



# Letter to Stakeholders

Dear Stakeholder,

Over our long history, CenterPoint Energy has evolved into a leader in the energy industry, and we are well-positioned to enhance that role in the future. We are charting a dynamic and innovative course for what an energy delivery company can be in the 21st century. Corporate responsibility and stewardship will continue to shape our priorities.

Our company's values of safety, integrity, accountability, initiative and respect serve as the foundation that drives our actions. These are all supporting tenets to good stewardship, and translate into a workforce that has a deep sense of duty to our stakeholders. While our focus is on safe and reliable delivery of electricity and natural gas, we actively engage in improving lives and addressing the needs in our communities.

We recognize that key environmental, social and governance (ESG)-related issues are integral to our performance. To that end, we established an ESG Council. The purpose of the council is to identify, evaluate and recommend strategic direction and opportunities on an ongoing basis that promotes ESG objectives that are aligned with our vision and strategic plan. We have also expanded our reporting to align with the Global Reporting Initiative (GRI) framework. GRI is the leading set of standards used by organizations to disclose ESG performance. In addition to greater insight into CenterPoint Energy's policies and programs, this report highlights our approach on environmental stewardship, enriching our communities and providing a safe, inclusive workplace.

In 2017, CenterPoint Energy delivered strong financial and operational results, while further positioning our company for the future through strategic capital investments. Through robust oversight, guidance and direction from our board of directors, our Operate, Serve, Grow, strategy guides our value creation.

As always, safety is our highest priority. We are guided by our companywide approach to safety performance, *Safety Forward*, which we believe has resulted in improved safety performance, expanded employee participation and an increased emphasis on the safety of our employees, contractors, systems and the general public.

We strive for strong stewardship of the environment with a continued focus on reducing greenhouse gas emissions from our operations, including our participation as a founding partner in the U.S. Environmental Protection Agency's Natural Gas Methane Challenge Program.

Our nearly 8,000 employees live our values every day. We are committed to creating a safe and open work environment where business results are achieved through the talents of our diverse workforce.

2017 was another outstanding year for our community involvement. We advanced our community engagement in the areas of education, community development, and health and human services. Six out of every 10 CenterPoint Energy employees volunteered their time last year for a total of more than 146,000 hours.

Thank you for your interest in CenterPoint Energy's corporate responsibility efforts. We look forward to continuing our conversations with communities, customers, employees, investors and other stakeholders on ESG topics that are important to all of us.

A stylized, handwritten signature in black ink, enclosed in a thin black rectangular border.

**Scott M. Prochazka**  
President & CEO





## **Management of Methane Emissions: Gas Distribution**

*Used with permission from Richard Meyer, Director Energy Analysis and Standards, American Gas Association*

The Environmental Protection Agency (EPA) made substantial updates to its estimates of methane emissions in its Inventory of U.S. Greenhouse Gases and Sinks: 1990-2015, released in 2017. The Inventory now incorporates new data available from studies on emissions, as well as its Greenhouse Gas (GHG) Reporting Program.

The Inventory reveals once again that natural gas distribution systems have a small emissions footprint shaped by a declining trend. Less than 0.1 percent of produced natural gas is emitted from distribution systems owned and operated by local natural gas utilities. Annual emissions from these systems declined 75 percent from 1990 to 2015 even as natural gas utility companies added nearly 600,000 miles of pipeline to serve 19 million more customers.

This exceptional record can be traced to safety as the top priority for gas utilities that continue to be vigilant and deeply committed to systematically upgrading infrastructure through risk-based integrity management programs. As companies and the country continue to modernize the natural gas infrastructure base and connect homes and businesses, there will be new opportunities to achieve low-cost carbon emissions reductions by leveraging this existing infrastructure and the nation's natural gas resource.

### *Key Findings*

- Annual methane emissions from natural gas distribution systems declined 75 percent from 1990 to 2015.
- The natural gas emissions rate of production from distribution systems is now less than 0.1 percent.
- The ratio of methane emissions per unit of natural gas produced has declined continuously during the past two and a half decades, dropping 46 percent since 1990.
- Total methane emissions from all natural gas systems have declined 16 percent from 1990 to 2015.
- Methane emissions economy-wide represent 10 percent of all greenhouse gas emissions in the United States. Along with natural gas systems, methane emission sources include enteric fermentation and manure management (livestock), landfills, coal mining petroleum systems, wastewater treatment and others.

## **Pipe Replacement: EPA Natural Gas Methane Challenge Program**

As part of CenterPoint Energy's efforts to reduce methane emissions, the company's natural gas distribution business joined the EPA Natural Gas Methane Challenge Program as a founding partner in March 2016. Partner companies have committed to replacing or rehabilitating cast-iron and unprotected steel natural gas distribution mains, as well as reducing methane emissions from natural gas pipeline blowdowns. Reducing methane emissions lowers operational risk, increases efficiency and improves air quality.

CenterPoint Energy’s plan included replacement of cast-iron and unprotected steel natural gas mains at a 5 percent annual rate. During 2018, our replacement percentage rates were well above the EPA commitment rate.

In addition, CenterPoint Energy expects to complete the replacement of more than 192 miles of unprotected steel main by year-end 2018. We continue to achieve our committed annual replacement rate. This program is an important component of our operational strategy, as well as our commitment to safety and reliability.

	2016	2017	2018
<b>Cast-iron Miles Replaced</b>	71	49	27.2
<b>Unprotected Steel Mains Miles Replaced</b>	68	60	64

**Emissions Avoidance and Reduction: EPA Natural Gas STAR Program**

The EPA Natural Gas STAR Program provides a framework for partner companies with U.S. oil and natural gas operations to implement methane-reducing technologies and practices, as well as to document their voluntary emission reduction activities. CenterPoint Energy joined the program in 1997 and submits its reports annually.

**Case Study: Picarro System**

The Picarro Surveyor system is the next generation of methane detection technology. With 15 units, CenterPoint Energy has the largest fleet in the world of the state-of-the-art Picarro Surveyor leak survey technology, which is a thousand times more sensitive than other current techniques.

In 2013, the company began a pilot study of the Picarro Surveyor in its natural gas distribution operations to proactively identify leaks in underground natural gas mains and service lines, as well as above-ground facilities.

In addition to enabling us to locate and respond to natural gas leaks much faster, Picarro Surveyors are more efficient in terms of accuracy and coverage area. As a result, Picarro also plays a key role in the company’s methane emissions-reduction efforts.

Traditional survey methods use methane detection devices with optical, laser, infrared or flame ionization technology. These devices are either mounted on a vehicle that drives slowly through an area or a handheld instrument used by a technician who walks over the lines to detect methane plumes near underground natural gas mains and service lines.

Picarro can be used at driving speeds of up to 40 miles per hour to accurately survey a much broader area. Each night, a single surveyor can cover up to 30 miles of natural gas mains and service. Night is the optimal survey time as the ground is cooler and natural gas does not rise as quickly as it does during the day. In the “survey” mode, Picarro constantly collects precise data, including Global Positioning System (GPS) readings, wind speed and direction, as well as methane and ethane concentration. This data is utilized in complex algorithms to determine areas where there may potentially be a natural gas leak.

Picarro’s sensitivity to methane is measured in parts per billion, while traditional technology measures in parts per million. This innovative tool helps detect leaks before customers even know about them. As a result, Picarro technology has proven to detect significantly more natural gas leaks than traditional leak survey methods.

CenterPoint Energy tested and phased Picarro into operations beginning in 2016. In Texas, the company has been using Picarro since January 2016. Arkansas completed full deployment in 2016, with the remaining regions being implemented in early 2018.

To further enhance the Picarro system, CenterPoint Energy has deployed industry-leading business processes and technology systems, including:

- Real-time tracking of the leak survey results and natural gas system assets surveyed in the geographic information system, replacing the need to manually track completed leak surveys using paper maps;
- Automation of paperless work orders to investigate potential leaks identified by Picarro, which replaced a manual process; and
- Leak survey applications on computer tablets allow technicians to document survey results with cameras and GPS capabilities. Providing crews with mobile data access to digital photos and GPS coordinates significantly reduces the time spent determining where to excavate.

CenterPoint Energy is currently discussing with Picarro the potential to integrate its Emission Quantification (EQ) technology into our distribution integrity management (DIM) program. EQ can be utilized to predict the number of leaks and methane emission volume in a given segment or project. By adding EQ information into CenterPoint Energy’s DIM program, the company expects to enhance the ability to select and design pipe replacements that deliver increased value in safety and emission reductions.

**CenterPoint Energy Natural Gas Operations: Subpart W GHG Emissions Summary**

Metric Tons CO2e



**Renewable Natural Gas**

**Overview**

Renewable Natural Gas (RNG) is methane produced from any of a number of non-geologic sources and processed to meet pipeline quality standards. RNG can be transported via existing natural gas pipelines and substituted for any end use for which conventional gas is used. Because RNG is interchangeable with conventional natural gas, it represents an opportunity to reduce fossil fuel consumption in natural gas end uses like space heating, while leveraging existing natural gas transmission, storage and distribution infrastructure. RNG is typically produced by diverting an existing waste stream; common sources include animal manure, wastewater treatment plants, food processor waste and landfills. While the GHG reductions associated with RNG vary depending on the source, substituting RNG for natural gas represents a significant – 40 percent or more – carbon emissions reduction and, in some cases, results in net negative emissions. A summary of the

lifecycle impact assessments certified by the California Air Resources Board indicated that, on average, RNG produced from landfills is 44 percent less carbon intensive than natural gas, RNG produced from wastewater sludge is 77 percent less intensive, and RNG produced from anaerobic digestion of food, green waste and dairy manure is more than 100 percent less intensive.

Due to the variety of potential sources of RNG, estimating the size of the total resource is difficult; no centralized database for RNG production currently exists. However, an assessment performed by the National Renewable Energy Laboratory estimated the potential at about 756 billion cubic feet (BCF) per year from four anaerobic digestive feedstocks, including wastewater treatment, landfills, animal manure and industrial, institutional and commercial organic waste. A study conducted by the American Gas Foundation (AGF) estimated potential RNG from thermal gasification of lignocellulosic feedstocks at between 612 and 1,563 BCF per year. The high end of the potential RNG resources from all sources estimated by the AGF study was about 2.4 trillion cubic feet per year. This volume of methane would be equal to roughly ten percent of current annual U.S. natural gas consumption.

### ***Minnesota Voluntary Pilot RNG Program***

CenterPoint Energy has submitted a petition for approval of a five-year pilot RNG program. The proposed program is a voluntary green tariff program through which CenterPoint Energy customers may subscribe to purchase all or a portion of their natural gas from RNG sources for an additional fee. The company is also proposing to add a small amount of renewable natural gas to CenterPoint Energy's general gas portfolio in support of the pilot offering. A decision on the petition is anticipated in 2019.

### ***CenterPoint Energy Services and 'Green Gas'***

Thanks to innovative technology and a strong customer focus, CenterPoint Energy Services (CES) – the company's competitive natural sales and services business – purchases RNG from landfills in the United States and sells the gas to specific customers to meet their supply needs and environmental requirements. CES also shares in a monetary credit for the value RNG provides in reducing emissions as a transportation fuel.

RNG is commonly used as transportation fuel in vehicles that use compressed or liquefied natural gas (CNG or LNG). In 2014, CES structured a transportation fuel RNG deal through a long-standing relationship with Memphis Light, Gas and Water (MLGW). The arrangement involved delivering green gas to the utility's CNG stations and LNG tanks for redelivery to customers. One of these customers is United Parcel Service (UPS), which uses the RNG to fuel its fleet of trucks. The contract with MLGW is active and more UPS facilities have been added. CES has been purchasing landfill gas in Houston for more than 15 years. Since 2008, CenterPoint Energy has been delivering landfill gas to InBev's Budweiser beer production plant located in northwest Houston.

### ***Green Balance***

Green Balance is a carbon-neutral gas purchase program that applies Green Credits to customers' natural gas purchases in order to offset all or a portion of the carbon emissions that are created during natural gas combustion. CES purchases Green Credits to offset the carbon emissions created when a customer consumes natural gas, making the purchase carbon-neutral.

By participating in the Green Balance program, our customers can conveniently manage their carbon footprint, meet greenhouse gas emissions-reduction goals and promote environmental stewardship. CES purchases its Green Credits exclusively from [Element Markets](#), a Houston-based integrated environmental credit marketing and project development company. Element Markets certifies that all Green Credits purchased by CES are sourced from voluntary carbon emissions-reduction projects that meet nationally recognized standards. The

credits have been registered as required by the rules and protocols of the Climate Action Reserve, the Verified Carbon Standard or other generally accepted organizations.

### **Participation in Methane Research**

- In 2018, CenterPoint Energy, along with other American Gas Association (AGA) member companies, participated in the Basin Methane Reconciliation Study, a first-of-its-kind field campaign for measuring methane emissions from natural gas operations. The study was designed to understand the persistent gap between top-down and bottom-up methane emissions estimates for production regions. With assistance from industry partners, the researchers have significantly advanced basin-level emission quantification methods and shed new light on important emissions processes.
- CenterPoint Energy and other AGA member companies participated in and co-funded three methane studies within the past five years. The studies were conducted in conjunction with the Environmental Defense Fund and the Department of Energy, as well as with support from various universities, including Washington State University, Colorado State University and Colorado School of Mines.
- In 2017, CenterPoint Energy, along with other AGA member companies, co-funded the Gas Technology Institute's portion of a new methane study to address the large uncertainties surrounding the estimate of methane emissions from natural gas distribution systems. We believe this study will improve the characterization of the emissions from industrial meters in the natural gas distribution system, examine significant differences between vintage and new plastic pipelines, and gather data comparing pipelines with and without plastic liners.

## Safety

CenterPoint Energy is committed to the protection of its employees, contractors, systems and communities. The company's goal is to maintain a safe work environment and deliver electricity and natural gas safely to the communities we serve. To achieve this goal, CenterPoint Energy is guided by the following principles:

- **Accountability:** Safety is the responsibility of all employees and is a condition of employment. While management sets clear expectations and provides support and training, employees are accountable for understanding and incorporating safety responsibilities into their daily work activities. Employees are also accountable for reporting incidents, injuries and unsafe practices or conditions so they can be promptly addressed and corrected. Employees are empowered and understand we will perform our duties in a safe manner or we will not do them;
- **Continuous Improvement:** CenterPoint Energy strives to continuously improve our safety performance and culture. We embrace innovation and technology that will enhance our performance. We will identify opportunities to improve and learn from incidents, near-misses, inspection programs and observations that the public or employees submit;
- **Customer and Community Focus:** We will continue to develop and maintain effective safety programs that educate and inform customers and the public in the communities where we operate; and
- **Compliance:** We are committed to complying with applicable safety laws and regulations. Employees are expected to adhere to and abide by company policies, procedures and guidelines for safely working and operating our systems. We also expect contractors who perform work for the company to do so safely, in compliance with applicable laws and regulations.

### **Workplace Safety**

CenterPoint Energy focuses on being *Safety Forward*, which is our companywide approach to safety performance and excellence. Initiatives are designed to encourage employees to keep safety at the forefront, regardless of their business unit or work location. It is critical that our employees be well trained when it comes to safety procedures, so we offer industry and peer education programs that address safety challenges. CSAFE (CenterPoint Energy Safe Action For Employees) is the natural gas operations' behavior-based safety program that has multiple committees that meet on a monthly basis. Employees are encouraged to share safety experiences that will help their peers, while also identifying and addressing at-risk conditions and behavior.

Initiative and accountability – two of our five values – have led to many safety improvements through employee involvement. Speaking up to correct possible hazards or improve existing practices has created positive change. In both our electric and natural gas operations, we practice our safety commitment through quality observations, near-miss notifications, inspections and other safety-related activities. Safety observations are the first line of defense in maintaining safety awareness on a job.

In 2017, more than 64 percent of employees in our electric and natural gas businesses submitted at least two observations per month. This amounted to 214,895 safety observations submitted over the course of the year.

We believe CenterPoint Energy's ongoing efforts to sustain a strong safety culture are resulting in fewer injuries and incidents. We had excellent safety performance in 2017, with our highest levels in employee engagement and continuous improvement for participation and observation rates; days away, restricted or transferred (DART) rates; and recordable incident rates (RIR).

From 2016 to 2017, we had a 16 percent decrease in Occupational Safety and Health Administration (OSHA) recordable incidents, a 28 percent decrease in DART cases, and a 32 percent decrease in Lost Time Injuries. Our

reduction in recordable incidents placed CenterPoint Energy in the top quartile for Edison Electric Institute (EEI) and AGA rankings.

#### *Highlights*

- 2018 – Our Safety department recently held its first Contractor Safety Summit. More than 50 CenterPoint Energy contractors, including executive leadership and safety management employees, gathered to hear from the company’s leaders on the importance of safety for employees, contractors, systems and the public. The summit covered topics related to both electric and natural gas operations, such as pipeline safety and management systems, damage prevention and employee safety.
- 2017 – Our natural gas operations in Oklahoma achieved a 0-0-0 incident rate in 2017, which means zero preventable vehicle collisions, zero recordable incidents and zero days away from work/restricted injuries. Their success is attributable to a commitment to incorporate safety into everything they do.
- 2017 – Employees in Arkansas and Oklahoma hosted the last Natural Gas Distribution Safety Summit of the year with the theme “Safety Improvement,” based on the television series “Home Improvement.” More than 100 employees attended.

#### *Facts*

- All company drivers are expected to complete training on safety behind the wheel. Smith System training, AlertDriving training and Mobileye collision avoidance technology help prevent vehicle incidents and related injuries and reduce the severity when the incidents cannot be avoided. In 2018, Mobileye was deployed in natural gas operations in Texas, Mississippi, Arkansas, Louisiana and Minneapolis.
- To drive continuous improvement and knowledge sharing, regular safety meetings, trainings and summits are held for employees.
- Quarterly safety campaigns focus on key topics, such as ergonomics during work activities, including setting meters, climbing poles, lifting boxes and driving.

#### **Public Safety**

CenterPoint Energy is committed to the safe delivery of electricity and natural gas. To support this commitment, we provide our stakeholders with information and educational outreach about potential hazards and how to respond to them. This includes education about staying away from power lines and how trees and vegetation affect electric safety, and natural gas safety.

#### *2017 Highlights*

- CenterPoint Energy’s Safety and Gas System Integrity organization committed to participating in the American Petroleum Institute’s standards for managing pipeline infrastructure and is implementing them in our operations.
- Through our Speakers’ Bureau, CenterPoint Energy offers free presentations to Houston-area community groups, professional associations and businesses. In 2017, 49 presentations were held reaching more than 2,100 individuals.
- CenterPoint Energy partnered with the Houston Astros to lead interactive assemblies on electrical and natural gas safety for elementary students. The assemblies featured company mascot Louie the Lightning Bug and Orbit of the Houston Astros. Eight assemblies held in the Houston area reached more than 1,700 students.
- CenterPoint Energy’s educational websites, Electric Universe and Safe and Smart with Buddy Blue Flame, offer educational information and activities related to electrical and natural gas safety. In 2017, the company received the Southern Gas Association Community Service Award for our natural gas safety education website.

### *Educational Outreach*

CenterPoint Energy's educational outreach activities include partnerships with local schools and nonprofit organizations. To reach a broad audience, we educate adults and youth in our communities in both English and Spanish. During the 2016-17 school year, CenterPoint Energy actively promoted safety education and outreach through free community resources and strategic partnerships. We distributed 68,640 booklets on electric and natural gas safety to K-12 students. In the 2016-17 school year, we partnered with more than 60 organizations on safety outreach, including Junior Achievement, Houston Audubon Society and the Children's Museum of Houston.

### *Community Partnership Grants*

One of the company's signature safety programs is CenterPoint Energy's Community Partnership Grants. The program helps cities leverage local funds to purchase safety equipment, hold trainings or support important safety projects. We invite local emergency responders, including fire and police departments in our natural gas markets, to apply for a safety grant. We conduct this program in Minnesota, Arkansas and Oklahoma and are in the process of expanding it. In 2017, 73 grants were awarded totaling \$144,576. Since the program's inception in 2003, CenterPoint Energy has contributed \$1.7 million toward safety initiatives in our communities.

### ***Pipeline Public Safety Awareness***

As part of our focus on safety, CenterPoint Energy has a comprehensive pipeline safety public awareness program that educates the public about pipeline purpose, reliability, potential hazards and preventive measures. Additional topics include leak recognition and response, emergency preparedness and damage prevention, and One Call requirements. We communicate information via ads on television, radio and outdoor, direct mail, presentations and school materials. Much of our public safety awareness work is accomplished through strategic partnerships.

CenterPoint Energy's Public Awareness Program helps protect people, property and the environment through increased stakeholder awareness and knowledge. Objectives include:

- Increasing stakeholder awareness of pipelines in their communities and how they transport energy;
- Growing stakeholder understanding of steps to reduce the occurrence of pipeline emergencies; and
- Educating stakeholders on the steps to take in response to a pipeline emergency.

### *2017 Initiatives*

- Delivered key natural gas pipeline safety messages to approximately 1.3 million non-customer stakeholders along CenterPoint Energy's distribution and transmission system.
- Partnered with Texas Pipeline Awareness Alliance to produce natural gas safety advertising campaigns in all 254 counties in Texas on both English and Spanish television networks, producing more than 34 million impressions.
- Sponsored presentations at 17 Texas regional school safety summits presented by the Smalley Foundation. We provided pipeline safety information to school administrators, safety officials, bus drivers and other staff at schools located near underground pipelines.
- Distributed supplemental outreach of pipeline safety information to all public officials in Arkansas.
- With the Pipeline Operators Safety Partnership, which helps build partnerships between pipeline companies and emergency responders, we distributed educational materials at two nationwide conferences.

## CenterPoint Energy AGA Voluntary Sustainability Metrics: Quantitative Information

**Disclaimer:** All information below is being provided on a voluntary basis, and as such, companies may elect to include or exclude any of the topics outlined below and customize the template to their specific needs. The decision to include data for historical and future years is at the discretion of each company and the specific years (e.g., historical baseline) should be chosen as appropriate for each company. © American Gas Association. All rights reserved.

**Parent Company:** CenterPoint Energy  
**Operating Company(s):** CenterPoint Energy  
**Business Type(s):** Gas Distribution  
**State(s) of Operation:** Texas, Minnesota, Arkansas, Louisiana, Mississippi and Oklahoma  
**Regulatory Environment:** Regulated  
**Note:** Data from from operating companies is rolled up to the corporate level.  
**Report Date:** 12/6/2018

Ref. No.	Refer to the "Definitions" column for more information on each metric.	Year 2017	Definitions	Comments, Additional Information
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### NATURAL GAS DISTRIBUTION

<b>1</b>	<b>METHANE EMISSIONS AND MITIGATION FROM DISTRIBUTION MAINS</b>			
1.1	Number of Gas Distribution Customers	3,469,791		
1.2	Distribution Mains in Service	8	<i>These metrics should include all local distribution companies (LDCs) held by the Parent Company that are above the LDC facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule.</i>	
1.2.1	Plastic (miles)	42,518		
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	31,860		
1.2.3	Unprotected Steel - Bare & Coated (miles)	371		
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	71		
1.3	<b>Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (# years to</b>			
1.3.1	Unprotected Steel (Bare & Coated)			At the beginning of 2016, CenterPoint Energy had approximately 498.3 miles of unprotected steel main in our system. By year-end 2017, we replaced 127.6 miles (25.6 percent) of this pipe. All unprotected steel is expected to be removed by 2027.
1.3.2	Cast Iron / Wrought Iron			At the beginning of 2016, CenterPoint Energy had approximately 190 miles of cast iron pipe in our system. We completely removed nearly 119 miles (62.6 percent) of cast iron pipe by year-end 2017. By end of 2018, our replacement percentage rates were well above the EPA commitment rate.
<b>2</b>	<b>Distribution CO2e Fugitive Emissions</b>			
2.1	CO2e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	418,461	<i>Fugitive methane emissions (not CO2 combustion emissions) stated as CO2e, as reported to EPA under 40 CFR 98, Subpart W, sections 98.236(a)(3)(ix)(C) and (D), 98.236(r)(1)(iv) and (v), and 98.236(r)(2)(v)(A) and (B). This metric should include fugitive methane emissions above the reporting threshold for all natural gas local distribution companies (LDCs) held by the Parent Company that are above the LDC facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule.</i>	
2.2	Natural Gas Throughput from Gas Distribution Operations in thousands of scf	400,161,943		This metric provides gas distribution throughput reported under Subpart W, 40 C.F.R. 98.236(aa)(9)(i) through (iii), as reported on the Subpart W e-GRRT integrated reporting form in the "Facility Overview" worksheet Excel form, gas received (column 1) plus the gas withdrawn (column 2) minus the gas injected into storage (column 3). See screenshot of e-GRRT report provided in template instructions.
2.3	CO2e Fugitive Methane Emissions Rate (metric tons per thousands scf of Throughput)	0.001		2.1 divided by 2.2

### NATURAL GAS TRANSMISSION & STORAGE

<b>1.2</b>	<b>Transmission Pipelines, Blow Down Volumes, and Fugitive Emissions</b>			
1.2.1	Total Miles of Transmission Pipeline Operated by gas utility (miles)			
1.2.2	Volume of Transmission Pipeline Blow Down Emissions - outside storage and compression facilities:		As reported to EPA under 40 CFR 98, Subpart W.	

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		2017		
1.2.2.1	scf natural gas	NA		
1.2.2.3	metric tons CO <sub>2</sub> e	NA		Blowdown volume for each reporting district was below the reporting threshold.
<b>1.3</b>	<b>Underground Natural Gas Storage Emissions</b>			
1.3.2	Storage Compressor Station Emissions ( <i>metric tons CO<sub>2</sub>e</i> )	-	As reported to EPA under 40 CFR 98, Subpart W. Utilizing EPA emissions factors, as reported to EPA under Subpart W, 40 CFR 98.236, on the e-GRRT integrated reporting form, "Equipment Leaks Surveys and Population Counts [98.236 (q, r)]" tab.	Total station minus wellhead emissions.
1.3.3	Storage Facility Wellhead Component Fugitive Emissions ( <i>metric tons of CO<sub>2</sub>e</i> )	NA		Underground natural gas storage facility is below the reporting threshold.
<b>2</b>	<b>CO<sub>2</sub>e EMISSIONS FOR TRANSMISSION AND STORAGE COMPRESSION</b>			
2.1	CO <sub>2</sub> e Emissions for Transmission Pipelines ( <i>metric tons</i> )	NA	CO <sub>2</sub> combustion emissions as reported to EPA under 40 CFR 98, Subpart C and methane emissions stated as CO <sub>2</sub> e as reported under Subpart W.	Below reporting threshold.
2.2	CO <sub>2</sub> e Emissions for Storage Facilities ( <i>metric tons</i> )	NA	CO <sub>2</sub> combustion emissions as reported to EPA under 40 CFR 98, Subpart C and methane emissions stated as CO <sub>2</sub> e as reported under Subpart W.	Below reporting threshold.
<b>3</b>	<b>CONVENTIONAL AIR EMISSIONS FROM TRANSMISSION AND STORAGE COMPRESSION</b>			
3.1	Emissions reported for all permitted sources (minor or major)		The number of permitted sources for conventional emissions may not be the same number of sources reporting under the EPA GHG reporting rule. Companies may wish to describe which, or how many, sources are included in the conventional pollutants data and whether the CO <sub>2</sub> e data reported includes all of these sources.	
3.1.1	NO <sub>x</sub> ( <i>metric tons per year</i> )	9.83		CenterPoint Energy has three facilities holding air permits, all of which are in Minnesota. As reported to the Minnesota Pollution Control Agency (MPCA) in the Air Emission Inventory Report for 2017 actual emission. Three facilities are included in this total: Dakota Station, Golden Valley and South. Emissions reported to the MPCA were reported as U.S. tons, which were converted to metric tons for this worksheet. Conversion factor is 1 U.S. ton = 0.90718 tons.
3.1.2	VOC ( <i>metric tons per year</i> )	0.25		CenterPoint Energy has three facilities holding air permits, all of which are in Minnesota. As reported to the Minnesota Pollution Control Agency (MPCA) in the Air Emission Inventory Report for 2017 actual emission. Three facilities are included in this total: Dakota Station, Golden Valley and South. Emissions reported to the MPCA were reported as U.S. tons, which were converted to metric tons for this worksheet. Conversion factor is 1 U.S. ton = 0.90718 tons.

### NATURAL GAS GATHERING & BOOSTING

<b>1</b>	<b>METHANE EMISSIONS</b>			
1.1	Gathering and Boosting Pipelines, Blow Down Volumes, and Emissions			

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		2017			
1.1.1	Total Miles of Gathering Pipeline Operated by gas utility ( <i>miles</i> )		0		
1.1.2	Volume of Gathering Pipeline Blow Down Emissions ( <i>scf</i> )	NA		<i>This metric is collected to support calculations under EPA 40 CFR 98, Subpart W.</i>	Not applicable
1.1.4	Gathering Pipeline Blow-Down Emissions outside storage and compression facilities ( <i>metric tons</i> )	NA			Not applicable
<b>2</b>	<b>CO2e COMBUSTION EMISSIONS FOR GATHERING &amp; BOOSTING COMPRESSION</b>				
2.1	CO2e Emissions for Gathering & Boosting Compression Stations ( <i>metric tons</i> )	NA		<i>CO2 combustion emissions reported to EPA under 40 CFR 98, Subpart C, as directed in Subpart W, 98.232(k).</i>	Not applicable
<b>3</b>	<b>CONVENTIONAL COMBUSTION EMISSIONS FROM GATHERING &amp; BOOSTING COMPRESSION</b>				
3.1	Emissions reported for all permitted sources (minor or major)			The number of permitted sources for conventional emissions may not be the same number of sources reporting under the EPA GHG reporting rule. Companies may wish to describe which, or how many, sources are included in the conventional pollutants data and whether the CO2e data reported includes all of these sources.	
3.1.1	NOx ( <i>metric tons per year</i> )	NA			Not applicable
3.1.2	VOC ( <i>metric tons per year</i> )	NA			Not applicable