MGE ENERGY INC
Form 10-K
February 22, 2019

United States

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

[X] Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended:

December 31, 2018

[ ] Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _____ to _____

Commission File No.	Name of Registrant, State of Incorporation, Address of Principal Executive Offices, and Telephone No.	IRS Employer Identification No.
000-49965	**MGE Energy, Inc.** (a Wisconsin Corporation)	39-2040501

133 South Blair Street

Madison, Wisconsin 53788

(608) 252-7000

mgeenergy.com

000-1125	**Madison Gas and Electric Company**	39-0444025

(a Wisconsin Corporation)

133 South Blair Street

Madison, Wisconsin 53788

(608) 252-7000

mge.com

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

	Title of Class	Name of Each Exchange on which Registered
MGE Energy, Inc.	Common Stock, $1 Par Value Per Share	The Nasdaq Stock Market

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

	Title of Class
Madison Gas and Electric Company	Common Stock, $1 Par Value Per Share

Indicate by check mark if the registrants are well-known seasoned issuers, as defined in Rule 405 of the Securities Act.

MGE Energy, Inc.	Yes [X] No [ ]
Madison Gas and Electric Company	Yes [X] No [ ]

1

Indicate by check mark if the registrants are not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

MGE Energy, Inc.	Yes [ ] No [X]
Madison Gas and Electric Company	Yes [ ] No [X]

Indicate by check mark whether the registrants (1) have filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrants were required to file such reports) and (2) have been subject to such filing requirements for the past 90 days. Yes [X] No [ ]

Indicate by check mark whether the registrants have submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrants were required to submit and post such files): Yes [X] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrants' knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [ ]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act:

	Large Accelerated Filer	**Accelerated Filer**	**Non-accelerated Filer**	**Smaller Reporting Company**	**Emerging Growth Company**
MGE Energy, Inc.	X				
Madison Gas and Electric Company			X		

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

MGE Energy, Inc.	Yes [ ] No [X]
Madison Gas and Electric Company	Yes [ ] No [X]

The aggregate market value of the voting and nonvoting common equity held by nonaffiliates of each registrant as of June 30, 2018, was as follows:

MGE Energy, Inc.	$2,180,572,457
Madison Gas and Electric Company	$0

The number of shares outstanding of each registrant's common stock as of February 1, 2019, were as follows:

MGE Energy, Inc.	34,668,370
Madison Gas and Electric Company	17,347,894

DOCUMENTS INCORPORATED BY REFERENCE

Portions of MGE Energy, Inc.'s definitive proxy statement to be filed before April 30, 2019, relating to its annual meeting of shareholders, are incorporated by reference into Part III of this annual report on Form 10-K.

Madison Gas and Electric Company meets the conditions set forth in General Instruction (I)(1)(a) and (b) of Form 10-K and is therefore omitting (i.) the information otherwise required by Item 601 of Regulation S-K relating to a list of subsidiaries of the registrant as permitted by General Instruction (I)(2)(b), (ii.) the information otherwise required by Item 6 relating to Selected Financial Data as permitted by General Instruction (I)(2)(a), (iii.) the information otherwise required by Item 10 relating to Directors and Executive Officers as permitted by General Instruction (I)(2)(c), (iv.) the information otherwise required by Item 11 relating to executive compensation as permitted by General Instruction (I)(2)(c), (v.) the information otherwise required by Item 12 relating to Security Ownership of Certain Beneficial Owners and Management as permitted by General Instruction (I)(2)(c), and (vi.) the information otherwise required by Item 13 relating to Certain Relationships and Related Transactions as permitted by General Instruction (I)(2)(c).

Table of Contents

Filing Format

This combined Form 10-K is being filed separately by MGE Energy, Inc. (MGE Energy) and Madison Gas and Electric Company (MGE). MGE is a wholly owned subsidiary of MGE Energy and represents a majority of its assets, liabilities, revenues, expenses, and operations. Thus, all information contained in this report relates to, and is filed by, MGE Energy. Information that is specifically identified in this report as relating solely to MGE Energy, such as its financial statements and information relating to its nonregulated business, does not relate to, and is not filed by, MGE. MGE makes no representation as to that information. The terms "we" and "our," as used in this report, refer to MGE Energy and its consolidated subsidiaries, unless otherwise indicated.

Forward-Looking Statements

This report, and other documents filed by MGE Energy and MGE with the Securities and Exchange Commission (SEC) from time to time, contain 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 generally identify forward-looking statements. Both MGE Energy and MGE caution investors that 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.

The factors that could cause actual results to differ materially from the forward-looking statements made by a registrant include (a) those factors discussed in Item 1A. Risk Factors, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, and Item 8. Financial Statements and Supplementary Data, Footnote 17. Commitments and Contingencies, and (b) other factors discussed herein and in other filings made by that registrant with the SEC.

Readers are cautioned not to place undue reliance on these forward-looking statements, which apply only as of the date of this report. 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, except as required by law.

Where to Find More Information

The public may read and copy any reports or other information that MGE Energy and MGE file with the SEC at the SEC's public reference room at 100 F Street, NE, Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. These documents also are available to the public from commercial document retrieval services, the website maintained by the SEC at sec.gov, MGE Energy's website at mgeenergy.com, and MGE's website at mge.com. Copies may be obtained from our websites free of charge. Information contained on MGE Energy's and MGE's websites shall not be deemed incorporated into, or to be a part of, this report.

Definitions, Abbreviations, and Acronyms Used in the Text and Notes of this Report

Abbreviations, acronyms, and definitions used in the text and notes of this report are defined below.

MGE Energy and Subsidiaries:	
CWDC	Central Wisconsin Development Corporation
MAGAEL	MAGAEL, LLC
MGE	Madison Gas and Electric Company
MGE Energy	MGE Energy, Inc.
MGE Power	MGE Power, LLC
MGE Power Elm Road	MGE Power Elm Road, LLC
MGE Power West Campus	MGE Power West Campus, LLC
MGE Services	MGE Services, LLC
MGE State Energy Services	MGE State Energy Services, LLC
MGE Transco	MGE Transco Investment, LLC (which holds our interest in ATC)
MGEE Transco	MGEE Transco, LLC (which holds our interest in ATC Holdco)
North Mendota	North Mendota Energy & Technology Park, LLC
Other Defined Terms:	
ACE	Affordable Clean Energy
AFUDC	Allowance for Funds Used During Construction
ANPR	Advanced Notice of Proposed Rulemaking
ANR	ANR Pipeline Company
ARO	Asset Retirement Obligation
ATC	American Transmission Company LLC
ATC Holdco	ATC Holdco, LLC
BART	Best Available Retrofit Technology
Blount	Blount Station

BSER	Best System of Emissions Reductions
BTA	Best Technology Available
CAA	Clean Air Act
CAVR	Clean Air Visibility Rule
CCR	Coal Combustion Residual
CNG	Compressed Natural Gas
CO2	Carbon Dioxide
Codification	Financial Accounting Standards Board Accounting Standards Codification
Columbia	Columbia Energy Center
Cooling degree days	Measure of the extent to which the average daily temperature is above 65 degrees Fahrenheit, which is considered an indicator of possible increased demand for energy to provide cooling
COSO	Committee of Sponsoring Organizations
CPP	Clean Power Plan
CSAPR	Cross-State Air Pollution Rule
CWA	Clean Water Act
DTA	Deferred Tax Assets
Dth	Dekatherms
EEI	Edison Electric Institute
EGUs	Electric Generating Units
electric margin	Electric revenues less fuel for electric generation and purchase power costs, a non-GAAP measure
ELG	Effluent Limitations Guidelines
Elm Road Units	Elm Road Generating Station
EPA	United States Environmental Protection Agency
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
Forward Wind	Forward Wind Energy Center
FTR	Financial Transmission Rights

GAAP	Generally Accepted Accounting Principles
gas margin	Gas revenues less cost of gas sold, a non-GAAP measure
GHG	Greenhouse Gas
Heating degree days (HDD)	Measure of the extent to which the average daily temperature is below 65 degrees Fahrenheit, which is considered an indicator of possible increased demand for energy to provide heating
ICF	Insurance Continuance Fund
IRS	Internal Revenue Service
kVA	Kilovolt Ampere
kWh	Kilowatt-hour
MISO	Midcontinent Independent System Operator Inc. (a regional transmission organization)
MRO	Midwest Reliability Organization
MW	Megawatt
MWh	Megawatt-hour
NAAQS	National Ambient Air Quality Standards
Nasdaq	The Nasdaq Stock Market
NERC	North American Electric Reliability Corporation
NGO	Nongovernment Organizations
NNG	Northern Natural Gas Company
NOV	Notice of Violation
NOx	Nitrogen Oxides
NYSE	New York Stock Exchange
PCBs	Polychlorinated Biphenyls
PGA	Purchased Gas Adjustment clause
PJM	PJM Interconnection, LLC (a regional transmission organization)
PM	Particulate Matter
PPA	Purchased power agreement
PSCW	Public Service Commission of Wisconsin
REC	Renewable Energy Credit
Riverside	Riverside Energy Center in Beloit, Wisconsin
ROE	Return on Equity
RTO	Regional Transmission Organization
Saratoga	Saratoga Wind Farm
SCR	Selective Catalytic Reduction
SEC	Securities and Exchange Commission
SIP	State Implementation Plan

SO2	Sulfur Dioxide
the State	State of Wisconsin
Stock Plan	Direct Stock Purchase and Dividend Reinvestment Plan of MGE Energy
Tax Act	Tax Cuts and Jobs Act
UW	University of Wisconsin at Madison
VIE	Variable Interest Entity
WCCF	West Campus Cogeneration Facility
WDNR	Wisconsin Department of Natural Resources
WEPCO	Wisconsin Electric Power Company
Working capital	Current assets less current liabilities
WPDES	Wisconsin Pollutant Discharge Elimination System
WPL	Wisconsin Power and Light Company
WPSC	Wisconsin Public Service Corporation
WRERA	Worker, Retiree and Employer Recovery Act of 2008
XBRL	eXtensible Business Reporting Language

PART I.

Item 1. Business.

MGE Energy operates in the following business segments:

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Regulated electric utility operations generating, purchasing, and distributing electricity through MGE.

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Regulated gas utility operations purchasing and distributing natural gas through MGE.

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Nonregulated energy operations owning and leasing electric generating capacity that assists MGE through MGE Energy's wholly owned subsidiaries MGE Power Elm Road and MGE Power West Campus.

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Transmission investments representing our investment in American Transmission Company LLC, a company engaged in the business of providing electric transmission services primarily in Wisconsin, and our investment in ATC Holdco LLC, a company created to facilitate out-of-state electric transmission development and investments.

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All other investing in companies and property that relate to the regulated operations and financing the regulated operations, through its wholly owned subsidiaries CWDC, MAGAEL, MGE State Energy Services, North Mendota, and Corporate functions.

MGE's utility operations represent a majority of the assets, liabilities, revenues, expenses, and operations of MGE Energy. MGE Energy's nonregulated energy operations currently include an undivided interest in two coal-fired generating units located in Oak Creek, Wisconsin, which we refer to as the Elm Road Units, and an undivided interest in a cogeneration facility located on the Madison campus of the University of Wisconsin, which we refer to as the West Campus Cogeneration Facility or WCCF.

As a public utility, MGE is subject to regulation by the PSCW and the FERC. The PSCW has authority to regulate most aspects of MGE's business including rates, accounts, issuance of securities, and plant siting. The PSCW also has authority over certain aspects of MGE Energy as a holding company of a public utility. FERC has jurisdiction, under the Federal Power Act, over certain accounting practices and certain other aspects of MGE's business.

MGE Energy's subsidiaries are also subject to regulation under local, state, and federal laws regarding air and water quality and solid waste disposal. See "Environmental" below.

MGE Energy was organized as a Wisconsin corporation in 2001. MGE was organized as a Wisconsin corporation in 1896. Their principal offices are located at 133 South Blair Street, Madison, Wisconsin 53788, and their telephone number is (608) 252-7000.

Electric Utility Operations

MGE distributes electricity in a service area covering a 264 square-mile area of Dane County, Wisconsin. The service area includes the city of Madison, Wisconsin. It owns or leases ownership interests in electric generation facilities located in Wisconsin and Iowa.

As of December 31, 2018, MGE supplied electric service to approximately 153,000 customers, with approximately 90% located in the cities of Fitchburg, Madison, Middleton, and Monona and 10% in adjacent areas. Of the total number of customers, approximately 87% were residential and 13% were commercial or industrial. Electric retail revenues for 2018, 2017, and 2016 were comprised of the following:

	Year Ended December 31,		
	2018	2017	2016
Residential	35.4%	33.5%	33.9%
Commercial	52.3%	53.2%	52.9%
Industrial	3.6%	4.0%	4.4%

Public authorities (including the UW)	8.7%	9.3%	8.8%
Total	100.0%	100.0%	100.0%

Electric operations accounted for approximately 71.8%, 73.6%, and 75.2% of MGE's total 2018, 2017, and 2016 regulated revenues, respectively.

See Item 2. Properties for a description of MGE's electric utility plant.

MGE is registered with North American Electric Reliability Corporation (NERC) and one regional entity, the Midwest Reliability Organization (MRO). The essential purposes of these entities are the development and implementation of regional and NERC reliability standards; and determining compliance with those standards, including enforcement mechanisms.

Transmission

American Transmission Company LLC (ATC) was formed by utilities who were required by Wisconsin law to contribute their transmission facilities to it in 2001, and is owned by those utilities and their affiliates. ATC's purpose is to provide reliable, economic transmission service to all customers in a fair and equitable manner. ATC plans, constructs, operates, maintains, and expands transmission facilities that it owns to provide adequate and reliable transmission of power. ATC is regulated by FERC for all rate terms and conditions of service, is regulated by the PSCW as to some aspects of its governance and is a transmission-owning member of the MISO.

Regional Transmission Organizations (RTO)

MISO

MGE is a nontransmission owning member of the MISO. MISO, a FERC approved RTO, is responsible for monitoring the electric transmission system that delivers power from generating plants to wholesale power transmitters. MISO's role is to ensure equal access to the transmission system and to maintain or improve electric system reliability in the Midwest.

MISO maintains a bid-based energy market. MGE offers substantially all of its generation on the MISO market and purchases much of its load requirement from the MISO market in accordance with the MISO Tariff. MGE participates in the ancillary services market operated by MISO. That market is an extension of the existing energy market in which

MISO assumes the responsibility of maintaining sufficient generation reserves. In the ancillary services market, MISO provides the reserves for MGE's load, and MGE may offer to sell reserves from its generating units.

MGE participates in the voluntary capacity auction, which provides an optional monthly forum for buyers and sellers of aggregate planning resource credits to interact. Load serving entities, such as MGE, may participate in the voluntary capacity auction potentially to obtain the necessary aggregate planning resource credits needed to meet their planning reserve margin requirement established by the PSCW. Generator owners may participate to sell any excess aggregate planning resource credits that are not needed by them.

PJM

MGE is a member of PJM. PJM, an RTO, is a neutral and independent party that coordinates and directs the operation of the transmission grid within its area of coverage, administers a competitive wholesale electricity market, and plans regional transmission expansion improvements to maintain grid reliability and relieve congestion.

Fuel supply and generation

MGE satisfies its customers' electric demand with internal generation and purchased power. MGE's current fuel mix for generation will fluctuate from year-to-year due to fuel pricing in the market, generating unit availability, weather, and customer demand. MGE has a responsibility to its customers to dispatch the lowest cost generation available pursuant to regulatory requirements.

MGE's Energy 2030 framework details our plan for growth in generation for renewables. This growth will continue as legacy fossil fuel-fired generation assets are retired and replace with renewables, such as wind and solar assets. The transition or displacement of coal-fired resources is ongoing and active. Currently two utility-scale solar projects are awaiting regulatory approval, totaling approximately 100 MW of MGE's combined ownership share.

MGE's carbon intensity is expected to decrease as our use of coal decreases over time, due in part to our investments in cost-effective, efficient renewables like the Saratoga Wind farm, which is expected to come online in 2019, and the purchase of the Forward Wind farm in 2018.

During 2018, 2017, and 2016, MGE's electric energy delivery requirements were satisfied from the following fuel sources:

	Year Ended December 31,		
	2018	2017	2016
Coal	52.3%	52.7%	48.3%
Natural gas[(a)]	13.8%	11.3%	18.6%
Renewable sources[(b)]	10.5%	12.4%	10.8%
Purchased power	23.4%	23.6%	22.3%
Total	100.0%	100.0%	100.0%

(a)

MGE's electric operations burn natural gas in several of its peaking power plants. The market price of natural gas decreased in 2016, which improved the economics of natural gas-fueled generation over other types of generation.

(b)

Includes both internal generation and purchased power.

Generation sources

MGE receives electric generation supply from coal-fired, gas-fired, and renewable energy sources. These sources include owned facilities as well as facilities leased from affiliates and accounted for under our nonregulated energy operations. See Item 2. Properties for more information regarding these generation sources, including location, capacity, ownership or lease arrangement, and fuel source. See "Nonregulated Energy Operations" below for more information regarding generating capacity leased to MGE by nonregulated subsidiaries.

Purchased power

MGE enters into short and long-term purchase power commitments with third parties to meet a portion of its anticipated electric energy supply needs. The following table identifies purchase power commitments as of December 31, 2018, with unaffiliated parties for the next five years.

(Megawatts)	2019	2020	2021	2022	2023
Purchase power commitments	83	83	83	33	30

Gas Utility Operations

MGE transports and distributes natural gas in a service area covering 1,684 square miles in seven south-central Wisconsin counties. The service area includes the city of Madison, Wisconsin and surrounding areas.

As of December 31, 2018, MGE supplied natural gas service to approximately 161,000 customers in the cities of Elroy, Fitchburg, Lodi, Madison, Middleton, Monona, Prairie du Chien, Verona, and Viroqua; 25 villages; and all or parts of 49 townships. Of the total number of customers, approximately 90% were residential and 10% were commercial or industrial. Gas revenues for 2018, 2017, and 2016 were comprised of the following:

	Year Ended December 31,		
	2018	2017	2016
Residential	59.4%	59.6%	60.2%
Commercial	35.8%	35.8%	34.9%
Industrial	1.6%	1.3%	1.1%
Transportation service and other	3.2%	3.3%	3.8%
Total	100.0%	100.0%	100.0%

Gas operations accounted for approximately 28.2%, 26.4%, and 24.8% of MGE's total 2018, 2017, and 2016 regulated revenues, respectively.

MGE can curtail gas deliveries to its interruptible customers. Approximately 3% of retail gas deliveries in 2018 and 2016 and approximately 4% in 2017 were to interruptible customers.

Gas supply

MGE has physical interconnections with ANR Pipeline Company (ANR) and Northern Natural Gas Company (NNG). MGE's primary service territory, which includes Madison and the surrounding area, receives deliveries at one NNG and four ANR gate stations. MGE's outlying territory receives deliveries at NNG gate stations located in Elroy, Prairie du Chien, Viroqua, and Crawford County. Interconnections with two major pipelines provide competition in interstate

9

pipeline service and a more reliable and economical gas supply mix, which includes gas from Canada and from the mid-continent and Gulf/offshore regions in the United States.

During the winter months, when customer demand is high, MGE is primarily concerned with meeting its obligation to firm customers. MGE meets customer demand by using firm supplies under contracts finalized before the heating season, supplies in storage (injected during the summer), and other firm supplies purchased during the winter period.

By contract, a total of 5,934,489 Dth of gas can be injected into ANR's storage fields in Michigan from April 1 through October 31. These gas supplies are then available for withdrawal during the subsequent heating season, November 1 through March 31. Using storage allows MGE to buy gas supplies during the summer season, when prices are normally lower, and withdraw these supplies during the winter season, when prices are typically higher. Storage also gives MGE more flexibility in meeting daily load fluctuations.

MGE's contracts for firm transportation service of gas include winter maximum daily quantities of:

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167,150 Dth (including 106,078 Dth of storage withdrawals) on ANR.

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65,828 Dth on NNG.

Nonregulated Energy Operations

MGE Energy, through its subsidiaries, has developed generation sources that assist MGE in meeting the electricity needs of its customers. These sources consist of the Elm Road Units and the WCCF, which are leased by MGE Power Elm Road and MGE Power West Campus, respectively, to MGE. See Item 2. Properties for a description of these facilities, their joint owners, and the related lease arrangements.

Transmission Investments

ATC owns and operates electric transmission facilities primarily in Wisconsin. MGE received an interest in ATC when it, like other Wisconsin electric utilities, contributed its electric transmission facilities to ATC as required by Wisconsin law. That interest is presently held by MGE Transco, which is owned by MGE Energy. As of December 31, 2018, MGE Transco held a 3.6% ownership interest in ATC.

In 2016, ATC Holdco was formed by several of the members of ATC, including MGE Energy, to facilitate electric transmission development and investments outside of Wisconsin. MGE Energy's ownership interest in ATC Holdco is held by MGEE Transco, a wholly-owned subsidiary. As of December 31, 2018, MGEE Transco held a 4.4% ownership interest in ATC Holdco. In the near term, it is expected that ATC Holdco will be pursuing transmission development opportunities that typically have long development and investment lead times before becoming operational.

Environmental

MGE Energy and MGE are subject to frequently changing local, state, and federal regulations concerning air quality, water quality, land use, threatened and endangered species, hazardous materials handling, and solid waste disposal. These regulations affect the manner in which they conduct their operations, the costs of those operations, as well as capital and operating expenditures. Regulatory initiatives, proposed rules, and court challenges to adopted rules, have the potential to have a material effect on our capital expenditures and operating costs. In addition to the regulations discussed below, MGE continues to track state and federal initiatives such as potential changes to regulations governing polychlorinated biphenyl (PCB), potential changes to air and water standards, and potential climate change legislation.

Water Quality

EPA's Effluent Limitations Guidelines and Standards for Steam Electric Power Generating Point Source Category

In November 2015, the EPA published its final rule setting Effluent Limitations Guidelines (ELG) for the steam electric power generating industry. The ELG rule establishes federal limits on the amount of metals and other pollutants that can be discharged in wastewater from new and existing steam electric generation plants. The rule will be applied to Wisconsin-based power plants as they renew their WPDES permits, no later than 2023. The operators of the Columbia and Elm Road Units have indicated that equipment upgrades may be necessary to comply with the new discharge standards. Management believes that any compliance costs will be recovered in future rates based on previous treatment of environmental compliance projects.

10

EPA Cooling Water Intake Rules (Section 316(b))

Section 316(b) of the Clean Water Act requires that the cooling water intake structures at electric power plants meet best available technology standards so that mortality from entrainment (drawing aquatic life into a plant's cooling system) and impingement (trapping aquatic life on screens) are reduced. The EPA finalized its Section 316(b) rule for existing facilities in 2014. Section 316(b) requirements are implemented in Wisconsin through modifications to plants' WPDES permits, which govern plant wastewater discharges.

The WCCF, Blount, and Columbia plants are considered existing plants under this rule. The WCCF facility already employs a system that meets the Section 316(b) rule. The Blount plant's WPDES permit assumes that Blount meets best technology available (BTA) for the duration of the permit, which expires in 2023. However, MGE needs to perform an entrainment study by the end of 2021 to determine future BTA, which will be included with the next permit renewal. Section 316(b) applies to river intakes at the Columbia plant. The operator of the Columbia plant is in the process of a WPDES permit renewal. The draft permit directs the Columbia operator to conduct similar studies on their intake structures. The study requirements will not be known until the permit is final. Future BTA requirements at Blount and Columbia will be based on the results of these required intake studies and will be specified in the next permits issued in 2023 or later. MGE expects that the Section 316(b) rule will not have a material effect on its existing plants.

Energy Efficiency and Renewables

The Wisconsin Energy Efficiency and Renewables Act requires that 10% of the state's electricity be generated from renewable sources. MGE is in compliance with the requirement. The costs to comply with the Act and its accompanying regulations are being recovered in rates.

Air Quality

Air quality regulations promulgated by the EPA and Wisconsin Department of Natural Resources (WDNR) in accordance with the Federal Clean Air Act and the Clean Air Act Amendments of 1990 impose restrictions on emission of particulates, sulfur dioxide (SO_2), nitrogen oxides (NO_x), hazardous air pollutants and other pollutants, and require permits for operation of emission sources. These permits must be renewed periodically. Various newly enacted and/or proposed federal and state initiatives may result in additional operating and capital expenditure costs for fossil-fueled electric generating units.

Ozone NAAQS

In May 2018, the EPA issued a final rule which designated the northeast portion of Milwaukee County as being in nonattainment with Ozone National Ambient Air Quality Standards (NAAQS). The Elm Road Units are located in Milwaukee County, outside the designated nonattainment area. In August 2018, several environmental groups, the City of Chicago, and the State of Illinois filed federal lawsuits challenging several of the EPA's attainment designation decisions, including the EPA's partial Milwaukee County designation as being too narrow and not sufficiently protective. MGE is monitoring the outcome of this lawsuit and how it may affect the Elm Road Units in Milwaukee County. See Footnote 17 of the Notes to Consolidated Financial Statements in this Report for additional information.

EPA's Cross-State Air Pollution Rule: Proposed Ozone Season Update based on 2008 Ozone NAAQS

The EPA's CSAPR is an interstate air pollution transport rule designed to reduce ozone and fine particulate (PM2.5) air levels in areas that the EPA has determined are being significantly impacted by pollution from neighboring and upwind states. This is accomplished in the CSAPR through a reduction in SO_2 and NO_x from qualifying fossil-fuel fired power plants in upwind or "contributing" states. NO_x and SO_2 contribute to fine particulate pollution and NO_x contributes to ozone formation in downwind areas. Reductions are achieved through a cap and trade system. Individual plants can meet their caps through modifications and/or buying allowances on the market.

In October 2016, the EPA finalized rulemaking for an update to CSAPR that incorporated 2008 Ozone NAAQS standards into the rule (the original CSAPR is based on 1997 Ozone NAAQS standards) and began further reducing summertime ozone season NO_x allowances in 2017. The update affects 22 states, including Wisconsin, by further limiting statewide NO_x allowances in each of those states. The rule also includes revisions to CSAPR that are designed to address issues remaining from the D.C. Circuit remand of CSAPR, including Wisconsin's inclusion in the NO_x ozone season portion of the rule. The State of Wisconsin filed a legal challenge to the CSAPR update rule asserting, among other things, that the rule over-controls NO_x emissions in Wisconsin.

MGE has met our CSAPR obligations in 2017 and 2018 through a combination of reduced emissions through pollution control (e.g. SCR installation at Columbia), as well as owned, received, and purchased allowances. There remains uncertainty around CSAPR due to legal challenges, however, MGE expects that we will meet ongoing CSAPR obligations for the foreseeable future. MGE will continue to monitor developments and litigations to this rule.

Clean Air Visibility Rule (CAVR)

Columbia is subject to the best available retrofit technology (BART) regulations, a subsection of the EPA's CAVR, which may require pollution control retrofits. Columbia's existing pollution control upgrades, and the EPA's stance that compliance with the CSAPR equals compliance with BART, should mean that Columbia will not need to do additional work to meet BART requirements. At this time, however, the BART regulatory obligations, compliance strategies, and costs remain uncertain in Wisconsin due to the continued legal challenges surrounding CSAPR and CAVR. MGE will continue to monitor developments to this rule.

Global Climate Change

MGE is a producer of greenhouse gas (GHG) emissions, primarily from the fossil fuel generating facilities it uses to meet customers' energy needs, as well as from its natural gas pipeline system and fleet vehicles. Climate change and the regulatory response to it could significantly affect our operations in a number of ways, including increased operating costs and capital expenditures, restrictions on energy supply options, operational limits on our fossil fuel fired plants, permitting difficulties, and emission limits. MGE management would expect to seek and receive rate recovery of such compliance costs, if and when required. MGE continues to monitor proposed climate change legislation and regulation.

MGE has taken steps to address GHG emissions through voluntary actions. In 2005, MGE implemented its Energy 2015 Plan, which committed to ensuring a balanced, economic energy supply with reduced environmental emissions. The Plan emphasized increased renewable energy, energy efficiency, and new cleaner generation three strategies that reduced GHG emissions. Under the Plan and other actions, our CO_2 emissions declined from 2005 to 2015 by approximately 20% even though total system energy increased. In 2015, MGE announced its Energy 2030 framework that continues steps to reduce CO_2 emissions. Subject to regulatory approvals and other conditions, MGE aims to increase renewable energy to 25% of retail electric sales by 2025 and to 30% by 2030. Under our Energy 2030 framework, we will also work to reduce CO_2 emissions by 40% from 2005 levels by 2030. MGE is further committed to reducing carbon emissions by 80% from 2005 levels by 2050.

EPA's Greenhouse Gas Reduction Guidelines under the Clean Air Act 111d Rule

The EPA's Clean Power Plan (CPP) rule became effective in December 2015, setting guidelines for states to use in developing plans to control GHG emissions from existing fossil fuel-fired EGUs and systems. When fully implemented in 2030, the CPP was projected to reduce GHG emissions from this sector by 32% below 2005 levels. States were given up to three years to submit a plan or be subject to a federal plan to meet the reduction goals, and states were expected to meet interim goals starting in 2022 and the final goals in 2030. Implementation of the rule was

expected to have a direct impact on coal and natural gas fired generating units, including possible changes in dispatch and additional operating costs. In February 2016, the U.S. Supreme Court stayed implementation of the CPP which remains in effect. In October 2017, the EPA proposed to rescind the CPP.

In August 2018, the EPA proposed the Affordable Clean Energy (ACE) rule which would replace the CPP, if successfully implemented. The ACE proposal directs states to submit plans to the EPA for approval that implement standards of performance (called Best System of Emissions Reductions, or BSER) for individual EGUs over 25 MW. ACE defines BSER as on-site, heat-rate efficiency improvements, whereas the CPP defines BSERs using carbon

dioxide emission performance rates. Simple cycle units such as the smaller combustion units, and combined cycle units such as the WCCF are exempt from the proposed rule. Under the ACE proposal, if a state fails to prepare a plan, or its plan is not approved by the EPA, a federal implementation plan will be issued for that state. The proposed ACE as it is currently written has the potential to impact Blount, Columbia, and the Elm Road Units.

Given the pending CPP legal proceedings, and the proposed ACE rule, the nature and timing of any final requirements is subject to uncertainty. MGE is unable to determine with any certainty the impact of the CPP and proposed ACE rule on our operations. If an ACE rule is implemented substantially in the form of the CPP rule, it is expected to have a material impact on MGE. MGE will continue to monitor developments with the proposed ACE rule, the CPP rule, and related litigation.

Solid Waste

EPA's Coal Combustion Residuals Rule

EPA's Coal Combustion Residuals (CCR) rule regulates landfills, ash ponds, and other surface impoundments used to manage coal combustion residuals by regulating their design, location, monitoring, and operation. The CCR rule is implemented in phases to allow for sites with onsite storage and/or disposal to evaluate their compliance with the rule's design criteria. Landfills, impoundments and ash storage systems, such as ash ponds, that cannot meet design criteria will need to close formally within defined timeframes.

Columbia and the Elm Road Units are subject to this rule. The Elm Road Units' operator has indicated that cost to comply with this rule will not be significant. Columbia's operator has completed a review of their system and has determined that an onsite ash pond will need to be closed by 2023. Columbia's operator will install a dry ash handling system to replace the ash pond. The dry ash handling system installation is planned for 2020-2021. In August 2018, the Court of Appeals for the D.C. Circuit vacated parts of the CCR for not being sufficiently protective of the environment. It is unclear how the EPA will respond to that decision. MGE will continue to monitor potential rule modifications to assess potential impacts on our operations.

Columbia

Based upon current available information, compliance with various environmental requirements and initiatives is expected to result in significant additional operating and capital expenditures at Columbia as noted below.

Columbia Clean Air Act Litigation

Columbia is a coal-fired generating station operated by WPL in which WPL, WPSC, and MGE have ownership interests. In December 2009, the EPA sent a Notice of Violation (NOV) to the co-owners, including MGE. The NOV alleged that WPL and the Columbia co-owners failed to comply with appropriate pre-construction review and permitting requirements and, as a result, violated the Prevention of Significant Deterioration program requirements, Title V Operating Permit requirements of the CAA, and the Wisconsin SIP. In June 2013, the court approved and entered a consent decree entered by the EPA, Sierra Club, and the co-owners of Columbia. One of the requirements of the consent decree requires installation of an SCR system at Columbia Unit 2 by December 31, 2018. Installation of the SCR was approved by the PSCW, which was placed in service in 2018.

Employees

As of December 31, 2018, MGE had 706 employees. MGE employs 223 employees who are covered by a collective bargaining agreement with Local Union 2304 of the International Brotherhood of Electrical Workers and 84 employees who are covered by a collective bargaining agreement with Local Union No. 39 of the Office and Professional Employees International Union. These collective bargaining agreements expire on April 30, 2023 and May 31, 2023, respectively. There are also 5 employees covered by a collective bargaining agreement with Local Union No. 2006, Unit 6 of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial, and Service Workers International Union. This collective bargaining agreement expires on October 31, 2023.

Financial Information About Segments

See Footnote 21 of the Notes to the Consolidated Financial Statements in this Report for financial information relating to MGE Energy's and MGE's business segments.

Executive Officers of the Registrants

As of December 31, 2018, the executive officers of the registrants were as follows:

Executive	Title	Effective Date	Service Years as an Officer
Jeffrey M. Keebler[a]	Chairman of the Board, President, and Chief Executive Officer	10/01/2018	7
Age: 47	President and Chief Executive Officer	03/01/2017	
	Senior Vice President Energy Supply and Planning	07/23/2015	
	Assistant VP Energy Supply and Customer Service	01/01/2012	
Craig A. Fenrick[b][c]	Executive Vice President Energy Operations	03/01/2017	12
Age: 59	Senior Vice President Energy Operations	07/23/2015	
	Vice President Energy Delivery	02/10/2015	
	Vice President Electric Transmission and Distribution	01/01/2012	
Lynn K. Hobbie[b]	Executive Vice President Marketing and Communications	03/01/2017	24
Age: 60	Senior Vice President Marketing and Communications	02/01/2000	
Jeffrey C. Newman[a]	Executive Vice President, Chief Financial Officer, Secretary, and Treasurer	03/01/2017	21
Age: 56	Senior Vice President, Chief Financial Officer, Secretary, and Treasurer	07/23/2015	
	Vice President, Chief Financial Officer, Secretary, and Treasurer	01/01/2009	
Cari Anne Renlund[b]	Vice President and General Counsel	11/02/2015	
Age: 45	Dewitt Ross & Stevens S.C. (law firm) Partner	06/11 10/15	3

Note: Ages, years of service, and positions as of December 31, 2018.

(a)

Executive officer of MGE Energy and MGE.

(b)

Executive officer of MGE.

(c)

Expected to retire April 30, 2019.

Item 1A. Risk Factors.

MGE Energy and our subsidiaries, including MGE, operate in a market environment that involves significant risks, many of which are beyond our control. The following risk factors may adversely affect our results of operations, cash flows and market price for our publicly traded securities. While MGE Energy and MGE believe we have identified and discussed below the key risk factors affecting our business, additional unknown risks and uncertainties may adversely affect our performance or financial condition in the future.

Regulatory Risk

We are subject to extensive government regulation in our business, which affects our costs and responsiveness to changing events and circumstances.

Our business is subject to regulation at the State and Federal levels. We are subject to regulation as a holding company by the PSCW. The PSCW regulates the following aspects of MGE's business: rates, terms and conditions of service; various business practices and transactions; financing; and transactions between it and its affiliates, including MGE Energy. MGE is also subject to regulation by the FERC, which regulates certain aspects of its business. The regulations adopted by the State and Federal agencies affect how we do business, our ability to undertake specified actions since pre-approval or authorization may be required for projects, the costs of operations, and the rates charged to recover such costs. Our ability to attract capital also depends, in part, upon our ability to obtain a fair return from the PSCW.

Our utility revenues are subject to regulatory proceedings, which can affect our ability to recover, and the timing of recovery of, costs that we incur in our operations.

Our utility customer rates have a material impact on our financial condition, results of operations, and liquidity. Our ability to obtain adjustments to those rates depends upon timely regulatory action under applicable statues and

regulations. Rate regulation is based on providing an opportunity to recover costs that have been reasonably incurred and the ability to earn a reasonable rate of return on invested capital. However, we have no assurance that our regulators will consider all of our costs to have been reasonably incurred. In addition, our rate proceedings may not always result in rates that fully recover our costs or provide a reasonable return on equity (ROE). Certain costs and revenues are deferred as regulatory assets and liabilities for future recovery or refund to customers, as authorized by our regulators. If recovery of regulatory assets is not approved or is no longer deemed probable, these costs would be recognized as a current period expense and could materially and adversely impact our operations and financial performance.

We could be subject to higher costs and potential penalties resulting from mandatory reliability standards.

MGE must adhere in its electric distribution system to mandatory reliability standards established by NERC. These standards cover areas such as critical infrastructure protection, emergency preparedness, facility design, and transmission operations, among others. The critical infrastructure protection standards focus on physical and access security of cyber assets, as well as incident response and recovery planning. Compliance with these standards affects operating costs and any noncompliance can result in sanctions, including monetary penalties.

We are subject to changing environmental laws and regulations that may affect our costs and business plans.

MGE Energy's subsidiaries are subject to environmental laws and regulations that affect the manner in which they conduct business, including capital expenditures, operating costs, and potential liabilities. Changes and developments in these laws and evolving regulations may alter or limit our business plans, make them more costly, or expose us to liabilities for past, present, or future operations.

Numerous environmental laws and regulations govern many aspects of our present and future operations. These include: air emissions limits and reporting; ambient air quality standards; water quality; water intake and discharges; wetlands; solid and hazardous waste; handling and disposal of hazardous substances; protection of endangered resources, such as threatened and endangered species, protection of cultural resources and archaeological sites; remediation and management of contaminated sites; and control of potential pollution from electric and gas construction sites. These evolving regulations affect us by:

.

Introducing uncertainty into our planning and capital expenditures processes, as changes in requirements may affect the timing and choice of compliance methods and require costly revisions to prior plans and commitments.

.

Imposing or modifying limits on the operations of our facilities in order to meet restrictions on air emissions, water use or water discharges.

.

Requiring capital expenditures and changes in operating procedures and costs as a result of the need to install additional pollution controls or more advanced technology or equipment at new or existing facilities.

.

Mandating increasing purchases of renewable energy, which affects the use of existing generation, and energy efficiency initiatives, which affect revenues.

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.

Our subsidiaries operate or co-own electric power plants that burn fossil fuels, deliver natural gas, and deliver electricity to customers. These business activities are subject to evolving public concern regarding greenhouse gases (GHG), and legislative and regulatory action, and possible litigation in response to that public concern. The primary greenhouse gas associated with our subsidiaries' combustion of fossil fuels, and the largest emission in our system overall, is carbon dioxide (CO_2).

Our subsidiaries could incur costs from the regulation of GHG from power plants, natural gas delivery, greenhouse gases used in power distribution, and efficiencies lost during power distribution. While the current State and Federal governments are unlikely to pass comprehensive greenhouse gas legislation or regulations in the immediate future, future legislation is likely. In addition, litigation by environmental nongovernment organizations (NGOs) targeting GHG emissions from the electric power industry is also likely if the federal government fails to act on greenhouse gas initiatives. We may also incur costs associated with actions taken due to investor interest in reducing our subsidiaries' reliance on fossil fuel generation, and coal in particular. Investors may also move away from investing in fossil fuel generated electricity for reputational or perceived risk-related reasons. These matters represent uncertainties in the operation and management of our business.

15

We face risks associated with the passing of the new tax reform.

On December 22, 2017, President Trump signed the Tax Cuts and Jobs Act (Tax Act) into law. The passing of the law significantly lowers MGE's corporate tax rates and triggers a remeasurement of deferred taxes. We have reflected the impact of the Tax Act in our financial results; however, those estimates could be affected by, and require subsequent adjustment as a result of, clarity and regulatory guidance that develops around the Tax Act. Furthermore, while regulation allows us to incorporate changes in tax law into the rate-setting process, there will most likely be timing delays before realization of the changes.

We face risk for the recovery of fuel and purchased power costs.

MGE has price risk exposure with respect to the price of natural gas, electricity, coal, emission credits, and oil. MGE burns natural gas in several of its peak electric generation facilities. In many cases, the cost of purchased power is tied to the cost of natural gas. In the event of an unexpected interruption in energy supply, whether due to equipment problems, transmission constraints, or otherwise, we may incur additional costs to obtain alternative sources of energy supply, in order to meet our contractual or regulatory obligations to our customers. Under the electric fuel rules, MGE is required to defer electric fuel-related costs that fall outside a symmetrical cost tolerance band that is currently plus or minus 2% around the amount approved in its most recent rate order. Any over/under recovery of the actual costs in a year is determined in the following year and is then reflected in future billings to electric retail customers. Under the electric fuel rules, MGE is required to defer the benefit of lower costs, if its actual fuel costs fall outside the lower end of the range, and is required to defer costs, less any excess revenues, if its actual fuel costs exceed the upper end of the range. Excess revenues are defined as revenues in the year in question that provide MGE with a greater return on common equity than authorized by the PSCW in MGE's latest rate order. MGE assumes the risks and benefits of variances that are within the cost tolerance band.

Operating Risk

We are affected by weather, which affects customer demand and can affect the operation of our facilities.

The demand for electricity and gas is affected by weather. Very warm and very cold temperatures, especially for prolonged periods, can dramatically increase the demand for electricity and gas for cooling and heating, respectively, as opposed to the softening effect of more moderate temperatures. Our electric revenues are sensitive to the summer cooling season and, to a lesser extent, the winter heating season. Similarly, very cold temperatures can dramatically

increase the demand for gas for heating. A significant portion of our gas system demand is driven by heating. Extreme summer conditions or storms may stress electric systems, resulting in increased maintenance costs and limiting the ability to meet peak customer demand.

We could be adversely affected by changes in the development, and utilization by our customers, of power generation, storage, and use technologies.

Our revenues and the timing of the recovery of our costs could be adversely affected by improvements in power generation, storage, and use technology.

Advancements in power generation technology, including commercial and residential solar generation installations and commercial micro turbine installations, are improving the cost-effectiveness of customer self-supply of electricity. Improvements in energy storage technology, including batteries and fuel cells, could also better position customers to meet their around-the-clock electricity requirements. Improvements in the energy efficiency of lighting, appliances, and equipment will also affect energy consumption by customers. 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, including those self-supply customers whose equipment has failed for any reason to provide the power they need whether due to inadequate on-site resources, restricted operating hours, or equipment failure. In addition, since a portion of our costs are recovered through charges based upon the volume of power delivered, a reduction in electricity deliveries will affect the timing of our recovery of those costs and may require changes to our rate structures.

Changes in power generation, storage, and use technologies could have significant effects on customer behaviors and their energy consumption. Customers could engage in individual conservation efforts by voluntarily reducing their consumption of electricity through changes in energy use and through the use of more energy efficient lighting, appliances, and equipment. They could also change their consumption of electricity from us through the installation of alternative energy sources, such as rooftop solar panels and micro turbines for self-supply. Customer energy conservation could adversely affect our results of operations by reducing our revenues without necessarily changing our operating costs due to our obligation to serve.

We are affected by economic activity within our service area.

Higher levels of development and business activity generally increase the numbers of customers and their use of electricity and gas. Likewise, recessionary economic conditions generally have an adverse impact on our results of operations.

Our ability to obtain an adequate supply of coal could limit our ability to operate our coal-fired facilities.

The availability of coal and the means to transport coal could:

.

Affect our operating costs due to increased costs associated with lower levels of generation or the need for alternate supply or alternate transportation,

.

Limit our ability to generate electricity if we are unable to arrange adequate deliveries of coal, and

.

Result in potentially higher costs for replacement purchased power as well as potential lost market sales opportunities.

A significant portion of our electric generating capacity is dependent on coal. Demand for coal has been impacted by prevailing prices for natural gas and may affect mine performance. Consequently, we are exposed to the risk that counterparties to these contracts will not be able to fulfill their obligations. Disruption in the delivery of fuel, including disruptions as a result of transportation delays, weather, labor relations, force majeure events, or environmental regulations affecting any of our fuel suppliers, could limit our ability to generate electricity at our facilities at the desired level. Should counterparties fail to perform, or other unplanned disruptions occur, we may be forced to fulfill the underlying obligation at higher prices. We may also be forced to reduce generation at our coal units and replace this generation through additional power purchases from third parties. These factors may also affect

the terms under which any of our existing coal supply or transportation agreements are renewed or replaced upon the expiration of their current terms.

Our ability to manage our purchased power costs is influenced by a number of uncontrollable factors.

We are exposed to additional purchased power costs to the extent that our power needs cannot be fully covered by the supplies available from our existing facilities and contractual arrangements. Those needs, and our costs, could be affected by:

.

Increased demand due to, for example, abnormal weather, customer growth, or customer obligations,

.

The inability to transmit our contracted power from its generation source to our customers due to transmission line constraints, outages, or equipment failures,

.

Reductions in the availability of power from our owned or contracted generation sources due to equipment failures, shortages of fuel or environmental limitations on operations, and

.

Failure to perform on the part of any party from which we purchase capacity or energy, whether due to equipment failures, transmission constraints or other causes.

An unexpected change in demand or the availability of generation or transmission facilities can expose us to increased costs of sourcing electricity in the short-term market where pricing may be more volatile.

The equipment and facilities in our operational system are subject to risks which may adversely affect our financial performance.

Weather conditions, accidents, and catastrophic events can result in damage or failures of equipment or facilities and disrupt or limit our ability to generate, transmit, transport, purchase, or distribute electricity and gas. Efforts to repair or replace equipment and facilities may take place over prolonged periods or may be unsuccessful. We may also be unable to make the necessary improvements to our operational system, causing service interruptions. Furthermore, our facilities are interconnected with third-party transmission providers. Damage to or failures of these providers' equipment or facilities is out of MGE's control but could lead to service interruptions. The resulting interruption of services would result in lost revenues and additional costs. We are also exposed to the risk of accidents or other incidents that could result in damage to or destruction of our facilities or damage to persons or property. Such issues could adversely affect revenues or increase costs to repair and maintain our systems.

Our operations and confidential information are subject to the risk of cyber-attacks.

Our operations rely on sophisticated information technology systems and networks. Cyber-attacks targeting our electronic control systems used at our generating facilities and for electric and gas distribution systems, including denial of service and ransomware attacks, could result in a full or partial disruption of our operations. Any disruption of these operations could result in a loss of service to customers and loss of revenue, as well as significant expense to repair system damage and remedy security breaches.

Our business requires the collection and retention of personally identifiable information of our customers, shareholders, and employees, who expect that we will adequately protect such information. A significant theft, loss, or fraudulent use of personally identifiable information may cause our business reputation to be adversely impacted and could lead to potentially large costs to notify and protect the impacted persons. The occurrence of such an event may cause us to become subject to legal claims, fines, or penalties, any of which could adversely impact our results of operations.

The safeguards we have may not always be effective due to the evolving nature of cyber-attacks. We cannot guarantee that such protections will be completely successful in the event of a cyber-attack. If the technology systems were to fail or be breached by a cyber-attack, and not be recovered in a timely fashion, we may be unable to fulfill critical business functions and confidential data could be compromised, adversely impacting our financial condition and results of operations.

We rely on the performance of our information technology systems, the failure of which could have an adverse effect on our business and performance.

We operate in a highly engineered industry that requires the continued operation of sophisticated information technology systems and network infrastructure to manage our finances, to operate our control facilities, to provide electric and gas service to our customers, and to enable compliance with applicable regulatory requirements. Our computer-based systems are vulnerable to interruption or failure due to the age of certain systems, the introduction of viruses, malware, ransomware, security breaches, fire, power loss, system malfunction, network outages and other events which may be beyond our control. System interruptions or failures, whether isolated or more widespread, could impact our ability to provide service to our customers, which could have a material adverse effect on our operations and financial performance.

Acts of terrorism could materially and adversely impact our operations and financial condition.

Facilities for electric generation, transmission, and gas and electric distribution are potential targets of terrorist threats and activities. A terrorist act at our facilities could result in a disruption of our ability to generate, transmit, transport, purchase, or distribute electricity or natural gas. A possible attack would have additional adverse effects, including environmental ramifications, increased security and insurance costs, as well as general economic volatility or uncertainty within our service territories. The inability to maintain operational continuity and any additional costs incurred for repairing our facilities could materially and adversely affect our financial condition and results of operations.

Failure to attract and retain an appropriately qualified workforce could affect our operations.

An aging workforce and the retirement of key employees without appropriate replacements may lead to operating challenges and increased costs. Some of the challenges include lack of resources, loss of knowledge, and time required for replacement employees to develop necessary skills. Failure to identify qualified replacement employees could result in decreased productivity and increased safety costs. If we are unable to attract and retain an appropriately qualified workforce, our operations could be negatively affected.

We face construction risk in connection with the completion of the Saratoga Wind Farm project.

The 66-megawatt (MW) wind farm project is subject to various risks that could cause costs to increase or delays in completion. 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. If the project is over budget, we may not be able to recover excess costs. Inability to recover excess costs, or inability to complete the project in a timely manner, could adversely impact our financial condition and results of operations.

Failure to successfully manage the implementation of our Enterprise Forward corporate initiative could adversely affect our operations.

MGE committed to undertake a multi-year project aimed at transforming our foundational customer engagement capabilities and enabling it to be flexible in delivering new products and services as outlined in our energy 2030 framework. These objectives are expected to be accomplished through the implementation of a new customer information system, enterprise resource planning platform, along with other solutions that meet the goals of the initiative. Integrating new systems is complex, costly and time consuming. If the systems and related processes do not operate as intended, it could result in disruptions to our business as well as unrecoverable excess costs. Inability to recover excess costs, or inability to implement the project successfully and in a timely manner, could adversely impact our financial condition and results of operations.

Financial Risk

We are exposed to commodity price risk relating to our purchases of natural gas, electricity, coal, oil, and environmental allowances.

We face commodity price risk exposure with respect to the purchase of natural gas, electricity, coal, oil, and environmental allowances. We also face risk through our use of derivatives such as futures, forwards, and swaps, to manage our commodity price risk. We could experience increased costs as a result of volatility in the market values of those commodities. We could also experience losses on our derivative contracts as a result of that market value volatility or if a counterparty fails to perform under a contract. In the absence of actively quoted market prices and pricing information from external sources, the valuation of these derivative contracts involves our exercise of judgment and use of estimates. As a result, changes in the underlying assumptions or use of alternative valuation methods could affect the reported fair value of these contracts.

Interest rate movements and market performance affects our employee benefit plan costs.

Prevailing interest rates affect our assessment and determination of discount rates and are a key assumption in the determination of the costs and funding of our defined benefit pension plans. Changes in rates may impact the amount of expense and timing of contributions to those plans. The performance of the capital markets affects the values of the assets that are held in trust to satisfy the future obligations under our pension and postretirement benefit plans. We have significant obligations in these areas and hold significant assets in these trusts. A decline in the market value of

those assets may increase our current and longer-term funding requirements for these obligations. Changes in the value of trust fund assets may affect the level of required contributions to these trusts to meet benefit obligations. Reduced benefit plan assets could result in increased benefit costs in future years and may increase the amount and accelerate the timing of required future funding contributions.

We are exposed to interest rate risk.

We are exposed to interest rate risk on our variable rate financing. Borrowing levels under commercial paper arrangements vary from period to period depending upon capital investments and other factors. Such interest rate risk means that we are exposed to increased financing costs and associated cash payments as a result of changes in the short-term interest rates.

We are exposed to credit risk primarily through our regulated energy business.

Credit risk is the loss that may result from counterparty nonperformance. We face credit risk primarily through MGE's regulated energy business. Failure of contractual counterparties to perform their obligations under purchase power agreements, commodity supply arrangements, or other agreements may result in increased expenses for MGE as a result of being forced to cover the shortfall in the spot or short-term market, where prices may be more volatile.

As a holding company, we are dependent on upstream cash flows from our subsidiaries for the payment of dividends on our common stock.

As a holding company, we have no operations of our own, and our ability to pay dividends on our common stock is dependent on the earnings and cash flows of our operating subsidiaries and their ability to pay upstream dividends or to repay funds to us. Our subsidiaries have financial obligations that must be satisfied before funding us. These obligations include debt service and obligations to trade creditors, among others. Our subsidiaries are also subject to contractual and regulatory restrictions on the payment of dividends.

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.

The credit markets have experienced disruption and uncertainty in prior years. To the extent that such issues affect the ability or willingness of credit providers or investors to participate in the credit markets or particular types of investments, or affect their perception of the risk associated with particular types of investments, our cost of borrowing could be affected. We also rely on our strong credit ratings to access the credit markets. If our credit ratings are downgraded for any reason, borrowing costs could increase, potential investors could decrease, or we could be required to provide additional credit assurance, including cash collateral, to contract counterparties.

General economic conditions may affect our operating revenues and our counterparty risks.

Operational

MGE Energy's and MGE's operations are affected by local, national and worldwide economic conditions. The consequences of a prolonged period of reduced economic activity may include lower demand for energy, uncertainty regarding energy prices and the capital and commodity markets, and increased credit risk. A decline in energy consumption may adversely affect our revenues and future growth. Increased credit risk reflects the risk that our retail customers will not pay their bills in a timely manner or at all, which may lead to a reduction in liquidity and an eventual increase in bad debt expense.

Counterparty creditworthiness

Credit risk also includes the risk that trading counterparties that owe us money or product will breach their obligations. MGE's risk management policy is to limit transactions to a group of high-quality counterparties. Should the counterparties to these arrangements fail to perform, we may be forced to enter into alternative arrangements. In that event, our financial results could be adversely affected and we could incur losses.

The stock market can be volatile, and various factors, could cause our stock price to decline.

The stock market has experienced, and may continue to experience, fluctuations that significantly impact the market prices of securities issued by many companies. Many factors affect the volatility and price of our common stock in addition to our operating results and prospects, including economic conditions changes locally and in the broader

economy. These conditions include technological change, the level of interest rates and yields on other investments, and the effects of the other risk factors discussed in this report. Our stock price could fluctuate significantly in response to our quarterly or annual results, as well as factors affecting the broader economy that are beyond our control.

Item 1B. Unresolved Staff Comments.

MGE Energy and MGE

None.

Item 2. Properties.

Electric Generation

Net summer rated capacity in service as of December 31, 2018, was as follows:

Plants	Location	Commercial Operation Date	Fuel	Net Summer Rated Capacity (MW)[a]	No. of Units
Steam plants:					
Columbia	Portage, WI	1975 & 1978	Low-sulfur coal	219[b][c]	2
Blount	Madison, WI	1957 & 1961	Gas	103[g]	2
WCCF	Madison, WI	2005	Gas/oil	126[d]	2
Elm Road Units	Oak Creek, WI	2010 & 2011	Coal	106[b][e]	2
Combustion turbines	Madison, WI Marinette, WI	1964-2000	Gas/oil	147[f]	6
Portable generators	Madison, WI	1998-2001	Diesel	49[f]	54
Wind turbines	Townships of Lincoln and Red River, WI	1999	Wind	1[f][g]	17
	Township of Brookfield, IA	2008	Wind	4[f][h]	18
	Counties of Dodge and Fond du Lac, WI	2008[i]	Wind	2[i]	86
Total				757	

(a)

Net summer rated capacity is determined by annual testing and may vary from year to year due to, among other things, the operating and physical conditions of the units.

(b)

Baseload generation.

(c)

MGE's share. See "Columbia" below.

(d)

Facility is jointly owned. Based on the terms of the joint plant agreement between MGE and the UW, the UW has the ability to reduce net capability of these units by approximately 17 MW in the summer. The net summer rated capacity shown reflects this decrease. See "WCCF" below.

(e)

MGE's share. See "Elm Road Units" below.

(f)

These facilities are owned by MGE.

(g)

Nameplate capacity rating is 11 MW.

(h)

Nameplate capacity rating is 30 MW.

(i)

Facility is jointly owned with WPL and WPSC. Power from this facility is shared in proportion to each owner's ownership interest. Nameplate capacity rating of the MGE-owned portion is 16.5 MW. Commercial operation date of facility is 2008; MGE purchased its ownership interest in 2018.

Columbia

MGE and two other utilities jointly own Columbia, a coal-fired generating facility consisting of two 556 MW units, which, as of December 31, 2018, accounted for 29% of MGE's net summer rated capacity. Power from this facility is shared in proportion to each owner's ownership interest. As of December 31, 2018, MGE had a 19.4% ownership interest in Columbia. The other owners are WPL, which operates Columbia, and WPSC. The Columbia units burn low-sulfur sub-bituminous coal obtained from the Powder River Basin coal fields located in Wyoming. The coal inventory supply for the Columbia units decreased from approximately 61 days as of December 31, 2017, to approximately 46 days as of December 31, 2018. See "Executive Overview" under Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, for a discussion of the reduction in MGE's ownership

share in Columbia commencing January 2017 and continuing through June 2020.

Elm Road Units

MGE Power Elm Road and two other owners own undivided interests in the Elm Road Units, consisting of two 615 MW units, which, as of December 31, 2018, accounted for 14% of MGE's net summer rated capacity. Power from these units is shared in proportion to each owner's ownership interest. MGE Power Elm Road owns an 8.33% ownership interest in the Elm Road Units, and its interest in the Elm Road Units is leased to MGE. The other owners are Wisconsin Energy Corporation, which operates the Units, and WPPI Energy, Inc. The Elm Road Units burn bituminous coal obtained from northern West Virginia and southwestern Pennsylvania, and sub-bituminous coal from the Powder River Basin in Wyoming. MGE's share of the coal inventory supply for the Elm Road Units increased from approximately 48 days as of December 31, 2017, to approximately 56 days as of December 31, 2018.

MGE leases MGE Power Elm Road's ownership interest in the Elm Road Units pursuant to two separate facility leases. The financial terms of each facility lease include a capital structure of 55% equity and 45% long-term debt, return on equity of 12.7%, and a lease term of 30 years. At the end of the respective lease terms, MGE may, at its option, renew the facility lease for an additional term, purchase the leased ownership interest at fair market value, or allow the lease to end. The Unit 1 and Unit 2 leases commenced with the commercial operation of each respective unit.

WCCF

MGE Power West Campus and the UW jointly own undivided interests in a natural gas-fired cogeneration facility on the UW campus. The facility has the capacity to produce 20,000 tons of chilled water, 500,000 pounds per hour of steam, and approximately 150 MW of electricity. The UW owns 45% of the facility, which represents its interest in the chilled-water and steam assets. These assets are used to meet a part of the UW's need for air-conditioning and steam-heat capacity. MGE Power West Campus owns 55% of the facility, which represents its interest in the electric generating assets. These assets are used to provide electricity to MGE's customers. The UW's share of the plant and portion of the earnings from the WCCF are not reflected in the consolidated financial statements of MGE Energy or MGE. MGE Power West Campus' share of the plant is reflected in property, plant, and equipment on MGE Energy's and MGE's consolidated balance sheets.

MGE leases the electric generating assets owned by MGE Power West Campus and is responsible for operating the entire facility. The financial terms of the facility lease include a capital structure of 53% equity and 47% long-term debt, return on equity of 12.1%, and a lease term of 30 years. At the end of the lease term in 2035, MGE may, at its option, renew the facility lease for an additional term, purchase the generating facility at fair market value, or allow the lease contract to end.

Electric and Gas Distribution Facilities

As of December 31, 2018, MGE owned 865 miles of overhead electric distribution line and 1,224 miles of underground electric distribution cable, all of which are located in Wisconsin. These electric distribution facilities are connected by approximately 52 substations, installed with a capacity of 1,202,500 kVA. MGE's gas facilities include 2,900 miles of distribution mains, which are all owned by MGE.

A significant portion of MGE's electric and gas distribution facilities are located above or underneath highways, streets, other public places, or property that others own. MGE believes that it has satisfactory rights to use those places or property in the form of permits, grants, easements, and licenses; however, it has not necessarily undertaken to examine the underlying title to the land upon which the rights rest.

Encumbrances

The principal plants and properties of MGE are subject to the lien of its Indenture of Mortgage and Deed of Trust dated as of January 1, 1946, as amended and supplemented, under which MGE's first mortgage bonds are issued. As of December 31, 2018, there were $1.2 million of first mortgage bonds outstanding. See Footnote 10 of the Notes to Consolidated Financial Statements in this Report for additional information regarding MGE's first mortgage bonds.

MGE Power Elm Road has collaterally assigned its right to lease payments from MGE for the Elm Road Units in order to secure the repayment of $57.3 million of senior secured notes issued by MGE Power Elm Road. See Footnote 10 of the Notes to Consolidated Financial Statements in this Report for additional information regarding these senior notes.

MGE Power West Campus has collaterally assigned its right to lease payments from MGE for the WCCF in order to secure the repayment of $41.6 million of senior secured notes issued by MGE Power West Campus. See Footnote 10 of the Notes to Consolidated Financial Statements in this Report for additional information regarding these senior notes.

Item 3. Legal Proceedings.

MGE Energy and MGE

MGE Energy and its subsidiaries, including MGE, from time to time are involved in various legal proceedings that are handled and defended in the ordinary course of business.

See "Environmental" under Item 1. Business and Footnote 17.c. of the Notes to Consolidated Financial Statements in this Report for a description of several environmental proceedings involving MGE. See Footnote 17.d. of the Notes to Consolidated Financial Statements in this Report for a description of other legal matters.

Item 4. Mine Safety Disclosures.

MGE Energy and MGE

Not applicable.

22

PART II.

Item 5. Market for Registrants' Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities.

Market for Common Equity

MGE Energy

MGE Energy common stock is traded on Nasdaq under the symbol MGEE. On January 25, 2019, there were approximately 37,843 shareholders of record. For additional information regarding dividends and dividend restrictions, see Footnote 9 of the Notes to the Consolidated Financial Statements in this Report.

MGE

As of January 25, 2019, there were 17,347,894 outstanding shares of common stock, all of which were held by MGE Energy. There is no market for shares of common stock of MGE.

Issuer Purchases of Equity Securities

MGE Energy

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced	Maximum number (or Approximate Dollar Value) of Shares That May Yet Be

				Plans or Programs[(a)]	Purchased Under the Plans or Programs[(a)]
October 1-31, 2018	10,111	$	63.86	-	-
November 1-30, 2018	6,467		62.92	-	-
December 1-31, 2018	44,048		68.12	-	-
Total	60,626	$	66.85	-	-

(a)

Under the MGE Energy, Inc. Direct Stock Purchase and Dividend Reinvestment Plan (Stock Plan), common stock shares deliverable to plan participants may be either newly issued shares or shares purchased on the open market, as determined from time to time by MGE Energy. MGE Energy's transfer agent uses open market purchases to provide shares to meet obligations to participants in the Stock Plan. The shares are purchased on the open market through the transfer agent's securities broker-dealer and then are reissued under the Stock Plan as needed to meet share delivery requirements. The volume and timing of share repurchases in the open market depends upon the level of dividend reinvestment and optional share purchases being made from time to time by plan participants. As a result, there is no specified maximum number of shares to be repurchased and no specified termination date for the repurchases. All shares issued through the Stock Plan, whether newly issued or reissued following open market purchases, are issued and sold pursuant to a registration statement that was filed with the SEC and is currently effective.

MGE

None.

Stock Performance Graph

The performance graph below illustrates a five-year comparison of cumulative total returns based on an initial investment of $1,000 in MGE Energy common stock, as compared with the Russell 2000 and the EEI Index for the period 2013 through 2018. The EEI Index reflects the consolidated performance of Edison Electric Institute investor-owned electric utilities.

Cumulative Five-Year Total Return Comparison

(assumes $1,000 invested on 12/31/2013 with dividends reinvested)

Value of Investment as of December 31,

	2013	2014	2015	2016	2017	2018
MGEE	$ 1,000	$ 1,219	$ 1,275	$ 1,835	$ 1,808	$ 1,756
Russell 2000						