

# THE RESOURCE

Official Publication of the  
Minnesota Municipal Utilities Association



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## Minnesota municipal utilities participate in GRIP grant process

**Significant new federal funding over the past two years has Minnesota's municipal utilities hard at work preparing grant requests.**

The largest application by far is a collaborative effort currently underway to bring some \$250 million in resources from the Infrastructure Investment and Jobs Act (IIJA) to the upper Midwest. MMUA is working with the Minnesota Rural Electric Association (MREA) and the Minnesota Department of Commerce to manage the process and increase the chances of success for municipal utility members.

The funds will come from a pool of \$10.5 billion administered by the Grid Deployment Office at the Department of Energy (DOE) for the purpose of grid resilience and innovation partnerships, also known as "GRIP." The goal is to modernize the US electrical grid, reduce the effects of climate change on infrastruc-



ture, modernize the system using technology, and implement innovative projects related to grid resilience.

About 20 of Minnesota's municipal utilities, as well as the Southern Minnesota Municipal

Power Agency and the Western Minnesota Municipal Power Agency/Missouri River Energy Services, are involved in this effort covering four states and more than 90 entities. Skilled grantwriters at Power Systems

Engineering (PSE) and STAR Energy Services have contributed project management skills to the efforts, helping to keep everything flowing and ensuring alignment within the master grant request.

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## Cody Raveling keeps things humming at MMUA Training Center

*Editor's Note: Cody Raveling joined the MMUA team in April of 2016 and became its Assistant Director of Education and Outreach in 2022. While also working as a member of the safety team, Cody has headed the MMUA Training Center in Marshall, Minnesota, making sure MMUA is delivering best-in-class technical training and workshops for students from a multistate area. We sat down with Cody to learn what's new with MMUA's educational offerings and day-to-day life at the MMUA Training Center.*

**MMUA:** You've been at the training center for about seven years. What has changed or stayed the same in that time?

**Cody Raveling:** What has evolved is the way the classes are run. For instance, the overhead and underground schools have changed the schedule from single classes to a multisession format. This way students are able to learn about a broader range of topics at a single school. We have had great feedback on this approach, and students find it more beneficial to do it this way.

Inside the training center, we updated all the lighting to LED a few years ago. Outside on the



Cody Raveling

training grounds, we have plans to change the whole layout, making it more user friendly and creating more real-world scenarios for the schools. We originally hoped

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## Luverne and Rock County officials explore promise of biogas in Copenhagen

*By Dan Nath, MMUA Regional Safety Coordinator and City of Luverne Councilmember*

**The City of Luverne and Rock County sent a contingent of local leaders to Denmark to view the inner workings of the Nature Energy organization in March.**

Nature Energy is a biogas capture company that captures methane from animal waste and vegetable produce. It then scrubs the methane and compresses it to introduce it into the natural gas pipelines to be consumed. Nature Energy is looking at Luverne as a location for expansion to their organization in the United States.

Luverne was one of six communities that were invited over to Denmark. It was a weeklong trip with visits to the Nature Energy headquarters, laboratory, three working processing plants, and three farm suppliers. We flew into Copenhagen and then

were bussed to Odense, which served as a base for our tours. The days were full and started early, around 7:30 a.m., usually finishing around 4:30 p.m.

Nature Energy is a forward-thinking organization that has addressed many of the issues of biogas capture. They offered an in-depth presentation of where they are currently in plant processing, Phase 1.0; what the next plants being built will be like, Phase 2.0; and where they want to go in the future, Phase 3.0. The business model currently is for groups of suppliers that are contracted to provide waste material to specific plants. These suppliers are strategically located around the plants and the waste material is usually picked up on a daily or every other day basis. The processing plants are built on the hub - and - spoke philosophy to allow

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Stepping into Leadership



MMUA's Stepping Into Leadership program graduated another cohort on April 13. The group had fun with graduation caps and enjoyed their time together. Front (L-R) Brian Austinson, Owatonna Public Utilities; Brittany DeGroot, Delano Municipal Utilities; Julie Kennedy, Grand Rapids Public Utilities; Kary Tillmann, City of Zimmerman; Jean Lane, Grand Rapids Public Utilities; Back (L-R) Instructor Steve Wischmann; Jason Dahl, Alexandria Lake Area Sanitary District; Curt Novotny, New Prague Utilities Commission; Josh Hennen, New Prague Utilities Commission; Seth Koneczny, Southern Minnesota Municipal Power Agency; Bob Brezina, New Prague Utilities Commission; Lance Messner, Glencoe Light & Power Commission; Steve Mattson, Grand Rapids Public Utilities; Scott Thoreson, Elk River Municipal Utilities; Jeff Meyer, City of Sleepy Eye; Instructor Dana Haagenson.

APPA Rodeo

The 2023 Public Power Lineworkers Rodeo was held March 31-April 1 in Kansas City, Kansas.

Participants from all over the country came to show off their skills in a variety of events. MMUA staff filled leadership roles at the event, and Rita Kelly again donated a handmade quilt, which raised \$2,660 for a Florida-based non-profit that helps the families of lineworkers hurt or killed in the line of duty.



Spectators gathered as the events got underway under an amazing sky.



Rita Kelly's quilt raised a lot of money at the rodeo, which was donated to Highline Heroes.

# Potpourri

**This is not going to be like most of my columns in *The Resource*. I don't have a unifying topic or a subject I need to get off my chest.**

I do have a lot of things on my mind about the happenings for municipal utilities and what MMUA is doing about them. So, much like the "Potpourri" category on *Jeopardy!* where a bunch of unrelated clues are lumped together, that's what I'm going to share this month. I hope this download off my brain's hard drive is useful to you.



**I'll take collaborative grant activities for \$500 million, Alex**

As you read on page one of this issue, MMUA has been hard at work with Minnesota's Department of Commerce (DOC) and our friends at the Minnesota Rural Electric Association (MREA) to coordinate the efforts of more than 90 utilities, cities, and power agencies to secure about \$250 million in total grant dollars from the Department of Energy (DOE) for about \$500 million in projects for grid resilience. If we are successful, these efforts will accelerate modernization of the grid in our region by 20

years or more. In addition to these obvious improvements to infrastructure, there are other implications for municipal utilities should the grant be funded. These include:

- MMUA will serve as the project manager for the municipal grantees, working closely with each one to ensure compliance and reporting meet the requirements so the money is paid to you as promised.
- MMUA is likely to be funded to add personnel that will assist municipals with community outreach and workforce efforts, as well as with other requirements of the grant.
- MMUA will plan to expand its offerings at the training center to ensure personnel can become proficient with the new equipment that will be used in our power systems.

Until we know whether the grant is funded, I cannot say more about how this will all come together. The grant period is five years, which means we'll have plenty of time to figure it out and to deliver value to the municipals of our state.

The grid resilience effort is not the only grant in which MMUA has been involved this fiscal year. We have also been collaborating with APPA on a Susan Harwood training grant for the past several months. This effort brought MMUA about \$90,000 to develop and deliver an infectious diseases course at several sites throughout the Navajo Nation. In addition to stepping up to address an unmet need in a regional municipal, the skills and information we gleaned from this effort will help

us develop and deliver similar courses within Minnesota.

**Calling all commissioners and council members!**

As MMUA focuses on how we can be ever more relevant to municipal utilities, we are committed to engaging with commissioners, council members, and other utility leaders to help them in their work. As a result, we are introducing two new efforts to provide content that is valuable to you.

In June we will be traveling the state to hold regional meetings specially designed for commissioners, council members, and utility leaders. The focus will be twofold: to share and to listen. Our government relations team and I will be on hand to explain the important outcomes of the legislative session and how the new laws apply to municipals. Whether you care most about the carbon free requirements, matching funds, paid family leave, or when Juneteenth will be observed, we'll cover it and answer your questions. We also want to hear your stories and concerns. Knowing what matters from the perspective of a commissioner or councilmember is essential for effective representation of munis in St. Paul. We are coming prepared to learn from you too. Check out page 20 for dates and locations. The meetings are free, so please join us.

In August, the MMUA Summer Conference will be held at the DECC in Duluth. This year we are adding an education track and roundtable discussion topics specially geared to the elected or appointed utility leader's needs. Registration will open May 22, and the details of the sessions

## From My Desk to Yours

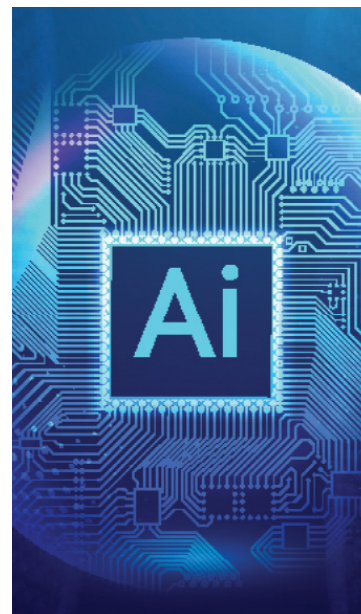
**Karleen Kos**  
MMUA CEO



will be available then or shortly thereafter.

### Artificial intelligence (AI).

I warned you that this column would be a bit eclectic ... have you been following the news on AI these past few months? These systems, which simulate human intelligence processes such as perceiving, synthesizing, and inferring information, and then—sometimes—acting on it, are becoming mainstream very rapidly now. Some people think AI will solve all of our problems; some think it will be the end of civilization.



Doubtless both arguments have their merits. From what I have seen of AI so far, it offers great potential for making certain types of work easier or eliminating the need for repetitive, mundane tasks that a machine can "learn" to do. On the other hand, a number of the smartest people involved in building this technology are saying things like, "It is hard to see how you can prevent the bad actors from using it for bad things."

Some of the most likely positive nearer-term outcomes of AI that could affect utilities include technology like smart meters, software that can initiate self-repair of certain outage conditions and improve load forecasting, systems that monitor and self-adjust for water treatment activities, and systems that can enhance physical security of infrastructure by monitoring activity within spaces. On the downside, the unchecked proliferation of AI worries developers, researchers, and regulators who warn of an explosion of cyber-attacks, scams, disinformation, unsanctioned surveillance, and misuse by political strongmen.

What we know about AI and its potential impact on utilities is that we don't know enough. Consequently, one of our leadership track speakers at the Summer Conference will focus on this topic. If you want to know more about it, be sure to be there.

### Easy money.

Since I started this column with a reference to *Jeopardy!* I thought I'd finish it with a bit of related trivia. The last time utilities were mentioned on an episode of the popular game show was July 10, 2017. In a category called "Everybody 'Pay's," the answer was, "It's the word for one who is the customer of an electric utility and must deal with its bills." I am pretty sure everyone reading this column would have made an easy \$1000 with the question, "What is a ratepayer?"

Have a great summer, and know that MMUA is working hard to help you serve your ratepayers every day in a way that makes everybody feel like a million bucks.

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## EIA's Annual Energy Outlook 2023 reveals national energy capacity projections

The Energy Information Administration's (EIA) Annual Energy Outlook 2023 featured several interesting projections for America's future energy capacity, given different underlying scenarios.

The target date for the study was 2050, measuring installed capacity in gigawatts (GW).

The different underlying scenarios included dichotomies like low/high economic growth, low/high oil prices, and low/high oil and gas supplies. Perhaps the most striking thing about the projections is how little the different factors impacted the expected progress of renewables as a component of capacity. For example, having a high oil price during the study period would shave only a fraction of capacity off of new wind capacity that will enter service by 2050, while solar, although affected, does not see much of a change either if oil prices spike.

Areas of capacity that are projected to stay the same or shrink during the study period, regard-



less of variables, include nuclear and coal. Oil and natural gas capacity are expected to stay the same or grow slightly. Solar is expected to see the most explosive growth, with storage and wind coming in next.

Another dichotomy measured was the pairing of economic growth with the cost of zero-carbon technology. In a low economic growth/high zero-carbon technology cost pairing, which would be the most negative for the installation of new renewable

capacity, renewables will see 230 percent growth by 2050. In the most optimistic situation, a high economic growth/low zero-carbon technology price pair, renewables will see 600 percent growth.

The most notable projection of all is that even with variables, total capacity is projected to almost double over the next 28 years as electricity demand grows along with the economy and population.

## EPA proposes new rules on tailpipe emissions

On April 12, the Environmental Protection Agency (EPA) proposed two rules under the Clean Air Act that would regulate total tailpipe emissions from new cars and heavy-duty vehicles.

The net effect of the rules would be a dramatic increase in the percentage of electric vehicles (EVs) that will be sold by the target date of 2032.

To meet the targets, automakers will have to see 67 percent of

sales of light-duty passenger vehicles come from EVs by 2032. About 46 percent of medium-duty vehicles and 25 percent of heavy-duty vehicles will also have to be EVs. The limits were set by researchers at the EPA who determined how much EV technology is likely to advance in the next 10 years.

The EPA will take public comment on the proposed rules over the next few months.



## April 15 last day for German nuclear power

On April 15, the last of Germany's nuclear power plants shut down for good when plants in the German states of Bavaria, Baden-Württemberg, and Lower Saxony ended operations.

Germany's power will now be provided entirely by a growing renewable sector as well as traditional carbon-based sources.

Germany has had a long-running anti-nuclear movement that has fought new and existing plants for decades. Germany's current coalition government, which includes the Green Party, helped accelerate the final closure of the three remaining plants.



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## Biogas in Copenhagen

Continued from page 1

the specialized engineers and laboratory technicians to support several plants while the plants are staffed by personnel that understand their specific suppliers' needs and products. Plants are not really competing against each other and save on efficiencies for the specialized services provided.

The normal process for pickup is for Nature Energy trailers to be filled with processed digestate at the plant. The truck and trailer then show up at a farm site and, using a joystick-controlled arm, they will pump the processed digestate off the trailer and into a holding vessel. Using the same arm, the liquid manure from a catch basin is then pumped into the trailer. The manure is trucked to the plant where it is offloaded via the same arm and fed into the processing plant. Once offloaded, the truck is filled with processed digestate, and the process starts again. During the offload and reload, the truck is washed to reduce the risk of any spillage outside of the plant. This offload, wash, and reload cycle is timed to be 15-20 minutes per load.

The easiest analogy for the plant is a wastewater treatment plant. The manure is pumped into the plant and fed into the large digestors, where it is mixed with a variety of waste products. They build a bacteria base just the same as wastewater plants, and these bacteria break down the manure and waste. Heat is applied, and this has the benefit of killing off any virus, pathogen, and plant seed germination. The heat brings the digesters to an optimal temperature for the processing plant bacteria to consume. When the bacteria consumes the manure, they expel methane gas. This gas is then

captured, scrubbed clean of any impurities, and once pure it is compressed and sent directly into the natural gas pipeline system. The advantage that Nature Energy purports to have is their methane leakage or escape is reduced to less than 1 percent, whereas farm systems have leakage factors up to 20 percent. The waste is processed in the plant for about 30 days and then is considered a processed digestate.

The main benefit of this process is the digestate contains all the same nutrients that the farmer needs (nitrogen, phosphorus, potassium, sulfur, and micro-nutrients), but the greenhouse gases methane and carbon dioxide have been removed from it. The digestate that is returned to the farm sites is lower in volume with a higher concentration of nutrients. It is also cleaner and purer than unprocessed manure and waste. This is another value-add because the digestate can be applied to the crop land in a more controlled manner. The laboratory at Nature Energy works with the farm agronomists to identify the soil needs, and adjustments can be made to the digestate that is sent back to each farm site.

Of course, the big question was, "What about the smell?" There are several safeguards that the processing plants have in place to remedy this. The loading and unloading bays are one and the same, controlled by piping. This limits the time it takes to perform these tasks. The bays are also controlled with negative air flow, meaning when the doors open, fans pull air in from outside to keep the smell escaping to a minimum. As the trailers are unloaded,



The group explored the massive storage facilities and processing plants belonging to Nature Energy.

they are washed in the bay. This minimizes the potential for any spillage to be transferred on the exterior of the truck. Another remedy is adjusting the stack height. Currently Nature Energy is running with stacks of about 100 to 125 feet. The new stacks will be almost 200 feet to keep any exhaust up and away from the ground.

A couple of additional features seem worth mentioning. Just about any waste item can be processed through the plants. We visited one plant that used a lot of leftover vegetable produce. Items like spoiled hay and alfalfa, sugar beet pulp, and tops to carrots, turnips, and sugar beets are all examples that may be processed. In this plant they had two lines functioning. One was organic, and the second was general produce. The advantage to the farmers for the organic line was that they could then show their products were treated

with organic fertilizer, and this worked as a benefit to their marketing.

The processing plants themselves are very automated. They use supervisory control and data acquisition (SCADA) software to control the flow from unit to unit and process to process in the plant. This is the same SCADA system that is used in many water, wastewater, and power plants here in the United States. The SCADA system allows remote monitoring of the processes and often allows the staff to correct issues from an app running on a tablet or phone. The movement of solid waste material such as the sugar beets pulps is controlled by large grapple hooks or cranes that run on an automated process to continually transport product from the dump location back further to the process feed augers and conveyors. This was controlled by height lasers and required no human intervention.

The major impact for employment is the drivers. Several of these are needed to keep the products moving to and from the processing plants. The deliveries are set for six days a week, and drivers were scheduled usually at one week on and one week off. There are maintenance plans and personnel to complete them at each plant, along with some supervisors. Overall employment numbers are 15-20 people per plant with an additional 20-40 contractors that are brought in for things like electrical, plumbing, and software support.

Denmark is very progressive in waste management, and 34 percent of all gas used in that country is biogas. Nature Energy is one of several firms that are working to provide biogas, and estimates are that in five to seven years, they will be able to supply 100 percent of the gas needed for the country.



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## Roger Avelsgard joins MMUA

Roger Avelsgard has joined MMUA as Apprenticeship Trainer & JT&S Instructor.



He has more than 28 years of experience in the electric field, with more than 23 years as a foreman and superintendent.

In his last role, Roger was the Electric Supervisor for Melrose Public Utility, where he directed the electric department. He has also spent time working at Breckenridge Public Utilities and in Nebraska and Iowa in the utilities space. He started his career as a journeyman lineman.

Roger holds a degree in Business Administration and also is trained as an emergency medical technician (EMT). Roger lives in Sebeka with his wife April. Welcome to MMUA, Roger!

# Nominations sought for MMUA awards, board of directors seat

## MMUA's Nominations and Awards Committee is accepting nominations for MMUA's 2023 industry awards.

This is a great way to recognize a municipal utility colleague, a public official, or a municipal utility system for showing leadership, innovation and providing an example for others to follow.

Nomination forms for the various awards can be downloaded from our website using the button below. All nominations will be considered. The deadline for 2023 submissions is June 30. The awards will be presented at the MMUA Summer Conference on August 22.

### Submit for One or More of the Following Award Categories

**System Innovation**—This award is given to a utility that has demonstrated leadership and innovation in customer service, energy efficiency or renewables, technology, or other areas.

**Public Service**—This award is given to a state or federal elected or appointed official who has been a

strong supporter of MMUA and its members.

**Distinguished Service**—This award is given to individuals who perform outstanding service in support of the association and its goals.

**Community Service**—This award is given to an individual who has performed long and well in support of a municipal utility at the local level.

**Rising Star**—This award recognizes a future leader who has demonstrated a dedication to the goals and principles of municipal utilities through problem solving, creativity, and job knowledge.

**Honorary Lifetime Membership**—This prestigious award symbolizes a long professional life dedicated not only to the advancement of municipal utilities locally, but also for the betterment of our industry on a statewide basis.

### Board of Directors

Serving on MMUA's Board of Directors is an honor, as well as a responsibility and a great

opportunity for professional growth. One seat on the Board is coming open this year through the regular rotation process. If you represent a regular MMUA member utility, are willing to accept responsibility for governance, and are available to actively participate as a Board member, please contact MMUA CEO Karleen Kos to declare your interest and learn more about the nominations process.

Nomination forms should be submitted to Rita Kelly via email (rkelly@mmua.org) or regular mail (3131 Fernbrook Lane North, Suite 200, Plymouth, MN 55447). The deadline for nominations is June 30.

If you have any questions about the nominations process or what service on the board involves, please contact Karleen Kos. She will be happy to discuss the role of the board members and the time commitment involved. Please email her at kkos@mmua.org or call her at 763.746.0701.

# Schwarzenegger makes a mistake on pothole filling



**Former California Governor Arnold Schwarzenegger, who recently filled in two "potholes" on his street, has now learned from the Southern California Gas Company that what he was filling was not a pothole, but an active service trench.**

In a statement, the Southern California Gas Company said, "It's a service trench that relates to active, permitted work being performed at the location by So-Cal Gas, who expects the work to be completed by the end of May."

Schwarzenegger has returned to acting since his days at the statehouse ended in 2011, but he remains vocal on a variety of public issues. He defended his "pothole-filling" actions through his representative, saying the "potholes" were still a danger to cars and bicyclists.

# Joint proposal by California utilities may bring flat utility bills based on income

**A new joint proposal by Southern California Edison, Pacific Gas & Electric, and San Diego Gas & Electric that was filed with the California Public Utilities Commission (CPUC) may result in customers receiving a fixed bill based on income, as well as a smaller charge for consumption.**

The basic structure would cap electric bills at \$20-\$34 a month for households making \$28,000-\$69,000 annually, \$51-\$73 for households making \$69,000-\$180,000 annually, and \$85-\$128 a month for households making more than \$180,000 annually.

The proposal comes as the result of a law passed by the California State Assembly last year that requires state utilities to create fixed-rate plans. The joint proposal is the first submitted to the CPUC since the new law passed. It requires the CPUC to adopt a new rate structure by July 1, 2024.

Southern California Edison says the earliest customers would see the updated bills is 2025.

# Mercedes-Benz signs power purchase agreement with offshore wind farm



**Mercedes-Benz, the Stuttgart, Germany-based maker of automobiles and other types of motor vehicles, has signed a large power purchase agreement (PPA) with Spain's Iberdrola.**

The contract is for wind power from the Windanker Wind Farm located in the Baltic Sea. The farm is projected to begin producing energy in 2026.

Mercedes is making the agreement as it seeks to reduce its carbon footprint worldwide. The company's goal is to have 70 percent of its energy needs for vehicle production come from renewables by 2030. This contract with Iberdrola alone will take care of 30 percent of Mercedes' electricity use in Germany.

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## Minnesota hotel becomes the first in the world with its own carbon capture unit



**On March 29, Radisson Blu Mall of America, in partnership with CenterPoint Energy, announced the installation of a carbon-capture unit called CarbinX at the hotel, which is produced by the company CleanO2.**

The device collects greenhouse gas emissions from the hotel's heating equipment. The Radisson Blu is the first hotel in the world

to be so equipped.

According to the press release, the CarbinX device is connected to the flue of the natural gas water heating equipment and captures carbon dioxide (CO2). The device then converts the CO2 to pearl ash, a non-toxic carbonate powder that can be used as a component in CleanO2's line of soaps and detergents.

CenterPoint will install 10 of these devices for different commercial customers through a pilot program. The Natural Gas Innovation Act, which was passed through the Minnesota Legislature in 2021, may encourage further installations of the CarbinX system in the near future.

## Legislature headed into homestretch

By Kent Sulem

**The legislature will likely have adjourned for the year by the time you are reading this.**

By constitutional mandate, the session must end by May 22, but leadership allegedly set a goal to wrap things up by May 12. Thus, a fast pace was set for legislators to pass the omnibus bills sent to their respective chambers' floor just before the legislative spring break. This meant MMUA tracked HF 2310, the omnibus environment, natural resources, climate, and energy finance and policy bill, as it made its way into a conference committee where differences between the House and Senate versions of the bill were to be resolved. The conference committee process for HF 2310 started just as the submission deadline for this article arrived, so you will need to tune in to the June 2023 edition of the *Resource* to find out how it all worked out.

Some of the key issues in HF 2310 involved:

- Senate inclusion of waste-wood and woodchip biomass as clean energy.
- Senate inclusion of mandatory MPUC action on requests for

waivers or delay in complying with 100 percent carbon-free standards.

- Opposition to reporting requirements on rates and reliability.
- Funding for pre-winterization.
- Limited scope for diversity reporting and benchmarking.
- Senate support for Study on Advanced Nuclear Technology.
- Senate funding for grid resilience grants for municipal utilities and co-ops.

Other issues being processed outside of HF 2310 included:

- Repeal of the local government salary cap.
- Additional matching funds for IIJA/IRA grants.

For a year that started with a bang and a rush to pass the 100 percent carbon free by 2040 bill, the success level of the 2023 legislative session for municipal utilities will come down to the waning days of the session. That is pretty much the same as any other year but with a greater sense of urgency on behalf of legislators.

## Antibiotic-resistant bacteria found in LA wastewater



**Scientists at the University of Southern California (USC) reported in early April that for the first time, bacteria that are resistant to last-resort antibiotics have been found in Los Angeles County wastewater.**

The bacteria were discovered at the Joint Water Pollution Control Plant in Carson and the Hyperion Water Reclamation Plant in Playa Del Rey.

The bacteria are of special concern to scientists because their presence in wastewater indicates people in the community are now carrying them. Bacteria of this type were first discovered in China in 2015.

Local health officials say there has been no uptick in patients presenting with antibiotic-resistant infections so far, although they have been occasionally seen in the L.A. area and elsewhere.

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## Cody Raveling

Continued from page 1

to accomplish phase one of that project prior to October 2022. However, because of the extended mutual aid event in Florida, the work had to be pushed back, and we now we plan to do this in the summer of 2023.

**MMUA:** You've changed how the classes are set up over the years. What were classes like previously?

**Cody Raveling:** Classes were more specific to a larger job. The class you would sign up for would last two days for the hands-on portion. Now, each of the six segments in a multisession school lasts two and a half to three hours each. Learners are still getting good training, and they are exposed to six topics with a hands-on component, compared to just one during a bigger class that lasted two days.

In the past, when attendees would sign up for the longer course, it was hard to gauge what they were most interested in; we wanted to keep people engaged. The multisession format breaks up the flow so we keep people's attention, change things up, and bring in new ideas and questions as they move through the sessions.

Today, we offer the multi-session format for our largest schools—overhead and underground. The other ones have stayed the same, and they continue to focus on the topic of the school itself.

We are also able to keep class size down that way, allowing more one-on-one training for each student. Instead of teaching 15-20 people or more, we now have 10 or 11 people per session.

**MMUA:** You became Associate Director of Education and Outreach in the fall of 2022. How has it changed your role at the training center and what has it been like?

**Cody Raveling:** Nothing much has changed as far as my role at the training center is concerned. I'm still running everything that is involved with schools that are held at the training center as well as the offsite schools. I am in charge of mutual aid now, as well as the apprenticeship and the on-site, on-demand program. That is taking more of my time to build it and make it better for our members.

**MMUA:** Can you tell me a little about the development of the on-site, on-demand program for apprentices?

**Cody Raveling:** Lately we have been in search of an instructor. We wanted to find someone really well qualified, and we were really pleased to have Roger Avelsgard join the team earlier this month. The program has really grown over the last few years. We now have a list of member utilities waiting to come aboard. We also want to hire a second instructor in the not-too-distant future.

We know the interest is out there, and we want to grow the program so we can serve

members better that way. There is great feedback on the program and the value that utilities are getting out of it.

**MMUA:** How does the change of the seasons affect what you are doing out at the training center?

**Cody Raveling:** Rain always has an effect on our schools, so we always need to have a "plan B" for overhead and underground schools, a competent person, and the excavation workshop. You've got to be thinking outside of the box, especially if it is going to be pouring rain. Even if it is just raining for a few hours during the multi-day session, an alternative plan has to be in the back of your mind.

With rain in the summer months, the grass grows a lot faster. I'm responsible for taking care of the training field, and along with that comes the mowing. Last year wasn't terrible because we had quite a dry season towards the middle and end of the summer, but that varies from year to year. In the spring, you mow at least once a week, and it takes a while!

In winter, the amount of snow plays a role. Moving the snow doesn't take as long, thankfully, but it is usually about an hour and a half—and up to two and a half hours—to move all the snow off of the parking lot and our road that goes to the training center. You can never predict when the snow is going to come or how much we'll get.

We have a zero-turn lawn-mower that is supplied by Marshall Municipal Utilities. and in the winter, we use a truck with a snowplow for moving the snow. Last Sunday, I went to the training center to check on some things. Over the weekend, with all the wind we had, and all the snow we had previously, we suddenly had a 5-foot drift over the driveway I couldn't even touch with a plow. I had to walk over the snowdrift into the shop and get the skid loader out to move the snow that way. It was too much snow and too hard packed for my normal snow removal tactics. The wind can really move the snow on the wide-open spaces here in southwestern Minnesota. There are years where the city of Marshall has to bring out its airport equipment to move 8-foot drifts in town.

**MMUA:** In your role, you engage with quite a bit of the curriculum development for the programs. Tell me about that.

**Cody Raveling:** Yes, for our two largest schools, overhead and underground, we have a school planning committee that incorporates roughly 10 or so lineworkers from different member utilities, and they help us develop the content for those schools. They meet twice a year, and I also report to them on how the other schools are going. The people on that committee have been around the block quite a few times. They offer ideas and we

work together to come up with the plans behind those schools.

For many of the schools, a big part of the planning comes from the prior year's evaluations. What other things did the attendees want to see? I try to take those ideas, run with them, and accomplish them. We are always looking for new concepts and ways to improve our schools so we can keep people coming. I always mention to the utilities I visit that we want their ideas. So, to whoever is reading this: Please let me know what you think, and we use those thoughts to improve things.

**MMUA:** What is the newest school you have?

**Cody Raveling:** That is the Electrical Skills Training for Water/Wastewater Operators school. That was new last year, and we started offering it simply because we knew there was a need for that type of training. Water/wastewater folks need to have knowledge of what they can or can't do on the electrical side of stuff: pumps, panels, and that sort of thing. We don't want those personnel to get into a situation where they're not qualified to handle something, whether it is electricity or wiring.

This course is designed around the basics of electricity. Sometimes they need to hire an electrician to take care of these things, and in the school, they learn when not to handle it themselves. Maybe in the past they, or their employer, thought they could take care of it, but they learn in the course that it is often not legal to do a lot of this work. We got great feedback from the attendees at the school, and it is definitely going to be an ongoing workshop for the foreseeable future.

A big goal of that school is that we want people to stop and think, not just jump into something if they are not professionally trained.

**MMUA:** Are there some areas of interest for new schools in the future?

**Cody Raveling:** We're looking into dabbling in the water world again, looking at trainings we can do out at the training center for professionals who wear multiple hats. We are in the beginning stages of that, starting with listening to people at the water/wastewater school who mentioned some ideas. From there we will explore whether it would be good to come up with more trainings on the water-related side of the municipal utilities industry.

**MMUA:** Marshall Municipal Utilities and their team have been great partners for MMUA over the years. Tell us about that.

**Cody Raveling:** The relationship that we've had with MMU since the beginning has been excellent. They've been a huge asset to MMUA, like with borrowing equipment or getting things


ready for certain events; they've played a key role since day one when the training center was built. They're always ready to help. For example, if I need a dump truck or a woodchipper to clean things up, they bring their equipment out to help us. That relationship is continuing to build and is greatly appreciated.

**MMUA:** When you're developing programs, what are the ones you really enjoy working on? You're from the electrical side of things originally.

**Cody Raveling:** I like the bigger schools, the overhead and underground schools. I like seeing how we can make the experience better and more interesting.

What different aspects can we bring to educate apprentices, journeyman lineworkers, and others? They're always coming with the expectation of learning something. If they learn one important thing, that is a job well done.


The beauty of it is that we've built all of these relationships with utilities in this state and surrounding states. When it comes to instructors, they play a huge part in these schools. They come from a multistate area. They volunteer their time to come down, and that is a huge part of our program. You don't find other training facilities that have those type of people willing to give their time.



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## Department of Agriculture, White House announce \$1 billion in rural clean energy grants

On March 31, the United States Department of Agriculture (USDA) and the White House announced \$1 billion in grants that will help rural Americans invest in clean energy.

Farmers, small businesses, and families will be able to use

the grants to deploy a variety of clean energy types, including biomass, biogas, solar, wind, and much more. Energy efficiency tactics will also be funded by the grants.

The grants will fund a maximum of 50 percent of the total project cost. The grants are being funded

through the Inflation Reduction Act and will be accessed through the USDA Rural Energy for America Program. Quarterly competitions will occur through September 30, 2024, to determine grantees and award amounts.

## New wind farm opens in southwest Wisconsin

During the first week of April, the Red Barn Wind Park came online in Grant County, Wisconsin, the southwestern-most county in the state.

The new wind installation will generate 92 megawatts of electricity with 28 wind turbines, enough to supply more than 50,000 homes with electricity. The project is a partnership between Wisconsin Public Service and Madison Gas and Electric.



## Minneapolis and western suburbs create initiative to promote energy efficiency and renewable transition



The western and southwestern Minneapolis suburbs of Eden Prairie, Edina, and St. Louis Park, together with Minneapolis, have created an initiative called "Electrify Everything MN" that will focus on the twin goals of energy conservation and the pivot to renewable energy.

The initiative's website includes information about weatherization and transitioning gas appliances toward electric alternatives. In addition, the effort will include a series of free educational workshops in Edina, Eden Prairie, and St. Louis Park in May.

More information can be found at <https://www.mncee.org/electrifyeverythingmn?home>.

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# Substation school takes students to Brainerd/Baxter



Paul Cervantez from Electric Power Systems leads things off on Tuesday with an informative presentation on substation maintenance and inspections.



Dave Krause, a favorite from the Summer Conference, covered the topic of "Your substation, knowing what you have".



Jamie Sieren of Power System Engineering speaks on correct switching procedures.



The group sets off for a tour of the Brainerd hydro dam.



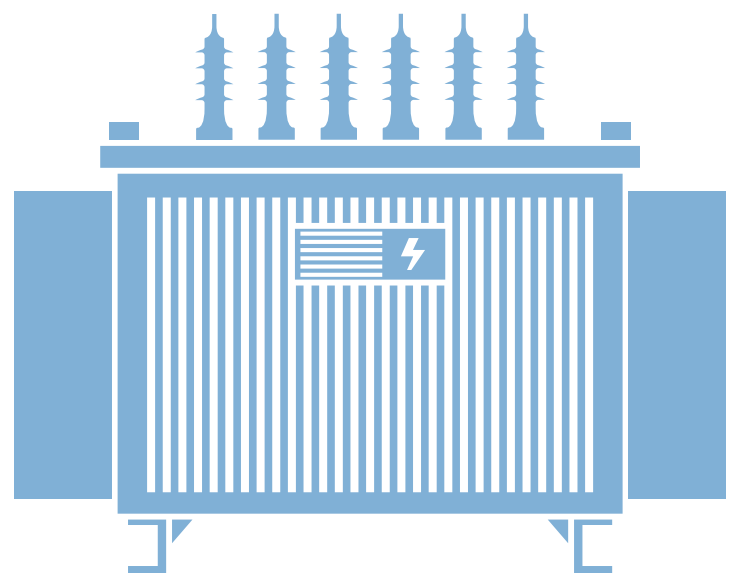
Students examine a generator up-close at the Brainerd hydro dam.



Trent Hawkinson of Brainerd Public Utilities shows off the hydro dam's generators, the oldest of which dates to 1916.



Brent Yaunick talks students through an exercise at the BPU substation.



## GRIP grant process

Continued from page 1

MMUA sat down and talked with a few participating utilities to see how the process works and how it has been going so far. Comments have been lightly edited for space and clarity.

**MMUA:** *How did your utility decide to get involved in the process?*

**Joe Kohlgraf, Mora Municipal Utilities:** Our engineering company extended this opportunity to us. Our staff had seen the information, but we had not fully investigated it at that time. With the possibility of funding for projects that we have on the burner, we decided to take advantage of applying.

**Kris Manderfeld, New Ulm Public Utilities:** It happened due to our relationship with Power Systems Engineering (PSE). We had projects that we felt might qualify and discussed this with PSE; they agreed, and we were lucky enough to have them involved from the beginning.

**Keith Butcher, Princeton Public Utilities:** As a municipal utility that is here to serve the community, we are always looking for ways to improve our services either through increased reliability, lower rates, or improved environmental sustainability. A couple of years ago, PPU embarked on an effort to improve our local distribution system. To that end, we developed a 10-year capital improvements plan to improve the operation of the local distribution system by completing a citywide voltage conversion to 12.47 kV, moving distribution lines underground, strengthening the system, replacing aged substation equipment, and developing a new supervisory control and data acquisition (SCADA) system.

The SCADA section fits nicely with the GRIP opportunity under IIJA.

**Mark Nibaur, Austin Utilities:** We stayed close to the grant process and what was happening. I got involved early with APPA and the information that was flowing out. When MMUA announced their streamlined process with MREA, I found that process very attractive from a sense of efficiency, economically, for Austin Utilities to participate.

**Chris Kerzman, Elk River Municipal Utilities:** ERMU watched a webinar hosted by MREA for the initial concept paper and observed that this grant opportunity would allow us to install equipment and projects that would benefit our long-term initiatives.

**MMUA:** *What projects are you hoping to get funded?*

**Keith Butcher, Princeton Public Utilities:** The new SCADA system is important because it will allow staff to better monitor real-time conditions and react to issues and outages on the system more quickly. This will help reduce outage times for our customers and increase the overall reliability of the system.

**Chris Kerzman, Elk River Municipal Utilities:** ERMU is currently working to define our long-term goals for our distribution SCADA system. This grant gives us the opportunity to extend communications to needed distribution equipment and expand the data available through SCADA. The largest project that we are proposing involves voltage upgrades, undergrounding, and expansion of our communications system to include line

reclosers and fault indicators in a portion of our service territory.

**Kris Manderfeld, New Ulm Public Utilities:** New Ulm has five projects that we are hoping to fund. Three of the projects have to do with reliability and replacement of aging infrastructure. These projects involve critical transformer replacements, generator controls, and electrical and switchgear replacements. The projects are important because of New Ulm's unique benefit to the Midcontinent Independent System Operator (MISO) system in energy and capacity support as well as New Ulm's ability to become a micro grid if disconnection from the grid occurs. The other two projects involve remote terminal unit replacement and electro-mechanical relay replacements which are critical to our SCADA system and the communication of our generation and distribution systems. This is especially important with increased distributed energy resources and electric vehicles on our system.

**Mark Nibaur, Austin Utilities:** We are taking overhead and moving it to underground in strategic locations in our community. We have six projects, with a total of a mile and a half to two miles of line that will go underground. There are pieces of our utility system that were natural to move. Also, we plan to automate parts of the system. It will help make our operations more efficient and add some technology as well.

The automation will be some SCADA, so we will have better, faster communications and better data on how the system is operating—automatic switches, new software, data points to gather data.

We are looking for a \$2 million grant that will match our \$2 million contribution. The grant-funded projects will be worked on over a five-year span. Our capital planning process will provide dedicated dollars for a project like this.

**Joe Kohlgraf, Mora Municipal Utilities:** We have four projects that we have submitted. These are SCADA improvements, substation relay upgrades, powerplant switchgear upgrades, and mainline conversions and automation on our north loop and the same for our south loop. Priorities are as listed. These projects are listed in our improvement plan, and we hope that this funding will happen to reduce the cost to the utility customers for these changes.

**Chris Kerzman, Elk River Municipal Utilities:** ERMU is currently working to define long-term goals for our distribution SCADA system. This grant gives us the opportunity to extend communications to

needed distribution equipment and expand the data available through SCADA. The largest project that we are proposing involves voltage upgrade, undergrounding, and expansion of our communications system to include line reclosers and fault indicators in a portion of our service territory.

**Mark Hanson, Elk River Municipal Utilities:** The proposed projects will increase system reliability, resiliency, and provide expanded data for ongoing analysis and improvement of our system—all of which improves our ability to provide safe, reliable, and affordable power to our customers.

**MMUA:** *What are you or your organization learning through this process?*

**Mark Nibaur, Austin Utilities:** For the most part, we have not applied for many grants in this capacity. This is new for us. If it weren't for our partners creating this streamlined process, I'm not sure that we would be involved in it. It would be a lot harder for us to do on our own.

What I've learned is that I've been impressed with the comprehensiveness of the process. I've understood how grants can be complicated. I've liked the flow of it as we've put together the documents. I'm also surprised with how fast the grant process goes.

**Keith Butcher, Princeton Public Utilities:** PPU has been tracking developments with the IIJA efforts for many months. Utilizing our networks, we talked with many of our peers soliciting advice everywhere we could find it. Not surprisingly, opinions were contradictory and all over the board. It became obvious that there is not any one answer that fits everyone in all situations. It was therefore necessary to reflect on what is best for PPU's customers and how to acquire the necessary resources to increase PPU's likelihood of success. Understanding that grant writing is a skill just like accounting, line-work, or IT, we determined that we would not be able to just figure it out and fit it in amongst our other duties. Even if we tried, we determined that our chances of success would be small.

**Joe Kohlgraf, Mora Municipal Utilities:** So far, having the plans in place already is a great benefit for us to take advantage of the possibilities of funding if they come along unplanned. We have been a bit ahead on some of the items, but there still is a lot of work to be done before the application process is completed. Defining the needs is often harder due to the plans that have been made

and what has changed due to recent needs.

**Kris Manderfeld, New Ulm Public Utilities:** As with anything this large, there is a lot of documentation and work that is being put into this. It is an opportunity of a lifetime for utilities to have this amount of funding available, and we are hopeful that we can secure some of it for our rural municipal and cooperative utilities.

**Chris Kerzman, Elk River Municipal Utilities:** The process and amount of documentation needed for this level of grant application is overwhelming, and the support of PSE and STAR to manage all the pieces needed has been great.

**MMUA:** *How has support been through this process?*

**Joe Kohlgraf, Mora Municipal Utilities:** Support has been great from our engineering company, as well as added weekly webinars that are helping those working through the process to answer the questions that come up as the application is done.

**Keith Butcher, Princeton Public Utilities:** Although there were folks that offered to help out by answering any questions that we might have, we unfortunately did not know what questions to even ask. It became apparent that the advice we received from some to hire a grant application writer was the best option for us. Since DGR Engineering developed our Cap Plan, we had them put together the application materials on our behalf. We have been very pleased with that effort and, regardless of the outcome of our GRIP application, we hope that it will put us in a position to take advantage of other grant opportunities in the future.

**Chris Kerzman, Elk River Municipal Utilities:** Everyone involved in the grant administration has been great to work with. MMUA and MREA are working well with PSE and STAR to provide the support needed to put together the documentation needed for a successful grant application. It is also very clear that PSE and STAR are working closely with the Minnesota Department of Commerce to submit a very strong grant application. PSE and STAR host weekly webinars that are very helpful to break the application into manageable parts and keep everyone on track with the various deadlines.

**Kris Manderfeld, New Ulm Public Utilities:** We are so very thankful for the support we are receiving from STAR Energy Services and PSE. Without them this would be very difficult to achieve. This could be a large-impact project,

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## GRIP grant process

Continued from page 11

and we are very hopeful that the DOE will recognize the coordination of what the Minnesota Department of Commerce, the trade associations, our consultants and the utilities have achieved and are capable of doing.

**Mark Nibaur, Austin Utilities:** From what I'd originally envisioned, I've been pleasantly surprised. Our partners have been good. I don't really see any ways the process could be better.

**MMUA:** How many people have you been working with from PSE and STAR?

**Mark Nibaur, Austin Utilities:** Basically, we've been working mainly with PSE. All my correspondence has been through them. Our electrical engineering firm consultant, DGR, has been another main contact. We've also had contacts with MMUA CEO Karleen Kos.

**MMUA:** Is there anything else that would be helpful to share with readers or other utilities regarding this grant process?

**Mark Hanson, Elk River Municipal Utilities:** Thanks to the collective support of MMUA, MREA, PSE and STAR, this has been a very manageable process on our end.

We are hopeful MMUA can continue to help coordinate these types of grant opportunities and support resources.

**Keith Butcher, Princeton Public Utilities:** For every grant application that was discussed with outside folks, half would tell us not to bother and the other half will tell us that we were foolish if we didn't apply. Of course, you will want to select those areas with the highest likelihood of success, but you won't get any if you never apply. Wayne Gretzky said, "You miss 100% of the shots you don't take." Trust your gut, take your shot, and don't give up.

**Joe Kohlgraf, Mora Municipal Utilities:** This process has many deadlines, and keeping up with those is the hardest part once the planning is in place. It will be worth the effort to complete the process so if the process is to happen again, everyone will know what to expect.

**Mark Nibaur, Austin Utilities:** If you don't apply, you don't get any money! So, it was like let's jump in here and get some money for our community. If you're thinking of applying, the process has been very well put together, is very efficient, and you should give it a try because there will be more opportunities.

## NERC reports eight attempted cybersecurity attacks on electric utilities in 2022

**In the North American Electric Reliability Corporation's (NERC) annual report on cybersecurity incidents, NERC stated it was aware of eight cybersecurity incidents that occurred in 2022.**

Two of the events happened in the Western Electricity Coordinating Council region, two in Midwest Reliability Organization region, and two in the Texas Reliability Entity's territory.

Of the eight events, the attack vector in four of them involved

malware such as malicious codes, Trojans, and ransomware. Two additional incidents consisted of attacks on third parties supporting the responsible entities' bulk electric system (BES). In another case, the incident involved an attempt to remotely open a gate at a facility. The attack vector was not specified in one incident.

None of the incidents created operational impacts.

NERC noted the attacks were spread across the calendar year.

That seemed to indicate the absence of a coordinated effort to disrupt the grid during 2022.

Responsible entities have been required to report cyber security incidents that compromise, or attempt to compromise, their electronic security perimeter or associated electronic access control or monitoring systems since 2018 when the Federal Energy Regulatory Commission directed NERC to update its reliability standards to include cyber threats.



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## Snowmelt threatens overflow of Washburn, Wisconsin wastewater basin



Rapid snowmelt in Washburn, Wisconsin on April 12 placed a wastewater storage basin at the city's waste treatment plant in danger of overflowing and spilling into Lake Superior. Melting snow has made its way into sewer pipes, causing levels to rise rapidly.

City officials warned residents earlier in the week to limit water use in response to the rapidly filling basin. Ashland, Wisconsin and Duluth, Minnesota have also been dealing with the effects of the rapid snowmelt. Ashland's wastewater plant has been overflowing since April 10, and Duluth has also experienced problems with the same issue.

## Strategic EV charging may be solution to future electricity demand

An article released by the Massachusetts Institute of Technology (MIT) in the journal *Cell Reports Physical Science* on March 15 shows that "all of the above" might be the best way to charge electric vehicles (EVs) effectively and efficiently in the coming years.

The study examined how to best charge a future EV fleet without overburdening the grid or having to install more generation expressly for the purpose of EV charging. To avoid charging on peak, the article recommended

two strategies (and charging locations) for EVs in the future.

The first location for efficient charging would be at the workplace, or for those who do not work in an office, charging stations at places of commerce or at home. Charging midday will allow the power being generated from sources like solar to be used efficiently at the time it is generated. EV charging at this time will reduce demand at other times of the day as well.

The second location for efficient charging is at home during off-peak times, such as the over-

night hours. Charging at this time absorbs power supply when demand is low, avoiding peak demand times and using non-solar resources efficiently.

The article sees the establishment of these charging times as important to avoiding the construction of new generation capacity. Encouraging EV owners' behavior in this direction through the construction of home and work EV chargers would be beneficial to ratepayers and would help power infrastructure operate at its highest efficiency as EVs become more commonplace.

## Interconnection backlog continues to increase

A new report from the Lawrence Berkeley National Laboratory at the University of California says the total capacity of projects waiting for interconnection increased 40 percent in 2022.

Much of this development can be attributed to the Inflation Reduction Act (IRA) and its stim-

ulation of clean energy development. Indeed, approximately 95 percent of the projects waiting for interconnection are zero-carbon.

The report notes 10,000 projects representing 1,350 gigawatts (GW) of generator capacity and 680 GW of storage are waiting to connect. Solar accounts for 947 GW, or more than 70 percent of

this total. Wind stands at 300 GW or more than 22 percent. Just 21 percent of projects and 14 percent of capacity reached commercial operations by 2023 that had been in the interconnection queue in the period 2000-2017. Transmission needs continue to slow down interconnection and the completion of projects.

## Hydropower facilities feeling the pain of Ukraine conflict

The head of Ukrainian state hydropower generating company Ukrhydroenergo says that the country's hydropower facilities have been severely impacted by the country's ongoing war with Russia.

Four of Ukraine's nine hydropower plants have been damaged, with the country losing 2,000 megawatts (MW) of the hydro facilities' total 6,300 MW generation capacity. Since the

damage occurred, only about 500 MW of generation has been restored. Experts estimate more than \$1 billion in damage has been inflicted on Ukrainian hydro infrastructure since the war began.

To avoid further damage to key infrastructure, Ukrhydroenergo has begun hiding electrical equipment underground to keep it safe from Russian military strikes.

## 29 Minnesota Municipal Electrical Utilities earn "Certificate of Excellence in Reliability" from APPA

The American Public Power Association (APPA) honored 219 public power utilities in early April with a "Certificate of Excellence in Reliability" for the utilities' reliable performance in 2022.

Utilities that subscribe to APPA's eReliability Tracker service are eligible to receive the award. Winning utilities must have 2022 System Average Interruption Duration Indexes (SAIDI) that fall in the top quartile of all utilities' SAIDI numbers averaged over the last five years based on Energy Information Administration data averaged over the last five years.

Minnesota's Excellence in Reliability winners are:

ALP Utilities (Alexandria, MN)  
Anoka Municipal Utility (Anoka, MN)  
Austin Utilities (Austin, MN)  
Blooming Prairie Public Utilities (Blooming Prairie, MN)  
Chaska Public Utilities (Chaska, MN)  
City of Barnesville (Barnesville, MN)  
City of Litchfield (Litchfield, MN)

City of Ortonville (Ortonville, MN)

City of Staples (Staples, MN)

City of Waseca (Waseca, MN)

Detroit Lakes Public Utilities (Detroit Lakes, MN)

Elk River Municipal Utilities (Elk River, MN)

Hutchinson Utilities Commission (Hutchinson, MN)

Le Sueur Municipal Utility (Le Sueur, MN)

Madelia Municipal Light & Power (Madelia, MN)

Marshall (MN) Municipal Utilities (Marshall, MN)

Melrose Public Utilities (Melrose, MN)

Moorhead Public Service (Moorhead, MN)

New Prague Utilities Commission (New Prague, MN)

New Ulm Public Utilities (New Ulm, MN)

Olivia Municipal Utilities (Olivia, MN)

Owatonna Public Utilities (Owatonna, MN)

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sion (Preston, MN)

Princeton Public Utilities (Princeton, MN)

Sauk Centre Public Utilities Commission (Sauk Centre, MN)

Shakopee Public Utilities Commission (Shakopee, MN)

St. Peter Municipal Utilities (St. Peter, MN)

Willmar Municipal Utilities (Willmar, MN)

Worthington Public Utilities (Worthington, MN)

## Wärtsilä battery storage facility reaches operation

A pair of energy storage systems, totaling 200 megawatts (MW) of battery storage, reached commercial operation on March 27.

The systems, known as the Madero and Ignacio energy storage plants, are located in Mission, Texas. The plants were built by Wärtsilä, and they will be operated by Eolian.

The system is the world's largest merchant battery system and will provide dispatchable capability to the Electric Reliability Council of Texas (ERCOT) market, with backup available for the grid when necessary. The system can provide multi-hour continuous dispatch.

Construction on the plants began in January of 2021.

## More renewables needed faster to avoid surpassing global heating goals

The International Renewable Energy Agency (IRENA), an intergovernmental organization consisting of 165 member nations and the European Union, published a report on March 28 stating the transition to renewable energy is lagging behind global goals.

According to the report, more than \$44 trillion in investments will be required by 2030 to keep the planet at the climate goal of 1.5 degrees centigrade above pre-industrial levels or lower.

IRENA documents that some progress is being made, especially in the power sector, where renewables now represent 83 percent of capacity additions and, in 2022, reached 40 percent



of installed power generation worldwide. Still, the pace of change needs to increase rapidly. The report observes: "Every year, the gap between what is required and what is implemented continues to grow. [...] Delays only

add to the already considerable challenge. [...] The lack of progress will also increase future investment needs and the costs of worsening climate change effects."

## EPA proposes new standards for coal plant mercury emissions

On April 5, the Environmental Protection Agency (EPA) proposed new standards for mercury and other toxic emissions at the nation's coal plants.



The new standards would lower emissions limits for particulate matter, including mercury, by 67 percent.

Lead, nickel, and arsenic would also fall under the proposed standard. Lignite coal would be required to lower emissions by 70 percent under the standard.

The proposal was the result of a lengthy review process. The Agency estimated that costs to operators could total \$330

million, but health benefits that would occur from implementation could yield anywhere from \$2-3 billion in savings. The EPA is accepting comments for 60 days from the date of publication in the *Federal Register*.

## Xcel to increase nuclear waste storage payments to Prairie Island Indian Community

In an agreement announced on March 28 at the Minnesota Legislature, Xcel Energy will increase annual payments to the Prairie Island Indian Community from \$2.5 million to \$10 million per year for the right to store nuclear waste near tribal land.

Xcel will also pay the Community \$50,000 annually per cask of spent nuclear fuel stored at Prairie Island.

Xcel began storing spent nuclear fuel casks at the Prairie Island nuclear power plant in the 1990s. Xcel began making \$2.5 million annual payments to the tribe in 2003.

## National Lineworkers Day was April 18

National Lineworkers Day is celebrated every year on April 18 and acknowledges the hard work and service of lineworkers, as well as those lineworkers who have died on the job.

After Hurricane Sandy in 2012, when lineworkers from all over the country hurried to repair electrical infrastructure in many states, the 113th Congress passed a bill designating April 18 as National Lineworkers Appreciation Day. The bill became law in 2013.

Lineworkers do an essential but dangerous job, and we rely on them to maintain the power that allows all of us to live our lives. Thank a lineworker; their efforts keep America's lights on!

## EPA permit denial could lead to shutdown of North Dakota power plant

On January 25, the Environmental Protection Agency (EPA) issued a determination to six energy facilities across the country that it would deny the facilities' requests to continue disposing of coal ash in unlined surface impoundments.

Among the facilities named was the Coal Creek Station in Underwood, North Dakota.

In late March, North Dakota energy officials said that if the determination becomes final,

Coal Creek Station might have to shut down for three years in order to meet coal ash disposal requirements. The plant is the largest in the state, and it contributes a significant amount of baseload generation.

The North Dakota Industrial Commission voted unanimously to send a letter to the EPA in support of a modified liner solution for the plant that they hoped the agency would accept. The public comment deadline for the determinations was April 15.



## "Spring" weather knocks out power for Minnesota electric customers



A snow event on April 1 wreaked havoc across most of the southern half of Minnesota, with more than 8.5 inches recorded at the Minneapolis-St. Paul Airport.

The storm also impacted power lines, as the heavy, icy precipitation knocked out power to 215,000 Xcel Energy customers the night of April 1. By the

morning of April 2, power was still out for 17,000 customers.

Minnesota Power and other power providers warned of possible outages April 4 and 5 as Central Minnesota saw a severe ice storm that coated the roads and again threatened power lines. Fortunately, only limited outages were seen during this weather event.

## PUC approves 2.7 percent increase for Xcel gas customers

On March 24, the Minnesota Public Utilities Commission (PUC) approved a 2.7 percent increase for the state's Xcel Energy natural gas customers.

The average customer will see a rate increase of \$2.56 per month.

The increase is below Xcel's requested amount, which would have seen customers receive a 6.6 percent increase. Since the approved rate is lower than the 2021 interim rate, customers will see approximately \$4 million in refunds.

## Diamond ring found in Rogers, Minnesota wastewater plant

A group of workers cleaning a filter at the Metro Wastewater Treatment Plant in Rogers, Minnesota, in late March found a diamond ring amidst the waste, and it was in relatively good repair considering its journey to the plant.

Although the band is damaged, the diamond is in excellent condition.

A find like this is quite rare due to the nature of the wastewater treatment process. Plant employees believe that because the ring was found at the Rogers plant, it was probably lost by a Rogers community member. Please contact 651-602-1269 or email inquiries@metc.state.mn.us if the ring might be yours.



## Large solar panel manufacturing plant coming to Ohio

Invenergy, a power generation development and operations company based in Chicago, has announced plans to make a \$600 million investment in the construction of a new solar panel plant in Pataskala, Ohio, located 19 miles east of Columbus.

The plant is expected to bring 850 permanent jobs to the region. The 1.1 million square foot building will take \$220 million to build, with an additional \$380 million going toward equipment and initial manufacturing process costs.

The Resource, May 2023 15

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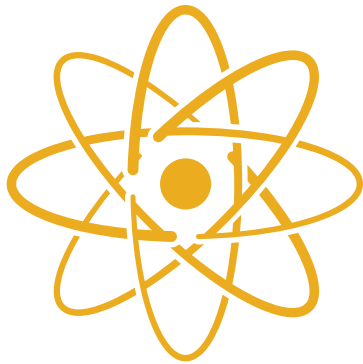
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# U.S. Senators introduce bipartisan nuclear energy bill

On March 30, a bipartisan group of Senators introduced the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy (ADVANCE) Act of 2023.

The Act includes titles that focus on the development and deployment of new nuclear technologies, the preservation of current nuclear generation capabilities, and providing support to the nuclear supply chain, infrastructure, and workforce development. The Act would also provide support for communities that are seeing the closure of a nuclear power plant.

The bill was introduced by Senator Shelley Moore Capito (R-WV), Senator Tom Carper (D-DE), and Senator Sheldon



Whitehouse (D-RI). Cosponsors of the bill include John Barrasso (R-WY), Cory Booker (D-NJ), Mike Crapo (R-ID), Lindsey Graham (R-SC), Martin Heinrich (D-NM), Mark Kelly (D-AZ), and Jim Risch (R-ID). A companion bill in the U.S. House has not yet been introduced.

# European Parliament sets new renewable requirements for 2030 target

On March 30, the European Parliament reached consensus on the European Union's (EU) renewable energy standards for 2030.

By that time, 42.5 percent of energy generation in the EU will need to be renewable, with an optional "add-on" goal of 2.5 percent, bringing the proposed total to 45 percent in fewer than seven years.


The EU, as of 2021, generates 21.8 percent of its power from renewable sources. The March agreement also includes new standards for buildings and the easing of permitting processes that may slow down the construction of renewable energy infrastructure.

European Commission head



Ursula von der Leyen said in a statement that the agreement would "...help us progress

towards climate neutrality, strengthen our energy security, and boost our competitiveness."



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## Otter Tail Power files plans to keep part-ownership of Coyote Station coal plant

In early April, Fergus Falls-based Otter Tail Power filed documents with the Minnesota Public Utilities Commission stating its intention to retain a partial stake in the Coyote Station coal plant located in Beulah, North Dakota.

While the company had previously planned to sell their ownership in Coyote Station during the 2020s, the filing revealed that Otter Tail now wants to maintain its ownership in order to provide more certainty for customers.

Otter Tail is concerned about its ability to purchase power generation capacity affordably in the future as well as with the recent volatility in natural gas prices.

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More than 150 Vietnam Veterans gathered in **Bagley** on March 31 to acknowledge National Vietnam War Veterans' Day.

**Benson** saw 80 inches of snow for the first time since daily weather records in the city started being kept 70 years ago.

The Minnesota Department of Transportation held an open house in **Blue Earth** on April 6 to discuss the 2023-2024 Interstate 90 project between Blue Earth and Highway 22 south of Wells. The public should start seeing lane closures on that section of I-90 in May 2023, and there is a target completion date of October 2024 for the work. The project will resurface lanes, repair bridges, and fix ramps on that 19-mile span.

The Minnesota Public Utilities Commission held meetings in **Breckinridge** on May 2 and Fergus Falls on May 3 to discuss Summit Carbon Solutions' application to construct a carbon capture pipeline in Otter Tail and Wilkin Counties.



**Buhl** won the "best tasting water" award at the 39th annual Minnesota Rural Water Association's (MRWA) Technical Conference held on March 8.

On April 16, the Bridge Avenue river bridge in **Delano** was closed due to flooding, and the city began to construct flood walls to protect downtown.

**Gibbon Winthrop Fairfax** school district voters approved two school bond questions by a wide margin on April 11. The first question—whether to build a new, centrally located \$55 million school to serve grades 7-12—passed by a margin of 1356 in favor and 675 against. The second question—whether to contribute \$2.3 million of current school district funds to the project if question one was accepted—passed by a margin of 1345 for to 680 against.

**Rochester Public Utilities** will be replacing city water mains dating from 1958 and 1963 between April and July. The project will also include bituminous restoration, curb and gutter, and storm/sanitary sewer reconstruction.

**Rushford** is starting a business commercial loan program to help strengthen the fabric of the local business community. The program will offer loans of up to \$50,000 with 2.5 percent interest and no payments required in the first year.



Dennis Rykken of **Sauk Centre** has died at the age of 81. Dennis had a background in social work and

was employed at Minnesota Correctional Facility-Sauk Centre for many years. Dennis was very involved in the municipal utilities space as well, working as a municipal utilities consultant and as a board member for the Minnesota Municipal Utilities Association for seven years, serving as president of the board during 2012-13. He also served on the Sauk Centre Public Utilities Commission for 27 years, including 16 years as chair of that body. In addition, Dennis was a three-time mayor of Sauk Centre, and he served on the Sauk Centre City Council. His

legacy of service to people, his community, and public utilities will be remembered.

Low Conner is the new mayor of **Two Harbors**. He was elected on April 11 in a special election to replace former mayor Chris Swanson, who was recalled in August 2022. Conner won the election by 27 votes, 345-318 over his opponent Robin Glaser.

The last remaining structure standing at the old **Willmar** power plant was demolished on April 13. Demolition started in early March.

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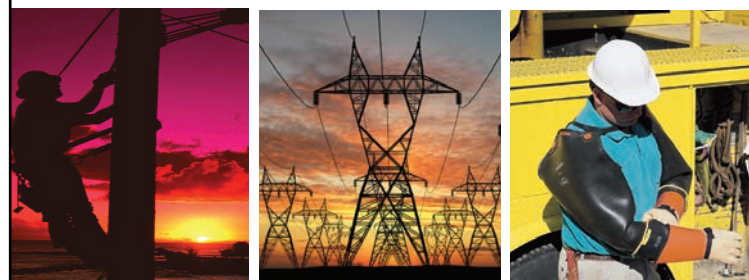


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Late in March, officials in the Nigerian city of Gora broke ground on a \$171 million solar cell production plant. Most of the funding for the project comes from the China-Africa Development Fund through the Bank of China. The location was selected because of the large amount of silicon and silica in the area, both of which are used in the production of solar cells.

A new report from Innovative Systems, a provider of software to support rural telecom operations, found that rural Americans spend an average of \$71 per month on home internet service. Although this is higher than the average American price tag, rural Americans are also on average receiving higher-speed internet than many of their city-based counterparts.

Utility Dive reported that in early March, the California Independent System Operator (CAISO) began efforts to improve its interconnection queue processes and transmission planning as the addition of large amounts of renewable energy to the grid drives changes in its existing processes.

Congressman Tom Emmer (R-MN) hosted a roundtable on April 4 with Minnesota leaders and energy producers to discuss the House's newly passed Lower Energy Costs Act. The Act's components include the repeal of the natural gas tax and reforming the permitting process for new energy projects. The proposed Act is unlikely to pass in the Democrat-controlled Senate.

WCCO Television reported on April 5 that three Minnesota state agencies knew about the Monticello Nuclear Power Plant leak that occurred in late 2022 relatively soon after it happened. The Minnesota Pollution Control Agency (MPCA), the Minnesota Department of Natural Resources, and the Minnesota Department of Health (MDH) all had knowledge of the situation well before the public was made aware, but neither the agencies nor Xcel shared it. WCCO's reporting said that the MPCA and MDH responded to questions regarding their earlier knowledge by stating the initial reporting from Xcel Energy to the agencies shared very little information.

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1 www.bls.gov/oes/current/oes499051.htm 2 www.bls.gov/oes/2017/may/oes499052.htm 3 www.bls.gov/oes/2017/may/oes472152.htm

**\* Your ad could be here \***

Energy Intelligence reported on April 10 that the Organization of Petroleum Exporting Countries Plus (OPEC+) saw its largest drop in total production in 10 months, with output falling 680,000 barrels a day to 37.6 million barrels per day. Cuts in Russian and Nigerian production accounted for most of the output decrease.

In mid-April, the United States Import-Export Bank and the U.S. International Development Finance Corporation signed an agreement to lend a cumulative \$4 billion to the ORLEN Synthos Green Energy project, which will develop 20 small modular nuclear reactors in Poland. The reactors were designed by GE Hitachi Nuclear Energy. The first one should come online in 2029.



On April 19, the German cabinet approved a bill to phase out oil and gas heating systems from 2024 onward.

The American Clean Power Association stated in its new report Clean Energy Investing in America that American clean energy growth in the last nine months included:

- A total of **46** announcements of new, expanded, or re-opened utility-scale manufacturing facilities including:
- **26** solar manufacturing facilities
- **10** battery storage manufacturing facilities
- **8** wind manufacturing facilities
- **2** offshore wind manufacturing facilities
- **18,000** new American manufacturing jobs
- More than **\$150 billion** in capital investment
- Nearly **96,000 megawatts** of clean energy capacity
- **\$4.4 billion** in consumer savings that will be realized by the **24 million** Americans served by utilities announcing consumer savings

States that will see new or expanded factories include **Alabama, Arizona, Colorado, Georgia, Iowa, Michigan, Minnesota, New Mexico, New York, Ohio, Tennessee, and Texas**, while other locations remain undetermined.

## President Biden visits Cummins Power Generation in Fridley, Minnesota

On April 3, President Joe Biden landed in the Twin Cities on his “Investing in America” tour promoting the federal government’s work to increase investment in products and jobs that are “Made in America.”

Many of these investments have been made through the Inflation Reduction Act and the

Infrastructure Investment and Jobs Act, as well as through private investments facilitated by the legislation.

President Biden toured the Cummins facility in Fridley which is going to be making hydrogen electrolyzers that break water down into hydrogen fuel. Cummins will also be producing new clean engine technology

that will allow for the production of low and zero-carbon engines that use fuels like natural gas and hydrogen.

Biden spoke at the event, detailing Cummins’ investment as well as others in the state including Xcel Energy’s plans to build the state’s largest solar farm in Becker.

## Gulf of Mexico oil leases auctioned

On March 29, the Biden Administration put 114,000 square miles of oil-rich territory within the Gulf of Mexico up for auction.

The decision was part of an agreement made with Senator Joe Manchin (D-WV) to ensure passage of the Inflation Reduction Act in 2022.

Although 114,000 square miles were up for bid, oil companies have only 2,600 square miles as of press time. The government estimates development of the



leases for sale in the Gulf of Mexico could yield more than a billion barrels of oil and four trillion cubic feet of natural gas in the next 50 years.

## Compostable food packaging found to contain PFAS in new study

In another sign of the urgent action required to mitigate per- and polyfluoroalkyl substances (PFAS), a new Canadian study published in the journal *Environmental Science and Technology Letters* on March 28 found that many types of food packaging from restaurants contain PFAS, sometimes in high levels.

In the compostable food packaging sampled, just under 50 percent contained some PFAS and more than half—26 percent—contained high levels of various PFAS chemicals. The finding is a concern because materials that are supposedly appropriate for composting will break down, allowing PFAS to enter the composted material or the water supply.

The study noted that a ban by the Canadian government on certain types of single-use plastic food packaging has led to the substitution of packaging that is higher in PFAS than previously.



## Virginia governor signs nuclear energy bills into law

On March 23, Virginia governor Glenn Youngkin signed a variety of bills designed to reinvigorate the nuclear power in his state.

The broad-ranging laws covered a variety of areas related to nuclear power, including the creation of a Virginia nuclear innovation hub, development of educational pathways for future workers in the nuclear industry, and developing energy projects

on former coal sites.

Virginia’s efforts include plans to install a commercial modular nuclear reactor in the state within 10 years. Two projects related to the state’s deployment of small modular reactors recently received grant awards from the “Growth and Opportunity for Virginia” grant program to spur progress toward that goal.



## Upcoming Events

### Regional Safety and Commissioner Workshops

MMUA is hitting the road this summer for a series of six regional workshops across the state. These workshops will include a ticketed session on accident prevention and a free session for utility leaders focused on how to protect, promote, and strengthen your hometown utility. We hope you consider joining for both!

#### Safety workshop: Accidents, accountability, and best practices.

Intended audience: Utility staff, safety personnel, and leadership

Join the MMUA safety team as we explore the causes of workplace accidents, prevention and mitigation strategies, effective emergency response techniques, and successfully implementing changes based on lessons learned.

These sessions will prepare anyone within your organization to be part of a safety culture.

#### Interacting on the issues: Protecting, promoting, and strengthening your hometown utility

Intended Audience: Utility commissioners, city council members, and utility leaders.

Join the MMUA government relations team and peers from your region to discuss the implications of new laws, explore solution opportunities, and network with others committed to protecting, promoting, and strengthening hometown utilities in the coming years.

#### Register today!

Learn more and register by visiting the calendar section of the MMUA website.

June 7—Austin  
June 13—Moorhead  
June 14—Hibbing  
June 15—Two Harbors  
June 22—Jackson  
June 27—Litchfield

For more information, see the Events Calendar at [www.mmua.org](http://www.mmua.org) or call MMUA at 763-551-1230.