



*Neighbors  
serving  
neighbors*

MUSCATINE POWER AND WATER • 2023

ANNUAL REPORT



# Neighbors serving Neighbors

## A MESSAGE FROM OUR GENERAL MANAGER

As I reflect on the past year, it brings me great pride to see the impact Muscatine Power and Water (MPW) has made in serving and supporting the community. It's an opportunity to reflect on the plans we made, the projects we completed, their results, and how they impacted the community and neighbors we serve.

At the heart of our work lies a deep commitment to delivering reliable, affordable utilities with exceptional, local customer service, while being flexible enough to continuously improve and refine our processes and ourselves, every day.

The energy, water and communications industries continue to evolve as new technologies, new and increased regulation, and changing customer expectations converge. This dynamic landscape impacts the way we do business today and will for years to come.

The Utility's current Strategic Plan (2021-2023) has served to focus our eyes and minds on key objectives, and tremendous progress was made in 2023. While there were challenges and unknowns, the plan's solid framework served as a sort of "GPS" to keep us all on-task and moving forward.



MPW made significant strides in enhancing operational efficiency, fostering innovation, and embracing sustainable practices. We have successfully implemented key projects aimed at modernizing our infrastructure, ensuring the resilience of our systems, and incorporating cutting-edge technologies to better serve our customers. Our Powering the Future strategy was front and center as we continue to move toward fundamental changes in MPW's power generation portfolio.

Looking ahead, we remain focused on our mission to provide best-in-class utility services to you. In 2023, we updated our strategic plan for the next three-year period and are already making progress. We appreciate your ongoing trust and support as we press into 2024.

I extend my sincere gratitude to all of our stakeholders — customers, employees, and our Board of Trustees — for their support and collaboration. Together, we will continue to build a utility that not only meets the demands of the present, but also lays the foundation for a resilient and prosperous future.

This 2023 Annual Report stands as a testament to the dedication of the MPW team and the support we have received from the Muscatine community. It reflects MPW's unwavering focus on enhancing service quality, embracing technological advancements, and fostering a culture of learning. As you read the pages ahead, I hope you will appreciate the strides we have taken to not only meet but exceed your expectations.



Gage Huston, General Manager

“  
**...we remain  
focused on our  
mission to provide  
best-in-class  
services while  
navigating the  
dynamic landscape  
of the industry**  
”



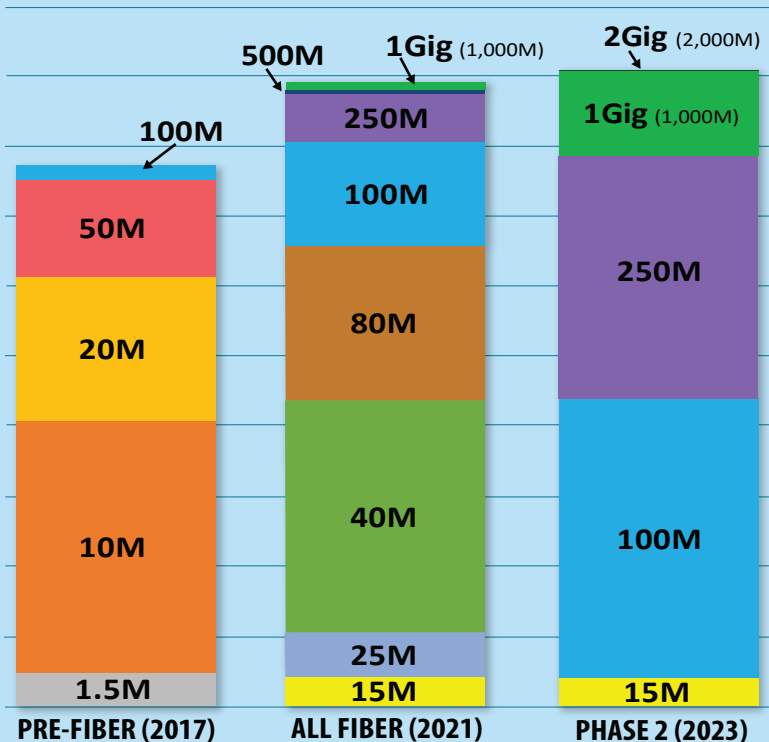
# Meeting Tomorrow's Needs TODAY

Today, access to broadband internet is just as important as clean water and reliable power. As consumers continue to add more and more connected devices, their need for bandwidth increases, but for many, their chosen connection speed did not keep pace with their actual usage. As we saw usage trending up, MPW developed a plan.

Before fiber, MPW's top available bandwidth was 100 Mbps, with a majority of users at just 10 Mbps, and lifeline service at 1.5 Mbps; sluggish by today's standards. Fiber made Gigabit speeds possible for the first time and MPW migrated all users to new, higher speeds.

## EVOLUTION TO A GIGABIT CITY

RESIDENTIAL SUBSCRIBERS



*How fiber changed the internet landscape*

**97% of MPW users are at 100 Mbps or higher. These speeds were also made "symmetrical" with upload capacity matching download.**



REGIONAL ISP COMPARISON	MPW		CENTURY LINK - MUSC		MEDIACOM - QCA		METRONET - QCA		IMON - IOWA CITY	
	PROMO	REG	PROMO	REG	PROMO	REG	PROMO	REG	PROMO	REG
1 Gig (1,000 Mbps)	1 <sup>st</sup> Mo. Free	<b>\$83.97</b>	N/A	N/A	68.99*	<b>\$168.99*</b>	\$71.99	<b>\$101.95</b>	\$104.00	<b>\$187.00</b>
100 Mbps	1 <sup>st</sup> Mo. Free	<b>\$53.97</b>	N/A	<b>\$70.00</b> *^	48.99*	<b>\$53.99*</b>	\$41.99	<b>\$61.95</b>	\$79.00	<b>\$131.00</b>

Published, regular and promotional rates. Includes required monthly equipment/service fees. \*non-fiber service. N/A not available in our area. ^ 3-100Mbps, 100 Mbps not available to every address

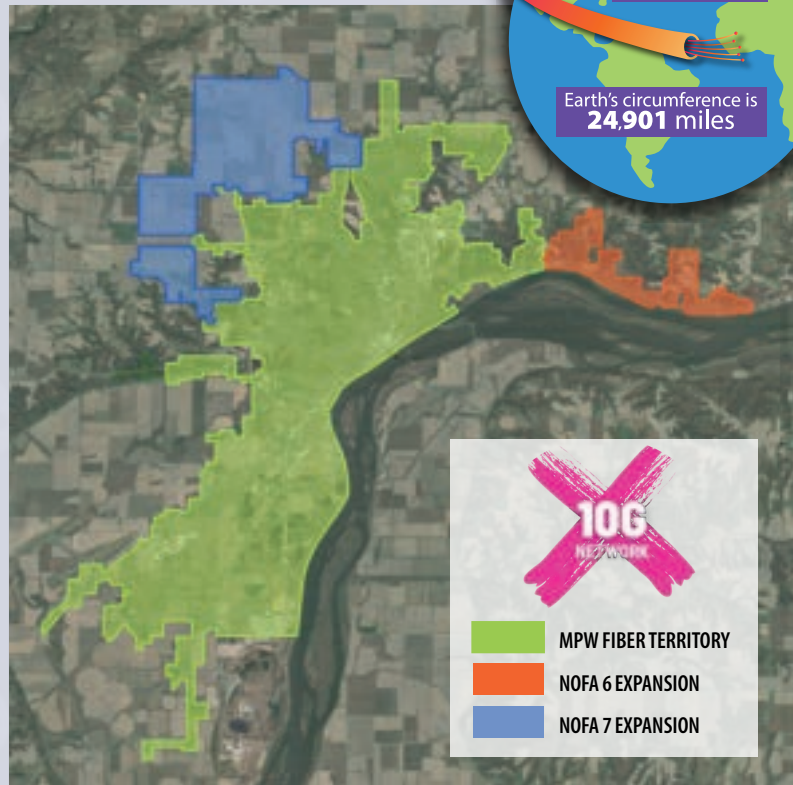
In 2022, MPW merged those eight service levels into six. Users were “next-leveled”, most at no extra cost.

In May 2023, the Utility rolled out phase two of that restructure, consolidating again into four right-sized levels. Significantly, the rate for MPW’s 1 Gig service (1,000 Mbps) was reduced by \$30 per month and no-cost upgrades made higher speeds more affordable and competitive with regional and national service providers.

Now, 97% of MPW users are at 100 Mbps or higher. These speeds were also made “symmetrical” with upload capacity matching download.

“Multi-Gig” services were made available in November 2023. The launch of 2 Gbps and 5 Gbps internet to homes marked a significant connectivity milestone.

MPW’s all-fiber infrastructure and cutting edge 10G Network not only supports today’s needs, but tomorrow’s as well, with world-class speeds matched with MPW’s industry-leading reliability.



**99.96%**  
% time internet available



MPW pursued opportunities to expand our fiber service area, and with support from the State’s Empower Rural Iowa Broadband Grant Program (NOFA 6), the Utility began construction on a service extension along IA Highway 22 East, to bring internet, television, and telephone services to hundreds of new homes. Assisted by the state program (NOFA 7) and American Rescue Plan (ARPA) funds from Muscatine County, planning was also completed for another extension north of the US 61 Bypass.

In 2024, NOFA 6 will be finished, and NOFA 7 construction will begin. Through these efforts and others, MPW is actively pursuing Governor Reynolds’ goal to provide every Iowan access to high-speed internet.

# Your RELIABLE Neighbor

Award winning reliability takes strategic infrastructure planning, regular maintenance, proactive prevention measures, and quick response. Our investments in state-of-the-art technology have given MPW customers one of the safest and most reliable utility systems in the country.



In 2023, the Utility began integrating modern technologies such as advanced monitoring systems, to enhance real-time data analysis and energy flow optimization. Substation upgrades bolster resilience and efficiency of overall grid performance, ensuring adaptability to the evolving energy industry.

Underground electrical infrastructure increases reliability, protecting the system from weather events, animal interference, and vehicular accidents. MPW continued planned moves of additional overhead electric cables underground and the relocation of transformers from pole-top to pad mount style units.

## **Outage Management:** *We've got a map for that!*

While outages are rare, in 2023 MPW implemented new outage management tools to increase effective response if and when the time comes.

In the past, customer service filled out work orders from calls or online reporting. Those would then populate our outage maps and data. Now, our iVue software automatically adds data from a phone call via the interactive voice response system (IVR) or the SmartHub reports and puts the data directly into the outage management system (OMS).

System Control operators see outages and their predicted causes, yielding a quick decision where to send crews. An operator could make that decision on their own, but in the case of multiple outages, a system like this helps them make sound decisions fast.



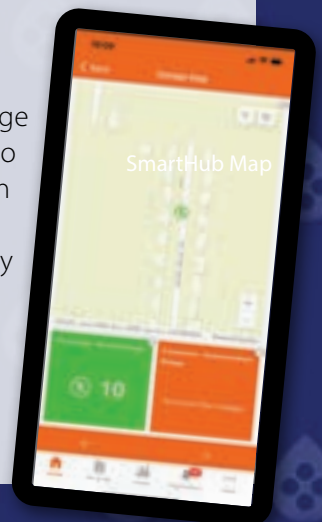
System Operator's Map



Field Patrol Map

The same information is instantly available to Field Patrol crews on their tablets as a map, satellite image or a detailed list. Lines can also then be assigned to patrollers who will self-dispatch and follow-up with what they find from within the same app. Once done by phone, these updates now happen quickly from the field with less chance for error.

Finally, the customer-facing map from our SmartHub app gives customers certainty their report is on our radar, as well as ability to report.



**99.99%**  
% time power available  
AVERAGE SERVICE AVAILABILITY INDEX (ASAI)



**11 BILLION**  
GALLONS  
water pumped per year



**313+** miles transmission & distribution lines

**8,000+**  
utility poles

**13**  
substations

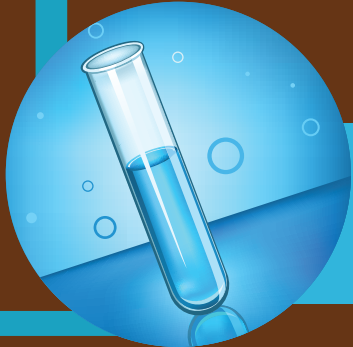
**1,280**  
fire hydrants

**4,970** feet overhead lines moved underground in 2023

**3,151**  
valves

**158** miles  
of water main

**29** million gallons  
produced daily



**13,000+**  
water tests  
annually



Water plays a fundamental role in our lives. For over 120 years, MPW has been proud to provide this essential utility service to the community and works daily to ensure the safe and effective delivery of water for drinking, public safety and industrial processes. Annual infrastructure projects are key to maintaining a ready and plentiful supply of high quality water. In 2023, 18 fire hydrants and 2,987 feet of water main were replaced.



Since the start of the City's West Hill Sewer Separation Project, the Utility has had the opportunity to inspect miles of water mains as well as underground electric and communications lines for defects while streets and sidewalks are excavated. MPW's ongoing coordination with the City of Muscatine has created numerous opportunities to enhance utility service reliability, leveraging resources and aligning our mutual commitment.



Monitoring weather conditions is extremely important to utilities. It's not only a reliable predictor of energy demand, severe weather events can also negatively impact utility infrastructure, causing disruptions.

In 2023, MPW took a proactive step, investing in advanced weather software to help utility staff determine storm severity and threats. This new tool will allow crews to be dispatched to impacted areas quickly and safely. Besides a 10-day, hourly forecast, lightning data is also available — accurate to within 100 meters or less and a detection rate of 99%.



As the energy sector increasingly relies on interconnected digital systems, cyber security has emerged as a crucial protection against the bad actors. Threats like hacking, phishing and ransomware put utilities and the bulk electric system at risk of prolonged power outages, environmental hazards, and loss of life.



MPW has worked to safeguard against malicious cyber threats by implementing industry best-practices, shoring-up response plans and continued training and education for utility staff. All MPW team members have a role in stopping cyber security breaches to prevent disruptions that could have far reaching consequences.





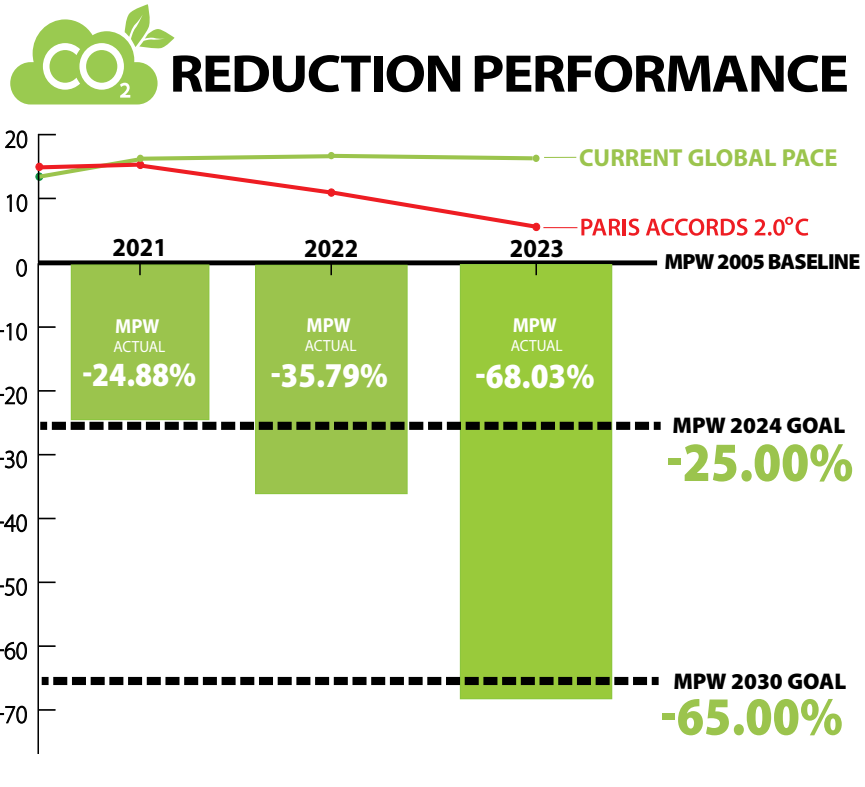
# Powering the Future

Powering the Future (PTF) is a multi-year project — the result of years of research and collaboration with industry experts. It's the Utility's most challenging and transformational initiative and it's reshaping how electricity is generated for our community.

It represents a fundamental change in the Utility's power generation portfolio and positions the community for further growth, while continuing to be good stewards of our environment.

In 2022, the Utility transitioned Generation Units 7 and 8 to "peaking units", which only run when needed to meet peak grid load. In 2023, Unit 8A was decommissioned, further reducing MPW's environmental impact.

Our Powering the Future strategy set the ambitious goal to reduce CO<sub>2</sub> emissions by at least 25% by 2024 and 65% by 2030. Under our PTF strategy, and shown in the graph above, the Utility continues to exceed global CO<sub>2</sub> reduction goals. In fact, we've beaten our own 2024 goal early and have demonstrated the potential to meet or exceed our 2030 reduction goal of -65%!

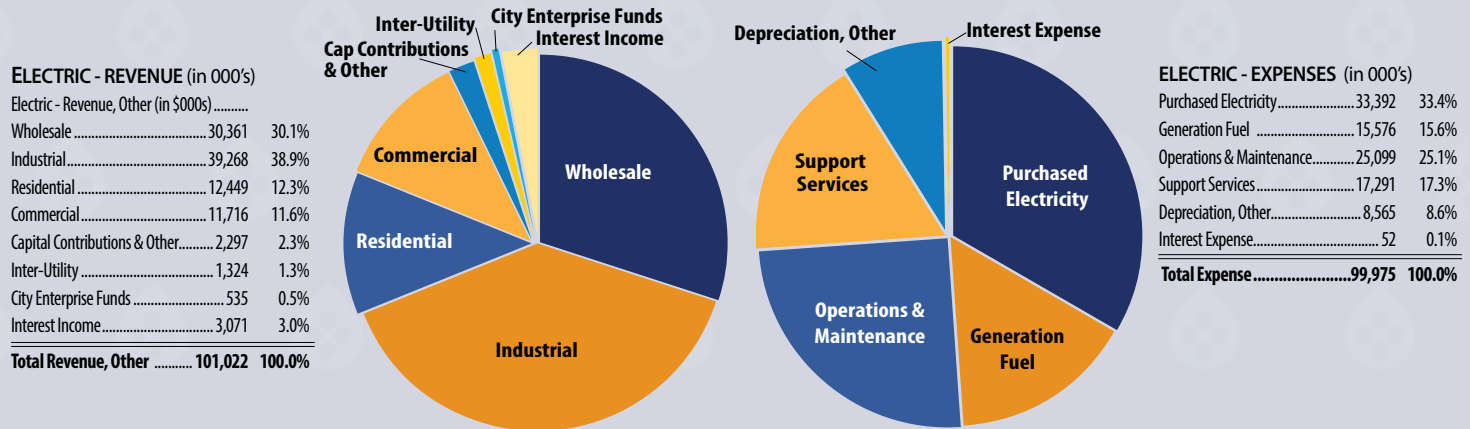


**2023 PTF Customer Forum**

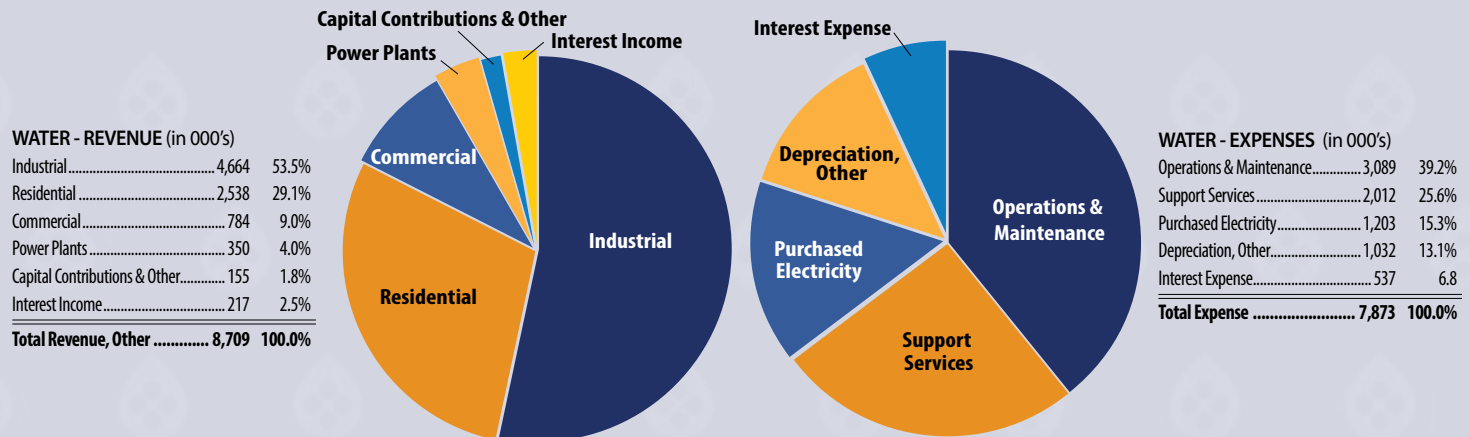
# Reinvesting in reliability

The Utility's net income is used to make system improvements like the ones noted in this report.

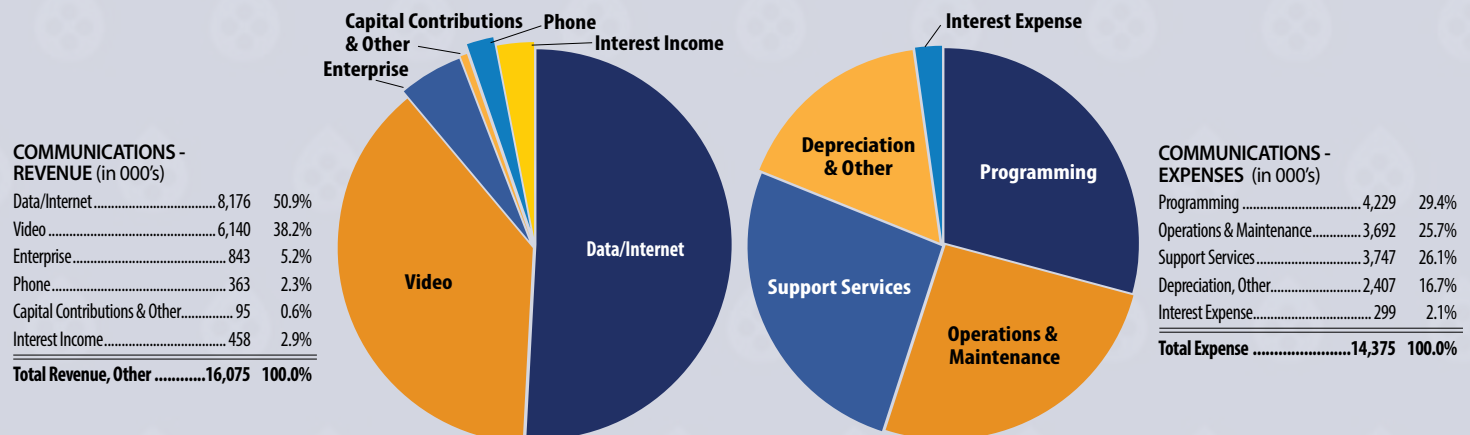
## Electric: The Electric Utility had a net income of \$1.0M and capital expenditures of \$5.1M



## Water: The Water Utility had a net income of \$0.8M and capital expenditures of \$1.6M

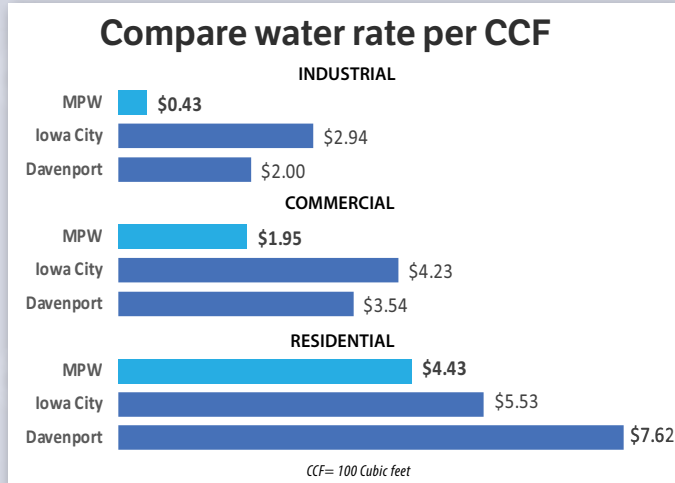
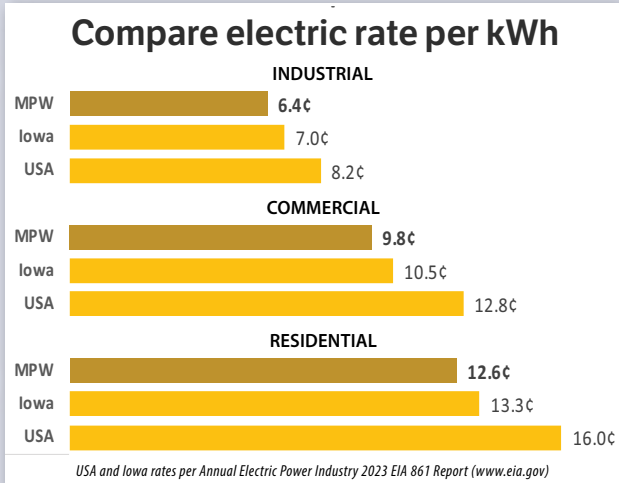


## Communications: The Communications Utility had a net income of \$1.7M and capital expenditures of \$1.9M



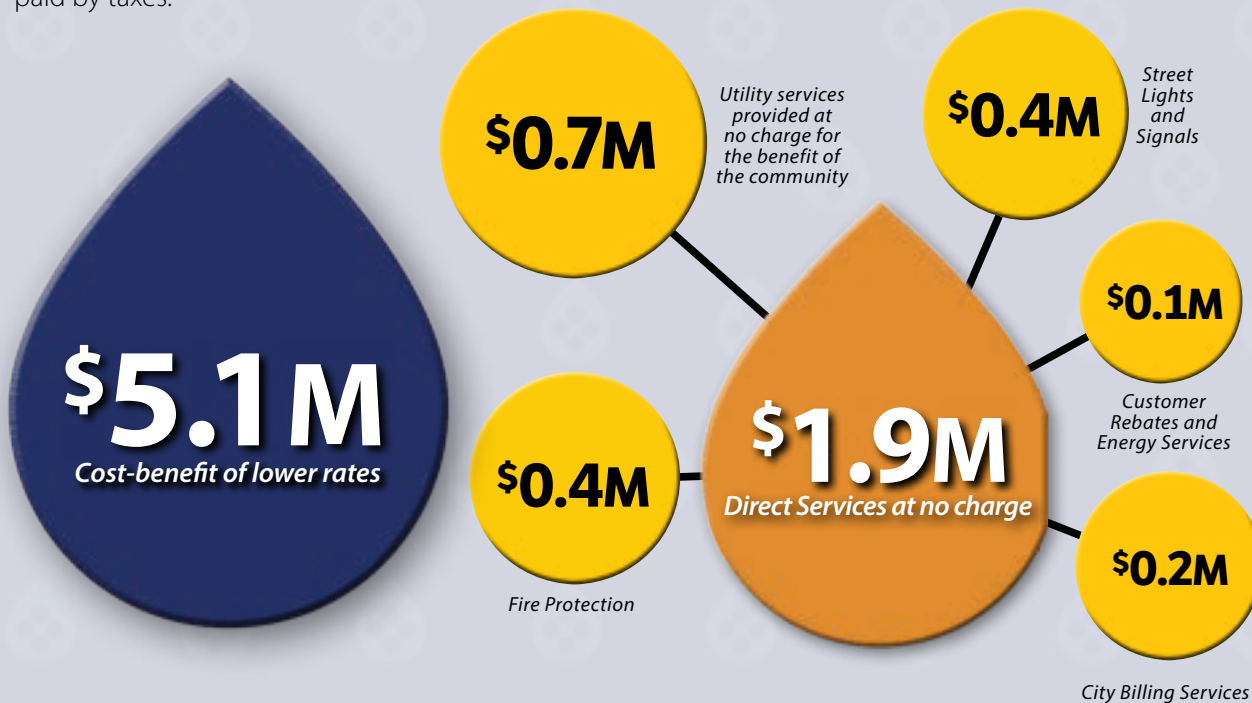
# Saving our neighbors money

As a municipal utility, MPW is not driven by profit, which helps result in lower rates. Keeping rates below the national and state averages is a priority for us.



***In Muscatine, great reliability does not cost more! When compared to the rates of other cities in Iowa and national averages, MPW customers saved \$5.1 million dollars in 2023 — That's about \$465 per year/per customer —***

Besides the multi-million dollar cost-benefit customers receive due to lower rates, the Utility also directly provides lights and water to the city's public buildings, spaces and infrastructure, that would otherwise be paid by taxes.



**Total \$7 million annual benefit**

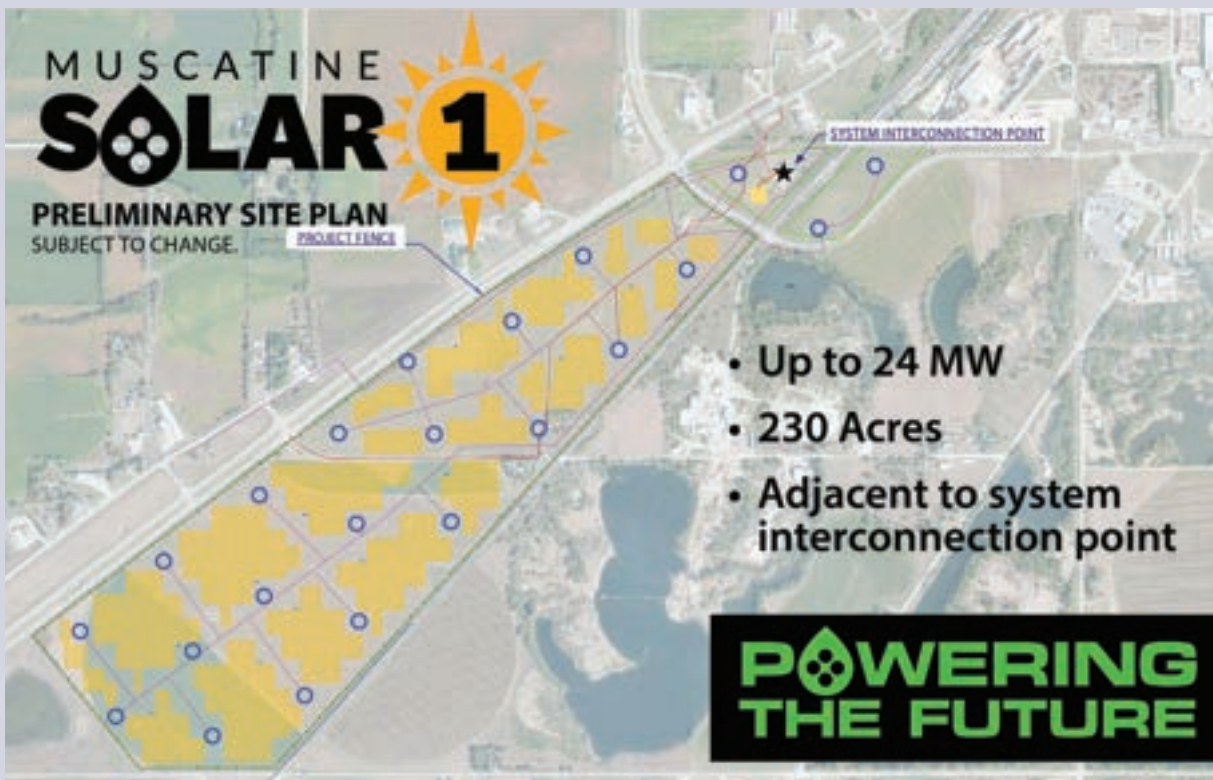
The reduction of the Utility's carbon footprint is expected to continue with the addition of Muscatine Solar 1, MPW's first utility-scale solar array, and a natural gas-fired combined heat and power (CHP) unit.



Of note, strategic partnerships with local corporations and the City of Muscatine are making the Muscatine Solar 1 project possible. Their long-term commitments for a share of its output will enable the Utility to add this renewable resource to our generation portfolio and allow Muscatine to take a significant step forward in renewable energy growth without passing extra costs on to residents.

Pending regulatory and interconnection approvals, construction on the 24-megawatt (MW) array is expected to begin in late 2024 with an operational target in 2026. Coupled with the existing South Fork Wind farm, our investments in renewable power generation today lay the foundation for a sustainable and cleaner tomorrow.

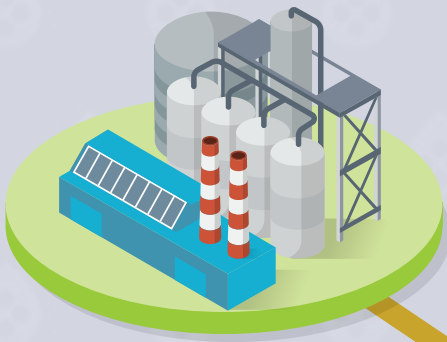
In addition to those renewable resources, a natural gas-fired combined heat and power (CHP) unit is currently being researched and engineered to join our generation fleet and eventually replace older coal-fired units. Due to their efficiency, CHP units are endorsed by the Environmental Protection Agency (EPA), the US Department of Energy (DOE) and the Iowa Economic Development Authority (IEDA).





# A Balanced Approach

for today and tomorrow

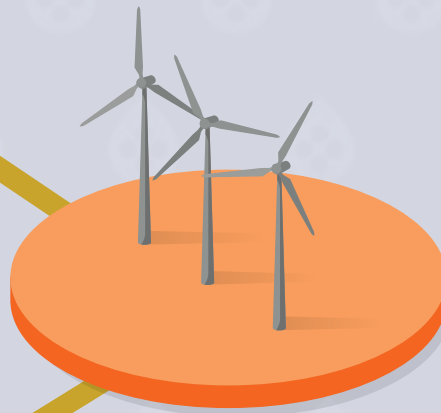


## MPW Local Generation

- **275.5** Megawatts
- Unit 9
- Units 7 & 8 (peaking operation)

## South Fork Wind Farm

- **13** Megawatts
- **6%** of MPW's native system load



## Muscatine Solar 1

- **24** Megawatts
- **4** industrial partners
- Coming in 2026

# Powering the Present

While plans are being formulated and executed toward future generation needs, MPW is committed to transitioning reliably and safely. The Utility continued its decades-old commitment to environmental compliance through rigorous monitoring and adherence to strict regulatory standards. It is these very investments in technologies and sustainable practices which enabled MPW to achieve its CO<sub>2</sub> reduction goals and ensure the responsible management of resources and environmental protection.

One big project for 2023 was the decommissioning of generation Unit 8A which has served for many years to provide steam to a large industrial customer while also supporting Muscatine's electric grid. During the year, an extensive network of steam piping was isolated, capped and filled with nitrogen to keep it available and ready for future steam transport.



*It's the dawn of a new day for power generation at MPW*



The MPW Board of Trustees approved several strategic priorities for the Power the Future initiative in 2023, including pursuing the development of a small-scale CHP unit as well as additional renewable resources. In an ever-changing power industry, Utility engineers continue to evaluate power supply options, in tandem with leading consultants as part of those strategic priorities.

MPW will also continue to investigate demand response alternatives and energy efficiency services as part of these strategic priorities, along with a major 2024 investment to comply with effluent limit guidelines (ELG) for Unit 9.



***Generation team dedicated to a reliable and safe transition***

# Give Customers Reasons to Love MPW

Customer satisfaction is the cornerstone of our success, and MPW invests in initiatives aimed at enhancing our customers' overall experience. We launched a new customer information system, and with that, a new customer portal called SmartHub, in early 2023. It features an easy-to-use website and mobile app for customers to share and receive information, and manage their accounts. Of course, live, local customer service and HelpDesk agents continue to provide MPW's signature personalized service.

Each year, MPW engages in many outreach events, like the Muskie S.P.A.R.K. program at schools and public activities to provide education about S.T.E.M. careers, conservation of energy and water, safety, and sustainable practices. Utility staff is also well-known for their regular volunteer work in our community across a wide range of organizations.

Our longstanding Energy Rebate Program saves customers thousands each year. And many MPW customers have also taken advantage of the Utility Loan Program which allows residential and business owners to borrow money from the Utility interest-free to pay for improvements to their electric, water and communications services, and certain energy efficiency projects.

**“ We’ve been with multiple utility companies but MPW has been the best one. From the field crews to customer service, you’ve always been there to help us when we needed it. ”**


— MPW Customer

**8000+**  
regular users of



smart hub

**\$45,000**




energy efficiency rebates paid to customers in 2023

**7,847**  
total trees planted since the start of Muscatine Branching Out



MPW has been a Charter Sponsor since 1990

**65,000+**  
calls received



by HelpDesk and Customer Service annually







In the fall of 2023, MPW rolled out a comprehensive customer survey to learn customer likes/dislikes and spot emerging trends. Participation exceeded industry norms as well as our expectations. These insights will help shape and improve services, putting our customers in the position of advisors in our continuous improvement journey.



MPW continues to encourage customer adoption and use of electric vehicles to help reduce emissions and foster sustainability. The Utility's four Level II public charging stations offer convenient access to both residents and travelers. Two additional all-electric vehicles (EVs) were added to the MPW fleet in 2023. Our first plug-in hybrid pickup truck is expected in early 2024, to be followed later in the year by the first bucket trucks.



*Neighbors serving neighbors*

# Investing in People, Investing in Excellence

Continuous improvement is critical for delivering great services to our customers. Following the success of our 2021-2023 Strategic Plan, teams worked to update and implement a revised plan for 2024-2026.



The journey to apply the Malcolm Baldrige National Quality Award framework began in earnest in 2023. The Iowa Quality Center which administers the state level program, offered helpful feedback based on our responses to criteria questions and participation in a site visit from the state examiners. They provided a valuable outside viewpoint on what we do well and how we can improve — from leadership and strategy, to customer and employee engagement.

2023 was an outstanding year for Muscatine Power and Water with the receipt of seven distinguished awards from the American Public Power Association (APPA) in recognition of MPW's unwavering pursuit of excellence. These awards, received over the course of the past year, underscore MPW's dedication to providing superior energy reliability and customer communications efforts.



**258** employees 

**12** years average length of service 

**23** new hires in 2023 

**12** retirees with **307** years combined service **26** average years of service 



Developing great employees and leaders is a key focus of our Strategic Plan and we're proud of each team member's achievements in 2023.

Investing in employee leadership growth, continuing education, and certifications and is key to individual and organizational success.

# Local Leadership, Lasting Impact

MPW is governed by a local board of trustees, to ensure decisions are tailored to address the community's unique values and challenges, prioritize initiatives, and leverage local resources.

Chosen for their experience in both public and private organizations, and appointed by the Muscatine City Council, the Trustees provide policy direction and fiduciary oversight.

The partnership between the Board and MPW's senior leadership team (SLT) is truly cooperative. The Trustees' diverse perspectives help navigate the often complex decisions affecting customers and community. Likewise, the Trustees rely on the SLT for their extensive industry expertise.

Together, they develop and deploy strategic plans executed by employees across the Utility, who strive to provide maximum benefit to the community.

## Board of Trustees



**Keith Porter**  
CHAIRPERSON  
STANLEY CENTER  
FOR PEACE & SECURITY



**Tracy McGinnis**  
VICE CHAIRPERSON  
CBI BANK & TRUST



**Kevin Fields**  
TRUSTEE  
KENT CORPORATION



**Susan Eversmeyer**  
TRUSTEE  
RIVER REHABILITATION



**Steven Bradford**  
TRUSTEE  
HNI CORPORATION



## Senior Leadership Team

**Mark Roberts**  
FINANCE AND  
ADMINISTRATIVE  
SERVICES

**Brandy Olson**  
LEGAL,  
REGULATORY AND  
PEOPLE SERVICES

**Ryan Streck**  
UTILITY  
SERVICE  
DELIVERY

**Erika Cox**  
CUSTOMER &  
TECHNOLOGY  
EXPERIENCE

**Doug White**  
POWER  
PRODUCTION  
AND SUPPLY

**Gage Huston**  
GENERAL  
MANAGER

# Neighbors serving neighbors

## MISSION

*To provide best-in-class utilities through exceptional local service empowering Muscatine's residents and businesses to thrive.*

## CORE VALUES

### ACT WITH INTEGRITY

*We do the right thing.*

### KEEP EACH OTHER SAFE

*We are committed to the safety of our coworkers and customers.*

### FOCUS ON OUR CUSTOMERS

*We provide exceptional local service because we are neighbors serving neighbors.*

### PURSUE EXCELLENCE

*We take pride in our standard of excellence and invest in our employee's growth and development.*

### EMBRACE SUSTAINABILITY

*We continually evolve our operations in ways that reduce our environmental impact and help our customers achieve their sustainability goals.*

### INVEST PURPOSEFULLY

*We act as good stewards of the resources entrusted to us and invest wisely to ensure long-term stability and desirable rates.*

### ENSURE HIGH RELIABILITY

*We deliver best-in-class reliability through our proactive approach to system design, operation, and maintenance.*



**MPW**

Always 