



Long-Term Gas Infrastructure Plan

Kickoff Meeting

September 23, 2024

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If you would like to ask a question, enter it in the chat along with your name and organization.

Questions will be addressed at the end of the presentation.

Meeting objectives

- Long-term gas infrastructure plan (LTGIP) overview
- Company overview
- Gas supply strategy
- Natural gas system overview

Long-Term Gas Infrastructure Plan (LTGIP) Overview

Deb Egelhoff, Manager – Gas Regulatory Compliance and Advocacy

Tom Aridas, Director – Gas Regulatory Planning Policy

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Why are we filing an LTGIP?

- Peoples Gas and North Shore Gas must file a long-term gas infrastructure plan with Illinois Commerce Commission (ICC) every two years beginning July 1, 2025
- Work Plan was filed July 1, 2024

Future of Gas Proceeding

- The ICC is evaluating the impacts of Illinois' current decarbonization and electrification goals on the natural gas system
- Two Phases
 - April - August 2024 (Phase 1)
 - September 2024 - July 2025 (Phase 2)
- Your input in that proceeding will help inform development of LTGIP

Our stakeholder and public participation plan

- Public workshops
 - Share methods, approaches and preliminary findings in publicly available sessions
- 1:1 or group engagement(s)
 - Platform for feedback in smaller and ongoing touchpoints
- Public sessions focused on customers
- Dedicated web pages:

[Peoples Gas LTGIP](#)

[North Shore Gas LTGIP](#)

Long-term gas infrastructure plan overview

ICC directives

1. List of proposed system expenditures and investments, including analysis of infrastructure needs and detailed information on all planned projects within the action plan
2. Demonstration that each project or program plan complies with all applicable commission rules and jurisdiction requirements, such as safety and reliability, among others
3. 5-year action plan of investments with a longer-term planning horizon analysis where applicable
4. Estimated total cost and annual incremental revenue requirement of the proposed action plan
5. Explanation for the pace of each project or program, including reasoning as to why the project or program cannot be deferred to future years
6. Comparative evaluations of resource procurements and major capital investments
7. Distribution mapping that identifies areas of constraint and risk, location of planned projects, pressure districts served by each project, and locations of environmental justice communities
8. Description of lowest societal cost gas distribution system investments necessary to meet customer demand and comply with public policy objectives
9. Demonstration that the program or project will minimize rate impacts on customers, particularly low-income and equity investment eligible communities
10. Scenario and sensitivity analysis to test robustness of utility's portfolio and investments under various parameters
11. Publicly filed workpaper documenting all inputs and assumptions with limited use of confidentiality
12. Summary of stakeholder participation and input and an explanation of how the company incorporated stakeholder engagement

Plan specifics (to be filed July 1, 2025)

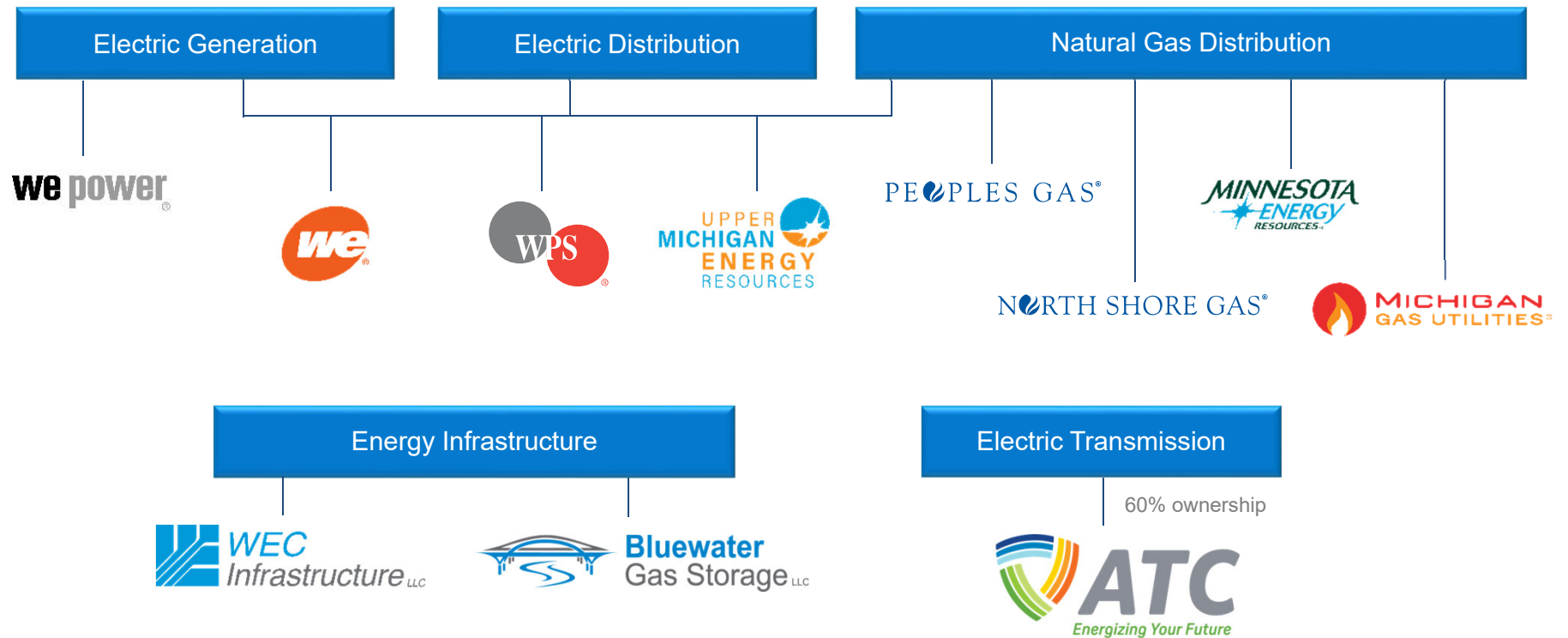
- Executive summary
- Baseline and regulatory drivers
- Assessment of drivers and demand / supply analysis
- Methodology and planning
- Preferred portfolio and alternatives
- Conclusion

Company Overview

Sal Arana, Vice President – Operations
Peoples Gas and North Shore Gas

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WEC Energy Group



Company overview

Providing safe and reliable gas to nearly 1 million customers in primarily urban settings



North Shore Gas

- In business for nearly 125 years
- Delivers natural gas to approximately 164,000 customers in the northern suburbs of Chicago through over 2,300 miles of gas main

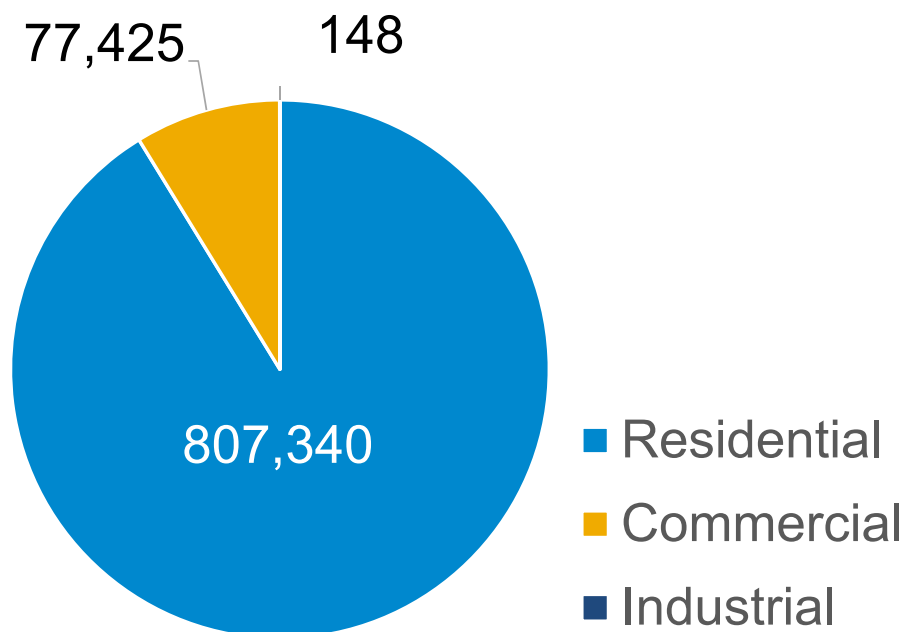
Peoples Gas

- In business for nearly 175 years
- Delivers natural gas to approximately 885,000 customers in the city of Chicago through over 4,500 miles of gas main

Total customers by class – 2023

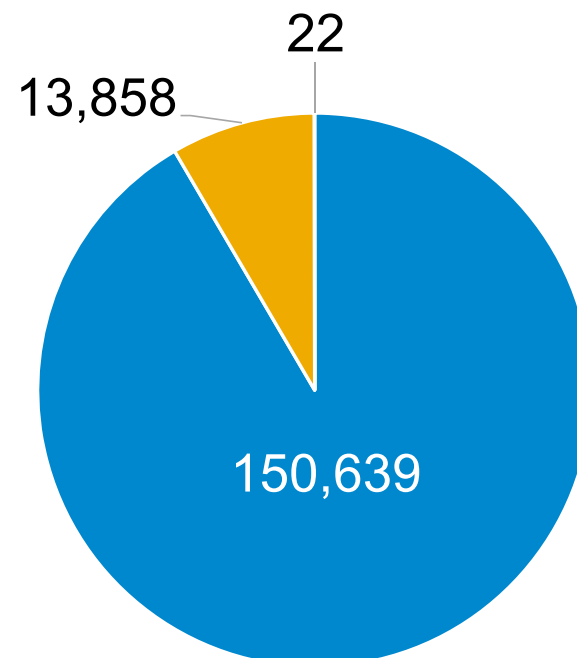
Peoples Gas

Total Customer Count: 884,912



North Shore Gas

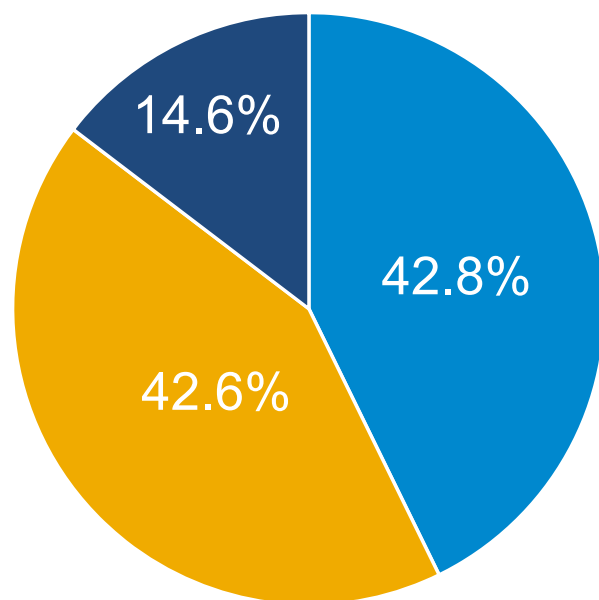
Total Customer Count: 164,159



Total gas volume in therms – 2023

Peoples Gas

Total gas volume: 1,498,889,347 therms

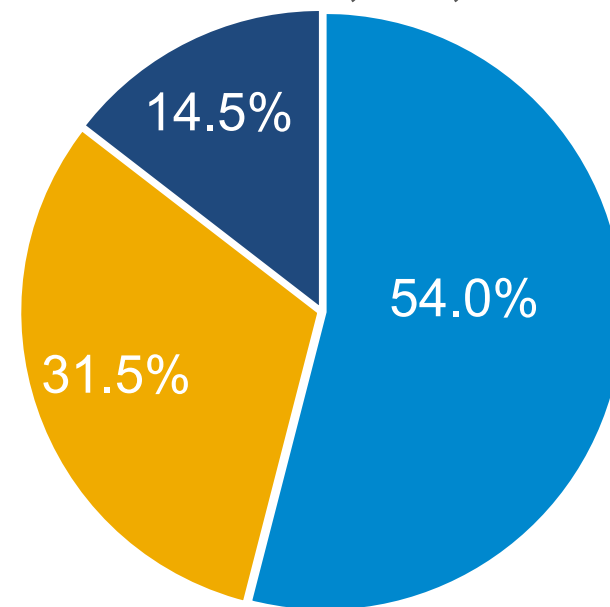


■ Residential
■ Commercial
■ Industrial

Note: These figures are not weather normalized

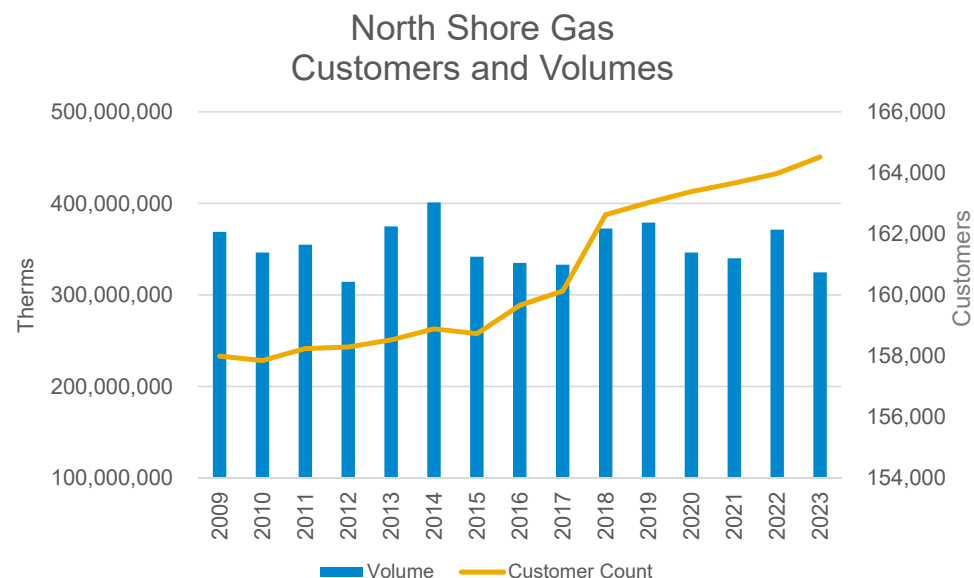
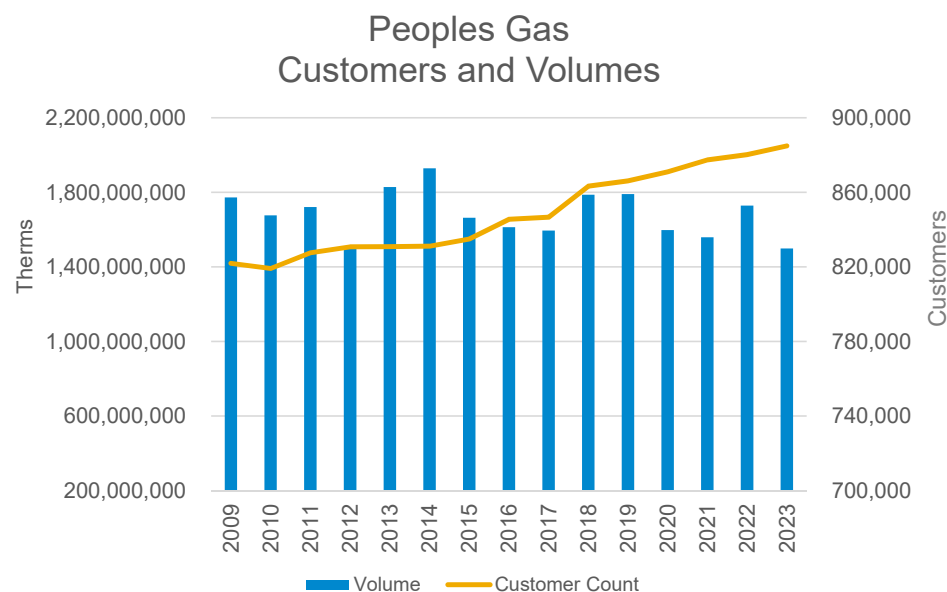
North Shore Gas

Total gas volume: 324,804,383 therms



Company overview

Total customers and volumes 2009-2023



Note: These figures are not weather normalized



Our strategy is to create long-term value by focusing on the fundamentals: safety, world-class reliability, operating efficiency, financial discipline and customer care.



Ranked first among investor-owned utilities in the 2023 E Source Large Business Customer Satisfaction Study

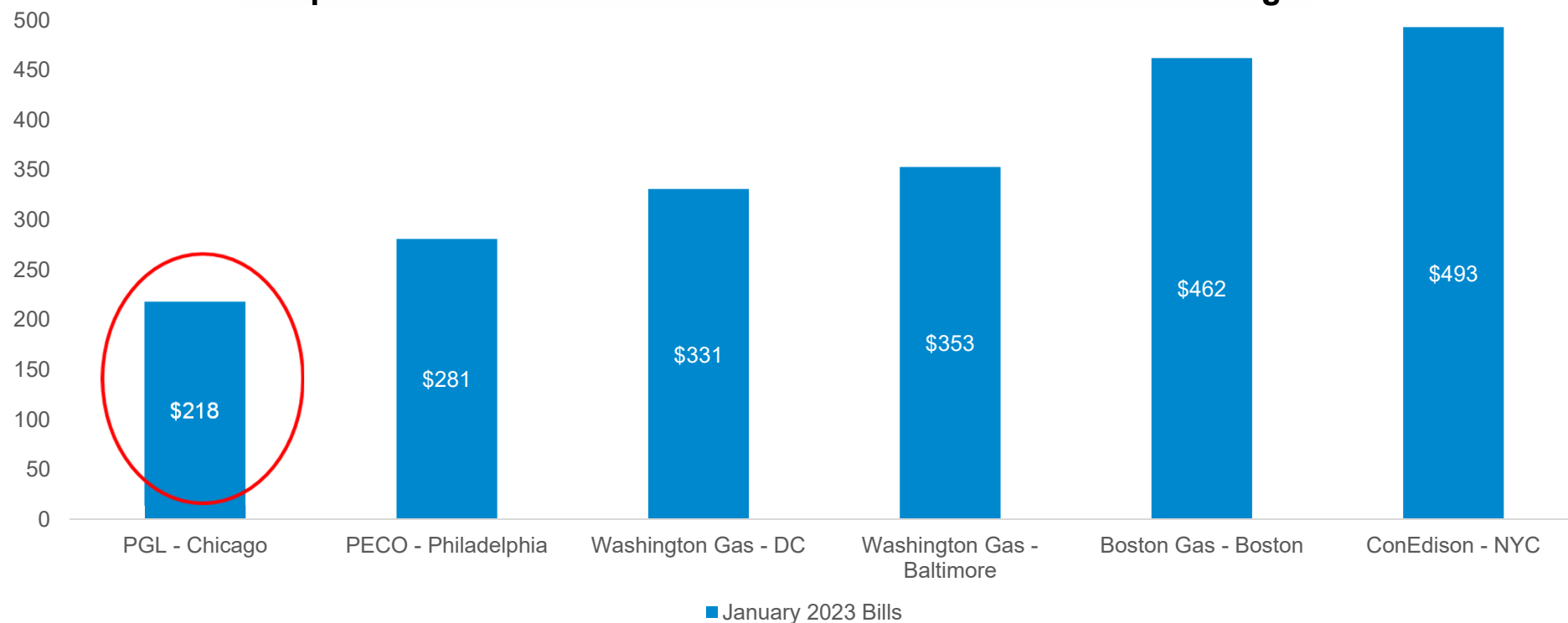
Honored by the Wisconsin Department of Workforce Development with the Vets Ready Employer Initiative award for supporting veterans in the workforce and the community

Recognized with the 2023 Corporation of the Year award from the Chicago Minority Supplier Development Council

Company overview

Peoples Gas home heating bills are currently well below other LDCs serving major US cities

Peoples Gas residential bills are more than 38% below the average



Rates effective January 2023 based on 200 CCF or 205 therms; represents select large U.S. Cities based on data reported by Memphis Light, Gas and Water

Safety and reliability

- Peoples Gas and North Shore Gas always deliver during extreme and dangerous winter conditions
 - 2019 Polar Vortex (Jan. 30-31)
 - Coldest temperature in Chicago in 34 years
 - Fourth-longest deep freeze ever recorded in Chicago
 - 52 hours of temperatures below zero
- We did not impose usage restrictions on customers
- Regular maintenance and necessary upgrades will ensure we keep customers warm during life-threatening events

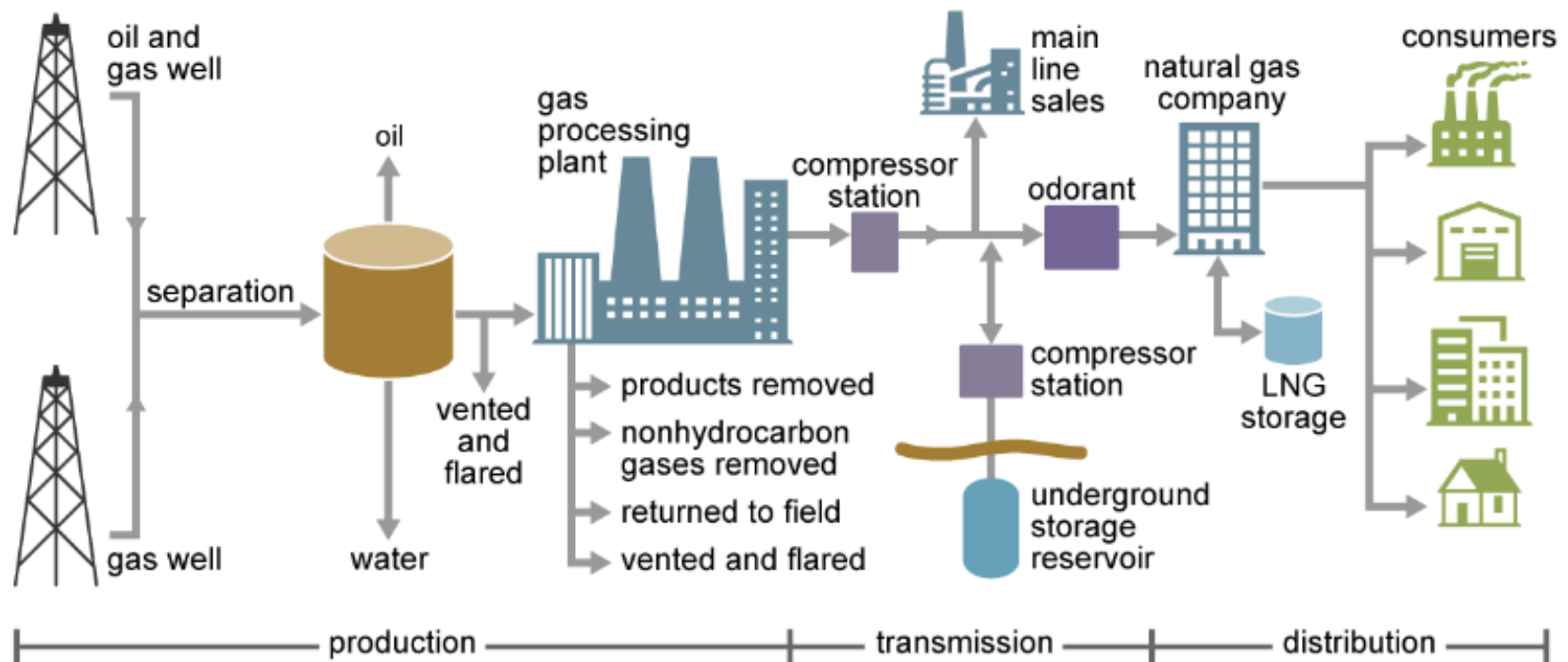
Gas Supply

Ali Mauermann, Manager – Gas Supply

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Gas supply

Natural gas production and delivery



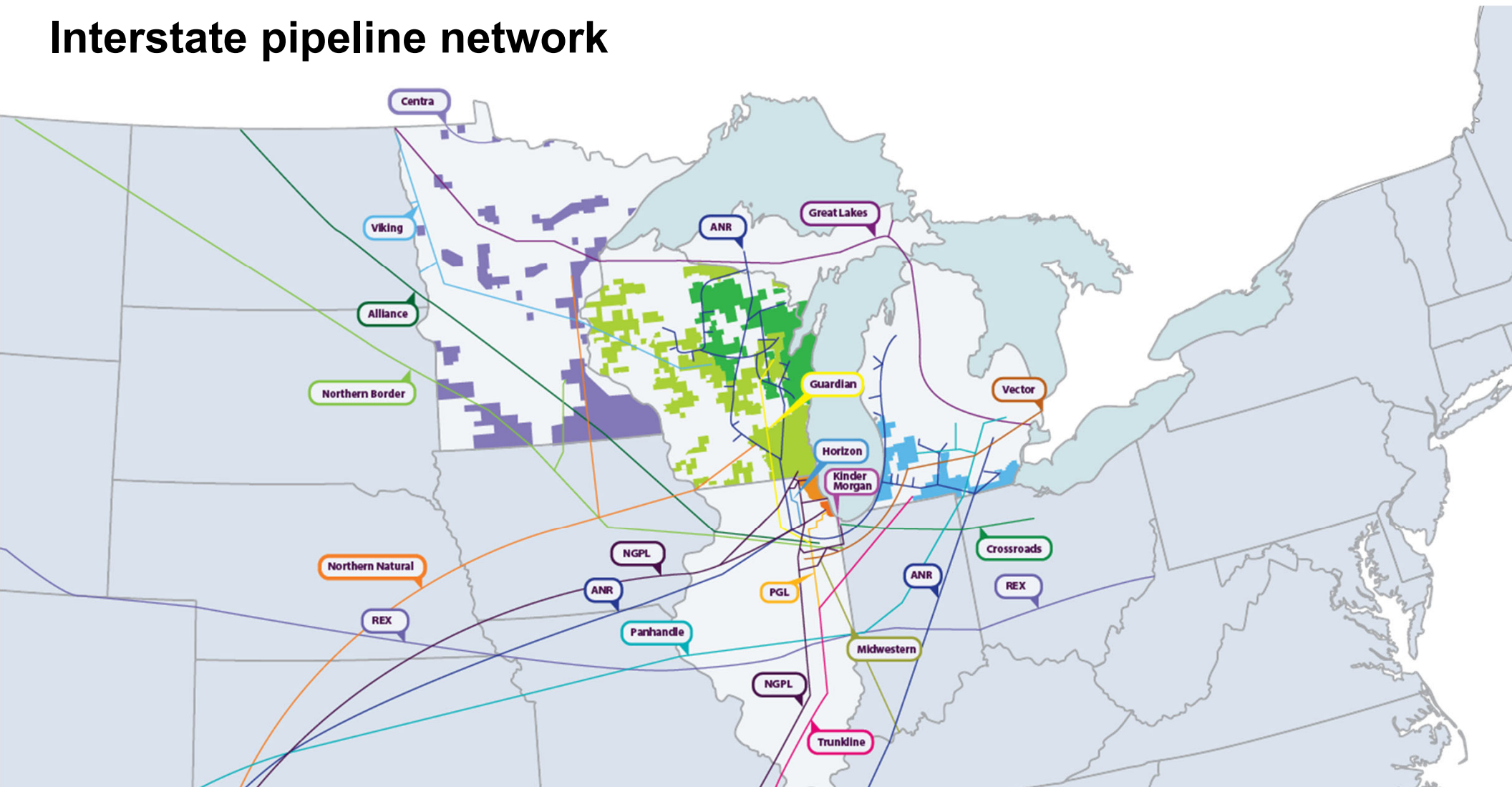
Source: U.S. Energy Information Administration

How gas supply works in Illinois

- Natural gas commodity is deregulated
 - Purchased daily or monthly from various suppliers
 - Utility does not make money on the commodity
- Pipeline capacity is regulated by FERC
 - Not unlimited, a finite resource
 - Requires a contract between parties
 - Pay for use of pipeline
 - Contracts have varying lengths of time, but most firm pipeline capacity contracts are multiyear

Gas supply

Interstate pipeline network



Interstate pipeline network

- Peoples Gas and North Shore Gas interconnect with nine interstate pipelines
 - Peoples Gas contracts firm pipeline capacity on five pipelines
 - ANR, Kinder Morgan Illinois, Natural Gas Pipeline of America, Northern Border Pipeline, Vector
 - North Shore Gas contracts firm pipeline capacity on three pipelines
 - ANR, Natural Gas Pipeline of America, Northern Border Pipeline
- Provides diverse gas supply from multiple locations and competitive pricing

Pipeline	Peoples Gas Capacity (dth/d)	North Shore Gas Capacity (dth/d)
ANR	100,333	110,000
KMIP	200,000	0
NGPL	278,597	215,968
NBPL	60,000	20,220
Vector	130,000	0

The Role of Natural Gas Storage - Manlove Field

- Underground storage facility located in Champaign County, Illinois
- 36,500,000 dth of natural gas stored 4,000 feet below the ground in sedimentary rocks
 - 300,000 dth withdrawn on an average winter day
- 2,000,000 dth of LNG stored in two tanks
- Provides enough gas to warm more than 320,000 homes every year
- Storage allows for gas to be moved from production areas closer to the area needed during cold peaking months
- Storage reduces cost of natural gas for customers
 - Gas is purchased and injected in summer months when prices are lower and withdrawn in winter months to avoid buying gas at higher prices



Our utilities rely on our storage facilities in Illinois

Peoples Gas

- Manlove Field Underground Storage
 - Supplies 27% of peak day requirement
 - Supplies 23% of winter volume
- Manlove Field LNG
 - Supplies 15% of peak day requirement

North Shore Gas

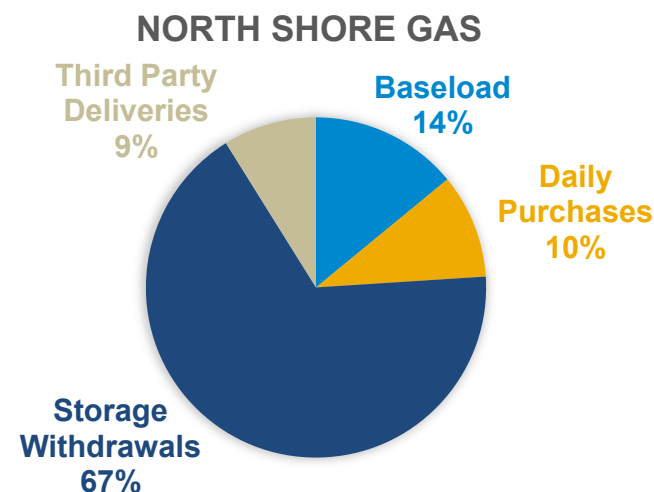
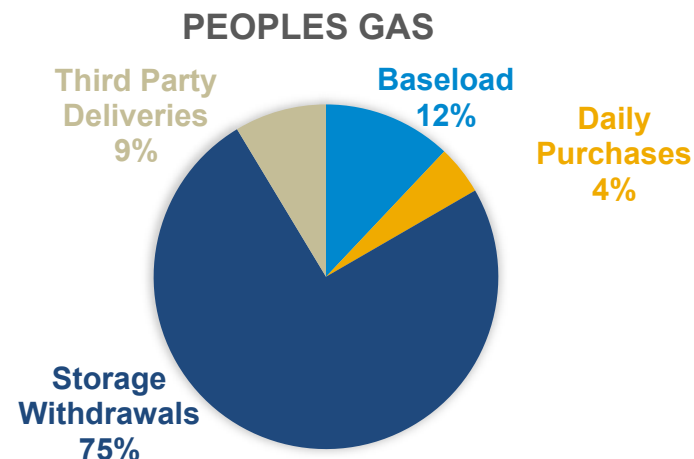
- Manlove Field Underground Storage
 - Supplies 14% of peak day requirement
 - Supplies 10% of winter volume
- Peterson Rd Liquid Propane
 - Supplies 5% of peak day requirement

Benefits: utilities own, operate and maintain the reliable facilities that directly serve our customers

Peak day plan 2023-2024 winter

Portfolio diversity provides protection on a peak day

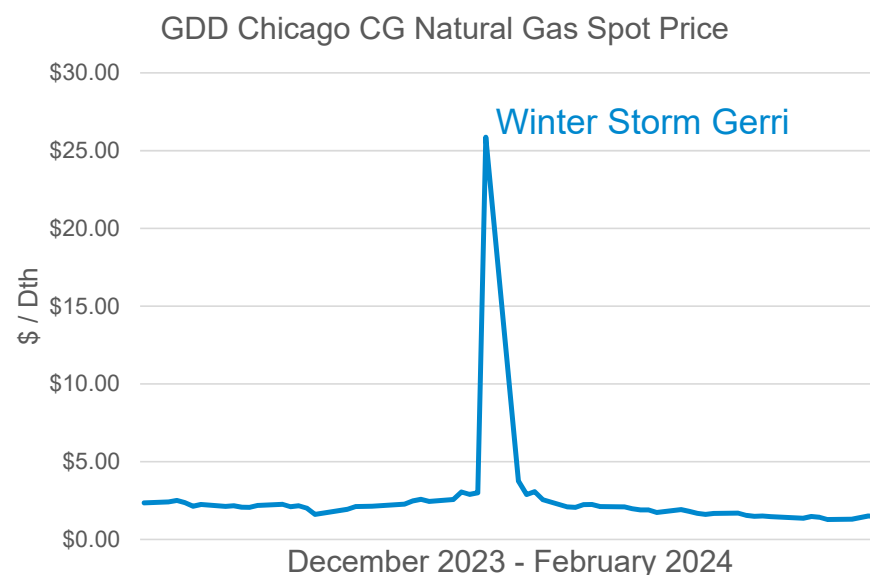
- Firm pipeline capacity allows access to a variety of purchase locations
- Storage withdrawals from four different pipelines/storage fields support reliability
- Mix of storage withdrawals plus multiple monthly baseload purchases and daily purchases protects against price fluctuations
- All winter purchases are contracted for before winter to ensure availability for our customers



Gas supply

Winter Storm Gerri – Jan. 15, 2024

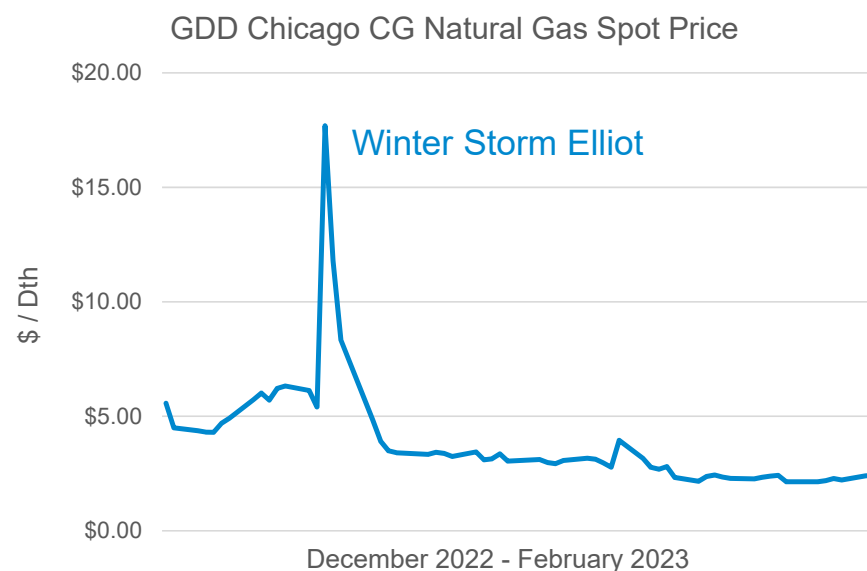
- Wind chills below -30 °F
- Total gas delivered
 - Peoples Gas: 1,590,000 dth, 77% of peak day
 - North Shore Gas: 330,000 dth, 72% of peak day
- Diverse portfolio limits exposure to price spikes in daily market during a cold spell



Gas supply

Winter Storm Elliot – Dec. 23, 2022

- High winds, blizzard conditions
- Total gas delivered
 - Peoples Gas: 1,640,000 dth, 82% of peak day
 - North Shore Gas: 345,000 dth, 79% of peak day
- Diverse portfolio limits exposure to price spikes in daily market during a cold spell



Our approach

- Primary objective: provide safe and reliable long-term service to customers utilizing a “best-cost” gas purchasing strategy
 - Firm pipeline capacity offers reliability and price diversity
 - Utilities own, operate and maintain reliable storage facilities that directly serve our customers
 - Diverse portfolio to satisfy company obligation to meet peak day demand
 - Storage
 - Monthly baseload
 - Daily purchases

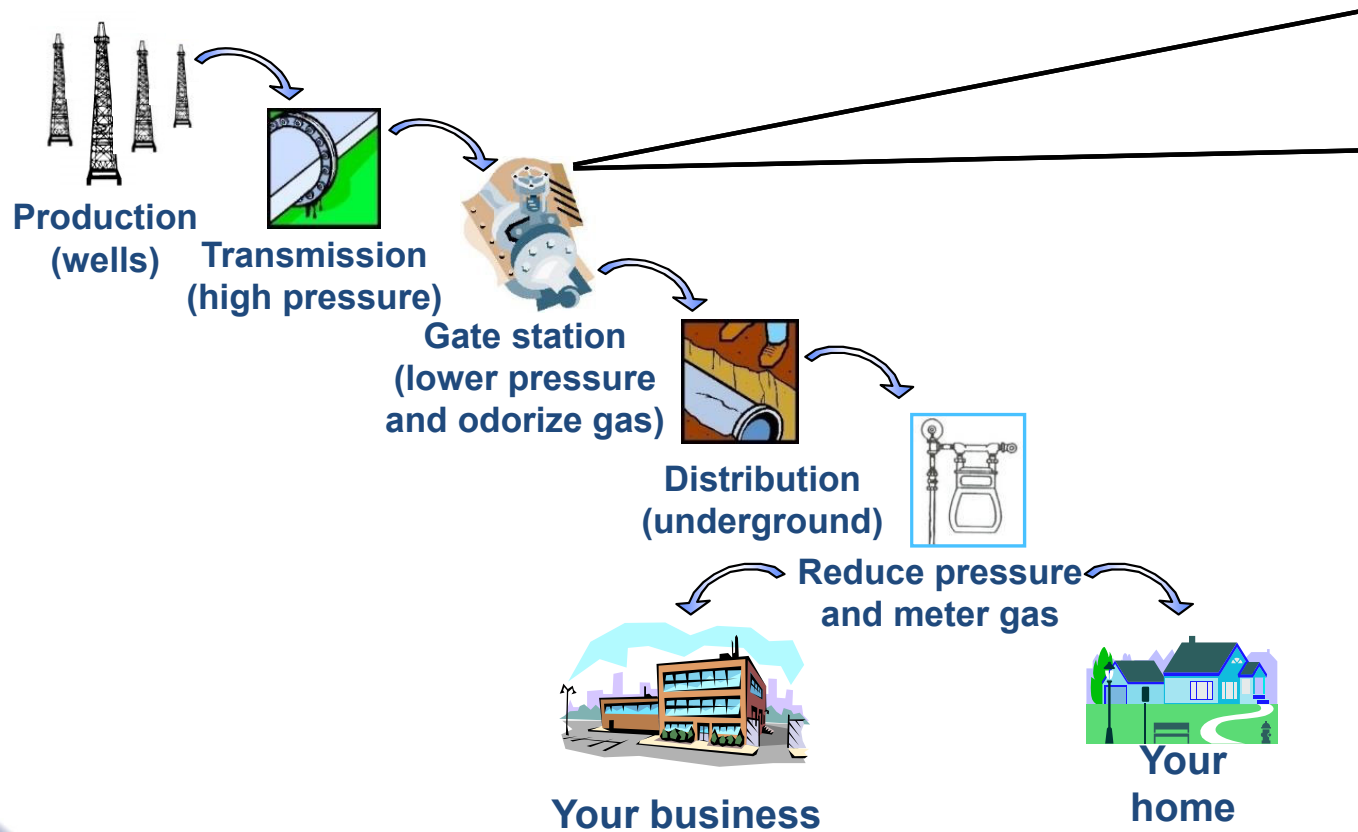
Natural Gas System Overview and Innovation

Jon Czarnecki, Director – Gas Engineering

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How gas flows through the system

Wellhead to Burnertip



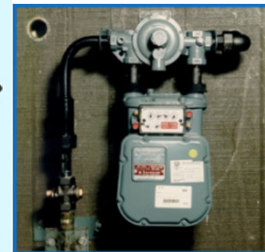
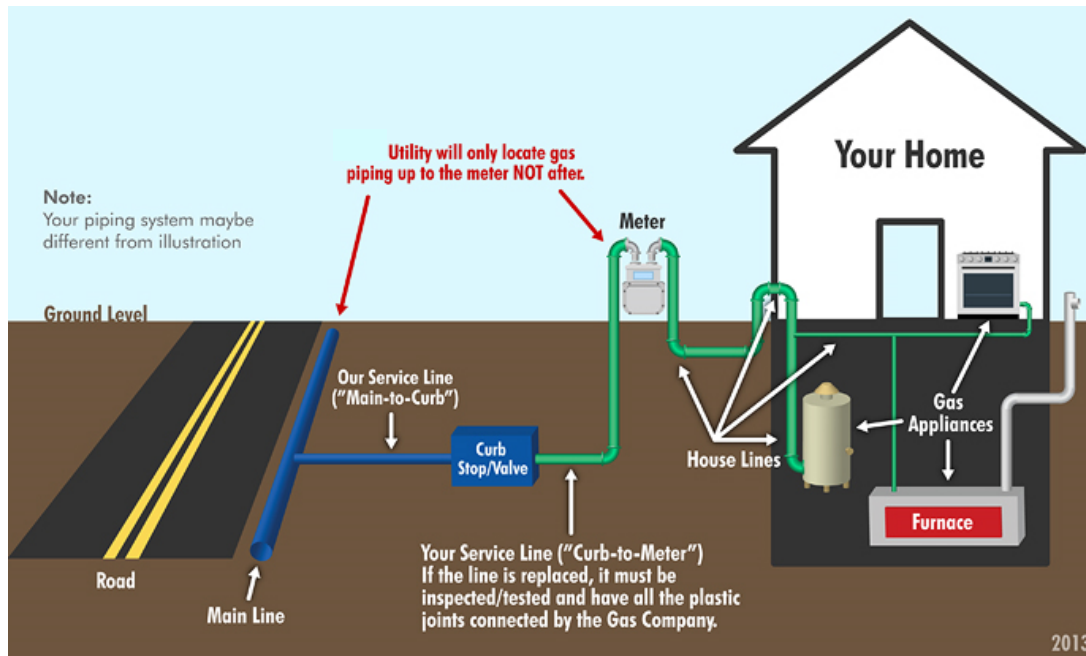
Completion of Niles Gate Station



- Provides supply options
- Reinforces system pressures
- Enables replacement of high-risk ranking neighborhoods

How gas flows through the system

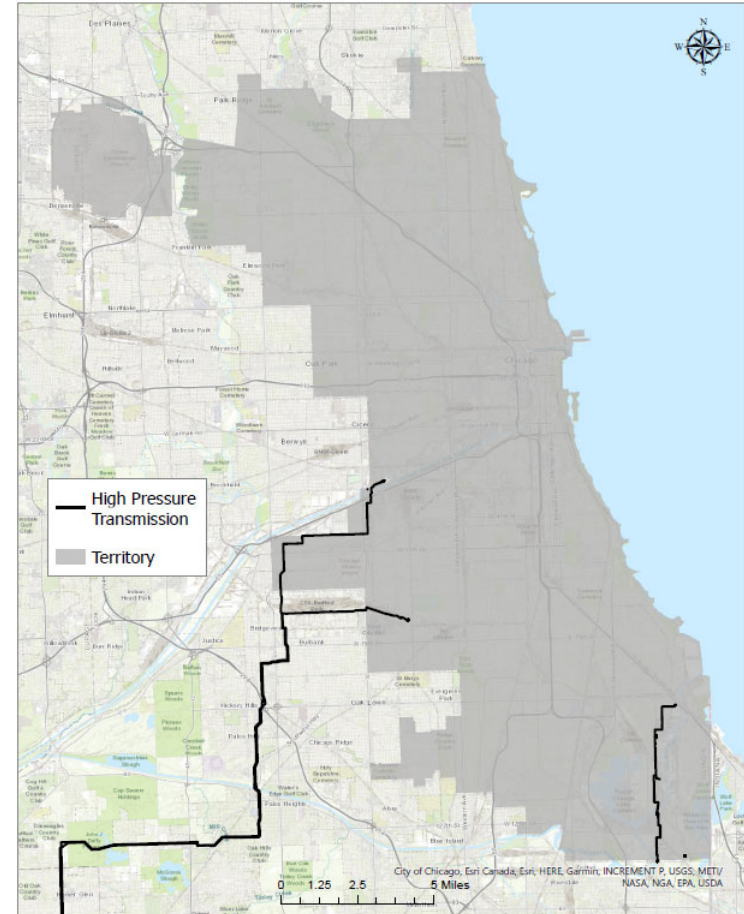
Natural gas delivery to your home



How gas flows through the system

Peoples Gas system pressure overview

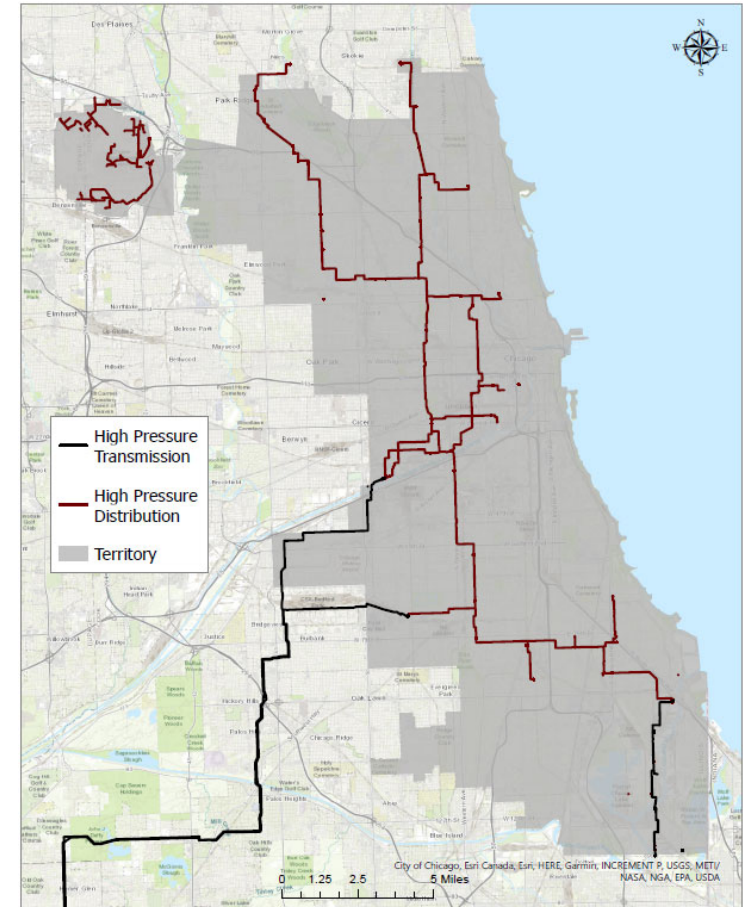
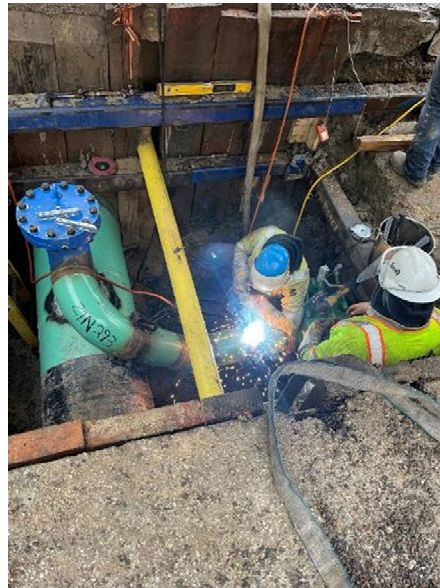
High-pressure transmission gas main: 333 miles



How gas flows through the system

Peoples Gas system pressure overview

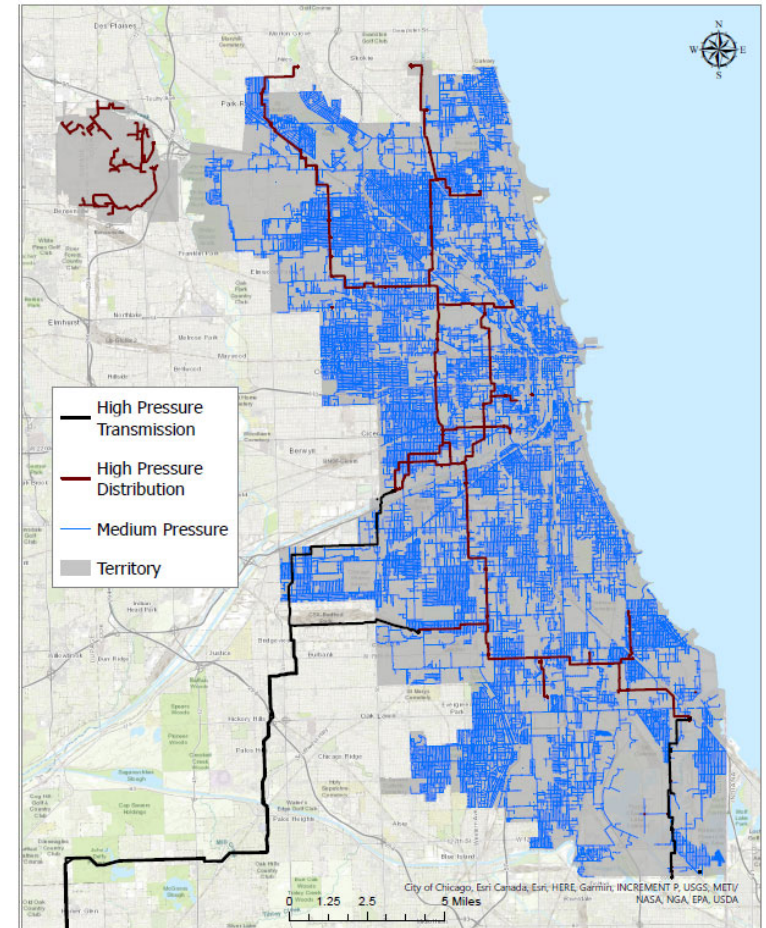
High-pressure transmission gas main: 333 miles
High-pressure distribution gas main: 91 miles



How gas flows through the system

Peoples Gas system pressure overview

High-pressure transmission gas main: 333 miles
High-pressure distribution gas main: 91 miles
Medium-pressure gas main: 3,255 miles



How gas flows through the system

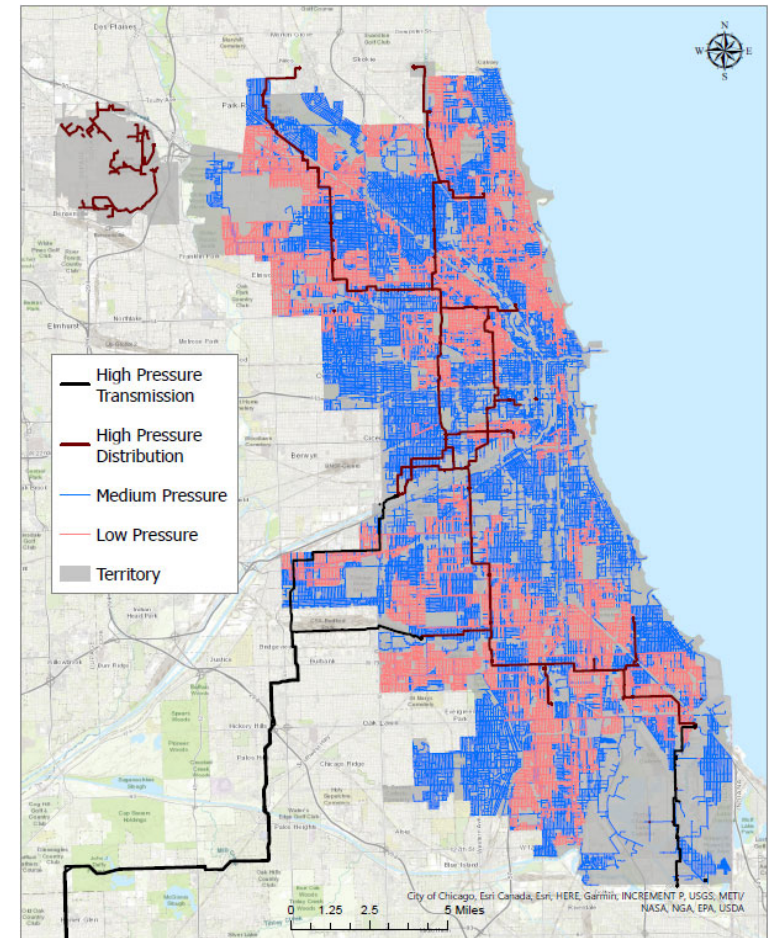
Peoples Gas system pressure overview

High-pressure transmission gas main: 333 miles

High-pressure distribution gas main: 91 miles

Medium-pressure gas main: 3,255 miles

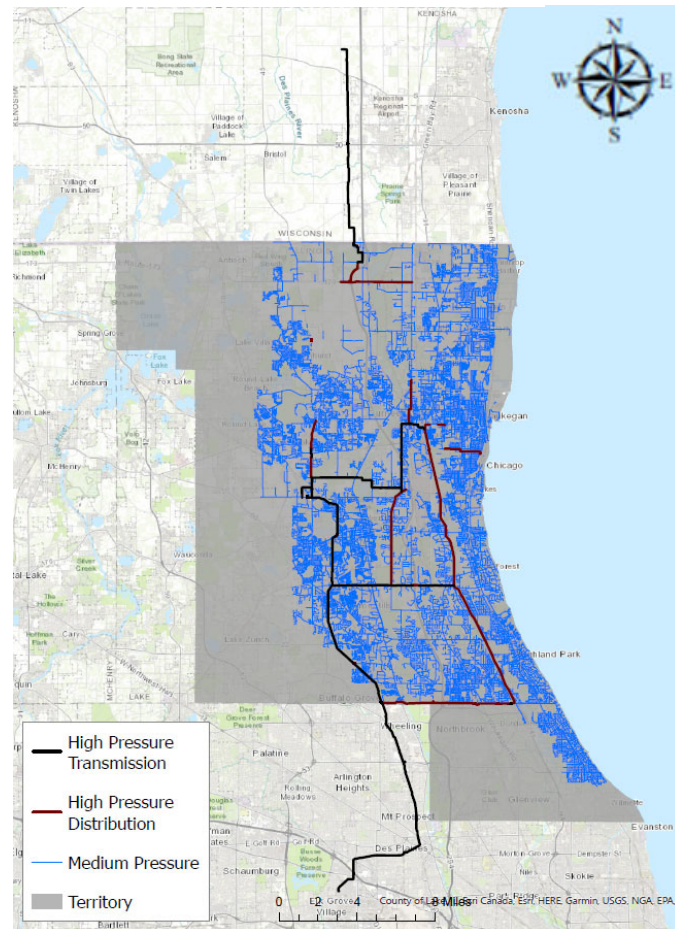
Low-pressure gas main: 1,368 miles (over 70% cast and ductile iron)



How gas flows through the system

North Shore Gas system pressure overview

High-pressure transmission gas main: 58 miles
High-pressure distribution gas main: 139 miles
Medium-pressure gas main: 2,219 miles



Regulatory oversight of pipeline safety



- Pipeline and Hazardous Material Safety Administration (PHMSA) is responsible for regulating the natural gas pipeline system in the United States
 - 192.12 – Underground Storage Integrity Management Programs
 - Subpart O – Transmission Integrity Management Programs (TIMP)
 - Subpart P – Distribution Integrity Management Programs (DIMP)
- The Illinois Commerce Commission (ICC) Gas Pipeline Safety Program acts on behalf of PHMSA in Illinois
 - Enforces Part 192 of PHMSA regulations

Integrity management

- System knowledge
- Threat identification
- Risk evaluation and mitigation
- Monitor performance
- Continuous improvement

ICC ordered engineering study for Peoples Gas

- Replacement program should be accelerated to 2030 but not recommend to extend past 2045
- Replacement program improves public safety and system integrity
- 82% of CI/DI pipe has less than 10 years of life



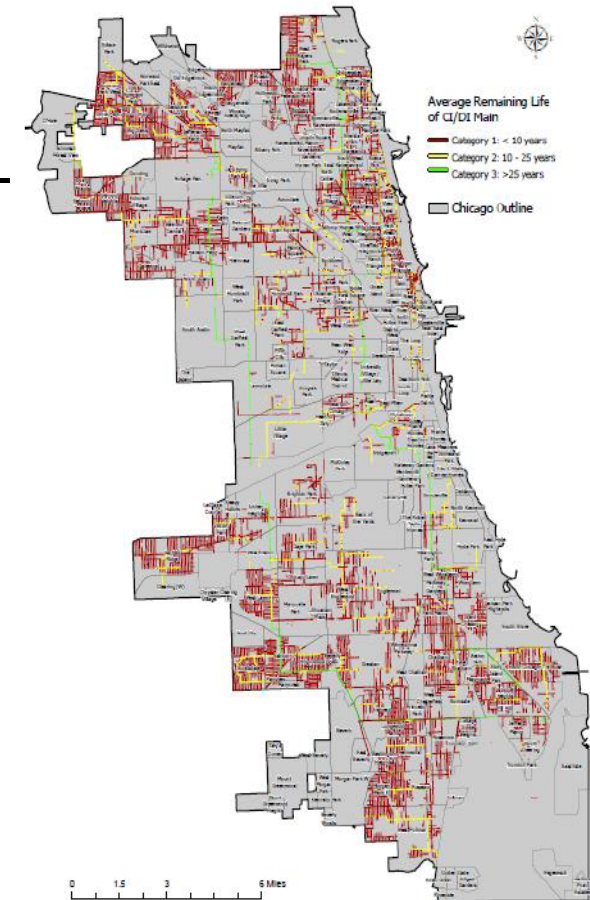
Peoples Gas Safety Modernization Program (SMP)

Risks

- PHMSA Call to Action to evaluate threats on leak-prone systems
- Integrity Management Program has identified top threats in the system
- 2020 Kiefner Engineering Study validated threats

Mitigation

- Retire leak-prone gas main and services
- Upgrade system from low-pressure to medium-pressure
- Relocate meters from inside to out



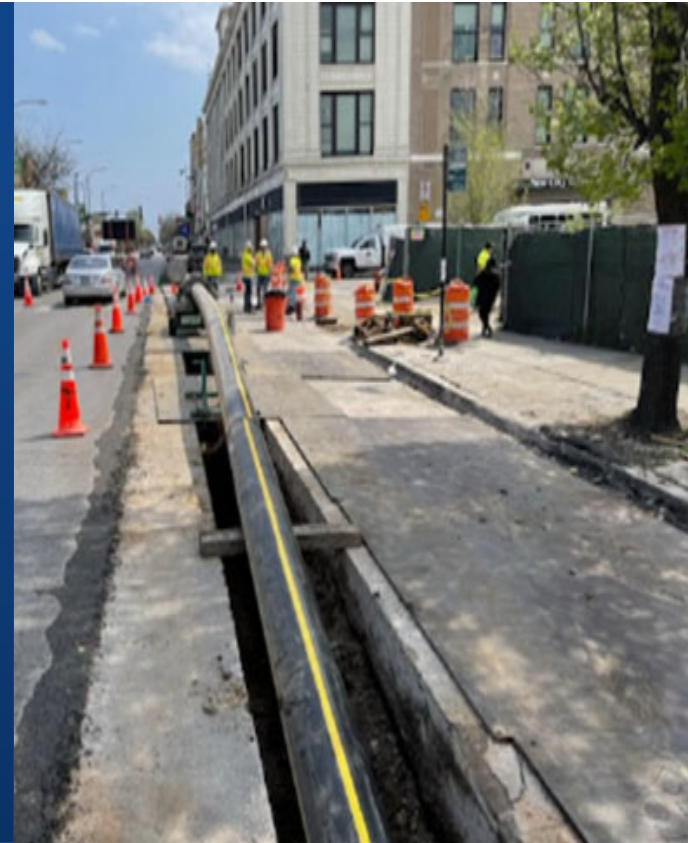
Peoples Gas SMP progress

38%
complete

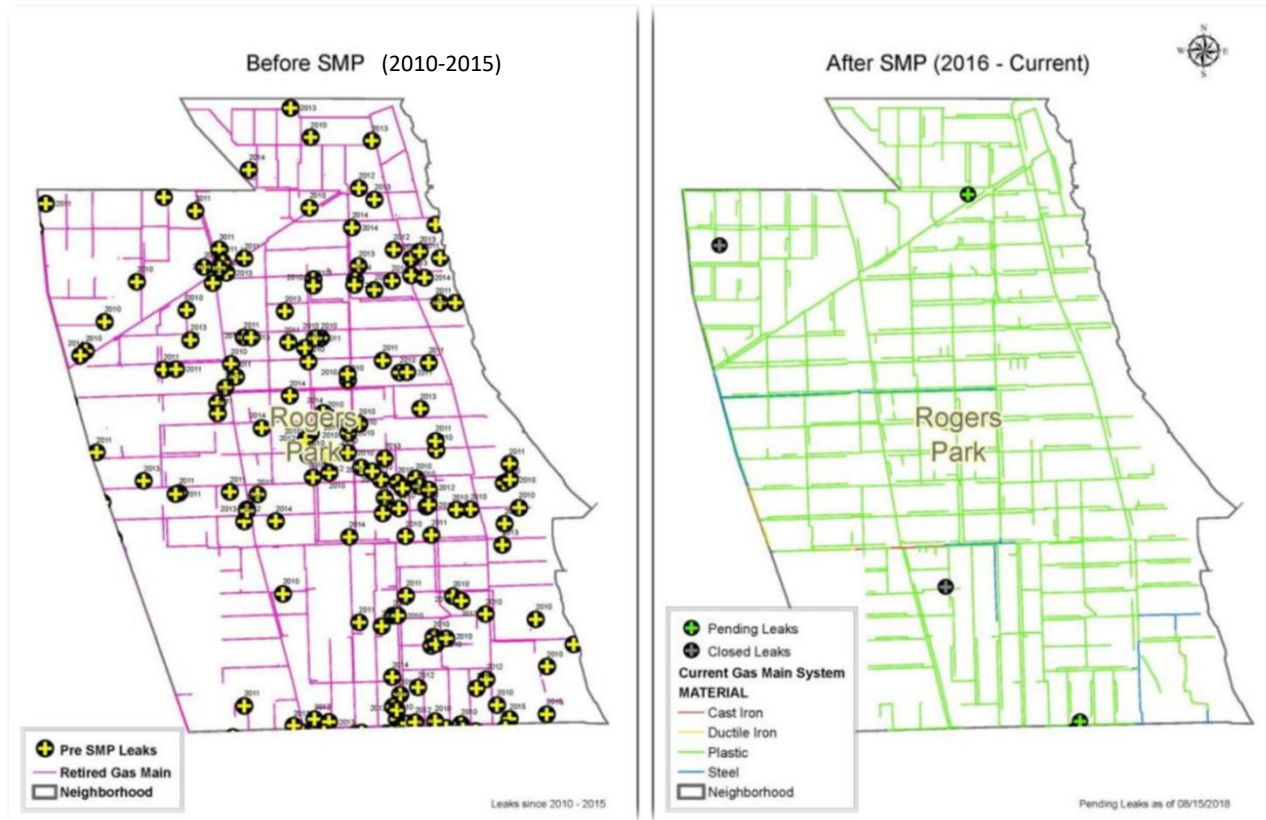


Since 2011, Peoples Gas has installed more than:

- 1,400** miles of modern gas main
- 123,000** service lines
- 231,000** natural gas meters
- 270,000** explosion prevention devices

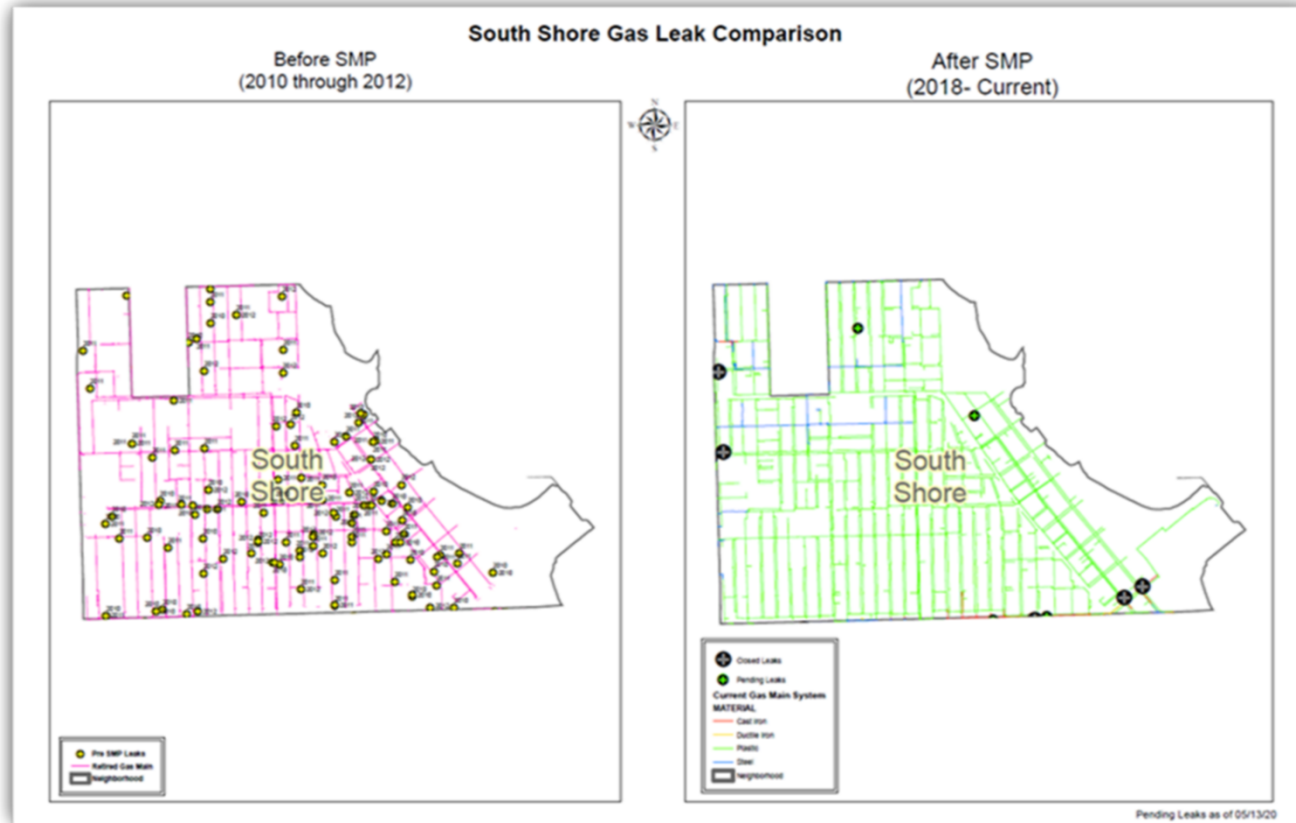


Peoples Gas SMP is lowering leak rates



Rogers Park

Peoples Gas SMP is lowering leak rates



South Shore Neighborhood

Environmental goals

Peoples Gas methane reduction results

Neighborhood	Miles of Gas Main	District	Methane (SCFH)/Mile		% Decrease in Emissions
			Pre	Post	
Kenwood	6.54	South	18.33	0.09	99.52%
North Mayfair	7.8	North	12.87	0.77	99.23%
Princeton Park	4.57	South	16.34	0.15	99.08%
Albany Park	19.85	North	20.36	0.64	96.86%
Mayfair	11.34	North	10.01	0.46	95.40%
Bowmanville	11.11	North	30.69	0.11	99.64%
South Edgebrook	3.91	North	20.17	0	100.00%
Stony Island Park	7.86	South	31.98	1.00	96.87%

Table 1: Reduction in Methane Emissions before and after construction

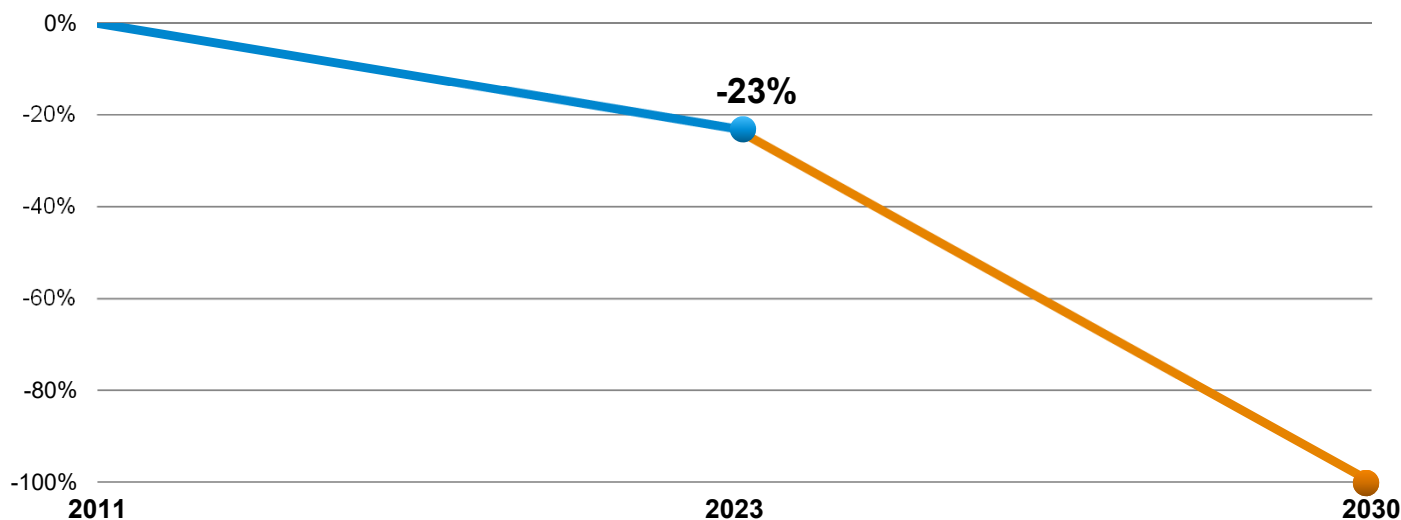
Converted SMP areas show a decrease in methane emissions of at least 95%

Environmental goals

WEC Energy Group methane reduction



Achieved¹ and **anticipated** methane emission reduction from natural gas distribution.
Aligns with effort to limit warming to 1.5°C.



Goal:

Net zero

by end of 2030²

Use of renewable natural gas (RNG) is expected to contribute significantly to our goal.

1. Represents a decrease in the rate of methane emissions across our system from a 2011 baseline.
2. This goal applies to emissions from WEC Energy Group natural gas distribution companies calculated in accordance with EPA's 40 Code of Federal Regulations Part 98, Subpart W reporting rule.

Environmental goals

Peoples Gas environmental goals

- Peoples Gas joined the Methane Challenge in 2016 as an original founding partner
- From 2016 to 2022, over 33,000 metric tons of greenhouse gas has been prevented from leaking in the environment through the Safety Modernization Program
- Over 1,300 metric tons of methane emissions kept out of the environment = 96 million miles driven by gasoline-consuming cars
- Peoples Gas has pledged to reduce methane emissions by at least 30% by 2030, the equivalent of taking 34,000 cars off the road
- Escalent analytics firm named Peoples Gas 2021 Environmental Champion and top Midwest performer



Technology advancements and innovation

- Methane Reduction
 - Cross-Compression Pilots
 - Vacuum Purging
- Advanced Leak Detection Program
- Carbon Capture
 - Carbon X units installed at Grayslake High School

EPA EQUIVALENCIES



12.9
Homes' energy
use for a year



114,872
Pounds of coal
burned



22.8
Passenger
vehicles driven
for one year



122
Acres of US
forest

Emerging fuels – Renewable Natural Gas and Hydrogen

- Green Era – RNG
 - \$32M renewable energy and urban farming campus in Chicago's South Side converts food waste to rich compost and RNG with an initial capacity that could heat up to 2,180 homes
- Upper Michigan Energy Resources – Hydrogen Pilot
 - First hydrogen power test of a utility-scale grid connected RICE generator in the world
- Peoples Gas Hydrogen Blending Pilot Project
 - Partner with EPRI to evaluate leak detection equipment at Peoples Gas Training Center



Natural gas industry will be essential to achieve a net-zero future

- Ambitious decarbonization goals need practical solutions
- Peoples Gas and North Shore Gas remain committed to support and develop solutions to achieve a sustainable energy future

EPRI


GTI ENERGY

 **UTD**
Utilization Technology
Development

 **OTD**
Operations
Technology
Development

 **LCRI**
LOW-CARBON
RESOURCES INITIATIVE

Q&A

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