BUILDING DECARBONIZATION COALITION

The Future of Gas in Illinois

A report by BDC and Groundwork Data

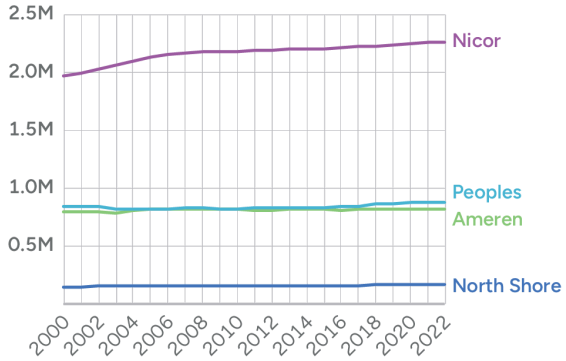
The future of gas in Illinois is fraught with financial risks for customers, utilities and their investors, and even taxpayers. To avoid the worst outcomes of an unmanaged transition, a managed transition that equitably decarbonizes entire neighborhoods and communities is needed.

Illinois is on a path toward an unmanaged transition that requires immediate intervention

The state risks up to $80 billion in stranded gas assets by 2050 if regulators don't control utility spending

Illinois is one of the country's most methane gas reliant states with **75% of households** primarily using gas to heat their homes. However, the market share of gas in Illinois home heating is in decline, dropping each year since 2010.

Despite stagnant customer growth over the past decade, the state's largest gas utilities have embarked on aggressive spending plans, installing pipelines **that cost customers up to $2.8 million per mile.** These pipelines are at high risk of becoming underutilized before they're paid off, turning them into **stranded assets** that could create financial risk for customers, utilities and their investors, and even taxpayers.



Stagnating trend in total customer counts by gas utility, 2000-2022

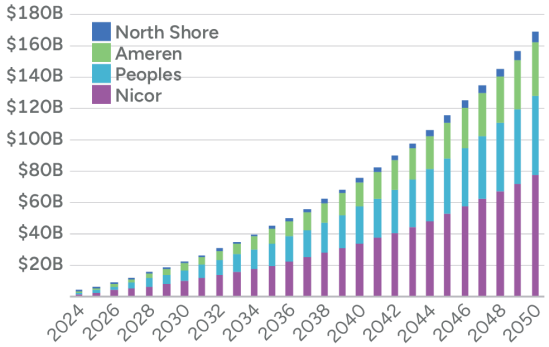
Nearly half of the state's gas pipelines were **installed between 1950 and 1980.** Instead of utilizing leak detection and repair to save customers money and ensure pipeline safety (an operational expense), gas utilities overinvest in costly pipeline replacement projects, which are capital investments that can be billed to customers to provide lucrative returns for investors over a pipeline's 40-70 year lifespan.

Together, the state's four largest gas utilities—North Shore, Ameren, Peoples, and Nicor—are spending **over $1 billion annually** to replace aging gas infrastructure (see attached utility profiles for detail), even as Illinois pledges to achieve 100% clean energy by 2050 and customers across the state struggle to pay already unaffordable gas bills. With this pace of investment, by 2050, gas system delivery charges on residential **customer bills could skyrocket to $651 a month during the winter—an eightfold increase** from today's levels. These set costs on a customer's gas bill do not even include the cost of gas itself.

Unless gas utilities are forced to substantially limit spending on the gas system, unrecovered (and potentially stranded) gas utility investments are projected to **increase sixfold to $80 billion by 2050**.

The economic, health, and climate risks of "business as usual" are substantial

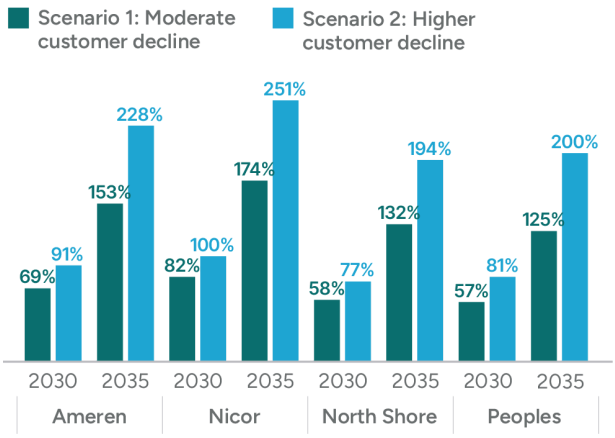
Gas customers in Illinois could see gas delivery charges triple in the next 10 years



Total cumulative revenue requirement, 2024-2050, which increases with business-as-usual gas system investments

During an **unmanaged transition,** as gas system costs rise, the customer base shrinks as customers opt for homes powered by efficient electric equipment rather than gas. This dynamic—more costs and fewer ratepayers—creates a **feedback loop** that causes rates to skyrocket for those stuck on the declining gas system.

If gas utilities continue spending on pipeline replacement at the current rate while the customer base shrinks, **remaining gas customers could see their gas delivery charges triple by 2035,** which wouldn't even include risks related to the volatility of gas prices.



Business-as-usual capital expenditures with moderate (double delivery charges) and high (triple) customer departures

Even if utilities entirely stop spending today, customers continue paying for prior investments well into the future due to the **"undertow effect" of prior spending.**

Without regulators intervening to manage this transition, low-income residents risk being among the last remaining ratepayers to carry the burden of increasing gas delivery charges.

A managed transition is possible, but requires immediate, coordinated action to achieve

A **managed transition** overseen by regulators can mitigate these inequitable and unaffordable outcomes, ideally through neighborhood-scale decarbonization, a strategy that transitions whole street segments or communities off the gas system and onto clean energy infrastructure.

Hallmarks of a managed transition include: coordinating gas and electric infrastructure planning; downsizing the gas system and redirecting gas system investments toward clean energy alternatives; implementing safeguards for affected communities and workers; and passing policies that protect customers from the worst effects of utility overspending.

Regulators can mitigate the worst outcomes by immediately controlling and reducing utility capital expenditures. Significantly limiting spending starting today **would shrink stranded asset risk by 67% by 2050.** In addition, frameworks could be developed to enable the redirection of avoided gas system costs toward neighborhood-scale clean energy infrastructure like heat pumps and thermal energy networks. Our analysis shows that **for every mile of gas line replacement avoided, each customer saves up to $28,145 in direct costs** and three times that amount when the return to investors is factored in over the pipe's 60 year lifespan. Neighborhood-scale solutions can lower energy bills and pollution, while also limiting the impact on ratepayers who remain on the gas network.

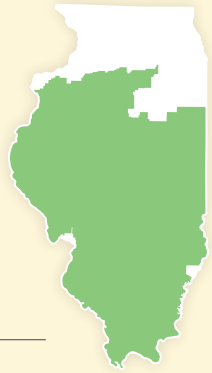
An effectively managed gas transition must include clear decarbonization objectives to accelerate change in the building sector along with three categories of gas system management:

1. **Halting the expansion of the gas system** *(ICC, Capital Development Board, Municipalities)***:** Stop gas line extension allowances and adopt the new Stretch Energy Code to limit the expansion of the gas system in new buildings.
2. **Limiting gas pipeline reinvestment** *(ICC, Utilities)***:** Restrict and reduce capital spending on the replacement of existing gas infrastructure and require non-gas pipeline alternatives, caps on rate base increases, and advanced leak detection and repair.
3. **Strategically downsizing the gas network** *(ICC, Utilities, IEPA)***:** Develop a coordinated plan for pruning branches of the gas system and transitioning to neighborhood-scale solutions such as targeted electrification and thermal energy networks.

Illinois Gas Utility

Ameren Illinois Co.

Parent company: Ameren Corporation



Ameren Illinois is a combination gas and electric utility whose service territory is located in central and southern Illinois. It provides gas service to 816,000 gas and 1.2 million electric customers across 1,200 communities and 43,700 square miles. The territory is divided into 4 regions (north, south, east, and west). The company was formed in 2010 as the result of the merger of 3 legacy utilities.

Gas infrastructure

17,456
miles of distribution mains

813,274
service lines

1,224
miles of transmission mains

12
underground storage fields

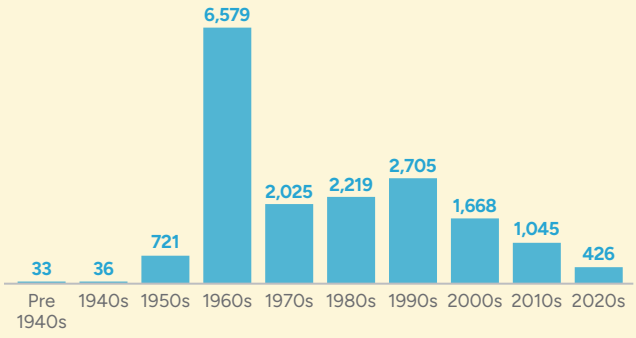
47
customers per mile of distribution main

$647,596
spend per mile of distribution main installed

Replacement priorities

- Mechanically coupled steel mains, replace @ 60-80 miles for 10 years
- Mechanically coupled steel services
- High-pressure transmission pipes (67 miles)
- Unprotected steel services
- Pressure control stations
- Pre-1970 pipeline (~6,500 miles)

Miles of distribution mains by decade installed



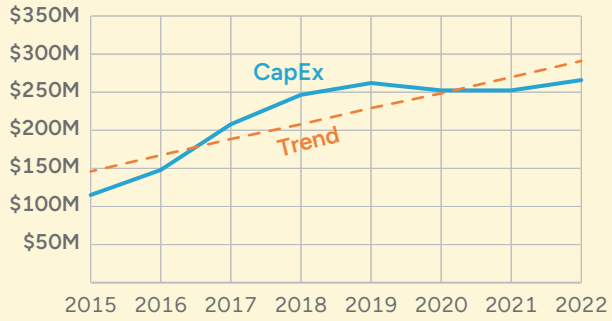
System growth

10%
average year-over-year trend growth in CapEx

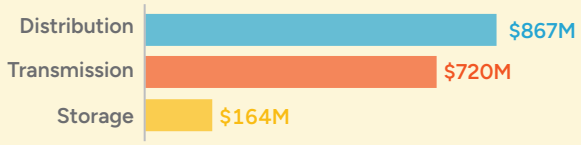
81%
increase in value of gas plant from 2014 to 2022

$265 million
gas system CapEx in 2022

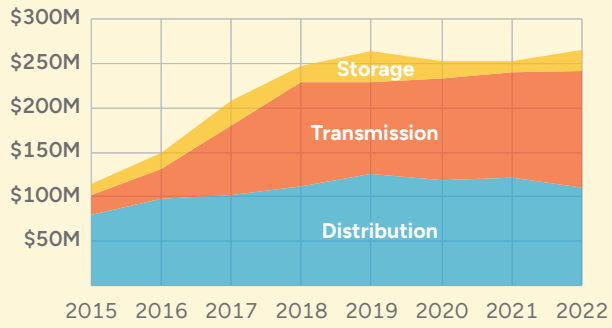
Annual CapEx, 2015-2022



Total spending by category from 2015 to 2022



Spending by category, 2015-2022



Customers

3%
total growth, 2000-2022

0.12%
average annual growth, 2000-2022

813,757
total customers, 2022

744,995
residential customers, 2022

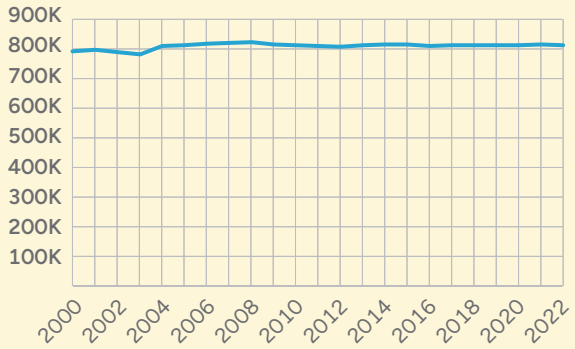
$630
estimated average annual delivery cost per customer in 2024

$7.3 million
total bill assistance received by Ameren from public programs and rate riders in 2021

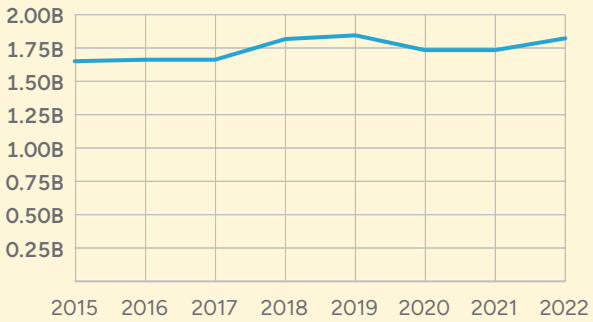
11%
residential customers charged late fees in January 2024

$23.2 million
total residential arrearages at end of January 2024

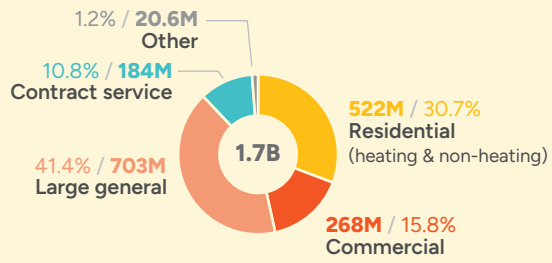
Total customers vs year



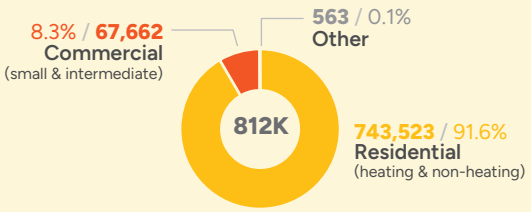
Total therms sold



Therms by customer type, 2024 test year



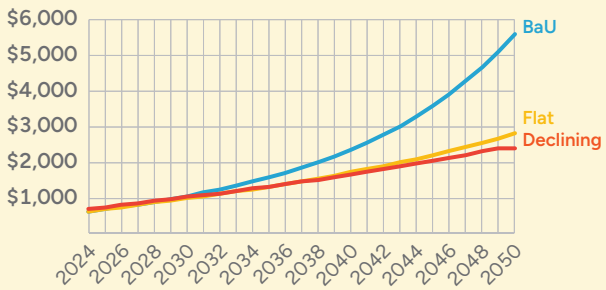
Customers by type, 2024 test year



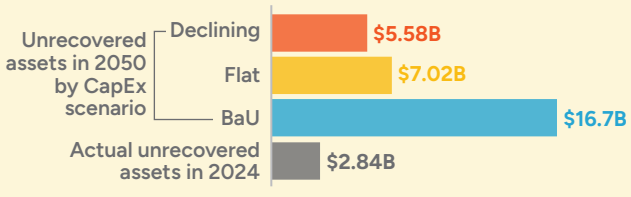
Cost projections & unrecovered gas assets

50% by 2030
revenue increase needed if business-as-usual (BaU) spending continues

Projected average annual delivery cost per customer by utility CapEx scenario



Projected unrecovered gas assets by utility CapEx scenario

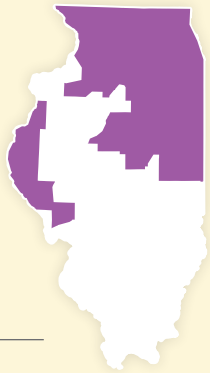


Illinois Gas Utility

Nicor Gas Company

Parent company: Southern Company

Nicor is Illinois' largest gas utility. It serves about 2.3 million customers in 650 communities across 17,000 miles in northern Illinois, outside Chicago, and along the Mississippi River.



Gas infrastructure

33,616
miles of distribution mains

2,054,463
service lines

1,164
miles of transmission mains

8
underground storage fields

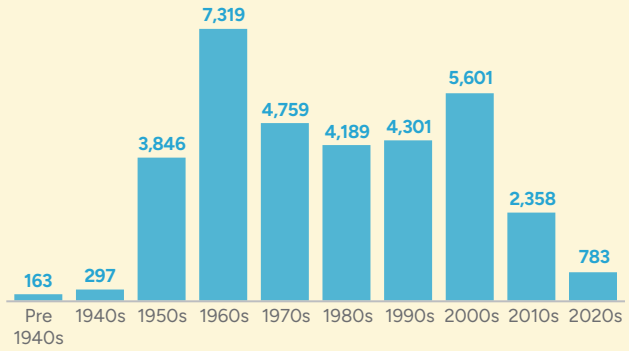
67
customers per mile of distribution main

$1,885,687
spend per mile of distribution main installed

Investment priorities

- Over 4,300 miles of pre-1960 non-bare steel mains
- 1,624 miles of pre-1960 mechanically-coupled steel mains
- 38,277 pre-1985 vintage plastic services
- 61 miles of transmission lines

Miles of distribution mains by decade installed



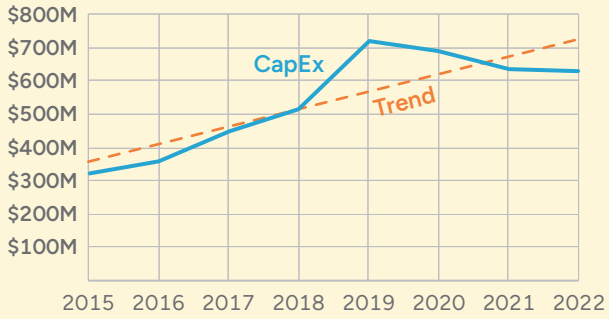
System growth

11%
average year-over-year trend growth in CapEx

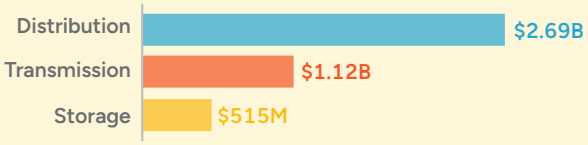
90%
increase in value of gas plant from 2014 to 2022

$629 million
gas system CapEx in 2022

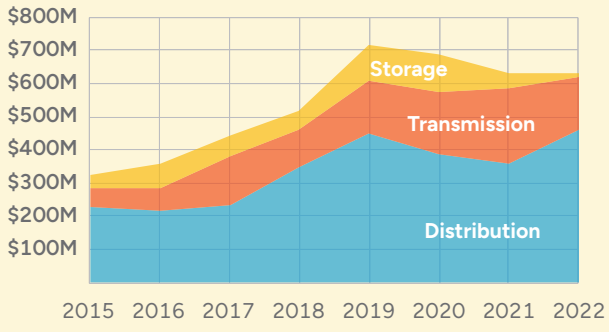
Annual CapEx, 2015-2022



Total spending by category from 2015 to 2022



Spending by category, 2015-2022



For sources and citations see page 99

Customers

15%
total growth, 2000-2022

0.64%
average annual growth, 2000-2022

2,259,019
total customers, 2022

1,898,579
residential customers, 2022

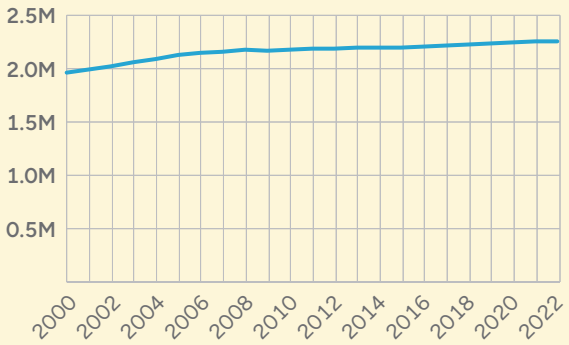
$453
estimated average annual delivery cost per customer in 2024

$60.1 million
total bill assistance received by Nicor from public programs and rate riders in 2021

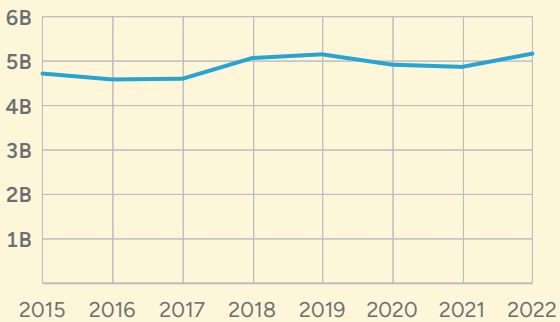
20%
residential customers charged late fees in January 2024

$64.6 million
total residential arrearages at end of January 2024

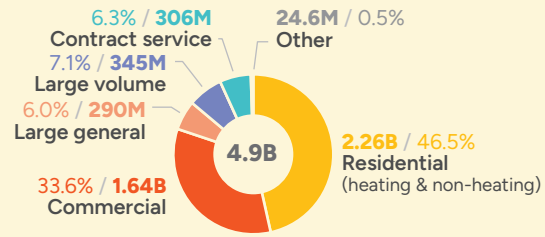
Total customers vs year



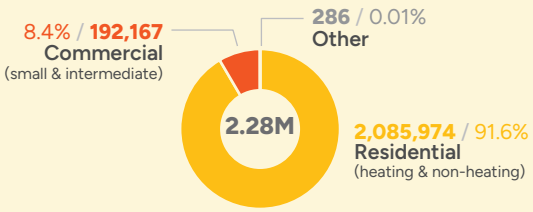
Total therms sold



Therms by customer type, 2024 test year



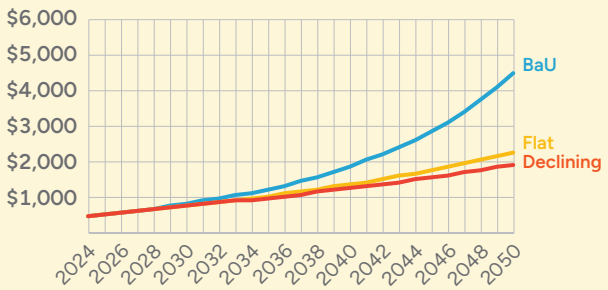
Customers by type, 2024 test year



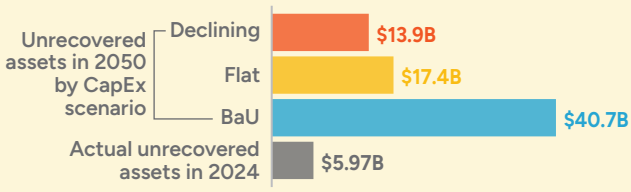
Cost projections & unrecovered gas assets

61% by 2030
revenue increase needed if business-as-usual (BaU) spending continues

Projected average annual delivery cost per customer by utility CapEx scenario



Projected unrecovered gas assets by utility CapEx scenario

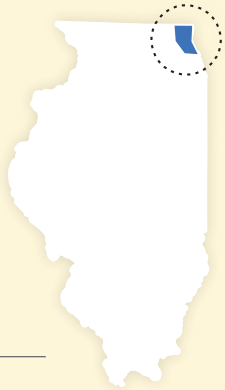


Illinois Gas Utility

North Shore Gas

Parent company: WEC Energy Group

North Shore is the smallest of the four companies and serves about 160,000 customers in the northern suburbs of Chicago. This territory covers about 275 square miles and serves 54 communities.



Gas infrastructure

2,360
miles of distribution mains

143,473
service lines

68
miles of transmission mains

0
underground storage fields

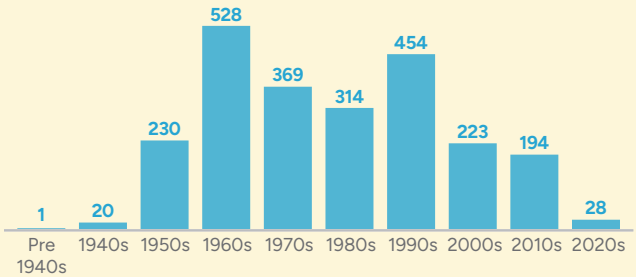
69
customers per mile of distribution main

N/A
spend per mile of distribution main installed

Replacement priorities

- Reconfirm 17.5 miles of transmission mains by 2035 (some may be replaced)
- Replace vaporizers, piping, and other facilities at propane peaker plant
- Upgrade 2 of 6 stations feeding distribution system
- Install advanced metering throughout territory
- No announced plan for 778 miles of pre-1970 distribution mains

Miles of distribution mains by decade installed



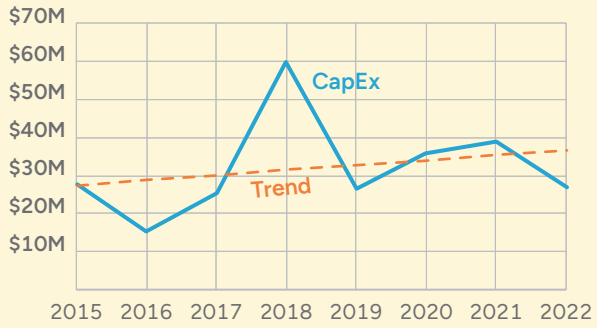
System growth

4%
average year-over-year trend growth in CapEx

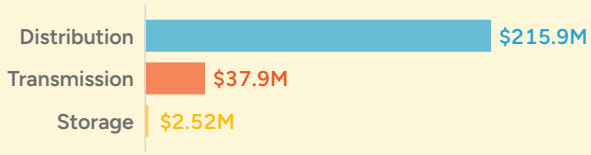
55%
increase in value of gas plant from 2014 to 2022

$27 million
gas system CapEx in 2022

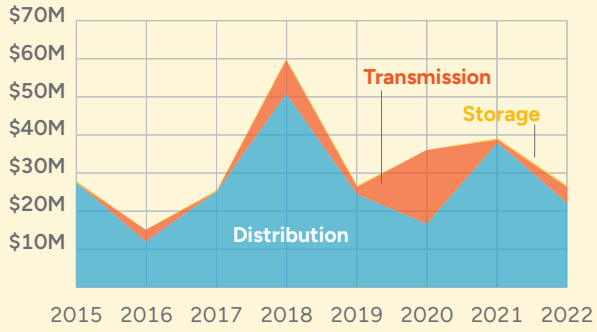
Annual CapEx, 2015-2022



Total spending by category from 2015 to 2022



Spending by category, 2015-2022



For sources and citations see page 99

Customers

10%
total growth, 2000-2022

0.44%
average annual growth, 2000-2022

163,984
total customers, 2022

140,710
residential customers, 2022

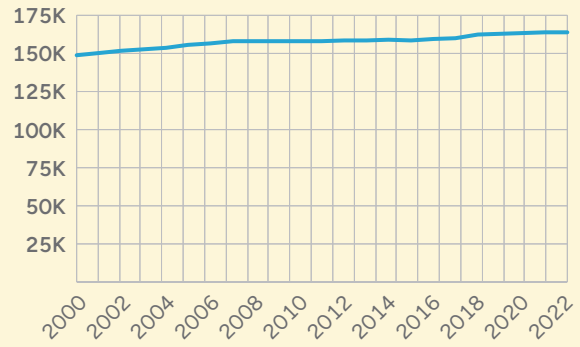
$595
estimated average annual delivery cost per customer in 2024

$5.9 million
total bill assistance received by North Shore from public programs and rate riders in 2021

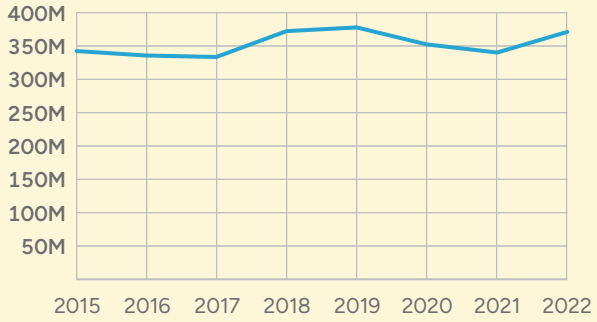
17%
residential customers charged late fees in January 2024

$2.3 million
total residential arrearages at end of January 2024

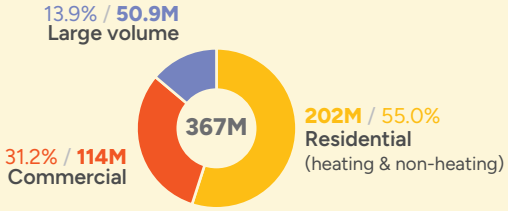
Total customers vs year



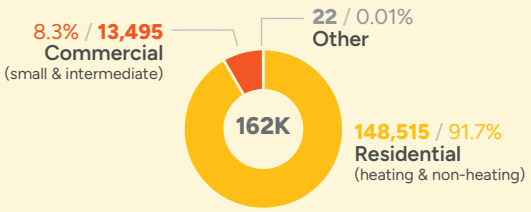
Total therms sold



Therms by customer type, 2024 test year



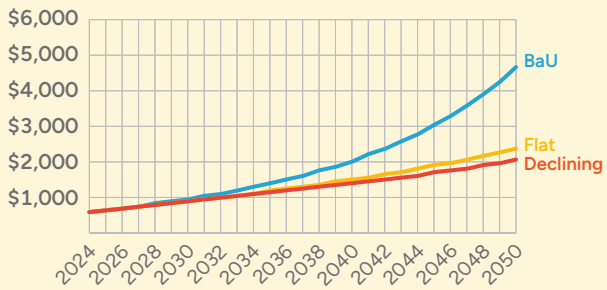
Customers by type, 2024 test year



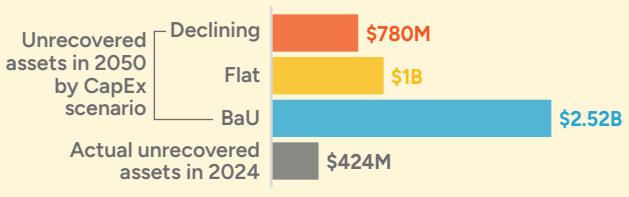
Cost projections & unrecovered gas assets

44% by 2030
revenue increase needed if business-as-usual (BaU) spending continues

Projected average annual delivery cost per customer by utility CapEx scenario



Projected unrecovered gas assets by utility CapEx scenario

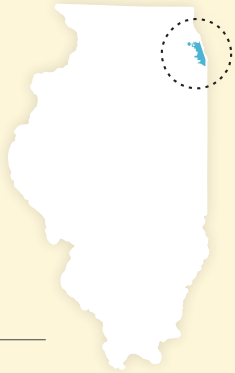


Illinois Gas Utility

Peoples Gas Light & Coke Co.

Parent company: WEC Energy Group

Peoples Gas serves the city of Chicago (a 237 square mile area) and has 873,000 customers. Peoples was chartered in 1855 and was the second utility to begin serving gas in Chicago, following Chicago Gas Light & Coke Company in 1849.



Gas infrastructure

4,678
miles of distribution mains

499,354
service lines

346
miles of transmission mains

1
underground storage field

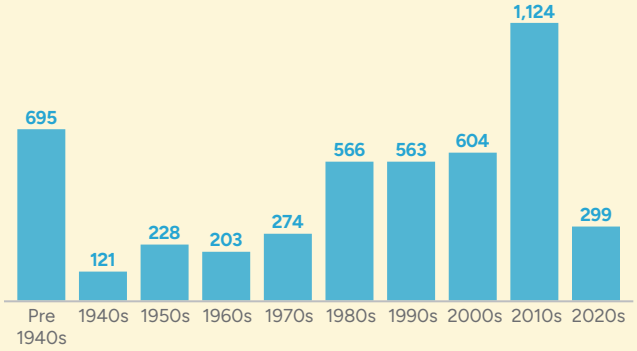
188
customers per mile of distribution main

$1.2M - $2.8M
spend per mile of distribution main installed

Replacement priorities

- Replace an additional 1,500 mains and related services and meters by 2040
- Modernize South Shop facility for providing operations, maintenance, and construction
- Install advanced metering throughout territory
- Major upgrade of customer service technology
- Modernize data and voice communications infrastructure

Miles of distribution mains by decade installed



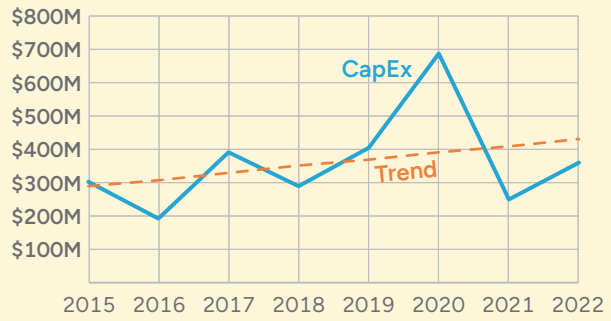
System growth

6%
average year-over-year trend growth in CapEx

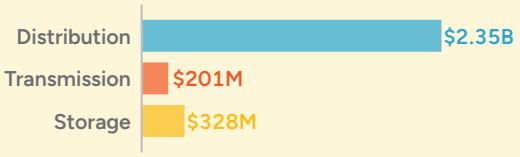
80%
increase in value of gas plant from 2014 to 2022

$363 million
gas system CapEx in 2022

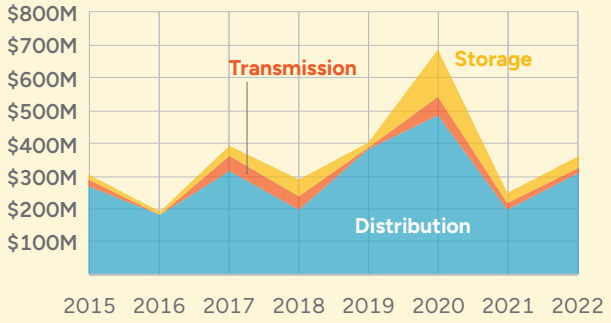
Annual CapEx, 2015-2022



Total spending by category from 2015 to 2022



Spending by category, 2015-2022



For sources and citations see page 99

Customers

10%
total growth, 2000-2022

0.43%
average annual growth, 2000-2022

880,236
total customers, 2022

765,607
residential customers, 2022

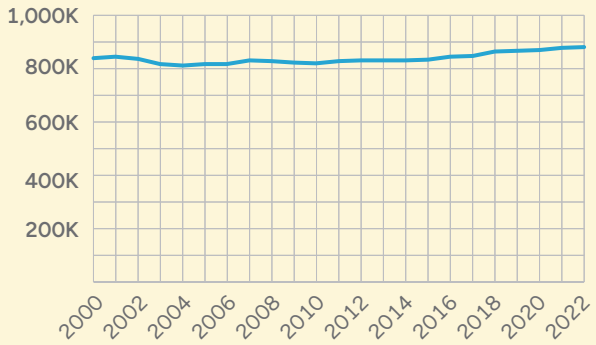
$994
estimated average annual delivery cost per customer in 2024

$76 million
total bill assistance received by Peoples from public programs and rate riders in 2021

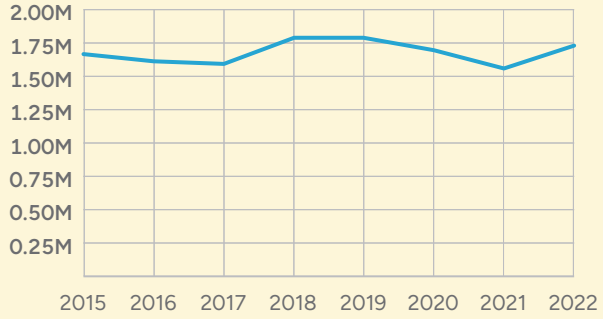
29%
residential customers charged late fees in January 2024

$83.7 million
total residential arrearages at end of January 2024

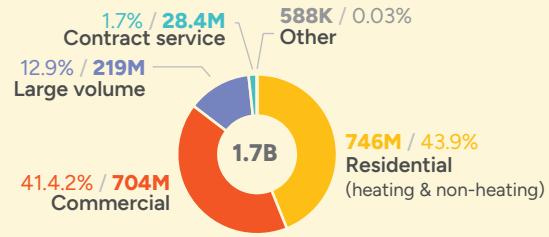
Total customers vs year



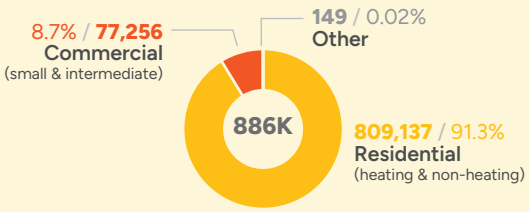
Total therms sold



Therms by customer type, 2024 test year



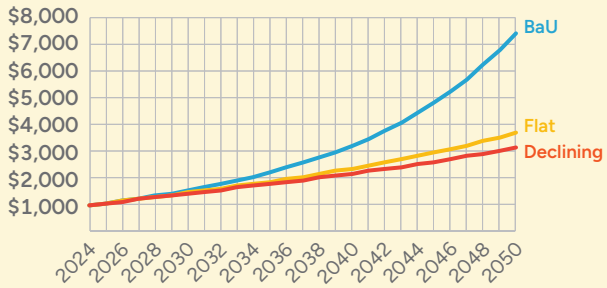
Customers by type, 2024 test year



Cost projections & unrecovered gas assets

37% by 2030
revenue increase needed if business-as-usual (BaU) spending continues

Projected average annual delivery cost per customer by utility CapEx scenario



Projected unrecovered gas assets by utility CapEx scenario