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MMUA
3131 Fernbrook Lane North
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Plymouth, MN 55447
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Summer Conference illustrates how Minnesota's hometown utilities are stronger together

A heat wave was hitting most of the state as MMUA's Summer Conference gathered in Duluth.

Its moderate temperatures were a welcome respite from the sultry weather elsewhere, and MMUA's own "Great Minnesota Get Together" provided many opportunities to strengthen hometown utilities all over the state.

The event began for some with a Board of Directors meeting on Sunday night. For everyone else, the main conference kicked off on Monday, August 21. The theme of this year's event was "Resiliency," a topic that is more important now than ever. By bringing together the forces of the municipal utility world, including utility staff, leadership, commissioners, joint action agencies, experts, scientists, vendors, and many more, the conference aimed to join municipal utility talents to help make our world more resilient.

Things kicked off with two



Julie Kennedy, incoming MMUA Board President, accepts the gavel from Don Martodam, outgoing MMUA Board President.

in-depth pre-conference sessions on Monday morning. Mark Fritsch led a discussion on utility negotiation skills that highlighted important tactics for a wide array of situations. Learning to be a good listener,

using a mediator, and building relationships with other utilities are all ways negotiation can become easier for a utility.

Karleen Kos and Susan Walker presented on successful grant-writing skills. The presenters

spoke about how to identify grant opportunities that could be a good fit for your utility, the purpose of each step of the grant process, and how to succeed at those steps. The pair also talked about watching for grants

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Government Relations working on priorities and outreach for upcoming legislative session

By Kent Sulem

Since the end of the 2023 Regular Legislative Session, the Government Relations team has been busy drafting summaries of the new laws, gathering more details about how they will affect municipal utilities, and preparing for special events like the annual Summer Conference.

It is also never too early to be working on issues for the next legislative session, which will convene in February 2024.

A great deal of time has been spent preparing and filing initial comments for the docket opened by the Minnesota Public Utilities Commission (MPUC) regarding the interpretation and scope of Chapter 7, the carbon-free by 2040 bill that also modifies the renewable energy standards. The team conducted individual phone calls with the power agencies

and then brought everyone together for a Zoom meeting to confirm we were all on the same page regarding the best way to interpret Chapter 7 to ensure compliance. The biggest initial challenge centers around 23 municipal utilities that do not currently have memberships in a power agency, as they now meet the new definition of an electric utility. However, it appears the wholesale providers and the Department of Commerce agree with MMUA that the wholesale providers are in the best position to ensure compliance with both the modified and new standards on behalf of the independent electric utilities. After reviewing all comments filed, MMUA did not see the need to file supplemental comments and has turned its attention to preparing for the first hearing on the docket, which will occur

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Cold Spring's first-in-the-state biological treatment plant for nitrate uses nature to solve problems

Editor's note: On July 31, the Star Tribune published an excellent story on Cold Spring's new biological nitrate reduction plant. MMUA sat down with Jon Stueve, public works director for Cold Spring, to take a deeper dive into the making of the state's first biological treatment plant for nitrate.

MMUA: When did the nitrate removal plant open? How was operation out of the gate?

Jon: It was roughly spring of 2023. There were some hiccups at first, but you're going to have that with any new plant. We worked through most and will continue to improve operation every day.

MMUA: Tell me about your nitrate levels in Cold Spring before the plant opened. What were your main drivers of the levels? What made you and the city decide it was time to take a different approach to the problem?

Jon: Our nitrates hit as high as 14. We did some crop conversion efforts that helped for a short period of time, but then that

stopped working. The main drivers of nitrates are fertilizer on row-crop fields. It seems like when corn and beans shot up in price, there were fewer and fewer cover crops, and more row crops, and that is when our nitrates started climbing. We had to do some form of treatment, so we ended up getting on the bonding bill, and we received \$4 million to put toward treatment.

MMUA: Could any city do this type of project? Are there special local requirements for this type of system?

Jon: We had to run a pilot through the Minnesota Department of Health (MDH) to prove biological treatment can work

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Staff

Chief Executive Officer

Karleen Kos, kkos@mmua.org

Director of Administration

Rita Kelly, rkelly@mmua.org

Director of Finance

Larry Pederson, lpederson@mmua.org

Director of Gov't Relations and Senior Counsel

Kent Sulem, ksulem@mmua.org

Director of Training and Safety

Mike Willetts, mwilletts@mmua.org

Government Relations Attorney

Bill Black, bblack@mmua.org

Government Relations Liaison

Michael Siebenaler, msiebenaler@mmua.org

Multimedia Journalist and Content Creator

Reid Baumann, rbaumann@mmua.org

Marketing and Member Relations Manager

Christian Glanville, cglanville@mmua.org

Accounting Assistant

Karen Heiden, kheiden@mmua.org

Safety Services Coordinator

Theresa Neddermeyer, tneddermeyer@mmua.org

Ass't Director of Education and Outreach

Cody Raveling, craveling@mmua.org

Ass't Director of Technical Services

Jay Reading, jreading@mmua.org

Ass't Director of Workplace Safety Services

Joseph Schmidt, jschmidt@mmua.org

Regional Safety Group Program Leader

Mike Sewell, msewell@mmua.org

Regional Safety Group Coordinator

Jason Gorr, jgorr@mmua.org

Regional Safety Coord./JT&S Instructors

Keith Byklum, kbyklum@mmua.org

Travis Denison, tdenison@mmua.org

Mike Grabow, mgrabow@mmua.org

Brad Gunderson, bgunderson@mmua.org

Rusty Kaderabek, rkaderabek@mmua.org

Apprenticeship/JT&S Instructor

Roger Avelsgard, ravelsgard@mmua.org

Generation Coordinator/JT&S Instructor

Paul Helling, phelling@mmua.org

Natural Gas Circuit Rider

Dennis Danielson, ddanielson@mmua.org

Regional Safety Coordinators

Jim Bruender, jbruender@mmua.org

Adam Chesney, achesney@mmua.org

Brad Levasseur, blevasseur@mmua.org

Dan Nath, dnath@mmua.org

Bernie Richards, brichards@mmua.org

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MMUA's day at the Twins game



MMUA staff, board members, and their families attended the Minnesota Twins game on July 23 against the White Sox. The game was a bit of a yawner until the Twins tied the game in the bottom of the 9th, and went on to win in 12 innings!

New report highlights strategy of using depleted electric vehicle batteries for grid storage

A new report from the Natural Resources Defense Council (NRDC) highlighted the ability to repurpose electric vehicle (EV) batteries in several different applications, including grid storage, when their useful life as an EV battery is at an end.

With today's EV batteries, most scientists say that the battery will outlive the car, which is a positive development and sign of the progression of battery technology. However, the batteries still eventually lose most of their range capability, making landfilling, recycling, or reuse necessary.

That is where reuse comes in. The NRDC report calls these uses "second-life applications" and noted several areas in which depleted EV batteries could be reused. These include lighter-use applications such as small electric vehicles, golf carts, and for home microgrids or battery storage. Even with the batteries' loss of capacity, they are still helpful in these areas.

Another use, called "repurpos-



ing," is the use of EV batteries in larger, commercial-scale storage applications. Although work in this area is just starting to emerge, companies like RePurpose Energy have already piloted projects that use EV batteries in this way. RePurpose assesses the batteries as they come in, and then monitors their performance as they act in their

new storage capacity.

Effectively recycling and repurposing modern batteries will become even more important as electric vehicles and electricity storage become more widespread. Getting ahead of the curve will help everything go more smoothly as the clean revolution progresses.

Nearly 1.2 million gallons of partially untreated wastewater enters Pacific Ocean

On July 9, a mechanical issue at the wastewater treatment plant for the City of Newport, Oregon, caused 1.18 million gallons of incompletely treated wastewater to enter the Pacific Ocean near Nye Beach.

Newport is about 120 miles southwest of Portland.

A machine that adds chlorine to the city's wastewater broke, allowing the wastewater to enter the ocean partially treated. The situation continued for several

hours until it was remedied.

Beaches in the area were posted and tested for a few days after the water entered the ocean. Any issues stemming from the spill were resolved within a few days.

A Tale of Two Conferences

When Charles Dickens wrote *A Tale of Two Cities*, he started it with the iconic sentence, “It was the best of times; it was the worst of times.”

If he had been able to look forward 164 years and read the feedback from Summer Conference 2023, his quote might have seemed prescient.

A record number of municipal utility personnel, council members, and commissioners gathered in Duluth last month for MMUA’s 2023 Summer Conference. Attendees were bullish on much of the content, networking opportunities, and the trade show. Their feelings about the location were less positive. Sometimes, reading through the comments, it is hard to believe the attendees were at the same event. Remarks like, “The event was great!” came in right next to, “I didn’t feel I got enough out of the conference to make me want to come back.”

Overall ratings dropped this year. In 2022, 98 percent of attendees scored the event seven or higher on a 1-10 scale, but just 82 percent gave the 2023 event a similar assessment. Still, the vast majority of attendees cited a great many things they liked. For example:

- “It was my first year attending, and I thought it was a great event! I was able to meet so many from other utilities, including someone that I would consider [to be] a mentor going forward ... Everyone was so inviting, and the breakout sessions were great.”
- “This year’s conference was far more engaging than any in the past I’ve attended ... speakers were improved, the reception was improved, the audience was a tad more inclusive. There was more for women in terms of content and recognition.”

- “It’s a good time to network with others, and [I] always come away learning something new.”

The dip in satisfaction seems mostly tied to issues with the venues in general and to certain pinch points in particular. These included:

- The less intimate feel of the event due to being more spread out.
- The impact the summer’s drought had on the golf course.
- Logistical headaches both at the DECC and the hotel.
- Certain event details, such as food choices, lack of water on the tables, and acoustics.

Educational content was generally rated highly, though attendees had strong views about some of the speakers.

- Closing keynote speaker Chuck Gallagher’s talk on ethics received the approval of 98 percent of attendees. That was the best rating of all the plenary sessions. Opening keynote Russ Gold’s discussion of the energy transition was not as warmly received, with some 35 percent of attendees rating him as worse or much worse than they expected.
- All of the breakout sessions, including the new track specifically designed for council and commission members, were also rated very highly, with 98 percent approval by those who attended the sessions. Chuck Gallagher’s session on AI-driven innovation and Dave Berg’s session on residential electric demand rates were particular favorites, both rating higher than 4.3/5.0 overall.
- There was general agreement that the roundtable discussions were highly valuable, and the content spanned the needs of the audience. Sessions on

grant tips, drug testing and legal cannabis, EV charging rates, and public EV charging considerations were particularly strong. Unfortunately, the loudness and crosstalk in the room made it difficult for some attendees to hear during the roundtables, diminishing the value for them.

Plenary sessions on workforce trends in Minnesota and avoided distribution costs received lukewarm reviews. While the content was among the topics requested by members prior to the event, the presentations missed the mark for more than 20 percent of attendees.

This year MMUA offered two separately ticketed pre-conference sessions. They included a focus on successful grant writing and negotiation tactics for utilities. Both of these sessions received high marks from those who attended the three-hour workshops.

Networking. As is usually the case, attendees highly valued the networking time with one another, learning from one another, and meeting with their vendor colleagues. They were also uniformly positive about the MMUA staff and their helpfulness throughout the three days.

- “The utility world is ever changing so the networking and learning opportunities are very valuable.”
- “Great networking opportunity for municipal utility professionals.”
- “The ability to network and build connections is priceless.”
- “MMUA staff did an amazing job!”

Event flow, logistics, and venue. Generally speaking, moving the awards to a luncheon was well received. Most—but not all—

From My Desk to Yours

Karleen Kos
MMUA CEO



attendees were happy with the opening reception at Hoops Brewery as well, and the hardy handful that accompanied Mike Willetts on a hike Monday afternoon had a great time.

Opinions were decidedly “A Tale of Two Conferences” on many other aspects of the event. On the positive side we received comments like,

- “Duluth was a nice option to change to.”
- “The DECC was an excellent venue for the conference. The trade show had a more professional feel and wasn’t nearly as crowded as it was at the Brainerd resorts.”
- “The conference was well laid out and the content was extremely beneficial.”

From there, though, comments became far less complimentary. Common points of concern included:

- Hospitality rooms were inconveniently located, and in general the experience of them was diminished compared to prior years.
- The DECC’s food did not compare favorably with the food available at the resorts in prior years. Attendees would have liked more snacks as well.
- The dry and rough conditions found at the golf course provided a disappointing round

for those that hit the links Monday afternoon.

- The entire event seemed to lack the intimacy found at the resort venues.
- Members were displeased about early the closing of the skywalk requiring a long outdoor trek in the evenings.

Comments on the above ranged from polite to extremely stern, registering a range of unhappiness and confusion about why the change from the lakes area has been necessary and what MMUA can do to help members become more comfortable with it.

Looking ahead. As a staff, we are reviewing all of the feedback we have received, and we are using it to help with our planning for the 2024 event. The Summer Conference belongs to MMUA’s members, and it needs to reflect members’ priorities.

Unfortunately, the Summer Conference has simply outgrown the Brainerd Lakes area. There is no venue there that can accommodate the MMUA Summer Conference—nobody has enough hotel rooms, conference space, and tradeshow space on one site. Using multiple resort venues simultaneously, something MMUA staff explored, is not feasible for a variety of reasons. That limits the location options.

MMUA’s members have made it clear they don’t wish to have the conference in the Minneapolis-St. Paul metro area. Consequently, the remaining locations with enough space currently include Duluth, Fargo-Moorhead, St. Cloud, Rochester, Mankato, and Sioux Falls. One or two of Minnesota’s casinos may also be able to accommodate MMUA, a venue possibility MMUA has been reluctant to consider without clear direction from the members. In this year’s survey, MMUA asked about that, and 68 percent of respondents were open to the idea of holding the conference at a casino, while 32 percent gave it a thumbs down.

It is important that you, MMUA’s members, feel confident we are going to take all of this year’s feedback to heart. We give you our word that we’ll deal with logistical issues better. We’ll find a way to make the roundtable acoustics less of a din. We’ll work on the food and pray for rain on the golf course. We’ll continue to bring

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The incandescent light bulb (largely) ends its run

On August 1, the story of the incandescent light bulb in American life, which started with Thomas Edison at Menlo Park in 1879, largely came to an end.

On that date, a rule put forward by President Biden took effect, saying that lightbulbs must emit a minimum of 45 lumens per watt. Since traditional incandescent bulbs only emit around 15 lumens per watt, they are no longer allowed to be sold. Halogen bulbs were also banned on that date.

The process of phasing out the traditional light bulb began in 2007 under the presidency of George W. Bush, with the Energy Independence and Security Act of 2007. At that time, the goal was to make light bulbs currently on the market 25-30 percent more efficient by 2012-2014. On January 1, 2013, 75-watt light bulbs were banned because they were not 27 percent more efficient. Other incandescent light bulb wattages were also banned prior to the final ban as the rulemaking changed.

However, incandescent bulbs are not totally going away. The Department of Energy noted that under the current rule, the following incandescent bulb types can still be sold:

- Appliance lamps
- Black light lamps
- Bug lamps
- Colored lamps
- General service fluorescent lamps
- High intensity discharge lamps
- Infrared lamps
- Left-hand thread lamps
- Marine lamps
- Plant lights
- Flood lights
- Reflector lamps
- Showcase lamps
- Traffic signals
- Other specialty lights, including R20 short lamps and silver bowl lamps

The end of incandescent lightbulbs will have significant efficiency and cost-savings impacts. The rules are projected to cut carbon emissions by 222 million metric tons over 30 years, as well as providing \$3 billion in annual American energy bill savings. After all, traditional light bulbs emit 90 percent of their energy as heat.

So, let us say a fond farewell to the incandescent light bulb, the thing that literally allowed humankind to “keep the lights on” and powered the growth of utilities when there were few other uses of electricity.

The Ideal Electric Company takes on the electrical side of power generation

The corporate world is known for divestments of product lines by some companies and the purchase of those lines by others.

Companies can see divestment as streamlining their offerings and helping them focus on what they do best. Buyers of those lines can grow their product portfolio in areas related to their business aspirations, helping to strengthen their market position.

One such buyer is The Ideal Electric Company (formerly known as Hyundai Ideal Electric Co.), which has manufactured electric motors, generators, converters, power systems, and controls since 1903. The company describes itself as the last 100 percent American-owned, vertically integrated producer of these products since taking back private ownership in 2017.

Throughout most of its history, The Ideal Electric Company’s growth was powered by internal development. In recent years, the company supplemented this growth with acquisitions on the electrical side of power generation. In 2023, Ideal Electric announced its purchase of the intellectu-

al property (IP) and right to manufacture certain assets of The Louis Allis Company (formerly of Milwaukee, Wisconsin) including synchronous motor and generators and large induction motors above 950 horsepower. The acquisition also included the IP for the rotating electrical generation business of Beloit Power Systems, Fairbanks-Morse,* and Colt Industries, which includes products like legacy rotating electric machines, alternators, electric motors, vertical and horizontal motors, and synchronous motors. Ideal is currently digitizing these designs and capturing the IP so that they can learn from the history of this power equipment and unlock the data for customers across the installation base.

Nic Phillips, vice president and a founding member of The Ideal Electric Company, said that it acquired these product lines to keep Ideal Electric in touch with many of these products’ predecessor companies. “We have a formal relationship with Fairbanks Morse Defense (FMD), and we work to support them when they do service work



The Ideal Electric Company tests electrical equipment at its Mansfield, Ohio facility.

for the US Navy, while supporting them where Ideal, Louis Allis, Colt, and Fairbanks-Morse electric machines are coupled to their engines in other installations,” said Phillips. Ideal Electric can send its own team to perform inspections, repair equipment, or support FMD as it services power plant infrastructure.

It is good news that a company like Ideal Electric is redoubling its commitment to what it does best right here in the US.

Through these acquisitions, they prove their commitment to providing important knowledge and support on American power plant floors for years to come.

**Please note that The Ideal Electric Company’s acquisition of the Louis Allis Company only includes the IP for Fairbanks-Morse electric motors and generators and does not include the engine manufacturing or servicing capabilities of Fairbanks Morse Defense.*

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Greg Drent joins MMUA board



Greg Drent, general manager of Shakopee Public Utilities (SPU), has been elected to MMUA's Board of Directors.

Drent has built his career in the utility industry, starting early on at Worthington Public Utilities as summer help. Greg attended Worthington Community College, where he earned his AA degree before completing the lineworker program at Jackson Technical College. In July 1996 he became an Apprentice Lineman in LeSueur, MN. Demonstrating initiative and leadership skills he advanced to line foreman before becoming electric director. In 2015 those same skills were recognized when LeSueur restructured and Drent was promoted to public services director. During his tenure as public services director, Drent was responsible for the Electric, Water, Wastewater, Street and Airport departments.

Seeing an opportunity to serve in a larger community with a growing service territory, Drent made the move to SPU as electric superintendent in 2016. Motivated by the prospect of building new infrastructure and advanced systems, and taking on new challenges facing a dynamic territory such as Shakopee's, Drent wasted no time effecting change in his new role. Working to establish a new apprenticeship program to attract and retain lineworkers in a competitive metro market was one of his first accomplishments. In 2017 he was an instrumental leader in bringing a new substation online, along with an all-city LED streetlight conversion. By 2020, Drent was appointed interim general manager, and in June 2021 he was officially named general manager of SPU.

In Drent's short time as GM, he has been an active leader, working to bring new technologies to the utility and its customers, strengthening community engagement, and proactively planning and building for the future demands of the utility.

Drent is currently the treasurer for the MMPA Board of Directors, having served on MMPA's board since 2007. He also serves on the Shakopee Chamber of Commerce Board of Directors. He is active in his community of LeSueur and on his local church board.



Lakes area utilities host electric vehicle event in Detroit Lakes



From Lakes Area Radio:

Detroit Lakes, Minn. (KDLM) – Lakes area utility providers hosted an electric vehicle event at First Lutheran Church in Detroit Lakes on Saturday [August 12, 2023].

Event attendees were able to check out and ask questions about more than a half-dozen electric vehicles, including: an EV Hummer, Ford F-150 Lightning, Tesla Model Y, a Ford Mustang Mach-E, and a Chevrolet Bolt, among others.

Vernell Roberts, general manager for Detroit Lakes Public Utilities, said he was able to test a Ford F-150 Lightning this February over some of the coldest days of the winter to see how the pickup would react to frigid lakes area temperatures.

"I had this outside and it was 25-below and I brought it into my garage and warmed it up to about 40 degrees on ambient, so it was just above zero in my garage and I plugged it into a 110V outlet," said Roberts, during a KDLM Facebook Live video. "I conditioned the batteries and I gained about 60 miles of range just by bringing it inside and plugging it into a 110V outlet. So once you understand that, you can kind of plan your trip and plan your day a little bit better and, if it's pre-conditioned, you are going to be good to go."

Roberts also said the range of the battery can vary depending on the driving conditions, location and other vehicle economy features being used.

"You will lose some mileage,

there's no doubt," he said. "Right now, it says 317 (miles), in the real world, that's probably 265-270 miles given you want to run air conditioning, wind and other things. And that's going down the interstate at speed, 55-60 mph, I'm pretty sure we'll get 300 miles."

Roberts also demonstrated the acceleration of the Ford Lightning during a test drive with KDLM Morning Show Host Joel Koetke, who noticed the truck must've gotten to 70 mph in about 4 seconds.

Currently, there are two electric vehicle charging stations on Holmes Street, near Lakes Liquor, but the city has plans to add two additional charging stations at a proposed trailhead to the Heartland Trail, near East Shore Drive.



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Two Conferences

Continued from page 3

in provocative speakers, and we will fill out the program with a wide variety of experts.

The 2024 Summer Conference is scheduled for August 19-21 in Fargo-Moorhead. Both cities are MMUA members, and preconference activities will occur on both sides of the river. All sleeping rooms, education sessions, hospitality rooms, and the tradeshow will be under one roof at the Holiday Inn Fargo. We hope this setup will alleviate many of the logistical concerns raised in this year's surveys.

Change is hard. The staff and I will be doing our best to make it easier for MMUA members who attend our Summer Conference, and that's starting right now. Our goal is to move the needle from Dickens' "best of times, worst of times" mood to something more like "Great Expectations."

Biological Treatment Plant

Continued from page 1

and meet parameters set by them. Once we were approved, we were able to start to design and build the plant. I believe any city can do this style of treatment as long as it's approved by the MDH after their pilot study.

MMUA: How do nitrate monitoring and costs change with the new nitrate removal plant?

Jon: Obviously, there are significant costs that go along with a water treatment plant versus well houses, but with biological treatment, the costs end there and don't pass anything along to the wastewater plant. Nitrate monitoring stays the same, but now we're able to maintain a level that is allowed by the MDH, so we don't have any worries about going over the maximum contaminant level.

MMUA: The Star Tribune article mentioned six other cities that have nitrate removal systems. Did you talk with them before or during your project? If so, how did you work with them or learn from their experiences?

Jon: There are no other biological nitrate systems in Minnesota yet. There were, however, three other ones in the US; two are in California, and one is in Illinois. Yes, we contacted them to discuss their operations, and the pros and cons from their perspectives. There are a lot of different cities that have nitrate removal in Minnesota, just none with this specific style of treatment.

MMUA: How many Cold Spring staff were involved with the project? How many with partners?

Jon: We worked with Stantec Engineering and our city engineer, and they were great at taking staff input in the design of the project. My staff consists of three operators and myself. We got a lot of input throughout the project, which was great. A lot of times engineers design something and it gets built, then handed over to the operators. [When that happens] usually, operators end up complaining about certain things that were done the way they were. Here, with as much input as we were able to give, we were able to help design a very efficient and operator-friendly plant.

MMUA: What additional work processes are involved with the addition of the nitrate plant?

Jon: Daily testing, plant checks/operation, making sure everything is functioning properly and there are no leaks. Daily oversight of everything through our SCADA system. We have an infiltration basin for the backwash water. Right now, we are working through some issues with that, mostly figuring out a way to stop biology from blocking the pores of the basin to allow water to infiltrate. We will get through it.



The exterior of the new plant.

MMUA: What advice would you have for communities or utility departments looking to go this route?

Jon: I would encourage it. I think it's more efficient and, like I said, you're not passing

any problems down the road to a wastewater plant. They are ending [at the treatment plant]. Work with your engineer more on any plant and get it set up the way it best fits you. We built our building larger in the tank



The pump room in the new plant.

room so if we have an increase in flow, or if nitrates continue to rise and we have to treat more water, we can add an additional system without having to add on to our building. It is already ready for two more tanks that

would treat an additional 500 gallons per minute. That should be a significant cost savings in the future if or when that time comes. Everyone knows it is cheaper to build today than it will be tomorrow.



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University of Minnesota launches Minnesota Center for Electrification Opportunity

The University of Minnesota's Technological Leadership Institute (TLI), which is an interdisciplinary center at the University of Minnesota that has three technology-focused graduate programs, announced in July 2023 that the center, together with the Minnesota Department of Employment and Economic Development (DEED), Design Ready Controls, Polaris, and Toro, had launched the Minnesota Center for Electrification Opportunity (MN CEO).

MN CEO will focus on electrification, the process of moving from fossil fuels to electric technologies. The center will have a number of diverse goals,

including growing the electrification workforce, driving growth in the renewable energy and electric power fields, and helping to provide national leadership in the electrification area.

MN CEO noted that according to research firm Market.us, the global electrification market was worth \$74.2 billion as of 2022, with that number expected to grow to around \$170.4 billion by 2032. MN CEO will help create the workforce and ideas needed to help meet these growing needs.

The website for the new center is at <https://cse.umn.edu/tli/center-electrification-opportunity-ceo>.

Discovery of 50-year phosphate supply in Norway may help increase lithium iron phosphate battery market share



Norge Mining, an Anglo-Norwegian mineral exploration company, recently announced that it had discovered 77 billion tons of phosphate rock in Norway, which is estimated to be enough phosphate to satisfy global demand for 50 years.

This discovery is important for the growth of the lithium iron phosphate (LFP) batteries market, which has already seen significant growth. In the electric vehicle (EV) market, this battery variety already makes up 31 percent of the total battery market, taking market share from other battery types.

The market share of LFP batteries in commercial vehicles is expected to approach 90 percent by 2040.

LFP batteries are growing in popularity because iron and phosphates are very common. LFP batteries also don't contain cobalt or nickel, which are rarer and therefore more expensive.

LFP batteries are also expected to grow within the utility-scale storage market and in use for home backup power. Recent lithium discoveries should further encourage the adoption of LFP batteries on a larger scale.

FERC to hold reliability technical conference to gauge impacts of EPA power plant regulations

Senator Joe Manchin, Democrat of West Virginia, announced in early August that the Federal Energy Regulatory Commission had acceded to his request that the Commission hold a conference to scientifically assess the impacts of the recent power plant rules proposed by the Environmental Protection Agency.



The date of the conference has not yet been set.

The May proposal would, for the first time, limit the amount of carbon that power plants can emit. Under the plan, coal plants and various types of gas plants would slowly have to reduce their emissions, including through the use of carbon capture and sequestration technologies.

The plan, if implemented, is projected to see power plant emissions drop by 63 percent by 2030 and 83 percent by 2040.

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New rule makes for a “historic day” for speeding up interconnection

These were the words of Federal Energy Regulatory Commission (FERC) Acting Chair Willie Phillips as a rule was approved on July 27 to speed up interconnection through reforms of the process.

The rule, called Order 2023, alters the status quo by seeing what work needs to be done to get a project online. Interconnection projects will be studied in

clusters, instead of one at a time in the traditional first-come, first-served queue.

The idea is that interconnection queues will gradually decrease as projects that enter have a better chance of being built. This will come from the clustering of studies as well as increased deposits and commitments from developers. However, some prognosticators noted that

the rule will not instantly shrink the interconnection queues, and the implementation of the rule will have a large effect on how well it will work.

Transmission operators will have 90 days after the rule is published in the Federal Register to file plans at FERC explaining how they will implement the rule.

Television streaming record further bolsters broadband business

According to research from Nielsen, streaming made up 37.7 percent of TV usage in June of 2023, which is a new record.

Cable television viewing made up 30.6 percent, while broadcast television viewing made up 20.8 percent. Cable television viewing was down 11.6 percent year-over-year, while broadcast television viewing was down 5.6 percent.

All of this streaming is helping to drive the use of faster and more expensive broadband services. The Federal Communications Commission recommends at least 25 megabits per second (Mbps) of download speed in



order for one person to watch videos while doing other online tasks. To support a household of 4-5 unique internet users at fast speeds, 200 Mbps is recommended.

The playing of online video games is also helping to drive the speeds required for a household, especially when there are several simultaneous users.

Government Relations

Continued from page 1

in October.

The Government Relations team of Kent Sulem and Bill Black have worked closely with MMUA's CEO, Karleen Kos, to prepare for and help lead two regional meetings, entitled Interacting on the Issues: Protecting, Promoting, and Strengthening Your Hometown Utility. The program is designed for utility commissioners, city council members, and utility leaders. It is intended to inform them of what MMUA is doing on behalf of municipal utilities while soliciting input on what more is needed, while providing suggestions of what they can do to bolster positive feelings about being a hometown power community. The first session was held in Austin, and the second in Litchfield. Both were well received, and four more are scheduled as follows:

September 18—New Ulm
September 27—Grand Rapids
October 3—Detroit Lakes
October 4—Marshall

The team is also working on ideas for how to approach

and work with legislators of all parties, particularly those who do not have municipal utilities in their districts, as well as those who represent the metropolitan area and hold leadership positions.

A specific issue the team is working on is preparing materials to help ensure the rights of a municipality and its citizens are protected by confirming that statutory procedures are followed before a municipal utility transfers all of its service territory to a different utility. More importantly, MMUA wants to provide the information a member community needs to minimize the risk of a complete service territory transfer being seen as necessary.

Kent and Bill supported round tables at the annual conference, and Kent joined Michael Nolan and Doug Carnival in preparing and delivering the annual legislative update.

We also said goodbye to Michael Siebenaler, who left at the end of July to accept an offer of employment in the private sector that was too good to pass

up. Kent and Karleen have begun discussions on modifying the position to focus primarily on the assorted grant opportunities currently underway, and to help lead MMUA's members in seeking the next several rounds of grants under both the Infrastructure, Investment and Jobs Act (IIJA), and the Inflation Reduction Act, as well as money that may be available from other funding sources.

Finally, the Government Relations team, via the Minnesota Utilities Action Fund (MUAF), has also been hitting the fundraiser circuit. This has led to discussions on how the MUAF could be grown to ensure the team's ability to continue participating in these types of events. Mulligans were once again sold at the MMUA golf tournament, and donations will be solicited throughout the year. We are now able to accept credit cards on behalf of MUAF, making it easier than ever for people to contribute to the fund.

Citizens' Utility Board criticizes Minnesota's largest gas utilities for capital investment levels

A new study conducted on behalf of the Citizens' Utility Board (CUB) by DH Infrastructure, a consulting firm based in Massachusetts, has found that capital investments made by Minnesota's three largest gas utilities are so high, rates may skyrocket as well.

The study found that capital spending by CenterPoint Energy rose from \$74 million in 2011 to \$282 million in 2021. Xcel Energy's spending rose from \$35 million

in 2011 to \$128 million in 2021. Minnesota's third-largest gas utility, MERC, which is a division of Milwaukee-based WEC Energy Group, saw a similar increase.

CUB argues that this spending is unsustainable for ratepayers, as many of these infrastructure costs will be passed on to the gas utilities' customers.

The utilities replied by saying the investments are necessary for a modern and safe gas system.



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Bipartisan PREDICT Act could help communities track disease in wastewater systems



A bill introduced in Congress on June 26 titled the **Public Health and Emergency Detection Through Integrated Wastewater Surveillance Act, or PREDICT Act**, would award grants to state and tribal governments, as well as local health departments, for the purpose of tracking pathogens in water.

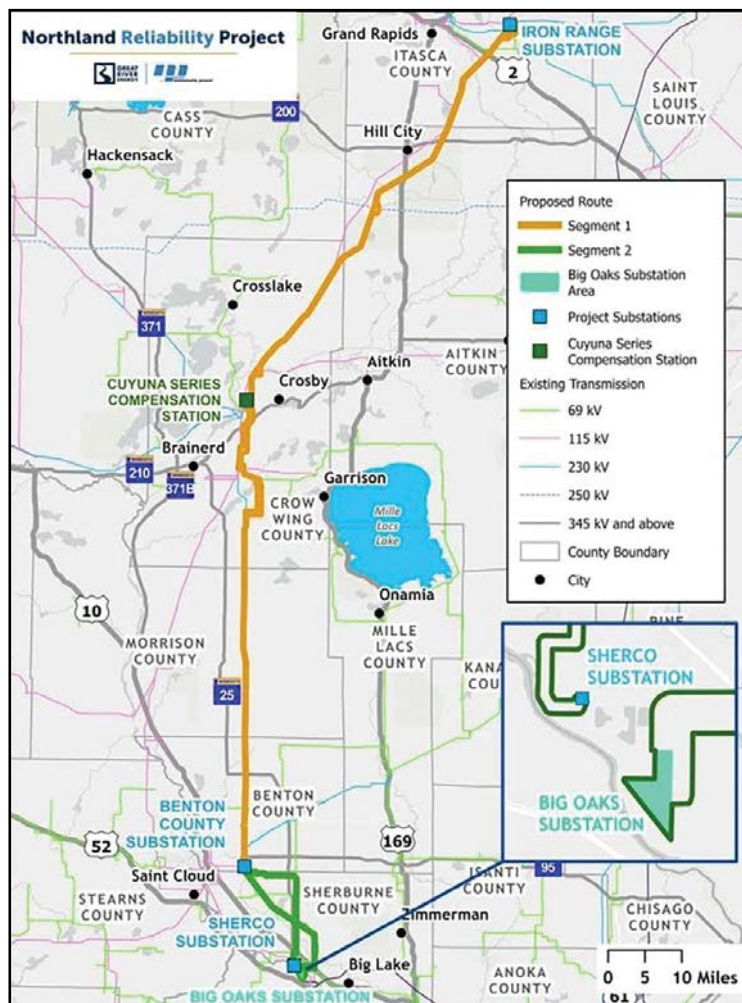
The Act would also provide funding for the development of best practices for wastewater data collection.

Senators Cory Booker (D) from New Jersey, Angus King (I) from Maine, and Mitt Romney (R) from Utah, cosponsored the bill. In a statement, Senator Romney said,

“We learned from the COVID-19 pandemic that monitoring wastewater systems can provide dependable data which can be used to detect and track the spread of infectious disease. This bill will bolster Utah’s already sophisticated wastewater monitoring technology by ensuring it receives the funding needed to continue to invest in new research and technology, so we can be better equipped to fight future pandemics.”

Wastewater tracking continues to be the front line of disease monitoring, with wastewater revealing the presence of disease in a community before it is apparent through other forms of public health monitoring.

Northland Reliability Project



Minnesota Power and Great River Energy are partnering to build the Northland Reliability Project, a 180-mile, double-circuit, 345-kilovolt (kV) transmission line from central Minnesota to northern Minnesota. The project is expected to cost at least \$970 million, start construction in 2027, and be completed by 2030. (Graphic courtesy of the Northern Reliability Project)

MIT develops energy-storing concrete

Scientists at the Massachusetts Institute of Technology (MIT) have developed a new kind of concrete that is able to not only act as part of a structure or as a surface, but also as a storage battery for electrical energy.

MIT created the material by mixing carbon black, a black powder typically used as ink or a pigment, with cement and water in a special way. The carbon black forms a network of “wires” through the cement, able to turn the finished concrete into a supercapacitor which is able to store energy.

The new technology is inexpensive, adding little cost to making concrete. The technology also has endless applications. Concrete foundations could become a massive storage battery to serve the needs of a home or business. Roadways could become giant storage batteries for electric cars. Anywhere that there is concrete, there could be battery storage.

The MIT team plans to scale up their research to a larger prototype within 18 months.

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Summer Conference in Photos



Cool Duluth beckoned as most of the rest of the state suffered under temperatures around 100 degrees.



(L-R) Miles Heide, superintendent at Fairmont Public Utilities, golfs with Doug Dorhout from PCS, Jake Slaathaug from EPS, and Jamie Sieren from PSE.



Attendees enjoy a roundtable session on physical security for utility assets.



(L-R) MMUA's Theresa Neddermeyer and Joe Schmidt welcomed conferencegoers to the Summer Conference.



Carson Gorecki from the Minnesota Department of Employment and Economic Development speaks about workforce trends in Minnesota.



Members of MMUA's government relations team, (L-R) Doug Carnival, Kent Sulem, and Michael Nolan, presented on issues facing the Association and how they are working to address them.

Continued on page 11

Scientists achieve net energy gain in a fusion reaction for a second time

On July 30, scientists at Lawrence Livermore National Laboratory in Livermore, California, successfully completed a net energy gain in a fusion reaction for the second time in history.

The energy gain that was achieved was higher than the results of the first successful reaction, where lasers delivered 2.05 megajoules of energy and created 3.15 megajoules of fusion energy, a gain of about 1.5 times.

Final results of the second net energy gain are still being analyzed. The first net energy gain was achieved on December 5, 2022, a scientific breakthrough that was the culmination of decades of scientific research.

PJM Interconnection issues two emergency alerts

On July 27, the PJM Interconnection, which serves at least parts of 13 states and the District of Columbia, issued two emergency alerts that emergency procedures might be needed as a heatwave gripped the United States for several days.

PJM said that at that time, all generating resources were online or had been scheduled. PJM reached a peak load of 138,000 megawatts (MW) on July 26. On July 28, the forecast was for 154,000 MW of peak load. Peak in all of 2022 topped out at 149,000 MW.

Summer Conference in Photos

Continued from page 10



Closing keynote speaker Chuck Gallagher gave an interesting presentation on ethics and resiliency in the workplace.



Track presenters Kris Swanson and Morgan Salo (L-R) from Bolton & Menk staff their booth at the trade show.



The trade show offered a pleasant northern vibe.



(L-R) Brian Morgan, commissioner at Rochester Public Utilities and Vernell Roberts, general manager, Detroit Lakes Public Utilities, presented on good governance, the grid, and MISO.



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Wisconsin wastewater surveillance program wins national recognition

On July 14, the Wisconsin Wastewater Surveillance Program (WWSP) was named as a “National Center of Excellence for Wastewater Surveillance” by the Centers for Disease Control.

WWSP earned the award for their excellence during the coronavirus pandemic. WWSP developed and used new techniques in order to monitor COVID-19 across Wisconsin. Researchers at the University of Wisconsin-Madison, as part of WWSP, scientifically deter-

mined ways to collect and analyze COVID-19 from wastewater systems.

Now, as a Center of Excellence, WWSP will share what they’ve learned with diverse organizations across the United States.

WWSP is a partnership between the Wisconsin Department of Health Services, the Wisconsin State Laboratory of Hygiene at the University of Wisconsin-Madison, and the University of Wisconsin-Milwaukee.



Summer Conference

Continued from page 1



continuously, so that utilities are aware of what is out there and when certain funds are released. Attendees also had the chance to practice important grant writing skills. Kos and Walker were joined by representatives from the Department of Iron Range Resources & Rehabilitation (IRR), who actually review grant applications. Attendees particularly appreciated the IRR's views on what to do and what not to do in writing for grant funds.

Things then moved outside so attendees could enjoy some open-air activities in the pleasant weather. Mike Willetts of MMUA led a group hike at the Hartley Nature Center, while others went golfing at Enger Park Golf Course. One notable occurrence was the hole-in-one by Beth Fondell of SMMPPA to win the putting contest, making a very tricky putt!

The welcome reception at Hoops Brewing in Canal Park brought everyone together for a night of fun and conversation. A good crowd enjoyed beverages and hors d'oeuvres as night settled on Duluth.

The action moved to the Duluth Entertainment Convention Center (DECC) on Tuesday. After breakfast and welcomes from MMUA Board President Don Martodam and MMUA CEO Karleen Kos, Russell Gold, an energy journalist and investigative reporter, gave the opening keynote on the topic of "Navigating a New Energy Path for Resilience." His talk was on the rapid rate of the energy transition and how new technologies are allowing utilities to make changes while staying resilient. As Gold saw it, the last 10 percent of the conversion to carbon-free energy will be the most difficult (if not impossible) for utilities in light of current technologies, resources, and timelines.

Conference goers then attended roundtable discussions, choosing four areas of focus from a long list of interesting topics. Of particular note this year were

implications for utilities since the legalization of recreational cannabis, as well as electric vehicle charging considerations.

After a plated luncheon and the MMUA Awards presentation, (to see the full list of winners, please visit <https://www.mmua.org/news/breaking-news/mmua-honors-2023-municipal-utility-award-winners>), conference goers attended a series of plenary sessions covering resiliency topics facing utilities.

Carson Gorecki from the Minnesota Department of Employment and Economic Development spoke about workforce trends facing Minnesota and how utilities can respond to them. Of note is the fact that Greater Minnesota has seen population growth since the pandemic, yet there are two job openings for every job seeker. Gorecki highlighted the high wages of the utility sector, as well as the aforementioned population growth, as trends that could help outstate utilities attract workers.

Dr. Gabe Chan of the University of Minnesota gave a presentation on distributed energy resources (DERs) and how they are growing in importance as the nature of power generation and transmission changes. These smaller energy generation units allow utilities and consumers to bypass some of the increasingly expensive costs of distribution and transmission by using solar or local generation resources to get power to customers cheaply and easily. As large power plants served by massive transmission infrastructure become less financially optimal, what is old is new again!

The afternoon's educational segment wrapped with an update from MMUA's Government Relations Team, including Kent Sulem, MMUA's Director of Government Relations; Doug Carnival from McGrann Shea Carnival Straughn & Lamb; and Michael Nolan, MMUA's Washington representative. They spoke about MMUA's policy priorities in the current

environment and their work toward achieving the Association's objectives.

Everyone then went down to Edmund Fitzgerald Hall for the year's trade show and reception. With some 62 exhibitors, the trade show was one of the large in MMUA history and featured a pleasant northwoods theme. Vendors and attendees met old and new friends and saw the products and services that make life in the utility world possible.

On Wednesday, the day started with breakfast and the MMUA business meeting. Julie Kennedy of Grand Rapids took the gavel as MMUA's new president, and Mark Nibaur of Austin rotated off the Board of Directors after six years of service. MMUA's members elected Roger Warehime of Owatonna, Pete Moulton of St. Peter, and Greg Drent of Shakopee to their first terms on the Board. Bruce DeBlieck of Willmar and Kevin Lee of Marshall were elected

to second terms on the Board, and Scott Grabe of Staples was named president-elect. MMUA's leaders presented a recap of the work of the Board and staff that is underway to make the MMUA stronger, and the members approved the 2024 dues resolution.

Attendees then moved to learning sessions centered around their areas of interest and expertise. Tracks this year included electric, water/wastewater, leadership, and a new track on governance topics for the commissioners and council members in attendance. Topics related to resiliency were also highlighted here, with information such as preparing water/wastewater systems for the future and helping systems become more resilient to climate change on offer.

The closing keynote was given by Chuck Gallagher, a former CPA who—though highly accomplished and respected—ultimately went to prison after

creating a Ponzi scheme. By delving into topics like "socially acceptable" ways to be unethical, like taking gifts on the job, gossiping, or calling in sick when you're not, Chuck made the group think more about how even the little things affect us and the people around us, highlighting how small ethical lapses can become a slippery slope.

As Chuck finished, MMUA's conferencegoers began heading home, where it was still unseasonably hot in most of the state. They took with them many compelling ideas and concepts that, while often challenging, are important as Minnesota's utilities seek to grow more resilient with each passing year. The challenges to our utilities are unrelenting. What this year's Summer Conference showed is that we have many talented people willing to pitch in to meet these challenges. Working together, we will all stay strong.

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Hibbing Public Utilities cuts the ribbon on electrostatic precipitator rebuild

On July 24, 2023, many community members attended a ribbon cutting at Hibbing Public Utilities celebrating the rebuilding of the biomass boiler electrostatic precipitator.



Pictured (left to right): 1st Row—MN State Senator Rob Farnsworth (District 7), Commissioner Katrina Kessler-Minnesota Pollution Control Agency (MPCA), Commissioner Ida Rukavina-Iron Range Resources & Rehabilitation Board (IRRRB), Mayor Pete Hyduke-Hibbing, MN State Representative Spencer Igo (District 7A), Shelly Hanson-Hibbing Chamber of Commerce, Gabriella Hauser-Hibbing Chamber of Commerce. 2nd Row: Al Raushel-Savanna Pallet, Larry Link-Delta V, Ben Lobb-Lobb Forest Enterprises, Paul Plombon-HPU Energy pricing & programs manager, Dean Helstrom-senior project manager at Bolton & Menk, Greg Prusinske-Hibbing City Administrator, Julie Marinucci-St. Louis County Land and Minerals director, Rich Kampsula-Local 94 Union president & HPU operations engineer, Jeff Hart-HPU Commission chairman, Stefanie Dickinson- HPU operations manager.

What is a biomass boiler electrostatic precipitator?

Luke Peterson, Hibbing Public Utilities General Manager, described the new precipitator:

“We have a wood boiler, and we make steam out of it to create 35 megawatts of power. This [the precipitator] is pollution control equipment that is at the end of the thermal process. The resulting smoke, we take all the heat out of it through the heat exchanger. This is the last step. It is like a three-story

bug zapper that has 1-foot-wide metal plates charged with electricity. They take any remaining particulate that falls down to the bottom of the boiler.

[This equipment] is replacing an existing item. When the boiler was installed in 2007, the team has continued with a partially functioning precipitator since inception. As a result, we have had to limit our operations on the boiler to stay in compliance. With the new [equipment], we

will be able to operate at full capacity for the first time since 2007.

For our wood boiler, we use wood and natural gas as fuels. We use waste wood; we have a contact with a local pallet manufacturer to cut the local wood to our specification, and we burn it instead of landfilling. It is part of our restorative utility plan. [We can] use many different species, pine, tamarack, spruce, poplar, oak, you name it.”

Dutch students develop car that absorbs more carbon than it uses

A group of students at the Eindhoven University of Technology in the Netherlands have created a car, named “Zem,” that when powered by electricity from clean sources, can eliminate more carbon from the environment than it adds to it.

By definition, the car is “carbon negative” or “climate positive.”

The car achieves this by removing carbon from the air

using filters on the underside of the vehicle, which collect carbon dioxide as the car drives. When the filter needs to be cleaned, the car can visit an electric vehicle (EV) charging station designed by the team that extracts the carbon dioxide so it can be sequestered or used for other chemicals or fuels.

A world where carbon dioxide can be removed from the atmosphere and turned into a valuable commodity, either as a

carbon neutral fuel or for other purposes, is intriguing. If carbon capture devices become more efficient, drivers may actually come out ahead as they operate their vehicles, and EV charger owners might become dealers of and profit from carbon dioxide as a commodity.

CenterPoint Energy releases innovation plan under the auspices of the Natural Gas Innovation Act

On June 29, CenterPoint Energy proposed a set of planned projects submitted under Minnesota’s Natural Gas Innovation Act (NGIA).

The plan includes 18 pilot projects and seven research and development projects. The total planned budget is \$106 million over five years.

One of the projects is a renewable natural gas (RNG) initiative that will see CenterPoint purchase RNG for the local gas supply. CenterPoint will make the purchases through requests for proposals and through planned buys from organics recycling facilities in the Twin Cities Metro Area. CenterPoint will also build on their green hydrogen pilot in Minneapolis by building a second production facility in Mankato.

Another project is a networked geothermal system. As has been done in other projects nation-

wide, CenterPoint will take a neighborhood and convert that area away from gas and toward a community geothermal system. Many homes will share a common set of wells and piping to heat and cool the neighborhood.

CenterPoint also plans to support residential and industrial decarbonization with their projects. Hybrid heating, which is using electric heat pumps to heat with gas used for the coldest days, will be incentivized and explored. Industrial decarbonization will be addressed through projects utilizing electric heat pumps for lower-heat projects, with carbon capture or hydrogen being used for high-heat processes.

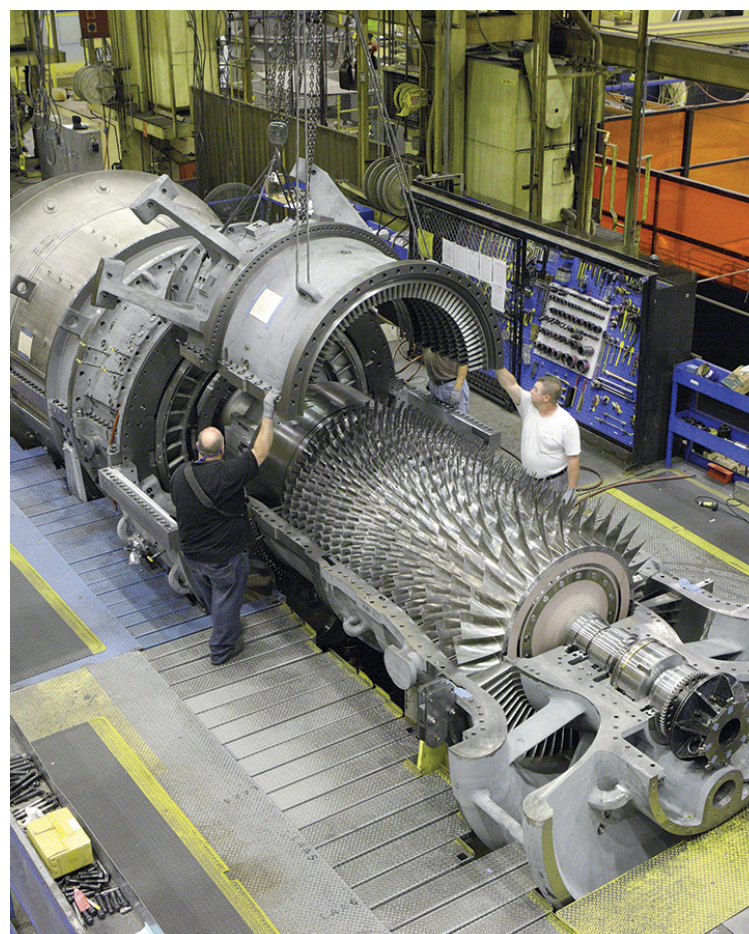
The Minnesota projects are estimated to eliminate 1.2 million tons of carbon emissions over the duration of the projects. The projects are also estimated to create 3,000 full-time jobs.

Tennessee Valley Authority opens three new natural gas units

The Tennessee Valley Authority (TVA) announced on July 26 that they had brought three new natural gas units online on July 25.

The \$500 million project added the units at the existing Colbert Combustion Turbine site in northern Alabama, near Tusculumbia.

The expansion adds 750 megawatts (MW) of natural gas capacity, which is enough to provide power to 400,000 homes. TVA plans to pair up to 7,000 MW of new gas generation with around 10,000 MW of new solar generation by 2035, as well as energy storage.



Minneapolis leaders propose franchise fee increases on gas and electric service

Minneapolis leaders, including Mayor Jacob Frey, announced on July 19 that the City of Minneapolis would like to increase fees on electric and natural gas bills in the city in order to pay for climate-friendly activities like weatherization and renewable energy projects.

Officials would make the increase to the city's franchise fee, which is essentially rent being paid by a utility for the right to use a city or county's right-of-way. The mayor and city council can raise these fees without input from other stakeholders.



Under the plan, fees would rise \$8-12 annually per household, on average. This increase would raise \$8-10 million annually for city climate change activities. If approved, the fee increase will take effect on January 1.

Florida municipal utilities to quadruple output of two existing solar farms

On July 12, a group of 20 Florida municipal utilities, together with their wholesale power agency Florida Municipal Power Agency and Origis Energy, announced that two of their existing solar farms, Taylor Creek Solar in Orange County, and Harmony Solar in Osceola County, will soon have company.

The group plans to build six more solar farms by the end of 2026, bringing the total to eight.

While the current solar farms are located in the vicinity of Orlando, the new farms will be located in Bradford, Columbia, Levy, and Putnam Counties. These counties are west and southwest of Jacksonville.



The planned expansion will take the output of the Florida Municipal Solar Project from a current output of 150 megawatts (MW) to 600 MW. The 20 municipal electric utilities, which

include cities like Jacksonville, Kissimmee, and Lake Worth Beach, will be the purchasers of the power generated by the project.

East Central Energy CEO testifies before Congress on 50th anniversary of the Endangered Species Act



East Central Energy (ECE) CEO Justin Jahnz testified before the House Natural Resources Subcommittee on Water, Wildlife, and Fisheries on July 18 during a hearing discussing the 50th anniversary of the Endangered Species Act.

Jahnz was discussing ECE's efforts to create monarch butterfly-friendly zones on the utility's property, which made them the first rural electric cooperative nationwide to receive a "certificate of inclusion" from the US Fish and Wildlife Service. This certificate makes ECE eligible to continue engaging in other business activities that may impact Endangered Species Act habitat requirements elsewhere.

In total, the goal of the hearing was to describe businesses' and citizens' work to help save threatened species before their populations become so depleted that they are required to be listed as an endangered species. Jahnz also discussed his goal that future utility vegetation management practices could be on the same page as creating pollinator habitats.

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Maui fire brings devastation, lawsuits, and real questions to the utility world

The Lahaina Fire in Maui that started on August 8 killed 115 people and left 110 people unaccounted for as of September 4.

It destroyed 2,200 buildings, including much of historic Lahaina, a monarchy-era port that included a National Historic District in place since 1962. Eighty percent of the town was destroyed, and many people have been left homeless. Local residents are concerned that their town may never be rebuilt or may fall prey to speculators from the mainland. Estimates for fire damages are approaching \$6 billion in economic losses.

With all of these stark facts come others. The fires were undoubtedly enabled by dry conditions and drought, as well as by unique weather circumstances due to a high-pressure system to the north and Hurricane Dora to the south of Maui. These atmospheric conditions caused high winds in the area.

However, this perfect weather storm would have been harmless had a fire not been in the mix. According to the best currently available information, strong winds in the Lahaina area broke

a power pole, sparking a small brush fire that rapidly spread in the dry conditions. The fire caused panic as it jumped the Honoapiʻilani Highway and rapidly closed in on the town of Lahaina. Other smaller fires also occurred during this time, and the combination led to extreme consequences.

As a result, lawsuits are in the offing. Hawaiian Electric, the area's investor-owned utility, is facing lawsuits from Maui County as well as from citizens, whose claims have been combined into a class-action lawsuit. As the investigation has proceeded, more nuance and detail has been added to the picture.

At first, Hawaiian Electric was thought to be mostly to blame for the fire. As more information has become available, it has been found that cable and telephone providers Charter Communications and Hawaiian Telecom may also have been to blame, due to "overloading" of wooden poles with their lines and attachments. Some local landowners have been included in the class-action suit for being negligent in maintaining vegetation on their properties.



Hawaiian Electric seems to be acceding to the supposition that its poles caused the initial fire, but said that any subsequent fires could not have been caused by the utility because its lines were deenergized by that time.

Other utilities have been bankrupted because they were found to be negligent in similar cases. Having poorly maintained infrastructure or not having a shutoff plan has resulted in court findings of utility negligence, placing them on the hook for billions of dollars. For example, in 2020 Pacific Gas & Electric pleaded guilty to 84 counts of involuntary manslaughter in

connection with the 2018 Camp fire, which destroyed the town of Paradise, California, and was fined \$3.5 million, the maximum penalty allowed under state law. The fire led the utility, which had amassed \$30 billion in liability related to wildfires caused by its equipment, to file for bankruptcy protection in January 2019.

The real question in the Hawaii case is how the responsibility for that state's fires will be assigned. The age and condition of the power poles will certainly be examined. The complicating factor of pole attachments and cable/internet infrastructure makes it hard to ascertain how much of the stress on the poles came from their own condition or their attachments.

Credit rating agency Fitch says that whatever the case, Hawaii Electric could be exposed to up to \$3.8 billion in potential liability. This number could grow as more impacts are discovered from the Lahaina fire.

The fires on Maui have been devastating for all parties involved. Whether such things occur in California, Hawaii, Minnesota, or elsewhere, it is

critical that utilities, governments, and citizens learn from the fires that have already occurred and take steps to reduce the risk of such an event ever happening in their community. Here are some steps to consider:

- Having an action plan/shutoff plan (if there is time) in the event of weather or other events creating a high-risk scenario.
- Having modern electrical infrastructure that is rated correctly for the job it has to do.
- Assessing possible and historical wind conditions of the local area, and monitoring drought conditions so that risk mitigation strategies are adjusted accordingly.
- Understanding the impacts of pole attachments on poles designed solely for electricity transmission.
- Working with ratepayers so that vegetation doesn't become a problem.

Lahaina was a tragedy of large proportions. Taking steps to prevent an incident like this will help make utilities and the communities they serve safer.

Could wildfires or other disasters cause liability for Minnesota's municipal utilities?

Recent headlines announced multiple lawsuits having already been filed against Hawaiian Electric, the utility serving the island of Maui, seeking damages for the terrible wildfire that recently burned a large portion of the island.

These headlines were reminiscent of ones that ran shortly after a settlement was reached resolving class action litigation against PG&E for damages caused by devastating wildfires in parts of California dating as far back as 2017. Then in mid-August of this year, it was announced that a group of students had successfully sued the State of Montana for breaching their constitutional right to a clean environment. So, the question is, "How much risk do Minnesota's municipal utilities face when disaster strikes, and what can be done to mitigate the risk?" Watch for our coverage of this issue in the October issue of *The Resource*.

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University of Illinois-Chicago recommends that Chicagoland turn to wastewater to quench region's water needs

A report issued by the University of Chicago-Illinois put forward the idea that recycled wastewater should become part of the water supply for the region.



The two-pronged proposal would include treated wastewater being provided to industrial sites, while traditional drinking water would be provided to homes and other domestic settings.

Each new community that proposes to draw drinking water from Lake Michigan would adopt this plan to protect underground water aquifers as well as supplies from Lake Michigan. Water recycling of this type would use

water resources more cautiously as the Chicago metropolitan area continues to grow. From 2010 to 2020, the census shows that Chicagoland added more than 150,000 new residents.

Xcel holds Marshall open house to discuss second circuit for CapX transmission lines

On July 18, representatives of Xcel Energy joined the public in Marshall to discuss the addition of a second circuit to the CapX 2020 transmission lines, which run from Brookings County, South Dakota, to Dakota County, Minnesota.

The circuit is needed to serve the increasing number of wind energy projects that are coming online in southern Minnesota.

The double circuit is needed for about 60 miles of power lines between the Brookings County electrical substation to the Marshall substation, as well as lines in the southern Twin Cities suburbs.

Xcel designed the lines so that wires could be installed on both




sides of the transmission towers on some portions of the route.

If approved by the Minnesota Public Utilities Commission, work could start on the new lines by April 2024.

Minnesota and western Wisconsin storms cause 40,000 Xcel customers to lose power

Storms on the evening of July 19 across Minnesota and western Wisconsin with winds in excess of 60 miles per hour caused widespread power outages in parts of Xcel Energy's service territory, including the northern St. Paul suburbs and St. Croix County in Wisconsin.

Some 40,000 customers lost power that Wednesday night as downed trees caused problems for the grid. Two grocery stores in White Bear Lake and Shoreview were closed on Thursday, July 20 due to power outages. By the morning of July 20, 7,000 Xcel customers were still without power.



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Insurance companies sue Xcel Energy for Colorado wildfire

On July 6, more than 150 insurance companies sued Xcel Energy after a sparking power line between Denver and Boulder was found to play a role in the Marshall Fire that started on December 30, 2021.

The fire destroyed around 1,000 homes and caused \$2 billion in damage.

The suit claims that Xcel was negligent in maintaining and operating its power infrastructure. An official report on the fire said that a power line owned by the utility sparked, causing part of what eventually became the Marshall Fire. Human activity at another site was found to be a second cause of the fire.

Xcel has already been sued by numerous parties, including homeowners and businesspeople.

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In a work session of the Austin City Council on August 7, the Council gave unanimous approval for **Austin Utilities (AU)** to move forward on expanding its service territory. AU is working with Freeborn-Mower Cooperative, which currently serves that territory.

Brainerd ended a boil water advisory on the afternoon of August 16 after bacteria was found in the water system on August 10. The city, which normally does not disinfect its drinking water, will continue chlorinating and testing the city's water as it comes out of the boil water advisory.

On August 7, farmers cooperatives New Vision Cooperative of **Brewster** and Farmward Cooperative of Morgan announced that they would not be unifying after a two-month discussion period.

Elk River Municipal Utilities (ERMU) held an open house on August 24 at its new field services building. The public was able to tour the building and learn about the electric and water services that ERMU provides the community. The event included demonstrations, educational booths, trucks on display, and games. There was also music, and food trucks were present.

On August 9, **Fosston** was awarded \$960,460 from the Minnesota Department of Employment and Economic Development's (DEED) Greater Minnesota Business Development Public Infrastructure Grant Program (BDPI). The grant will assist in the construction of streets and utilities for an expansion of the city's industrial park.

Former Minnesota state representative Julie Sandstede and Jeffrey Stokes, a second-generation Hibbing Public utilities employee, were appointed to the **Hibbing Public Utilities Commission** on July 19.

The **Moose Lake Community School** has received a \$1.75 million endowment donation from the estate of Magdalyn Lund in memory of her late husband George E. Lund. George E. Lund graduated from Moose Lake High School in 1931. The funds will be invested and the income will be spent on scholarships for the school's students, which will be awarded through an application process.

On June 25, the **New Ulm Public Utilities Commission** approved the purchase of a new heat exchanger for \$46,601. The heat exchanger will replace the current one attached to the standby boiler at the power plant. The heat exchanger allows the standby boiler to be in hot circulation at

all times and ready to go if the main boiler needs to be shut down.

Morrison County Sheriff's Deputy Joe Pundsack was severely injured on July 15 as he was directing traffic on Highway 25 after the **Pierz Freedom Fest**. Deputy Pundsack was brought to St. Cloud for medical treatment. He underwent neck surgery and is expected to recover.

In early August, **Rochester Public Utilities** asked residents to limit water usage as drought conditions in the watershed



affected water levels. To help, RPU asked residents to limit activities such as irrigation, pool filling, and car washing.

A full-size "Thomas the Tank Engine" visited **Two Harbors** on August 4 through 6 and 11 through 13. The event occurred on the tracks of the North Shore Scenic Railroad.



The **Willmar City Council** told **Willmar Municipal Utilities** on July 17 that they are not planning to build a new city hall in combination with a new Willmar Municipal Utilities headquarters.

Willmar Public Works Director Gary Manzer retired in August after being a city employee for nearly 40 years.

Worthington's city staff are seeking public input as they create a 20-year plan for the city. The plan will include transportation, utilities, housing needs, and land use within the city. The city is conducting surveys and open houses, and plans to adopt the plan for "Our Worthington 2045" in June 2024.

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The Canadian provinces of Alberta and British Columbia are in discussions to ramp up liquified natural gas (LNG) shipments to Europe and Asia. The provinces' premiers noted the time advantage the provinces have shipping LNG vis-a-vis the United States and noted that they may have a domestic industry that would provide LNG quicker and faster worldwide than many current reliable sources.

Oilprice.com reported on July 17 that Kuwait intends to expand its oil output from a current 2.7 million barrels per day (bpd) to 3.15 million bpd within four years. Kuwait is currently the Organization of Petroleum Exporting Countries' fifth-largest producer after Saudi Arabia, Iraq, the United Arab Emirates (UAE), and Iran. Saudi Arabia and the UAE are also in the process of increasing its oil output.

A report released by power purchase agreement (PPA) marketplace operator LevelTen Energy on July 17 noted that solar PPA prices fell 1 percent during the second quarter of 2023, the first decrease since the onset of the coronavirus pandemic.

New research from Rystad Energy, a Norway-based energy research and business intelligence company, has found that \$7.8 billion, or 40 gigawatts direct current (GWdc), in mostly Chinese-produced solar panels are sitting in European warehouses due to hoarding of the panels in the wake of the Ukrainian conflict and the loss of Russian natural gas supplies. The stockpile is expected to grow larger by the end of 2023.

On July 25, the Financial Times reported that United Nations atomic watchdog inspectors had found landmines at the site of Ukraine's Zaporizhzhia nuclear power plant. The mines are located in a buffer zone between the internal and external perimeter barriers. International Atomic Energy Agency head Rafael Grossi said that detonation of the mines should not affect the site's nuclear safety and security systems.

On July 31, Georgia Power Company announced that Unit 3 at Plant Vogtle, a nuclear power plant southeast of Augusta, had entered commercial operation.

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The reactor was finished seven years late and \$17 billion over budget. This is the first American nuclear reactor to begin operation since 2016, and only the second in the 21st century. Vogtle Unit 4 is under construction and is expected to be completed by early 2024.

CBS News reported that Ann Arbor, Michigan's drive toward a municipal electric utility started with a desire for carbon neutrality but has now shifted toward an interest in more-reliable power as their existing utility, DTE, struggles to keep the local system reliable. Local residents say that Ann Arbor has experienced five or six power outages in 2023, lasting four to six days each.

Starting in early August, the Egyptian government started putting in place timetables for daily power cuts across the country, so Egyptians would have knowledge of when power outages would occur. The cuts were put in place to reduce pressure on the country's electrical infrastructure as demand continues to rise. The cuts will be in place until at least September.

In mid-August, hackers (computer hackers with a political agenda) using the name and images associated with the hacktivist group "Anonymous" claimed to have attacked 21 government and other websites associated with the Fukushima Nuclear Power Plant. The hack was conducted in protest of the release of wastewater from Fukushima by the Japanese government. Some of the organizations targeted include Japan's Ministry of the Environment, Atomic Power Company, the Atomic Energy Society, Nuclear Regulation Authority, Atomic Energy Commission (AEC), Science and Technology Agency, former Prime Minister Fumio Kishida, and the Foreign Press Center.

On August 21, the Minnesota Public Utilities Commission approved Xcel Energy's request to store additional nuclear waste at the site. An additional 36 canisters of waste will be allowed to be stored. Xcel currently has 30 canisters on site.



Astroturfing operation fails to stop new municipal broadband system in Utah

Bountiful, Utah will start construction on a new municipal broadband network in August after an astroturfing operation led by the “Utah Taxpayers Association” failed to get enough signatures on a petition campaign to stop the project.

Astroturfing refers to the strategy of corporate interests seeking to bring about their wishes by doing campaigns that look like they are being

led by everyday citizens, or the grassroots. Instead, corporate interests are leading the effort, and sometimes even funding it.

In the case of Bountiful, the Utah Taxpayers Association has long been connected to Comcast and CenturyLink, two industry behemoths who have no interest in having citizens choose the best broadband service for them.

An estimated \$43 million in revenue bonds will be used to finance the new system. The

petition aimed to bring the question of bond issuance to a referendum by collecting signatures from at least 20 percent of the residents of Bountiful within 30 days of notice from the city.

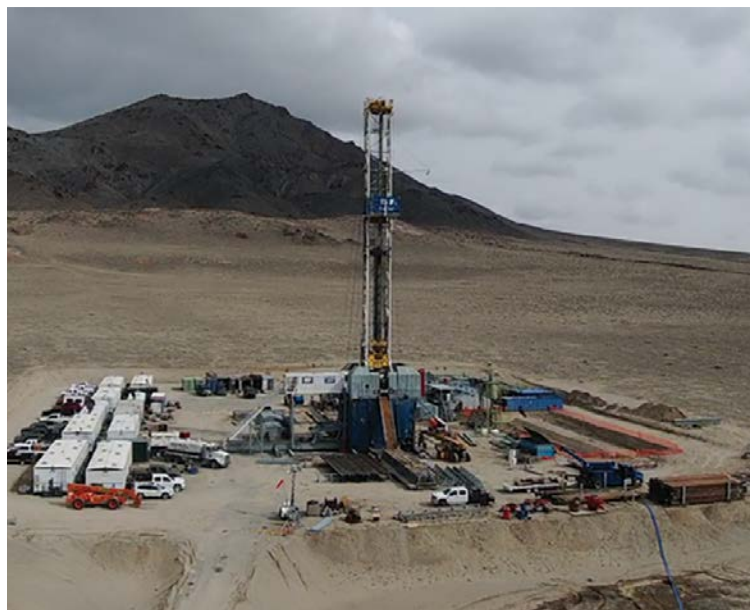
Bountiful’s 45,000 residents will soon be able to choose whether the city system is right for them or not. The process took three years and involved more than 24 public meetings.

Commercial scale enhanced geothermal system created for the first time

On July 18, scientists with Fervo Energy, a geothermal technology company, announced that they had completed a successful well test its commercial pilot project, called “Project Red,” in northern Nevada.

The project achieved a flowrate of 63 liters per second at a temperature that allows 3.5 megawatts of electric production—both records for an enhanced geothermal system (EGS).

EGS is human-created geothermal energy that is produced by drilling underground and injecting fluids to create fractures in rock. Regular geothermal systems require special heat, water, and rock permeability conditions for the system to work. EGS can artificially create these conditions, allowing for the creation of many places where geothermal systems can be implemented. Importantly,



geothermal systems can function as baseload power plants, providing energy continuously.

The US Department of Energy has found that geothermal resources, such as those tapped by EGS, could provide 20 percent

of American power needs in the future. The success of this first commercial-scale EGS system illustrates that geothermal is ready to start moving toward that goal.

China increases coal use as drought impacts hydropower production

Impacts on hydropower electricity output as a result of climate change has forced China to redirect its energy investments, at least temporarily, from its number two source of electricity, hydropower, toward its number one source, coal.

Hydropower generation decreased by 23 percent between January and June of 2023, the lowest in eight years, as provinces that produce much of the country’s hydropower generation, including Yunnan and Sichuan, struggled with low reservoirs due to drought.



As a result of this lack of rainfall, coal generation increased in the country. Coal production and coal imports also increased. Coal production rose by 4.4 percent in the first half of 2023 compared to the first half of 2022.

The Chinese government plans to begin cutting the country’s coal use starting in 2026.

DOE announces new residential water heater standards

On July 21, the United States Department of Energy (DOE) proposed new energy efficiency standards for home water heaters.

The proposed rule would raise the standard for tankless, gas-fired water heaters to 90 percent efficiency. Traditional electric water heaters will also be required to improve their efficiency with the use of heat pumps.

The rule, which would go into effect in 2029, would effectively end the use of tankless gas-fired water heaters, according to industry groups. It would also

facilitate a transition of traditional electric water heaters to electric heat pump water heaters.

The rule would create an estimated \$11.4 billion in annual energy and water bill savings for American consumers. It is also estimated to reduce 501 million metric tons of carbon dioxide emissions over 30 years. Water heating accounts for about 13 percent of both annual utility costs and annual residential energy use.

The DOE last updated residential water heater standards in 2010.

Upcoming Events

Interacting on the Issues

**September 27—Grand Rapids
October 3—Detroit Lakes
October 4—Marshall**

To learn more, visit mmua.org/events/ calendar for information about each session.

Cross Training School

**October 10-12
MMUA Training Center, Marshall**

MMUA’s Cross Training program excels at providing comprehensive training on the “basics” of electrical work for non-lineworker employees who may be called into service during emergency situations. Visit mmua.org/events/cross-training-2023 for more information.

Tree Trimming Workshop

**October 17-19
Brainerd Public Utilities**

This workshop offers lineworkers a thorough overview of electrical line tree trimming. This course will stress the importance of job planning, identify common safety hazards, and cover standard precautions. Visit mmua.org/events/tree-trimming-2023 for more information.



For more information, see the Events Calendar at www.mmua.org or call MMUA at 763.551.1230.