Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Madison Gas and Electric (MGE) generates and distributes electricity to 159,000 customers in Dane County and purchases and distributes natural gas to 169,000 customers in seven south-central and western Wisconsin counties. MGE is a subsidiary of MGE Energy (Nasdaq: MGEE), an investor-owned public utility holding company based in Madison, Wis. MGE's roots in the Madison area date back more than 150 years. Assets total approximately $2.4 billion. In 2021, revenue was approximately $607 million.

This report contains forward-looking statements that reflect management's current assumptions and estimates regarding future performance and economic conditions—especially as they relate to economic conditions, future load growth, revenues, expenses, capital expenditures, financial resources, regulatory matters, and the scope and expense associated with future environmental regulation. These forward-looking statements are made pursuant to the provisions of the Private Securities Litigation Reform Act of 1995. Words such as "believe," "expect," "anticipate," "estimate," "could," "should," "intend," "will," and other similar words, and words relating to goals, targets, and projections, generally identify forward-looking statements. These forward-looking statements are subject to known and unknown risks and uncertainties that may cause actual results to differ materially from those projected, expressed, or implied. MGE Energy and MGE undertake no obligation to release publicly any revision to these forward-looking statements to reflect events or circumstances after the date of this report.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2021	December 31, 2021	No

C0.3

(C0.3) Select the countries/areas in which you operate.

United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Equity share

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation

Distribution

Other divisions

Gas storage, transmission and distribution

Smart grids / demand response

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	MGEE

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board Chair	Our CEO also serves as President and Board Chair - see responses for CEO.
Chief Executive Officer (CEO)	MGE's Chief Executive Officer has overarching responsibility for company strategy, compliance, and operation. This includes climate-related risks, strategies, and performance. The CEO provides regular updates to the Board.
Other, please specify Board of Directors	Enterprise-wide risk assessment and oversight are fundamental responsibilities of the board. Directors are involved in the process of overseeing the primary risks facing the company. As part of the company's Enterprise Risk Management program, MGE's board receives on an ongoing basis information from management related to key business risks and mitigation strategies. These business risks include existing and emerging risks related to environmental performance and sustainability, including climate-related risks, among other risks.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Other, please specify Quarterly	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies	Quarterly review of SEC filings at the Board level are conducted which include climate-related risks.
Other, please specify Annually	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies	The company's Internal Audit department, on behalf of MGE management and the Board of Directors' Audit Committee, conducts an annual Enterprise Risk Management meeting with each officer of the company. The sessions with individual company officers and management update existing areas of risk, classify new or emerging areas of risk and identify owners responsible for assessing, managing and/or mitigating areas of risk.

	Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives	
Other, please specify Biannually	Reviewing and guiding strategy Reviewing and guiding risk management policies Reviewing and guiding business plans Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Board engages in a comprehensive risk assessment and mitigation review biannually with quarterly review. And, on a biennial basis, the board conducts a broad-based exercise with all company officers on risk and emerging risk identification, assessment, and mitigation strategies.
Other, please specify As important issues arise	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding business plans Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and	The company's comprehensive approach to risk management encourages all directors to initiate discussion at any time, either directly or through the Lead Independent Director, on any areas of concern, including risk identification and assessment, controls, management, and oversight. The board and MGE management have created a culture of sustainability, responsibility, and risk management. All officers of the company take ownership in and are accountable for managing and mitigating corporate risk.

	targets for addressing climate-related issues	

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	Climate-related issues are core competencies of the past and current Chairman, President and CEO, both of whom are Board members. Climate-related issues are fundamental to MGE's business and these Board members have and/or continue to lead their company through a climate-related transition. MGE Board members bring a breadth of experience and diversity to their service as directors, which helps them in their oversight of the Company and climate-related issues. The board conducts an annual Board of Directors assessment. This evaluation covers key professional skills, diversity, and breadth of community and other business experience and knowledge and includes financial expertise, business development, strategic planning, business operations, cybersecurity, sustainability, business processes and effectiveness, information technology, and community engagement. Three directors, in addition to the current and former CEO, are classified as having environmental experience.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

Other C-Suite Officer, please specify VP General Counsel and Secretary	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other C-Suite Officer, please specify VP Finance, CIO and Treasurer	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify VP-Energy Operations	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Director Safety, Sustainability and Environmental Affairs	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Sustainability Executive Team which includes Executive VP-Marketing and Communications; VP-Finance, CIO and Treasurer; VP-Energy Operations	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Sustainability Steering Team which includes 18 employees from different departments and field operations	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The CEO also is the President of the Company and Chairman of the Board of Directors. The VP General Counsel and Secretary oversees Legal Services, Government Affairs, and Safety, Sustainability and Environmental Affairs, is the Corporate Secretary, serves on the Sustainability Executive Team, and reports directly to the CEO. The Executive Vice President-Marketing and Communications; VP-Finance, CIO and Treasurer; and VP-Energy Operations all also serve on the Sustainability Executive Committee, and report to the CEO. The Director Safety, Sustainability and Environmental Affairs manages Safety, Sustainability and Environmental Affairs and reports to the VP General Counsel and Secretary. All of these positions monitor climate-related issues through their professional work, business operations and strategy, collaboration with industry partners, community stakeholders, investors, academia, and peers, and through scientific reports from organizations such as the IPCC.

The officers on the Sustainability Executive Team provide input to the Steering Team and keep the Board of Directors informed on sustainability initiatives and ESG-related matters. The Sustainability Steering Team has representation from throughout the organization and oversees the company-wide Environmental Management System to drive environmental risk management and sustainability performance.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Goals related to environmental, social and governance, operations and financial goals are reviewed by the board in assessing management.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Corporate executive team	Monetary reward	Emissions reduction project Emissions reduction target Efficiency project Efficiency target Other (please specify) Renewable energy targets	Our executive officers, including the named executive officers, are partially compensated through annual short-term incentives or bonuses. The incentives are based on objective metric-specific targets, a subjective assessment of overall corporate performance and a subjective assessment of individual performance. Goals related to environmental, social and governance that are reviewed by the board in assessing management include: - Advances "Energy 2030" framework and "Net-carbon zero by 2050" goals - Maintains or improves culture of environmental stewardship including preparing the annual Corporate Responsibility and Sustainability Report - Promotes and improves a diverse, equitable and inclusive workplace - Maintains or improves safety culture - Upholds compliance with regulatory requirements Full text on executive compensation is on Page 33 of our Annual Shareholder Report found at https://www.mgeenergy.com/MGEEnergy/media/Library/documents/annual-reports/2021-AR-Proxy-Final.pdf

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	1	5	These are general guidelines for how we think of time frames regarding climate-related topics
Medium-term	6	15	These are general guidelines for how we think of time frames regarding climate-related topics
Long-term			

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

MGE defines substantive financial or strategic impact consistent with the guidelines of the US Securities and Exchange Commission (SEC). These results are described in the Management Discussion and Analysis (MD&A) section of the company's annual 10-K Form and other periodic public filings to the SEC. The MD&A provides an overview of the company's strategy as well as qualitative results on the company's performance relative to implementation of the strategy. Primary indicators of financial results indicators include net income and earnings per share. Additional quantitative indicators include capital investments expending company-owned renewable generation as well as investments in supporting resources and modernizing infrastructure that will enable maximizing operation on the electricity grid.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Enterprise-wide risk assessment and oversight are fundamental responsibilities of our board. Directors are involved in the process of overseeing the primary risks facing the company. As part of the company's Enterprise Risk Management program, our board receives on an ongoing basis information from management related to key business risks and mitigation strategies. These business risks include existing and emerging risks related to environmental performance and sustainability, among other risks. The company's Internal Audit department, on behalf of MGE management and the Board of Directors' Audit Committee, conducts an annual Enterprise Risk Management meeting with each officer of the company. The sessions with individual company officers and management update existing areas of risk, classify new or emerging areas of risk and identify owners responsible for assessing, managing and/or mitigating areas of risk. In addition, the board engages in a comprehensive risk assessment and mitigation review biannually. And, on a biennial basis, the board conducts a broad-based exercise with all company officers on risk and emerging risk identification, assessment, and mitigation strategies.

The company's comprehensive approach to risk management encourages all directors to initiate discussion at any time, either directly or through the Lead Independent Director, on any areas of concern, including risk identification and assessment, controls, management, and oversight. The board and MGE management have created a culture of sustainability, responsibility, and risk management. All officers of the company take ownership in and are accountable for managing and mitigating corporate risk.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	MGE is subject to extensive government regulation in our business, which affects our costs and responsiveness to changing events and circumstances. We have an Environmental Management Information System (EMIS) in place to monitor, record and report on compliance with current regulations affecting our operations, including climate-

		related regulations. MGE also has an Environmental Management System (EMS), which evaluates environmental risks throughout all our operations including climate-related environmental performance risks.
Emerging regulation	Relevant, always included	We may be subject to future laws, regulations, or actions associated with public concern with fossil-fuel generation, greenhouse gases, and the effects of global climate change. We continually track and assess emerging regulations on specific topics including climate-related regulations. This information is presented to our management team at least annually for consideration in enterprise-wide risk assessments and strategic planning.
Technology	Relevant, always included	We could be adversely affected by changes in the development, and utilization by our customers, of power generation, storage, and use technologies. Such developments could reduce customer purchases of electricity but may not necessarily reduce our investment and operating requirements due to our obligation to serve customers. Our long-term decarbonization goals are based on certain assumptions regarding the timing, scope, and relative costs of technological advancements, including generation, storage and energy use technologies, levels of customer participation in programs and partnerships. These assumptions may differ materially from actual future results. Accordingly, we may not achieve our stated long-term goals in the timeframe projected or at all.
Legal	Relevant, always included	We face legal risk in connection with the completion of significant capital projects. Our capital projects, such as our renewable generation projects, are subject to various completion risks that could cause costs to increase or delays in completion. These include legal risks such as the inability to agree to terms of contracts or disputes in contract terms; the inability to obtain necessary permits in a timely manner; changes in applicable laws or regulations; adverse interpretation or enforcement of permit conditions; governmental actions and legal action.
Market	Relevant, always included	We are exposed to commodity price risk relating to our purchases of natural gas, electricity, coal, oil, and environmental allowances. Disruptions in the financial markets or changes to our credit ratings may affect our ability to finance at a reasonable cost and in accordance with our planned schedule. Catastrophic and unpredictable events could have a material adverse effect on our business and markets.
Reputation	Relevant, always included	We are exposed to reputational risk if we are not being seen as being proactive in addressing climate-related concerns. This could affect customers' energy choices, including efforts at self-supply, and could affect the handling and treatment of our rate requests and cost recovery. This could also result in difficulty attracting investors, which could affect the availability and cost of capital and financing.

Acute physical	Relevant, always included	A terrorist attack, war, natural disaster, extreme weather, pandemic virus or disease, or other catastrophic or unpredictable event could adversely affect our future revenues, expenses and operating results by: interrupting our normal business operations; causing employee absences or casualties, including loss of our key employees; interrupting or affecting supplier operations; requiring substantial expenditures and expenses to repair, replace and restore normal business operations; and reducing investor confidence.
Chronic physical	Relevant, always included	We are affected by weather, which affects customer demand and can affect the operation of our facilities. Very warm and very cold temperatures, especially for prolonged periods, can dramatically increase the demand for electricity and gas for cooling and heating, respectively. With the climate changing, we must adapt to manage our operations and serve our customers with the expectations of higher high temperatures, and more precipitation and ice.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased direct costs

Company-specific description

We are subject to environmental laws and regulations that affect the way we conduct business, including capital expenditures, operating costs, and potential liabilities. While it is difficult to know the extent of possible legislation or regulatory activity, it is expected there will be an increase in the number and scope of climate-related laws and regulations aimed at fossil-fueled generation and the transportation of natural gas.

These possible changes, as well as evolving consumer sentiment, have affected and may continue to affect our business plans, make them more costly, or expose us to liabilities for past, present, or future operations.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation

MGE has a process in place to continuously evaluate and anticipate regulatory and legislative developments. We review the international and national science on carbon reduction expectations and have pledged our company goals to be consistent with that direction. MGE has pledged an 80% reduction of electric generation carbon dioxide emissions by 2030 and net-zero by 2050.

We continue to evaluate potential impacts from mandates and regulations of greenhouse gas emissions on our business strategy around these goals and their pace. We recently updated the goals based on this process and will continue to do so.

Comment

The impact has not been quantified financially. A wide range of specific potential impacts from mandates or regulation can occur and there are interactions with other inherent risks.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Technology

Transitioning to lower emissions technology

Primary potential financial impact

Increased direct costs

Company-specific description

We face risk in connection with the completion of significant capital projects. Our capital projects, such as our renewable generation projects, are subject to various completion risks that could cause costs to increase or delays in completion affecting our transition to lower emissions technology. These risks include shortages of, the inability to obtain, the cost of, and the consistency of, labor, materials and equipment; the inability of the contractors to perform under their contracts; the inability to agree to terms of contracts or disputes in contract terms; work stoppages; adverse weather conditions; the inability to obtain necessary permits in a timely manner; changes in applicable laws or regulations; adverse interpretation or enforcement of permit conditions; governmental actions; legal action; and unforeseen engineering or technology issues. In the case of our renewable generation projects, we may face delays in the completion of the necessary transmission system connections or upgrades to accommodate the project.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation

MGE mitigates the risk of renewable energy project delays through its reserve margin of energy production, project controls, and operation of dispatchable assets.

Comment

The impact has not been quantified financially. A wide-range of specific potential impacts from transitional risks can occur and there are interactions with other inherent risks.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Storm (including blizzards, dust, and sandstorms)

Primary potential financial impact

Increased direct costs

Company-specific description

Effects from storms and other natural disasters have the potential to impact our operations. These include heavy rains, floods, lightning, high winds, extreme hot and cold temperatures, tornados, and fire. These can disrupt our ability to produce, distribute and provide electricity and natural gas to our customers and we can incur significant costs to repair and/or replace infrastructure within our operations. The potential disruption in demand and significant costs could adversely impact our financial condition and results of operations.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The Company maintains budgets for unplanned expenses. These budgets are to be used for things such as storms or other natural disasters that have an impact on operations.

Cost of response to risk

Description of response and explanation of cost calculation

MGE has plans in place to prevent and mitigate damage from unplanned events including extreme weather and storms. The intent is to ensure reliability for our customers and safety for our workers and our community in response to these events. Having a well-defined and practiced All Hazards Response Plan (AHRP) is critical to managing and responding appropriately to emergency situations. MGE's AHRP encompasses everything from storm response to cyberattacks. The incident command structure within the plan oversees, logistics, operations, and planning. It is supported by communications, legal, environmental, safety, and IT resources.

Comment

The impact has not been quantified financially. A wide-range of operational impacts can occur and there are interactions with other inherent risks of operations.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

MGE's solar, wind, and battery storage projects are a major step toward deep decarbonization and greater use of clean energy sources in pursuit of our net-zero carbon goal.

Since 2015, MGE has announced several new joint and wholly-owned utility-scale wind and solar projects, which are expected to increase MGE's owned renewable capacity by more than nine times when completed by 2024.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Eliminating coal-fired generation from our portfolio, transitioning to cleaner fuels and increasing our investments in renewable energy are key strategies to achieving Net Zero Carbon by 2050. Increasing our renewable energy resources creates new investment opportunities while also reducing our exposure to potential future climate regulations. As a regulated utility, our financial earnings are driven by the allowed specific rate of return on assets included in rate base. Increasing our investments in renewable energy reduces our reliance on coal-fired generation and increases the percentage of cleaner technologies in our rate base.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Our strategies for achieving our carbon reduction goals are investing in renewable energy, electrifying transportation and other end uses, advancing energy efficiency, and reducing the company's reliance on fossil fuels for electricity generation. As part of the

transition, we have recently announced plans to purchase part of the Paris Solar-Battery Park, the Darien Solar Energy Center, the Koshkonong Solar Energy Center and the Red Barn Wind Farm. We completed two distributed solar projects, the 20-megawatt (MW) O'Brien Solar Fields and the 8-MW Hermsdorf Solar Fields, and have welcomed the first phase of the Badger Hollow Solar Farm to our energy supply mix. We're investing in cost-effective cleaner energy sources to power our community safely, reliably, affordably, and sustainably for decades to come.

Comment

Our projected investments in renewable energy are expected to account for nearly 50% of our capital expenditures through 2024. Between 2015 and 2024, we have an estimated total investment of $645 million in renewable energy and battery storage capacity.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

MGE is working to achieve a more sustainable energy future by investing in cost-effective renewable generation and innovative new technologies and services for ALL customers. MGE has emphasized this innovation by developing customer programs to address climate change and encourage our customers to use clean energy and practice energy efficiency and conservation. Our Renewable Energy Rider and Shared Solar programs reduce MGE's carbon emissions while providing customers the ability to purchase renewable energy to meet their energy needs.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Examples of specific programs to realize this opportunity include managing peak demands through our smart thermostat program MGE Connect©; researching and demonstrating residential solar/battery storage projects; researching charging patterns and grid impacts through our electric vehicle programs and projects, such as Charge@Home, and Charge Ahead; and reducing peak demand and reducing energy use through our On Demand Savings program.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver

Other, please specify

Increased development of electric grid

Primary potential financial impact

Other, please specify

Company-specific description

Capital investments in our electric grid infrastructure earn a rate of return, can reduce our operating costs, and improve access to demand management options for our customers.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Capital investments in our electric grid infrastructure can reduce our operating costs and improve access to demand management options for our customers. Increasing our investments in these grid technologies is a key strategy to achieving Net Zero Carbon by 2050. As a regulated utility, our financial earnings are driven by the allowed specific rate of return on assets included in rate base.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

MGE is investing in infrastructure improvements to enhance the electric distribution grid to support and integrate new technology while working to ensure reliable and resilient service at a reasonable cost. Modernization of the grid includes projects that can improve the two-way flow of electricity from traditional sources as well as distributed sources of renewable energy as we transition to cleaner energy sources. Additional initiatives to further enhance reliability and resiliency include Distribution Automation; Asset Renewal projects, such as moving overhead wires underground and voltage conversions; and physical and technological security, communication, and control upgrades. These projects help to improve the resiliency, reliability, security, and safety of the grid while also enabling new renewable energy sources, and advancing innovative customer programs and technologies to deliver a more integrated and efficient grid for the benefit of all customers.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan

Yes

Mechanism by which feedback is collected from shareholders on your transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

MGE has a link to our 1.5-degree analysis and climate transition strategy on our websites, mge.com and mgeenergy.com. The University of Wisconsin-Madison studied MGE's 2050 net-zero carbon electricity goal in its report, "Interpreting Global Energy Scenarios for Emissions Planning at the Utility Scale" published in fall 2020. This analysis supports that MGE's plan reflects carbon reductions consistent with limiting global warming to 1.5 degrees Celsius.

Specific investor feedback occurs in many ways. MGE is a small, investor-owned utility. As Your Community Energy Company, our Officers and Directors are members of our community and generally available to the public. MGE Energy has a larger than typical number of retail shareowners. Those shareowners often communicate directly with our management, employees, Officers and Directors when out in our community attending local events, in local stores/restaurants, and other places. MGE also prioritizes regular engagement with institutional investor groups. MGE Officers also engage proactively at least twice a year with our largest institutional shareholders to obtain their feedback on our climate transition, and all shareholders are invited to ask questions during our Annual Shareholder meeting. MGE Energy's website has an email portal for investor questions to be addressed by the company. Investors also can provide feedback via either Investor Relations or to the Secretary of the Company at any time.

Frequency of feedback collection

More frequently than annually

Attach any relevant documents which detail your transition plan (optional)

Interpreting Global Energy Scenarios for Emissions Planning at the Utility Scale

UW_Climate_Report_November_2020.pdf

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios Customized publicly available physical scenario	Business division	1.5ºC	To evaluate what combination of energy and land-use policies could support the 1.5 degree C goal, multiple research groups around the world have developed computer models. These models attempt to project the global temperature response to different assumptions about energy technology and other factors over the next 100 years. The results of these computer models were reported in the SR15 report of the IPCC and shared through an online database managed by the Integrated Assessment Modeling Consortium (IAMC). The IAMC database provides researchers, companies, and the general public with information to support planning for a low-carbon future. The University of Wisconsin-Madison Nelson Institute for Environmental Studies and the Department of Atmospheric and Oceanic Sciences worked with MGE to evaluate the IPCC scenarios relevant to its operations. The IPCC database used in this study includes 414 scenarios of future energy use. The scenarios considered were those that had a temperature rise below 1.5 degrees or 1.5 degrees with low overshoot, in industrialized countries, and representing CO2 emissions from the electricity sector. Five scenarios met these requirements for inclusion in this analysis. The results of the analysis can be found in the report, "Interpreting Global Energy Scenarios for Emissions Planning at the Utility Scale" at https://www.mge.com/net-zero-carbon-

			electricity/uw-madison-analysis-of-mge-s-net-zero-carbon-goal

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

We set out to evaluate our goal and decarbonization strategies for our electric energy decarbonization pathway. The evaluation applies to the electric energy supplied to our customers consistent with the five IPCC 1.5C scenarios considered in the UW-Madison analysis.

Results of the climate-related scenario analysis with respect to the focal questions

From the UW analysis report, “Interpreting Global Energy Scenarios for Emissions Planning at the Utility Scale”, MGE’s goal of 100% net-zero carbon emissions by 2050 is in line with these scenarios, and in fact, more aggressive than any of the five.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	The products and services MGE provide to its customers are influenced by, and part of our strategy for transitioning to a low carbon future. MGE is working to achieve a more sustainable energy future by investing in cost-effective renewable generation and innovative new technologies and services to benefit all customers. MGE has emphasized this innovation by developing customer programs to address climate change and encourage our customers to use clean energy and to practice energy efficiency and conservation. Our Renewable Energy Rider and Shared Solar programs are two examples of programs that help to reduce MGE's carbon emissions while providing customers the option to grow their use of renewable energy as MGE works to decarbonize its energy supply for all customers. We also have been working on many fronts in the community to

		further the electrification of transportation and energy efficiency.
Supply chain and/or value chain	Evaluation in progress	
Investment in R&D	Yes	MGE is involved in several types of research and collaborations that are influenced by our climate-related risks and opportunities. These risks and opportunities are inherent to our business and therefore trade organizations like EEI and EPRI coordinate research and development in these areas for the electric utility industry. MGE is members of these organizations. Research topics include decarbonization pathways, low/no carbon energy, electrification, energy efficiency, and energy storage. We have also partnered with the University of Wisconsin-Madison to verify our decarbonization path and related research.
Operations	Yes	Climate-related risks and opportunities influence our operations since MGE's future path to achieve its new target of 80% carbon reduction by 2030 is based on the transition away from coal and the addition of new renewable generation to reach our ultimate target of net-zero carbon by 2050. MGE also is investing in the infrastructure we operate to enhance the electric distribution grid to support and integrate new technology while ensuring reliable and resilient service at a reasonable cost.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures Assets Liabilities	Climate-related risks and opportunities are an inherent aspect of our financial planning. Our primary focus today and for the foreseeable future is our core utility customers at MGE as well as creating long-term value for our shareholders. MGE continues to face the challenge of providing its customers with reliable power at competitive prices. MGE works on meeting this challenge by investing in more efficient generation projects, including renewable energy sources. As we work toward achieving 80% carbon reduction by 2030 (from 2005 levels), MGE continues to examine and pursue opportunities to reduce the proportion that coal generation represents in its generation mix and to grow ownership of renewable generation sources. MGE has recently

		announced our plans to eliminate coal from our generation mix through the retirement of Columbia (a coal generation plant) and, the change in the Elm Road Units fuel source from coal to natural gas. MGE will continue to focus on growing earnings while controlling operating and fuel costs. MGE's goal is to provide safe and efficient operations in addition to providing customer value. We believe it is critical to maintain a strong credit rating consistent with financial strength in MGE as well as the parent company in order to accomplish these goals.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

Yes

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's transition to a 1.5°C world.

Financial Metric

CAPEX

Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)

33

Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)

Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)

Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world

MGE deploys resources - both human and financial - that advance its decarbonization strategies and the company's Energy 2030 framework for a more sustainable future. Energy 2030 guides MGE's work with customers to achieve a number of foundational objectives, which include transitioning to a more environmentally sustainable energy supply, building a more dynamic, integrated grid that enables new technology and ensuring that all customers benefit from changing technology.

MGE committed to further reducing carbon emissions from the energy supplied to customers by at least 80% by 2030. MGE is growing its use of solar and wind energy

and investing in battery storage in pursuit of its decarbonization goals, and the company expects to invest in other renewable energy projects beyond what is currently planned.

MGE leadership has stated since setting the company's carbon reduction goals, if the company can go further faster by working with its customers, it will. MGE is working with customers to pursue globally recognized decarbonization strategies to achieve carbon reductions consistent with climate science. In addition to growing its use of renewable energy, MGE also is working to further engage customers in energy efficiency and working to electrify transportation and other energy end uses.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2005

Target coverage

Business activity

Scope(s)

Scope 1
Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Base year

2005

Base year Scope 1 emissions covered by target (metric tons CO2e)

2,308,469

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3 emissions covered by target (metric tons CO2e)

912,517

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

3,220,987

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

Target year

Targeted reduction from base year (%)

20

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

2,576,789.6

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2,009,043

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

329,182

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

2,338,225

% of target achieved relative to base year [auto-calculated]

137.0328411757

Target status in reporting year

Achieved

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

In 2005, MGE set a goal to reduce CO2 emissions from electric energy supplied to customers low1by at least 20% by 2015. The CDP system does not allow the target date of 2015 to be entered. Our decarbonization goals for electricity supplied to our customers include emissions from our owned generation (Scope 1) and purchased generation (Scope 3). We include this previously achieved target to demonstrate MGE's commitment to GHG emissions reductions and to illustrate the company's approach to goal-setting. Our carbon reduction goals are consistent with climate science and signal the company's direction but do not determine its pace in working to achieve decarbonization as quickly and cost-effectively as possible

Plan for achieving target, and progress made to the end of the reporting year

List the emissions reduction initiatives which contributed most to achieving this target

In 2011, MGE discontinued burning coal at the Blount Generating Station as part of its previous long-term framework called Energy 2015. In addition to discontinuing the use of coal at Blount, under Energy 2015, MGE increased its energy from renewable resources by almost 12 times between 2005 and 2015 in order to achieve the 20% goal. In 2015, MGE set the additional goal to reduce CO2 emissions from electric energy supplied to customers from 2005 levels by at least 40% by 2030, and has since updated this goal to an 80% reduction from 2005 levels by 2030.

Target reference number

Abs 2

Year target was set

2015

Target coverage

Business activity

Scope(s)

Scope 1
Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Base year

2005

Base year Scope 1 emissions covered by target (metric tons CO2e)

2,308,469

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3 emissions covered by target (metric tons CO2e)

912,517

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

3,220,987

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

Target year

2030

Targeted reduction from base year (%)

40

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

1,932,592.2

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2,009,043

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

329,182

% of target achieved relative to base year [auto-calculated]

224.4502228665

Target status in reporting year

Replaced

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

Under our Energy 2030 framework for a more sustainable future, introduced in November 2015, MGE committed to reducing carbon emissions from the energy supplied to customers by at least 40% by 2030. This target has since been replaced twice by a new goal to reduce carbon emissions from the energy supplied to customers. The current goal is at least 80% by 2030 from 2005 levels. Our decarbonization goals for electricity supplied to our customers include emissions from our owned generation (Scope 1) and purchased generation (Scope 3).

Plan for achieving target, and progress made to the end of the reporting year

List the emissions reduction initiatives which contributed most to achieving this target

---

Target reference number

Abs 3

Year target was set

2020

Target coverage

Business activity

Scope(s)

Scope 1
Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Base year

2005

Base year Scope 1 emissions covered by target (metric tons CO2e)

2,308,469

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3 emissions covered by target (metric tons CO2e)

912,517

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

3,220,987

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

Target year

2030

Targeted reduction from base year (%)

65

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

1,127,345.45

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2,009,043

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

329,182

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

2,338,225

% of target achieved relative to base year [auto-calculated]

42.163951131

Target status in reporting year

Replaced

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

In fall 2020, the University of Wisconsin-Madison released its analysis of Madison Gas and Electric's (MGE) goal of net-zero carbon electricity by 2050. The report compared the company's goal to the modeled pathways for the electricity sector in industrialized nations to limit global warming to 1.5° Celsius. At that time MGE updated its interim 2030 goal for electricity supplied to customers from 40% to at least 65%. This target has since been replaced by a more recent goal of at least 80% by 2030. Our decarbonization goals for electricity supplied to our customers include emissions from our owned generation (Scope 1) and purchased generation (Scope 3). We believe this is a science-based target based on the University of Wisconsin-Madison Nelson Institute for Environmental Studies and the Department of Atmospheric and Oceanic Sciences study described further in Section C3 of this CDP report. In this work, IPCC scenarios relevant to its operations and targets were evaluated.

Plan for achieving target, and progress made to the end of the reporting year

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number

Abs 4

Year target was set

2019

Target coverage

Business activity

Scope(s)

Scope 1
Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Base year

2005

Base year Scope 1 emissions covered by target (metric tons CO2e)

2,308,469

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3 emissions covered by target (metric tons CO2e)

912,517

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

3,220,987

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

Target year

2050

Targeted reduction from base year (%)

100

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

0

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2,009,043

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

329,182

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

2,338,225

% of target achieved relative to base year [auto-calculated]

27.4065682351

Target status in reporting year

Underway

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

In May 2019, MGE announced a goal of net-zero carbon electricity by 2050, which aligns with the Intergovernmental Panel on Climate Change (IPCC) and its assessment of limiting global temperature increases to 1.5 degrees Celsius. In 2019, MGE began working with the University of Wisconsin-Madison's Nelson Institute for Environmental Studies to evaluate the company's goal of net-zero carbon electricity by 2050. The analysis was done within the context of the October 2018 special report on global warming of 1.5 degrees Celsius by the IPCC. Models were used to analyze MGE's goal, and suggested that by 2050, emissions from electricity generation in industrialized countries should be 87% to 99% lower than the 2005 baseline. MGE's plan for net-zero carbon emissions by 2050 is a 100% reduction from 2005 levels and reflects carbon reductions consistent with limiting global warming to 1.5 degrees Celsius. Our decarbonization goals for electricity supplied to our customers include emissions from our owned generation (Scope 1) and purchased generation (Scope 3). We believe this is a science-based target based on the University of Wisconsin-Madison Nelson Institute for Environmental Studies and the Department of Atmospheric and Oceanic Sciences study.

Plan for achieving target, and progress made to the end of the reporting year

In late 2021, MGE announced plans to eliminate coal-fired generation from its portfolio by 2035. This includes planned retirements and transitions to cleaner fuels at units co-

owned by MGE. In addition, MGE has developed projects that are expected will increase owned renewable capacity by roughly nine times by the end of 2024. Overall, MGE is decarbonizing its electricity generation, projecting an estimated total of $645 million in nearly 400 megawatts (MW) of wind, solar and battery storage between 2015 and 2024. Consistent with climate science, MGE expects to achieve carbon reductions of at least 80% by 2030. The main strategies that will be used to achieve this goal are decarbonizing electric generation, helping customers use energy efficiently, and electrifying other energy uses, including transportation.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number

Abs 5

Year target was set

2022

Target coverage

Business activity

Scope(s)

Scope 1

Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Base year

2005

Base year Scope 1 emissions covered by target (metric tons CO2e)

2,308,469

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3 emissions covered by target (metric tons CO2e)

912,517

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

3,220,987

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

Target year

2030

Targeted reduction from base year (%)

80

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

644,197.4

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2,009,043

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

329,182

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

2,338,225

% of target achieved relative to base year [auto-calculated]

34.2582102939

Target status in reporting year

Underway

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

In early 2022, MGE updated its previous 2030 goal to set a goal of 80% reduction in carbon emissions by 2030 from 2005 levels in addition to the net-zero carbon electricity goal by 2050. Our decarbonization goals for electricity supplied to our customers include emissions from our owned generation (Scope 1) and purchased generation (Scope 3). We believe this is a science-based target based on the University of Wisconsin-Madison Nelson Institute for Environmental Studies and the Department of Atmospheric and Oceanic Sciences study described further in Section C3 of this CDP report. In this work, IPCC scenarios relevant to its operations and targets were evaluated.

Plan for achieving target, and progress made to the end of the reporting year

In late 2021, MGE announced plans to eliminate coal-fired generation from its portfolio by 2035. This includes planned retirements and transitions to cleaner fuels at units co-owned by MGE. In addition, MGE has developed projects that are expected will increase owned renewable capacity by roughly nine times by the end of 2024. Overall, MGE is decarbonizing its electricity generation, projecting an estimated total of $645 million in nearly 400 megawatts (MW) of wind, solar and battery storage between 2015 and 2024. Consistent with climate science, MGE expects to achieve carbon reductions of at least 80% by 2030. The main strategies that will be used to achieve this goal are decarbonizing electric generation, helping customers use energy efficiently, and electrifying other energy uses, including transportation.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)
Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2015

Target coverage

Business activity

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Base year

2005

Consumption or production of selected energy carrier in base year (MWh)

42,078

% share of low-carbon or renewable energy in base year

1.2

Target year

2025

% share of low-carbon or renewable energy in target year

25

% share of low-carbon or renewable energy in reporting year

16

% of target achieved relative to base year [auto-calculated]

62.1848739496

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, this target supports MGE's original Energy 2030 goal of achieving at least a 40% reduction in carbon from energy supplied to customers by 2030, which has since been replaced with a goal to reduce carbon by 80% by 2030, and the Energy 2050 goal of achieving net zero carbon from energy supplied to customers by 2050.

Is this target part of an overarching initiative?

Other, please specify

Please explain target coverage and identify any exclusions

This target is an interim target aimed at supplying 25% of retail energy from renewable sources by 2025.

Plan for achieving target, and progress made to the end of the reporting year

MGE continues to make new investments in generation, including more energy from renewable resources and natural gas. MGE has committed to eliminate coal from its generation mix by 2035. MGE continues to work closely with customers and through

partnerships to encourage energy efficiency and conservation through education, information, technical assistance, and other resources. MGE plans the estimated addition of nearly 400 MW of wind, solar and battery storage between 2015 and 2024 and is on track to meet this 25% renewable energy target by 2025.

List the actions which contributed most to achieving this target

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2020

Target coverage

Business activity

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon vehicles

Percentage of low-carbon vehicles in company fleet

Target denominator (intensity targets only)

Base year

Figure or percentage in base year

Target year

2030

Figure or percentage in target year

100

Figure or percentage in reporting year

10

% of target achieved relative to base year [auto-calculated]

Target status in reporting year

Underway

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

The target is to convert 100% of the light duty vehicles in the MGE fleet to electric vehicles or plug-in hybrid vehicles by 2030.

Plan for achieving target, and progress made to the end of the reporting year

MGE plans to purchase only electric or plug-in hybrid light-duty vehicles for its fleet going forward. This is planned to be accomplished primarily through the replacement of vehicles that end their useful life.

List the actions which contributed most to achieving this target

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Business activity

Absolute/intensity emission target(s) linked to this net-zero target

Abs1
Abs2
Abs3
Abs4
Abs5

Target year for achieving net zero

2050

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions

Under the MGE Energy 2050 plan, the target is to provide net-zero carbon electricity by 2050. We believe this is a science-based target based on the University of Wisconsin-

Madison Nelson Institute for Environmental Studies and the Department of Atmospheric and Oceanic Sciences study described further in Section C3 of this CDP report. In this work, IPCC scenarios relevant to its operations and targets were evaluated.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Unsure

Planned milestones and/or near-term investments for neutralization at target year

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*	6	
Implementation commenced*	1	
Implemented*	2	
Not to be implemented		

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Low-carbon energy generation

Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

Estimated lifetime of the initiative

Comment

MGE had two large scale solar sites come online during 2021, the 50-MW Badger Hollow Solar Farm Phase 1 and the 20-MW O'Brien Solar Fields. The O'Brien Solar Fields operate under a Renewable Energy Rider (RER) agreement and serve businesses and governmental entities in the area. Another 8-MW capacity solar PV project came online in 2022, the Hermsdorf Solar Fields. Other renewable energy projects in the process of being implemented or planned for the next several years. The Project capacities discussed below represent MGE's share of projects constructed in partnerships with other utility companies. These partnerships provide scale on costs and technology. Projects include the 9.16-MW Red Barn Wind Farm, the 50-MW Badger Hollow Solar Farm Phase 2, the 20-MW solar and 11-MW battery storage Paris Solar-Battery Park, the 25-MW solar and 7.5-MW battery storage Darien Solar Energy Center, and the 30-MW solar and 16.5-MW battery Koshkonong Solar Energy Center. In addition, MGE along with its partners plan to retire the Columbia Energy Center units 1 and 2 by June 2026. MGE currently has a 19% share of these units.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	As a public utility, MGE operates under state and federal regulations. These regulations serve to protect the interests of customers, employees, investors, and the environment. MGE is subject to regulation by the Public Service Commission of Wisconsin, which has authority to regulate most aspects of MGE's business, including rates, terms and conditions of service, accounts,

	issuance of securities, and construction of infrastructure, such as generation siting. The Federal Energy Regulatory Commission has jurisdiction, under the Federal Power Act, over certain accounting practices and certain other aspects of MGE's business. MGE Energy's subsidiaries also are subject to regulation under local, state, and federal laws regarding air and water quality and solid waste disposal. Since determination of MGE's electric rates are regulated by the State of Wisconsin, we are only allowed to pass along costs to customers for activities that are deemed to be economically prudent or mandated by law. We continue to analyze the potential impacts of future legislation or regulation that may impact our electric generation resources.
Other	MGE is investing in long-term sustainability to benefit all stakeholders while maintaining top-ranked energy reliability. MGE is committed to helping customers, investors and other stakeholders better understand our strategies, risks, challenges, and opportunities as we transition to a more sustainable, net-zero carbon future. 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.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

Midwest Renewable Energy Tracking System

Type of product(s) or service(s)

Power

Other, please specify

Low-carbon product

Description of product(s) or service(s)

MGE's Green Power Tomorrow (GPT) is our green pricing program, which offers a convenient and effective way for customers to support local and regional renewable energy and offset their greenhouse gas emissions. Today, more than 10,300 customers buy green power through this program. Our GPT program is largely served by our wind resources in the region.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

Midwest Renewable Energy Tracking System

Type of product(s) or service(s)

Power

Solar PV

Description of product(s) or service(s)

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

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 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 nearly 40 MW of solar capacity under RER agreements since earning regulatory approval in 2017 to begin offering this clean energy option.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

Midwest Renewable Energy Tracking System

Type of product(s) or service(s)

Power

Other, please specify

Electric Vehicle Charging Products and Services

Description of product(s) or service(s)

MGE provides a number of low-carbon products to advance the electrification of transportation. Charge@Home is MGE's home EV charging program that owns, maintains and coordinates the installation of Level 2 charging stations at customers' homes. The program allows MGE to study 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.

A companion project is the Charge Ahead demonstration project, which also gives MGE the ability to manage customers' home charging remotely using a vehicle's onboard communications system. By managing charging, MGE is able to shift EV charging to manage both long-term costs and peak demand on the grid. During the first phase of the project, MGE was able to shift about 93% of customer charging to off-peak periods.

MGE also helps to facilitate and to accelerate the growth of electric transportation through its public charging network, which is powered by renewable energy. EV drivers who join our EV Owners Group receive a 50% discount on public charging within our network.

And MGE's latest addition to our public charging station network is a fast-charging hub in downtown Madison. With power levels up to 350 kilowatts, the hub has some of the most powerful EV chargers in the Midwest. Through partnership with Tesla, the hub also has eight Superchargers.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

MGE maintains its facilities to limit fugitive emissions of methane from its natural gas distribution system. Leak detection surveys are conducted annually, and MGE has already upgraded all distribution pipelines to plastic or cathodically protected steel to minimize leaks. In addition, MGE operates its generating facilities as efficiently as possible to minimize methane resulting from the combustion of fossil fuels.

MGE contracts with two natural gas transmission companies, Northern Natural 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 45 natural gas companies works together to voluntarily reduce methane emissions across the natural gas supply chain to 1% or less by 2025. In its 2020 report, ONE Future registered a methane intensity number of 0.334%, beating its 1% goal by 67%. Northern Natural Gas and ANR Pipeline 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.

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

Yes

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2014

Base year end

December 31, 2014

Base year emissions (metric tons CO2e)

1,803,960

Comment

Scope 2 (location-based)

Base year start

January 1, 2014

Base year end

December 31, 2014

Base year emissions (metric tons CO2e)

21,452

Comment

Emissions are from estimated distribution line losses associated with purchased power.

Scope 2 (market-based)

Base year start

January 1, 2014

Base year end

December 31, 2014

Base year emissions (metric tons CO2e)

21,452

Comment

Emissions are from estimated distribution line losses associated with purchased power.

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1, 2014

Base year end

December 31, 2014

Base year emissions (metric tons CO2e)

791,927

Comment

Includes emissions from purchased power for resale.

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

January 1, 2014

Base year end

December 31, 2014

Base year emissions (metric tons CO2e)

1,309,834.2

Comment

As reported and following the requirements and methods of 40 CFR Part 98, Subpart NN. MGE reports the potential CO2 quantities associated with natural gas received by

end-users that receive less than 460,000 thousand standard cubic feet of natural gas per year at a single meter.

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
US EPA Center for Corporate Climate Leadership: Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression, and Industrial Gases
US EPA Center for Corporate Climate Leadership: Indirect Emissions From Purchased Electricity
US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources
US EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources
US EPA Mandatory Greenhouse Gas Reporting Rule
US EPA Emissions & Generation Resource Integrated Database (eGRID)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

2,103,935

Comment

Scope 1 emissions include company-owned fossil fuel electricity generation, other fossil fuel-fired equipment at company facilities, fleet vehicles, refrigerant losses, and natural gas distribution system losses.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Emissions are from estimated distribution line losses associated with purchased power.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

8,905

Scope 2, market-based (if applicable)

8,905

Comment

Emissions are from estimated distribution line losses associated with purchased power.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Please explain

Data and systems to track this information and estimate this category of Scope 3 emissions are not yet in place.

Capital goods

Evaluation status

Relevant, not yet calculated

Please explain

Data and systems to track this information and estimate this category of Scope 3 emissions are not yet in place.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

329,182

Emissions calculation methodology

Supplier-specific method

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain

For energy market purchases from the Midcontinent Independent System Operator (MISO), an emission rate is used that reflects regional average data from 7 states: Wisconsin, Minnesota, Illinois, Iowa, Missouri, Indiana, and Michigan. For non-emitting

renewable energy sources, including wind and solar, there are zero emissions. The regional average rates are determined using the latest actual generation data from the U.S. Energy Information Administration (EIA).

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

The company is in the process of evaluating potential methods for calculating emissions from this Scope 3 category.

Waste generated in operations

Evaluation status

Relevant, not yet calculated

Please explain

Data and systems to track this information and estimate this category of Scope 3 emissions are not yet in place.

Business travel

Evaluation status

Relevant, not yet calculated

Please explain

Data and systems to track this information and estimate this category of Scope 3 emissions are not yet in place.

Employee commuting

Evaluation status

Relevant, not yet calculated

Please explain

Data and systems to track this information and estimate this category of Scope 3 emissions are not yet in place.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

The company has no upstream leased assets that produce Scope 3 emissions.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

Not applicable

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Not applicable

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,210,947.8

Emissions calculation methodology

Other, please specify

Methodology from 40 CFR Part 98, Subpart NN

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain

As reported and following the requirements and methods of 40 CFR Part 98, Subpart NN. MGE reports the potential CO2 quantities associated with natural gas received by end-users that receive less than 460,000 thousand standard cubic feet of natural gas per year at a single meter.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Electricity and natural gas products do not have a conventional useful life.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

The company does not have any downstream leased assets.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

The company does not have any franchises.

Investments

Evaluation status

Relevant, not yet calculated

Please explain

Data and systems to track this information and estimate this category of Scope 3 emissions are not yet in place.

Other (upstream)

Evaluation status

Not evaluated

Please explain

Not applicable

Other (downstream)

Evaluation status

Not evaluated

Please explain

Not applicable

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0034

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

2,112,840

Metric denominator
unit total revenue

Metric denominator: Unit total
606,584,000

Scope 2 figure used
Market-based

% change from previous year

Direction of change

Reason for change

Intensity figure
0.781

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
2,112,840

Metric denominator
megawatt hour generated (MWh)

Metric denominator: Unit total
2,704,993

Scope 2 figure used
Market-based

% change from previous year

Direction of change

Reason for change

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	2,073,321	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	22,293	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	8,233	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	88	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	0	IPCC Fifth Assessment Report (AR5 – 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	17.5	581.2	0	16,379	Emissions from natural gas distribution system losses and refrigerants.
Combustion (Electric utilities)	2,066,772	215	0	2,081,014	Emissions from owned fossil generation, also

					includes CO2e from N2O.
Combustion (Gas utilities)	0	0	0	0	
Combustion (Other)	6,531.2	0.14	0	6,543	Emissions from natural gas-fired equipment and appliances at MGE facilities and MGE fleet vehicles. Also includes CO2e from N2O
Emissions not elsewhere classified	0	0	0	0	

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	2,103,934.7

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Electric generation combustion (Scope 1)	2,081,013
Other stationary combustion (Scope 1)	4,424
Mobile combustion (Scope 1)	2,119
Fugitive (Scope 1)	16,379

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	2,081,013	This amount represents CO2e from generation by company-owned facilities.

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
United States of America	8,905	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

This is our first year of reporting, so we cannot compare to last year

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 15% but less than or equal to 20%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	7,009,000	7,009,000
Consumption of purchased or acquired electricity				
Consumption of self-generated non-fuel renewable energy		94		
Total energy consumption		94	7,009,000	7,009,094

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes

Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Other biomass

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

5,599,222

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

21,956

MWh fuel consumed for self-generation of electricity

31

MWh fuel consumed for self-generation of heat

19

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

1,387,456

MWh fuel consumed for self-generation of electricity

38

MWh fuel consumed for self-generation of heat

24,300

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

7,008,633

MWh fuel consumed for self-generation of electricity

69

MWh fuel consumed for self-generation of heat

24,319

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity				

Heat				
Steam				
Cooling				

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

317

Gross electricity generation (GWh)

Net electricity generation (GWh)

1,797

Absolute scope 1 emissions (metric tons CO2e)

1,831,388

Scope 1 emissions intensity (metric tons CO2e per GWh)

1,019

Comment

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Oil

Nameplate capacity (MW)
61

Gross electricity generation (GWh)

Net electricity generation (GWh)
0.88

Absolute scope 1 emissions (metric tons CO2e)
763

Scope 1 emissions intensity (metric tons CO2e per GWh)
848

Comment

Gas

Nameplate capacity (MW)
454

Gross electricity generation (GWh)

Net electricity generation (GWh)
405.7

Absolute scope 1 emissions (metric tons CO2e)
248,862

Scope 1 emissions intensity (metric tons CO2e per GWh)
613

Comment

Sustainable biomass

Nameplate capacity (MW)
0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Other biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Nuclear

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Hydropower

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Wind

Nameplate capacity (MW)

125

Gross electricity generation (GWh)

Net electricity generation (GWh)

355.97

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Solar

Nameplate capacity (MW)

134

Gross electricity generation (GWh)

Net electricity generation (GWh)

145.4

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Marine

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Total

Nameplate capacity (MW)
1,091

Gross electricity generation (GWh)

Net electricity generation (GWh)
2,705

Absolute scope 1 emissions (metric tons CO2e)
2,081,013

Scope 1 emissions intensity (metric tons CO2e per GWh)
769

Comment

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
United States of America

Consumption of electricity (MWh)

4,410

Consumption of heat, steam, and cooling (MWh)

14,516

Total non-fuel energy consumption (MWh) [Auto-calculated]

18,926

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region

United States of America

Voltage level

Distribution (low voltage)

Annual load (GWh)

3,510.98

Annual energy losses (% of annual load)

2.7

Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)

8,905

Length of network (km)

3,452

Number of connections

Area covered (km2)

684

Comment

Scope 2 emissions from energy losses are from purchased power only. Emissions from energy losses from electricity generated and distributed by MGE-owned facilities are already accounted for in Scope 1 emissions.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-EU9.5a

(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

Coal – hard

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

4,762,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

7

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

4

Explain your CAPEX calculations, including any assumptions

Planned CAPEX is over the next 3 years. Planned investments as transition away from coal.

Lignite

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Oil

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Gas

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

14,769,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

21

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

19

Explain your CAPEX calculations, including any assumptions

Planned CAPEX is over the next 3 years. Investments in new gas generation.

Sustainable biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Other biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Waste (non-biomass)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Nuclear

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Geothermal

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Hydropower

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Wind

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

1,218,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

2

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

5

Explain your CAPEX calculations, including any assumptions

Planned CAPEX is over the next 3 years. MGE is targeting at least 80% carbon reduction from electric generation by 2030 (from 2005 levels) and net-zero carbon electricity by 2050. Solar, wind, and battery storage projects are a major step toward deep decarbonization and greater use of clean energy sources in pursuit of our goal. MGE continues to evaluate solar, wind, and battery storage projects that align with its goals as legacy fossil fuel-fired facilities are retired.

Solar

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

49,034,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

68

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

52

Explain your CAPEX calculations, including any assumptions

Planned CAPEX is over the next 3 years. MGE is targeting at least 80% carbon reduction from electric generation by 2030 (from 2005 levels) and net-zero carbon electricity by 2050. Solar, wind, and battery storage projects are a major step toward deep decarbonization and greater use of clean energy sources in pursuit of our goal. MGE continues to evaluate solar, wind, and battery storage projects that align with its goals as legacy fossil fuel-fired facilities are retired.

Marine

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Fossil-fuel plants fitted with CCS

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

Other renewable (e.g. renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

2,210,000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

3

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

20

Explain your CAPEX calculations, including any assumptions

Planned CAPEX is over the next 3 years. MGE is targeting at least 80% carbon reduction from electric generation by 2030 (from 2005 levels) and net-zero carbon electricity by 2050. Solar, wind, and battery storage projects are a major step toward deep decarbonization and greater use of clean energy sources in pursuit of our goal. MGE continues to evaluate solar, wind, and battery storage projects that align with its goals as legacy fossil fuel-fired facilities are retired.

Other non-renewable (e.g. non-renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Other, please specify Enhanced Metering Solution	Advanced metering infrastructure	14,000,000	100	2024

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	No	

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

High assurance

Attach the statement

Page/ section reference

MGE operates CEMS to measure CO2 at our large generating units. CO2 emissions data measured and reported from a CEMS is quality-assured and certified in accordance with 40 CFR 75.

Relevant standard

Other, please specify

Clean Air Act 40 CFR Part 75

Proportion of reported emissions verified (%)

99

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stress test investments

GHG Scope

Scope 1

Application

MGE does not specifically use an internal price on carbon but evaluates carbon restricted futures. 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.

Actual price(s) used (Currency /metric ton)

Variance of price(s) used

Type of internal carbon price

Other, please specify

Potential carbon restrictions are modeled in resource planning

Impact & implication

Utilizing projected carbon emissions limits in our economic analysis ensures our decisions are financially sound—regardless of whether or how carbon is regulated in the future.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our customers/clients
Yes, other partners in the value chain

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing

Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

Energy efficiency is one of MGE's key strategies for achieving deep decarbonization. Through the use of new technologies, hands-on workshops, energy education (tools and resources), conservation kits and innovative rate options, MGE engages customers to help them take control of their energy use. Engaging and educating our residential and commercial and industrial customers around energy efficiency helps to reduce the amount of electric generation needed and the associated GHG emissions.

Engaging with a diverse customer base requires a diverse set of strategies to achieve the company's energy goals. MGE has communications tools (bill inserts, video, websites, newsletters and email, social media, Home Energy Line) as well as programs, products and services (MGE Connect, On Demand Savings, Charge Ahead, partnership with Focus on Energy, etc.) to advance this key decarbonization strategy.

Using a variety of channels, MGE provides culturally and linguistically relevant information, materials, workshops, and presentations. We serve customers who come to us for information as well as take information into the community through workshops and other events for direct engagement.

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. MGE also maintains a separate line for commercial and industrial customers who need assistance.

MGE also partners with community organizations and works with community media to reach targeted and underserved customers to share and promote our programs, products and services, resources and tools.

Impact of engagement, including measures of success

Social media is one of the communications vehicles used by MGE to share information about energy conservation and energy efficiency with customers. The following metrics reflect total activity in 2021:
o Facebook Total Page Reach (the number of people who saw any content from our page): 146,957
▪ Total Paid Reach (the number of people who saw our ads at least once): 18,379
▪ Total Paid Impression (the number of times our ads were on a screen): 69,400
▪ Total Posts: 227
o Instagram
▪ Total Reach: 13,375
▪ Total Posts: 54
o Twitter
▪ Total Impressions: 133,881
▪ Total Posts: 219
• YouTube
The following are data in the form of Campaign, Campaign Type, Clicks, Impressions, and Click Through Rate
Living in Balance - Raised to Conserve Video: 157 - 31,720 - 0.49%
Living in Balance - Programs Video: 123 - 28,147 - 0.44%
Living in Balance - At Home Video: 95 - 28,65 - 0.33%
Living in Balance - Mario's Journey Video: 26 - 3,221 - 0.81%
How To Stay Warm in Winter Video: 8 - 13,755 - 0.06%
Total: 105,495

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

MGE Connect®

% of customers by number

1.5

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

MGE works with customers to grow the company’s use of clean energy for the benefit of all customers. Electric use peaks during stretches of hot, humid days when air conditioners run in a majority of households and businesses, putting pressure on the electric grid and generation resources. With MGE Connect®, MGE is able to manage participating residential air conditioners to reduce energy use during periods of high demand, helping to manage both demand on our distribution grid and long-term costs to customers.

Impact of engagement, including measures of success

MGE Connect continues to expand. As of mid-2022, more than 3200 customers participate. With customers' permission, minor temperature adjustments are made to their smart thermostats to reduce energy use during periods of high demand.
Nearly 2,500 households participated in MGE Connect during the 2021 season. Some of the events lowered demand by more than 2 megawatts each hour.

Type of engagement & Details of engagement

Collaboration & innovation
Other, please specify
Residential battery pilot project

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

MGE works with customers to grow the company's use of clean energy for the benefit of all customers. In late 2020, MGE launched a technology demonstration project featuring battery storage in partnership with several residential electric customers who have solar photovoltaic systems. The homeowner's rooftop solar system charges the battery, which is used during times of peak demand and as a backup source of power for the household. This project helps MGE understand how batteries operate in Wisconsin temperatures and how batteries could help control long-term costs by managing our collective use of energy.

Impact of engagement, including measures of success

This program is in its infancy and four customers are currently engaged.

Type of engagement & Details of engagement

Collaboration & innovation
Other, please specify
Charge@Home

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

Transportation is the leading contributor of greenhouse gas emissions in the U.S. The electrification of transportation is a key strategy for reducing carbon emissions. MGE is working with customers, stakeholders, municipalities and other community partners to grow the use of EVs and to facilitate charging options throughout our community, including at home, at work and on the go. Charge@Home is MGE's home charging program. With Charge@Home, MGE owns, maintains and coordinates the installation of Level 2 charging stations at customers' homes. 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.

MGE also helps area employers of all sizes and multifamily developers who want to offer employees and residents charging. We discuss options and help them navigate the decision-making and implementation process.

Impact of engagement, including measures of success

Currently we have roughly 150 customers taking advantage of this program.

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

Electric vehicle Charge Ahead program

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

Advancing the electrification of transportation is one of MGE's key strategies for deep decarbonization. MGE launched the Charge Ahead demonstration project in March 2021 with a number of Tesla drivers. This program, known as Charge Ahead, gives eligible electric vehicle (EV) drivers the opportunity to test new charging technology and help MGE explore ways to meet the needs of EV drivers into the future while planning for the impact of EVs on our distribution grid.

A software platform was used to manage charging through the vehicles' on-board modems. Charge Ahead customers provided a need-by time for their vehicle and enabled smart charging. The software then optimized charging. Participating customers were assigned to one of three groups that allowed MGE to shift 80% of charging to off-peak times or curtail charging during peak times. In 2022, MGE is seeking to expand the pilot to involve more customers and vehicle models.

Impact of engagement, including measures of success

Currently we have roughly 35 customers taking advantage of this program. Participating customers were assigned to one of three groups that allowed MGE to shift 80% of charging to off-peak times or curtail charging during peak times. In 2022, MGE is seeking to expand the pilot to involve more customers and vehicle models.

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

On Demand Savings program

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

MGE's On Demand Savings (ODS) program offers large customers tools and strategies to reduce their energy use, especially during periods when demand for electricity is at its peak. ODS uses an online dashboard to give customers near real-time energy usage information, enabling them to act to cut costs and to reduce their environmental footprint. Some additional features for program participants include: alert notifications by email or text to participants when their building load exceeds a specified threshold; monthly energy challenges that allow participants to set monthly demand and energy goals that are tracked in the system; energy markers that provide participants with the ability to track energy performance from a specific project or milestone before and after a specified date.

The program was recognized in 2018 with an Inspiring Efficiency Award for Innovation by the Midwest Energy Efficiency Alliance, a regional organization dedicated to advancing energy-efficient technologies, products and best practices.

Impact of engagement, including measures of success

Approximately 35 customers take advantage of this program. A third-party evaluation of the program completed in 2021 revealed high levels of customer satisfaction. The evaluators found an average demand reduction of 3.3% across all participating sites and a 4% reduction in energy use.

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

Managed Electric Water Heater Demonstration Project

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

MGE is partnering with residents at a local condominium and rental community to test technology that allows MGE to shift water heating without impacting customer comfort as part of ongoing grid optimization efforts. The installation of smart devices on the residents' water heaters help MGE to shift heating to periods when renewable resources are generating the most electricity or to off-peak periods on the distribution grid.

Impact of engagement, including measures of success

MGE is approximately halfway through its Managed Electric Water Heater Demonstration Project. To date, the project has tested the optimization of managed controls to optimize both winter and summer time of use rates. Additional testing is planned throughout the remainder of 2022.

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

Shared Solar Program

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

MGE works with customers to grow the company's use of clean energy for the benefit of all customers. MGE's community solar program, Shared Solar, offers customers locally generated solar energy at minimal upfront cost. Shared Solar gives residential and small business customers the option to power their household or business with solar energy for up to half of their annual energy use. This program offers an alternative way for customers to incorporate solar energy directly for their use.

Impact of engagement, including measures of success

Shared Solar participants pay an upfront cost to lock in electricity rates to help protect against increases over time. Also, Shared Solar supports, local renewable energy to reduce the customer's carbon footprint and helps our community achieve net-zero electricity. MGE currently has 2,035 customers in the Shared Solar program and an active waiting list for additional projects.

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

MGE Renewable Energy Rider

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

MGE's Renewable Energy Rider program gives MGE and larger business customers who seek customized renewable energy solutions the opportunity to partner to grow locally generated renewable energy. The 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. This new service can provide renewable energy to power all or a portion of a business. MGE is the first utility in Wisconsin to offer this opportunity.

Impact of engagement, including measures of success

To date, MGE is partnering with the following customers through RER agreements: City of Fitchburg, Placon, Promega Corporation, Tribe 9 Foods, University of Wisconsin-Madison, Willy Street Co-op, and the Wisconsin Department of Administration. Currently 40.5 MW of renewable projects are in the program.

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

MGE Green Power Tomorrow Program

% of customers by number

0.06

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

MGE's Green Power Tomorrow (GPT) is the company's green pricing program. At a penny more per kilowatt-hour (kWh), GPT is a convenient and effective way for customers to support local and regional renewable energy and offset their greenhouse gas emissions. The GPT program is largely served by MGE's wind resources in the region.

Impact of engagement, including measures of success

There are approximately 10,000 MGE customers who already buy green power that's generated in our region. They help to prevent carbon dioxide emissions equivalent to more than 11,000 homes' electricity use for one year. They also offset the greenhouse gas emissions equal to more than 180,000,000 miles driven by the average passenger vehicle.

Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

Engagements with municipality and community groups

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

MGE has ongoing collaborations with a number of communities it serves, including the cities of Fitchburg, Madison and Middleton. These partnerships serve to advance shared goals around renewable energy, electric vehicles (EVs), and energy efficiency and conservation. MGE also serves as a member of the Dane County Council on Climate Change, which includes local government, businesses, utilities and environmental organizations. MGE's partnership with local stakeholders through the council offers another opportunity to work toward common goals, including deep decarbonization.

As MGE advances electrification as a decarbonization strategy, MGE works with customers, stakeholders such as car dealerships, municipalities and school districts, and other community partners to grow the use of electric vehicles (EVs) and to facilitate charging options throughout its service territory. MGE also helps to educate customers, businesses and communities at-large about the benefits of EVs. MGE experts have been and continue to be 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 to share information about EVs and EV charging.

Impact of engagement, including measures of success

The impact of our collaboration with municipalities and businesses and other community partners are detailed on our Energy2050 website at https://www.energy2030together.com/en/working-together

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

MGE is a small investor-owned utility. Based in the area it serves, its Officers and Directors are members of the community and generally available to the public. MGE's parent company, MGE Energy, has a larger than typical number of retail shareowners. Those shareowners, many of whom also are MGE customers, may communicate directly with our management, employees, Officers and Directors when out in our community attending local events, in local stores/restaurants and other places.

MGE Energy also prioritizes regular engagement with institutional investor groups. MGE Officers engage proactively at least twice a year with our largest institutional shareholders to obtain their feedback on our climate transition, and all shareholders are invited to ask questions during our Annual Shareholder meeting. MGE Energy's website has an email portal for investor questions to be addressed. Investors also may provide feedback via either Investor Relations or to the Secretary of the Company at any time.

As a community-focused organization, MGE engages directly with hundreds of local organizations to extend its reach into the community. MGE is committed to improving the quality of life for those it serves. MGE contributes to and helps to better its communities in three different ways:

- Charitable giving by the MGE Foundation. Established in 1967, the Foundation is MGE's philanthropic arm. Throughout the last five years, the Foundation has given more than $6.7 million to more than 400 community organizations, some of which focus on environmental and health-related issues impacting our community.
- Corporate giving by MGE through partnerships, collaborations and projects with local organizations and stakeholders.
- Volunteerism and service of MGE employees.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, and we do not plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, and we do not plan to have one in the next two years

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

MGE advocates for our customers, shareholders, and employees by building and maintaining relationships with policymakers; by working collaboratively with internal and external stakeholders to identify and address matters that impact our industry, goals, and corporate strategies; and by building coalitions with stakeholders, trade associations, employees, customer groups, utility associations, and others to pursue and achieve common goals. Our corporate strategies include our commitment to providing reliable, affordable energy consistent with our carbon reduction and net-zero carbon goals.

MGE employs registered lobbyists and utilizes external lobbyists to engage policymakers at the local, state, and federal levels to monitor legislation and policy proposals and to advocate for positions that are in the best interest of our employees, customers, and shareholders. Reports of our lobbying activities (MGE Energy and/or MGE) can be found at the federal, state, and local levels. Wisconsin lobbying reports can be found at the Wisconsin Ethics Commission, lobbying.wi.gov. MGE typically does not incur lobbying expenses at the federal or local level that would trigger a lobbying report; however, if it does, those expenses can be found at lda.senate.gov and lobbyingdisclosure.house.gov and at cityofmadison.com/clerk/lobbyists, respectively.

MGE belongs to a number of trade organizations and coalitions that provide expertise, training and research concerning important industry topics. Some trade associations also participate in the political process, including participating in lobbying. MGE does not control the political activity of its member trade associations, and in fact, may sometimes disagree with political positions taken by them. Trade associations must identify the portion of association dues used for lobbying and political activities to comply with tax rules.

MGE collaborates with local and regional entities such as municipalities and collaboratives to advance decarbonization strategies and clean energy goals.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate

Other, please specify

State Energy Goals

Specify the policy, law, or regulation on which your organization is engaging with policy makers

MGE has been an active stakeholder in the Wisconsin Clean Energy Plan, prepared by the Wisconsin Department of Administration (DOA), Wisconsin Office of Sustainability and Clean Energy (OSCE). It creates a pathway to multi-sector deep decarbonization and a transition to a strong clean energy economy that prioritizes environmental justice, ensures a diverse workforce, and technology innovation, as directed in Executive Order #38, signed by Governor Evers on August 19, 2019.

Policy, law, or regulation geographic coverage

Regional

Country/region the policy, law, or regulation applies to

Other, please specify

State of Wisconsin, USA

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

MGE participated in the preparation of this plan via stakeholder engagement activities directed by the Wisconsin Office of Sustainability and Clean Energy (OSCE), providing essential perspectives and subject matter expertise to advise on key pathways and strategies. OSCE engaged stakeholders via public listening sessions, by participating in statewide events, and collecting online written comments.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Edison Electric Institute (EII)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

EEI's policy on clean energy and climate change can be found on its web site at https://www.eei.org/en/issues-and-policy/clean-energy

EEI may participate in the political process, including participating in lobbying on issues related to climate. MGE does not attempt to control the political activity of EEI, and in fact, may sometimes
disagree with political positions taken by them.

We attend meetings and discussions with EEI regarding policy matters, including climate change, and provide input to ensure that the company's perspectives are considered.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

137,000

Describe the aim of your organization's funding

This represents the membership dues for EEI

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify

American Gas Association

Is your organization's position on climate change consistent with theirs?

Mixed

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

AGA's position on environment and climate change can be found on its website at https://www.aga.org/policy/Environment/

AGA may participate in the political process, including participating in lobbying on issues related to climate. MGE does not attempt to control the political activity of AGA, and in fact, may sometimes disagree with political positions taken by AGA.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

111,000

Describe the aim of your organization's funding

This represents the membership dues for AGA

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

2021-corporate-responsibility-sustainability-report.pdf

2021_EEI-Quantitative-Template.pdf

Page/Section reference

GHG Emission performance is discussed in the CSR specifically on page 16. They are also in the EEI Quantitative ESG template. MGE's response to climate change is discussed throughout the CSR but summarized on Pages 6 and 7.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Madison Gas and Electric (MGE) publishes an annual Corporate Responsibility and Sustainability Report to share matters of sustainability performance and interest with stakeholders. MGE is committed to helping customers, investors and other stakeholders better understand our strategies, risks, challenges, and opportunities as we transition to a more sustainable future. The report features information about MGE's corporate strategy and climate-related matters; safety and operations; metrics and targets; customer and employee engagement; risk management; and governance and oversight.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, executive management-level responsibility	The VP General Counsel and Secretary has executive oversight of the Safety, Sustainability and Environmental Affairs at MGE. Within this group biodiversity planning, strategy and compliance is managed.

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments
Row 1	Yes, we have made public commitments only	Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species Other, please specify We are evaluating pollinator initiatives. We are a member of the WI Monarch Collaborative and evaluating participation in the CCAA. We expect to clarify our direction on making a public commitment or endorsing initiatives within the next 2 years.

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	Yes, we assess impacts on biodiversity in our downstream value chain only

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Other, please specify An EMS goal is to determine current and increase pollinator-friendly habitat on our properties. We incorporate pollinator plants at solar sites, and review impacts from construction projects, including to endangered resources and habitat.

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments	Information on pollinator habitat strategies and projects (pg. 43). Also, an internal goal from our EMS to determine current pollinator friendly habitat on our properties and increase pollinator friendly plantings where feasible (pg 39)

		1

1corporate-responsibility-sustainability-report.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Director Safety, Sustainability and Environmental Affairs	Other, please specify Environment/Sustainability Director

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms