

Nicor Gas System and Long-Term Gas Infrastructure Plan Overview

September 26, 2024



Administrative Items



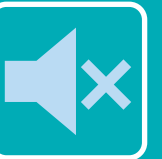
Disclaimer: This meeting is recorded



Put in your name and organization in the chat (especially if you are dialing in)



Participation is encouraged: Raise your hand or use the Chat Function



Please mute your microphone if you are not intending to speak



Meeting materials will be available on the Nicor Gas Website

Our Values

At Southern Company, Our Values establish the foundational behaviors that guide how we work.



Safety First

We actively care about the safety and well-being of our employees, customers and communities. Safely approaching every job, every day, always comes first.



Intentional Inclusion

We are One Team, working to foster a culture of belonging and ensuring our diverse team feels valued. Investing in an equitable culture benefits employees, customers, communities and shareholders.



Act with Integrity

We act with honesty, respect and fairness, demonstrating trustworthiness in all we do. We are true to our word and follow through on our commitments.



Superior Performance

We keep customers at the center of everything we do, with a focus on continuous improvement. We provide exceptional service, delivering innovative solutions that benefit our customers, communities, investors and the environment.

Safety Moment: Red Traffic Lights

The Numbers

- Red light runners cause hundreds of deaths and tens of thousands of injuries each year.
- In 2022, 1,149 people were killed in crashes that involved red light running. Half of those killed were pedestrians, bicyclists and people in other vehicles who were hit by the red light runners.
- In 2022, more than 107,000 people were injured in red light running crashes.

The Rules

- If a vehicle enters an intersection any time after the signal light has turned red, the driver has committed a violation.
- Motorists who are inadvertently in an intersection when the signal changes (waiting to turn left, for example) are not red light runners.
- In locations where a right turn on red is permitted, drivers who fail to come to a complete stop before turning may be considered red light runners.

Tips

- At green light, do not just proceed instantly. Look both ways to make sure that there are no other cars still going.
- At a yellow light, evaluate your speed, the distance to the light, and the time the light has been yellow. If there is time to cross the intersection, proceed with caution.
- At a red light, always stop. Never run a red light.



Agenda

Nicor Gas Overview and Characteristics

- Resilient and Efficient System: Storage, Transmission and Distribution
- Safety & Reliability
- Tight Gas System
- Nicor's Sustainability Efforts

LTGIP Overview

- Guiding Principles
- Plan Development
- LTGIP Processes
- LTGIP Portal

Questions & Discussion

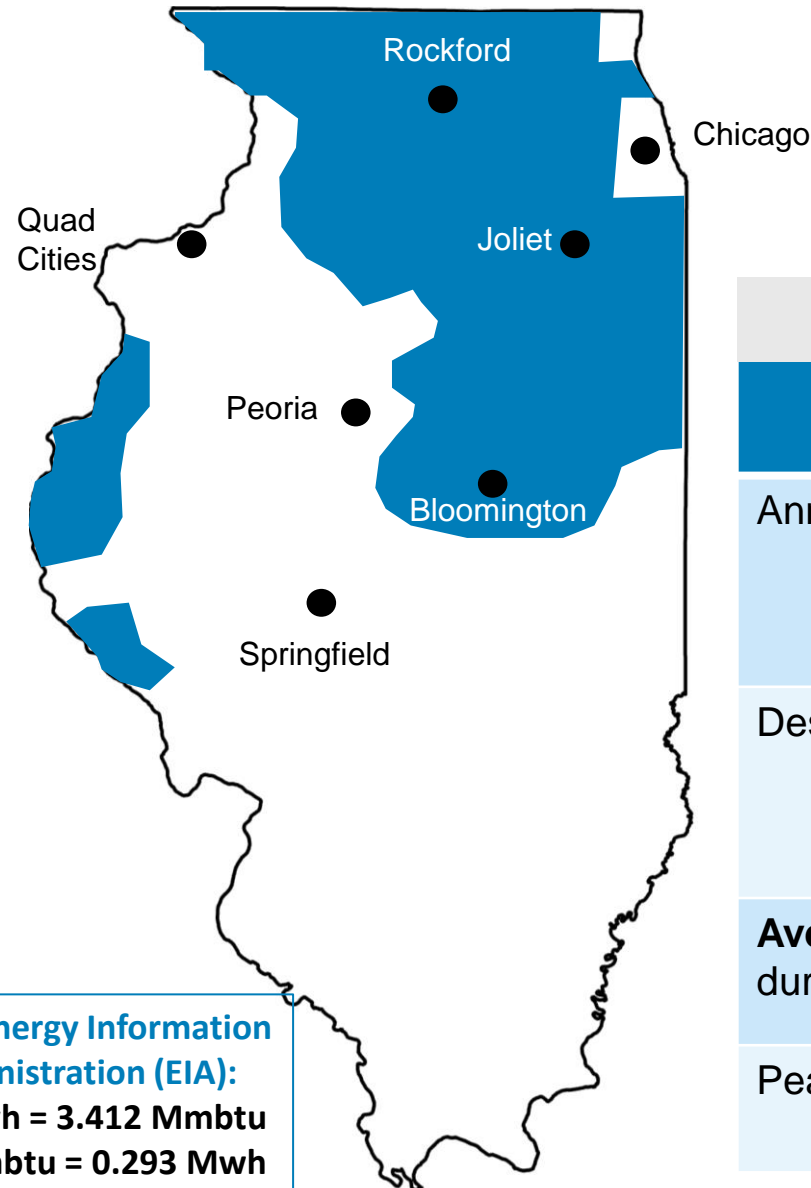
Nicor Gas System Overview

Tim Hermann

Vice President, Operations



Nicor Gas: Energy Supply and Delivery in Northern Illinois



Total Customers: 2.28 million
 Residential: 2.09 M
 Commercial: 0.18 M
 Industrial: 0.01 M

Per Energy Information Administration (EIA):
 1 Mwh = 3.412 Mmbtu
 1 Mmbtu = 0.293 Mwh

Energy Delivery Statistics			Nicor Gas MMBtu	Nicor Gas MWh
Annual Volume (Normal):	TOTAL: Residential: Commercial: Industrial:	497 million	146 million	
Design Peak Day:	TOTAL: Residential: Commercial: Industrial:	5.1 million	1.48 million	
Average Houly Load during Design Peak:	TOTAL:	211,400 <i>Jan 2019 Actual: 215,879</i>	62,000 <i>63,300</i>	
Peak Storage Delivery:	Peak Hour Peak Day	106,000 / hr 2.55 million / day	31,000 Mw 747,000 Mwh	

Nicor Gas System Overview

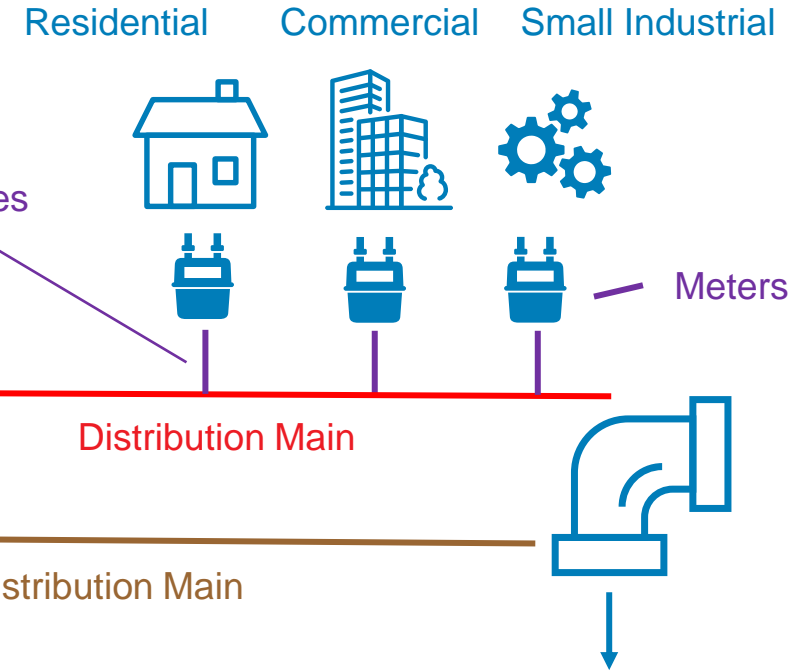
Gate Stations (82)

- Measurement
- Pressure and flow control
- Odorization
- Gas heating
- Remote Monitoring & Control

Distribution Regulator Vault

- Reduce to final distribution pressure
- Remote monitoring

Customers



Underground Gas Storage

- Compression (Injection)
- Gathering pipelines
- Storage wells
- Underground reservoirs
- Water removal vessels
- Gas dehydration
- Gate station equipment

Mainline Valves

- Often remote control

Regulator Station

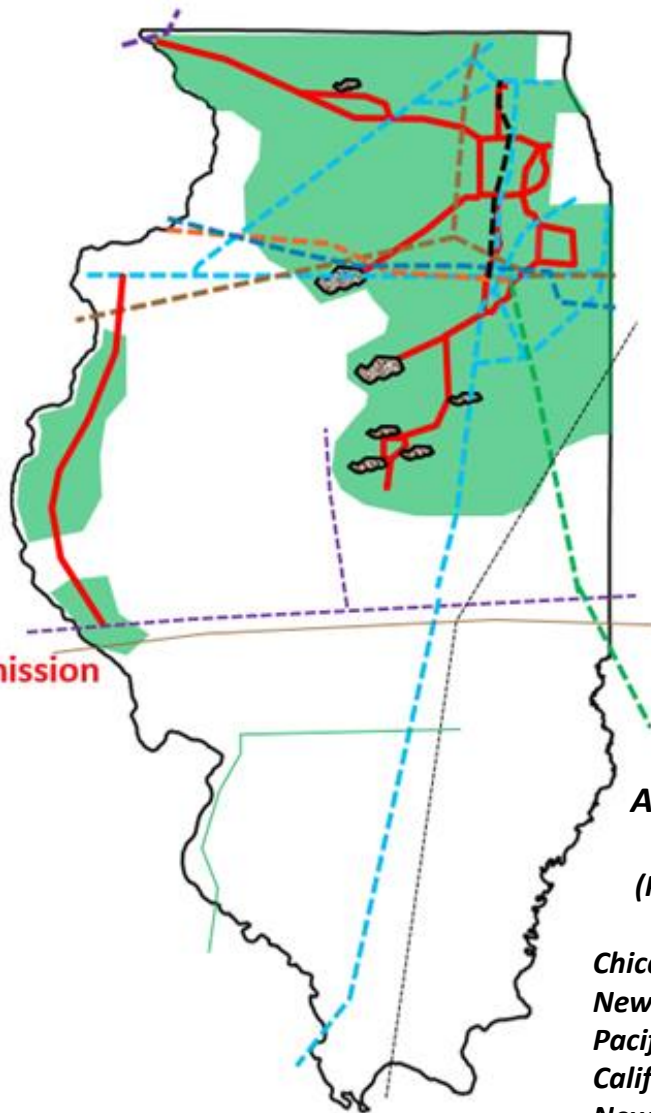
- Reduce to medium pressure
- Remote Monitoring & Control
- May have gas heating

Large Industrial Customer

- Measurement
- Pressure and flow control
- Remote Monitoring & Control

Nicor Gas: Highly Resilient and Efficient – Supply Access

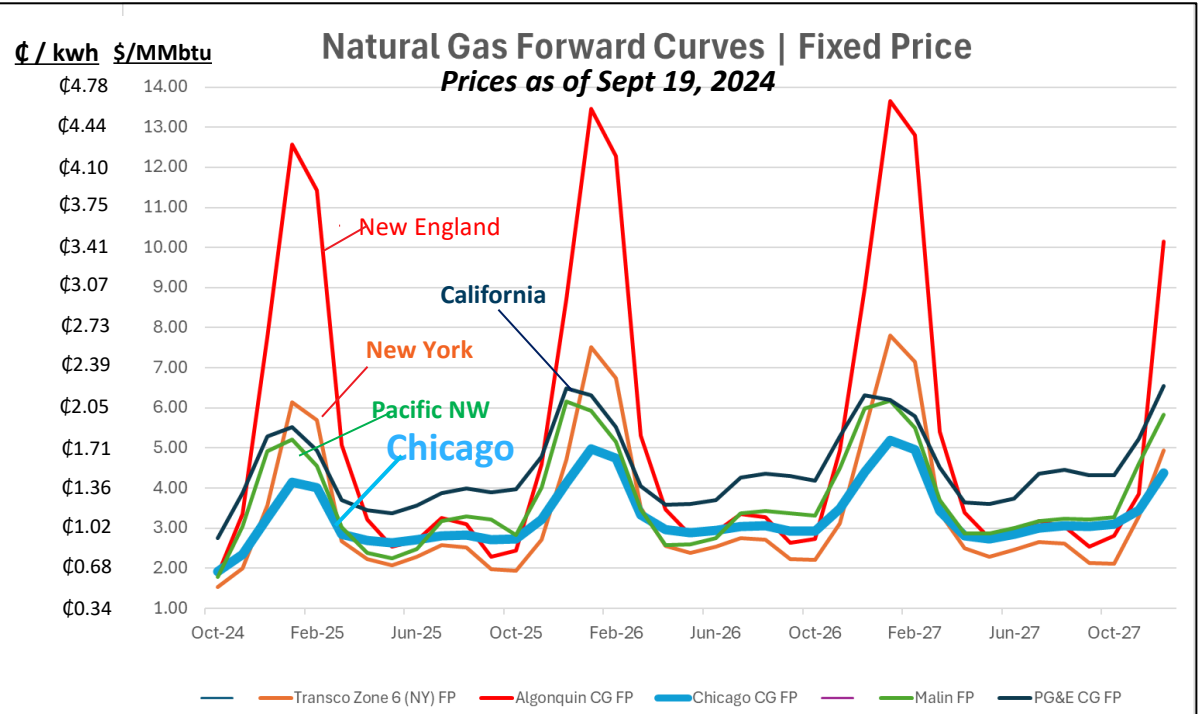
- **Nicor Gas is interconnected with eight interstate gas pipelines**
 - Diversity of gas supply basins
 - Competitive capacity pricing
 - Provides backbone for highly efficient Chicago gas market
 - Resiliency related to multiple supply options
 - Most pipeline suppliers offer storage as well as transportation



Nicor Transmission
 NGPL
 ANR
 NBPL
 MGT
 Alliance
 Horizon
 PEPL
 NNG

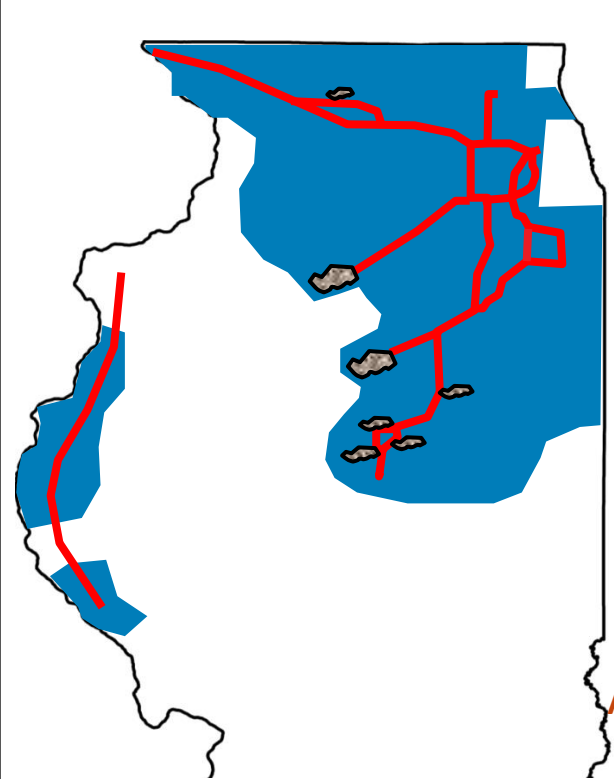
**Average Forward Prices
Oct 2024 – Mar 2028
(Prices as of Sept 19, 2024)**

Chicago:	\$3.39
New York (Transco Z6):	\$3.58
Pacific NW (Malin):	\$3.84
California (PG&E):	\$4.58
New England (Algonquin):	\$5.69



Nicor Gas: Highly Resilient and Efficient **Storage**

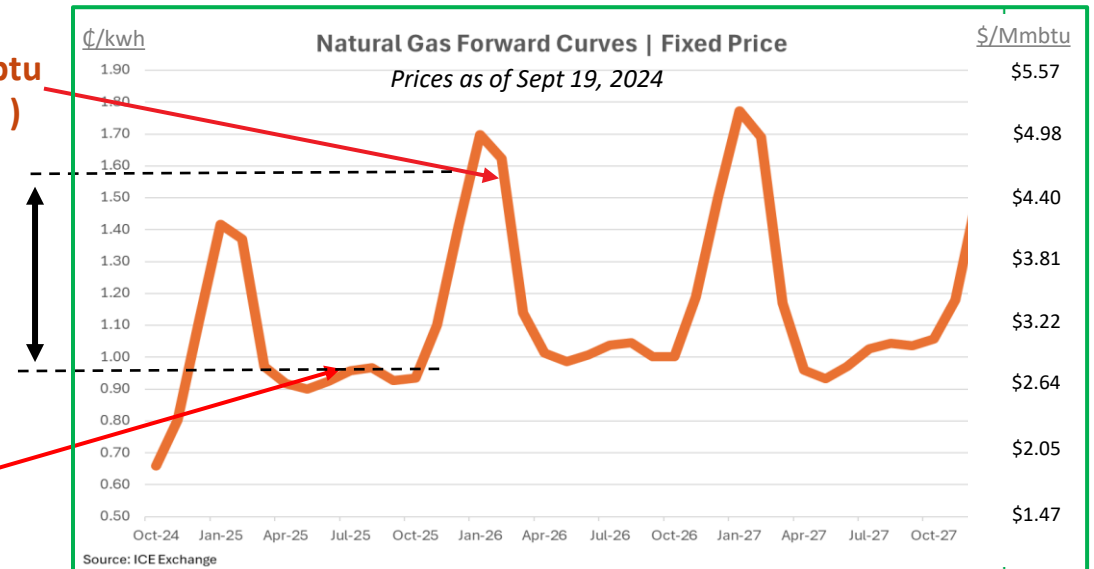
- **Nicor Gas operates eight underground gas storage reservoirs in Illinois**
 - **Store 135 BCF of cycling inventory (39 TWh equivalent)**
 - Accounts for 50% of Nicor Gas' annual heating load
 - Equates to 45% of ComEd's total 2023 annual electric load
 - **Peak deliverability of 2.5 Bcf/d**
 - Equates to 30,000 Mw equivalent – 125% of ComEd's all time peak delivery
 - Provides nearly 50% of Nicor's system demand on design peak day
 - **Provides load balancing in both directions (long and short supply)**
 - **Provides customers with summer / winter price arbitrage opportunity**



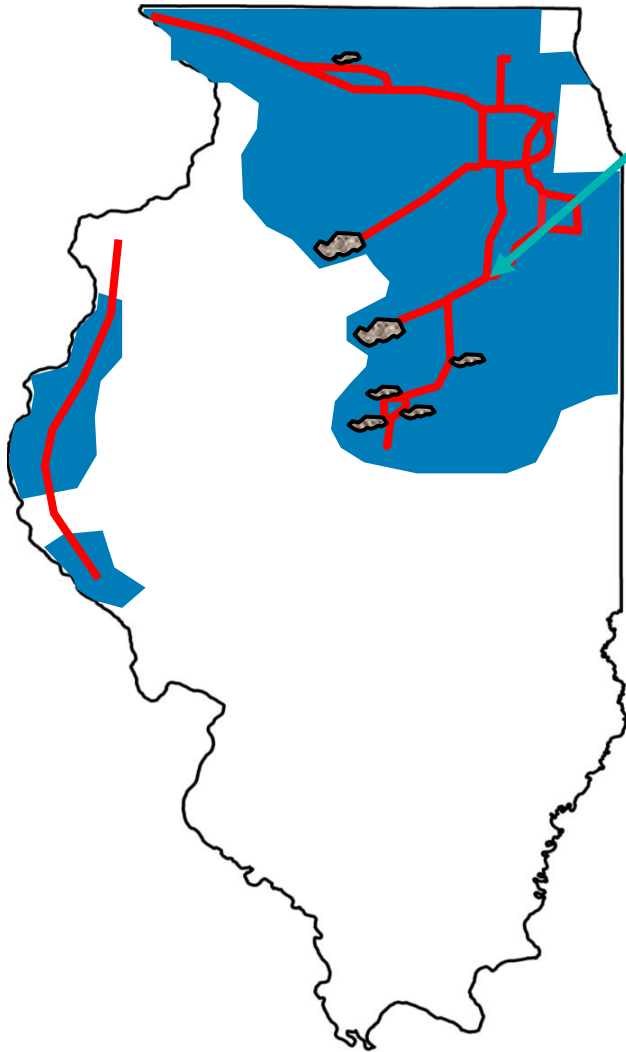
**Average Dec 25 – Feb 26 Price: \$4.63 / Mmbtu
(¢ 1.58/ kwh)**

Using storage, transportation customers can choose to purchase gas at 0.93 cents per kwh during next summer, and store it for consumption the following winter when its worth 1.6 cents per kwh (forward market values as of Sept 19, 2024)

**Average Summer 2025 Price: \$2.72 / Mmbtu
(¢ 0.93 / kwh)**



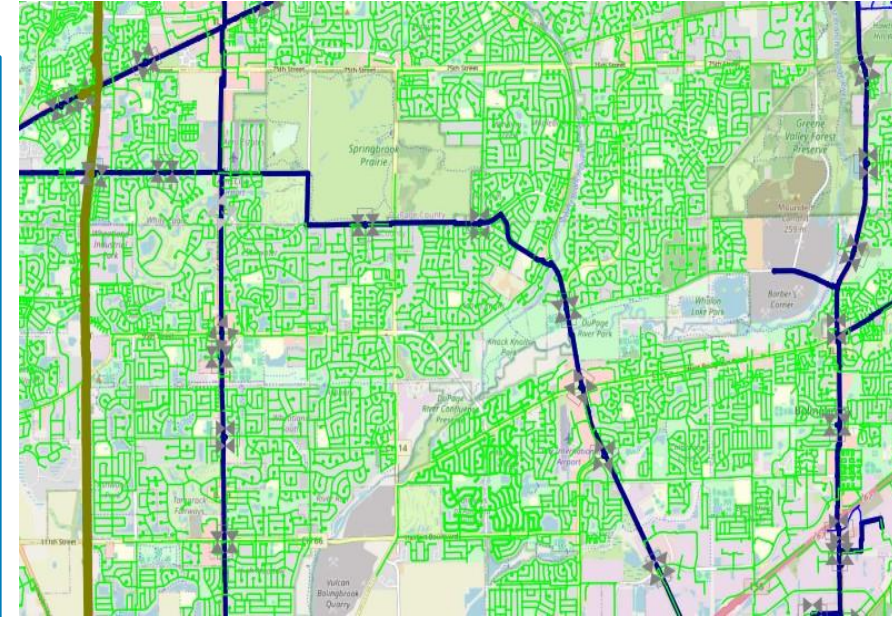
Nicor Gas: Resilient and Efficient **Transmission System**



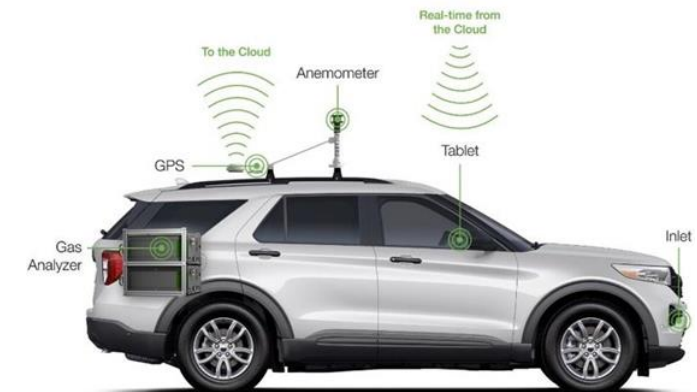
- **Highly integrated Nicor Gas transmission system**
 - Interconnects gas pipeline suppliers, Nicor storage and Nicor distribution systems to create an integrated system
 - Facilitates market efficiency for our customers
 - Enables transportation customers to purchase gas from multiple suppliers regardless of their location on Nicor's system
 - Buried infrastructure provides resiliency against damage from wind and ice
 - Linepack provides an additional cushion for absorbing supply/demand imbalances

Nicor Gas: Resilient and Modernized Distribution System

- **Gas system configurations drive resiliency**
 - Highly integrated system minimizes single-feed vulnerability
 - Buried infrastructure prevents outages due to wind / ice / trees
 - Line pack (pressure) provides time to trouble-shoot issues prior to outage
- **Aging and unreliable materials have been replaced**
 - Low pressure systems completely eliminated
 - Cast iron mains and known copper services completely eliminated
 - Replacement of Vintage plastic nearly complete (95%)
 - Replacement of bare steel is 75% complete
- **Highly efficient AMI system improves billing accuracy, increases usage data and enhances safety**
 - Only 3% of meters remain inside customer premise
- **Advanced leak detection equipment deployed at Nicor detects leaks at much lower levels vs. traditional technologies**



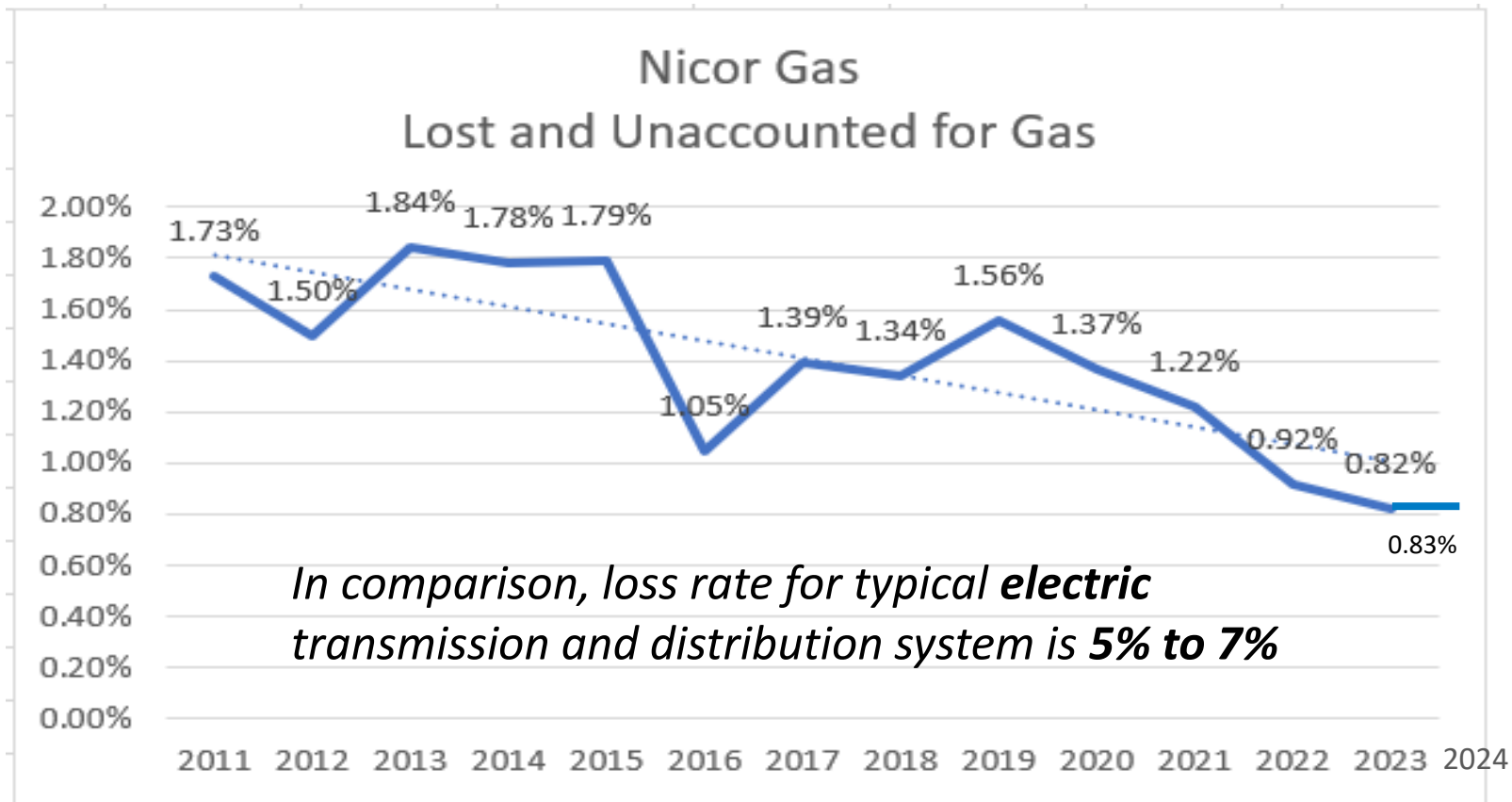
Nicor Gas distribution system, SW suburbs



Advanced leak detection equipment detects leaks at much lower levels (parts per billion) vs, traditional technologies (parts per million)

Nicor Gas: Low System Loss Rate

- Nicor's system loss rate has reduced considerably through technologies such as Advanced Metering Infrastructure
 - Highly efficient AMI system improves billing accuracy, increases usage data and enhances safety
 - ~ 1 % reduction saves ~ \$18 million/yr



Advanced Metering Infrastructure has streamlined meter reading processes at Nicor

Safety & Reliability During Severe Weather

● Polar Vortex – January 30, 2019

- Delivered more than 4.8 BCF of natural gas
- **Record peak hour delivery of 216,000 Mmbtu (63,300 Mw)**
- No Nicor customers lost access to gas service
- Up to 57,000 electric power outages in northern IL

● Winter Storm Elliott – December 23, 2022

- Delivered more than 4.2 BCF of natural gas
- No Nicor customers lost access to gas service

● Winter Storm Gerri – January 13-15, 2024

- Delivered more than 12.41 BCF of natural gas
- No Nicor customers lost access to gas service
- 40% delivered from Nicor Gas' underground storage
- Up to 153,000 electric power outages Jan 12-13



Repairing damage caused by water main break



Keeping storage wells flowing



Storage reboilers are critical in maintaining gas quality during withdrawals



Maintaining access to key supply stations

Nicor Gas: Delivering the Affordability of Natural Gas to Our Customers

Delivery Components Only Overall System Averages, 2023

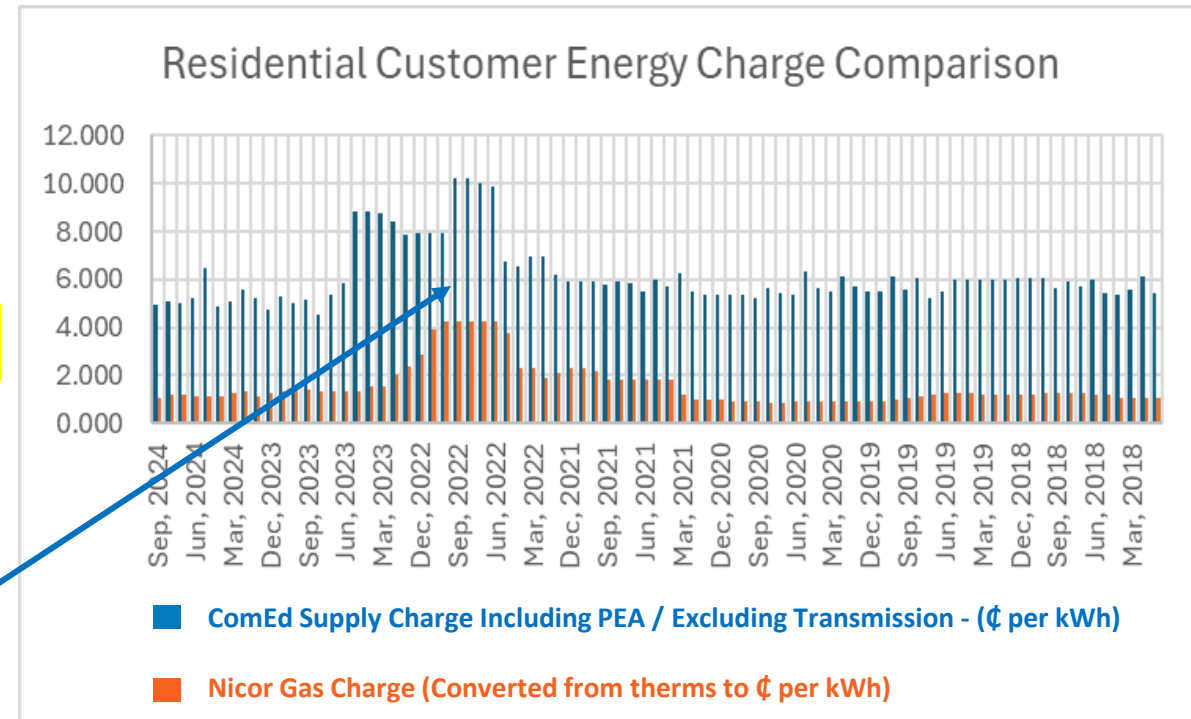
Electricity delivery almost 4 times higher

Upstream Energy Costs History, 2018 – Present

Electric Energy > 4 times higher

	Nicor Gas 2023	ComEd 2023*
Total Revenue (Less Purchased Energy Cost and Revenue Taxes)	\$1.29 billion	\$3.18 billion
Total Deliveries (MWh)	132 million	88 million
\$/MWh delivered:	\$9.77 / MWh	\$36.15 / MWh
Cents / KWh delivered:	¢ 0.98 / KWh	¢ 3.62 / KWh

~4X the Cost



Even during high gas cost period of May to Nov 2022, upstream electricity cost components were more than 2X upstream gas costs

Nicor Gas: Our Path to a Sustainable Future



UPSTREAM



DOWNSTREAM



Cleaner Molecules

Our state-of-the-art infrastructure helps enable the growth of clean fuels.

- Renewable Fuels
- Certified Natural Gas
- Hydrogen

Tighter Pipes

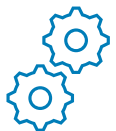
We leverage the latest technologies to prevent, identify and mitigate leaks.

- Direct measurement
- Infrastructure modernization
- Advanced leak detection and repair

Efficient Homes & Businesses

We support emissions reductions and increased energy efficiency in homes and businesses.

- Energy Efficiency
- Innovation
- Affordability and Equity



MACH H2
Project in the DOE-awarded Midwest Alliance for Clean Hydrogen



Through investments in pipeline and infrastructure modernization, we reduced our annual operational emissions by nearly 500,000 MtCO₂e over 2009 to 2019 - a 54% reduction over that 10-year period.



1.3 million metric tons of CO₂ emissions avoided since 2011 through energy efficiency programs

The Long-Term Gas Infrastructure Plan Overview

Shraddha Imbrogno, PE

Project Manger, Regulatory Affairs



LTGIP Guiding Principals



Safety, Reliability and Resilience



Affordability



Sustainable Future



Customer Choice and Energy Equity



Community Growth and Impact

LTGIP Plan Development

1 Investment Plan

2 Customer Benefits and Impact

3 Stakeholder Engagement

Long-Term Gas Infrastructure Plan (LTGIP)

Workplan

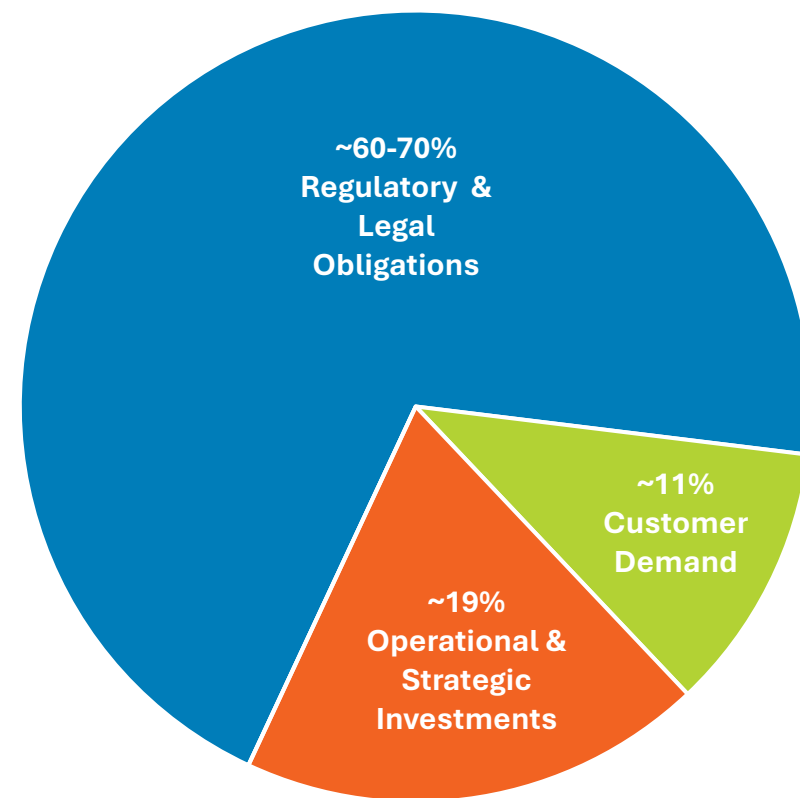
July 1, 2024



Investment Plan

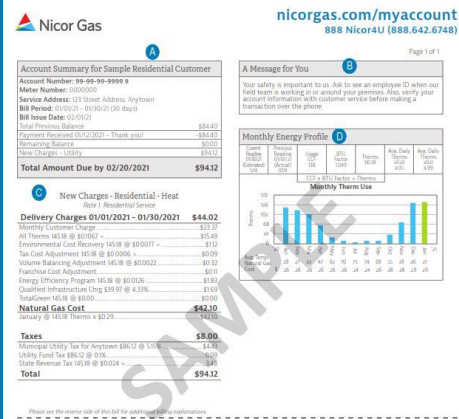
- Nicor's capital planning process:
 - Prioritizes safety, reliability, and our regulatory obligations
 - Involves risk-based evaluation to select capital projects
 - Evaluates customer needs and demand on our system
 - Assesses energy needs throughout our service territory
- Nicor plans to provide the following information:
 - List of the planned projects and programs for the next 5 years (2026-2030) and their associated costs
 - Demonstrate how these projects comply with current regulatory and legal obligations
 - Explain the investments and the pace
 - Demonstrate our cost containment strategy
 - Provide maps associated with certain investments

Nicor's Historical Annual Investment Categories



Customer Benefits and Impacts

Nicor's capital planning goal is to minimize impacts on customers, while ensuring it has a safe, reliable system to meet customer demand. To ensure this goal is met, Nicor evaluates the impact our 5-year capital plan may have on customers.



Stakeholder Engagement

- Nicor Gas plans to host 4 public meetings to solicit feedback from stakeholders. An anticipated timeline for the proposed meetings is shown below:

Meeting	Topic	Timeline
1	Overview of the Nicor System and Long-Term Gas Infrastructure Plan	September 26, 2024
2	Overview of Nicor's Infrastructure Planning Process and Evaluation of Customer Benefits and Impacts	4 th Quarter 2024
3	Preliminary Review of Projects	1 st Quarter 2025
4	Review of Near Final Plan	2 nd Quarter 2025

- Additional targeted stakeholder meetings will be conducted for additional feedback

LTGIP Portal

Our Infrastructure | Nicor Gas







Home / Company / Where We Are / Our Service Area

Natural Gas Infrastructure Planning – Vital to Supporting a Clean Energy Future with Reliable and Affordable Energy

LTGIP Landing Page

Upcoming Meetings

Each meeting will have an agenda, Powerpoint presentation, Teams recording and one pager afterwards.

 <p>September 26, 2024</p> <p>Overview of the long-term gas infrastructure plan</p>	 <p>Coming Soon! Q3 2024</p> <p>Additional Required Analysis</p>	 <p>Q2 2025</p> <p>Preliminary List of the investments</p>	 <p>Q3 2025</p> <p>Near Final Plan</p>
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Meeting Materials

Get Involved

Name*
First Name Last Name

Email*

Company

Please provide any additional feedback you may have:

Sign up for the distribution list and provide feedback

Questions & Discussion





Nicor Gas