



# Long-Term Gas Infrastructure Plan

Kickoff Meeting

September 23, 2024

PEOPLES GAS® | NORTH SHORE GAS®

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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.

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## 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

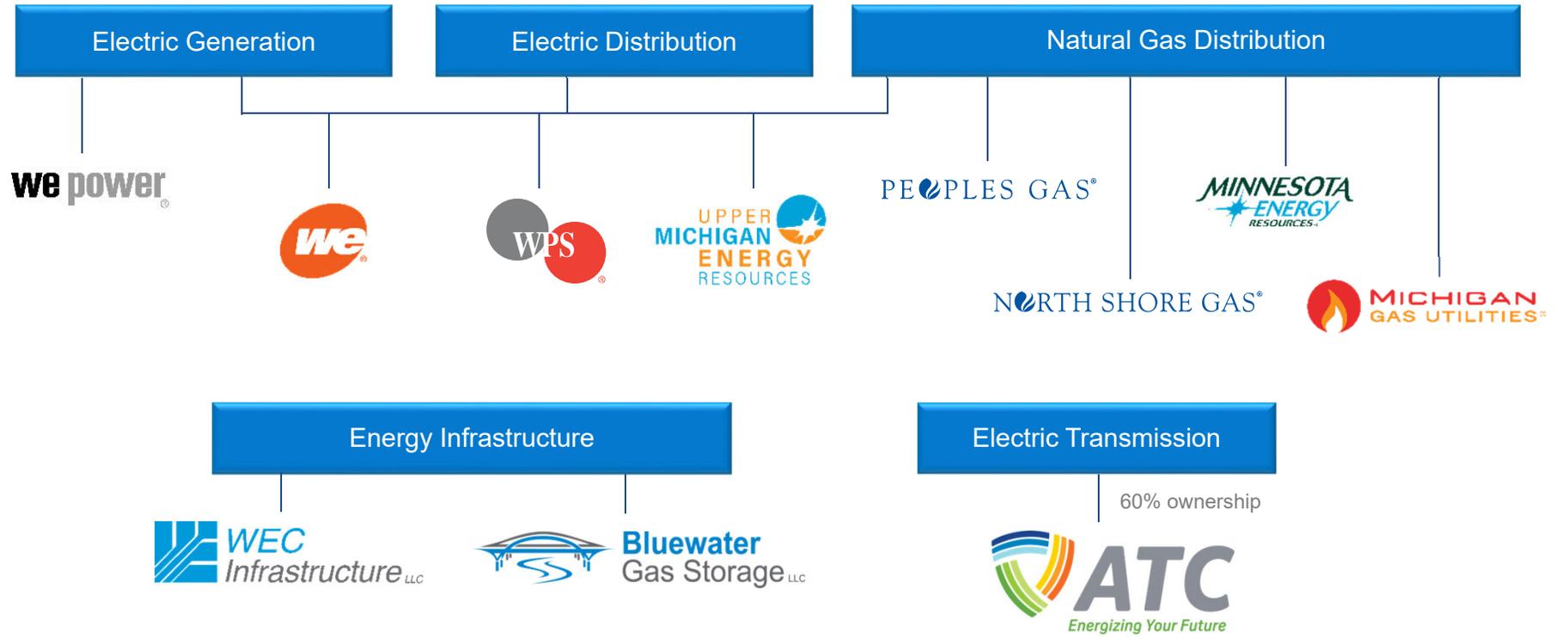
# Company Overview

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

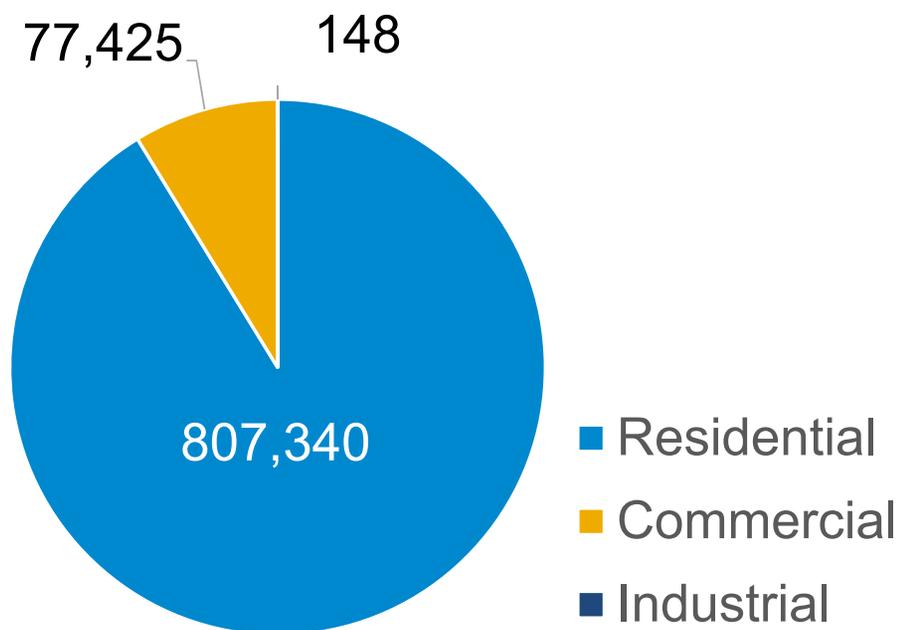
## Peoples Gas

- 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

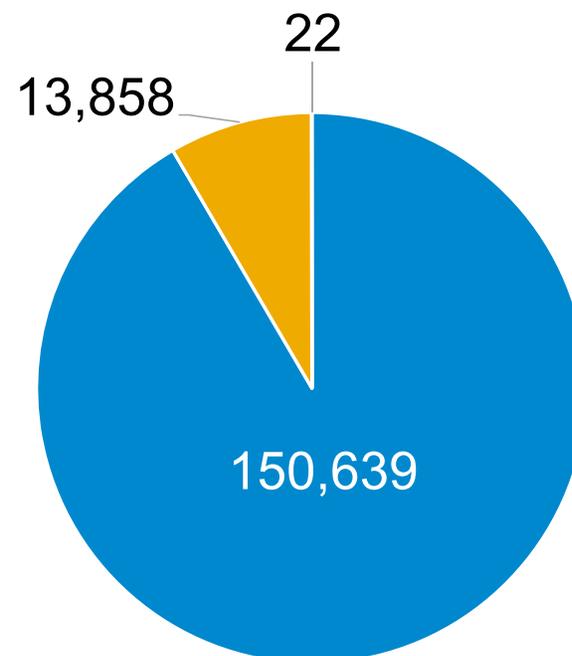
### Peoples Gas

Total Customer Count: 884,912



### North Shore Gas

Total Customer Count: 164,159

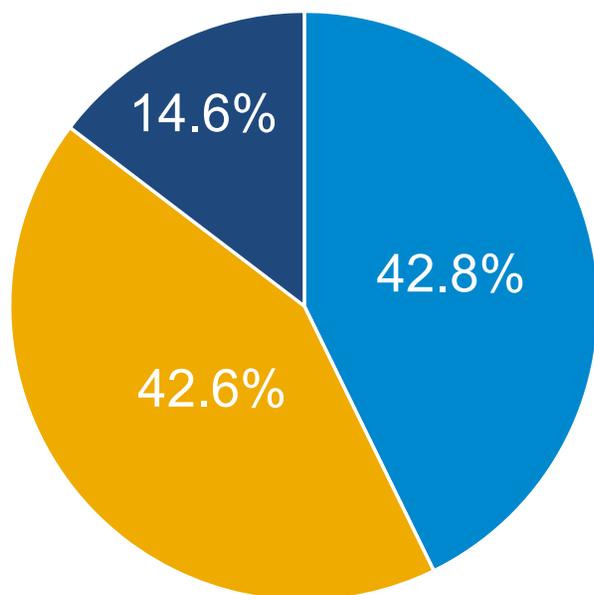


Company overview

# Total gas volume in therms – 2023

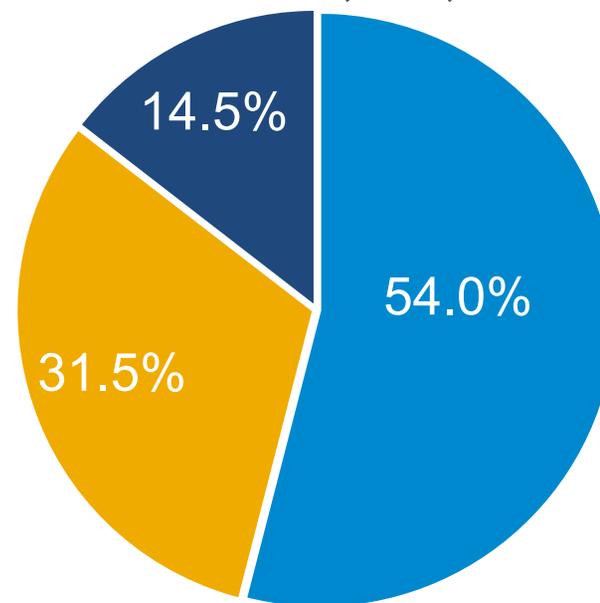
## Peoples Gas

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



## North Shore Gas

Total gas volume: 324,804,383 therms

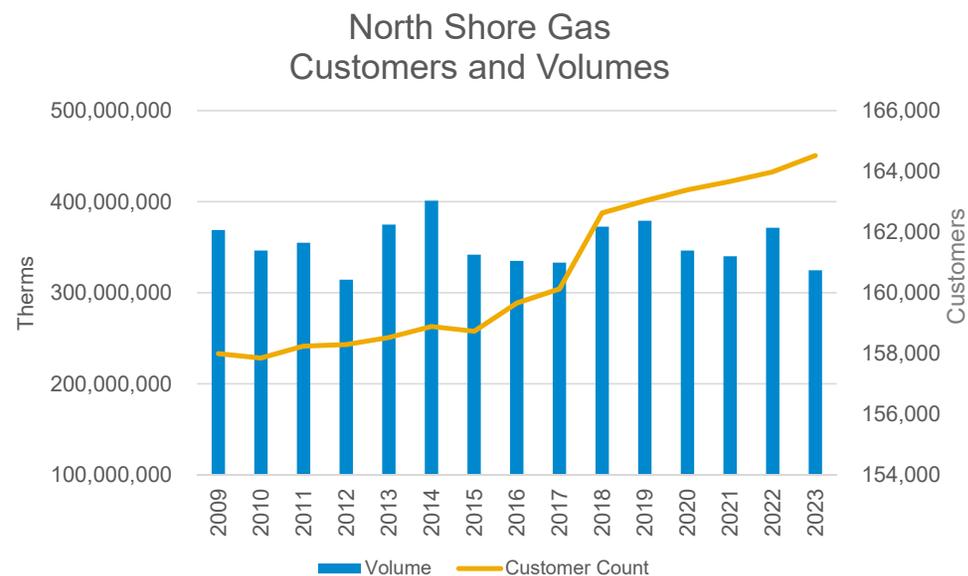
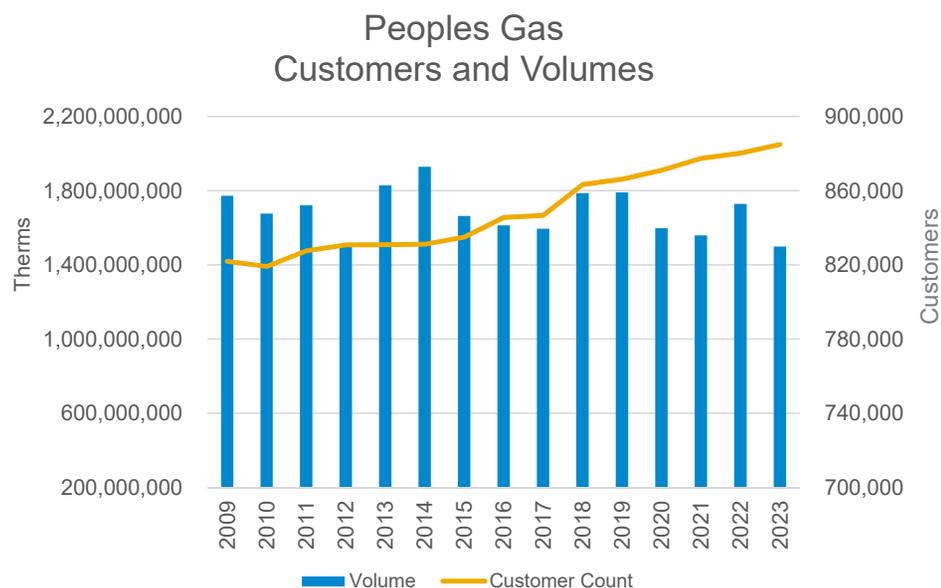


- Residential
- Commercial
- Industrial

Note: These figures are not weather normalized

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

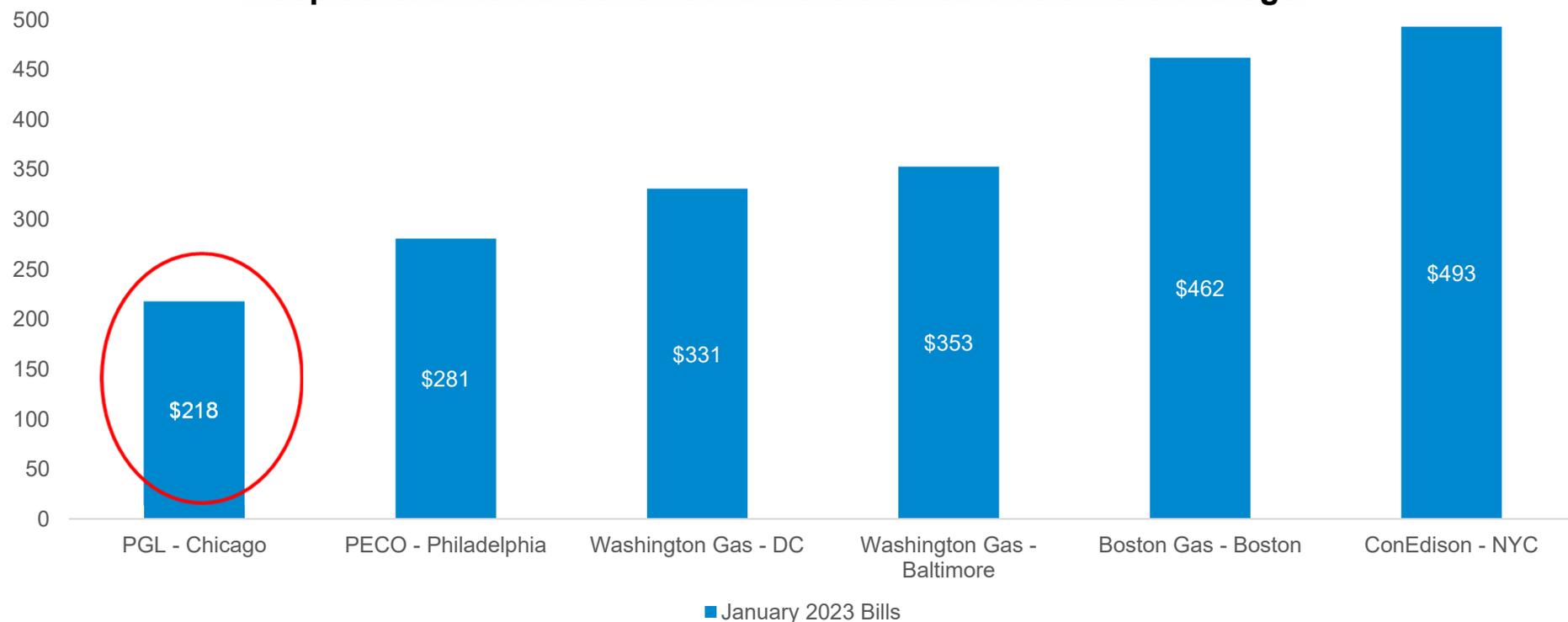
Honored by the Wisconsin Department of Workforce Development with the Vets Ready Employer Initiative award for supporting veterans in the workforce and the community

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

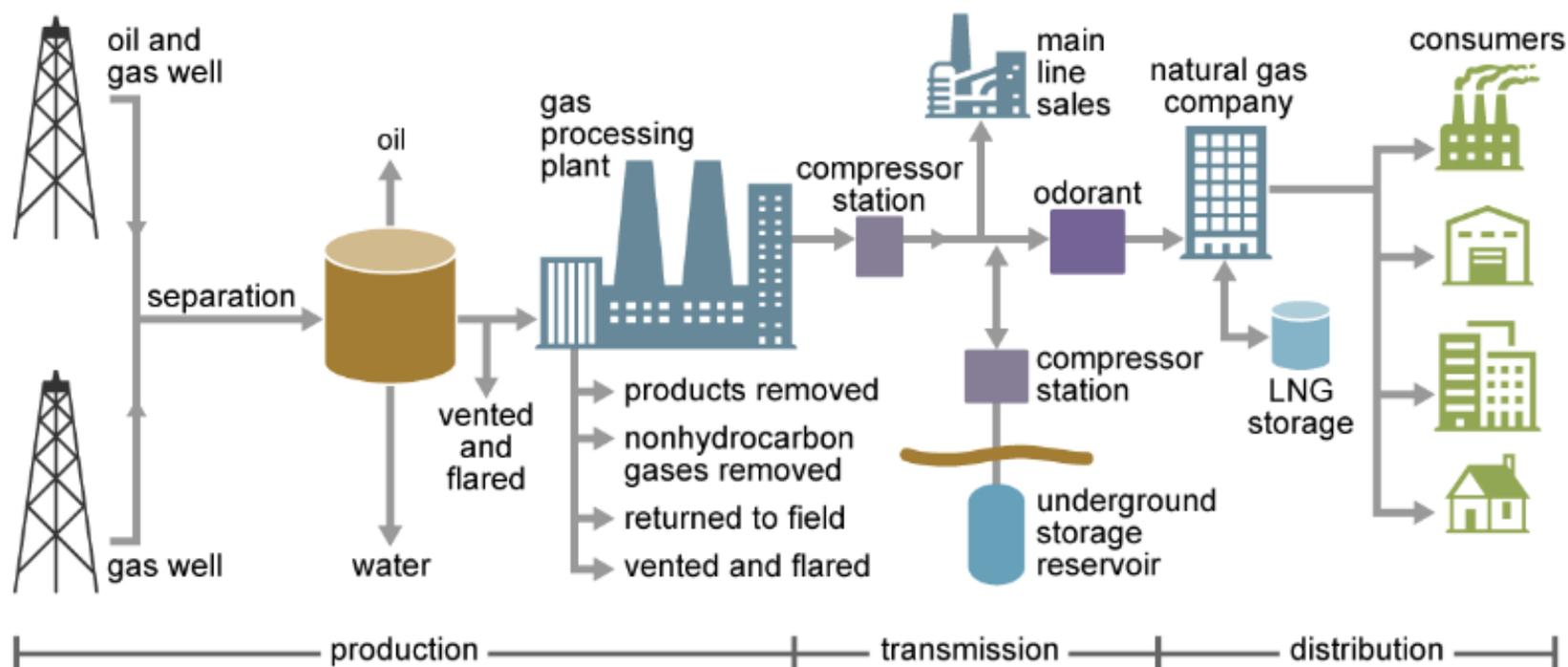
# Gas Supply

Ali Mauermann, Manager – Gas Supply

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## Gas supply

# Natural gas production and delivery



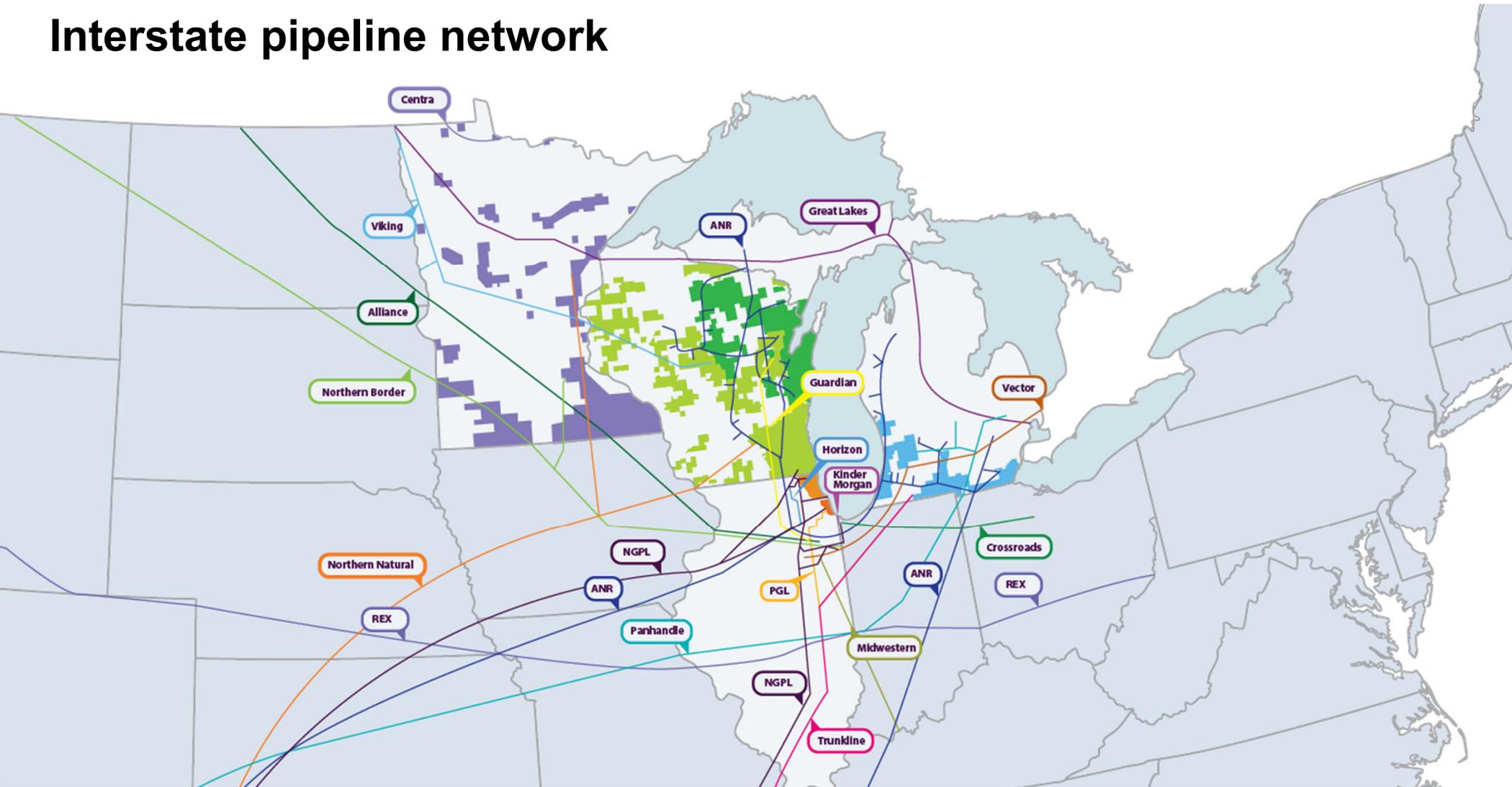
Source: U.S. Energy Information Administration

## 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



## Gas supply

# 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

## Gas supply

# 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

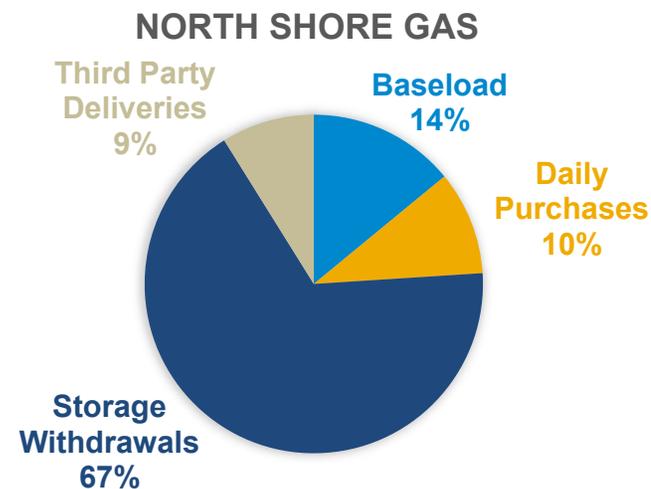
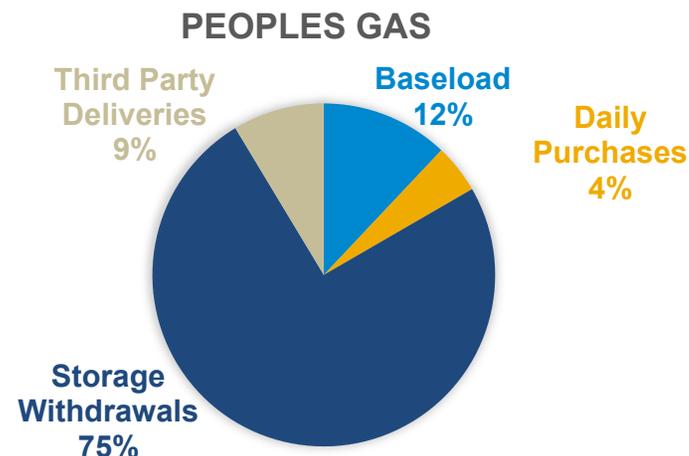
**Benefits: utilities own, operate and maintain the reliable facilities that directly serve our customers**

## Gas supply

# Peak day plan 2023-2024 winter

## Portfolio diversity provides protection on a peak day

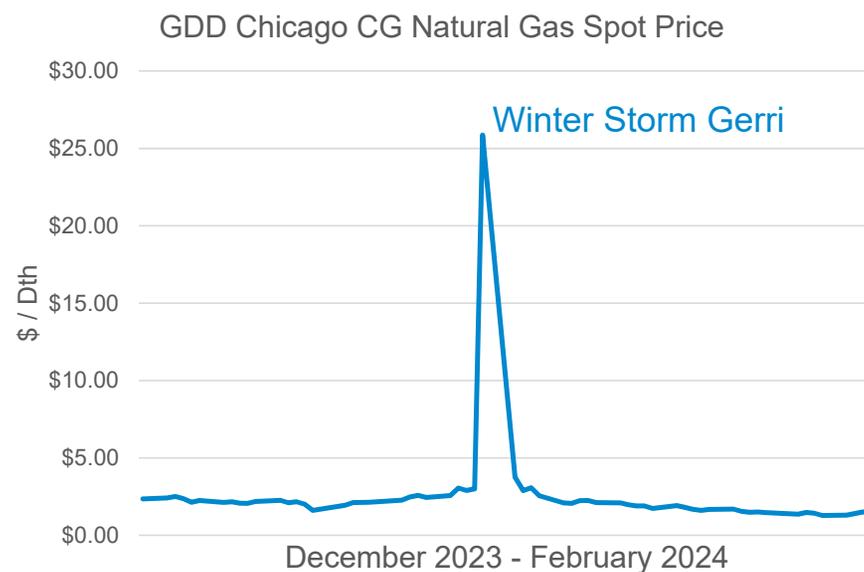
- Firm pipeline capacity allows access to a variety of purchase locations
- Storage withdrawals from four different pipelines/storage fields support reliability
- Mix of storage withdrawals plus multiple monthly baseload purchases and daily purchases protects against price fluctuations
- All winter purchases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



## Gas supply

# Winter Storm Gerri – Jan. 15, 2024

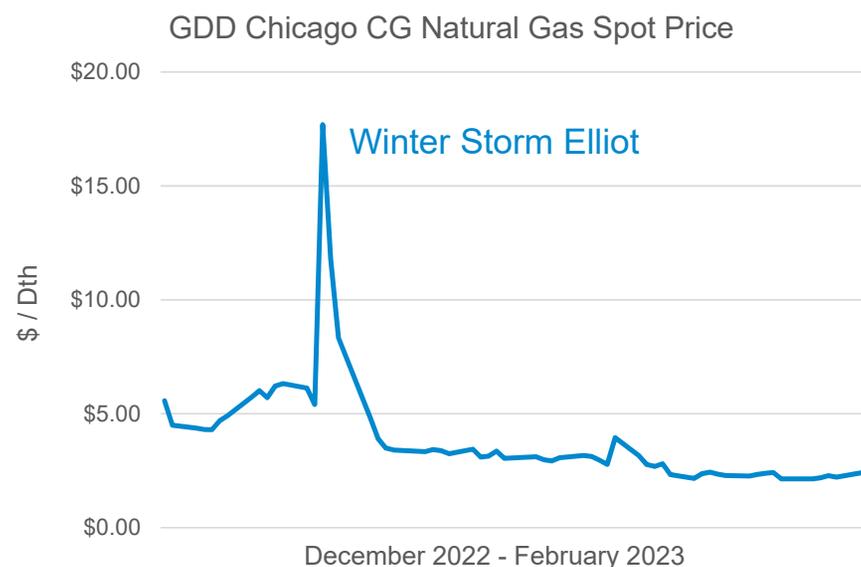
- Wind chills below -30 °F
- Total gas delivered
  - Peoples Gas: 1,590,000 dth, 77% of peak day
  - North Shore Gas: 330,000 dth, 72% of peak day
- Diverse portfolio limits exposure to price spikes in daily market during a cold spell



## 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

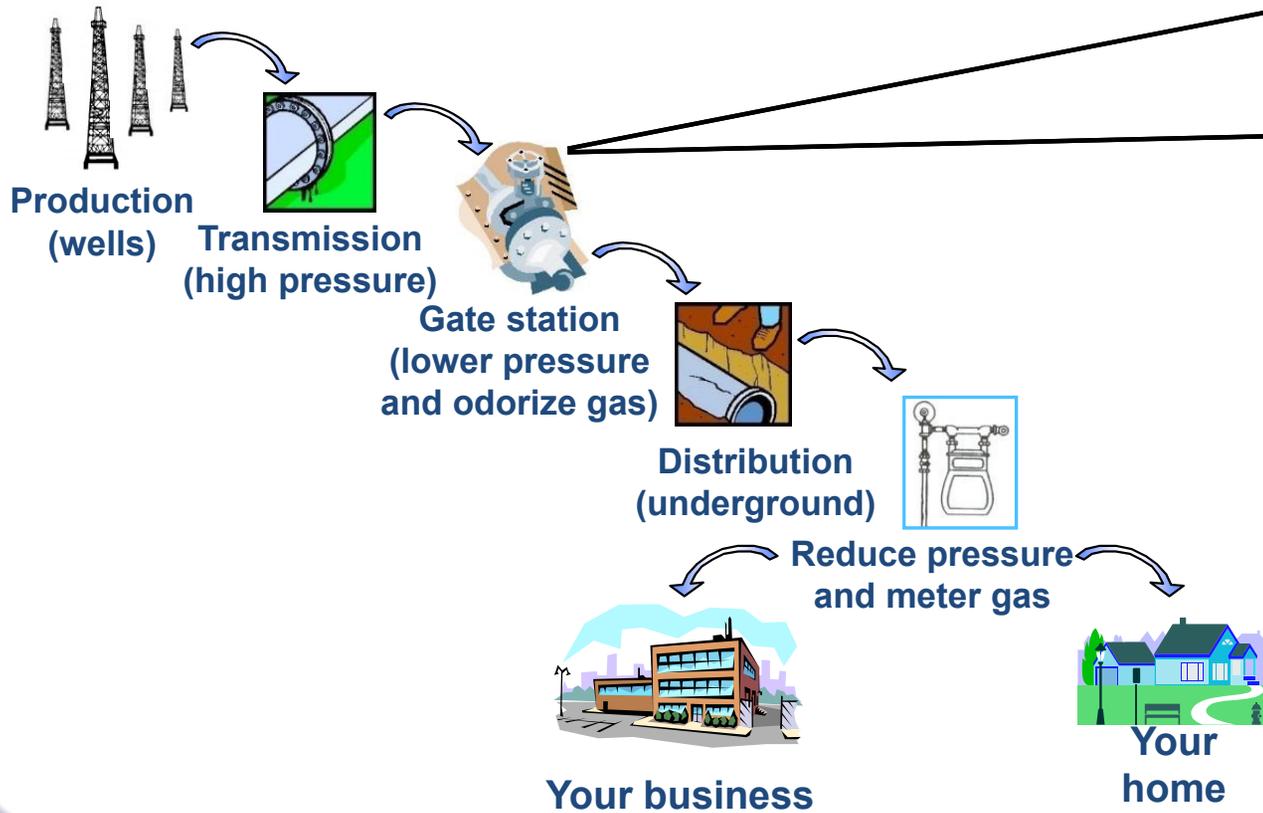
# Natural Gas System Overview and Innovation

Jon Czarnecki, Director – Gas Engineering

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How gas flows through the system

# Wellhead to Burnertip



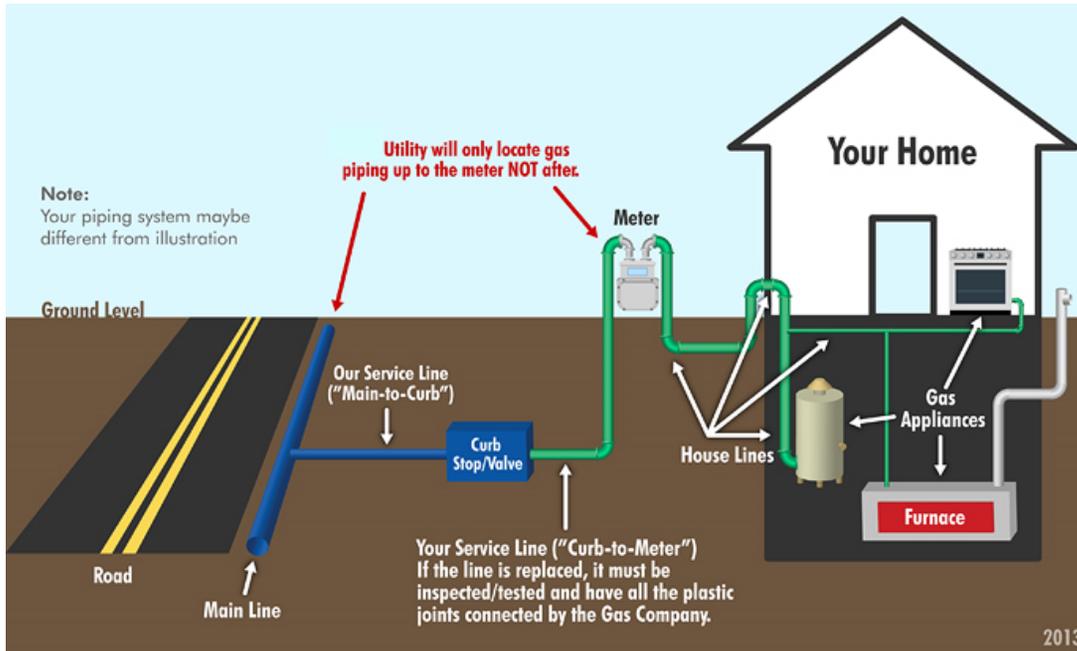
## Completion of Niles Gate Station



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

How gas flows through the system

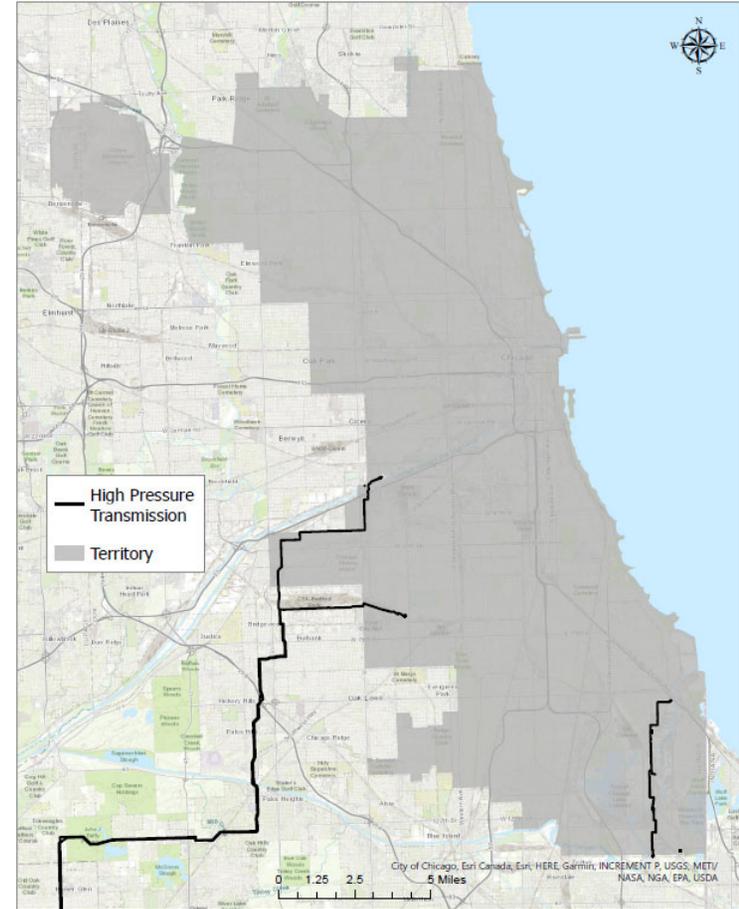
# Natural gas delivery to your home



*How gas flows through the system*

## Peoples Gas system pressure overview

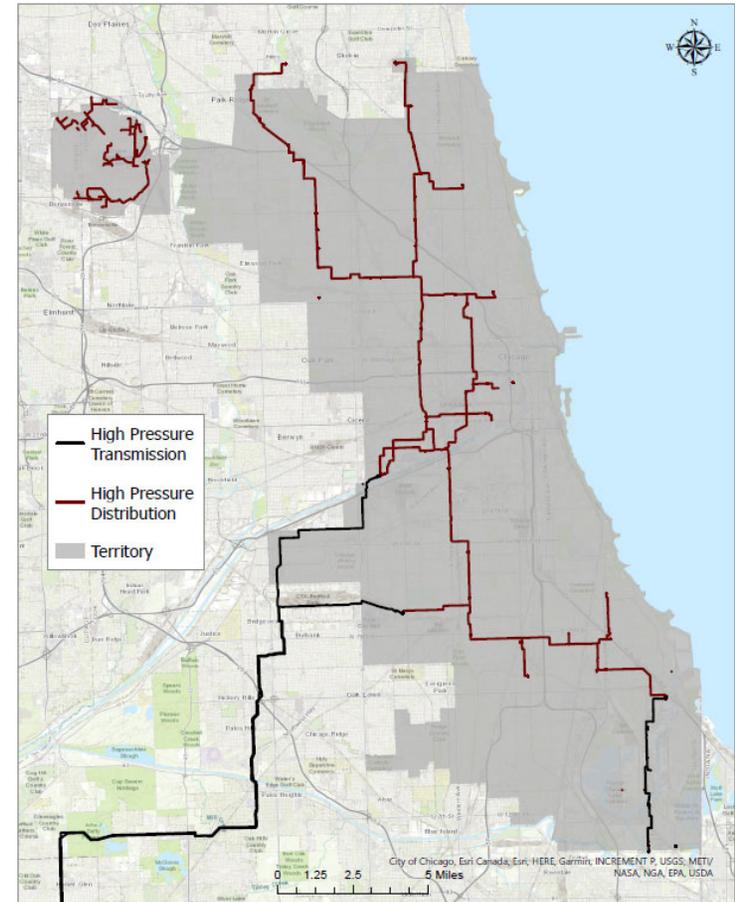
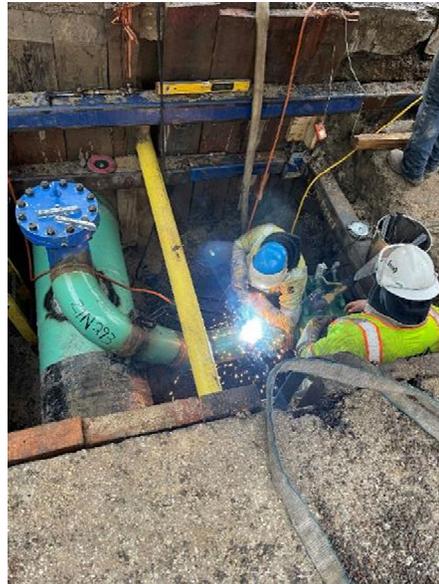
High-pressure transmission gas main: 333 miles



*How gas flows through the system*

## Peoples Gas system pressure overview

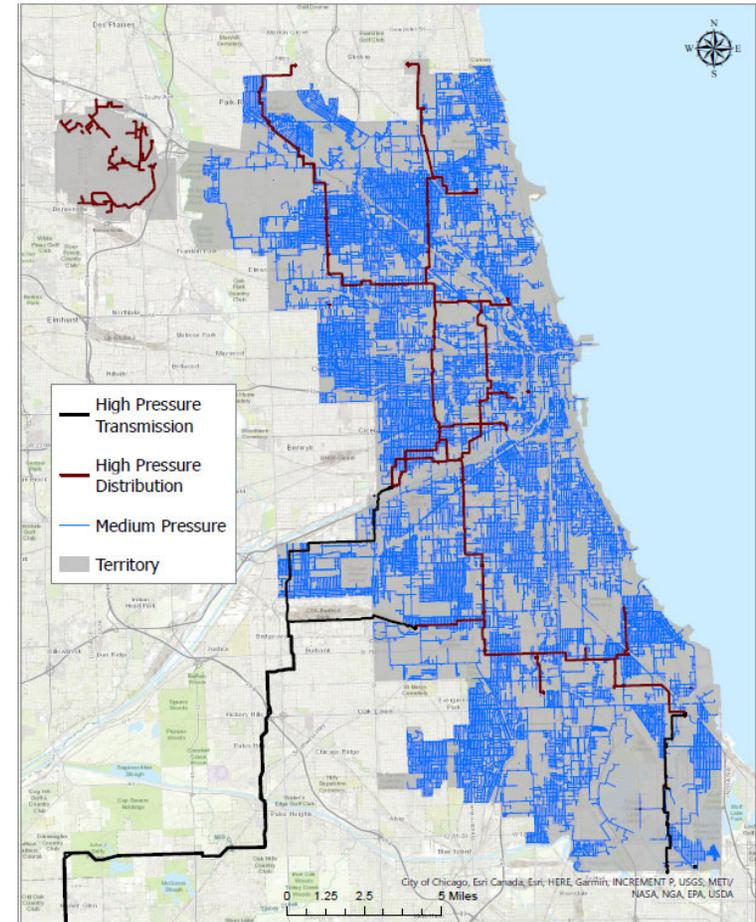
High-pressure transmission gas main: 333 miles  
High-pressure distribution gas main: 91 miles



*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*

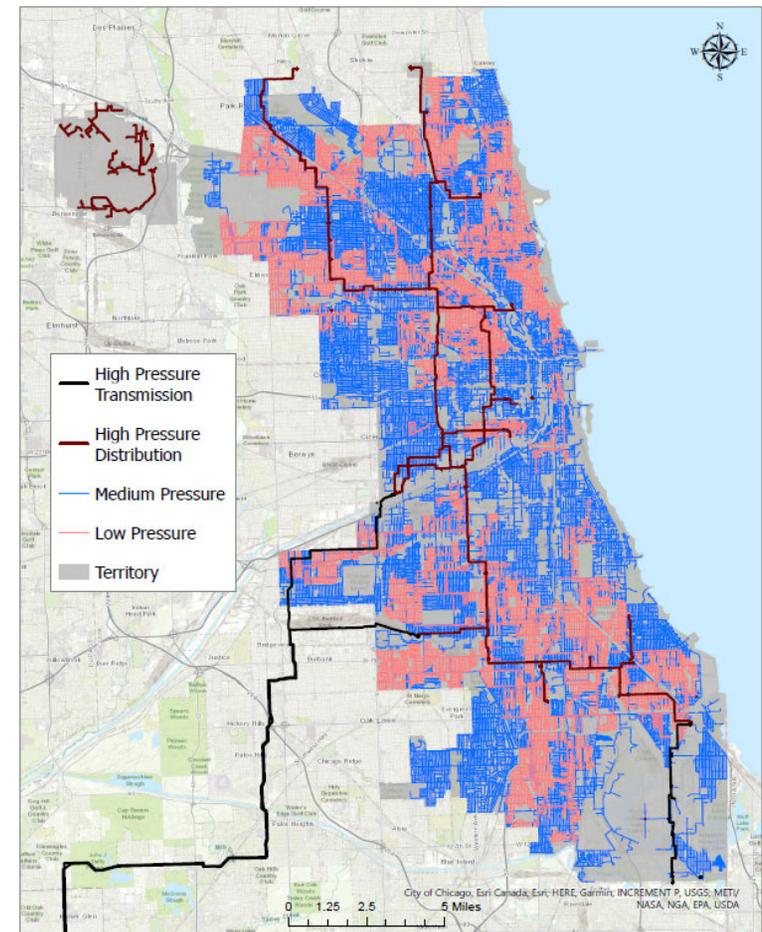
## Peoples Gas system pressure overview

High-pressure transmission gas main: 333 miles

High-pressure distribution gas main: 91 miles

Medium-pressure gas main: 3,255 miles

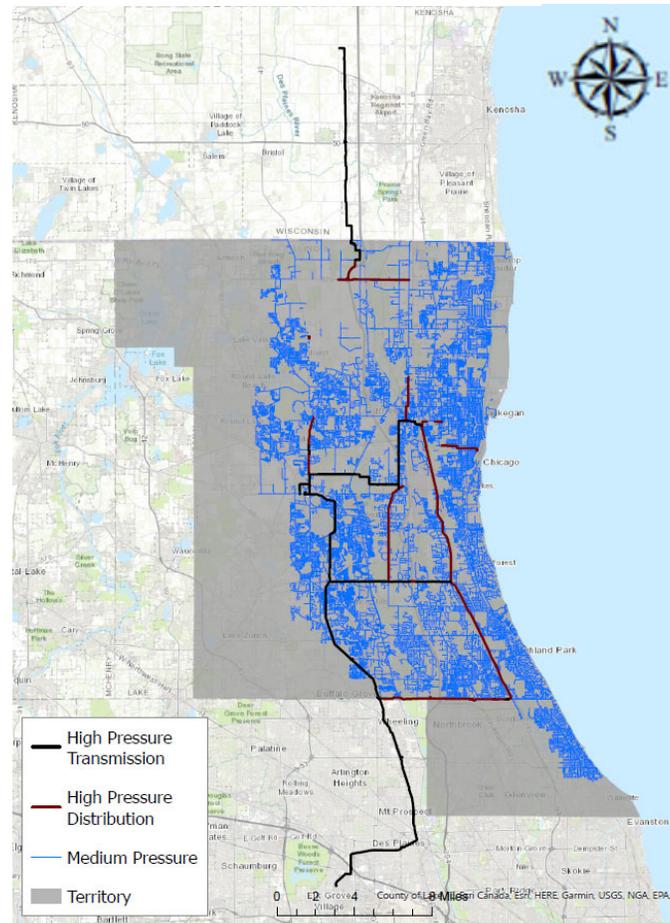
Low-pressure gas main: 1,368 miles (over 70% cast and ductile iron)



*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

## *Regulations and compliance strategies*

### **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



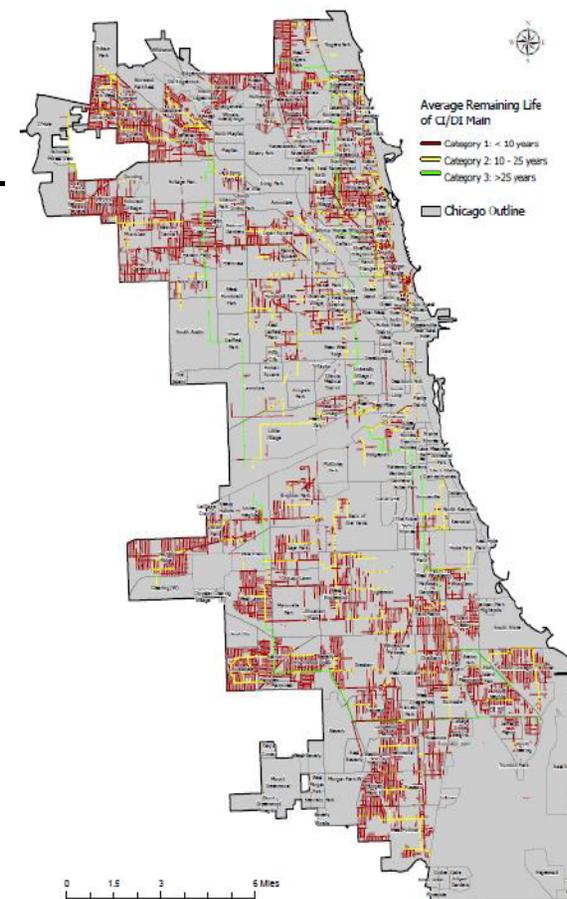
## Peoples Gas Safety Modernization Program (SMP)

### 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



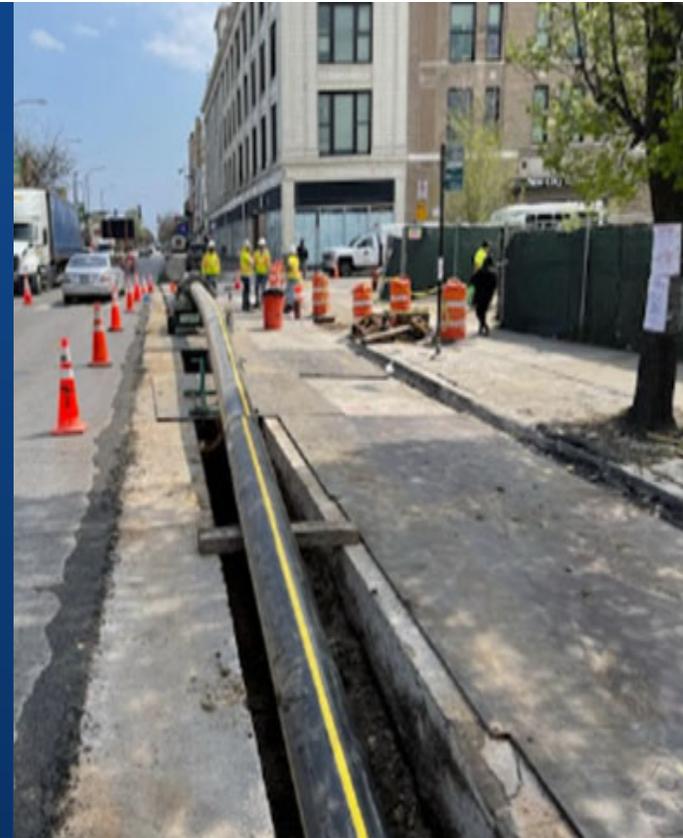
## Peoples Gas SMP progress

**38%**  
complete

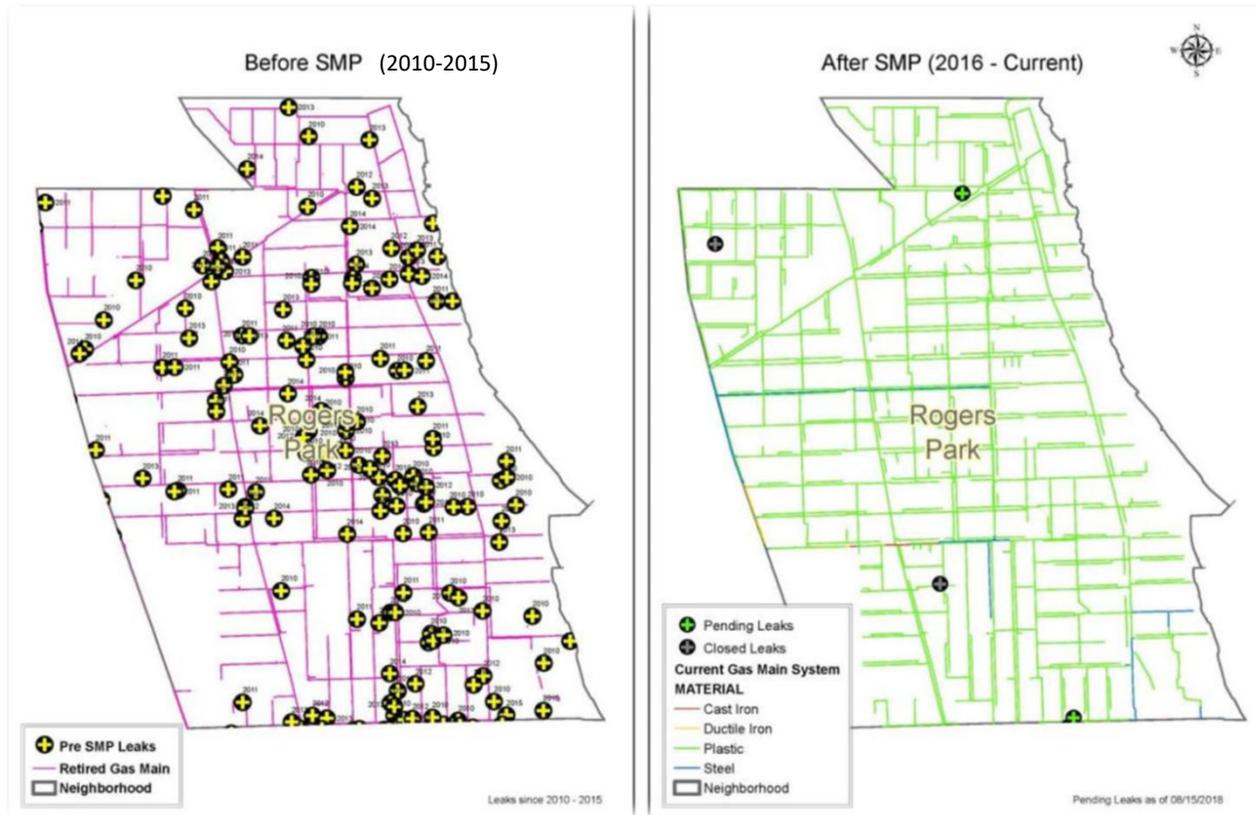


Since 2011, Peoples Gas has installed more than:

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

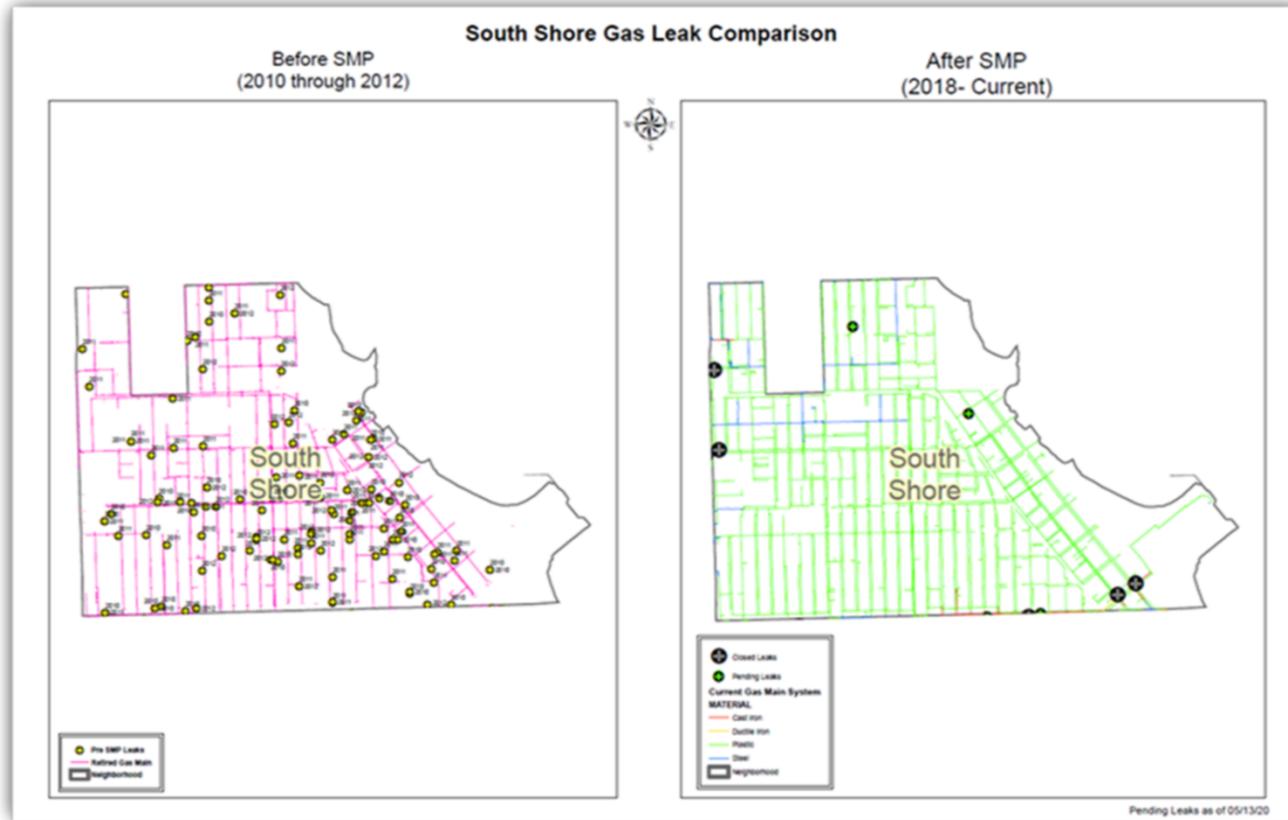


# Peoples Gas SMP is lowering leak rates



## 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

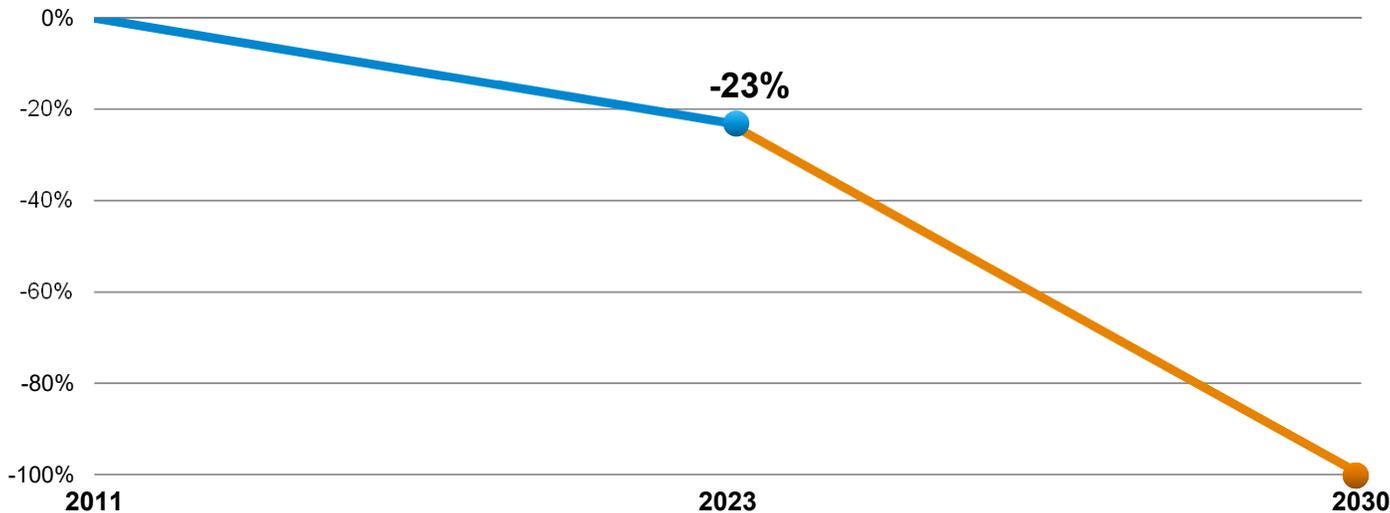
Converted SMP areas show a decrease in methane emissions of at least 95%

Environmental goals

# WEC Energy Group methane reduction



**Achieved<sup>1</sup>** 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 2030<sup>2</sup>

*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



*Innovation*

## 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

The logo for EPRI (Electric Power Research Institute) in blue.The logo for GTI Energy, featuring a stylized infinity symbol in blue and green above the text "GTI ENERGY" in blue.The logo for UTD (Utilization Technology Development), featuring a stylized flame in blue and green above the text "UTD" in bold black, with "Utilization Technology Development" in smaller black text below.The logo for OTD (Operations Technology Development), featuring a stylized flame in yellow and black above the text "OTD" in bold black, with "Operations Technology Development" in smaller black text below.The logo for LCRI (Low-Carbon Resources Initiative), featuring a stylized circular graphic with yellow and green dots above the text "LCRI" in large white letters, with "LOW-CARBON RESOURCES INITIATIVE" in smaller white letters below.

# Q&A

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