

THE RESOURCE

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Minnesota Municipal Utilities Association



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Busy times at Blue Earth Light & Water

There have been a lot of things happening at Blue Earth Light & Water (BELW).

A new substation, funding a new water plant, and a renewable energy partner's change in ownership all add up to busy and exciting times. MMUA spoke with Tim Stoner, General Manager of Blue Earth Light & Water, to learn about progress at the utility.

MMUA: Tell me about the new substation with generation in town. What drove the need?

Tim: Our new substation has two purposes. First, we have experienced some load growth, and our industrial park is poised for expansion. Those things, combined with our reliability needs, meant the new substation was only a matter of time.

The location for the new substation was chosen because our interconnect feeds intersect there. It is also close to the new Golden Spike Industrial Park, which is convenient as well. Considering our rural location,



A recent renovation gives the BELW offices a pleasant atmosphere.

almost all of the new businesses in the industrial park are agriculturally based. We're hoping this growth continues, and we are currently having discussions about how to best proceed with expanding the park.

MMUA: Tell me about the generation aspect of the substation.

Tim: BELW added a 2-MW Cat we purchased from Ziegler CAT at a great price, and it was placed at the substation. This was an effort to shore up our

capacity needs while diversifying locations for reliability in the case of severe weather.

MMUA: How many customers does the new substation serve?

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MMUA Board of Directors approves legislative objectives for 2024

By Kent Sulem

MMUA's Board of Directors has approved general legislative objectives and positions on a range of issues MMUA expects to see raised, or will try to get raised, during the 2024 legislative session.

The action came at the Board's December 5, 2023, meeting prior to the Technical and Operations Conference in St. Cloud. The legislature will convene on February 12.

The Board's list is not an exhaustive compilation of all matters that may impact municipal utilities during the 2024 session. Even so, it will help the Government Relations team make decisions on how to allocate resources. The issues and positions approved by the Board are as follows:

Bonding - With a biennial budget

having been adopted last year, 2024 should be a traditional bonding year. MMUA will advocate for a bonding bill sizeable enough to address the infrastructure needs of municipal utilities, including the funding of programs such as the Wastewater Infrastructure Fund whose grants administered by the Public Facilities Authority are a vital resource to help upgrade and maintain wastewater treatment utilities.

Third parties and EV charging stations - MMUA is accepting of third parties charging for the use of EV charging stations, assuming the power for the charging station is provided by the utility whose service territory includes the charging station. MMUA opposes any action that would allow a third party to generate the power to be sold at a charging station.

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The Resource receives APPA communications award

In late 2023, MMUA's flagship newspaper, The Resource, received the American Public Power Association's (APPA) 2023 Excellence in Public Power Communications Award of Merit in the print/digital category.

Winners, including *The Resource*, were recognized at APPA's Customer Connections Conference held November 12-15 in San Antonio, Texas.

The Resource has been published for years by MMUA, and it is the voice of the Association. In 2022-2023, the newspaper received a visual facelift and an important update to its content goals. Today, *The Resource* provides original coverage of innovative projects within our state as well as our Association's news and events. We publish up-to-date information and MMUA's analysis of Minnesota's legislative deliberations, agency activities, and funding opportunities that may be of interest to

members. Additionally, we curate stories and report on utility news from around the United States and beyond so that our members can broaden their view of the many factors that may affect their operations locally. Various guest contributors help ensure a wide range of voices and topics are easily available to the people who depend on MMUA for utility news.

Reid Baumann is the main writer and creator of *The Resource*. MMUA's CEO Karleen Kos is the main editor of the newspaper, and she also writes a monthly column. The MMUA Government Relations team of Kent Sulem and Bill Black are monthly contributors on the important issues that face MMUA. Christian Glanville provides information about MMUA's events and activities.

The Resource has a monthly circulation of approximately 2,100 copies. Issues reach our members, associate and affiliate

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Green Bay considers transportation utility

On December 19, the City of Green Bay moved to examine the idea of creating a transportation utility for the city.

The new model would fund road construction costs in Green Bay, replacing the current "wheel tax" payments made directly to the state of Wisconsin on top of annual vehicle registration fees. If a transportation utility is formed, Green Bay

residents would see a fee added to their utility bills, effectively charging all property owners for the cost of maintaining roads. Under the "wheel tax," only those licensing automobiles pay these costs.

Green Bay will spend \$100,000 for raSmith, an engineering consulting firm, to study the idea. The goal is to maintain the roads at a level that satisfies residents while also being fiscally prudent.

Several other cities in Wisconsin are considering a similar move, though the legality of the proposed structure is being challenged as well.

Green Bay's study will be completed in six months to a year. If the study's results are favorable and legal roadblocks do not occur, a transportation utility could be up and running in the city by 2025.

Group of European countries pledges to remove fossil fuel power plants by 2035

A group of seven European countries pledged on December 18 they would completely end the use of carbon-fueled power plants.

In a statement, the nations of Austria, Belgium, France, Germany, Luxembourg, the Netherlands, and Switzerland committed themselves to the goal, as well as working together to get there.

Many of the countries are well on their way. For example, Austria is already generating 77 percent of its power from non-carbon sources, mostly hydropower and wind. France generates 70 percent of its power



from non-carbon sources, with nuclear power being the preferred power plant type.

Many European countries, especially in Eastern Europe,

have further to go down this path. However, this pledge is significant in helping all of Europe reach the goal of a carbon-free power sector.

New manual on traffic control devices to make it easier for EV owners to find chargers

On December 19, a final rule adopting the 11th Edition of the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) was adopted after its publication in the Federal Register.

The MUTCD is published by the Federal Highway Administration.

This edition of the manual is notable because signs pointing motorists to electric vehicle (EV) chargers will now be allowed on "specific service" signs that



currently list motorist amenities like gas stations, restaurants, and motels. By making EV

charging stations more visible to motorists, it will make travel by EV easier for EV drivers.

AI helping in wastewater monitoring activities

In October, the City of Phoenix's Water Services Department began a pilot with an artificial intelligence (AI) company called Kando.

Using sensors, the company can monitor wastewater and then feed the information through

an AI system designed to detect issues faster than in the past.

Some of the things that can be detected and analyzed include dumping and pollutants that enter the system. By catching problems earlier using AI, problems can be corrected and illegal activities stopped much faster

than with traditional monitoring.

As of November 2023, 16 devices have been installed in Phoenix's sewers to help monitor wastewater. Within the year, a total of 32 devices may be installed to further help in this project.

DEI: Forget political correctness and embrace belonging

“Whatever we deny or embrace, for worse or for better, we belong together.” –We Belong, sung by Pat Benatar (1984)

During the first day of the 2023 Technical and Operations Conference in St. Cloud, the MMUA Board of Directors held its regular December meeting.

In addition to the usual end-of-year agenda items giving direction for the upcoming legislative session and reviewing MMUA’s operational performance, this year, the Board did something else. With a good discussion but little fanfare, MMUA adopted a policy related to diversity, equity, and inclusion (DEI).

Political correctness or catalyst? The Association’s new DEI policy is fairly unremarkable. (See the text on page 5) It includes the language you would expect: MMUA’s history of embracing “a wealth of backgrounds, perspectives, cultures, and experiences” and a declaration that “MMUA insists on a culture of respect in all aspects of organizational life, recognizes that words and actions matter, and commits to inclusiveness in all that we do.” It then goes on to describe, in more specific detail, what we expect of ourselves to demonstrate these values.

The policy runs a little more than 400 words. Having it in place will make it easier for us to attract job candidates and to be considered for grants of all types. In the world of associations and nonprofits, we need such a policy to “keep up with the Joneses” and to maintain our standing as a leader. Over the long term, a DEI policy that is followed can also help us with legal and ethical compliance.

In reality, whether those 400 words amount to anything more

than a formality to achieve this kind of political correctness is up to us. That’s because a DEI policy means little on its own. If it doesn’t become a way of life, its value is limited.

So, we are at a fork in the road. MMUA gets to decide whether this policy will simply be words on a page or the catalyst for an evolution in matters relating to diversity, equity, and inclusion. Saying we need to evolve doesn’t mean anyone is doing anything wrong now. It just means we can improve.

Thus, we ask ourselves: how can we better welcome and embrace the full range of human experiences within MMUA? How can we act as a resource to the utilities we serve?

DEI is not all about racial diversity or employment. That’s the first thing we have to get straight in our minds. Conceptualizing it that way limits DEI’s usefulness and largely misses the point of these initiatives.

Then there’s simple reality. According to 2022 population estimates, greater Minnesota is 89.4 percent white, and labor force participation across all non-white ethnic groups is just 9.2 percent of the total. Municipal utilities employ somewhere between 800 and 900 workers statewide, according to the Minnesota Department of Employment and Economic Development. It’s hard to make much headway on racial and ethnic diversity at the community level when even a proportional representation of non-white workers would spread approximately 80 professionals over 121 electric and 33 gas utilities—even assuming these 80 people are available, qualified, and interested in applying for open positions.

With numbers like these, it’s

easy to see how being asked to undertake DEI initiatives—if conceptualized as dealing just with racial diversity in employment—could seem out of touch with the realities MMUA members experience daily. Who has time to fuss over recruiting and hiring (maybe) one employee?

Think bigger. Think accountability. The DEI movement in the United States goes back more than 60 years. Largely beginning with the 1960s civil rights movement, over time it has embraced other areas of diversity, including gender, marital or parenting status, sexual orientation, religion, and many others. According to the Greenlining Institute (2018), the focus from the 1960s into the mid-1970s was on tolerance, meaning the acceptance of integrating diverse individuals into workplaces, schools, and communities.

From the mid-1970s into the 1990s, the focus shifted to multiculturalism and being aware of the achievements of various racial and ethnic minorities. Because many of us grew up and began our working careers in those years, we were influenced by this push for multiculturalism, and that is probably a big reason we still think of DEI in those terms.

Since the 1990s, demographics have been shifting. This has resulted in greater awareness of differences beyond cultural and ethnic origins and a focus on inclusion and equity. If diversity meant everyone could be at the table, equity and inclusion have emphasized everyone being valued and heard in the discussions held there.

Over the past ten years or so, we have seen an increased emphasis on the public responsibility of companies and government entities to ensure diverse groups

From My Desk to Yours

Karleen Kos
MMUA CEO



are represented at all economic and social levels, often using social media to hold government, corporations, and communities accountable.

So, as we think of it in 2024, diversity is a much bigger concept than it was when many of us were first hearing that term. Apart from racial and ethnic differences—which are comparatively small in numbers in greater Minnesota—the variations in humans are endless, whether they live in Duluth or Dawson. From age differences to religious differences to the wide range of reading levels, political opinions, physical abilities, body sizes, marital statuses, gender differences, and more: everybody has a unique set of needs and experiences. We obviously cannot cater to all of them. Yet we cannot ignore them either.

Plainly speaking, we need to pay attention and adapt our operations to ensure we are being inclusive of the many voices and considerate of the many needs of our stakeholders. That is true of MMUA, and it is true of municipal utilities. If we fail to do that, we will likely cease to exist. I am not saying this to be dramatic; I’m just looking at what happens to any entity in history that falls out of step with the requirements of the times. They become irrelevant,

and others step in to keep things moving forward.

Embrace the challenge of “belonging.” The heart of DEI is really best captured in the term “belonging.” That means we create conditions so that people can feel accepted and part of a community where their full participation is sought and valued, regardless of their unique attributes. Ideally, this pertains to everyone from current and future employees to ratepayers to power suppliers, vendors, and other stakeholders.

Fostering a sense of belonging is just common sense. Including people on the front end, listening to them, and addressing their concerns saves time and angst in the long run. It doesn’t mean everyone gets exactly what they want. It means they were heard and considered. This minimizes the likelihood of bad consequences, builds a culture based on trust, and sets everyone up for better results.

In many cases, MMUA and Minnesota’s municipal utilities already do a decent job at this—but there is more to do. At the association level, we are committed to training our staff members and enhancing their ability to deliver services in a manner that exemplifies the spirit of our DEI policy. We hope they will be a resource for member communities in that regard.

We also plan to offer content at our conferences that will help municipal utilities create their own DEI programs. A good DEI initiative is not a one-size-fits-all approach and should be customized to fit the specific needs and culture of the community or utility. The goal is to create a place where every employee and ratepayer feels valued, respected, and empowered to be their best, regardless of their background or differences. We are planning conference content that will help you think about how to do that—or to improve the current DEI program—in your utility.

MMUA’s new DEI policy is not the first in the world of municipal utilities; many of you already have one in place. We know we can learn from you, and you can learn from one another. So, let’s embrace the challenge of evolving to a truly inclusive industry. As the 1984 Pat Benatar hit proclaimed, “Whatever we deny or embrace, for worse or for better, we belong together.”

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Blue Earth Light & Water

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Tim: The new substation benefits our entire system. It is interconnected to our existing two substations, allowing us to reduce load on current feeders. These distribution subs are aging and showing signs of degradation. Another benefit of having a more robust system is the future electrification of everything. We are starting to see more electric vehicles and some heat pump systems.

MMUA: Did you experience supply chain issues with the materials for the project, including transformers?

Tim: We were able to secure everything we needed for the most part. Some items we are still waiting on, including our cap bank and control building. One item we were lucky to get was our transformer, which we ordered in early 2022 and had delivered in December 2023. I do know from talking with the manufacturer that they are now accepting build dates into 2028. So, things have gone from a two-year lead time to upwards of four years lead time. I wonder what will happen if the Infrastructure Investment and Jobs Act (IIJA) money starts to flow and all utilities start building. What happens to lead times then?

MMUA: What about the status of other electrical projects in town? We understand you are creating an underground system running from the Rice Street area to East Street and also implementing an underground feeder connecting your two existing substations.

Tim: We are having additional feeder ties into the new sub. We are also trying to harden our infrastructure by converting our remaining overhead to underground as soon as we reasonably can do that through normal planning for budgeting and building. We currently have about 50 percent underground. We have also been pursuing some of the DOE grant opportunities when possible, hoping to reduce the rate pressure on our customers.

MMUA: The Senate Capital Investment Committee visited Blue Earth in the fall to review BELW's drinking water treatment request for \$8.6 million for improvements to the facility. Tell me about the planned improvements and what you learned from the Committee when they visited.

Tim: We have had conversations with both House and Senate Capital Improvement Committees. We are in the process of trying to fund a new reverse osmosis (RO) water filtration plant due to excessive chlorides from our wastewater plant. A Minnesota Pollution Control Agency compliance concern started this process back in



Blue Earth's current water plant.

2018. BELW has installed \$12 million of new water infrastructure in the last ten years paid for by rates payers. In the absence of funding assistance, the new 15.8-million-dollar plant would more than double the rate pressure on customers. We are hoping for some direct bonding assistance from the State; both Senate and House committees have taken the time to hear our story. Because we have completed our own projects over the last 10 years, and we have accomplished 75 percent of our water

infrastructure improvements throughout town without any federal or state funds, we think BELW is a good candidate for assistance.

This project is great for the community. As our water filtration approaches implementation of an RO system, we have additional industrial customers taking interest in either starting new lines or increasing production in Blue Earth. The benefits to our ratepayers include RO to every faucet of every household, the reduction or removal of



The new substation transformer being delivered and placed on December 18.

water softening, and a complete water infrastructure system that is good for the next 40 years.

The system won't be operational until 2025. We are planning to put it out for bid in 2024.

MMUA: Turning to the wind power that is present in Blue Earth, the towers were recently sold to local owners. Will that impact the operation of wind turbines that have been sitting dormant for a few years? Why were they not turning under the old owners?

Tim: The two turbines capable of generating 2.5 megawatts (MW) of behind the meter wind were recently sold to Midwest Power Partners from Ruthton, MN. The new owner has completely refurbished the units, and they were fully operational in December. BELW had power purchase agreements for the energy and renewable energy credits, so we are happy to see the new owner take charge and refurbish the units. In the past, the units weren't turning because of main-

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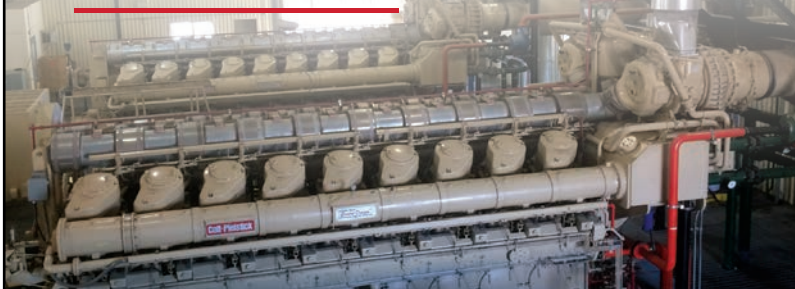
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Blue Earth Light & Water

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An ownership change for Blue Earth's local wind generation will help BELW add more renewables to their generation mix.

tenance issues. Since our current contract is ending in 2025, the previous owner probably was not planning to upgrade the units.

MMUA: What percent of the city's power can the turbines provide? What will things look like when it is time to renegotiate the contract in 2025?

Tim: Of course, wind capacity is hard to determine and rely upon. At nameplate we can expect about 18 percent of our load to come from the turbines. The 2.5 MWs are behind the meter and sold at a fair price. Like every other utility, we are working on how we are going to contribute to the state's goal of being carbon free by 2040. We are trying to get there somehow and with a reasonable approach. This is one way that helps us.

MMUA: Things have been busy in Blue Earth! Can you tell me about any other projects BELW is considering or things that are

happening in your community more generally?

Tim: Some of the future items we are working on include conversion to advanced metering infrastructure and continuing with our load management efforts, which are currently at 60 percent saturation. We have started offering heat pump water heaters as an energy savings technique. Other initiatives include system hardening, physical security, and automation system improvements.

As a small utility, we are trying to use everything possible, including the Inflation Reduction Act and IIJA grant programs. And of course, none of this work happens without an experienced staff, so staff retention efforts always continue to be on the agenda and supported by our elected board members and the larger community.

DEI

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Diversity, Equity, and Inclusion Policy

Approved 12-5-23

The Minnesota Municipal Utilities Association's (MMUA) mission is to unify, support, and serve as a common voice for municipal utilities.

We know that a diverse, equitable, and inclusive association is a more innovative and successful one. Throughout our services to MMUA members, in the content we create, in the relationships we foster with our communities and staff team, and in the way we represent utilities' interests, MMUA embraces a wealth of backgrounds, perspectives, cultures, and experiences.

MMUA and its stakeholders have been advocating against injustice and inequity since its founding in 1931. From promoting policies that ensure all of Minnesota's residents have equal access to utility services, to bringing skills training and safety resources to remote communities, to creating opportunities for underrepresented individuals to participate in the life of the association, to amplifying diverse voices, we leverage MMUA's platforms to help create and promote positive change wherever possible as we carry out the Association's mission.

MMUA's commitment: MMUA insists on a culture of respect in all aspects of organizational life, recognizes that words and actions matter, and commits to inclusiveness in all that we do.

Specifically:

1. MMUA will encourage diversity, equity, and inclusiveness in all its member-focused services, activities, committees, groups, and communities.
2. MMUA's responsibility for diversity, equity, and inclusion in employment is applicable—but not limited—to our practices and policies on recruitment and selection, compensation and benefits, professional development and training, promotions, transfers, social and recreational programs, layoffs, terminations, and the ongoing development of a work environment built on the premise of equity that encourages and enforces:
 - Respectful communication and cooperation among all employees.
 - Teamwork and employee participation, actively seeking all employee perspectives.
 - Work/life balance through flexible work schedules to accommodate employees' varying needs wherever possible.
 - Behavior in the communities we serve that promotes a greater understanding and respect for the diversity of all.
3. MMUA will embrace opportunities to achieve equity, reject racism, sexism, and other forms of discrimination, and we will hold ourselves accountable to be considerate of many factors including, but not limited to, age, race/color/ethnicity, nationality, citizenship status, ancestry/cultural background, family or marital status, pregnancy, sexual orientation, gender identity and expression, physical ability or handicap, geographic location, political affiliation, religious beliefs or practices, socio-economic or public assistance status, veteran status, local human rights commission activity, professional role, and professional perspective.
4. Representation is important, but it is not sufficient to create a just and equitable environment. We are committed to supporting all members of the MMUA community and to a regular review of MMUA's policies and practices to ensure fairness.



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Dairyland Power Cooperative chosen as developer of transmission project

On December 5, Dairyland Power Cooperative of La Crosse, Wisconsin, announced that it had been selected as the developer of a new 345-kilovolt transmission project in the state.

Dairyland will also own and operate the line, which will consist of reconstructed line as well as 35 miles of new line.

The Alma-Blair Transmission Project will stretch from Alma, Wisconsin on the Mississippi River, to the Tremval substation near Blair, Wisconsin. The project is part of the Midcontinent Independent System Operator's (MISO) Tranche 1 as part of its Long Range Transmission Plan.

The project is expected to reach operation by June 1, 2028.

Massachusetts Department of Public Utilities strikes a different tone on gas

On December 6, the Massachusetts Department of Public Utilities (DPU) released an order modifying the Department's stance on gas and gas utilities in the state.

In a subheading called Beyond Gas: A Summary of Regulatory Principles, DPU noted that for Massachusetts to reach its goal of net-zero greenhouse gas emissions (GHG) by 2050, a "different lens will be applied to gas infrastructure investments going forward."

The DPU emphasized this would not result in changes that would hurt the possibility of rate recovery for existing gas distribution companies. However, it should mean a closer look at future investments and how they play into reaching climate and economic goals.

The order will require the submission of climate compliance plans by gas utilities every five years beginning in 2025. The plans will guide gas utilities to meet the state's emissions goals.



China brings first commercial Generation IV nuclear reactor online



On December 6, China brought the Shidao Bay Nuclear Power Plant online for the first time. It is located in Shandong Province, in the eastern part of the country.

Generation IV reactors are unique because they use nuclear power technologies that have been developed since approximately the year 2000. Because of global attitudes and economic

factors, none have entered commercial operation until now.

Shidao Bay uses high-temperature gas-cooled (HTGR) technologies. This technology harnesses uranium fuel and graphite moderation to make high reactor core output temperatures. While this idea is not completely new, what makes the plant a "Generation IV" reactor is the addition of novel

components like fission reaction self-regulation, helium cooling, passive cooling, and fuels that are more resilient.

The plant features two reactors of 250 megawatts-thermal apiece that turn a 210 megawatt-electric steam turbine. These new technologies are expected to be used in other plants in China as the country transitions to renewable energy.

Louisiana electric cooperative to raise base rates for the first time since 1984



On December 13, the Louisiana Public Service Commission (LPSC) voted 4-1 allowing the Northeast Louisiana Power Cooperative (NELPCO) to raise its interim base rates 12 percent.

NELPCO has not raised this rate for nearly 40 years.

A negative rate of return and the discovery that the utility only had three days of cash reserves on hand in late 2022 brought about the change.

NELPCO serves about 12,000 customers in Franklin, Madison, Richland, Tensas, East Carroll, West Carroll, and Morehouse Parishes. Parishes are an administrative division in Louisiana that are equivalent to counties in much of the rest of the country.

NELPCO has been in business since 1938. Even with the rate hikes, NELPCO is expected to continue to deliver low electricity bills to its members.



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California becomes the second state to adopt direct potable reuse rules

The California State Water Resources Control Board on December 19 voted unanimously to approve new regulations that would ease the adoption of direct potable reuse (DPR) techniques in the state.

DPR means that purified wastewater is directly used in a water system, hence the nickname, “toilet to tap.”

Water processed through DPR systems is so purified that important minerals providing the taste of water have to be added back in. California’s regulations include so-called “triple redundancy” to purify the water of chemicals and pathogens.



California has struggled for years to provide sufficient drinking water for its millions of residents. Officials noted that this first step still leaves any actual DPR systems years in the future.

Colorado adopted similar rules in January of 2023.

DOE announces carbon capture pilot projects

On December 14, the United States Department of Energy (DOE) announced up to \$890 million in funding for three fossil fuel plants in California, North Dakota, and Texas to build and demonstrate carbon-capture systems.

The North Dakota project will be based at the coal-burning Milton Young Power Plant in Center, North Dakota, and will receive \$350 million. In Texas, the Baytown Energy Center natural gas plant in Baytown, Texas will receive up to \$270 million, and the Sutter Energy Center gas plant near Yuba City, California, will receive up to \$270 million.



The projects are using different carbon sequestration methods so their efficacy can be understood during actual power

plant operation. North Dakota is using a solvent developed by Mitsubishi Heavy Industries to capture carbon during operations and store it in geologic formations around the power plant. Texas is using a solvent developed by Shell to capture carbon and transport it through pipelines to be stored along the Gulf Coast. California is using a solvent developed by the company ICE to capture carbon and trap it underground.

The DOE said the projects could prevent the release of about 7.75 million metric tons of carbon dioxide per year. The stakeholder engagement process for the projects will begin in January of 2024.

FERC questions investment fund ownership of utilities

On December 19, the Federal Energy Regulatory Commission (FERC) put out a “notice of inquiry” to review the Commission’s policy of granting waivers to ownership limits of utility stock.

The concern is that when index funds or asset managers own too much of a utility or utility

holding company, their goals can clash with the goals of utilities. Asset managers largely focus on returns for their investors. Meanwhile, utilities typically strive to both maintain financial solvency and, in the case of investor-owned utilities, to turn a profit, while also serving the community and being good stew-

ards of resources.

The inquiry will determine what effect large investment firms are having on utilities, and if it is time to withdraw FERC’s authorization.

Comments are due to FERC by March 26, 2024, and reply comments are due by April 25, 2024.



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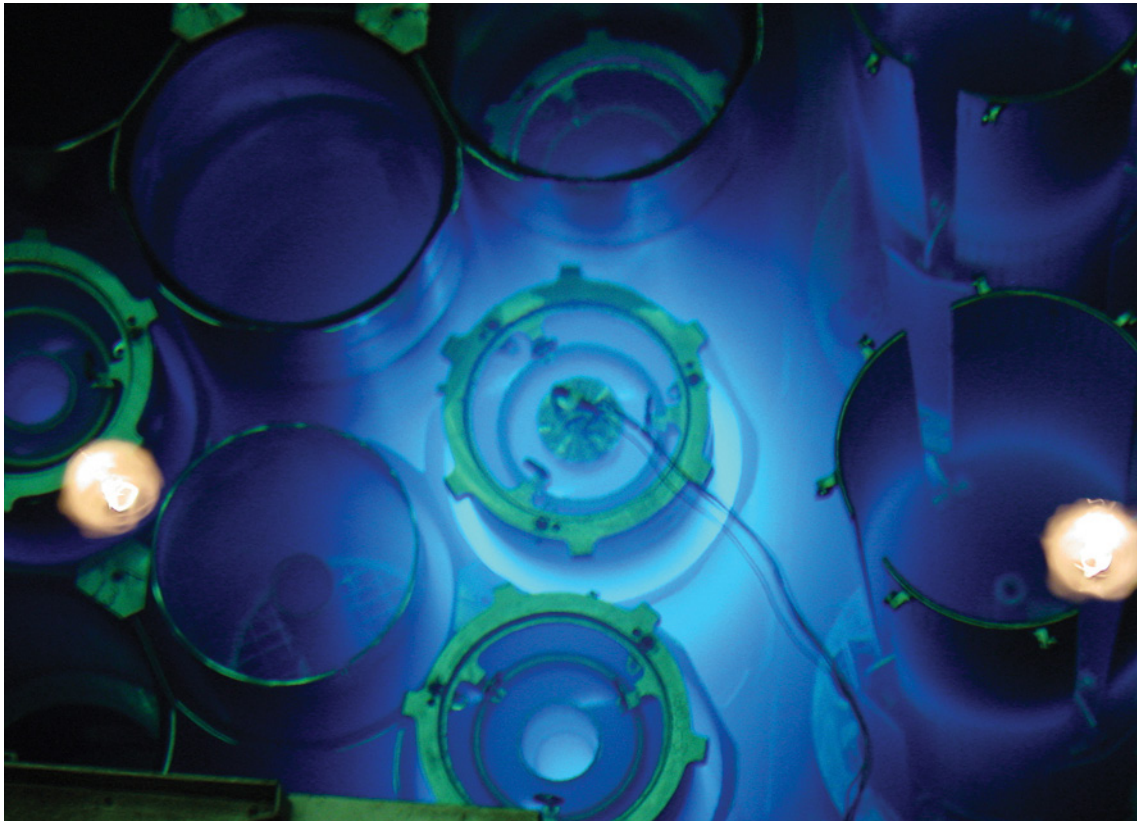
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New experimental molten salt-cooled nuclear reactor permit approved by the NRC



A new experimental nuclear reactor construction permit approved by the United States Nuclear Regulatory Commission (NRC) will allow the first non-water-cooled reactor to be built in the United States since 1968.

The \$100 million, 35-megawatt thermal reactor will use

molten fluoride salt for cooling. The reactor, called the Hermes demonstration reactor, will be built in Oak Ridge, Tennessee by Kairos Power. The Oak Ridge National Laboratory and the Tennessee Valley Authority are assisting with the project.

Molten salt-cooled reactors can operate at higher tempera-

tures and lower pressures than reactors that use water for cooling. They can also be more efficient and produce fewer waste materials.

Construction on the experimental reactor is expected to start in 2024 and reach operation by the end of 2026.

Texas Court of Appeals rules power plants have no obligation to provide power if unable to do so

On December 14, Houston's First Court of Appeals ruled that power companies which failed to provide power during the Texas Winter Storm of 2021 would not be held liable for billions in claims.

The claimants had gone to court because they had been

adversely affected by power outages occurring during the storm. At least 250 people died and many others suffered physical and mental health effects.

The court ruled that since the retail market for electricity was deregulated in 2002, there was no "...legal duty owed by whole-

sale power generators to retail customers to provide continuous electricity to the electricity grid..."

The plaintiff's attorneys said an appeal is in the works in this case.

Hearing before Pennsylvania legislative panel questions rate increases, utility valuations when for-profits buy municipal utilities

A hearing before a Pennsylvania House panel on December 12 questioned the causes behind large rate increases proposed for former municipal water and sewer utilities that are purchased by for-profit companies.

According to the Pennsylvania Public Utilities Commission, municipal utilities that have been purchased by for-profits

since passage of a 2016 law have been authorized to bill rate increases between 44 percent and 166 percent.

The 2016 law allowed municipal water and sewer utilities to sell on the basis of "fair market value" instead of the actual value. This higher price, while good for the utility at the time of sale, results in higher costs down the road for the customers of

the utility. The higher price of acquisition by the for-profit entities allows them to justify raising rates on consumers.

A Pennsylvania House committee is now looking to either repeal the 2016 law or have for-profits use lower valuations for setting rates at recently acquired utilities.

Xcel fined \$14,000 for actions related to Monticello Nuclear Power Plant leak

On December 14, the Minnesota Pollution Control Agency (MPCA) fined Xcel Energy \$14,000 for pumping contaminated groundwater into a storage tank at the plant that did not have the required permits.

Xcel had already filled several permitted tanks after the leak occurred, and it began filling an additional tank without a required permit in April 2023. A permit was eventually authorized in May. Most of the contaminated ground water has

now been sent to storage ponds. As much as 400,000 gallons of water contaminated with tritium, a radioactive isotope, leaked from a water pipe connecting two buildings at the plant. The source of the leak was identified in November 2022 and shared with federal and state agencies at the time. A notice was posted by the Nuclear Regulatory Commission (NRC) as well, but the leak did not become widespread public knowledge until March 16, 2023.

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COP28 sees world's countries make deal on fossil fuels

On December 13, representatives of 124 countries concluded an agreement at the 28th United Nations Climate Change Conference, known as "COP28," held in Dubai, UAE.

The conference participants reached a significant deal on the use of carbon-based fuels globally. The final language called, for the first time, for a "transitioning away from fossil fuels in energy systems in a just, orderly, and equitable manner... so as to achieve net zero by 2050 in keeping with the science."

While welcomed as a significant step forward by American climate change activists, the agreement still contained language that allowed room for developing countries like China and petrostates like Saudi Arabia to feel comfortable endorsing the deal. Transitional fuels like natural gas were mentioned as acting as a bridge to renewable energy, and each country can set their own goals within the larger worldwide framework, somewhat hindering progress toward the larger global goals.

Developed countries made financial pledges to developing countries to facilitate those nations skipping the usual process



of building a carbon-based energy infrastructure and beginning directly with a renewable energy ecosystem.

Countries were encouraged to come forward with their commitments to helping their nations contribute to achieving the global target of holding global warming

below a 1.5 degrees Celsius increase over historic averages. These pledges and reductions will be tracked with a variety of tools so that decisionmakers can continue to assess data going into COP29. That session will be held in Azerbaijan in November of 2024.

New Florida toll road will charge cars on the go

Just weeks after the first public electric vehicle (EV) charging road opened in Detroit, Florida planners now aim for a new toll road in their state with a similar goal.

The Central Florida Expressway Authority (CFX) is an independent agency of the State of Florida, operating and maintaining five toll roads in the Orlando vicinity.

On December 14, the CFX Governing Board unanimously approved plans to build an east-west, 4.4-mile toll road that will connect Highway 27 and

State Road 429. The Board also approved a \$218 million construction contract for phase one of the project. The total estimated cost is \$534 million.

The toll road will have in-road charging capabilities along part of its route. At first, the chargers will only work for Tesla EVs, but the goal is to eventually charge all types of EVs as they drive on the road.

Construction is expected to begin in Spring of 2024. Completion of the expressway is expected in 2027.



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Technical and Operations Conference



Attendees discuss a topic during Kim's session.



Keynote speaker Hector Hernandez educated the audience on how to protect yourself from dog attacks on the job.



Roundtables taught attendees about numerous topics, including workforce development, technical generation services, and the new GRC Plus program, all pictured here.



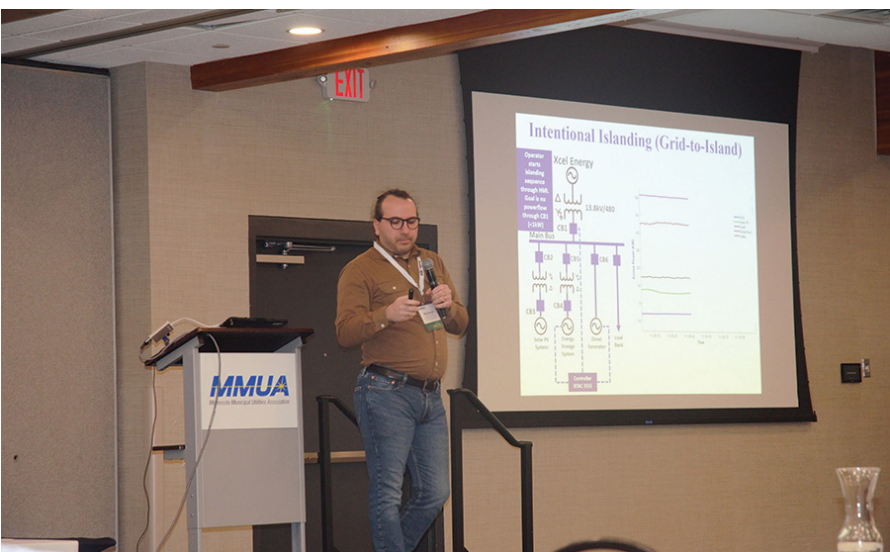
Mike Willetts of MMUA directs the action during the roundtables.



Attendees enjoy a plated lunch on day two of the conference.



Stefan Salmonson speaks on de-escalation techniques for frontline workers.



Mahmoud Kabalan presented on the innovative microgrid laboratory he runs at St. Thomas University.



MMUA staff thanked attendees and wished them safe travels as the conference came to a close.

Continued on page 11

T&O Conference (continued)

Continued from page 10



Glenn Sanders from the Cybersecurity and Infrastructure Security Agency spoke on physical security considerations for utilities.



Mike Crane from ElectroTech taught about air-insulated switchgears.



Kent Sulem of MMUA took the complicated topics of pole attachments and railroad crossings and made them easier to understand.



The guys from Vermeer/RDO Equipment enjoy the trade show.

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Chad Briese from Minnesota Valley Electric Cooperative spoke about a skid steer fatal that happened at MVEC and what the cooperative learned from the terrible experience.



Closing keynoters Gary and Jeanne Norland spoke on the importance of safety by addressing Gary's electrical accident, which changed his life forever.

With Governor's signature, Illinois enters a future of small modular reactors

On December 8, Governor J.B. Pritzker of Illinois signed a bill into law that will allow for the development of small modular reactors (SMRs).

The passage of the bill ends Illinois' 1987 moratorium on any nuclear power construction in the state.

However, the new law does not allow for the construction of

traditional nuclear power plants, focusing solely on SMRs that are 300 megawatts or fewer. The bill also requires a study that will inform the rules creation process for regulating SMRs.

The new law takes effect in June of 2024. The earliest an SMR could enter service in Illinois would likely be in 2030 or later.



Wisconsin Clean Water Fund distributes \$414 million

On December 13, Wisconsin governor Tony Evers and the Wisconsin DNR announced that \$414 million would be provided to 84 municipalities for wastewater and stormwater infrastructure.

The funds will go to help communities fix older systems.

Among the cities receiving funds from the program are Marshfield, Medford, and Wausau. The funds consist of \$358 million in subsidized, reduced-interest-rate loan funding and \$56 million in principal forgiveness.

Xcel's President for Minnesota, North Dakota, and South Dakota to retire; successor named

On November 30, Xcel Energy announced that Chris Clark, the company's current President for Minnesota, North Dakota, and South Dakota, will retire on March 1, 2024.

Ryan Long, the company's current interim general counsel, will succeed him.

Xcel described the role Clark is vacating responsible for strategic planning, financial results, and operational outcomes for three states, as well as leading teams in areas including customer, community, and governmental relationships.

Clark first joined Xcel as a senior attorney in 1999, ascending to his current role in January of 2015.

New York City adopts new initiatives to increase renewable energy

Big changes are coming to New York City's cityscape after the "City of Yes for Carbon Neutrality" initiative came into effect on December 11.

The initiative, which was approved by the New York City Council, will bring about a complete sea change in the city's zoning policies in order to allow

more renewable energy infrastructure.

Some of the changes include increasing the amount of commercially zoned land where electric vehicle (EV) charging facilities can be sited, opening up parking lots across the city for the installation of solar panels, and changing roof and yard zoning rules so that renew-

able energy infrastructure like solar panels can be more easily installed.

The City of New York's 2050 carbon goal is to reduce carbon emission in the city by 80 percent. City leaders believe this initiative will give city residents the ability to adopt renewable technology and integrate it into their daily lives.

Solar tower power plant innovation allows for increased energy output

Have you ever heard of a solar tower power plant?

This type of generator is composed of a tower that looks like a chimney, and it uses the phenomenon of updrafts to create power. Solar radiation is absorbed, heating the air within the tower which results in updrafts. The rising updraft then spins a turbine in the tower to generate electricity.

In a recent development, scientists have learned how to increase the power produced by a tower by also collecting downdrafts. This is done by pumping water to the top of the tower, where it is cooled by air. The cooled air becomes denser than the outside air, falling through the tower and driving a turbine at the base of the tower.

This new tower design is called the Twin Technology Solar System (TTSS), and it can work around the clock. The tower, which is 652 feet tall and



45 feet in diameter, can create 752,763 kilowatt-hours of electricity in a year.

Scientists are continuing to

work on this new technology. Over time, even greater gains in efficiency are expected.

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Legislative objectives for 2024

Continued from page 1

PFAS – MMUA expects a lot of discussion in St. Paul on the issue of per- and poly fluoroalkyl substances (PFAS). MMUA will try to guard against unfunded and costly mandates regarding PFAS treatment and mitigation. MMUA also believes it is important to remind decisionmakers and lobbyists that municipal utilities should not be viewed as a source of PFAS.

Excess generation compensation flexibility – Current law requires utilities to pay distributed energy resources, customers any excess generation compensation by check. The administrative cost of limiting reimbursement to this form of payment often exceeds the value of the check. MMUA would like the option to offer the compensation as a bill credit.

Repeal of nuclear moratorium – While admittedly no municipal utility is currently planning to site a new nuclear reactor of any size, MMUA believes that all utilities should be able to have meaningful dialogues about all options for providing power, particularly under the revised renewable standards and new carbon-free standards. With the current prohibition on the Minnesota Public Utilities Commission approving new nuclear reactors in the state, any meaningful discussion of this option is curtailed. Dialogue regarding nuclear power can help advance technology, and no one can say when some form of nuclear power may make good economic and environmental sense.

Modify the Conservation Improvement Program (CIP) savings

goal applied to the source of a disproportionate increase to a municipal utility's load. Data mining operations are one example of such a use.

Modify CIP savings goal for municipal gas utilities to 1%. An oversight in the Energy Conservation and Optimization or ECO Act of 2021 resulted in a 1.5% goal for municipal gas utilities as opposed to the 1% goal that applies to IOUS. MMUA will advocate for this problem to be rectified.

Other issues that may make an appearance during the 2024 legislative session include permit procedure reforms, and minor adjustments to the 100 percent by 2040 bill from the 2023 session. No specifics of what those may be are known at this time. Proposed changes to reporting and mapping requirements under the Gopher State One Call system governing excavations are also being discussed, and MMUA expects to see some legislation at least debated in committee. There is some level of support for applying the proposed changes only to utilities that have more than a set number of locate tickets issued in a year, and it is possible this threshold could leave the vast majority of municipal utilities exempt from the mandates. However, MMUA members may actually like some of the changes being discussed. Thus, it is too early to say whether such a bill would be supported or opposed by MMUA, or whether we would stay neutral. Stay tuned for additional information as it becomes available.

The Resource

Continued from page 1



MMUA staff celebrate their award. From (L-R) Reid Baumann, Bill Black, Karleen Kos, and Christian Glanville. Not pictured: Kent Sulem.

members, employees, and state legislators. MMUA also provides *The Resource* to libraries for any ratepayer to read.

The content of the newspaper is designed to keep readers informed about the issues, people, and ideas that make up the Minnesota municipal utility world.

All of this supports our mission “to unify and serve as a common voice for municipal utilities.”

To our members—thank you for providing so many interesting stories! It is your unceasing efforts that help make *The Resource* what it is.

T&O Conference 2023



Opening keynote Kim Becking taught conferencegoers how to keep personal and professional momentum going.

On December 5, the Technical and Operations (T&O) Conference returned to the St. Cloud Holiday Inn, after being at the St. Cloud Kelly Inn for the past two years.

The Holiday Inn had recently undergone a multi-million dollar renovation, and it showed!

The conference began for some with an MMUA Board meeting at the hotel on the morning of December 5. Many priorities were discussed, including the Association's legislative goals in the upcoming legislative session.

As afternoon approached, attendees began arriving for the main event. Mike Willetts of MMUA welcomed the group to the conference, and then Kim Becking presented the opening keynote. Kim, who hails from Missouri and has worked in a variety of fields, presented her plan to drive momentum in the workplace and at home.

Kim's thoughts were centered around three little words: stop, shift, and reframe. The first step, stop, means to pause during busy or stressful times and feel what we need to feel. By taking a break, we are better able to create forward progress.

The next step in Kim's plan was to shift. In this step, she suggested we stay focused on our purposes or goal. What is the reality of the goal? What can be achieved, as opposed to what stands in the way?

The last step is to reframe. Identify the best action that can be taken to solve the problem or reach the goal. It is okay to not have all of the answers or to reach out for help? Connecting to others is often helpful during this step.

Kim also discussed momentum busters, which are things that keep us away from progress and achieving our goals. She worked with small groups of attendees to think about what their momentum busters were. Taking time out to rest and prioritize our well-being can

actually make us more efficient. Cutting through the clutter and focusing on the important things can be a great all-around step to drive momentum.

After Kim's opening keynote, conferencegoers enjoyed a welcome reception courtesy of Northwest Lineman College, and celebrated the graduating lineworkers who are entering the field.

On day two, the program began with a keynote by dog expert Hector Hernandez on how to avoid dog attacks and injury from dog attacks. Hector's presentation and videos depicted many different dog attack scenarios, including being attacked by a pack of dogs. Hector advised that an object be kept between a person and the dog, even something as small as a baseball cap. By facing the dog and defending your personal space with an object, you can keep the dog at bay. Even if the dog bites the object, it is biting the item instead of a person. If a pack of dog attacks, use the same strategies with the alpha dog, or pack leader. If that dog gets intimidated or discouraged, the other dogs will leave as well.

After Hector spoke, the group participated in a series of roundtable discussions on topics relevant to different parts of the utility world. Many professionals drawn from the ranks of members, MMUA staff, and outside experts provided valuable information to attendees, who also added considerable value through their peer-to-peer sharing.

After lunch, attendees moved into two breakout session tracks. The managers track included a session presented by Hector Hernandez on leadership, a talk on St. Thomas University's microgrid system by Dr. Mahmoud Kabalan, and a presentation by MMUA's Kent Sulem on issues related to pole attachments and railroad crossing permits for utilities.

The crew leaders track included a talk by Stefan Salmonson about de-escalation techniques for frontline workers, and substance use inside and outside the workforce by Shauna Reading.

Evening brought the trade show and reception. Vendors and customers filled the entire north court of the hotel with a wide variety of products and good conversations. The atmosphere was fun, and conferencegoers enjoyed the event.

Day three began with a welcome from MMUA CEO Karleen Kos, who discussed the work of the Association and upcoming conferences, including the 2024 Summer Conference planned for the twin cities of Moorhead and Fargo. Then, Chad Briese from Minnesota Valley Electric Cooperative spoke about the day the unthinkable occurred: a young lineworker was killed in a skid steer fatality at the cooperative. Chad talked about how the organization made it through this horrible event, and how planning and training can prevent something like this from happening again.

The conference ended with a closing keynote from Gary and Jeanne Norland. Gary and Jeanne spoke about Gary's electrical accident decades ago, which is still affecting him and his family today. Not only did Gary's accident change his life, but it also impacted his family's life forever. The ways Gary is perceived and the ways he could take care of his family were changed in an instant. Gary and Jeanne's message was that safety has to be #1 at all times—at work and at home.

As the conference came to a close, the weather was fair and good for the drive home. MMUA looks forward to seeing you next year for an even better one!

Michigan joins ranks of states aiming for zero percent carbon emissions by 2040

On November 28, Michigan Governor Gretchen Whitmer (D) signed into law a new clean energy package that aspires for Michigan to reach 100 percent renewable energy by 2040.

The state joins Connecticut, Minnesota, New York, and Oregon in its plan of reaching 100 percent renewable energy by 2040.

Michigan's law will require 60 percent of the state's generation to transition to renewables. The statute allows 40 percent of generation to come from nuclear and conventional carbon generation, but the effects of any carbon-based generation must be negated by the use of carbon capture.

The law gives Michigan's Public Service Commission the ability to make green energy project decisions that override the authority of local governments. This aspect was seen as crucial if Michigan were to reach the level of utility-scale renewable generation required by the law.

To date, 25 states, territories, and the District of Columbia have some sort of carbon-free goal in the electricity generation area.



EPA proposes major rule changes to lead and copper rules

On November 30, the Environmental Protection Agency (EPA) announced significant rule changes to the lead and copper rules that would create more urgency around the continuing issue of lead in drinking water.

Changes in the proposed package include achieving 100 percent lead pipe replacement within 10 years, meaning most water systems with lead service lines would be required to replace them in that time. Other changes include the requirement that water systems provide an initial inventory of their lead service lines by October 16, 2024, that tap sampling practices be improved, that the lead action level be lowered from 15 µg/L to 10 µg/L, and that systems with multiple lead action level exceedances be required to conduct additional outreach to customers and provide all customers filters to reduce lead.

"Lead in drinking water is a generational public health issue, and EPA's proposal will accelerate progress towards President Biden's goal of replacing every lead pipe across America once and for all," said EPA Administrator Michael S. Regan. "With collaboration and the focused actions proposed today, EPA is delivering on our charge to protect all Americans, especially communities of color, that are disproportionately harmed by lead in drinking water systems."

Once the proposed rule is published in the Federal Register, EPA will accept comments for 60 days.

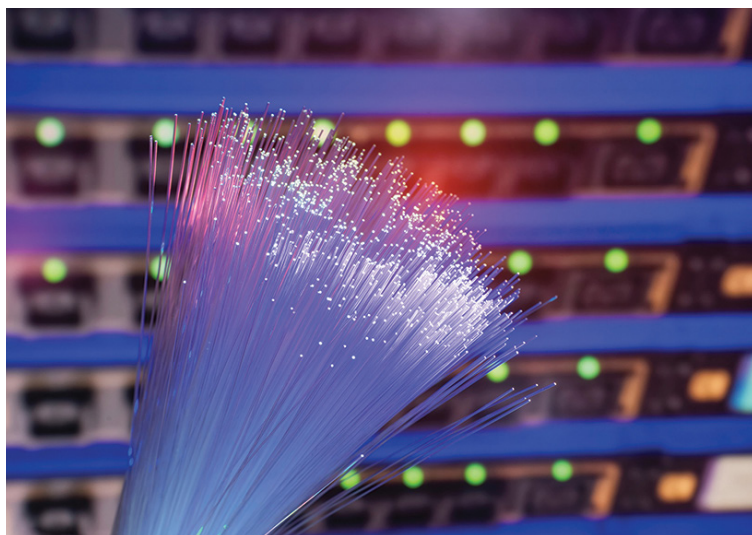
Study reveals more than 50 percent of American households now have access to fiber internet

A study commissioned by the Fiber Broadband Association (FBA), a trade association focused on connecting the Americas to fiber broadband, has found that 51.5 percent of American households now have access to fiber internet.

The total residences with fiber to the home now stands

at 78 million households. With 51.5 percent of households served, there is still significant growth potential remaining for both household access and the industry.

The survey was conducted for FBA by RVA LLC Market Research and Consulting.



America's first public EV charging road opens in Detroit



On November 29, a quarter mile of roadway on Detroit's 14th Street became the first stretch of road in the country that can charge electric vehicles (EVs) as they drive over it.

The \$1.9 million project consists of five-foot coils that are buried in the pavement. EVs equipped with a receiver activate the coils as they drive over them, allowing wireless charging when moving or stationary.

The company Electreon installed the system. Company and government officials are excited to see how the system performs in real-life situations. What they learn will allow for an expansion of the technology on a wider public scale.

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Wastewater sludge could become biogas with the use of anaerobic digesters



Wastewater and wastewater sludge are no longer an undesirable problem to solve, but increasingly a valuable energy source in their own right.

One new technique takes wastewater sludge and turns it directly into biogas using anaerobic digesters. The digesters remove oxygen and introduce microorganisms that help turn the wastewater sludge into methane gas. The gas can then be burned to create power or run to wastewater facilities.

With all of the different kinds of waste in the world, there are many different avenues for using anaerobic digesters to create fuel. Since these waste products would often emit carbon dioxide into the atmosphere if they were not reused, they create a renewable, green source of energy that is almost limitless in scope.

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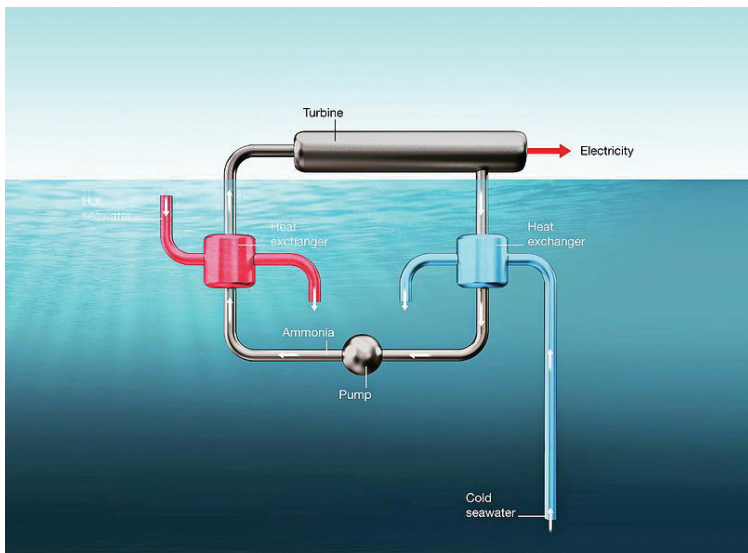
Ocean Thermal Energy Conversion to be used for the first time on a commercial scale

A technology dating back to 1881 will soon be used to power the island nation of São Tomé and Príncipe that lies off the coast of West Africa.

The power technology, called Ocean Thermal Energy Conversion (OTEC), uses temperature differentials in seawater to generate electricity.

How does OTEC work? In the new system, a floating barge called Dominique will be attached to the sea floor in an offshore area where the water is near freezing 2000 feet down, but tropical at the surface.

Using a looped power system, a refrigerant with a low boiling point, such as ammonia, is brought to a boil by the water on the surface, turning a generator as it becomes a gas. When that



part of the process is complete, the refrigerant condenses as it is cooled by the deep ocean water, and the process can begin again.

São Tomé and Príncipe system

is expected to generate a yearly output of 1.5 megawatts, making it the first commercial scale OTEC installation. It is expected to be operational by 2025.

Germany to invest \$4.37 million in African green energy

On November 20, German Chancellor Olaf Scholz announced at the G20 Compact with Africa Summit in Berlin that his country would invest the sum to build green energy projects throughout Africa.

The Compact with Africa Summit joins the Group of 20 (rich and developing countries with the largest economies) with African nations to encourage investment and development.

The effort will attempt to help Africa's economies grow while forestalling the influence of countries like China and Russia.

The Compact with Africa was founded in 2017. Benin, Burkina Faso, Côte d'Ivoire, Egypt, Ethiopia, Ghana, Guinea, Morocco,



Rwanda, Senegal, Togo, and Tunisia are the current African members.



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MPUC approves CenterPoint Energy's interim rate increase

On December 14, the Minnesota Public Utilities Commission (MPUC) approved an interim rate increase of 5.3 percent for CenterPoint Energy.

CenterPoint's initial request was for a 6.5 percent increase, but the Commission voted 4-0 in favor of the lower increase.

The Office of Attorney General Keith Ellison has attempted to limit CenterPoint's rate increases. In a letter to the MPUC, assistant Attorney General Erin Conti questioned the public's ability to handle another significant rise in gas bills.

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KARE-11 TV reported that for the second straight year, during the City of Arlington's Arli-Dazzle celebrations, the Hartmann sisters have returned to town to run a holiday pop-up store across the street from their family's former department store. Hartmann's, which was a landmark in **Arlington**, closed in 1987 due to retail competition.

On December 4, the Austin City Council unanimously authorized **Austin Utilities (AU)** to expand their service territory to approximately 230 acres on the edge of the city. On November 21, AU signed a 10-year agreement with Freeborn-Mower Cooperative on the terms of the service territory acquisition, clearing the way for the Council's authorization to expand.



On December 12, two work projects for city streets in **Detroit Lakes** were approved, with an estimated cost of \$9.31 million. The work will be done downtown and in residential areas. Estimated completion is expected in the summer of 2024.



For the purpose of retaining employees, **Ely** is considering giving every member of the police department a Kevlar canoe, along with paddles and life preservers. The incentive would emphasize the outdoor experience of living in the city.

On December 18, the **Hibbing Public Utilities Commission (HPUC)** and the Minnesota Department of Agriculture signed a partnership agreement that will see HPUC recycling ash trees impacted by Emerald Ash Borers. HPUC will use quarantined ash as fuel for its renewable energy and steam heating operations.

Mitchell Walbridge is the new City Administrator in **Lanesboro**. Walbridge is also a former city council member.

Minnesota Attorney General Keith Ellison was present at a public event in **Moorhead** on December 11 to discuss local resident concerns. Covered issues included homelessness,

tenant rights, transportation needs, and lack of childcare providers.

Moorhead also showed off its new high school as students got ready to attend classes in the \$110 million school after the Christmas break.

The closure of three schools in the **Rochester** district was averted after the Mayo Clinic gave the district a \$10 million gift. School officials warned the schools could still close, or other cuts may be made, if a planned levy referendum fails in 2024.



The proposed Nemadji Trail Energy Center gas plant in **Superior, Wisconsin** received a "Finding of No Significant Impact" on the



environment from the United States Department of Agriculture's (USDA) Rural Utilities Service on December 15. The USDA had previously issued a similar finding, but the agency was asked to review its findings. This second ruling—and the 14th regulatory approval the project has received according

to Northern News Now, should ease the way for the project to move forward. Several permits are still needed.

The **Wadena** Area Chamber of Commerce invited local clubs, businesses, and organizations to participate in the first annual "Wadena Parade of Lights" on December 1.



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North Star Electric Cooperative of Baudette, Minnesota, is suing a former couple from Roseau and Badger, Minnesota, respectively, who stole electricity from the cooperative to provide electricity to their cryptocurrency farms. According to the *Star Tribune*, the power was diverted to a house in Roosevelt, Minnesota.

On December 9, the government of Iraq inaugurated eight new wastewater treatment plants in the city of Baghdad. Officials from the German government and the United Nations Children's Fund (UNICEF) were also present. Germany helped fund the projects, while UNICEF assisted in the installation and operationalization of the plants.



On December 11, the European Commission said that it had approved \$2.8 billion of state aid that will help compensate German energy company RWE for the closure of its profitable coal-fired power plants. Germany plans to phase out all coal-fired power production by 2038.

On December 11, Brazil announced that it would resume the purchase of electricity from Venezuela after four years. Brazil stopped purchasing electricity from Venezuela in 2019 after relations between the two countries worsened.

On December 14, South Africa issued three requests for proposals (RFPs) for 7,615 megawatts (MW) of new power generation in the country. South Africa's RFPs were for 5,000 MW of renewable energy; 2,000 MW of gas generation; and 615 MW of battery storage.



On December 15, the International Energy Agency said 2023 set a record for the global consumption of coal. Coal consumption rose 1.4 percent in 2023 to reach 8.5 billion tons.

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The East Bay Municipal Utilities District, which serves large parts of the east San Francisco Bay area, is partnering with InPipe Energy to install an "in-conduit" hydroelectricity system that will generate power using the flow of the water in its system. The emissions-free hydroelectricity generated will be approximately 130,000 kilowatt-hours annually, enough to power 14 homes for a year.

A report published by energy research firm Wood Mackenzie said the cost for China to produce solar panels has dropped 42 percent in the last year.

According to research by the Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW) and utility association BDEW, renewable energy provided more than half of Germany's electricity last year. Almost 52 percent of the country's electricity came from renewable sources, 75 percent of which came from solar and wind. The remaining 25 percent came mostly from biomass and hydropower with a small amount of geothermal.



On December 18, Scottish explorers Chris and Julie Ramsey announced they had completed the first North Pole to South Pole voyage in an electric vehicle. The pair drove a Nissan Ariya e-4orce vehicle 17,000 miles. The trip took nine months.

The AP reported on December 20 that the Supreme Court will hear arguments in February 2024 about whether the Environmental Protection Agency (EPA) can continue using its "good neighbor" rule to restrict smokestack emissions from power plants in ten states.



New Mexico wastewater testing has found a surprise in the water: widespread cocaine use in New Mexico high schools. About 81 percent of high schools tested positive for cocaine and its metabolite. New Mexico's governor had previously declared drug abuse a public health emergency in the state, prompting the wastewater testing.

FERC and NERC release report on needed improvements after Winter Storm Elliott

On November 7, the Federal Energy Regulatory Commission (FERC) and the North American Reliability Corporation (NERC) released a joint report on the changes needed after Winter Storm Elliott left millions of electric customers without power on the east coast during the 2022 Christmas season.

The winter storm resulted in 90,500 megawatts of unplanned generating unit outages. With generation that was already inoperative before the storm, some 18 percent of the resources in the Eastern Interconnection were unavailable to customers at points throughout a five-day period.

During the storm, which occurred from December 21 to December 26, 2022, 96 percent of outages and failures to start were caused by three problems. An estimated 41 percent were caused by electrical issues, 31 percent of outages were caused



by freezing issues, and 24 percent stemmed from fuel issues.

To address these root causes, the report highlighted the importance of continued enforcement of reliability standards for cold weather. FERC and NERC emphasized the importance of legislation that will guarantee reliability standards for natural gas infrastructure, as well as addressing any needs for more natural gas infrastructure to backstop the grid's performance.

Another area of importance the report pinpointed was identi-

fying the source of outages in the power plant so that more information can be compiled for the future. Communication was also seen as crucial, with the report calling on companies to fill in any current gaps so that problems can be identified and shared more quickly.

Finally, the report called for balancing authorities to improve short-term load forecasts for extreme cold weather through new processes and communication with peers to create more efficiency in this area.

Peaker plants to run for an additional two years to backstop NYISO reliability

The New York Independent System Operator (NYISO), which is responsible for operating New York State's electric markets and power systems, announced on November 20 that it would continue operating four peaker plants to help New York City maintain the generation capacity it needs.

The city was facing a 446-megawatt (MW) deficit in its reliability margin.

As a result, four generators installed on barges in the New

York City area will continue to operate past their planned retirement dates of 2025, remaining available to generate until 2027. Their total capacity is 565 MW, but their security margin is only 508 MW.

A number of studies were conducted and the results examined to determine whether other feasible solutions to the generation deficit exist. The retention of the four peakers was the only answer that made sense at this time.

Sinkhole causes massive wastewater spill at Florida's Busch Gardens



On November 18, a wastewater treatment pond at Busch Gardens Amusement Park in Tampa, Florida, dumped approximately 2.5 million gallons of water when a sinkhole opened up under it.

The wastewater was drained underground.

The pond did not contain raw sewage. Water sampling activities will be ongoing, and an engineering firm has been hired to fix the sinkhole and the damage caused by it.

Advocates of an expanded definition of renewable fuels form coalition

In late November, a group of automobile manufacturers including Ford Motor Company, General Motors, Toyota, and Volkswagen joined together to form a new organization called the Partnership for Electric Pathways (PEP).

PEP will work with the United States Environmental Protection Agency (EPA) to create ways

for renewable electricity to be eligible for credit under the EPA Renewable Fuel Standard (RFS) program.

Of particular interest for PEP members is having biomass-derived electricity qualify as a renewable fuel. PEP argues this would be of benefit to automakers and the other coalition partners, as well as the American economy.

The RFS program was created under the auspices of the Energy Policy Act of 2005. The program requires a certain volume of renewable fuel to replace or reduce petroleum-based fuels. The four current renewable fuels under the RFS are biomass-based diesel, cellulosic biofuel, advanced biofuel, and total renewable fuel.

Upcoming Events

Meter School and Pre-Conference Seminar

February 6-9
MMUA Training Center

Meter School is an opportunity to obtain hands-on technical electric metering training. Basic/intermediate and advanced tracks are available. A pre-conference seminar is also held in conjunction with the school. Register online at mmua.org/event/meter-2024.

Emergency Preparedness and Restoration Conference

February 21-22
Holiday Inn, St. Cloud

Join other hometown utility and city professionals at this interactive conference. Increase your understanding of the mutual aid process and strengthen relationships with fellow industry professionals. Register by February 1 at mmua.org/event/emergency-2024.

Electrical Skills Training for Water/Wastewater Operators

March 13-14
MMUA Training Center

This members-only course is offered as supplemental training for water/wastewater operators and support staff. This comprehensive electrical training program can benefit non-electricians to improve skills and gain competency. Learn more by visiting www.mmua.org/event/water-wastewater-2024. Register by February 9 for the best rate; the final deadline for online registration is February 20.

Substation School

March 19-21
VFW Post 4046, Shakopee, MN

This school can benefit anyone who works in a substation environment or those interested in learning more. In addition to classroom instruction on a variety of substation-related topics, participants will also go behind the scenes and tour a Shakopee substation and an area transformer manufacturer. Learn more by visiting mmua.org/event/substation-2024. Register by February 19 for the best rate.

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