



# 2023 Corporate Responsibility and Sustainability Report



## Environmental

As your community energy company, MGE recognizes its responsibility to preserve and protect the environment while serving our communities with safe, reliable, affordable and sustainable energy. We are proactive and forward-thinking in our stewardship and promote sustainability with our partners, suppliers and employees as we work together to build a cleaner, smarter future.

*This report includes forward-looking statements and estimates of future performance that may differ from actual results because of uncertainties and risks encountered in day-to-day business.*



## A message from the Director of Safety, Sustainability and Environmental Affairs

Thank you for your interest in MGE's 2023 Corporate Responsibility and Sustainability Report. Our commitment to environmental stewardship goes beyond regulatory compliance. Our team in Safety, Sustainability and Environmental Affairs takes a proactive approach to advancing the culture and continual improvement of environmental, safety and sustainability practices throughout our organization. Safety and sustainability are top priorities at MGE. This report highlights how we focus on our sustainability goals and our performance.

## Our Environmental and Sustainability Policy

In pursuit of our mission and in support of our commitment to those we serve, MGE:

- Complies with all environmental laws, regulations, permit requirements and other corporate environmental commitments and exceeds compliance as demonstrated by the commitments in this policy.
- Seeks environment-friendly options and waste minimization when considering sources of supply, material and contractors.
- Considers the environmental impacts of applicable company activities and seeks sustainable, cost-effective ways to reduce adverse environmental impacts and risks.
- Sets corporate goals and objectives and fosters a culture of continuous improvement in environmental and employee safety performance.
- Educates employees about MGE's environmental responsibilities and policy and communicates and reinforces environmental values throughout the company.
- Provides regular updates on environmental and sustainability initiatives and performance to MGE's Board of Directors to advance oversight and transparency of company operations.
- Explores opportunities to advance new, cost-effective technologies for the benefit of all and to reduce the community's collective environmental footprint.
- Partners with community stakeholders to promote environmental education, energy efficiency and conservation.
- Communicates openly and honestly with the public regarding MGE's environmental policy and performance.
- Contributes to the well-being of its communities through charitable and corporate giving and the service and volunteerism of employees.



## Highlights

- MGE has a goal to reduce carbon at least 80% by 2030 as we work toward achieving net-zero carbon electricity by 2050. As of year-end 2022, MGE has reduced carbon emissions more than 39% since 2005, our baseline.
- Since fall 2015, when our Energy 2030 framework was announced and through year-end 2022, MGE has announced clean energy projects that we expect will increase our owned renewable capacity by more than nine times upon completion. MGE expects additional renewable energy investment beyond what has been announced as of the date of this publication.
- MGE set a goal to achieve net-zero methane emissions from our natural gas distribution system by 2035. Our strategies for achieving net-zero methane emissions include enhanced leak detection and repair, implementation of cost-effective technologies and processes, and the introduction of renewable natural gas to offset residual emissions.
- MGE continues to transition away from coal-fired generation. By the end of 2030, MGE expects coal to be used only as a backup fuel at Elm Road Generating Station. By the end of 2032, MGE expects to have eliminated coal as an energy source.
- MGE is partnering on an innovative, first-of-its-kind in the United States long-duration energy storage system that would be capable of providing more than 10 hours of energy storage, if approved by state regulators. Known as the Columbia Energy Storage Project, the 20-megawatt (MW) project was selected in fall 2023 to receive a federal grant.
- Working with residential customers through our smart thermostat demand response program, MGE Connect<sup>®</sup>, MGE is able to better understand the role and impact of smart devices in managing demand on our community grid. During the 2022 season, nearly 3,500 participating households lowered demand by nearly 3 MW each hour during some of the events that were initiated to manage demand.
- MGE has developed several electric vehicle (EV) managed charging pilots to control EV charging remotely to better correspond to the needs of the electric grid.
- MGE continues to add cleaner vehicles to our fleet, where possible. We are targeting a goal of 100% all-electric or plug-in hybrid light-duty vehicles by 2030.
- Our Environmental Management System evaluates, prioritizes and manages environmental risks across all company operations, allowing for a consistent and comprehensive approach to reducing impacts and to furthering continuous improvement.
- MGE continues to increase our efforts to provide habitat for monarch butterflies and pollinators at our facilities. We are taking inventory of what habitat we have planted and planned at our solar sites and are looking for opportunities to expand native plantings where it makes sense.

# Decarbonization goals and strategies

MGE is working to achieve deep decarbonization, consistent with global climate science, as quickly, responsibly and cost-effectively as we can. We're transitioning our energy supply mix to greater use of renewables, working with customers to manage their use and advancing sustainable transportation with our customers and communities.

## Industry-leading carbon reduction goals

In May 2019, we announced a goal of net-zero carbon electricity by the year 2050. MGE was one of the first utilities in the nation to commit to net-zero carbon by mid-century. This target is based on global climate science and is consistent with the work of the Intergovernmental Panel on Climate Change (IPCC) and its assessment of limiting global temperature increases to 1.5 degrees Celsius.

In January 2022, we built on previously set carbon emissions goals for 2030, announcing our goal to reduce carbon at least 80% by 2030 from 2005 levels as we work toward achieving net-zero carbon electricity. By 2030, we expect every MGE electric customer will have 80% fewer carbon emissions from their electricity use simply by being an MGE customer. This goal surpassed MGE's previous expectation to reduce carbon emissions at least 65% by 2030. We have said since establishing our goals that if we can go further faster by working with our customers, we will.

“  
*By 2030, we expect every MGE electric customer will have 80% fewer carbon emissions from their electricity use simply by being an MGE customer.*  
”

-  **80% reduced** carbon emissions by 2030  
**Net-Zero** carbon electricity by 2050
-  **Net-Zero** methane emissions from our natural gas distribution system by 2035
-  **2/3** coal-fired capacity eliminated by 2027  
Coal as a backup fuel by end of **2030**  
**Zero** ownership of coal by end of 2032
-  **> \$1 billion** in clean energy investment estimated through 2028\*
-  **100%** all-electric or plug-in hybrid light-duty MGE fleet vehicles by 2030

\*Since 2015

## Progress toward our carbon reduction goals

With approximately a billion dollars in investment in clean energy expected from 2015 through 2028, renewable energy will play a significant role in helping to achieve our goals of at least an 80% reduction in carbon by 2030 from 2005 levels and net-zero carbon electricity by 2050. Since fall 2015, when our Energy 2030 framework was announced and through year-end 2022, MGE has announced clean energy projects that we expect will increase our owned renewable capacity by more than nine times upon completion. As of year-end 2022, MGE has reduced carbon emissions more than 39% since 2005, our baseline.

## Climate science partnership with the University of Wisconsin

To inform our progress toward achieving deep decarbonization and net-zero carbon electricity, MGE worked with Dr. Tracey Holloway

at the University of Wisconsin-Madison Nelson Institute for Environmental Studies and the Department of Oceanic Sciences to evaluate our goal. Dr. Holloway used climate modeling available through the IPCC for an analysis of MGE operations and our deep decarbonization goal. The models suggested that, by 2050, emissions from electricity generation in industrialized countries should be 87% to 99% lower than the 2005 baseline. MGE's goal is net-zero carbon emissions, which is a 100% reduction from 2005 levels. The analysis showed MGE's goal is in line with model benchmarks to limit global warming to 1.5 degrees Celsius. The full report, published in fall 2020, is available at [minds.wisconsin.edu](https://minds.wisconsin.edu) and [mge.com/netzero](https://mge.com/netzero).



## Targeting carbon emissions



Our Net-Zero goal includes our fossil-fueled electric generation facilities (Scope 1) and purchased power for resale (Scope 3). Baseline year is 2005.

### Our strategies for deep decarbonization

The U.S. Mid-Century Strategy (MCS) for Deep Decarbonization is the United States’ strategy for meeting the goals of the Paris Agreement on climate change to limit global warming. Both the MCS and the IPCC rely on decarbonizing electric generation, using energy efficiently and electrifying other energy uses, including transportation. These are the strategies MGE is pursuing and will continue to pursue to achieve deep decarbonization and net-zero carbon electricity.

Achieving net-zero carbon by 2050 will require the use of technologies not yet commercially available or cost-effective, but we continue to make progress toward realizing our commitments to greater sustainability, to continued industry leadership and to those we serve. We’ve said since establishing our goals that if we can go further faster by working together with our customers, we will.

### Midcontinent Power Sector Collaborative

By working together with our customers and other stakeholders, we can develop solutions to the energy challenges of our times and reach our shared energy goals. For example, MGE is a partner in the Midcontinent Power Sector Collaborative (MPSC) facilitated by the Great Plains Institute in Minneapolis, Minn.

The MPSC, consisting of utilities, agencies, non-governmental organizations and environmental groups, worked together to develop the Road Map to Decarbonization in the Midcontinent: Electricity Sector. MGE’s local partners in the MPSC included the nonprofit Clean Wisconsin and the Dane County Office of Energy and Climate Change.

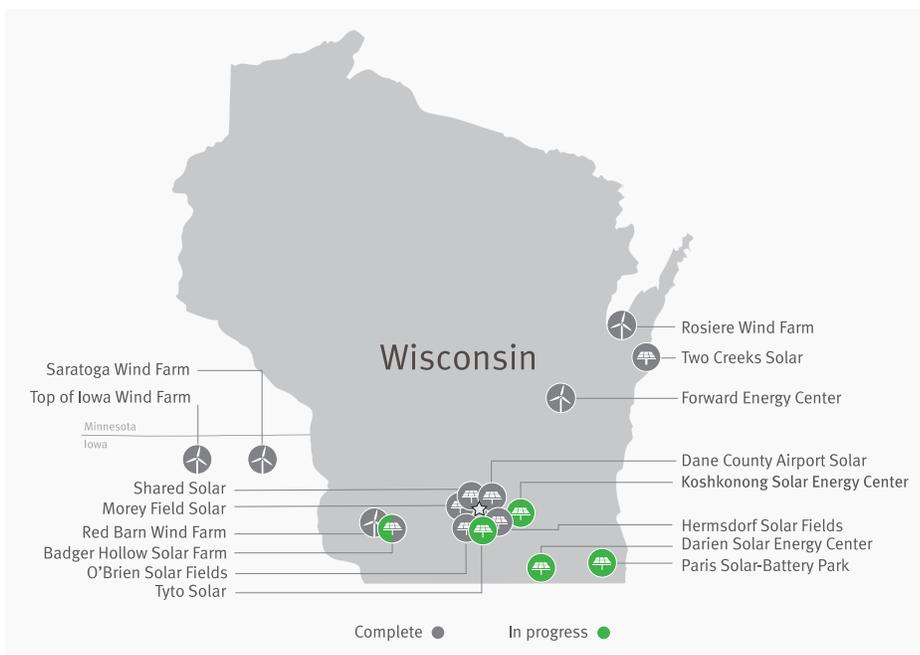
The MPSC brings together diverse viewpoints and priorities to develop options to continue driving toward a lower carbon future and to better inform policymakers. The MPSC is one of many partnerships in which MGE is involved to further sustainable energy.

# Clean energy

Since announcing our Energy 2030 framework in November 2015 and through year-end 2022, we have announced projects that we expect will increase our owned renewable capacity by more than nine times when completed. We continue to evaluate potential new wind and solar sites beyond what is currently planned as we grow our use of renewable resources to help achieve net-zero carbon electricity by 2050. In 2022, renewable energy accounted for about 22% of MGE’s overall energy mix. MGE expects to achieve our goal under our Energy 2030 framework of 25% renewable energy by 2025 ahead of schedule.

## Our clean energy projects

- Expanding our highly successful community solar program, Shared Solar, with a 6-megawatt (MW) solar array at the Middleton Municipal Airport in Middleton. The array came online in 2020.
- Purchasing 50 MW of solar capacity from the 150-MW Two Creeks Solar project, which came online in fall 2020. Two Creeks Solar was the first large-scale solar project to be built in Wisconsin.
- Partnering with Dane County to build a 10-MW solar installation at the Dane County Regional Airport in Madison, which came online in late 2020 to serve Dane County operations.
- Bringing online in spring 2021 the 22-MW O’Brien Solar Fields in Fitchburg, Wis. The array serves local companies, the City of Fitchburg, the State of Wisconsin Department of Administration and UW-Madison through our innovative Renewable Energy Rider program.
- Purchasing 100 MW of solar capacity from the Badger Hollow Solar Farm in Iowa County, Wis. Badger Hollow Phase I came online in late 2021; another 50 MW from Phase II is expected online in late 2023 or early 2024.
- Partnering with the City of Madison and the Madison Metropolitan School District to build the 8-MW Hermsdorf Solar Fields in Madison, which came online in spring 2022.
- Purchasing 9.16 MW of wind capacity from the 92-MW Red Barn Wind Farm in southwest Wisconsin, which came online in 2023.
- Constructing the 6-MW Tyto Solar Project in Fitchburg, Wis., which is expected online in 2023.
- Purchasing 20 MW of solar energy and 11 MW of battery storage from the 200-MW Paris Solar-Battery Park in southeast Wisconsin. The array is expected online in 2024.
- Purchasing 25 MW of solar energy from the 250-MW Darien Solar Energy Center in southeast Wisconsin. The solar array is expected online by the end of 2024.
- Purchasing 30 MW of solar energy from the 300-MW Koshkonong Solar Energy Center in Dane County. The solar array is expected online in 2026.





## Elimination of coal-fired generation

MGE has no controlling interest in coal-fired resources. In 2011, MGE discontinued the use of coal at the only generating facility in which we have sole ownership, our Blount Generating Station.



### Ongoing transition from coal

**2026**

**planned retirement of Columbia Energy Center**

**2030**

**coal as backup fuel at Elm Road Generating Station**

**2032**

**coal-fired generation eliminated from portfolio**

In 2018, MGE accelerated the depreciation of certain assets, including our combustion turbines, Blount Generating Station and Columbia Energy Center Unit 1. (In 2022, MGE received State regulatory approval to accelerate the depreciation of Unit 2 at Columbia to align with Unit 1 in 2029).

As part of MGE's ongoing transition away from coal, in early 2021, MGE and the co-owners of the Columbia Energy Center announced the planned early retirement of the plant. Both units at Columbia are expected to be retired by mid-2026, more than 10 years ahead of schedule. By 2027, with the planned retirements of both units at Columbia, MGE will have eliminated approximately two-thirds of the company's current coal-fired generation capacity.

In fall 2021, MGE and the co-owners of the Elm Road Generating Station announced the plant's planned transition from coal to natural gas. By the end of 2030, MGE expects coal to be used only as a backup fuel at the Elm Road Generating Station, and by the end of 2032, MGE plans to have eliminated coal-fired generation from its portfolio.

## Long-duration energy storage

MGE is partnering in an effort to develop energy storage at the Columbia Energy Center site. The innovative project would be the first of its kind in the United States. In fall 2023, MGE and the co-owners of the site were selected for a federal grant of up to \$30 million from the Department of Energy to support the construction of a long-duration energy storage system.

Known as the Columbia Energy Storage Project, it would use a closed-loop process either to create electricity or to store energy by transferring an element between its natural fluid or gas states. Through this process, the Columbia Energy Storage Project would deliver electricity to the grid when it is needed or take electricity and store its energy when the grid has excess electricity. The 20-MW project would be capable of providing more than 10 hours of energy storage.

MGE and Columbia's majority owners expect to submit an application to State regulators in the first half of 2024 to build the project.



## Resource planning and carbon regulation

When making generation decisions, MGE engages in extensive resource planning analysis and modeling, which consider many factors, including forecasted energy use projections; long-term impacts on customers, investors and the environment; potential future environmental regulations; assumptions related to the anticipated costs of fuel; and many other factors related to energy production. Our economic analysis explicitly includes possible projected carbon emissions limits to help ensure our decisions are financially sound—regardless of whether or how carbon is regulated in the future.

In addition, large new generating facilities are reviewed by the Public Service Commission of Wisconsin to ensure the projects are in the public interest. For larger projects, different generating scenarios are modeled in our regulatory application to demonstrate the need and to justify the cost. All proposals and decisions by the State regulatory body are part of the public record.

Our generating facilities:

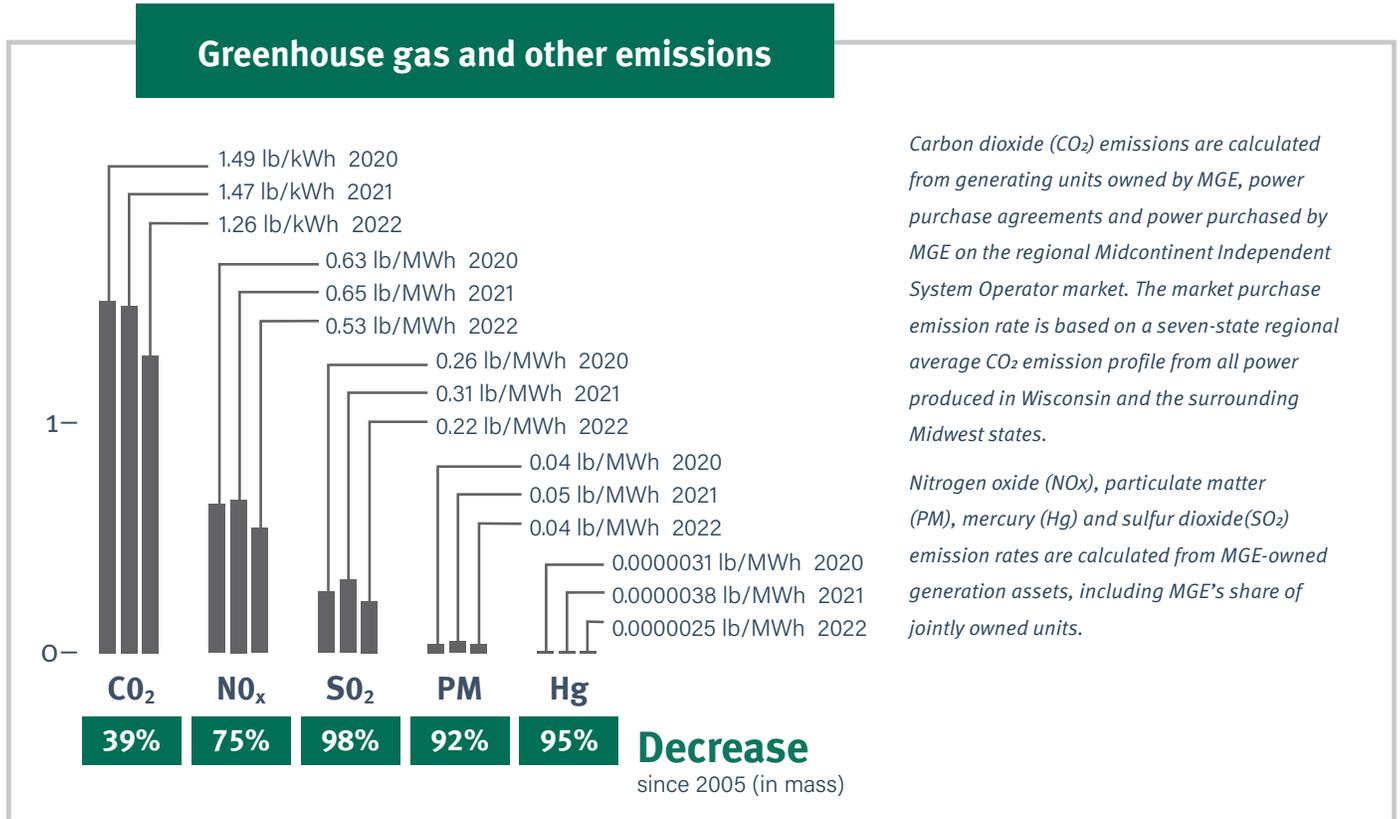
- Badger Hollow I Solar Farm, Iowa County (Phase II is expected online in late 2023 or early 2024.)
- Blount Generating Station, Madison
- Columbia Energy Center, Portage (expected retirement by midyear 2026)
- Combustion turbines, Madison and Marinette
- Dane County Airport Solar, Madison
- Elm Road Generating Station, Oak Creek (expected to transition to natural gas by end of 2030)
- Forward Energy Center Wind Farm, Dodge and Fond du Lac counties
- Hermsdorf Solar Fields, Madison
- Morey Field Solar, Middleton
- O'Brien Solar Fields, Fitchburg
- Red Barn Wind Farm, Grant County
- Rosiere Wind Farm, Kewaunee County
- Saratoga Wind Farm, Howard County, Iowa
- Shared Solar at the Middleton Operations Center, Middleton
- Solar photovoltaic units, Dane County
- Top of Iowa Wind Farm, Worth County, Iowa
- Two Creeks Solar, Manitowoc County
- West Campus Cogeneration Facility, Madison
- West Riverside Energy Center, Beloit

We also purchase power through contracts and from the Midcontinent Independent System Operator market.

## Emissions reductions

We have made strides to reduce emissions by installing emission-reduction equipment and improving equipment efficiencies in our current generation fleet. As we work toward our ambitious goal of net-zero carbon electricity by 2050, we continue to make significant investments in local and regional cost-effective renewable generation.

Ensuring that new and changing technology serves all customers equitably is one of our key objectives under our Energy 2030 framework. We are working to build a smarter, cleaner community grid that serves to benefit all customers.



## Edison Electric Institute-American Gas Association ESG/sustainability reporting templates

To advance further transparency and disclosure in company operations and governance, MGE participates in the Edison Electric Institute's (EEI) and American Gas Association's (AGA) environmental, social and governance (ESG)/sustainability-related reporting templates. The quantitative template includes data related to MGE's energy portfolio (generation and capacity), emissions, capital expenditures, and human and natural resources. The qualitative template includes information related to our company's management and oversight of and strategies for our transition toward deep decarbonization and greater sustainability. These templates are voluntary and industry-specific. Find them in our [ESG Data Center](#).

## Tyto Solar Project

Construction began in 2023 on the 6-MW Tyto Solar Project in Fitchburg, Wis. This project is being built as a distributed energy resource that will connect to our distribution grid and serve MGE customers with locally generated, cost-effective and carbon-free electricity. It is expected to begin serving customers by the end of 2023.



## Shared Solar



MGE's community solar program, Shared Solar, gives residential and small business customers the option to power their household or business with locally generated solar energy for up to half of their annual energy use. It's an affordable option for customers who want to support local solar.

The voluntary program began in early 2017 with a 500-kilowatt array on the roof of the City of Middleton's Municipal Operations Center. In 2020, the 6-MW Morey Field Solar project at the Middleton Municipal Airport came online.

## Renewable Energy Rider

Our Renewable Energy Rider (RER) gives MGE and larger business customers who seek customized renewable energy solutions the opportunity to partner to grow locally generated renewable energy. The innovative program is designed to meet the needs and goals of companies that support or have signed on to the Corporate Renewable Energy Buyers' Principles, a collaboration facilitated by the World Resources Institute and the World Wildlife Fund.

MGE has built more than 40 MW of solar capacity under RER agreements since earning regulatory approval in 2017 to begin offering this clean energy option.



## Green Power Tomorrow

MGE's long-standing Green Power Tomorrow (GPT) program offers customers a flexible, affordable option for supporting green energy. At a penny more per kilowatt-hour (kWh), GPT is a convenient and effective way for customers to support renewable energy and offset their greenhouse gas (GHG) emissions. Today, more than 10,000 customers participate in this long-standing MGE program.

## Customer-owned solar

We also work with customers who want to install solar to help power their homes or businesses. These customers connect to our community grid and sell their excess electricity to MGE. As of year-end 2022, we have partnered with more than 2,150 customers to connect their solar installations to our grid.

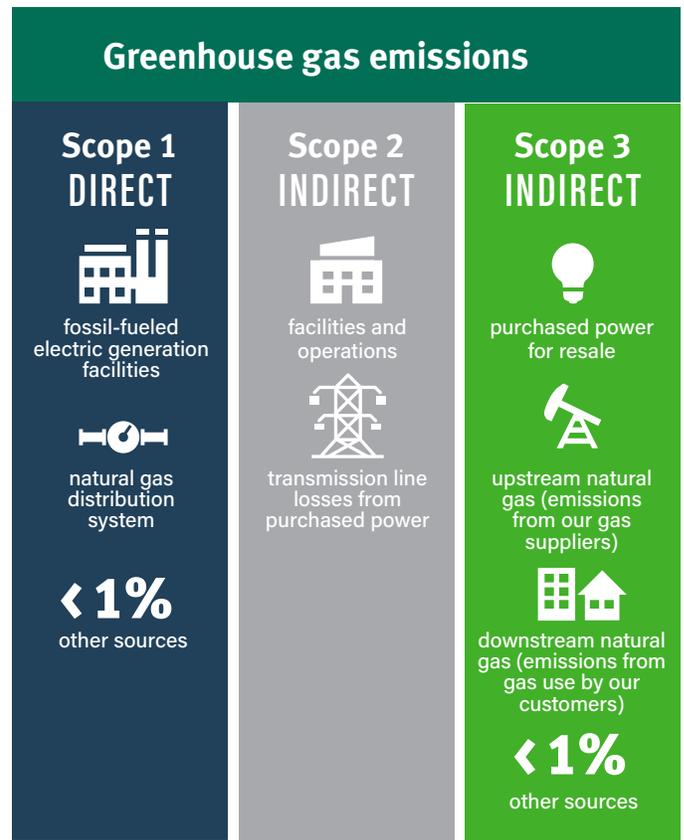
## Natural gas as a bridge fuel

While we are replacing much of the coal-fired generation to be retired from the Columbia Energy Center with investments in renewable generation, in early 2023, MGE purchased 25 MW from the state-of-the-art West Riverside Energy Center. In fall 2023, the company requested approval from State regulators to purchase an additional 25 MW. That request is pending before State regulators. The highly efficient West Riverside facility has lower emission rates compared to coal-fired generation and other older natural gas plants. We expect the carbon emissions resulting from a 50-MW share of the West Riverside Energy Center to be less than 10% of the carbon emissions resulting from our share of the output of the Columbia Energy Center.

## Net-zero methane emissions goal

Building on our existing sustainability and clean energy goals, MGE has set a goal to achieve net-zero methane emissions from our natural gas distribution system by 2035.

The company completed an in-depth analysis and inventory of all our GHG emissions associated with our electric generation and distribution, purchase and distribution of natural gas, and other sources. Methane, which is a primary component of natural gas, is more than 25 times as potent as carbon dioxide. It can be emitted during the production, transmission and distribution of natural gas.



## Our strategies for achieving net-zero methane emissions include:

**Enhanced leak detection and repair:** We will explore strategies, practices and/or commercially available technologies that help us to meet or to exceed current federal and state regulatory requirements surrounding leak-detection and repair methods.

**Implementation of cost-effective technologies and processes:** Improved monitoring of our system and estimated emissions will inform priorities for reduction opportunities. Consistent with those priorities, we will implement cost-effective technologies to improve the detection, measurement, mitigation and/or reduction of emissions from the operation and maintenance of our natural gas distribution system.

**Renewable natural gas (RNG) to offset residual emissions:** We will explore the use of RNG in our natural gas system to offset any remaining emissions we cannot directly control. New technologies, such as carbon capture, green hydrogen (zero-carbon hydrogen) and potentially other alternative fuels, continue to emerge and to evolve.

**Proactive steps taken:** We already have replaced all piping made of cast iron, bare or unprotected steel, and other material considered to be leak-prone in our natural gas distribution system. In addition, our leak inspection and repair schedules exceed federal requirements. Our ongoing efforts to improve our system and our partnerships to prevent damages help to advance safety and reduce emissions.

More than half of our GHG emissions come from sources already included in our net-zero carbon electricity goal. Emissions from our fossil-fueled electric generation facilities and purchased power agreements already are included in our net-zero carbon electricity goal.

MGE is working to reduce overall emissions from our natural gas distribution system cost-effectively as quickly as possible. Our framework for emissions reduction from our natural gas distribution system is available at [mgeenergy.com](https://mgeenergy.com).

## Partnerships and collaborations

MGE has ongoing collaborations with a number of communities, including the cities of Fitchburg, Madison and Middleton. These partnerships serve to advance shared goals around renewable energy, EVs, and energy efficiency and conservation.

MGE also is a longtime partner of Sustain Dane, a local organization that has offered innovative programs for local residents and businesses for more than 20 years. During this time, Sustain Dane has been recognized as a leader in helping local organizations set and achieve sustainability goals. MGE and the City of Madison have partnered with Sustain Dane to host Accelerate Sustainability Workshops, which help local professionals learn more about sustainability best practices through local case studies.

MGE also has served as a member of the Dane County Council on Climate Change. The council included local government, businesses, utilities and environmental organizations. MGE's partnership with local stakeholders through the council offered another opportunity to work toward common goals, including deep decarbonization.

## Energy efficiency and conservation

Energy efficiency is a key strategy for reducing carbon emissions. MGE is committed to providing customers with the tools and resources they need to make wise energy choices that help reduce their individual carbon footprints.

We strive to “meet customers where they are” to engage them in energy efficiency. Through the use of new technologies, hands-on workshops, energy education, conservation kits and innovative rate options, MGE is helping to empower customers to take control of their energy use to better manage long-term costs and to achieve deep decarbonization.

### Managing demand with smart thermostats

Electric use peaks during stretches of hot, humid days when air conditioners run in a majority of homes and businesses. These periods of high electric use put pressure on utilities to generate and distribute enough electricity to everyone who needs it.



MGE Connect® is our smart thermostat demand response program for residential customers. With customers' permission, minor temperature adjustments are made to their smart thermostats to reduce energy use during periods of high demand. The program helps MGE better understand the role and impact of smart devices in helping manage demand on our community grid while helping customers reduce their energy use with minimal possible impact on comfort. In 2022, MGE Connect helped us reduce usage by up to 2.9 megawatts

per event during a number of days with high demand, which is equal to the power from 8,700 solar panels or enough electricity to offset the usage of about 850 MGE households in the summer.

MGE also works with partners, such as FOCUS ON ENERGY®, Project Home and community organizations, to make smart thermostats and other energy-saving improvements available to lower-income households. MGE is committed to working with customers and our partners to help ensure all customers have the opportunity to share in the benefits of new technologies.

### Exploring managed water heating

In 2022, MGE launched our Smart Water Heater Rewards project. We partnered with residents at a local multifamily property to test technology that allowed MGE to shift water heating without impacting customer comfort.

The buildings have electric water heaters, which made them an optimal test site for the project. The smart devices, which were installed on the electric water heaters, helped us explore opportunities to shift heating to off-peak times or when renewable resources are generating the most electricity. The project was designed to offer benefits similar to managed EV charging for grid optimization.

## Conserving energy with MyMeter

MGE's MyMeter program offers large customers tools and strategies to reduce their energy use, especially during periods when demand for electricity is at its peak. MyMeter uses an online dashboard to give participating commercial customers energy usage information in near real-time 15-minute increments and alerts, enabling them to identify energy-saving adjustments to cut costs and to reduce their environmental footprint. The MyMeter customer dashboard also:

- Provides electric and natural gas monthly billing and cost data.
- Enables automated benchmarking services to allow commercial property owners to benchmark their buildings using ENERGY STAR® Portfolio Manager.

The MyMeter dashboard is a successor to our On Demand Savings program, which launched in 2015. MGE is working to expand access to the MyMeter dashboard to all business customers by the end of 2023.

## Working with Focus on Energy



Focus on Energy, Wisconsin's statewide energy efficiency and renewable resource program, is MGE's partner in educating customers about the value of energy efficiency and conservation. MGE works with residential and commercial customers seeking incentives and rebates through Focus on Energy to make energy-saving

improvements. Through our partnerships with Focus on Energy and other community organizations in 2022, we provided 185 Focus on Energy kits and more than 3,000 LED light bulbs to vulnerable residential customers who historically have low participation rates in Focus on Energy programs.

In 2022, MGE business customers who participated in Focus on Energy programs saved 4,226 kilowatts (kW); 22,119,635 kilowatt-hours (kWh); and 843,435 therms. They received \$2,262,407 in incentives for completing conservation projects.

Residential customers saved 16,108,520 kWh and 619,230 therms. They received \$2,579,222 in incentives for completing conservation projects.

## Testing residential battery technology

MGE is collaborating with the Electric Power Research Institute for a technology demonstration project to explore battery storage for residential electric customers. Several homeowners who have a solar photovoltaic system have a battery installed outside of their home. The rooftop solar system charges the batteries, which can be used during times of peak demand and as a backup source of power for the household. This project helps us better understand how batteries operate in Wisconsin temperatures and how batteries could help control long-term costs by managing our collective use of energy. Battery storage also could provide enhanced reliability as we continue our transition to greater use of renewable resources.

## Meeting customers where they are

Our Residential and Community Services team continues to connect in new ways with customers around energy efficiency, new technologies and other energy-related needs. Deepening our engagement with customers is one of our objectives under our Energy 2030 framework, which guides our work with customers toward a more sustainable future.

From our partnership to offer free energy-saving items from Focus on Energy to our outreach to introduce customers to our online tools and other resources, our energy experts work with community partners and customers to answer questions about customer bills, help customers understand their energy usage, identify resources for assistance and more.



## Working together to manage energy usage at multifamily buildings

In 2022, the Residential and Community Services team, in partnership with Focus on Energy, launched the Strategic Energy Management for Multifamily pilot. The innovative pilot included a two-pronged approach, including tenant engagement and operations and maintenance strategies.

The tenant workshops focused on cooling, dehumidification, ventilation and basic plug load strategies. For the operations/maintenance segment of the pilot, Focus on Energy conducted energy scans of the buildings and compiled lists of energy-saving opportunities for the property managers, ranging from HVAC and other mechanicals to lighting.

## Serving as a trusted energy resource

MGE's Home Energy Line to "ask the experts" is an efficient way for residential customers to get energy tips and answers to their energy-related questions via phone or email. In 2022, MGE energy experts provided individualized advice to more than 1,300 customers and conducted targeted digital engagement with customers and community partners throughout the year. Our energy experts worked with customers to help them better understand flexible payment plans and energy efficiency resources. This included outreach to customers who were behind on their bills due to the pandemic.

MGE also maintains a separate line for business customers who need assistance.

## Portable energy meters

MGE has donated more than 50 portable energy meters to area libraries for customers to use. The meters measure voltage, electricity cost and electric consumption. They help customers identify the potential causes of high energy use and better understand the exact operating costs of various items in their homes.

## Energy education for our youth

We partner with local teachers, schools and summer programs from elementary school through college to help educate thousands of students about energy, safety, electric transportation, new technologies and career opportunities in the industry. MGE also offers a series of brief videos in English and Spanish to help educate students about solar energy and electric vehicles.

Learn more about our customer and youth engagement efforts in the [Social](#) section of this report.

## Online resources

Simple, cost-effective energy-saving tips for homeowners, renters and businesses are available online from MGE. Customers also can compare their energy use and learn what has helped other customers save. For example, using My Account at [mge.com](https://mge.com), customers can review their bill, payment history and past energy use and sign up for MGE services. We share energy-saving tips, tools and information on our social media channels and online at:

### [mge.com](https://mge.com)

MGE's primary site for customer services; account access, paperless billing and bill payment; safety and outage information; and other news, information, programs and services from MGE.

### [mge2050.com](https://mge2050.com)

A source for clean energy news, energy-saving tips and information. The site includes locally based videos and features articles around saving energy, MGE's new programs and services, and initiatives for working together to achieve net-zero carbon electricity by 2050.

### [genre2030.com](https://genre2030.com)

Features films and energy-related content with the goal of engaging MGE's millennial customers in the company's Energy 2030 framework for a more sustainable future.

### [livinginbalancemadison.com](https://livinginbalancemadison.com)

Shares stories about what it means to be sustainable from MGE's diverse customer base and community members who are living it every day.

# Electrification of transportation

Transportation is the leading contributor of greenhouse gas emissions in the U.S. The electrification of transportation (and other end uses) is a key strategy for reducing carbon emissions. MGE works with customers, stakeholders, municipalities and other community partners to grow the use of electric vehicles (EVs) and to facilitate charging options throughout our community and to partner with customers to manage EV charging remotely.

We have been working to advance EVs for nearly 15 years. As the number of EVs on the road continues to grow, MGE is prepared to meet the need with managed charging, our growing public charging network of more than 50 stations—powered by renewable energy—and programs to facilitate charging at home, at work and on the go. Our public charging network features several DC fast chargers, which can provide 60 to 80 miles of range in about 20 minutes.

## MGE's EV fleet goal

MGE continues to add cleaner vehicles to our fleet, where possible. We are targeting a goal of 100% all-electric or plug-in hybrid light-duty vehicles by 2030.

Our fleet includes a plug-in hybrid Ford F-150 pickup truck, Ford F-150 Lightning all-electric pickup trucks, a Ford E-Transit, Ford Escapes, Volkswagen ID.4s, Chevy Bolts, a step van and bucket trucks with battery-powered technology, and other all-electric passenger vehicles. We added nine EVs to the fleet in 2022. More vehicles have been ordered and will be added to our fleet as they become available.

## Fast-charging hub

One of the first of its kind in Wisconsin, MGE's EV fast-charging hub in the heart of Madison's Capitol East District provides convenient EV fast charging—powered by renewable energy—for nearby apartment and condo dwellers, single-family households, commuters, and taxi and ridesharing services as well as electric fleet vehicles.

The hub has been fully operational since December 2022. With power levels up to 350 kW, the hub's high-speed chargers are some of the most powerful EV chargers in the Midwest. These chargers will support fast charging for EVs with greater driving ranges in the future.

Through a partnership with Tesla, the hub also has eight Superchargers from the electric car maker. Quick and easy EV charging will help enable the growth of more sustainable transportation options. As with all our public chargers, the hub is powered with 100% renewable energy.



## National Electric Highway Coalition

MGE is partnering with the Edison Electric Institute and more than 60 other electric utilities across the country in support of the National Electric Highway Coalition (NEHC). The NEHC is committed to quick and convenient EV charging along major U.S. travel corridors by the end of 2023.

## Managed charging

Demand for electricity to charge EVs can be unpredictable as customers charge at their convenience. With managed charging, the customer or utility remotely controls vehicle charging to better correspond to the needs of the electric grid. The opportunity to shift EV charging to lower-cost times and when renewable generation is most productive will help us prepare for more EV charging on our distribution grid.

Managed charging also serves to benefit all MGE customers by reducing the need for electrical system upgrades and new generation facilities long term. As more drivers opt for EVs, MGE's ability to work with customers to manage charging is becoming increasingly important.

## Residential charging

Charge@Home, MGE's home charging program, makes it easy for EV drivers to charge efficiently at their home, which is where more than 80% of charging happens. With Charge@Home, MGE owns, maintains and coordinates the installation of Level 2 charging stations at customers' homes. With no upfront cost, customers pay a monthly fee plus the cost of electricity. The program gives MGE the ability to study drivers' charging habits and to explore remote management of charging sessions to better understand the potential impact of EVs on the grid, including how grid management can help to lower costs for all MGE customers by optimizing our use of generation resources.

## Charge Ahead

MGE is partnering with EV drivers in our service territory to test how smart charging can save customers money and help plan for the impact of EVs on our grid. Charge Ahead uses a software platform to manage charging through the vehicles' on-board modems. Participants provide a need-by time for their vehicle and enable smart charging. The software then optimizes charging. Participating customers are assigned to one of three groups that allows MGE to shift 80% of charging to off-peak times or curtail charging during peak times. The pilot includes Charge@Home participants and customers who drive various EV models.

## Charging pilots

MGE is further exploring managed charging with several pilots for condo owners, renters, workplaces and fleets. These managed charging pilots will help MGE to evaluate load management strategies, such as shifting charging to lower-cost periods and staggering start times to avoid rebound peaks.

MGE also offers an EV Fleet Analysis for businesses. It helps customers compare gas and electric vehicles using data from telematics. It also provides a total cost of ownership summary and recommendations for EVs and charging infrastructure.

## Partnerships with local dealerships

Since 2021, MGE has worked with vehicle dealers to support the transition to EVs. MGE has worked to educate dealers on programs available to facilitate charging at home. In addition, MGE works closely with dealerships on their own electrification efforts by providing technical assistance for installing chargers at their facilities.

## EV Ambassadors

MGE has long partnered with local EV drivers to help educate customers about EVs and EV charging. In 2022, MGE launched its formal EV Ambassador program. More than 60 drivers already have signed up to showcase their vehicles at community events and talk with interested customers about their experience with EVs.

## EV engagement at MGE

MGE seeks to engage our employees in our efforts to grow the use of EVs. We offer five workplace charging stations, each with dual ports, to enable charging for employees while at work. Workplace charging offers many benefits, including employee attraction and retention and support for sustainable initiatives.



## Electric buses in Madison

MGE is providing technical assistance to the City of Madison in the development of an all-electric bus rapid transit (BRT) system. The BRT system will include 46 60-foot articulated buses as well as off-hours and en route charging. MGE is working with the City's Metro Transit (Metro) to plan and install charging capacity at its primary bus storage and maintenance facility. MGE also provided a letter of support for a recently awarded \$670,000 grant from the Federal Transit Administration under the Areas of Persistent Poverty grant opportunity.

In 2022, the City of Madison added three all-electric buses to its public transportation fleet with help from MGE. We worked with Metro to secure a \$1.3 million federal grant for the zero-emission buses and contributed 100% of the required local matching funds for charging infrastructure for the buses. As part of the ongoing collaboration to electrify the City's bus fleet, MGE is providing continued in-kind support and expertise to address technological issues and to facilitate charging infrastructure as Metro implements its new BRT system.

All-electric buses are quieter, produce zero tailpipe emissions and will play a key role in efforts to reduce carbon emissions. According to the manufacturer of the first three buses purchased by Metro, each year an electric bus operates in place of a diesel bus, it displaces more than 229,000 pounds of carbon dioxide.

## Ongoing partnership with Madison

MGE continues to work with the City of Madison to seek ways to further the electrification of transportation.

- **Fleet.** When the City received a Wisconsin Office of Energy Innovation grant to help purchase 20 all-electric Chevy Bolts, MGE partnered with the City to provide charging infrastructure for the new fleet vehicles.
- **Electric fire truck.** MGE provided charging equipment for the Madison Fire Department's first electric fire truck. The fire truck began serving the community in mid-2021 as part of a pilot project. That pilot was extended through the end of 2022. The Madison Fire Department announced plans in early 2023 to purchase an electric fire truck from the manufacturer based in Appleton, Wis.
- **Electric garbage trucks.** MGE is assisting the City in procuring and installing a charger for two new electric refuse trucks it is purchasing. MGE will purchase and maintain the charger, eventually turning it over to the City.

## Pole-mounted chargers

MGE is exploring ways to reduce the barriers to EV ownership, including the consideration of equity and the availability of charging for multifamily residents. MGE is working with the City of Madison to identify locations well-suited for pole-mounted EV charging technology. The first pole-mounted charger, which is attached to an existing MGE utility pole, was installed in Madison's Darbo-Worthington neighborhood on the city's east side. MGE has plans to install additional pole-mounted chargers throughout our service territory in neighborhoods that have been traditionally under resourced and where there is a high prevalence of multifamily buildings.



## Federal grant support

MGE worked with a team of local stakeholders, including Dane County, the Greater Madison Metropolitan Planning Organization, the City of Madison, the City of Middleton and the City of Sun Prairie among others, on a grant application for the Charging and Fueling Infrastructure Discretionary Grant Program. If awarded, the grant would provide funding to strategically deploy publicly accessible EV charging infrastructure and other alternative fueling infrastructure in our communities.



## Electric food truck

MGE partnered with the University Housing’s Dining and Culinary Services team at the UW-Madison and the UW-Madison Office of Sustainability to bring an all-electric food cart, known as “Electric Eats,” to campus in 2021. “Fuel” costs for the electric food cart are less than a comparable gasoline model, and it’s cleaner and quieter.

The small, rechargeable truck runs on two chargeable batteries: one for the food service equipment and one to power the vehicle. These batteries can be charged in any standard 20-amp power outlet, supply enough energy for the truck to run for 50 miles and provide up to 10 hours of service before needing to be recharged.

## EV charging for local school districts

MGE partnered with the Madison Metropolitan School District to install a charging station to serve its electric fleet vehicles. In addition to ongoing educational partnerships, MGE continues to work with local schools to evaluate charging options for their facilities.

## Midcontinent Transportation Electrification Collaborative

As part of the Great Plains Institute’s Midcontinent Transportation Electrification Collaborative (M-TEC), we’re working with other utilities, state governments, automakers, EV charging companies and environmental groups to advance EV infrastructure and to increase the use of EVs. Working together, the group conducts research, develops white papers and policy recommendations, and hosts workshops for stakeholders in the region. In 2021, M-TEC urged Congress to support investments in EV charging infrastructure; to keep the automotive supply chain in the U.S. by supporting EV and EV component manufacturing; and to support EV research, development and demonstration.

## Sustainable transportation series

MGE continues to partner annually with Wisconsin Clean Cities, the City of Madison and others to present the Transportation & Innovation Expo. Fleet managers and members of the public have the opportunity to attend panel sessions and get an up-close look at a variety of sustainable vehicles and equipment.

## EV resources and tools for drivers

MGE helps to educate customers, businesses and our community at-large about the benefits of EVs. Our experts have been on hand at many community events with a variety of EVs to share information on driving and charging EVs.

For example, each year, MGE sponsors the National Drive Electric Week event held in Madison. Local EV drivers register to showcase their vehicles to attendees. MGE EV experts are available to share information about EVs and EV charging.



Our LovEV website helps customers discover why “there’s a lot to love” about EVs. LovEV highlights available models, explains charging options, and details potential cost and environmental savings. It is an easy, one-stop online resource at [mge.com/LovEV](https://mge.com/LovEV).

The online tool, Explore My EV, gives users the opportunity to compare the costs of plug-in hybrid and all-electric vehicles to gasoline-powered models. The tool, available at [mge.com/exploremyev](https://mge.com/exploremyev), considers commute distances, available tax credits and maintenance costs, among other things through its online analysis.

# Modern grid

## Utility as conductor of the distribution grid

We take seriously our responsibility and commitment to those we serve. The electric grid is a shared resource for the benefit of everyone, providing for the safety and security of a community through safe, reliable electricity.

We're investing in the systems and capabilities to enable an electric grid that supports new technology, such as distributed energy sources like solar and battery storage. We have an important role to play to ensure that new resources and technologies are harnessed for the benefit of all customers.

This increasingly more advanced electric grid requires a conductor to ensure the system develops and operates in a way that keeps electricity safe, reliable and affordable for everyone. As the public utility, MGE serves as this conductor for our community grid.

When the utility serves as the conductor of the electric grid, new technologies and resources can add value to the system because the utility is able to dispatch generation and balance demand as needed. With more sources of two-way power flows—power flowing to the customer from the grid and power flowing from the customer's generation back onto the grid—a single conductor system provides efficiency in coordinating the different sources of power and the various needs of the grid in real time to maintain a safe and reliable power supply.

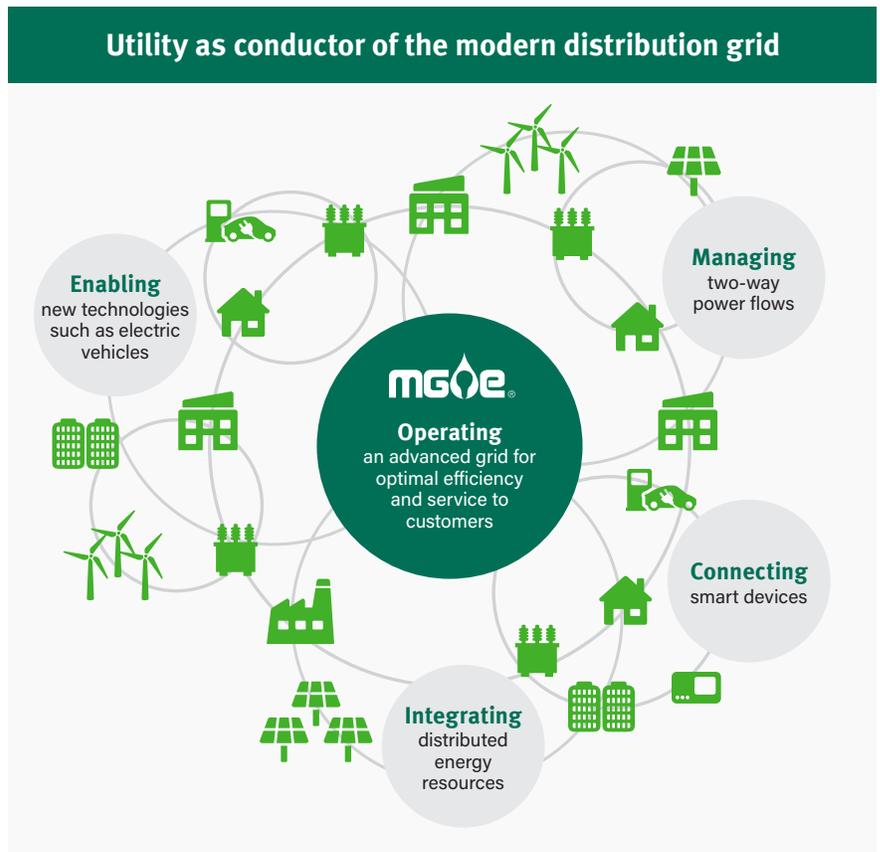
This orchestration benefits the utility as well as customers because it helps to ensure the system operates efficiently and is sized appropriately. The utility as conductor can optimize the efficiency and use of the electric system's assets to help control costs and to optimize benefits and value over time, which leads to lower costs for all customers. The benefits of grid resiliency, reliability and a more efficiently managed power system are captured for all customers, individually and collectively.

Today's customer expects a grid that integrates all sorts of energy technologies in a way that gives them choice, flexibility and value. New technology is changing how we plan for the energy grid of the future; however, our obligation to serve customers and communities 24 hours a day, seven days a week, 365 days a year remains unchanged.

## Connected Communities

In fall 2021, the United States Department of Energy (DOE) announced projects selected to receive grants to integrate buildings with distributed energy resources, such as solar photovoltaic generation and EV charging. A \$5 million grant with a \$3 million cost share was awarded to Slipstream Group for a project with the City of Madison, MGE and others.

According to the DOE, the plans call for the conversion of about 15 facilities to grid-interactive, efficient buildings and added EV charging nearby. If this project shows improvements in cost-effective efficiency and demand flexibility, it will serve as a model for communities across the country. Connected Communities funding supports projects that expand the DOE's network of grid-interactive, efficient building communities nationwide to help achieve a decarbonized electricity system by 2035 and decarbonized energy sector by 2050.





## Natural resources and biodiversity

MGE takes steps to protect our natural resources. This means doing our part to help improve waterways, preserve the natural beauty of our communities and protect wildlife habitats.

### **Fund for Lake Michigan/Salt Wise Strategic Development Grant**

Lake Michigan's water is critical to Wisconsin's future. MGE supports the Fund for Lake Michigan (the Fund), which helps sustain the lake for those who depend on it. Among its projects, the Fund supports the Wisconsin Salt Wise Strategic Development Grant. It provides funding to help communities and regions of the state protect our waterways by becoming salt certified.

In winter, many companies and individuals use salt to combat icy sidewalks and roads; however, excess salt flows into our waterways, negatively impacting water quality. One teaspoon of salt pollutes five gallons of water, and once in the water, salt cannot be removed. Additionally, chloride, a chemical in salt, is toxic to small aquatic life.

Oftentimes, more salt than is needed to fully melt ice on parking lots and sidewalks is applied. That means some of the salt put down is washed away. Salt certification provided through the grant trains consumers how to calculate the amount of salt needed for an area without a lot of waste.

The Wisconsin Salt Wise Partnership spearheaded salt-reduction efforts in Dane County. Madison launched the state's first salt certification program several years ago. MGE works with a local certified salt applicator for snow removal at our facilities.



## Combating the decline of monarchs

Monarch butterfly populations in the United States have seen substantial declines in their population the last few decades. In 2022, monarchs were officially designated as endangered by the International Union for Conservation of Nature.

One of the biggest impacts on the monarch population is the loss of habitat for breeding, migrating and overwintering. The monarch butterfly needs habitat for both its caterpillar and adult populations. Adult monarchs feed on the nectar from many flowering plants throughout the growing season, but they breed only in areas where milkweed is found. Milkweed is critical for their survival. Monarchs lay their eggs on milkweed, and their caterpillars are dependent on milkweed as a food source during their development. Milkweed is native to Wisconsin and can be found almost anywhere wildflowers grow throughout the state.

**MGE providing habitat:** MGE has been increasing our habitat for monarchs and pollinators at our facilities. We have planted native plants, including flowering natives, on all our MGE-owned and MGE-operated solar generation sites.

We've worked with our vegetation management consultants and asked for input from experts at the Wisconsin Department of Natural Resources and the Public Service Commission of Wisconsin to review several of our plant mixes to ensure they are viable in our climate, monarch-friendly and pollinator-friendly. We are actively managing our sites so that native plantings establish and invasives and undesirable woody plants do not overtake our native plantings.

At three of our MGE-owned and MGE-operated solar sites, representing more than half of MGE's owned and operated solar acreage, our native seed mixes were planted to support the monarch's life cycle from egg to caterpillar and to adult. This was accomplished by planting several types of milkweed and native plants that will flower throughout the monarch season in Wisconsin. Our partners at our jointly owned solar generation sites also have planted monarch-friendly and pollinator-friendly natives.

Our habitat conservation efforts at these solar sites are a good fit since we have space around and even under the solar arrays that would otherwise be turfgrass. We continue to

take inventory of what habitat we have planted and planned, and we're looking for opportunities to expand where it makes sense.

**A protection agreement:** Since monarchs migrate, they need to be able to find suitable habitat throughout their migration pathway. Increased development, fragmented habitat and intentional removal of milkweed all contribute to an overall reduction in habitat. One way the U.S. Fish & Wildlife Service is working to address this is through the development of a voluntary agreement with utility companies and departments of transportation in the states where monarchs are found.

The voluntary Monarch Candidate Conservation Agreement with Assurances (Monarch CCAA) is designed to increase monarch habitat throughout their migratory range using transportation and utility properties, such as rights-of-way and generation facilities, to plant monarch-friendly milkweed and flowering plants. The agreement allows utilities flexibility for further growth and protection against future monarch regulatory obligations in exchange for agreeing to maintain and/or create monarch habitat on a certain percentage of their properties. MGE continues to review our internal commitments and habitat inventory to determine whether the Monarch CCAA is a good fit for our monarch and pollinator commitments.

The Monarch CCAA also supports other pollinators, such as native bees. Land dedicated to the Monarch CCAA will have flowering plants from spring to fall, which many native bee populations need to thrive.



## 26 years as Tree Line USA utility

MGE recently marked 26 years of being named a Tree Line USA utility. The distinction recognizes our efforts to protect community trees and enhance urban forests. The Tree Line USA program recognizes best practices in public and private utility arboriculture, demonstrating how trees and utilities can co-exist for the benefit of communities and residents. The Arbor Day Foundation collaborates with the National Association of State Foresters on this initiative. MGE's Forestry team and other employees across the company collaborate to help ensure we meet all the necessary requirements to be designated a Tree Line USA utility.

## Falcon restoration

Since 2009, peregrine falcons have nested at our Blount Generating Station in downtown Madison. Man-made nesting boxes at power plants have proven to be ideal homes for the birds of prey, which are an endangered species in Wisconsin. The use of DDT pesticide beginning in the 1940s eradicated them.



Falcons were reintroduced to Wisconsin in the 1980s, and while they are listed as endangered in Wisconsin, they have made a slow, steady comeback due to statewide efforts and nesting boxes like the one at Blount Generating Station. The original nesting box at the plant was installed in 1999. It was built by an MGE employee and his son. In fall 2018, due to renovations at the power plant, employees built a new falcon box and moved it to a new location at the plant, which the falcons began using for nesting in 2019.

The falcon chicks born in 2023 have names inspired by iconic Wisconsin foods and voted on by MGE employees. Cheese Curdis, a female, was named for the little chunks of white or orange cheese that haven't gone through the aging process. Made famous as a Wisconsin delicacy, this squeaky

cheese can be found on the menu at many Wisconsin establishments. Cream Puff, a female, was named for the famous French pastry Wisconsinites have grown to love and celebrate every year at the Wisconsin State Fair.

MGE has seen 55 falcons hatch at Blount Generating Station since 2009 when they began nesting at the plant. Falcon expert Greg Septon visits the power plant every spring for our naming ceremony during which the chicks also are banded for tracking throughout their lifetimes. For more information on MGE's falcons, visit [mge.com/falcons](https://mge.com/falcons).

MGE is proud to support the ongoing recovery of these raptors through our nesting box and support from the MGE Foundation for Hoo's Woods Raptor Center, a local nonprofit dedicated to the rehabilitation of birds of prey and the preservation of their ecosystems.

## Erosion control

We are committed to implementing proper erosion control methods at all work sites. This minimizes the likelihood of soil being washed out of a site. We track permits and inspections and have dedicated staff who review new regulations, field techniques and technologies to ensure we manage our erosion-control strategies effectively.

## Protecting waterways

In 2022, we updated our environmental emergency response plans for facilities with high risk to waterways, human health and sensitive environmental features. MGE's Environmental Affairs staff reviewed the plans for accuracy and improvement regarding the potential for release of materials, oil or chemicals to wetland, waterbody or other environmentally sensitive areas from operations, bulk storage or construction. Employee training at facilities with the highest risk also was completed.

## Stormwater management

Pollutants transported in stormwater are harmful to lakes, rivers, wetlands and waterways. MGE implements measures to protect our water bodies. For example, MGE's downtown parking lot has a stormwater filtration system. This system cleans stormwater before it drains into nearby Lake Monona and is effective in reducing pollutants such as petroleum compounds, sediment and phosphorus.

## Phosphorus reduction in local lakes

Another way MGE supports clean lakes is through Yahara WINS. This collaborative water cleanup effort began as a pilot and expanded to a 20-year program to reduce phosphorus in our watershed. MGE supports this project through financial support from the MGE Foundation and through service on its technical advisory board, the Yahara Watershed Improvement Network Group. A collaborative approach pools the resources and expertise of community partners. It employs the strategy of watershed adaptive management in which all sources of phosphorus pollution are addressed together to meet water quality goals.

Yahara WINS is exceeding expectations for modeled phosphorus reductions and is on track to meet its 20-year project goals. In 2022, the program reported more than 50,500 pounds of phosphorus reduced, which was greater than its goal of 43,076 pounds.

## Solar power at corporate office

Nearly 450 solar panels on our corporate office in Madison help to power the facility. The array, along with 52 panels in our visitor parking lot, represents another step in our ongoing path toward greater sustainability throughout our operations. In addition, MGE's 2,000-square-foot office building in Prairie du Chien, Wis., has 20 rooftop solar panels.

# Sustainability benchmarking and performance

MGE is committed to reducing environmental impacts across all areas of the company. MGE voluntarily participates in statewide environmental performance programs and various industry sustainability and benchmarking groups.

## Sustainability Steering Team

Thirty years ago, a small, informal group of MGE employees concerned about the environment laid the groundwork for something bigger. Their efforts evolved into a successful company-wide effort to make environmentally responsible choices at work.

From establishing a vehicle idling policy to expanding recycling efforts, MGE's employee-led Green Team has helped the company achieve milestones in corporate sustainability and responsibility. Today, our Green Team remains active and strong with a new structure and focus on advancing our history of sustainable practices.

In 2018, MGE transitioned from our employee-led Green Team to our Sustainability Steering Team. Composed of employees from across the company, the Sustainability Steering Team oversees our Environmental Management System (EMS). It also supports external sustainability engagement and benchmarking, such as our participation in the Green Tier and Green Masters programs. Having team members from departments across the company is a more efficient way to gather data for our voluntary sustainability reporting efforts. The Sustainability Steering Team is overseen by and receives guidance from our Executive Sustainability Team, which has officer representation from across MGE.

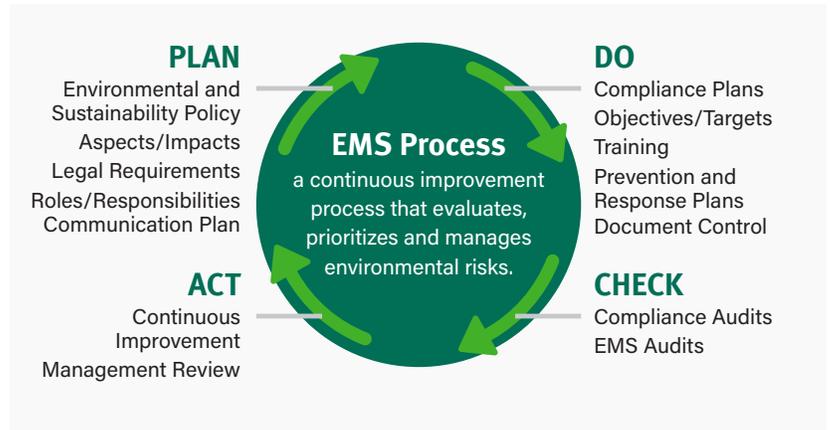


## Continuous Improvement Sustainability Teams

The Sustainability Steering Team reviews, evaluates and prioritizes continuous improvement opportunities for the company. The group assembles Continuous Improvement Sustainability Teams to address specific improvement initiatives and tasks.

## Company-wide EMS

Our first Continuous Improvement Sustainability Team oversaw the expansion of our EMS to cover all MGE operations. An EMS is a continuous improvement process that evaluates, prioritizes and manages environmental risks. MGE previously used an EMS at our Blount Generating Station. The expanded scope of our EMS captures and manages environmental risks across all company operations. It also further demonstrates our commitment to goal setting and environmental accountability. Read more about our EMS in the [Governance](#) section.



## Green Masters program

In 2022, MGE earned the Green Master designation for the ninth consecutive year from the Wisconsin Sustainable Business Council. Only the top 20% of applying companies receive the Green Master designation.

The independent, points-based benchmarking program evaluates applicants in nine key areas: energy, climate change, water, waste, transportation, supply chain, community outreach, workforce and governance. MGE was the first utility to be awarded the distinction in 2014.

## Energy Sustainability Interest Group

MGE partners with the Electric Power Research Institute (EPRI) in a number of areas, including the Energy Sustainability Interest Group (ESIG). The largest sustainability-focused group of its kind in the electric power industry, ESIG:

- Provides a collaborative industry forum for electric power companies to discuss sustainability performance.
- Facilitates peer-to-peer benchmarking on priority sustainability topics.
- Conducts focused technical research and develops specific tools to support sustainability program development.
- Tackles the challenge of identifying, understanding and communicating sustainability matters, goals, metrics and disclosure.
- Facilitates stakeholder engagement.
- Informs sustainability reporting initiatives.

ESIG projects focus on priority issues, goals, metrics and sustainability communication for the electric power industry and its stakeholders. The project work may be utilized by group members to inform the development of their own sustainability programs and initiatives. Launched in 2008, ESIG has approximately 40 members from the electric power industry.

## Sustainability benchmarking

In 2022, EPRI marked its ninth year of an ongoing effort to identify and understand metrics appropriate for benchmarking the performance of electric power companies on their priority sustainability issues. MGE has participated in this EPRI benchmarking since it began in 2014.

The Sustainability Benchmarking for Utilities project is conducted in collaboration with the previously mentioned ESIG and subject matter experts throughout EPRI. The project work is designed to advance technical research around what a sustainable electric power company looks like and how it can support the sustainable generation, delivery and utilization of electric power to customers.

## Supply chain and waste management

Successful waste management requires a solid recycling program. We encourage employees to make smart choices about the environment. That includes supporting our recycling and waste-reduction efforts every day. We work to conserve, recycle and manage waste efficiently.

### Reduce-reuse-recycle

Our all-in-one recycling method includes aluminum, steel cans, paper products, glass and plastic. We also recycle various metals and other scrap materials left over from field work. Our computing equipment and supplies are sent to an e-Steward-certified company for recycling or reuse, and our alkaline batteries go to a vendor who recovers steel and zinc.

Our battery recycling program allows employees to bring in alkaline, NiCad and rechargeable batteries from home. Collection points around the company allow for safe, efficient drop-offs.

We also recycle thermostats and other mercury-containing devices, chemicals, steel, iron, copper, glass and cell phones. Additionally, a local vendor takes our wood pallets, recycling them into mulch. In 2022, MGE recycled the following:

- Tons of alkaline batteries: 0.68
- Tons of e-waste: 7.69
- Tons of all-in-one office recycling: 173.8
- Tons of metal: 527.9



### 2022 recycling

**0.68** tons of alkaline batteries

**7.69** tons of e-waste

**173.8** tons of all in-one office recycling

**527.9** tons of metal

### Office recycling improvements

In 2022, as part of ongoing continuous improvement efforts, MGE implemented waste management changes at our headquarters to improve recycling rates. Individual garbage and recycling containers were removed from workstations and replaced with centralized waste bins with signage to make it easier for employees to choose between waste and recycling.

### Bottle filling stations and filtration systems

Throughout our facilities, MGE has more than 20 water bottle filling stations and filtration systems for employees to reduce the use of plastic bottles. In the nine years since the first one was installed through year-end 2022, MGE employees have avoided using more than 686,000 disposable plastic bottles.

### Eliminating waste with e-records

MGE's E-records Center allows employees to submit electronic documents to be stored as records rather than keeping paper copies. Over time, this will reduce our volume of paper. This environmentally friendly option also frees up physical storage space.

### Paperless billing

MGE launched an improved online billing and payment system for customers in 2016. Online billing and payment is a "win-win" for customers and companies. Studies find customers are more satisfied when viewing and paying their bills electronically. Companies benefit from paper and postage savings.

Based on the number of customer accounts signed up for paperless billing in 2022, an estimated 1,250,000 bills were not printed and mailed, which results in paper and cost savings. We expect that number will increase to more than 1,300,000 bills not printed and mailed in 2023.

## Supplier proximity and diversity

MGE is committed to supplier diversity. Our goal is to ensure that equal opportunities exist for all small businesses, women-owned businesses and minority-owned business enterprises.

MGE's corporate policy is to buy locally. We will give preference to Wisconsin manufacturers and distributors. Local purchases support the local economy and are typically more environmentally friendly. When it is time to purchase goods needed to run our company, we review our supplier database and buy from local vendors when possible and cost-effective. Many of the materials and equipment that utilities need are highly specialized; however, we buy U.S. products whenever possible.

## ONE Future Coalition

MGE contracts with two natural gas transmission companies, Northern Natural Gas, a Berkshire Hathaway Energy Pipeline Group Company, and ANR Pipeline Company, owned by TC Energy.

Both of these companies, as part of their sustainability commitments, are part of the ONE Future Coalition. ONE Future is the trade name for "Our Nation's Energy Future Coalition, Inc." This group of more than 50 natural gas companies works together to voluntarily reduce methane emissions across the natural gas supply chain to 1% or less by 2025. In its 2021 report, the most recent available, ONE Future cited a methane intensity of less than one half of one percent, beating its 1% goal.

Northern Natural Gas and ANR Pipeline Company also are part of the U.S. Environmental Protection Agency's Methane Challenge Program. Partners in this voluntary program report systemic and comprehensive actions to reduce methane emissions as part of efforts to enhance transparency in the industry. Reducing methane emissions decreases operational risk, increases efficiency and demonstrates concern for the environment, with benefits ranging from air quality improvements to conservation of non-renewable energy.

## Comprehensive risk minimization

MGE's Environmental Affairs team oversees hundreds of routine monitoring, recordkeeping and reporting tasks. MGE's Environmental Management Information System (EMIS) is used to manage environmental data collection, data analysis, recordkeeping and reporting associated with environmental management. Read more about our EMIS in the [Governance](#) section.

## Environmental Management System

In 2017, MGE expanded the scope of our Green Tier program, and in 2020, we renewed our five-year contract with the Wisconsin Department of Natural Resources (DNR) for Green Tier certification, which recognizes environmental leadership. Our primary goal in the expanded contract is to cover all MGE operations under our EMS. An EMS is a continuous improvement process that evaluates, prioritizes and manages environmental risks.

MGE previously used an EMS at our Blount Generating Station. The expanded scope of our EMS captures environmental improvements across the company and further demonstrates our commitment to goal setting and environmental accountability.

Our expanded EMS has undergone three external compliance audits and three EMS audits, resulting in recommendations to the DNR that we continue in the Green Tier program. Read more about our EMS in the [Governance](#) section.

# Transparency and disclosure

MGE is committed to providing transparency and accountability in its disclosures. This detailed annual compendium of activities and data is an example of that ongoing commitment to those we serve.

MGE also participates in the Edison Electric Institute's (EEI) and American Gas Association's (AGA) environmental, social and governance (ESG)/sustainability-related reporting templates. The voluntary, industry-specific templates include both qualitative and quantitative information, such as generation and emissions data. Our EEI-AGA templates are available in our [ESG Data Center](#).

MGE Energy participates in CDP (Carbon Disclosure Project), the global platform for disclosure of environmental impacts. Our CDP climate change questionnaire is available in our [ESG Data Center](#), where additional disclosures are available, including our Task Force on Climate-Related Financial Disclosures report.