SMMPA plans dramatic carbon reduction program

Southern Minnesota Municipal Power Agency (SMMPA) Feb. 5 announced its plan to reshape its generation portfolio through the retirement of the Sherco 3 coal-fired power plant and replace it primarily with wind and solar generation. The plan would result in a 90 percent reduction in carbon dioxide (CO₂) emissions from 2005 levels and 80 percent carbon-free energy on an annual basis in 2030.

“We have a unique opportunity to re-imagine SMMPA and are excited to take the Agency in this new direction,” said Dave Geschwind, Executive Director and CEO. “We will be taking our commitment to sustainability to a new level while maintaining our legacy of reliability and affordability.”

SMMPA currently owns 41 percent of the 900-megawatt Sherco 3 coal-fired generating unit located in Becker. Sherco 3’s majority owner, Xcel Energy, announced plans in 2019 to retire the plant in 2030. SMMPA

MMUA holds Meter School

There was a strong turnout for the annual MMUA Meter School and its Pre-Conference, both held at the MMUA Training Center in Marshall. The program stretched from Feb. 11-14. For more on this top-notch training, see page 12.

Roaring back

Once reeling back, City of Warren advances on numerous fronts

What a difference a few years can make.

Ravaged by repeated floods, the City of Warren lost about 20 percent of its population between 1980 and 2000. An extensive flood diversion channel is now in place, and the Marshall County seat of approximately 1,600 is advancing on a variety of fronts.

A new recreational/community center, featuring an ice rink, just opened. About half of the $1.1 million cost was paid through donations from foundations, businesses and individuals. A new hospital—the North Valley Health Center—opened five years ago.

Shannon Mortenson, Warren’s city administrator-clerk/treasurer, has played a leading role in Climate Smart Municipalities.

Marshall’s Roos made a lifetime study of how Public Power works

Brad Roos, general manager of Marshall Municipal Utilities (MMU), plans to retire this summer after 17 years in Marshall and 47 years with Public Power. His long tenure is one thing, but that only begins to tell the story—the Roos pedigree of municipal electric utility leadership extends for three generations and collectively almost 100 years.

Consider this perspective: Roos is secretary-treasurer of Missouri River Energy Services (MRES), which is MMU’s wholesale power supplier. Allen Roos, Brad’s father, helped create the organization that would become MRES—the Missouri Basin Municipal Power Agency.

Allen Roos left his private electrical contracting business to become Orange City, Iowa’s utilities manager in 1959. Toward the end of his career he also became city manager. He served in both positions, until retiring in 1986. He was also president of the Iowa Association of Municipal Utilities.

Brad Roos started his career as a laborer at the Orange City utility. He earned a business degree. He spent seven years as Sanborn, Iowa City Administrator, where he also managed the gas and water utilities. Later, he served 19 years as Denison, Iowa utility manager. He then continued his trek up U.S. Hwy. 59, moving due north to take the reins at MMU, 17 years ago.

Throughout it all, he was a student of municipal utilities—or, as he put it, “what works and what doesn’t work.”

Roos: see page 9 please
The Minneapolis Public Utilities Commission (MPUC) Feb. 20 approved a preliminary draft site permit application of Buffalo Ridge Wind (BWR) for a site permit for a 109 megawatts (MW) large wind energy conversion system in Lincoln and Pipestone Counties.

BWR and Great River Energy (GRE) have entered into a power purchase agreement (PPA) for full output of the project over a 25-year term. The output of the project will assist GRE in meeting and exceeding the Renewable Energy Standard (RES) established in Minnesota Statutes Section 216B.1691.3.

Elk Creek Solar

Also on Feb. 20, the MPUC tented Xcel Energy’s petition for approval of a solar energy purchase with Elk Creek Solar, a subsidiary of Geronimo Energy, an 80 megawatt solar plant located in Magnolia, Rock County.

On the question of whether or not to require the company to use a formal, competitive bidding resource acquisition process for the company’s RenewableConnect energy offering, the MPUC reached no conclusions. The question became entangled in a dispute regarding project costs involving union vs. non-union labor.

Notably, as with many power purchase agreements (PPA), a Generator Interconnection Agreement with the Midcontinent Independent System Operator (MISO) has yet to be finalized. The PPA in this case provides for the developer to bear the interconnection costs.

Landowners petition denied

The MPUC Feb. 6 denied a petition from the Association of Freeborn County Landowners, requesting an Environmental Assessment Worksheet (EAW) for the Freeborn Wind Project, a proposed 84 MW Large Wind Energy Conversion System in Freeborn County.

Winona County solar

Meanwhile, the Winona County Board in February approved the creation of a solar ‘garden’ in Minnesota City, overturning a planning commission recommendation to decline the proposal.

The solar energy plant will cover nine-acres. Developer is Novel Energy Solutions LLC. Energy generated will be sold via Xcel Energy subscription.

Regulatory agency convenes ‘Value of Solar’ forum

The Minnesota Department of Commerce, Division of Energy Resources (Department) on Jan. 29 convened a stakeholder meeting to discuss the methodology for calculating the locational avoided distribution cost of solar (VOS).

Minnesota law allows an investor-owned utility to apply for a ‘value of solar’ tariff instead of net metering. Information was presented regarding the methodology used by the New York Public Service Commission. It was noted that New York used a locational methodology for a period of time, but has subsequently moved away from a locational valuation calculation due to concerns about complexity and transparency. The Department will host another meeting to discuss specific proposals from 1:30 p.m. on Tuesday, April 14. Additional information on the meeting, including a conference bridge for participation will be sent out closer to the date of the meeting.

In preparation for that meeting, the Department requests that stakeholders provide written proposals for calculating the location-adjusted distribution cost through ‘edockets’ by April 1, 2020. It is seeking input on the information necessary to make the calculation and “the level of granularity you believe is needed for that information. Also address whether relevant information is available in other docket, such as the hosting capacity report, that could inform the avoided distribution cost.”

More information is available online through the Minnesota Public Utilities Commission’s edockets link. The Value of Solar Docket includes numbers E002/M-13-867 and E999/M-14-65.

Allele names own first female CEO

The Allele, Inc. board of directors in February elected Bethany Owen to be the company’s first female CEO. She has been serving as president. Current CEO Al Hodnik will serve as the executive chairman during the transition and work on legislative affairs.

Owen joined Allele in 2002. She’s held several roles with the company, including president of Allele-owned utility Superior Water, Light and Power, and senior vice president and chief legal and administrative officer.

We’ve moved!

With our former offices demolished to make way for re-development, MMUA has moved across the street to 3131 Fernbrook Lane N., Suite 200, Plymouth, MN 55447. All of our other contact info remains the same.
With key issues looming, ‘public power’ speaks out at APPA Legislative Rally

The American Public Power Association’s Legislative Rally was held Feb. 24-26 in Washington, D.C. The event reflects a recognition of the federal government’s distant but profound influence over municipal utility operations and costs.

Sixty-one people attended under the MMUA banner. Highlights of the event were a series of in-person meetings with our Congressional delegation and staff, to discuss Minnesota Public Power’s priorities.

The event bolstered the work done throughout the year by MMUA Washington Representative Michael Nolan and APPA’s advocacy team. The Rally brings ‘real people’ to D.C., to tell lawmakers their story and provide real-world examples about how federal policies impact their cities.

As the saying goes, the best lobbyists are an elected officials’ constituents, armed with the facts.

Key members of Congress also address the assembled meeting-goers, providing insight into the current legislative situation on issues of importance to public power.

A number of seminars and events were sprinkled throughout the few days allotted for the meeting. These included MMUA’s reception for Minnesota Congressional members and staff, held in the Longworth House Office Building the evening of Feb. 26. Our large group legislative meetings were mostly held in the Capitol Visitors Center, with smaller groups venturing to meet with certain delegations in their offices.

Attendees of the event included public power leaders and staff, as well as mayors, city council and board members.

Key issues

Two key areas of discussion at this year’s Legislative Rally where the significant strides made by public power utilities in recent years to cut carbon dioxide emissions, along with the need for providing comparable incentives to public power utilities investing in new generation.

While the issues are largely set by APPA working through its committee processes (see article below), MMUA works with its members to customize position statements to reflect local situations.

Working through its Government Relations Committee, MMUA selected five topics to highlight in its lobbying efforts. They include:

• Responding to Climate Change
• Comparable Incentives for Clean and Renewable Energy
• Modernize Tax-Exempt Financing
• Protect Mid-Band (6 GHz) Radio Spectrum
• Protecting the Interests of Western Area Power Administration Customers.

You can view and/or download the MMUA position statement booklet (which is pictured at right) from the Public Policy > Federal > Current Issues section of our website.

Climate change among key issues on which APPA delegates take a position

The American Public Power Association (APPA) Legislative Rally is not only a lobbying trip, it gives public power officials the chance to have their voices heard on the formation of key policy positions, through the APPA Legislative and Resolutions (L&R) Committee.

Members of the L&R Committee are among the APPA members at the Rally, to propose and vote on new policy resolutions. These resolutions are eventually voted on by all Association members.

Each APPA member can appoint one delegate to the L&R Committee.

A number of resolutions were approved by the assembled delegates at the Feb. 25 L&R Committee meeting, including what is perhaps our current era’s key issue: Climate Change.

The preamble to Resolution 20-01, setting Public Power’s Principles for Federal Climate Change Legislation, notes milestones in the climate change debate, and actions taken by Public Power utilities to reduce their carbon dioxide (CO2) emissions in response to changes in the economics of power supply resources, energy markets, and customer requests. These actions to reduce Public Power emissions are ongoing.

With the increasing likelihood of climate change legislation moving in Congress in the next several years, APPA said, climate legislation should:

Thus, APPA said, climate legislation should:

• Protect electric customers and the ability of U.S. industries to remain globally competitive by preventing or mitigating substantial rate impacts;
• Recognize regional differences in resources, power supply mix, and electricity consumption;
• Make clear that other sectors of the U.S. economy and other nations also need to take meaningful action to reduce their emissions;
• Ensure the continued use of all sources of non-emitting energy, including hydropower, wind, solar, geothermal and nuclear power, as well as fossil-fuel based and dispatchable resources, which will be needed to ensure generation diversity, system reliability, and resilience;
• Avoid mandates that rely

Resolutions: see next page

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Resolutions:
continued from page 3

on technologies that are not commercially demonstrated or economically feasible;
- Seek the most economically efficient means for reducing GHG emissions from an economy-wide perspective while protecting system reliability;
- Recognize early action taken by electric utilities to reduce their GHG emissions, including investments in renewable and other non-emitting generation, transportation electrification, energy efficiency measures and other GHG mitigation efforts;
- Provide appropriate flexibility, technical and financial assistance to communities and workers that depend economically on fossil-fuel fired power plants, and utilities that own or purchase power from such plants;
- Support demand-side measures to reduce GHG emissions, including increased energy efficiency, demand response measures and beneficial electrification;
- Ensure any federal incentives provided for non-emitting sources of electricity, energy storage, energy efficiency, and carbon capture, utilization, and storage are technology-neutral and provided on a comparable basis to all sectors of the electric utility industry;
- Provide robust federal funding and support for research, development, and deployment of new and advanced technologies to reduce, capture, transform, transport, or sequester GHG emissions by all segments of the electric utility industry;
- Recognize local, state, and regional efforts to reduce GHG emissions and work in a complementary fashion with those efforts; and
- Provide federal funding for technologies and actions to adapt to the effects of climate change, including building more resilient electric infrastructure.

For a complete look at the APPA Resolutions, see the APPA website.

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the German government. The exchange started by pairing five Minnesota cities and five German cities. (Perhaps not surprisingly, four of the Minnesota cities are MMUA members: Warren, Elk River, Duluth and Rochester. They were joined by Morris, and White Bear Lake was added in 2019.)

While Warren has adopted or developed some notable programs and practices, that isn’t really what the program has been about.

What has filtered through is “how we approach things,” Mortenson said. The German is “how we approach things,” Warren is “it’s been a life-changing experience,” said Mortenson. “I’m extremely grateful.”

Warren is also a Minnesota GreenStep City. It has obtained the services of an eight-week intern, who has begun developing an automated benchmarking program to track utility usage of its buildings, with the potential to expand to private commercial buildings and residential households.

Busy utility crews
The city operates electric, natural gas, water and waste-water utilities. It provides garbage service. There are streets to take care of, and the city also operates an airport, golf course, pool and campground. A new 200,000 gallon water tower has replaced an old 75,000 gallon tower. Warren recently upgraded its natural gas ‘town border’ regulator station and the distribution system was expanded to a rural residential area with 35 customers. The local crew did all the distribution system work.

Warren is unique in having McMillan, an electrical engineer working as a journeyman lineman/electric operations manager. He is joined by journeyman lineman Tyler Jevne, and a five-person utilities/public works crew, overseen by Public Works Supervisor Jeff Wohlers, who has been with the city 20 years and the public works crew is busy.

“We work,” he said. “There’s a lot of do and stay on top of.”

That task is helped by computerization of the various systems.

With expertise in a number of areas, city staff also occasionally lend a hand to other cities and municipal utilities in the area.

Floodway major improvement
Platted in 1879, the city was named for Charles Warren, a railroad official.

The Snake River, which provided water for steam locomotives, winds through the city. Flooding was a problem throughout the city’s history but appears to have been alleviated with a recent flood control project.

The Richard P. Nelson Floodway (named for a late Mayor of Warren), starts along the Snake on the city’s northeast side, skirts the city and reconnects to the river to the southwest. The four-mile channel directs excess water around the town and back to the river. The floodway reaches about 16 feet deep, and averages 160 feet wide at the top of its edges.

A 550-acre impoundment can hold the water from a 100-year flood event, and slowly release into the river as the flood subsides.

Developing the floodway was a long process, but the project was functional in 2006 when it saved the city from another flood.

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for the State Fair—thermal imaging with drones. The program started with usual conversation as former state Sen. Levy Stumpf flew with the German delegation into Third River Falls’ Regional Airport. While taking an impromptu tour of the Northland Community & Technical College aviation program, the Germans mentioned that they had done a flyover of Arnberg to conduct rooftop thermal imaging.

“What if we did that with our drones?” someone from the College’s aviation program wondered aloud. That thought turned into a successful grant application. Students last winter completed the early morning imaging work. The colorful images highlight where houses are leaking heat—important information for the homeowner and Warren’s cold-climate electric/natural gas utility.

Going through the data, determining what needs to be done, and working with residents is ongoing. The city is considering a financing program to allow people to make the needed upgrades revealed by the thermal images.

The attention is nice, but it doesn’t mean a thing if the city isn’t doing the job for its citizens.

“We want to make sure our residents are happy,” Mortenson said.

In an indication of the strong relationships that have developed since its inception in 2016, the German government has extended funding of the three-year program for two more years.

“It’s been a life-changing experience,” said Mortenson. “I’m extremely grateful.”

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March 2020 The Resource/5
Growing Detroit Lakes invests in electric transmission to maintain reliability

The Minnesota Public Utilities Commission (MPUC) took no action on a request from Detroit Lakes Public Utilities (DLPU) for a High Voltage Transmission Line (HVTL) Route Permit in Becker County. The non-action allowed the project to move forward.

DLPU has owned and operated a municipal electric system since 1903. It provides electric, water and wastewater service to the citizens of Detroit Lakes and surrounding areas.

The utility has grown substantially in recent decades, as water quality concerns around area lakes has led to requested annexations and subsequent provision of municipal services. The utility has a service territory of approximately 41 square miles. The transmission project involves construction of approximately 2.19 miles of 115,000-volt line and a new 115/12.47 kV distribution substation. The north terminus of the HVTL will be at the proposed substation near the intersection of U.S. Hwy. 59 and County Road 22, and the southern terminus will be an existing 115 kV HVTL owned by Great River Energy in Lake View Township. DLPU will locate the new transmission line within the highway right-of-way to minimize impacts to adjacent landowners.

For planning and construction purposes, DLPU requested a 200-foot right-of-way for much of the route, based on the highway centerline. The final right-of-way will vary between 15 and 41 feet wide to accommodate MnDOT's clear zone requirements.

DLPU completed an Electric System Study and Capital Improvements Plan in 2017. The system was analyzed and loads are projected to increase through 2026. System load growth projections are expected to increase the peak system demand from a level of 39,049 kilowatts (kW) in 2019 to a level near 48,976 kW by 2026.

The system study showed that under emergency scenarios such as the loss of a distribution feeder, substation transformer, or 12.47 kV bus during heavily loaded transmission, unacceptable voltage conditions would occur on areas of the system. Without proper voltage conditions, the remaining system would be incapable of serving the entire load without poor voltage conditions.

The solution selected by DLPU to remedy the potential unacceptable conditions on the electric system was construction of the new substation and HVTL on the south side of the DLPU service territory. Other options were looked at but were deemed unfeasible for resolving the voltage issues on the southern portion of the system.

The new substation will be DLPU’s fourth. The new transmission line will be the second 115-kV line owned and operated by DLPU. The utility aims to keep its impressive reliability record intact. Its 2018 performance includes:

- ASAI 99.998%
- CAIDI 14.8
- SAIDI 7.8
- SAIFI 0.525
- ASAI is the Average Service Availability Index. CAIDI is the Customer Average Interruption Duration Index. SAIDI is System Average Duration Index and SAIFI the System Average Interruption Frequency Index.

The siting process for the Detroit Lakes Public Utilities (DLPU) high-voltage transmission (HVTL) started July 9, 2019, when the utility filed a route permit application to construct a 2.19-mile 115 kilovolt (kV) line.

Due to the relatively low voltage and short length of the proposed line, DLPU filed the application under the Minnesota Public Utilities Commission’s alternative permitting process.

DLPU worked with the Department of Commerce Energy Environmental Resource and Analysis staff (DOE ERRA) and the Minnesota Department of Transportation (MnDOT) to clarify the project right-of-way. The DOE ERRA commented on the environmental scope prior to issuance of the final scoping decision for the environmental assessment (EA), and requested the Office of Administrative Hearings to conduct a public hearing and prepare a summary report of the proceedings.

DLPU, on Nov. 6, 2019, filed an updated application to address the concerns of DOE ERRA and MnDOT. The Alternative Permitting process is outlined in Minnesota Rules parts 7850.2800 to 7850.3800. The proposed HVTL was eligible for consideration under Minn. Stat. § 216E.04, subd. 2(3), and state rules, because the project is between 100 and 200 kV and less than 10 miles in length. DLPU initially asked the County board to handle the siting request, but the board declined, throwing the question to the state regulatory process.
ment agreement for a new hospital and clinic project. With the development agreement approved, the city council also approved an annexation ordinance; a reversion from residential to commercial; and a conditional use permit.

The final compromise made to the agreement, according to the Wadena Pioneer Journal, states “Developer and City shall each pay 50 percent of the (electric) Service Territory Acquisition cost. Developer’s obligation shall be amortized and payable over 10 years as an addition to developer’s monthly electrical service charges and shall be capped at a maximum of $5,000 per year.”

The final cost of acquisition is only an estimate at this time.

The cost of extending electrical, water and sewer utilities to the site is estimated at $3.2 million. The developer is responsible for most of that cost except for areas including “stub outs,” which the city discussed adding for potential development along the extension project, and 50 percent of electrical service territory acquisition costs.

The preliminary cost estimates for construction of the hospital, including site development and acquisition, were reportedly estimated at $61,841,879. The facility will be located adjacent to U.S. Hwy. 10 on Wadena’s west side. Construction is scheduled to begin this spring.

It promises to be a busy construction season in Wadena, with U.S. Hwy. 10 reconstruction from two to four lanes also scheduled to begin in April.

Marshall Municipal Utilities (MMU) has installed an electric vehicle (EV) charging station at one of Marshall’s major shopping areas, east of U.S. Hwy. 59. The charging hub has a 50 kilowatt fast charger and two 11.5 kilowatt Level 2 chargers. Marshall’s hub is reportedly the first of 22 charging stations being placed around Minnesota through grant funding from the Minnesota Pollution Control Agency.

The Marshall project was supported by the City of Marshall, which offered the location, and MMU, which provided electrical service for the charging equipment.

According to the Minnesota Pollution Control Agency (MPCA), the state of Minnesota will receive a total of $47 million from the national settlement between 2018 and 2028. The MPCA said it would spend 15 percent of the funding it received on infrastructure for electric vehicles, like charging stations.

The MPCA awarded grant funds to ZEP Energy, Inc., of Minneapolis, to install a total of 22 EV charging stations around the state. The completed EV charging stations will be owned and managed by ZEF.

The Marshall charging location was chosen partly because it was close to highways and commercial property in Marshall, and partly because it is city-owned property.

There has been an EV charging station at a Marshall hotel since 2018. MMU has also adopted an incentive program for homeowners who install EV chargers for their vehicles.

For the electric utility, the one-percent increase recommendation is mainly due to the debt service on a meter replacement project.

The Grand Marais Public Utilities Commission in January voted to acquire three acres for a possible solar energy plant in a local business park. Purchase depends on the outcome of negotiations with Cook County and the local Economic Development Authority. The Commission also approved moving forward with planning for a 21.8-kilowatt solar plant on the land. Additional solar panels would be added as warranted.
Written pact helps maintain regular order in Marshall’s utility—city relationship

After 47 years of working for municipal utilities, you would expect Brad Roos to take pride in certain accomplishments, and he does.

You might be surprised, however, that the Marshall Municipal Utilities (MMU) general manager’s biggest accomplishment is not a building or piece of infrastructure—it was establishing what he calls “a good relationship between city government and one of its commissions.”

This relationship is distilled into a 12-point agreement, which is annually reviewed and agreed to between MMU and the City of Marshall.

The agreement spells out the relationship in detail and reflects what Roos calls “a partnership” between the two entities.

In this partnership there is a majority partner and a minority partner, Roos said. And, perhaps somewhat surprisingly from a municipal utility manager, Roos said that his utility is the minority partner.

Why is that?

“We don’t appoint the Commissioners,” said Roos. “We don’t write the charter—the City does.”

As primary author of the agreement, however, Roos has taken the initiative. Putting an agreement in writing was one of the first things he did in Marshall, and there has been a written agreement every year he has been there. Because of the annual process it doesn’t get stale and forgotten. When new policymakers are seated, it becomes one of the items they discover and read. It enables good process and continuity, Roos said.

Each year the parties read through the agreement. Sometimes it is a simple matter of updating numbers; sometimes there is a more in-depth discussion.

The MMU management team prepares the first drafts for review and then provides it to the City Administrator. The City works through its staff review processes. Following that, the City Administrator and Utility Manager communicate.

When staff level agreement is attained, the Council and Commission meet in joint committee, with policymakers from both bodies. After this joint meeting, it is placed on the Council agenda.

The Council, after discussion with the Utility Manager in attendance and presenting as requested, approves the agreement first. Then it goes to the Commission agenda.

“Following this process really pays dividends,” Roos said. “The partnership attitude remains strong.” Since 2003, four different City Administrators have joined in this joint effort.

Topics currently covered in the agreement include:

- Payment In Lieu of Taxes (PILOT)
- Street Lighting
- Fire Protection
- Wastewater and Surface Water Management Billing
- ERMCO Transformers
- Midwest supplier for: FMDC Transformers

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Street Lighting

MMU partners with the city to provide street lighting to enhance public safety and improve community aesthetics. Street lighting includes public roadway, bicycle path, city parking lots and park lands. It does not include lighting recreational or athletic fields. The two entities share the costs equally.

Lighting design is a joint effort of the city public works director and utility electric
Brad Roos (foreground) has been a leading public power advocate for many years, including service as chair of MMUA’s government relations committee. Roos is pictured here acting as a spokesperson at the 2014 MMUA Winter Legislative Conference.

Agreement: Putting it on paper leads to understanding allocated costs to furnish the lighting, as determined in the Electric Cost of Service and Rate Design Study updated every three years. The cost is then equally split between the Electric Utility rate base and City’s property tax supported general fund.

Fire Protection
In echoes of the street lighting agreement, the MMU water operations manager collaborates with the city public works director to design and construct water distribution facilities that permit adequate fire flows to meet industry standards. Materials and related necessary items are selected by the utility. Water supply, mains, storage facilities and hydrants located on public land and in rights-of-way are owned, maintained and replaced by MMU.

Every three years, a rate analyst performs a Water Cost of Service and Rate Design Study. American Water Works Association accounting guidelines are applied to establish annual allocation of costs. Of the total annual amount of $348,445 for the years 2020 through 2022, the city will provide $145,000, with the rest supplied by MMU water rate base.

Engineering Services
MMU benefits from Professional Civil Engineering Services provided by the City for watermain projects. MMU pays a base annual fee of $65,000 for civil engineering services. If annual project costs exceed $406,250, MMU is billed at the rate of 36 percent for projects requiring full engineering services. This agreement has enabled the City to have two civil engineers on staff. Weekly coordination takes place resulting in better pipe projects.

Both municipal entities coordinate their respective annual capital funding and bonding needs with the goal of always issuing Bond Qualified Bonds. The parties use the same Financial Advisor and Bond Counsel.

Fiber Optic Utilization
MMU owns and maintains a fiber optic network as part of its electric utility. Public entities (the County, public schools, City and MMU) have participated in planning and funding and have connected to the network. This connectivity allows greater efficiency in planning and utilization of public Information Technology resources.

A benefited entity provides the capital to expand the MMU fiber system if the expansion is solely for its use. Most of the time there is a joint use and MMU acts as project manager. MMU’s fixed term ‘dark fiber’ agreements are also available for public entity use.

To obtain a copy of the agreement, email Steve Dauner at sdauner@mmua.org.

March 2020 The Resource/9
Bridge closings signal changing times for City of Nielsville and its utility

Municipal utilities and the communities they serve are subject to any number of economic and demographic pressures. Some of these pressures, it turns out, are particularly local.

Nielsville, population 89, is one of the smallest Minnesota cities operating a municipal electric utility. Only Whalan and Dundee are smaller, each with 2017 estimated populations of 65.

An unusual local pressure appeared in 2015, when a hole opened in the deck of the steel truss bridge that crosses the Red River at Nielsville. The bridge, built in 1939, has been closed ever since.

To cross the river, residents are now forced to drive 4.9 miles south to the Shelly bridge, or 5.7 miles north to the Climax bridge. This is a particular hardship for those who are transporting agricultural products, a common occurrence in the fertile Red River Valley.

Polk County, Minnesota and the North Dakota county of Traill have studied replacing the bridge, at an estimated cost of between $8.5 million and $11 million, according to published reports. Several grant applications to the U.S. Department of Transportation have been turned down.

The Nielsville municipal electric utility counts 56 customers. The city also provides water and wastewater services. The city boasts a variety of affordable housing options and dedicated, experienced staff and policymakers.

The volunteer fire department building on U.S. Hwy. 75 doubles as city hall.

Mayor David Vraa patrols the electric system, keeping an eye on potential reliability issues. Clerk/Treasurer Stephanie Abenroth runs the business. Ron Abenroth, her husband, operates the water and wastewater systems, and performs a variety of other tasks.

The city buys its power from the Western Area Power Administration and Otter Tail Power. Contractors or other utilities perform electric system maintenance.

Nielsville’s population was as high as 189 in 1950. The city has had a U.S. Post Office since 1883. Nielsville’s railroad depot along the Great Northern Railway line from Canada to Minneapolis, however, disappeared in the mists of time.

The rail line itself has been in a period of long decline. It was eventually acquired by the Minnesota Northern Railroad, which recently abandoned 5.8 miles of out-of-service rail from the Marsh River bridge south of Shelly north to Second Street in Nielsville.

The abandonment was declared due to a deteriorated bridge between Shelly and Nielsville. The line did not produce enough revenue to justify repairing the bridge, said the railroad, and there was “little possibility that additional businesses desiring rail service would locate” along the line.

An adjacent segment of rail between Shelly (another municipal electric city) and south to Perley was abandoned in 2009. A local group is working to build support for a recreational trail on the old railroad track bed.

A particularly good history of the city can be found at the digital projects section of the University of Minnesota-Crookston library.

The Nielsville Hall building was built in 1915 but is currently unused.

Nielsville has had a U.S. post office since 1883.

One size fits all – DOESN’T.
And neither do our solutions.

We work for your community
with your needs and best interest in mind.

bolton-menk.com

10/March 2020 The Resource
Blooming Prairie Public Utilities (BPU) is working with Southern Minnesota Municipal Power Agency to remove two aging generators from its municipal power plant. The space won’t be empty for long.

Prompting the work was failure of a 1.3-megawatt generator. Blooming Prairie plans to purchase a used Caterpillar diesel engine/generator, rated at 1.825 megawatts and able to operate as a quick-start unit. It will be refurbished and installed this year.

The refurbished unit will simply replace the original generator under the existing SMMPA-BPPU capacity purchase agreement. Since SMMPA would have had to pay the deductible to repair the failed unit, the SMMPA board last summer agreed to contribute $100,000 toward the purchase of the replacement generating equipment.

SMMPA harvested parts from the failed engine that can be used in other similar engines in the fleet of member generators.

During planning for the project, it was decided to remove two Fairbanks Morse engines. One was a 450-horsepower engine and generator dating to 1947. The other was a 1,000-horsepower engine coupled to a generator that dated to 1957.

Three engines remain in the plant. They are used for peak load management in addition to emergency use. The new engine will be used for the same purposes.

Let’s show the world what we can do together.

Day by day. Project by project.

Together we’re renewing infrastructure and keeping the world in business.
Accurately metering electric use has always been crucially important to a utility, and that importance has only grown with advances in metering and information technology.

That reality was reflected in a strong response to MMUA’s annual Meter School, and the accompanying Basic Metering Pre-Conference. Fifty-seven people from 36 different utilities attended the Meter School. Thirty-seven people from 24 utilities attended the Pre-Conference (most of whom also attended the School).

The training events were held at the MMUA Training Center in Marshall. The Pre-Conference ran half-days Feb. 11-12 while the School started the afternoon of Feb. 12 and ran through the morning of Feb. 14. Instructors included Larry Chapman and Mark Parson of Chapman Metering, along with experienced lineman and trainer Scott Murfield. Cody Raveling, James Monroe and Bruce Westergaard of the MMUA job training and safety staff were also on hand to lend their expertise.

The Pre-Conference served as a refresher course on basic metering, or introductory course for those with little metering experience. To ensure the most effective training, Meter School participants selected a Basic/Intermediate or Advanced training level. Both classes offered flexibility, with participants progressing at a pace to match their motivation and abilities. Hands-on training reinforced interactive classroom sessions.

The Pre-Conference included:
- Definitions of common abbreviations
- Blondel’s Theorem
- Common metering formulas
- Self-contained metering and troubleshooting
- The Basic/Intermediate Class built on the Pre-Conference, and included more hands-on training, including:
  - Single Phase Meters & Meter Forms
  - Current Transformers & Voltage Transformers
  - PPE for Electric Meter Safety
  - Electric Meter Safety
  - Tools Needed for Working with Electric Meters
  - Mounting Electric Meter Sockets
  - Single Phase Socket Wiring
  - Troubleshooting Electric Installations
  - Theft of Electric Power

The Advanced Class included a self-corrected exam that helped focus training needs. Training included troubleshooting problems on more than 15 different stations. Participants were able to work through scenarios encountered on their systems, with the help of a metering expert. Questions and answers were the order of the day throughout the week.

Students were able to select a training track to match their motivation and abilities. Students, at left, progressed with hands-on training at one of 15 stations available. Below: MMUA’s Bruce Westergaard kept a close eye on a student’s work.

Students were able to select a training track to match their motivation and abilities. Students, at left, progressed with hands-on training at one of 15 stations available. Below: MMUA’s Bruce Westergaard kept a close eye on a student’s work.
MMUA convenes members to discuss emergency preparedness and ‘mutual aid’ restoration

The conference opened Wednesday afternoon with a look at an MMUA-developed Detailed Damage Assessment. This template was developed through hard-won experience over decades of mutual aid efforts. MMUA Director of Job Training and Safety Mike Willetts presented this template to the attendees for their input and ideas. An accurate assessment is a critical first step in any damage restoration effort. The damage assessment template can help guide those efforts going forward, and will likely evolve as it is used in various situations.

A powerful tool in the service restoration toolkit is mPower Mapping & Mutual Aid Software. This GIS-based software application can support mutual aid coordination and communication efforts. Greg Calari of mPower Innovations led this session.

The afternoon concluded with an Emergency Preparedness Panel and open forum discussion. Panelists included Kim Duncomb of Austin Utilities; Troy Adams of Elk River Municipal Utilities and Marc Machacek of MMUA. Each of these individuals shared their ‘mutual aid’ experiences and individual perspectives.

Among the information provided was an MMUA-developed Mutual Aid/Storm Travel Packing Checklist, including a list for the person responding, and a list for truck/equipment.

The focus pulled out to a wider perspective Thursday morning, including a look at the APPA National Mutual Aid Exercise & Discussion. MMUA participated in this national exercise along with APPA. The event tested the capabilities of the public power mutual aid network, inter-organization and inter-agency coordination, and the tools and technologies currently used to support mutual aid coordination.

National ‘best practices’ recommend that all utilities should have a restoration plan that addresses pre-event preparations, event (response), and after-action analysis.

Critical considerations include:

• Communications: Communication is routinely an issue in major disasters, so prepare for the worst. Confirm you have this covered from two-way radios to government emergency telecommunications service/wireless priority service to satellite phones.

• System Assessments: Early system assessments are critical. There should be a specific plan, reviewed annually, for who will be responsible to assess damage for each segment of the system. This should be planned on a ‘blue-sky’ day before a disaster.

• Documentation: Federal Emergency Management Agency requirements should be known before a disaster hits and up-to-date maps, with wire size included, should be on hand. As soon as possible, document main feeders/circuits damage.

• Finance/Administrative Functions (Including Procurement and Contracting) were also addressed.

Chris Smith, of the League of Minnesota Cities Insurance Trust, closed the conference with a look at Liability and Insurance Matters When On a Mutual Aid Event.
A total of 27 participants from 18 public power utilities participated.

MMUA thanks all of its member utilities that have signed a copy of the mutual aid agreement, which is used nationally by municipal electric utilities and electric cooperatives. FEMA insists that this agreement be signed prior to a disaster, to be eligible for disaster reimbursement.

If you are unsure if your municipal utility is a signatory to this agreement, contact tneudermeyer@mmua.org

Rochester for Florida in response to Hurricane Dorion, in September 2019. Cities and municipal utilities have responded to varied natural disasters over the decades, from floods and summer storm damage locally to East Coast hurricanes. MMUA’s Mike Willetts (pictured standing above) led conference attendees through ‘lessons learned’ and planning to improve response to future events. The picture below (courtesy of RPU) is of the MMUA-gathered mutual aid crew prior to leaving Rochester for Florida in response to Hurricane Dorion, in September 2019.

Spring 2019

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Spring 2019
The U.S. Energy Information Administration (EIA) on Feb. 26 reported that in 2019 wind power generation exceeded hydroelectric generation for the first time. Wind power production from utility-scale facilities totaled 300.071 TWh, while conventional hydropower facilities produced 273.707 TWh. Solar production was a distant third.

The U.S. Environmental Protection Agency (EPA) Feb. 19 released preliminary data on 2019 emissions of nitrogen oxides (NOX), sulfur dioxide (SO2), carbon dioxide (CO2), and mercury (Hg) from power plants in the lower 48 states. This data shows a marked decline in emissions of these pollutants compared to 2018. The data show a 23 percent decline in SO2 emissions compared to 2018, a 14 percent decline in NOX emissions, an 8 percent decline in CO2 emissions, and a 13 percent decrease in Hg emissions. Additionally, ozone season NOX emissions dropped by 13 percent. During this time period, electric generation from these power plants decreased by 3 percent.

Further, from 1990-2017, the combined emissions of the six key pollutants regulated under the National Ambient Air Quality Standards dropped by 52 percent. Over the last decade, concentrations of sulfur dioxide have fallen by over 75 percent in the U.S., while regional average concentrations of average ambient SO2 declined 85 percent from the 1989-1991 to the 2016-2018 observation periods. The report found that greenhouse gas emissions from power plants dropped by roughly 20 percent since 2011.

The North Dakota Public Service Commission Feb. 19 approved an expansion of the Dakota Access Pipeline, doubling capacity. Approval is still needed from Iowa and Illinois regulators, and the Standing Rock Sioux Tribe has challenged the expansion in court. If completed, the pipeline would have the capacity to take to market three-quarters of all oil produced in North Dakota.

The federal Bureau of Reclamation recently announced that the Lewis & Clark Apprenticeship Lineworker Training Our experienced instructor—James Monroe—provides on-site instruction.

Call MMUA Director of Training and Safety Mike Willetts at 612-802-8474 for more information.
Regional Water System will receive $18 million in federal funding for fiscal year 2023, an increase of $3 million. The funds will cover a portion of three construction projects.

The Allete, Inc. board of directors in February elected Bethany Owen to be the company’s first female CEO. She has been serving as president.

Current CEO Al Hodnik will serve as the executive chairman of the company’s board during a transition. He will continue working on state and federal legislative affairs.

Owen joined Allete in 2002, as an attorney. She’s held several roles with the company, including president of Allete-owned utilities Superior Water, Light and Power, and senior vice president and chief legal and administrative officer.

The U.S. Energy Information Administration projects in its Annual Energy Outlook 2020 Reference case that U.S. energy-related carbon dioxide (CO2) emissions will decrease through the early 2030s, then increase to 4.9 billion metric tons by 2050.

This would result in U.S. energy-related CO2 emissions in 2050 that are 4 percent lower than 2019 levels.

The reference case assumes no new laws and regulations. Changes in the fuel mix and increasing activity in the industrial and transportation sectors are the main drivers of the projections.

Emissions of CO2 from the U.S. electric power sector see the largest drop through 2025 due to coal power plant retirements and additions in renewable generation capacity. From 2025 to 2050, electric power sector CO2 emissions remain relatively constant as the more economically viable coal power plants stay in service.

**Classified Ads**

Public Utility

HPUC is seeking applications for the position of General Manager. HPUC provides electric, water, steam and gas services to approximately 8,000 customers. The General Manager directs the business of the utility; establishes long-range objectives and plans, the utility with the public, customers, employees, financial community, and regulatory agencies under the direction of a three-member commission. Responsible for providing efficient, economic, and uninterrupted electric, gas, water, and steam heat service to all customers. Plans and directs all engineering activities of the Utility. Bachelor degree in engineering, business administration, finance, accounting or a closely related field and two years of relevant experience in a management level position is preferred. Excellent benefit package including pension; health, life and dental insurance; deferred compensation plan; paid vacation and sick leave. Salary commensurate with experience, education and qualifications. Job description and application available online at www.hpuc.com. Applicants must submit resume, HPUC job application and salary requirements to Jane Garrity, Human Resources, Hibbing Public Utilities, 1902 E 6th Ave, Hibbing, MN 55746, fax 218-262-7756, email janeg@hpuc.com. Position is open until filled.

More ads online! For a full and complete look at Classifieds, please go to the News > Classifieds at www.mmua.org
Upcoming Events

We are entering the busiest season for MMUA schools and workshops. Our upcoming slate of meeting and training opportunities includes:

Legislative Conference
March 31 - April 1
St. Paul

2020 promises to be a very active session for municipal utilities. Click on this event at the Calendar > Events page on our website for the latest program details!

Generation School
April 21-23

Generation School offers participants valuable classroom and hands-on instruction plus networking opportunities for generator operators and technicians.

Participants select hands-on instruction on three different engine sets: Enterprise, Cooper and Fairbanks Morse. Plus we’ll tour one of Hutchinson Utilities’ generation plants and 3M’s manufacturing plant in Hutchinson.

Another benefit is that participants can get to know one another better, at our reception sponsored by Ziegler CAT.

SMMPA: continued from front page

SMMPA expects all of its outstanding debt on Sherco 3 will be paid off in 2027.

Natural gas and other non-coal fossil-fueled generation will continue to play an important role in maintaining reliability for SMMPA’s members. The Agency expects these facilities to provide a relatively small percentage of its energy needs on an annual basis, but to continue to facilitate the increase in intermittent renewable resources, like wind and solar, while maintaining reliability and affordability.

“SMMPA’s member communities support this strategic initiative to reduce carbon emissions,” said Joe Hoffman, SMMPA Board President and Preston Public Utilities general manager. “We are excited about capturing this opportunity to address important environmental objectives while maintaining an affordable energy supply.”

Geschwind cautions that there are still important decisions to be made. “While we are optimistic that technological breakthroughs are on the horizon, the cost of achieving the last 10-20 percent reduction in carbon emissions in the power sector is currently projected to be prohibitively high with today’s technology. We believe society will need to evaluate whether further reductions beyond 80 percent in this sector are the most economical and practical path to deep carbon reductions economy-wide.”

SMMPA also highlighted the potential of beneficial electrification in applications like electric vehicles (EV) as well as energy efficiency to be important elements of meeting societal goals.

SMMPA plans to create an ‘EV Charging Network’ to connect its member communities. In addition, SMMPA’s energy efficiency programs have been recognized four times with ENERGY STAR Awards from the Environmental Protection Agency.

Geschwind says SMMPA will need the support of the member communities, elected officials and SMMPA staff to successfully implement the plan. He also urges policymakers to make utilities more flexible and to resist one-size-fits-all mandates where there is clear evidence the industry is already moving to meet public policy goals.

The Agency will strive to keep rates competitive and limit wholesale rate increases to levels at or below the rate of inflation during the transition.

SMMPA provides electric utility services to 18 municipally operated utilities, mostly in south-central and southeastern Minnesota.

Underground School
May 12-15
MMUA Training Center, Marshall

The Underground School offers a hands-on training track with a variety of training sessions and an advanced technical course. In addition to top-notch instructors, we strive to keep class sizes small to maximize participation and learning. Whether you are a seasoned Journeyman looking to stay current or an Apprentice just starting out, this school offers something for everyone.

Individuals registered for the Multi-Session Class will rotate through six different training sessions, covering a variety of topics that can enhance safety and improve efficiency.

We offer this school with our partners MREA and APPA.

Minnesota Public Power Fishing Tournament
Saturday, May 30
Rush Lake, Ottertail

Mark your calendars now for this popular event for a good cause! Two-person teams per boat compete for prizes and bragging rights! Proceeds go to the linenower training programs in Minnesota. Registration is now open.

Annual Summer Conference
August 24-26
Cragun’s Resort, Brainerd

Yes, we know it’s early, but check your calendars. This conference has been moved back one week from its original date! Our Trade Show and Reception takes place August 25.

For more information, see the ‘Events’ calendar at www.mmua.org

Apprentice Lineworker Training
On-site/On-demand Four-Year Career Development Program

This MMUA course allows the municipal utility employee who wants to learn more about the lineworker’s trade to receive professional training from experienced instructors, right at the utility site.

Students enjoy cutting-edge academics, extensive hands-on training, along with tuition-free attendance to several MMUA schools.

For information on this, and other MMUA training opportunities, contact treedermeyer@mmua.org

For more information call: 320.274.7223
9030 64th Street NW
Annandale, MN 55302
WWW.FS3INC.BIZ

Southern Minnesota Municipal Power Agency
Your Partner for a Bright Energy Future

MMUA has adopted a new logo, pictured above.

SMMPA:

1. Your partner in damage prevention
2. Your partner in damage prevention
3. Your partner in damage prevention
4. Your partner in damage prevention
5. Your partner in damage prevention
6. Your partner in damage prevention
7. Your partner in damage prevention
8. Your partner in damage prevention
9. Your partner in damage prevention
10. Your partner in damage prevention

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