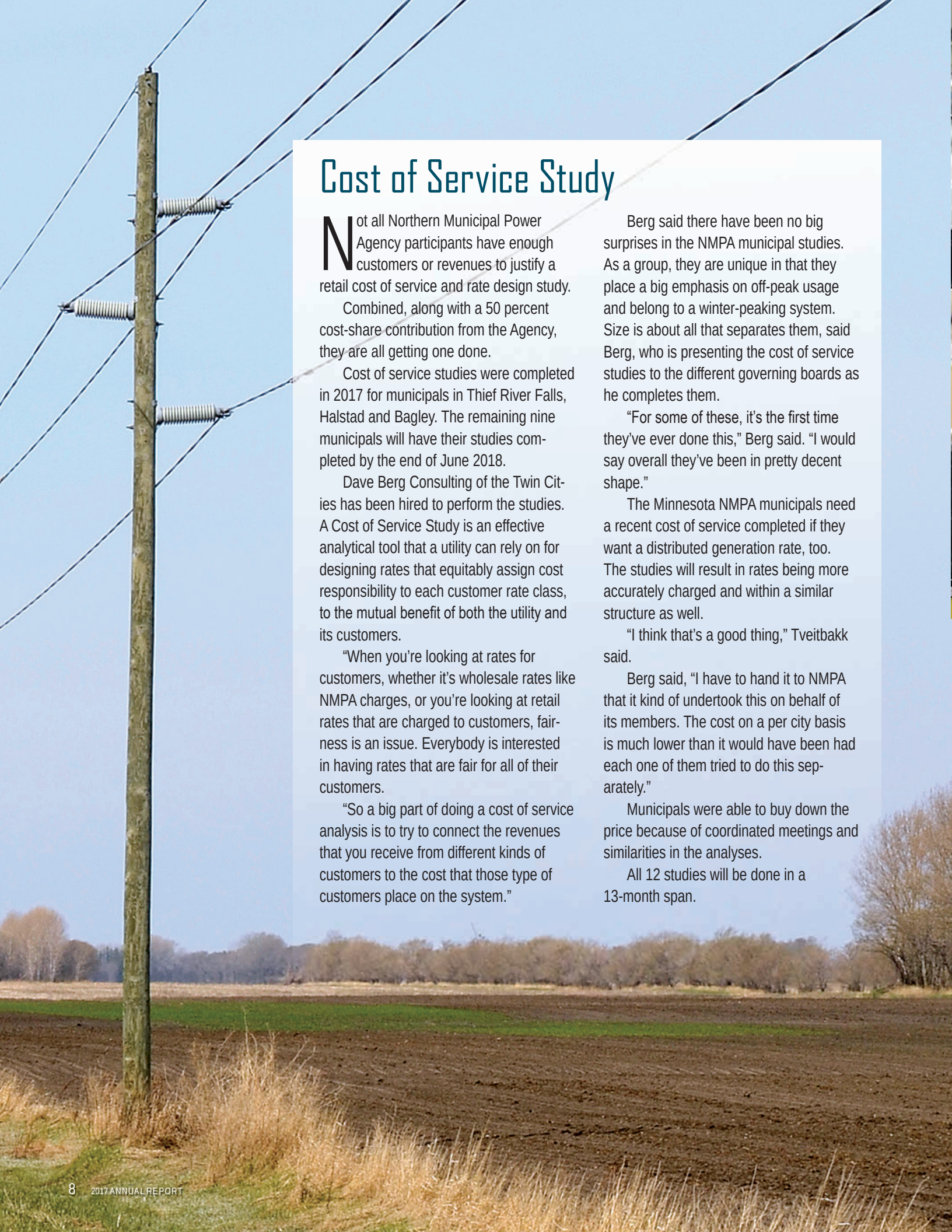
The bond funds will be used to finance NMPA's share of certain capital expenditures for the Coyote project and Joint Transmission System, current and advance refund certain outstanding bonds and fund deposits to certain reserves.

$59,695,000 of tax-exempt bonds were issued with approximately $25 million of new money to finance capital projects over the next five years.

They were structured as serial bonds maturing in 2019-2036 with a term bond in 2041.

The transaction was priced at an all-in cost of 2.85 percent over 7.4 years and generated average annual savings of $1.3 million in 2019-2021 translating to net present value savings of $3.2 million.

"It proved to be a great time to enter into the market," Monsebroten said. "The lower financing costs will help to continue supplying electricity to the NMPA participants at reasonable rates. We appreciate all the efforts of the entire financing team and value the assistance provided by Minnkota staff."



# Cost of Service Study

Not all Northern Municipal Power Agency participants have enough customers or revenues to justify a retail cost of service and rate design study.

Combined, along with a 50 percent cost-share contribution from the Agency, they are all getting one done.

Cost of service studies were completed in 2017 for municipals in Thief River Falls, Halstad and Bagley. The remaining nine municipals will have their studies completed by the end of June 2018.

Dave Berg Consulting of the Twin Cities has been hired to perform the studies. A Cost of Service Study is an effective analytical tool that a utility can rely on for designing rates that equitably assign cost responsibility to each customer rate class, to the mutual benefit of both the utility and its customers.

"When you're looking at rates for customers, whether it's wholesale rates like NMPA charges, or you're looking at retail rates that are charged to customers, fairness is an issue. Everybody is interested in having rates that are fair for all of their customers.

"So a big part of doing a cost of service analysis is to try to connect the revenues that you receive from different kinds of customers to the cost that those type of customers place on the system."

Berg said there have been no big surprises in the NMPA municipal studies. As a group, they are unique in that they place a big emphasis on off-peak usage and belong to a winter-peaking system. Size is about all that separates them, said Berg, who is presenting the cost of service studies to the different governing boards as he completes them.

"For some of these, it's the first time they've ever done this," Berg said. "I would say overall they've been in pretty decent shape."

The Minnesota NMPA municipals need a recent cost of service completed if they want a distributed generation rate, too. The studies will result in rates being more accurately charged and within a similar structure as well.

"I think that's a good thing," Tveitbakk said.

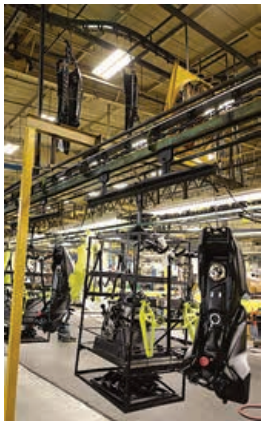
Berg said, "I have to hand it to NMPA that it kind of undertook this on behalf of its members. The cost on a per city basis is much lower than it would have been had each one of them tried to do this separately."

Municipals were able to buy down the price because of coordinated meetings and similarities in the analyses.

All 12 studies will be done in a 13-month span.

A Wildcat XX rolls through the production line at Textron's Arctic Cat facility in Thief River Falls, Minn.

# Textron invests in Thief River Falls



## Company has big plans for Arctic Cat facility

When Textron bought Arctic Cat in early 2017, many were concerned about the company's future and how much the new owner would invest in the Thief River Falls manufacturing facility.

Any tensions were eased when just a few months later, Textron announced that it would move production of the Textron Off Road Stampede side-by-side machines from Textron's Augusta, Ga., facility to Thief River Falls and begin production of the new Havoc side-by-side line in Thief River Falls as well.

Textron is hiring workers in Thief River Falls, and company executives expect growth and additional production volume to give employees a more consistent, year-round work schedule, rather than more seasonal work.

"Textron has been great," said Dennis Buckley, operations manager at the Thief River Falls facility. "They were very aggressive and quick to evaluate the plant and Arctic Cat as a whole. They decided very quickly to support and invest in the facility, both in equipment and other areas.

"It's been a very good transition for both the plant and the community."

Powering Arctic Cat is Thief River Falls Municipal Utilities. The Textron Specialized Vehicles facility in Thief River Falls is the city's second-largest electric load behind Digi-Key, an electronic component distributor.

Rhode Island-based Textron Inc. purchased Arctic Cat for $247 million in cash. A multi-industry company that manufactures products ranging from

E-Z-GO golf cars to Bell helicopters to Cessna and Beechcraft aircraft, Textron placed Arctic Cat under its "specialized vehicles" business. That division, based in Augusta, Ga., manufactures a range of vehicles and equipment to serve a variety of industries, including E-Z-GO golf cars, Cushman utility vehicles, Jacobsen professional turf equipment, Dixie Chopper zero-turn lawn mowers and TUG, Douglas and Safeaero aviation ground support equipment.

While snowmobiles remain under the Arctic Cat brand, Textron Specialized Vehicles changed the brand behind the company's side-by-sides and ATVs to Textron Off Road.

"I don't see us ever moving away from the Arctic Cat brand for snowmobiles," said Brandon Haddock, director of communications for Textron Specialized Vehicles. "It's an iconic brand in the snowmobile industry and powersports.

"When you move out of the snowmobile market, down to places like Texas and California, the brand didn't carry quite as well in the side-by-side and ATV markets."

Arctic Cat made several improvements in the last couple of years to improve production and quality. Shortly before Textron bought the business, a multimillion dollar state-of-the-art paint line was added to the facility.

The paint line improves efficiencies and capabilities and increases the company's throughput. It features 3,000 feet of power and free conveyor. The seven conveyors mesh together, with one conveyor handing off to another.

Parts can be sent directly to the paint powder booth without entering the e-coat area, or they can enter both of them. One powder booth is for black and the other is for all other colors.

Paint guns go in and out as the part goes through the booth. In addition, two employees with Tyvek suits occupy the booth for touch-up work.

"It's a major improvement," said John Hassert, paint line manager. "It's allowed us to increase our quality substantially, put out a much better looking part and a much longer-lasting part. One of the main contributors is our new e-coat system. We used to have to lay our large parts sideways. We had to use counterweights to keep them upright to go through the system.

Arctic Cat added an automated guided vehicle (AGV) production line in 2017. As opposed to a conventional assembly line with an overhead conveyor, the AGV system allows in-production of the **Wildcat XX to travel the line via a magnetic track on the floor.**

## 2017 NMPA POWERSAVERS SUMMARY

| | Incentives Paid | kWh Savings |
|---|---|---|
| Bagley Public Utilities | $ 41,924.05 | 605,873 |
| Baudette Public Utilities | 8,115.34 | 89,151 |
| Fosston Public Utilities | 66,225.94 | 865,974 |
| Halstad Municipal Utilities | 6,231.93 | 66,237 |
| Hawley Municipal Utilities | 8,805.81 | 63,868 |
| Roseau Municipal Utilities | 24,991.18 | 251,251 |
| City of Stephen Utilities | 1,986.46 | 28,249 |
| Thief River Falls Municipal Utilities | 52,913.67 | 709,130 |
| City of Warren Water & Light | 22,678.33 | 318,466 |
| Totals | $233,872.71 | 2,998,199 |


Employees work in the state-of-the-art powder booth.

"The old system was designed for snowmobile tunnels. As our parts got bigger, we outgrew it."

The company also added an automated guided vehicle production line.

As opposed to a conventional assembly line with an overhead conveyor, the automated guided vehicle system allows production of side-by-sides such as the new Textron Off Road Wildcat XX to travel the line via a magnetic track on the floor.

At each station, operators can adjust the height position of the vehicle to more easily work on the components. The first vehicle produced on the automated guided vehicle system came off the line at the beginning of 2017.

More projects are ahead. Textron Specialized Vehicles is considering a large LED lighting project and other conservation improvement upgrades in 2018-2019. The company has taken advantage of rebates from the Minnkota/NMPA Joint System PowerSavers program while doing upgrades to air handling equipment, air compressors and lighting in recent years.

Haddock said Textron Specialized Vehicles will continue to invest in the community.

"Thief River Falls is a big part of who we are, and it's going to continue to be a big part of who we are," he said.

John Hassert discusses the paint line.

## PowerSavers pays out nearly $234,000

The PowerSavers program was once again successful in 2017, paying out $233,872.71 in rebates to residential and business customers of participating municipals.

Minnkota Power Cooperative, NMPA's operating agent, administers an energy conservation improvement program (CIP), referred to as PowerSavers, on behalf of its participating Minnesota member cooperatives and NMPA municipals.

As a part of the program, the utilities collaborated to offer a comprehensive set of energy-efficiency strategies and incentives to retail consumers.

For instance, customers of Fosston Municipal Utilities received $66,225.94 in rebates in 2017. Thief River Falls Municipal Utilities paid $52,913.67, followed by Bagley Public Utilities at $41,924.05 and Roseau Municipal Utilities at $24,991.18.

Combined, individuals and businesses of the nine municipals in PowerSavers saved 2,998,199 kilowatt-hours (kWh) by becoming more efficient in 2017.

Fosston also led all municipals in kWh savings with 865,974 kWh, followed by Thief River Falls at 709,130 and Bagley at 605,873.

Among the individual businesses that saved big in 2017 were Team Industries of Bagley. By installing LED and other miscellaneous lighting, they received $27,510 in rebates resulting in 426,905 in KWh savings

Another big saver was the Northland Community & Technical College Foundation in Thief River Falls. LED lighting and heating and air conditioning upgrades resulted in 221,585 kWh savings and $18,035 in rebates.

In the city of Roseau, the school received $10,720 in rebates by installing LED lighting, which will reduce its annual kWh by 117,729.

# Sugar beet boost

## *Kringstad Ironworks receives bump from big industry*

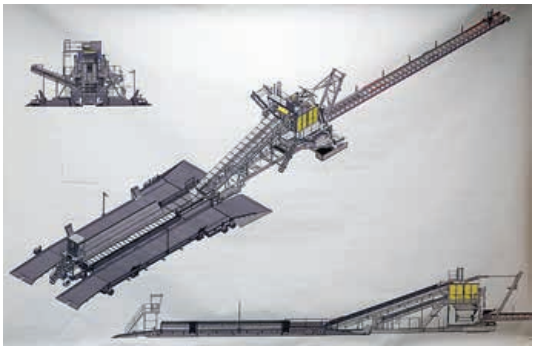
Bernie Kringstad says the Safe-T-Pull™ Crop Shuttle behind him is the largest cart or shuttle in the industry.

Bernie Kringstad has a picture of concept design for a sugar beet piler he sold to a Russian company a few years back on his office wall.

On his office desk, he has a Russian magazine.

This isn't by accident. He has Russia on his mind.

"Russia is a very big sugar industry," Kringstad said. "Over here in the U.S. we are farming about 1 million acres of sugar beets. Over there you have some of the companies who are 1 million acres apiece."



A concept design of a piler Kringstad sold to a Russian company.

No wonder the Park River, N.D., businessman sees a lot of opportunities for his sugar beet pilers – both in the U.S. and in places such as world sugar beet production leader Russia.

Kringstad Ironworks, which is served by Park River Municipal Utilities, manufactures pilers and parts for companies such as American Crystal Sugar, Minn-Dak Farmers Cooperative and others around the country and the world. It also repairs pilers and other farm equipment in the shop and has 24-7 in-the-field service during the sugar beet harvest.

A welder by trade, Kringstad launched the business in 1996 on a farm between Hoople and Park River. At that time, the three employees focused on farm repairs. All that changed when Kringstad Ironworks started to work on projects for American Crystal Sugar and other sugar companies.

The company now has 40 to 50 employees.

The relationship with Crystal Sugar expanded when in 2006 Kringstad Ironworks built its first piler, a machine that transfers beets from trucks to temporary storage piles where they remain until taken for processing, for the company.

Kringstad Ironworks has built as many as seven pilers in a year. The goal is to average about three pilers annually. When the sugar beet campaigns are productive with high yields in the region, Kringstad Ironworks receives an uptick in manufacturing.

The 2017 campaign has been a solid one, which should provide a boost for next spring.

Kringstad Ironworks is more than just sugar

beets, however. It has worked with LM Wind Power of Grand Forks on things such as blade reinforcement and a lift system to roll blades from the production area to outside of the building.

The company also would like to do more work with the federal government. Kringstad Ironworks landed a $500,000 Department of Defense contract to build a prototype of a launching system for drone rockets in 2005.

Kringstad also owns Safe-T-Pull™, a hydraulically operated hitch and towing system that makes assisting and pulling tracks, tractors and other equipment through tough conditions easy and safe. The company sells SlingShot Kinetic Ropes and Soft Shackles that hook up to the Safe-T-Pull truck hitch.

The Soft Shackle's lightweight design makes hooking up to the rope eyes and the Safe-T-Pull truck hitch system easy. In 2016 two John Deere tractors, using SlingShot Kinetic Ropes, towed a combine out of deep mud near Drayton, N.D.

Originally sold through Kringstad Ironworks, Safe-T-Pull became a sister company in 2014, moving out of the Kringstad Ironworks building into a nearby facility in Park River. Kringstad's sons, Jacob and Alek, run the company.

The companies work together to build the Safe-T-Pull Crop Shuttle. The 56-ton series is the largest such shuttle or cart in the industry. Pulled behind a tractor, the shuttle replaces trucks in running alongside crop harvesters in wet and muddy conditions.

"You load the cart out in the field alongside the harvester, and then you will take it up to the headland and fill two trucks," Kringstad said. "With the horizontal boom design in the front, you will drop a great amount of tare and dirt through the boom chain so you will have a cleaner load going into the piling station.

"And, being we have a flat-bottom floor, we use tracks instead of tire profile. With the track system, you're putting down less pounds a square inch with the tracks, reducing the compaction in the field."

Seven different crops have been used in the shuttles.

"We've seen potato harvesters sunk down in the sand and the mud and you can take a loaded cart and drive right by it and you're not going to sink a bit," Kringstad said. "Potato growers are liking our carts and we're looking for multiple orders from some of them."

With all the activity at the two businesses he owns, Kringstad said getting reliable power is necessary. Park River Municipal Utilities is a participant in the Northern Municipal Power Agency (NMPA).

"Very seldom do we ever have an outage here," Kringstad said. "Minnkota, NMPA and the city of Park River have done a great job."

*(Top)* Jacob Kringstad, who runs Safe-T-Pull, holds a Soft Shackle and a SlingShot rope he designed.

*(Bottom)* A pallet of Safe-T-Pull truck hitches awaits powder coating.

A plasma cutter cuts sugar beet pile height gauges.

*(Far left)* Machinist Tony Kringstad, a nephew of Bernie Kringstad, works on a piler repair.

*(Left)* Joe Salinas welds fire log turners. The company gives the log turners away for benefits.

# SECRETARY-TREASURER'S REPORT

The Northern Municipal Power Agency continues its mission to provide an adequate, economical, reliable and long-term supply of electric energy and related services to its 12 municipal participants. The ability to meet these obligations to the participants is further ensured by our Power Supply Coordination Agreement with Minnkota Power Cooperative.

Dalene Monsebroten
Secretary-Treasurer

In 2017, the average wholesale rate to participants was 78.89 mills/kilowatt-hour (kWh), a 2.4 percent increase from 2016. Temperatures for the year were more in line with 10-year averages and amounted to an increase in heating degree days of 10.3 percent from 2016 and 1.9 percent from 2015. Utilities participating in the PowerSavers program, which was set up to coordinate Joint System efforts of meeting the state of Minnesota Conservation Improvement Program mandate of 1.5 percent annual reduction of energy usage, was again met by utilizing a variety of conservation measures. These efforts resulted in total sales to participants approximately 1.3 percent less than 2016 at 442,681,058 kWh.

The amount of revenues received from participants in 2017 of $34,810,272 reflected a slight increase of 2.9 percent on rate components offset by the reduction in kWh sales. Total revenue of $61,699,156, which includes sales to Minnkota and others, and investment and other income, decreased from 2016 due to the reduction of costs for plant operations and interest impacting the sellback requirement of Minnkota for meeting the financial obligations of the Agency.

Otter Tail Power Company continues to serve the Coyote partners as operating agent of the Coyote Station. For 2017, the Agency's 30 percent share of Fuel and O&M costs for Coyote was 32.99 mills, while the average cost of net energy production rose to 33.04 mills per kWh, resulting in an increase of 1.66 percent in average cost of net energy production. We appreciate Otter Tail's diligence in the operation of Coyote.

Outstanding debt at the end of 2017 was $180,215,000 of fixed rate bonds with the final maturity date of 2041. This reflects the issuance of new money for the Coyote Station and transmission projects of $24.9 million along with a refunding of certain 2007, 2008 and 2010 bonds in the amount of $41 million with the issuance of the 2017 bonds. The transaction also included other fund deposits to ensure the coverage ratio and reserve obligations set by board policy are maintained. This transaction assisted the Agency in its efforts of keeping the wholesale rates competitive and our generation and transmission systems reliable.

Brady, Martz and Associates P.C., the independent auditor retained by the board, conducted the annual financial audit. The auditor indicates that the financial statements fairly present, in all material respects, the net position of the Agency as of Dec. 31, 2017, and the results of its operations and its cash flows for the year ended in accordance with generally accepted accounting principles. Included in this annual report are the Management's Discussion and Analysis, containing highlights of the balance sheet and financial statements which are to be read in conjunction with the auditor's report.

Our continued relationships with the NMPA participants and operating agent Minnkota Power Cooperative are greatly valued as we maintain the success of serving together to supply the electrical needs of our region's businesses and citizens.

This annual report contains a broad discussion of financial and operating information along with other highlights which occurred throughout the year. I encourage you to review the report in its entirety.

Sincerely,
Dalene Monsebroten, Secretary-Treasurer

The 1981, 1985, 1989, 1992, 1997, 1998, 2002, 2007, 2008, 2009, 2010, 2013, 2016 and 2017 Bond Prospectus contain projections of the Agency participants' peak demand, energy requirements and estimated power costs for years ending on April 1, as well as on a calendar-year basis. Our comparisons herein will be the calendar year actual vs. fiscal year projections.

The actual system peak of 94,276 kW is 1,505 kW greater than that of the 2016 yearly peak of 92,771 kW. The corresponding 2017 kWh energy sales total of 442,681,058 kWh is 5,765,872 kWh less than the 448,446,930 kWh sold in 2016. Energy sales have been steadily declining over the last five years.

2017 heating degree days increased significantly from that of 2016, which saw the lowest number of heating degree days recorded in the last 35 years. This increase in heating degree days did not however translate into increased energy sales as 2017's total sales decreased by 1.3 percent over 2016 levels. The annual average heating degree days since the Coyote Station began operations (1982-2017) is 9,525 degree days, with 2017 registering 8,627 degree days, or 9.4 percent below the 36-year average. The normal heating months of October through March saw 10.3 percent more heating degree days than that same period of 2016.

The Coyote Station was operated during 2017 by participating owner Ottertail Power Company. Monthly reports are issued to all owners on incurred operating costs, inventory activity, and capital expenditures. Operating costs for the year ending Dec. 31, 2017, totaled $86,753,394.58 with the Agency share totaling $26,076,626.61 or an average cost of 32.99 mills per kWh. The average cost of net energy production for the total plant rose to 33.04 mills per kWh from 32.50 mills per kWh in 2016. This reflects an increase in average cost of net energy production of 1.66 percent.

The average power cost per kWh continues to remain stable due to controlling load demand and improving plant efficiency, as well as the effects of refinancing during 1985, 1989, 1992, 1997, 1998, 2007, 2009, 2010, 2013, 2016 and 2017 and continued innovative Wholesale Power Pricing policies.

During 2017 the Agency participant's wholesale cost of power (average cost per kWh) increased 1.88 mills or 2.4 percent from 77.01 mills in 2016 to 78.89 mills in 2017. All 12 participants experienced individual average wholesale power cost increases ranging from 0.67 to 3.29 mills/kWh.

Production at the Coyote Station facility greatly improved in 2017 as there were only minor outages due to equipment failure and/or unscheduled maintenance. Facility availability improved to 85.06 percent (7,451 hours). By comparison, the average yearly availability over the past 28 years was 85.49 percent. The 2017 availability factor is 0.43 percent below the 28-year average. Gross generation increased by 191,213 MWH or 7.39 percent above that of 2016, resulting in a capacity factor of 70.0 percent, which is still below the 28-year average capacity factor of 75.7 percent.

Funds advanced by NMPA during 2017 for the operation of the Coyote Station equaled $27,597,921 of the total of $91,900,000 funds advanced by the entire group of Station owners. NMPA participants contributed $34,810,272 in revenue of the total of $61,699,156 in revenue derived to offset NMPA's share of the cost of owning and operating the Coyote Station, the cost of the load-ratio share of the Minnkota Power Cooperative transmission system and the cost of internal Agency administrative expense.

The Power Supply Coordination Agreement between Minnkota Power Cooperative and Northern Municipal Power Agency provides for capital credits to be allocated to the Agency whenever such credits are allocated to other Minnkota Power Cooperative members. For 2017 Minnkota Power had an operating loss of $1,097,964 and a nonoperating margin of $10,747,964 for a total margin of $9,650,000. Minnkota margin allocation policy is that margins received from operations, provided there are no accumulated prior years' operating losses, are to be allocated back to patrons. Due to an operating loss, there were no allocation of capital credits in 2017. At the time the accumulated operating losses are offset by operating margins, allocation of margins would resume.

## Coyote Operating Statistics

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Hours of Operation | 7,451 | 6,689 | 8,226 |
| Hours of Outage | 1,309 | 2,095 | 504 |
| Plant Availability (Percent) | 85.1 | 76.2 | 94.2 |
| Gross Generation – Total (MWh) | 2,778,798 | 2,587,585 | 2,060,099 |
| Net Generation – Total (MWh) | 2,616,371 | 2,440,646 | 1,916,652 |
| Fuel Burned – Coal (Tons) | 2,154,856 | 2,011,974 | 1,659,351 |
| Fuel Burned – Fuel Oil (Gallons) | 1,079,680 | 777,659 | 409,364 |
| Fuel Cost (Mills/kWh) | 23.30 | 20.18 | 19.1 |
| Total Production Cost (Mills/kWh) | 33.15 | 32.50 | 30.5 |

The year 2017 was a mixed bag for the Coyote Station.

Overall it was a strong year, with loads remaining high even through the fringe months in the spring and fall. The only marks on Coyote's 2017 record were equipment failures that cost the Station downtime and prevented it from making several of its production targets.

The nonoverhaul year featured a young and evolving workforce, primarily in Operations.

Still, safety continued to be a strong suit. At last check, the Coyote Station was at more than 2.9 million work hours without a lost-time incident. While no serious injuries occurred, the Coyote Station had four recordable OSHA incidents in 2017.

The Unit was offline 1,309.10 hours during the year, of which 490.73 hours were scheduled and 818.37 hours were miscellaneous outages. The forced outage rate of 9.34 percent was double the goal of 4.66 percent.

Things didn't get off to a good start with a difficult wash outage in January that included tube leaks and cyclone damper issues. Two transformers also failed early in the year.

In June, the maintenance/wash outage had to be extended due to a plugged "A" slag tank.

During the summer and fall, the fuel line replacement project from the tanks to the plant took a lot of effort, as did a plugged boiler in August.

From there, it was a great run from September through November with 100 percent availability.

Then, in December, Coyote experienced boiler circulating problems. A pump was replaced and then needed to be repaired after the wash outage. Despite all the troubles, the unit generated 2,616,371 megawatt-hours net for the year, which was 267,585 MWh below budget. The Coyote Station posted its fourth-largest one-week output from Dec. 22-28 with 71,400 MWh.

The unit was available 85.06 percent of the time, compared to the budgeted 87.67 percent.

A total of 2,154,856 tons of lignite coal were burned during the year, which was 261,465 tons under budget. Total fuel oil burned for generation was 1,199,657 gallons, which was 853,927 gallons over budget.

Coal quality consistency was difficult to maintain in 2017.

Total fuel expense totaled $22.54 per MWh, compared to the budgeted $21.39 per MWh. Operations and Maintenance expenses with fuel totaled $8.88 per MWh, compared to the budgeted $7.75 per MWH. The total production cost was $33.04 per MWH, compared to the budgeted $30.40.

The large quantity of fuel oil burned was primarily due to maintaining flame intensity during poor cyclone operations and start-ups.

Other projects completed during the year included a crane replacement, blue pit partial closure, purple pit closure and replacement of bags in the baghouse, boiler insulation and a conveyor belt.

Pending retirements, turnover and training are challenges heading into 2018. Several key supervisors and foremen are closing in on retirements.

To the Board of Directors
Northern Municipal Power Agency
Thief River Falls, Minnesota

## Report on the Financial Statements

We have audited the accompanying financial statements of Northern Municipal Power Agency, which comprise the statements of net position as of December 31, 2017 and 2016, and the related statements of revenues and costs, and cash flows for the years then ended, and the related notes to the financial statements.

### *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### *Auditor's Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit includes performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the net position of Northern Municipal Power Agency as of December 31, 2017 and 2016, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## Other Matters

*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule of Northern's contributions to the MN PERA retirement plan, and schedule of Northern's share of the net pension liability as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

BRADY, MARTZ & ASSOCIATES, P.C.
GRAND FORKS, NORTH DAKOTA
February 25, 2018

# Management Discussion and Analysis

## Financial Statement Overview

This discussion and analysis of Northern Municipal Power Agency's (Northern) financial performance provides an overview of Northern's activities for the fiscal years ended December 31, 2017 and 2016. The information presented should be read in conjunction with the basic financial statements and the accompanying notes to the financial statements.

The basic financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America. Northern's basic financial statements include the statements of net position, the statements of revenues and costs, and the statements of cash flows.

The statements of net position provide information about the nature and amount of assets and obligations (liabilities) of Northern as of the end of the year. The statements of revenues and costs report revenues and expenses for the current year. The statements of cash flows report cash receipts, cash payments, and net changes in cash resulting from operating, capital and related financing activities, and investing activities.

## Financial Highlights

The following table summarizes the financial position of Northern as of December 31:

### Condensed Statements of Net Position

| | | | | 2017 vs 2016 | |
|---|---|---|---|---|---|
| | 2017 | 2016 | 2015 | Dollar Change | Percent Change |
| Net Utility Plant | $104,734,947 | $130,623,045 | $144,158,888 | $(25,888,098) | (19.8%) |
| Current Assets | 83,186,037 | 62,238,319 | 74,443,255 | 20,947,718 | 33.7% |
| Total Assets | 187,920,984 | 192,861,364 | 218,602,143 | (4,940,380) | (2.6%) |
| Deferred Outflows of Resources | 75,338 | 118,585 | 22,466 | (43,247) | (36.5%) |
| Current Liabilities | 31,834,176 | 32,148,541 | 30,490,282 | (314,365) | (1.0%) |
| Long-term Liabilities | 156,119,822 | 160,802,944 | 188,115,658 | (4,683,122) | (2.9%) |
| Total Liabilities | 187,953,998 | 192,951,485 | 218,605,940 | (4,997,487) | (2.6%) |
| Deferred Inflows of Resources | 42,324 | 28,464 | 18,669 | 13,860 | 48.7% |
| Net Investment in Capital Assets | (75,480,053) | (54,061,955) | (64,586,112) | (21,418,098) | (39.6%) |
| Restricted by Bond Agreements | 69,638,427 | 49,197,237 | 60,095,964 | 20,441,190 | 41.5% |
| Unrestricted | 5,841,626 | 4,864,718 | 4,490,148 | 976,908 | 20.1% |
| Total Net Position | $ - | $ - | $ - | $ - | - |

Condensed statements of net position highlights are as follows:

- Net utility plant decreased by approximately $25.9 million. Net utility plant includes Northern's 30% share of the Coyote generating station and Northern's approximate load-ratio share of the related transmission system. The $25.9 million decrease in net utility plant is mainly due to an additional year's depreciation along with a bond refinancing premium related to the issuance of new bonds in October 2017, offset by property additions.
- Current assets increased by approximately $20.9 million. Current assets include cash, investments and accounts receivable. The increase is due to proceeds from the issuance of new bonds in October 2017.
- Current liabilities decreased by approximately $0.3 million primarily due to a decrease in the accrued interest on revenue bonds.
- Revenue bonds, net of current maturities, decreased by approximately $4.6 million. The decrease is due to the refunding of bonds in October 2017 as well as scheduled bond principal payments made in 2017, offset by new bonds issued.
- The net pension liability, deferred outflows of resources, and deferred inflows of resources are due to the implementation of GASB 68, which requires Northern to record its share of the PERA net pension liability.

The following table summarizes the changes in financial position of Northern for the years ended December 31, 2017, 2016 and 2015:

## Condensed Statements of Revenues and Costs

| | 2017 | 2016 | 2015 | 2017 vs 2016 Dollar Change | 2017 vs 2016 Percent Change |
|---|---|---|---|---|---|
| Revenues | $ 61,699,156 | $ 66,780,186 | $ 54,746,684 | $ (5,081,030) | (7.6%) |
| Operating Costs | $ 54,028,293 | $ 57,471,289 | $ 44,343,163 | $ (3,442,996) | (6.0%) |
| Interest | 7,670,863 | 9,308,897 | 10,403,521 | (1,638,034) | (17.6%) |
| Total Costs | $ 61,699,156 | $ 66,780,186 | $ 54,746,684 | $ (5,081,030) | (7.6%) |

Condensed statements of revenues and costs highlights are as follows:

- Total revenues decreased by $5.1 million. Revenues from exempt sales to public authorities and other income decreased by $1.8 million. Revenues from participants increased by $0.4 million and revenues from Minnkota Power Cooperative, Inc. (Minnkota) decreased by $3.7 million. Revenues from exempt sales to public authorities and other income decreased primarily due to lower surplus sales from the Coyote plant. The increase in Revenues from participants is due to a 2.9% rate increase on April 1, 2017 offset by a 1.3% decrease in energy kWh sales. Revenues from Minnkota were down primarily due to there being less Coyote plant costs in 2017 for Minnkota to cover under the Power Supply Coordination Agreement. Per this Agreement, Minnkota purchases all capacity and energy in excess of Northern's requirements at a cost to satisfy Northern's revenue requirements, subject to limitations pursuant to Federal tax law.
- Total operating costs decreased by $3.4 million. Total operating costs include fuel and operating & maintenance expenses for Northern's 30% share of the Coyote generating plant, transmission operating expenses, administrative expenses, and depreciation. Depreciation is provided for on a sinking fund method with depreciation equivalent to the principal payments required to pay the outstanding bonds. Depreciation expense increased $0.2 million due to slightly higher bond principal payments. Operation and maintenance expense decreased by $6.7 million and fuel increased by $3.3 million mainly due to there being no scheduled major Coyote generating plant overhaul in 2017.
- Interest expense decreased by $1.6 million in 2017.

## Debt Administration

As of December 31, 2017, Northern had debt outstanding of approximately $180.2 million, a decrease of approximately $4.5 million from December 31, 2016. Northern made scheduled bond principal payments of $24.2 million on January 3, 2017. Refunding of 2007A, 2008A and 2010A-2 Bonds was done in October 2017 along with the issuance of new bonds, which resulted in a net increase in bonds payable of $19.7 million. Northern bonds have an "A-" rating from Standard & Poor's and an "A3" rating from Moody's.

## Factors Bearing on Northern's Future

Northern is subject to various federal, state and local laws, rules and regulations relating to air and water quality, hazardous and solid waste disposal, reporting of toxic releases and air emissions, and other environmental matters. These laws, rules and regulations often require Northern to undertake considerable efforts and substantial costs to obtain licenses, permits and approvals from various federal, state and local agencies. Northern cannot predict at this time whether any additional legislation or rules will be enacted which will affect its operations, and if such laws or rules are enacted, what the future cost to Northern might be because of such action.

# Statements of Net Position

*As of December 31, 2017 and 2016*

| *Assets and Deferred Outflows of Resources* | 2017 | 2016 |
|---|---|---|
| UTILITY PLANT | | |
| Plant in Service | $ 360,829,100 | $ 364,352,298 |
| Transmission System | 53,310,977 | 51,350,877 |
| Total Utility Plant | 414,140,077 | 415,703,175 |
| Accumulated Depreciation | (309,405,130) | (285,080,130) |
| Net Utility Plant | 104,734,947 | 130,623,045 |
| CURRENT ASSETS | | |
| Cash | 859,048 | 726,324 |
| Investments – Unrestricted | 5,729,108 | 4,447,782 |
| Investments – Restricted | 73,338,102 | 53,842,326 |
| Accounts Receivable – Participants | 3,259,779 | 3,221,887 |
| Total Current Assets | 83,186,037 | 62,238,319 |
| TOTAL ASSETS | 187,920,984 | 192,861,364 |
| DEFERRED OUTFLOWS OF RESOURCES | | |
| Cost Sharing Defined Benefit Pension Plan | 75,338 | 118,585 |

| *Liabilities, Deferred Inflows of Resources and Net Position* | | |
|---|---|---|
| LONG-TERM LIABILITIES | | |
| Revenue Bonds, Net of Current Maturities | 155,890,000 | 160,535,000 |
| Net Pension Liability | 229,822 | 267,944 |
| Total Long-Term Liabilities | 156,119,822 | 160,802,944 |
| CURRENT LIABILITIES | | |
| Accounts Payable | | |
| Participants | 859,048 | 726,324 |
| Minnkota Power Cooperative, Inc. | 2,950,453 | 2,627,128 |
| Accrued Interest | 3,699,675 | 4,645,089 |
| Current Maturities of Revenue Bonds | 24,325,000 | 24,150,000 |
| Total Current Liabilities | 31,834,176 | 32,148,541 |
| TOTAL LIABILITIES | 187,953,998 | 192,951,485 |
| DEFERRED INFLOWS OF RESOURCES | | |
| Cost Sharing Defined Benefit Pension Plan | 42,324 | 28,464 |
| NET POSITION | | |
| Net Investment in Capital Assets | (75,480,053) | (54,061,955) |
| Restricted by Bond Agreements | 69,638,427 | 49,197,237 |
| Unrestricted | 5,841,626 | 4,864,718 |
| Total Net Position | $ - | $ - |

*See Notes to the Financial Statements.*

# Statements of Revenues and Costs

*For the years ended December 31, 2017 and 2016*

| | 2017 | 2016 |
|---|---|---|
| REVENUES | | |
| Participants | $ 34,810,272 | $ 34,422,856 |
| Minnkota Power Cooperative, Inc. | 15,865,596 | 19,543,718 |
| Exempt Sales to Public Authorities and Other Income | 11,023,288 | 12,813,612 |
| Total | $ 61,699,156 | $ 66,780,186 |
| COSTS | | |
| Plant Operations | | |
| Fuel | $ 18,403,057 | $ 15,098,323 |
| Operation and Maintenance | 9,194,864 | 15,902,853 |
| Transmission Operations | 1,501,190 | 1,765,264 |
| Administrative Expense | 604,182 | 554,849 |
| Depreciation | 24,325,000 | 24,150,000 |
| Total | 54,028,293 | 57,471,289 |
| Interest | 7,670,863 | 9,308,897 |
| Total | $ 61,699,156 | $ 66,780,186 |

*See Notes to the Financial Statements.*

# Power Sources and Energy Sales

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| NMPA Coyote Net Generation Delivered (kWh) | 790,401,800 | 749,016,430 | 580,288,574 |
| Energy Sales: (kWh) | | | |
| Municipal Participants | 442,681,058 | 448,446,930 | 456,823,149 |
| Minnkota Power Cooperative, Inc. and Other Public Authorities | 347,720,742 | 300,569,500 | 123,465,425 |
| | 790,401,800 | 749,016,430 | 580,288,574 |

# Statements of Cash Flows

*For the Years Ended December 31, 2017 and 2016*

| | 2017 | 2016 |
|---|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| Receipts from Participants | $ 34,883,049 | $ 34,374,605 |
| Receipts from Minnkota Power Cooperative, Inc. | 16,024,268 | 18,342,318 |
| Receipts from Other Public Authorities | 9,072,004 | 7,450,551 |
| Receipts from Others | 462,880 | 395,001 |
| Receipt of Interest | 243,606 | 390,120 |
| Payments for Fuel | (18,403,057) | (15,098,323) |
| Payments for Operation and Maintenance | (9,194,864) | (15,902,853) |
| Payments for Transmission Operations | (1,501,190) | (1,765,264) |
| Payments for Interest | (8,616,277) | (9,865,569) |
| Payments for Administrative Expense | (471,458) | (473,178) |
| Net Cash Provided (Used) By Operating Activities | 22,498,961 | 17,847,408 |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES | | |
| Proceeds from Issuance of Bonds | 59,695,000 | 22,375,000 |
| Bonds Refunded | (40,015,000) | (25,645,000) |
| Premium Received on Bonds Issued | 6,397,435 | 3,178,114 |
| Principal Paid on Debt | (24,150,000) | (20,790,000) |
| Addition to Utility Plant | (3,516,455) | (9,330,936) |
| Net Cash Provided (Used) By Capital and Related Financing Activities | (1,589,020) | (30,212,822) |
| CASH FLOWS FROM INVESTING ACTIVITIES | | |
| Proceeds from Sale of Investments | 112,877,342 | 130,254,036 |
| Purchase of Investments | (133,654,559) | (117,806,951) |
| Net Cash Provided (Used) By Investing Activities | (20,777,217) | 12,447,085 |
| INCREASE IN CASH | 132,724 | 81,671 |
| CASH AT BEGINNING OF YEAR | 726,324 | 644,653 |
| CASH AT END OF YEAR | $ 859,048 | $ 726,324 |
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| Depreciation | $ 24,325,000 | $ 24,150,000 |
| Deferred Charges | (1,298,782) | (4,440,487) |
| Change in Current Assets and Liabilities: | | |
| Accounts Receivable | (37,892) | (160,364) |
| Accounts Payable | 456,049 | (1,145,069) |
| Accrued Interest | (945,414) | (556,672) |
| Net Cash Provided (Used) By Operating Activities | $ 22,498,961 | $ 17,847,408 |

*See Notes to the Financial Statements.*

# Wholesale Power Costs

| City | Population | No. of Customers | Amount Purchased (kWh) | Cost of Power w/Levy | Mills/kWh w/Levy |
|---|---|---|---|---|---|
| Bagley | 1,422 | 771 | 26,740,277 | $2,070,722 | 77.44 |
| Baudette | 1,011 | 662 | 21,751,654 | 1,738,822 | 79.94 |
| Fosston | 1,508 | 890 | 32,405,845 | 2,503,146 | 77.24 |
| Grafton | 4,324 | 2,220 | 55,197,456 | 4,367,336 | 79.12 |
| Halstad | 598 | 327 | 8,703,526 | 723,291 | 83.10 |
| Hawley | 2,229 | 1,166 | 20,854,525 | 1,692,295 | 81.15 |
| Park River | 1,403 | 812 | 19,883,385 | 1,678,587 | 84.42 |
| Roseau | 2,855 | 1,421 | 38,841,240 | 3,153,720 | 81.20 |
| Stephen | 660 | 383 | 8,054,242 | 660,423 | 82.00 |
| Thief River Falls | 8,722 | 4,931 | 134,794,549 | 10,852,753 | 80.51 |
| Warren | 1,563 | 823 | 17,848,485 | 1,518,798 | 85.09 |
| Warroad | 1,871 | 929 | 57,605,874 | 3,961,049 | 68.76 |
| TOTAL | 28,166 | 15,335 | 442,681,058 | $34,920,942 | 78.89 |

# Financial Coverage Ratios

| City | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Bagley | 1.15 | 1.11 | 1.09 | 1.11 | 1.03 |
| Baudette | 1.31 | 1.33 | 1.30 | 1.30 | 1.49 |
| Fosston | 1.19 | 1.19 | 1.08 | 1.15 | 1.23 |
| Grafton | 1.23 | 1.08 | 1.12 | 1.10 | 1.19 |
| Halstad | 1.11 | 1.22 | 1.23 | 1.06 | 1.24 |
| Hawley | 1.18 | 1.16 | 1.27 | 1.13 | 1.14 |
| Park River | 1.08 | 1.03 | 1.07 | 1.16 | 1.22 |
| Roseau | 1.28 | 1.29 | 1.29 | 1.31 | 1.29 |
| Stephen | 1.06* | 1.06 | 1.19 | 1.19 | 1.21 |
| Thief River Falls | 1.16 | 1.23 | 1.13 | 1.15 | 1.06 |
| Warren | .95 | .93 | .95 | 1.13 | 1.04 |
| Warroad | 1.08 | 1.23 | 1.10 | 1.29 | 1.14 |
| Average | 1.16 | 1.16 | 1.17 | 1.17 | 1.19 |
| NMPA | 1.29 | 1.28 | 1.38 | 1.22 | 1.24 |

*(The coverage ratio measures the ability of the Agency and member cities to pay current purchased power expense and debt service with current year's net revenues.)*

** Estimated.*

## NOTE 1: ORGANIZATION

Northern Municipal Power Agency (Northern) is a municipal corporation and a political subdivision of the State of Minnesota. Its membership consists of ten Minnesota and two North Dakota municipalities each of which owns and operates a municipal electric utility distribution system.

Northern was incorporated on December 14, 1976, for the purpose of providing a means for its members to secure an adequate, economical and reliable long-term supply of electric energy.

In April 1981, Northern purchased a 30% interest in the Coyote Station plant near Beulah, North Dakota and related transmission facilities from Minnkota. As of December 31, 2017, the participants in Coyote No. 1 are as follows:

| Name | Percent of Ownership |
|---|---|
| Otter Tail Power Company | 35% |
| Northern Municipal Power Agency | 30% |
| Montana-Dakota Utilities Company | 25% |
| NorthWestern Corporation | 10% |
| Total | 100% |

Otter Tail Power Company is the operating agent for the Coyote Station plant.

## NOTE 2: ACCOUNTING POLICIES

### Basis of Accounting

Northern maintains accounting records on an accrual basis in conformity with accounting principles generally accepted in the United States of America, as applicable to governmental entities, including the application of the Governmental Accounting Standards Board (GASB) Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*, as the guidance relates to regulated operations. The guidance allows for deferral of revenues and expenses to future periods in which the revenues are earned or the expenses are recovered through the rate-making process.

### Deposits and Investments

Deposits and investments include cash and money market funds. Investments are reported on fair value based on quoted market prices as well as observable market based inputs or unobservable inputs that are corroborated by market data.

### Restricted Investments

Northern's bond resolution requires the segregation of bond proceeds and prescribes the application of Northern's revenues. Amounts classified as restricted funds on the statements of net position represent investments whose use is restricted by bond resolution. It is Northern's policy to use restricted resources first for debt service, and then unrestricted resources as they are needed.

### Fair Value Measurements

Northern accounts for all assets and liabilities that are being measured and reported on a fair value basis in accordance with generally accepted accounting principles (GAAP). GAAP defines fair value, establishes a framework for measuring fair value and expands disclosure about fair value measurements.

When fair value measurements are required, various data is used in determining those values. This statement requires that assets and liabilities that are carried at fair value must be classified and disclosed in the following levels based on the nature of the data used:

Level 1: Quoted market prices in active markets for identical assets or liabilities.

Level 2: Observable market based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

### Revenue

Revenues as defined by the Electric System Revenue Bond Resolution are established at amounts sufficient to cover operating costs (excluding depreciation) and debt service on revenue bonds, less capitalized interest. Revenues are computed and billed so that no equity is accumulated for Northern.

### Utility Plant

Utility plant includes all direct acquisition costs and other costs related to the acquisition of a 30% interest in the Coyote Station plant and the related transmission facilities, along with Northern's approximate load-ratio share of Minnkota's transmission system. Bond expenses, including premiums and discounts, and interest expense (less interest earned on investment securities) are included in the cost of the utility plant.

Depreciation is provided for on a sinking fund method with depreciation equivalent to the principal payments required to pay the outstanding bonds.

### Cash Flows

For purposes of the Statements of Cash Flows, Northern considers cash to be demand deposits.

### Income Taxes

Northern is exempt from federal and state income taxes, as it is a political subdivision of the State of Minnesota.

### Net Position

Northern has implemented GASB Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position*. This statement provides guidance for reporting deferred outflows of resources, deferred inflows of resources, and net position in accordance with Concepts Statement No. 4, *Elements of Financial Statements*.

### Pensions

For purposes of measuring the net pension liability, deferred outflows/inflows of resources, and pension expense, information about the fiduciary net position of the Public Employees Retirement Association (PERA) and additions to/deductions from PERA's fiduciary net position have been determined on the same basis as they are reported by PERA except that PERA's fiscal year end is June 30. For this purpose, plan contributions are recognized as of employer payroll paid dates and benefit payments and refunds are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

### Accounting Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

### Subsequent Events

Northern has evaluated subsequent events through February 25, 2018, the date which the financial statements were available to be issued.

## NOTE 3: POWER SUPPLY COORDINATION AGREEMENT

On March 1, 1981, Northern entered into a Power Supply Coordination Agreement with Minnkota. In 2017, this agreement was amended to be effective until the later of December 31, 2041, or the date on which the operating and engineering committee under the Agreement for Sharing Ownership caused the Coyote Plant to be retired from service. The agreement provides for Minnkota to purchase all capacity and energy in excess of Northern's requirements, subject to limitations pursuant to Federal tax law. Minnkota is the operating agent for Northern.

## NOTE 4: CASH AND INVESTMENTS

The bond resolution under which the revenue bonds were issued provides for the creation and maintenance of certain funds and accounts as follows:

| | Dec. 31 2017 | Dec. 31 2016 |
|---|---|---|
| Unrestricted: | | |
| Cash – Working Fund | $ 859,048 | $ 726,324 |
| Operating Fund | 2,437,834 | 2,000,011 |
| General Reserve Fund | 2,303,531 | 1,300,678 |
| Reserve and Contingency Fund | 987,743 | 1,146,978 |
| Refunding Series 2016 - Bond Fund | - | 115 |
| Total Unrestricted | 6,588,156 | 5,174,106 |
| Restricted: | | |
| Debt Service Reserve Account | 9,887,641 | 11,250,223 |
| Rate Stabilization Fund | 6,007,081 | 5,632,139 |
| Cost of Issuance Fund | 28,158 | - |
| 2013 Plant Additions Fund | 4,325,378 | 7,901,098 |
| 2017 Coyote Project Construction Fund | 10,423,102 | - |
| 2017 Plant Additions Fund | 14,471,212 | - |
| Bond Fund Interest Account | 3,699,702 | 4,300,430 |
| Bond Fund Principal Account | 24,495,828 | 24,758,436 |
| Total Restricted | 73,338,102 | 53,842,326 |
| Total Cash and Investments | $ 79,926,258 | $59,016,432 |

The funds consist of $79,067,210 of investment securities and $859,048 of cash deposits at December 31, 2017, and $58,290,108 of investment securities and $726,324 of cash deposits at December 31, 2016.

As of December 31, 2017, Northern had the following investments:

| | | Fair Value Measurements Using | | | | |
|---|---|---|---|---|---|---|
| | 12/31/17 | **Quoted Prices in Active** Markets for Identical Assets (Level 1) | **Significant Other** Observable Inputs (Level 2) | **Significant** Unobservable Inputs (Level 3) | Rating | Agency |
| Investments by Fair Value Level | | | | | | |
| Cash & Cash Alternatives | | | | | | |
| Treasury Money Market | $36,057,375 | $36,057,375 | $ - | $ - | N/A | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| Certificate of Deposit | $24,894,313 | $24,894,313 | $ - | $ - | N/A | N/A |
| Debt Securities | | | | | | |
| Bonds | 8,246,484 | - | 8,246,484 | - | A3 | Moody's |
| Federal Home Loan Mortgage Corp. | 1,964,365 | - | 1,964,365 | - | Aaa | Moody's |
| Federal National Mortgage | 7,904,673 | - | 7,904,673 | - | Aaa | Moody's |
| Total Investments by Fair Value Level | $79,067,210 | $60,951,688 | $18,115,522 | $ - | | |

### Custodial Credit Risk

For an investment, custodial credit risk is the risk that, in the event of the failure of the counter party, Northern will not be able to recover the value of the investments or collateral securities that are in the possession of an outside party. Northern's investments are held by the investments counter party, in Northern's name.

### Credit Risk

Northern is authorized to invest in:

(a) Direct obligations of the U.S. Government, its agencies or instrumentalities.
(b) New Housing Authority Bonds or Project Notes issued by public agencies or municipalities.
(c) Direct and general obligations of any state or municipalities, which are rated "Aa".
(d) Certificates of Deposit.
(e) Bankers Acceptances.
(f) Repurchase Agreements.

### Interest Rate Risk

Northern has a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Northern entered into a Forward Purchase Agreement with Barclays Bank PLC on May 30, 2014 for investing funds in the bond fund principal and bond fund interest accounts. This agreement was amended on September 27, 2017 to include the 2017 Bonds. The amended agreement establishes a guaranteed rate of return on the investments held in the bond fund principal and bond fund interest accounts at 1.455%. The agreement expires on January 1, 2026.

## NOTE 5: UTILITY PLANT

Utility plant activity was as follows:

| | Beginning Balance | Additions | Adjustments | Ending Balance |
|---|---|---|---|---|
| Utility Plant as of 12/31/17 | | | | |
| Plant in Service | $ 364,352,298 | $ 2,005,915 | $(5,529,113) | $ 360,829,100 |
| Transmission System | 51,350,877 | 1,960,000 | - | 53,310,977 |
| Total Utility Plant | 415,703,175 | 3,966,015 | (5,529,113) | 414,140,077 |
| Less Accumulated Depreciation | (285,080,130) | (24,325,000) | - | (309,405,130) |
| Net Utility Plant | $ 130,623,045 | $(20,358,985) | $ (5,529,113) | $ 104,734,947 |
| Utility Plant as of 12/31/16 | | | | |
| Plant in Service | $ 355,828,341 | $ 4,062,507 | $ 4,461,450 | $ 364,352,298 |
| Transmission System | 49,260,677 | 2,090,200 | - | 51,350,877 |
| Total Utility Plant | 405,089,018 | 6,152,707 | 4,461,450 | 415,703,175 |
| Less Accumulated Depreciation | (260,930,130) | (24,150,000) | - | (285,080,130) |
| Net Utility Plant | $ 144,158,888 | $(17,997,293) | $ 4,461,450 | $ 130,623,045 |

The Electric System Revenue Bond Resolution requires that revenues equal costs. At December 31, 2017 and 2016, $(2,794,570) and $(1,641,457), respectively were deferred against plant in service.

## NOTE 6: REVENUE BONDS

Revenue bonds payable at December 31, 2017 and 2016 are summarized below:

| | Dec. 31, 2017 | Dec. 31, 2016 |
|---|---|---|
| Electric System Revenue Bonds, Series 2007A, Interest 4.125% to 5.00%, Due Annually in Varying Amounts from Jan. 1, 2018 through Jan. 1, 2020 | $ 485,000 | $ 1,975,000 |
| Electric System Revenue Bonds, Series 2008A, Interest 5.00%, Due Annually in Varying Amounts from Jan. 1, 2018 through Jan. 1, 2021 | 23,665,000 | 62,275,000 |
| Electric System Revenue Bonds, Series 2008, Interest 5.82%, Due Jan. 1, 2017 | - | 17,110,000 |
| Electric System Revenue Bonds, Series 2010A-1, Interest 5.00%, Due Annually in Varying Amounts from Jan. 1, 2018 through Jan. 1, 2020 | 45,545,000 | 45,715,000 |
| Electric System Revenue Bonds, Series 2010A-2, Interest 5.00%, Due Annually in Varying Amounts from Jan. 1, 2022 through Jan. 1, 2024 | - | 6,785,000 |
| Electric System Revenue Bonds, Series 2013A, Interest 4.00% to 5.00%, Due Annually in Varying Amounts from Jan. 1, 2023 through Jan. 1, 2031 | 26,155,000 | 26,155,000 |
| Electric System Revenue Bonds, Series 2013B, Interest 4.35%, Due Jan. 1, 2022 | 2,295,000 | 2,295,000 |
| Electric System Revenue Bonds, Series 2016, Interest 5.00%, Due Annually in Varying Amounts from Jan. 1, 2021 through Jan. 1, 2031 | 22,375,000 | 22,375,000 |
| Electric System Revenue Bonds, Series 2017, Interest 4.00% to 5.00%, Due Annually in Varying Amounts from Jan. 1, 2019 through Jan. 1, 2041 | 59,695,000 | - |
| Totals | $180,215,000 | $184,685,000 |

Revenue bond debt service requirements to maturity are as follows:

| | Principal | Interest | Total |
|---|---|---|---|
| 2018 | $ 24,325,000 | $ 7,670,863 | $ 31,995,863 |
| 2019 | 23,865,000 | 7,703,939 | 31,568,939 |
| 2020 | 25,025,000 | 6,528,189 | 31,553,189 |
| 2021 | 26,505,000 | 5,276,939 | 31,781,939 |
| 2022 | 8,210,000 | 3,951,689 | 12,161,689 |
| 2023-2027 | 32,595,000 | 14,326,280 | 46,921,280 |
| 2028-2032 | 29,190,000 | 6,435,912 | 35,625,912 |
| 2033-2037 | 6,850,000 | 1,887,750 | 8,737,750 |
| 2038-2041 | 3,650,000 | 467,500 | 4,117,500 |
| | $ 180,215,000 | $ 54,249,061 | $ 234,464,061 |

On October 3, 2017, Northern issued $59.7 million of 2017 revenue bonds and redeemed $40.0 million of 2007, 2008 and 2010 revenue bonds. The net present value of savings on this refunding was $3,229,993.

The principal and interest on the bonds are payable solely from and secured solely by a pledge of (1) the proceeds of the sale of the bonds to the extent held in special funds established by the Bond Resolution, (2) the revenues of Northern subject to prior payments therefrom of operating expenses and (3) all funds and accounts established by the Bond Resolution permitting the application thereof for the purpose and on the terms and conditions set forth in the Bond Resolution.

Long-term liability activity for the years ended December 31, 2017 and 2016 was as follows:

| | Beginning Balance | Net Additions | Net Reductions | Ending Balance |
|---|---|---|---|---|
| Long-term liabilities, 12/31/17, Revenue bonds | $184,685,000 | $59,695,000 | $ (64,165,000) | $ 180,215,000 |
| Long-term liabilities, 12/31/16, Revenue bonds | $208,745,000 | $22,375,000 | $ (46,435,000) | $ 184,685,000 |

## NOTE 7: DEFINED BENEFIT PENSION PLAN

### Public Employees Retirement Association

### Plan Description

Northern participates in the following cost-sharing multiple-employer defined benefit pension plans administered by the Public Employees Retirement Association of Minnesota (PERA). PERA's defined benefit pension plans are established and administered in accordance with Minnesota Statutes, Chapters 353 and 356. PERA's defined benefit pension plans are tax qualified plans under Section 401 (a) of the Internal Revenue Code.

1. General Employees Retirement Plan (General Employees Plan (accounted for in the General Employees Fund))

All full-time and certain part-time employees of Northern are covered by the General Employees Retirement Plan. General Employees Plan members belong to either the Coordinated Plan or the Basic Plan. Coordinated Plan members are covered by Social Security and Basic Plan members are not. The Basic Plan was closed to new members in 1967. All new members must participate in the Coordinated Plan.

### Benefits Provided

PERA provides retirement, disability, and death benefits. Benefit provisions are established by state statute and can only be modified by the state legislature.

Benefit increases are provided to benefit recipients each January. Increases are related to the funding ratio of the plan. Members in plans that are at least 90% funded for two consecutive years are given 2.5% increases. Members in plans that have not exceeded 90% funded, or have fallen below 80%, are given 1% increases.

The benefit provisions stated in the following paragraphs of this section are current provisions and apply to active plan participants. Vested, terminated employees who are entitled to benefits but are not receiving them yet are bound by the provisions in effect at the time they last terminated their public service.

1. General Employees Plan Benefits

General Employees Plan benefits are based on a member's highest average salary for any five successive years of allowable service, age, and years of credit at termination of service. Two methods are used to compute benefits for PERA's Coordinated and Basic Plan members. The retiring member receives the higher of a step-rate benefit accrual formula (Method 1) or a level accrual formula (Method 2). Under Method 1, the annuity accrual rate for a Basic Plan member is 2.2% of average salary for each of the first ten years of service and 2.7% for each remaining year. The annuity accrual rate for a Coordinated Plan member is 1.2% of average salary for each of the first ten years and 1.7% for each remaining year. Under Method 2, the annuity accrual rate is 2.7% of average salary for Basic Plan members and 1.7% for Coordinated Plan members for each year of service. For members hired prior to July 1, 1989, a full annuity is available when age plus years of service equal 90 and normal retirement age is 65. For members hired on or after July 1, 1989, normal retirement age is the age for unreduced Social Security benefits capped at 66.

### Contributions

*Minnesota Statutes* Chapter 353 sets the rates for employer and employee contributions. Contribution rates can only be modified by the state Legislature.

1. General Employees Fund Contributions

Basic Plan members and Coordinated Plan members were required to contribute 9.1% and 6.50%, respectively, of their annual covered salary in calendar year 2017. Northern was required to contribute 11.78% of pay for Basic Plan members and 7.50% for Coordinated Plan members in calendar year 2017. Northern's contributions to the General Employees Fund for the year ended December 31, 2017, were $18,672. Northern's contributions were equal to the required contributions as set by state statute.

### General Employees Fund Pension Costs

At December 31, 2017, Northern reported a liability of $229,822 for its proportionate share of the General Employees Fund's net pension liability. Northern's net pension liability reflected a reduction due to the State of Minnesota's contribution of $6 million to the fund in 2017. The State of Minnesota is considered a non-employer contributing entity and the state's contribution meets the definition of a special funding situation. The State of Minnesota's proportionate share of the net pension liability associated with Northern totaled $2,920. The net pension liability was measured as of June 30, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. Northern's proportion of the net pension liability was based on Northern's contributions received by PERA during the measurement period for employer payroll paid dates from July 1, 2016, through June 30, 2017, relative to the total employer contributions received from all of PERA's participating employers. At June 30, 2017, Northern's proportion share was 0.0036% which was an increase of 0.0003% from its proportion measured as of June 30, 2016.

For the year ended December 31, 2017, Northern recognized pension expense of $15,516 for its proportionate share of the General Employees Plan's pension expense. In addition, Northern recognized an additional $84 as pension expense (and grant revenue) for its proportionate share of the State of Minnesota's contribution of $6 million to the General Employees Fund. For the year ended December 31, 2016, Northern recognized pension expense of $39,729 for its proportionate share of the General Employees Plan's pension expense.

At December 31, 2017, Northern reported its proportionate share of the General Employees Plan's deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|---|---|---|
| Differences between expected and actual economic experience | $ 7,574 | $13,379 |
| Changes in actuarial assumptions | 34,976 | 23,040 |
| Difference between projected and actual investment earnings | - | 2,382 |
| Changes in proportion | 23,452 | 3,523 |
| Contributions paid to PERA subsequent to the measurement date | 9,336 | - |
| Total | $ 75,338 | $42,324 |

At December 31, 2016, Northern reported its proportionate share of the General Employees Plan's deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|---|---|---|
| Differences between expected and actual economic experience | $ - | $21,418 |
| Changes in actuarial assumptions | 52,464 | - |
| Difference between projected and actual investment earnings | 50,121 | - |
| Changes in proportion | 7,774 | 7,046 |
| Contributions paid to PERA subsequent to the measurement date | 8,226 | - |
| Total | $118,585 | $28,464 |

$9,336 reported as deferred outflows of resources related to pensions resulting from Northern contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending December 31, 2018. Other amounts reported as deferred outflows and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

| Year Ending December 31 | Pension Expense Amount |
|---|---|
| 2018 | $13,177 |
| 2019 | 19,400 |
| 2020 | 857 |
| 2021 | (9,756) |
| 2022 | - |
| Thereafter | - |

### Actuarial Assumptions

The total pension liability in the June 30, 2017 actuarial valuation was determined using the following actuarial assumptions:

| | |
|---|---|
| Inflation | 2.50% per year |
| Active Member Payroll Growth | 3.25% per year |
| Investment Rate of Return | 7.50% |

Salary increases were based on a service-related table. Mortality rates for active members, retirees, survivors and disabilitants were based on RP 2014 tables for males or females, as appropriate, with slight adjustments to fit PERA's experience. Cost of living benefit increases for retirees are assumed to be 1.0% per year for the General Employees Plan through 2044 and then 2.5% thereafter.

Actuarial assumptions used in the June 30, 2017 valuation were based on the results of actuarial experience studies. The most recent four-year experience study in the General Employees Plan was completed in 2015.

The following changes in actuarial assumptions occurred in 2017:

- The Combined Service Annuity (CSA) loads were changed from 0.8% for active members and 60% for vested and non-vested deferred members. The revised CSA loads are now 0.0% for active member liability, 15.0% for vested deferred member liability and 3.0% for non-vested deferred member liability.
- The assumed post-retirement benefit increase rate was changed from 1.0% per year for all years to 1.0% per year through 2044 and 2.5% per year thereafter.

The State Board of Investment, which manages the investments of PERA, prepares an analysis of the reasonableness on a regular basis of the long-term expected rate of return using a building-block method in which best-estimate ranges of expected future rates of return are developed for each major asset class. These ranges are combined to produce an expected long-term rate of return by weighting the expected future rates of return by the target asset allocation percentages. The target allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

| Asset Class | Target Allocation | Long-Term Expected Real Rate of Return |
|---|---|---|
| Domestic Stocks | 39% | 5.10% |
| International Stocks | 19% | 5.30% |
| Bonds | 20% | 0.75% |
| Alternative Assets | 20% | 5.90% |
| Cash | 2% | 0.00% |
| Total | 100% | |

### Discount Rate

The discount rate used to measure the total pension liability in 2017 was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and employers will be made at rates set in Minnesota Statutes. Based on these assumptions, the fiduciary net position of the General Employees Fund was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

### Pension Liability Sensitivity

The following presents Northern's proportionate share of the net pension liability for all plans it participates in, calculated using the discount rate disclosed in the preceding paragraph, as well as what Northern's proportionate share of the net pension liability would be if it were calculated using a discount rate one percentage point lower or one

percentage point higher than the current discount rate:

| | 1% Decrease in Discount Rate (6.5%) | Discount Rate (7.5%) | 1% Increase in Discount Rate (8.5%) |
|---|---|---|---|
| Northern's proportionate share of the GERF net pension liability: | $356,470 | $229,822 | $126,137 |

**Pension Plan Fiduciary Net Position**

Detailed information about each pension plan's fiduciary net position is available in a separately-issued PERA financial report that includes financial statements and required supplementary information. That report may be obtained on the Internet at www.mnpera.org.

## NOTE 8: RISK MANAGEMENT

Northern is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees and others; and natural disasters. The Reserve and Contingency Fund was established to fund uninsured risks of loss. Reserve and Contingency Fund assets were $987,743 and $1,146,978 at December 31, 2017 and 2016, respectively. There were no outstanding or unpaid claims as of December 31, 2017 and 2016. Northern continues to carry commercial insurance for other risks of loss, including workers' compensation, property and liability, and employee health and accident. Settled claims resulting from these risks have not exceeded commercial insurance coverage in any of the past three fiscal years.

## NOTE 9: COMMITMENTS AND CONTINGENCIES

The United States Environmental Protection Agency has provided Otter Tail Power Company (the operator of the Coyote Station at Beulah, North Dakota) with a Request to Provide Information Pursuant to the Clean Air Act concerning Coyote and other plants owned or operated by Otter Tail Power Company. The Environmental Protection Agency is requesting the information to determine whether the emission source is complying with the Clean Air Act. Potential penalties could be authorized by the Clean Air Act if violations were noted but since the request is in preliminary stages, it is not possible to predict if any violations and subsequent penalties would be enforced. Northern believes the Coyote Station has been operating in accordance with the Clean Air Act and expects no violations to be found.

## NOTE 10: RECLASSIFICATIONS

Certain 2016 amounts have been reclassified to conform to the 2017 presentation.

## SCHEDULE OF NORTHERN'S CONTRIBUTIONS TO MN PERA RETIREMENT PLAN – LAST 10 YEARS

| Year Ended Dec. 31 | Pension Plan | Statutorily Required Contribution | Contributions in Relation to the Statutorily Required Contributions | Contribution Deficiency (Excess) | Northern's Covered - Employee Payroll | Contributions as a Percentage of Covered-Employee Payroll |
|---|---|---|---|---|---|---|
| 2015 | PERA | $14,232 | $14,232 | $ - | $189,767 | 7.50% |
| 2016 | PERA | $16,519 | $16,519 | $ - | $220,247 | 7.50% |
| 2017 | PERA | $18,672 | $18,672 | $ - | $248,954 | 7.50% |

Northern implemented GASB Statement No. 68 for its fiscal year ended December 31, 2015. Information for the prior years is not available.

*See Note to the Required Supplementary Information*

## SCHEDULE OF NORTHERN'S SHARE OF THE NET PENSION LIABILITY – LAST 10 YEARS

| For the Year Ended Dec. 31 | Northern's Proportion of the Net Pension Liability (Asset) | Northern's Proportionate Share of the Net Pension Liability (Asset) (a) | State of Minnesota's Proportionate Share of the Net Pension Liability (if Applicable) (b) | Proportionate Share of the Net Pension Liability and State of Minnesota's Share of the Net Pension Liability (if Applicable (a+b) | Northern's Covered-Employee Payroll | Northern's Proportionate Share of the Net Pension Liability (Asset) as a Percentage of its Covered-Employee Payroll | Plan Fiduciary Net Position as a Percentage of the Total Pension Liability |
|---|---|---|---|---|---|---|---|
| 2015 PERA | 0.0031% | $160,658 | $ - | $160,658 | $189,767 | 84.66% | 78.20% |
| 2016 PERA | 0.0033% | $267,944 | $3,559 | $271,503 | $220,247 | 121.66% | 68.90% |
| 2017 PERA | 0.0036% | $229,822 | $2,920 | $232,742 | $248,954 | 92.32% | 75.90% |

The amounts presented for each fiscal year were determined as of the measurement date of the collective net pension liability which is June 30, 2017.

Northern implemented GASB Statement No. 68 for its fiscal year ended December 31, 2015. Information for the prior years is not available.

*See Note to the Required Supplementary Information*

NORTHERN MUNICIPAL POWER AGENCY
NOTE TO THE REQUIRED SUPPLEMENTARY INFORMATION
AS OF DECEMBER 31, 2017 AND 2016

## NOTE 1: GENERAL EMPLOYEES FUND

### *2017 Changes*

Changes in Actuarial Assumptions:

- The Combined Service Annuity (CSA) loads were changed from 0.8% for active members and 60% for vested and non-vested deferred members. The revised CSA loads are now 0.0% for active member liability, 15.0% for vested deferred member liability and 3.0% for non-vested deferred member liability.
- The assumed post-retirement benefit increase rate was changed from 1.0% per year for all years to 1.0% per year through 2044 and 2.5% per year thereafter.

### *2016 Changes*

Changes in Actuarial Assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.0% per year through 2035 and 2.5% per year thereafter to 1.0% per year for all future years.
- The assumed investment return was changed from 7.9% to 7.5%. The single discount rate was changed from 7.9% to 7.5%.
- Other assumptions were changed pursuant to the experience study dated June 30, 2015. The assumed future salary increases, payroll growth, and inflation were decreased by 0.25% to 3.25% for payroll growth and 2.50% for inflation.

### *2015 Changes*

Changes in Plan Provisions:

- On January 1, 2015 the Minneapolis Employees Retirement Fund was merged into the General Employees Fund, which increased the total pension liability by $1.1 billion and increased the fiduciary plan net position by $892 million. Upon consolidation, state and employer contributions were revised.

Changes in Actuarial Assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.0% per year through 2030 and 2.5% per year thereafter to 1.0% per year through 2035 and 2.5% per year thereafter.

# Northern Municipal Power Agency

123 Second St. W. • Thief River Falls, MN 56701