Natural Gas Industry Fundamentals and Outlook

October 24, 2024

AGA
American Gas Association

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State of Play

Growing Demand

Industrial reshoring, growing electric power requirements, and new consumers

Lower Prices

Return to historical natural gas pricing trends

Exports poised to climb

New LNG export terminals and infrastructure to serve them

Cost-Effective

Lower commodity prices have translated to lower natural gas consumer bills

What We'll Cover

1. Review of Market Fundamentals
2. Gas Utility Planning and Readiness
3. End-Use Consumer Analysis

Review of Market Fundamentals

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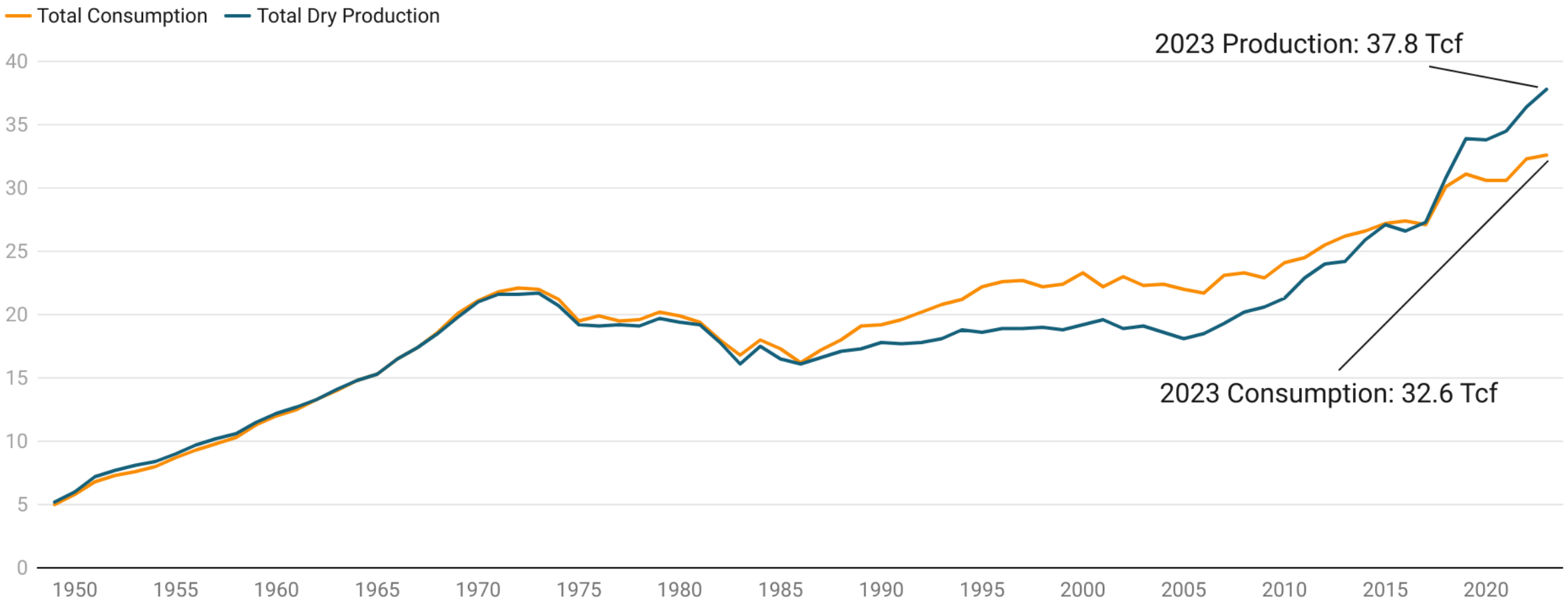
The U.S. natural gas market set new records last year

Annual U.S. Natural Gas Production and Consumption 1949 – 2023

Trillion cubic feet

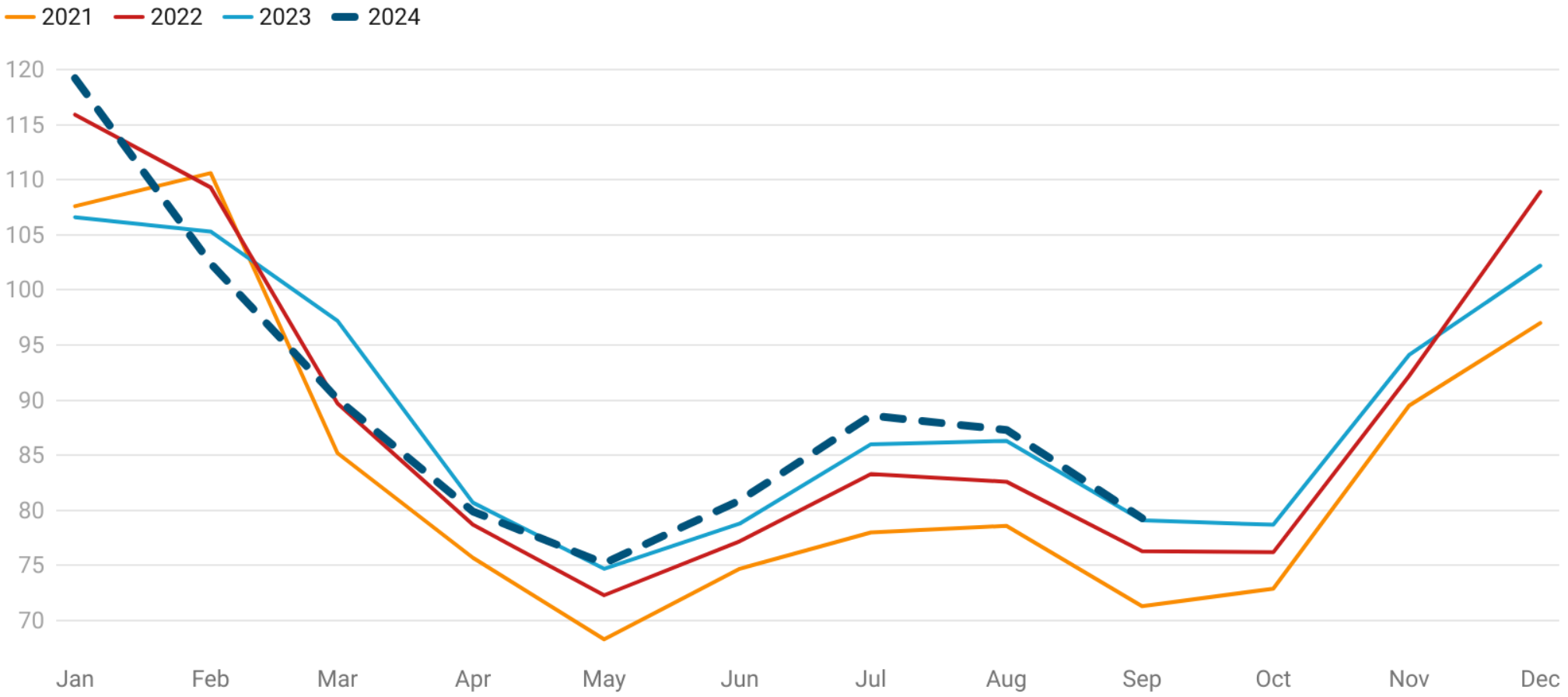


Source: Energy Information Administration • Created with Datawrapper

Natural gas demand is on pace to set another record in 2024

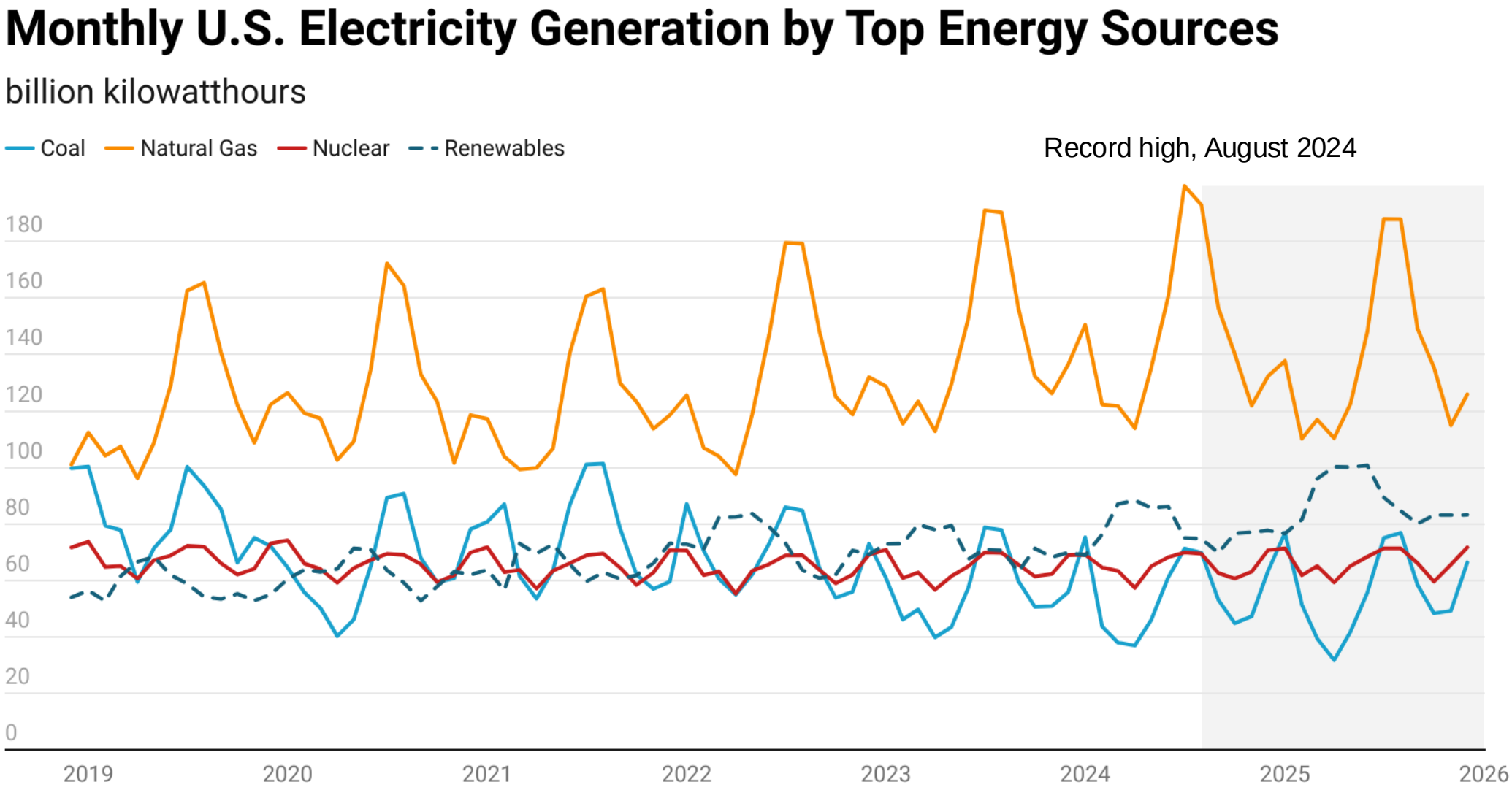
Monthly U.S. Natural Gas Consumption

Billion cubic feet per day

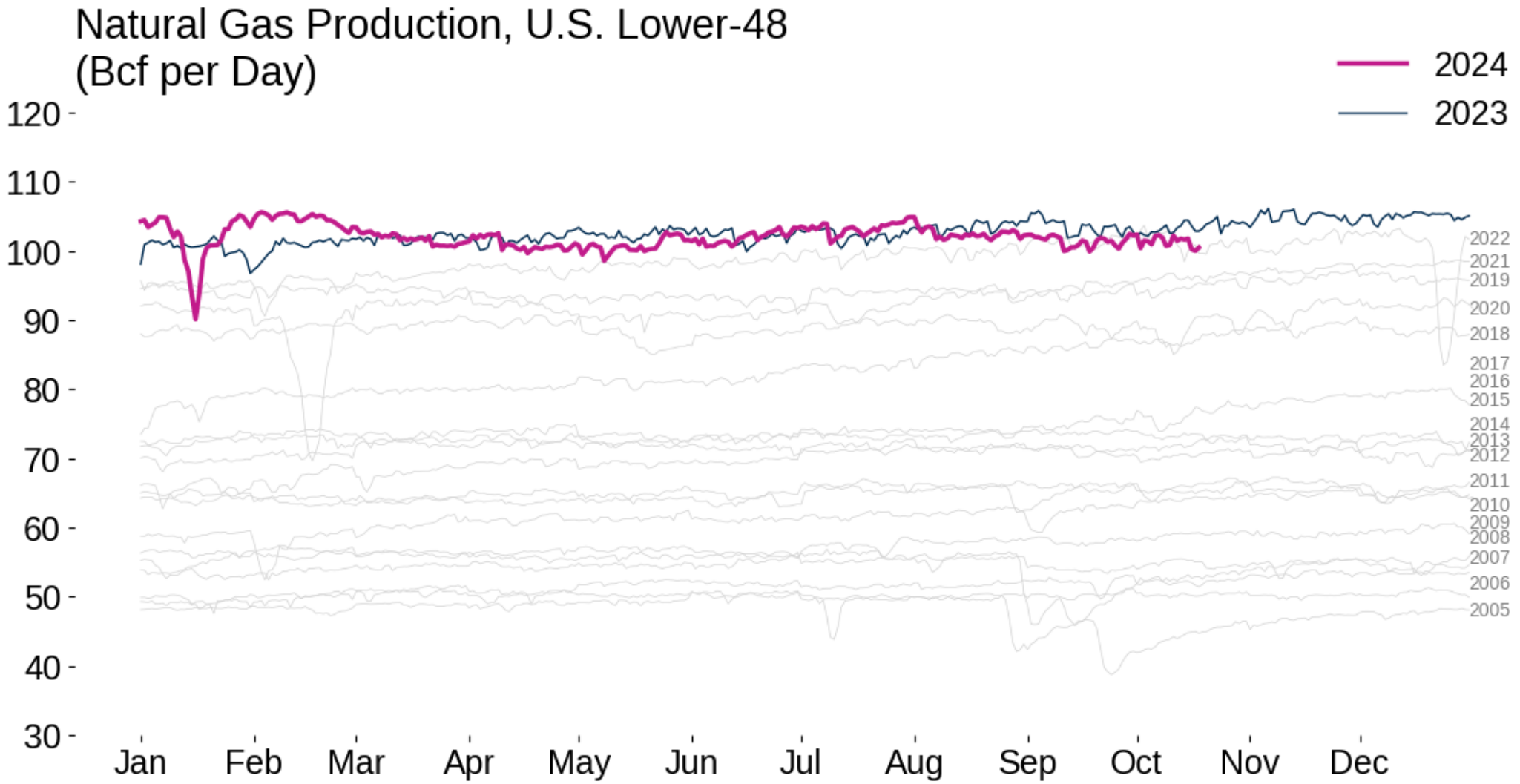


Source: EIA October 2024 Short-Term Energy Outlook • Created with Datawrapper

Natural Gas remains the leading fuel source for electricity generation

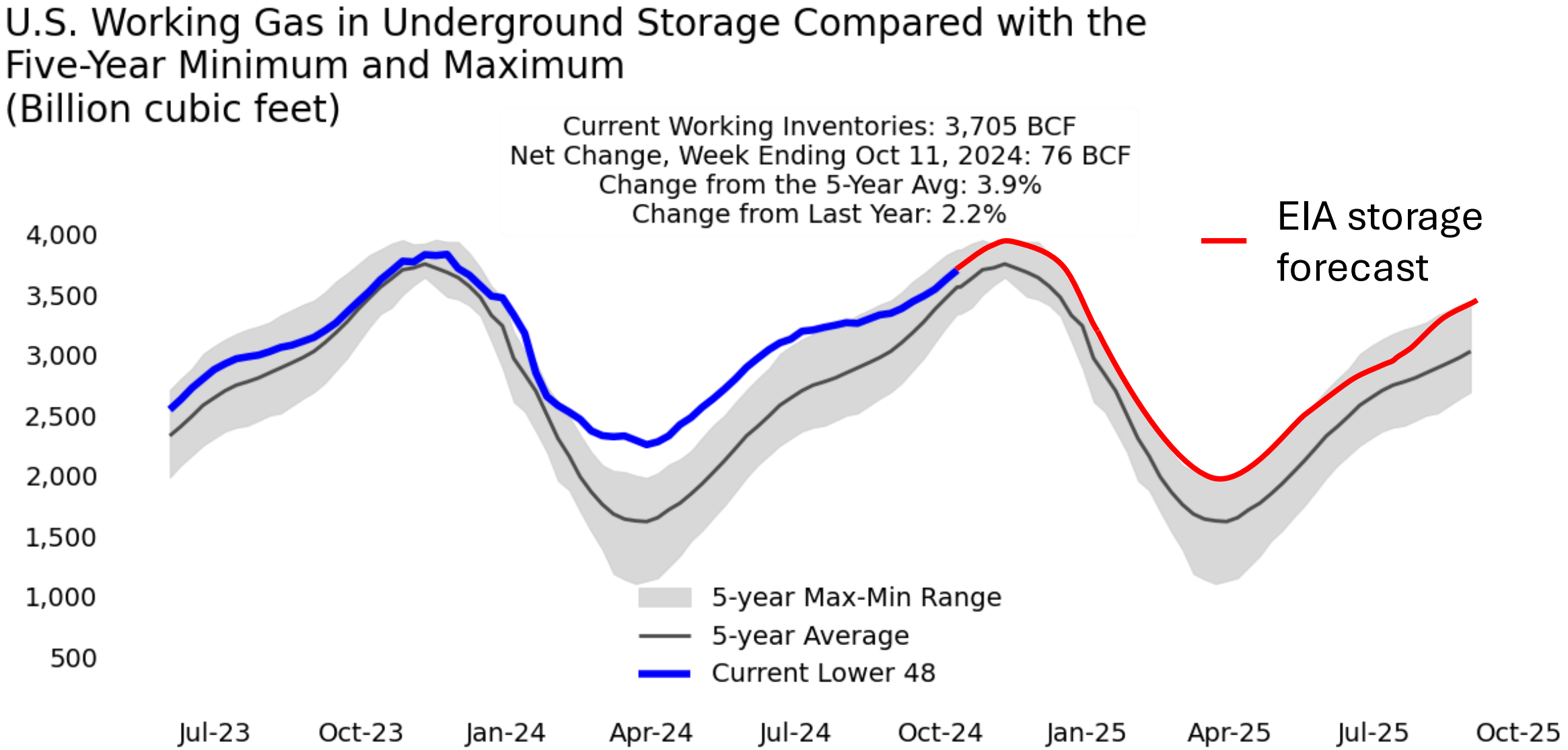


Natural gas production declined beginning in March with operator pullbacks and curtailments in response to low prices



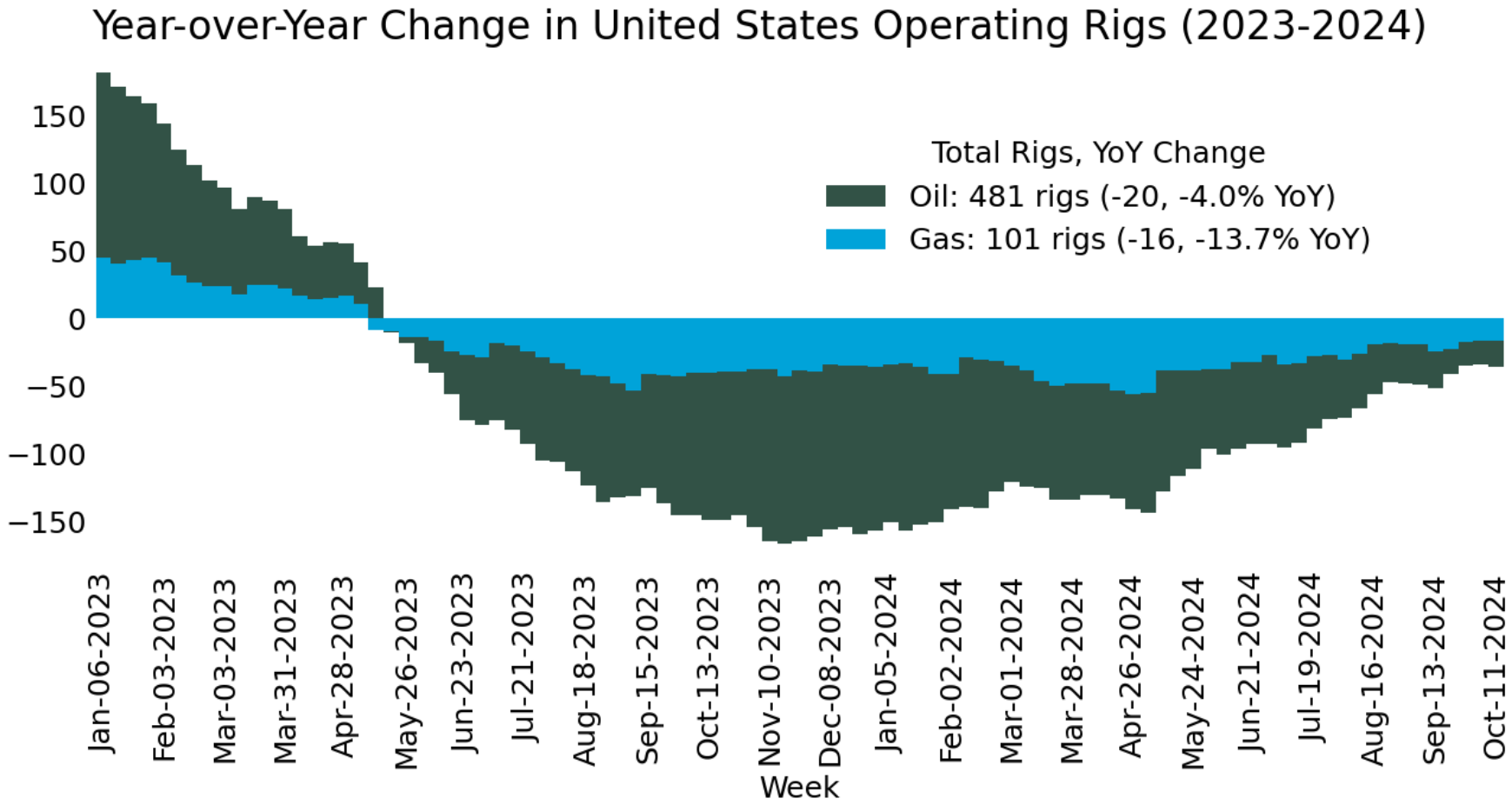
Source: S&P Global Commodity Insights, ©2024 by S&P Global Inc., Chart: American Gas Association, Data as of Oct 17, 2024, Subject to Revision

Storage inventories remain above the five-year average even as storage injections slowed this summer



Source: U.S. Energy Information Administration

U.S. drilling rig count remained steady around 580 rigs since mid-summer, is down year over year



American Gas Association
Source: Energy Information Administration/Baker Hughes

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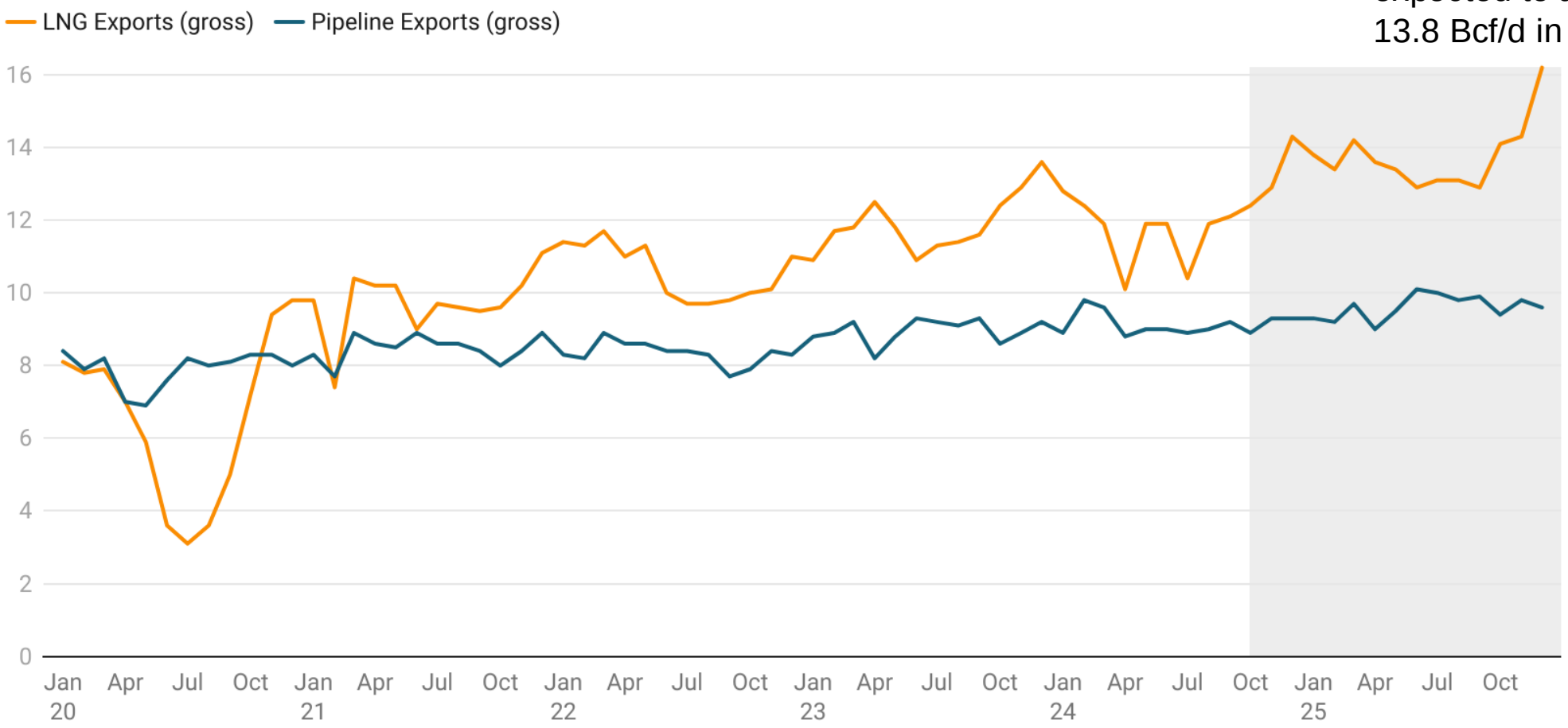
LNG export demand expected to grow as new facilities come online.

Monthly U.S. Gross Natural Gas Exports

Billion cubic feet per day

LNG exports expected to average 13.8 Bcf/d in 2025



Source: EIA October 2024 Short-Term Energy Outlook • Created with Datawrapper

Demand growth is expected to exceed supply in 2024 & 2025

Natural Gas Balances (Bcf per Day)

	2022	2023	Forecast 2024	Forecast 2025
Dry Gas Production	99.6	103.8	103.5	104.6
LNG Net Exports	10.5	11.9	12.0	13.7
Pipeline Net Exports	0.1	0.9	0.9	1.7
Total Consumption	88.5	89.1	90.1	89.1
Dec. Working Gas Inventories (Bcf)	2,925	3,457	3,285	3,230
Net Inventory Change	**-0.8**	**1.5**	**-0.5**	**-0.2**

Short-Term Energy Outlook, Energy Information Administration

October 2024

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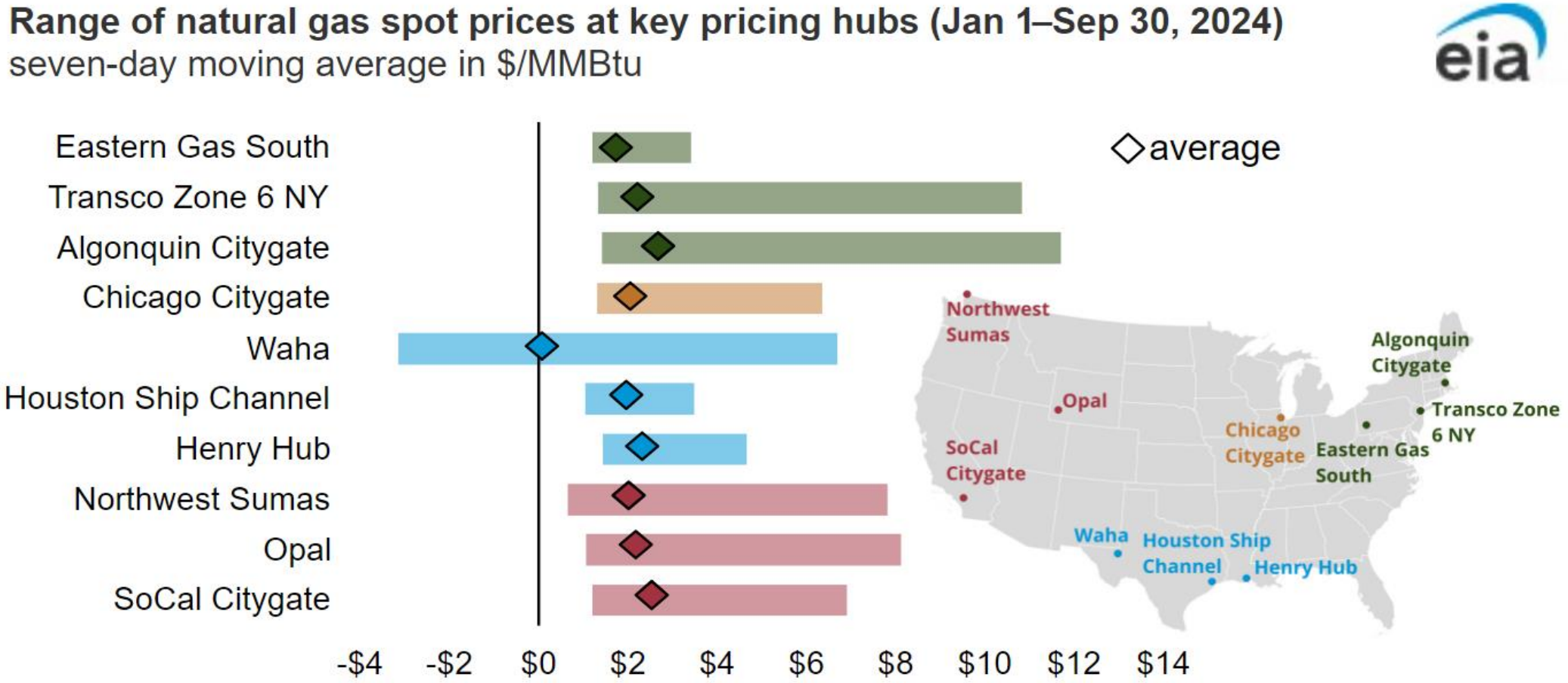
Natural gas market prices vary across the country, with higher and lower pricing often a function of infrastructure constraints



U.S. Energy Information Administration

Note: $/MMBtu=dollars per million British thermal units

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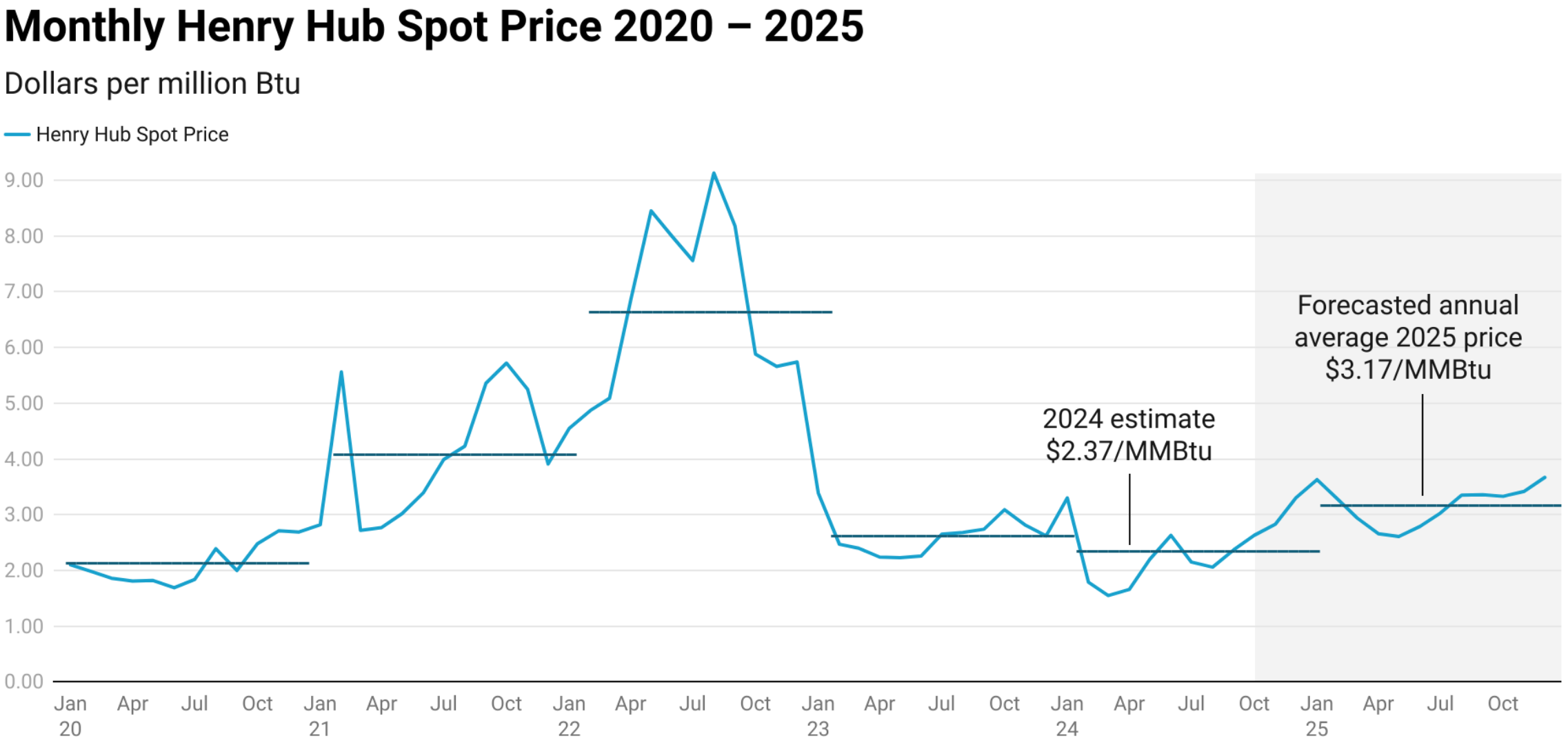
Average Henry Hub spot prices expected to soften in 2024, projected to increase 34% in 2025



Source: EIA October 2024 Short-Term Energy Outlook • Created with Datawrapper

Gas Utility Planning and Readiness

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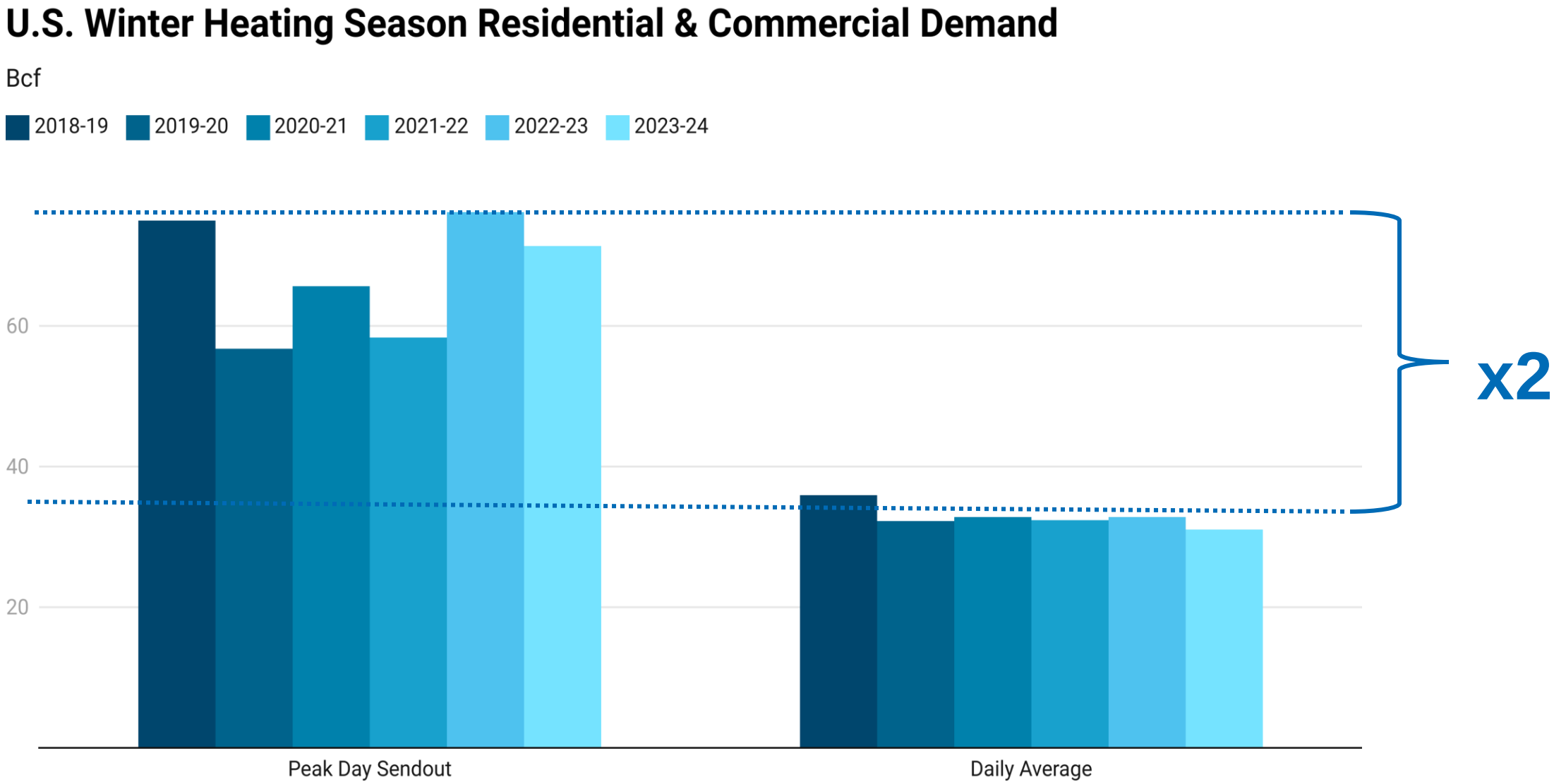
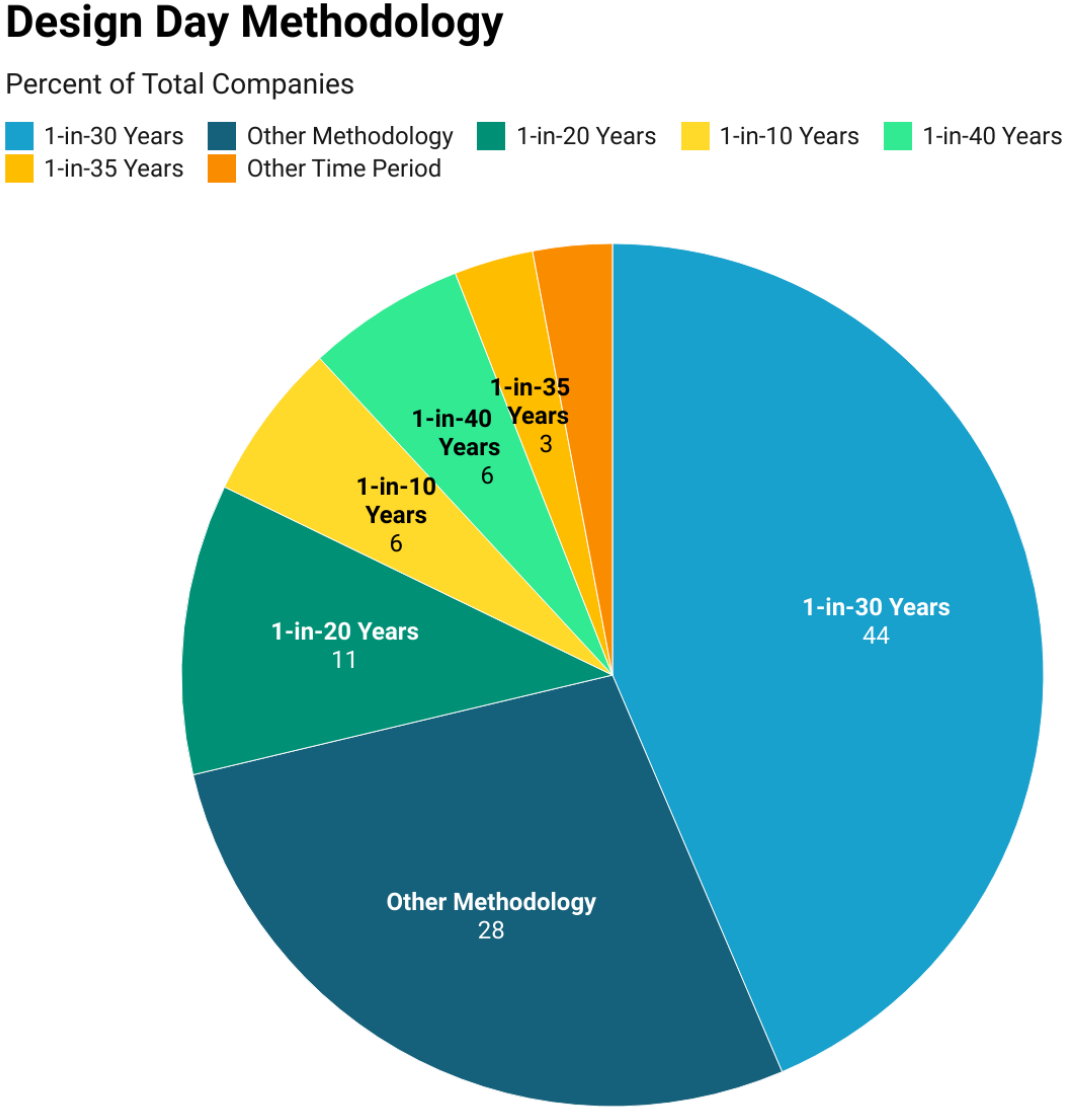
Each year local natural gas utilities develop robust plans to reliably and cost-effectively meet customer needs

- AGA surveyed natural gas utilities to understand supply portfolio practices for 2022-2023 winter heating season
  - Total utility respondents: 37
  - Gross utility WHS peak day volume: 26.5 Bcf
  - Total WHS utility sales customers: 23 million

Natural gas utilities plan and prepare to meet peak energy requirements. Peak natural gas demand is typically **double** the seasonal average



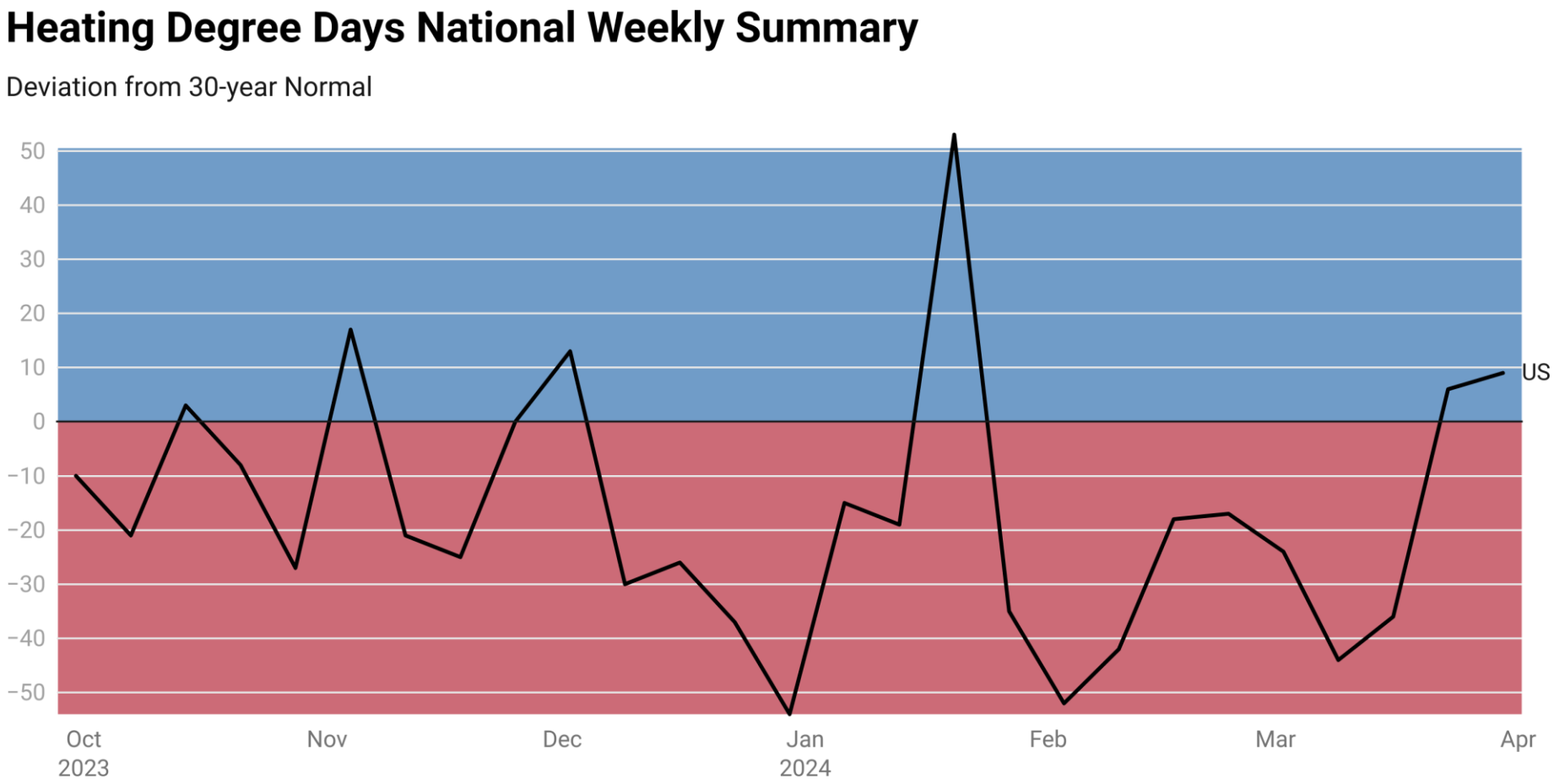
Gas utilities apply specific methods for determining a design day temperature calculation, which influences the construct of their gas supply portfolio



American Gas Association
AGA Winter Heating Season Performance Survey 2022-23

AGA American Gas Association

‘Milder winter’ may still include extreme cold events



American Gas Association
National Oceanic and Atmospheric Administration/ National Weather Service

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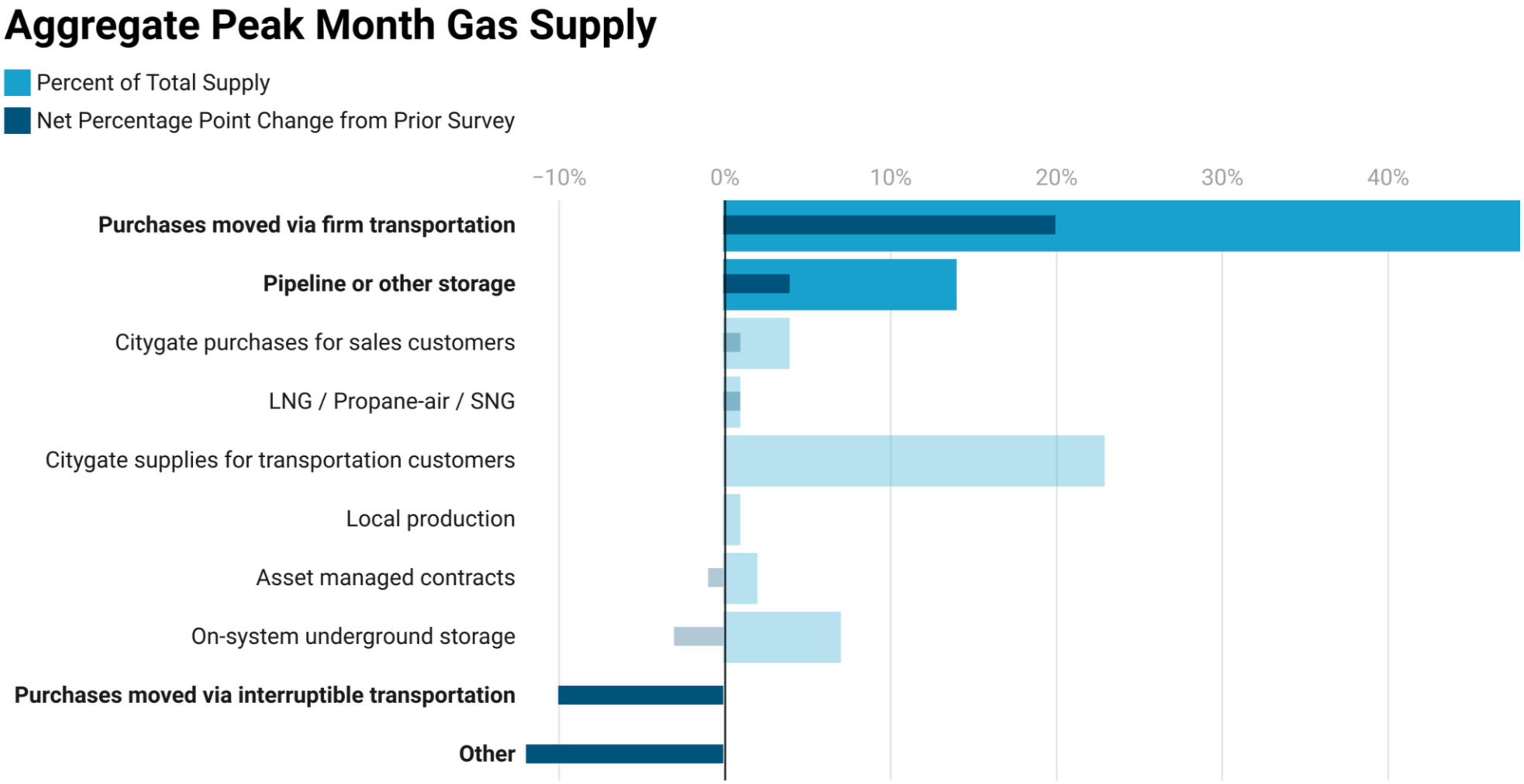
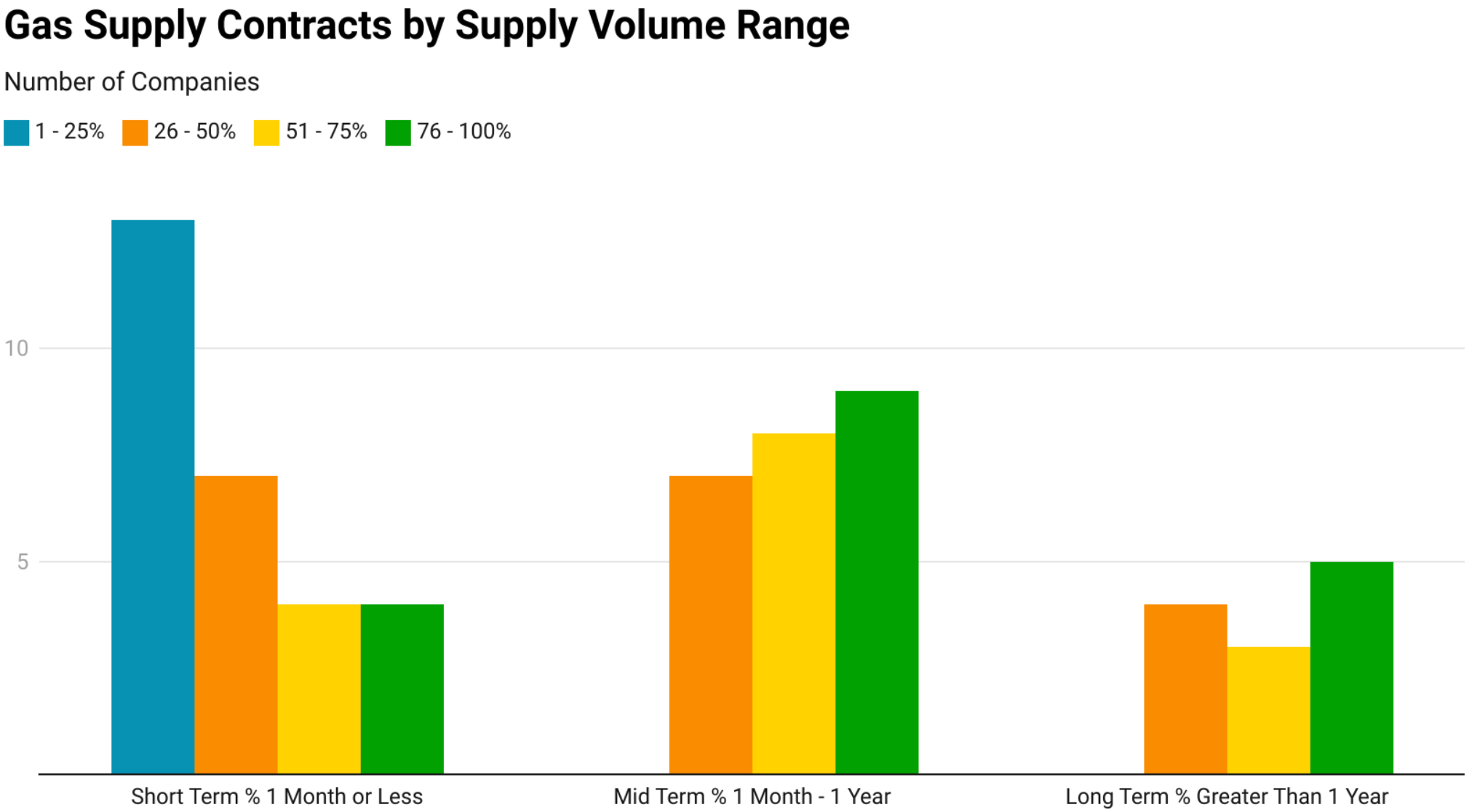
Local gas utilities build and manage a portfolio of supply, storage, and transportation services to meet requirements



AGA Winter Heating Season Performance Survey 2021-22 & 2022-23

Note: 'Other' category includes supply sources such as linepack, transporter imbalances, and off-system displacement

Gas utilities use a range of financial tools including term contracts to secure gas supplies



AGA Winter Heating Season Performance Survey 2022-23

End-Use Consumer Analysis

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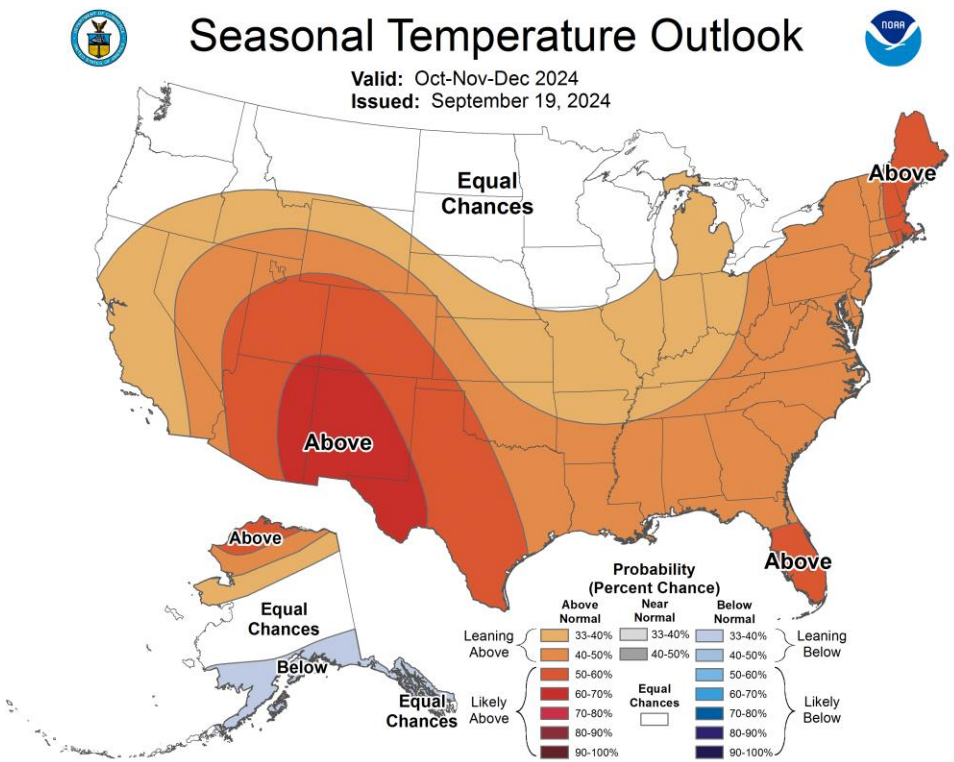
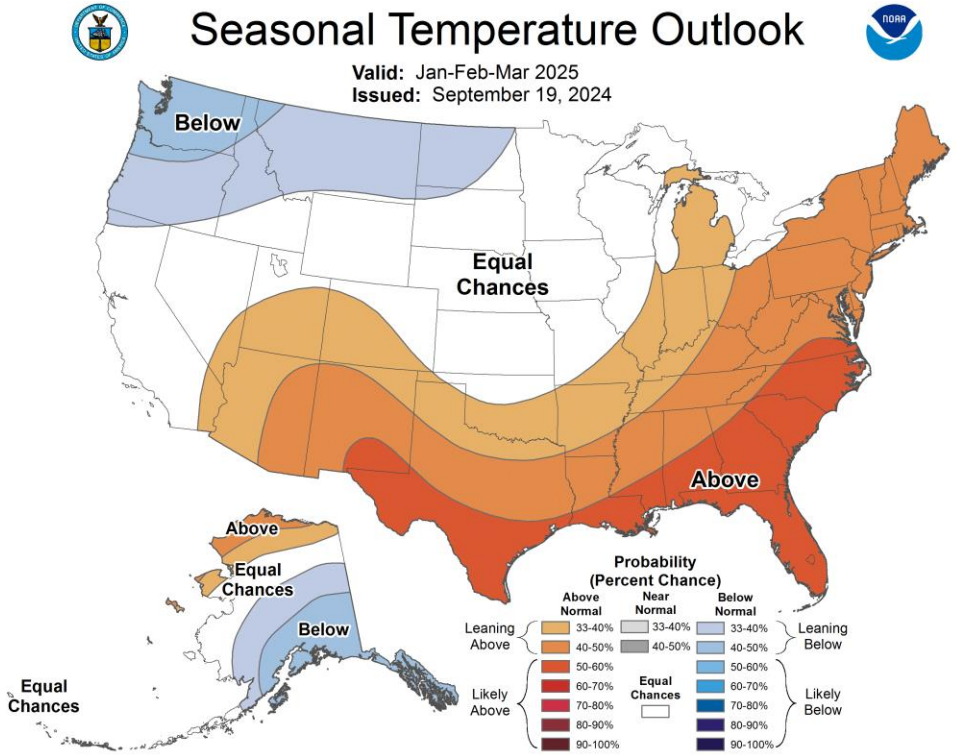
“La Niña” weather pattern will shape the 2024-2025 winter, which may drive higher heating demand

NOAA Forecast
October-December



NOAA Forecast
January-March

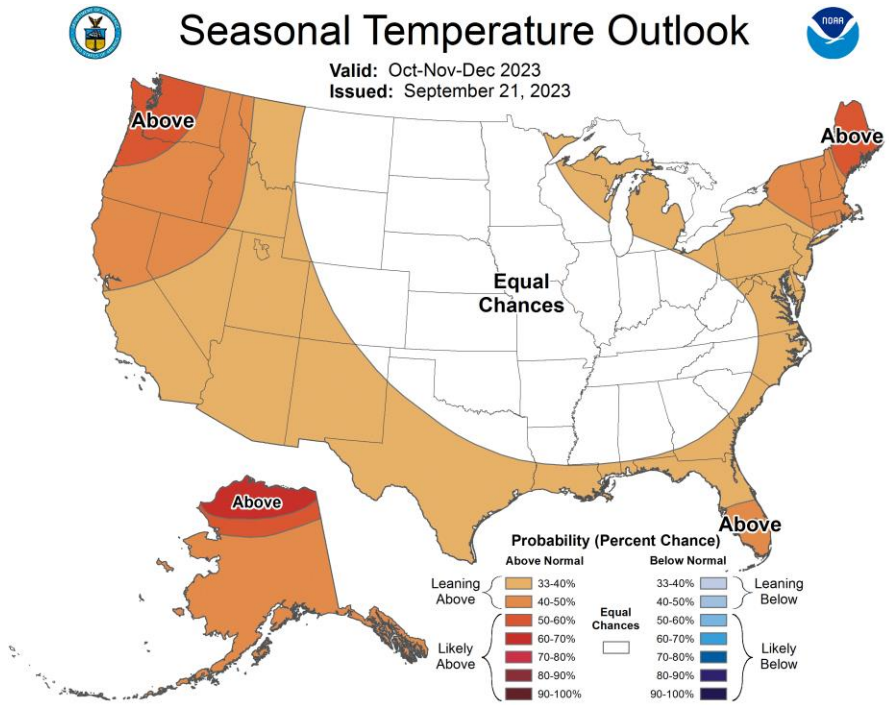


Source: National Weather Service Climate Prediction Center

American Gas Association

This contrasts with last winter's "El Niño" which generally brought lower heating demand

NOAA Forecast
October-December



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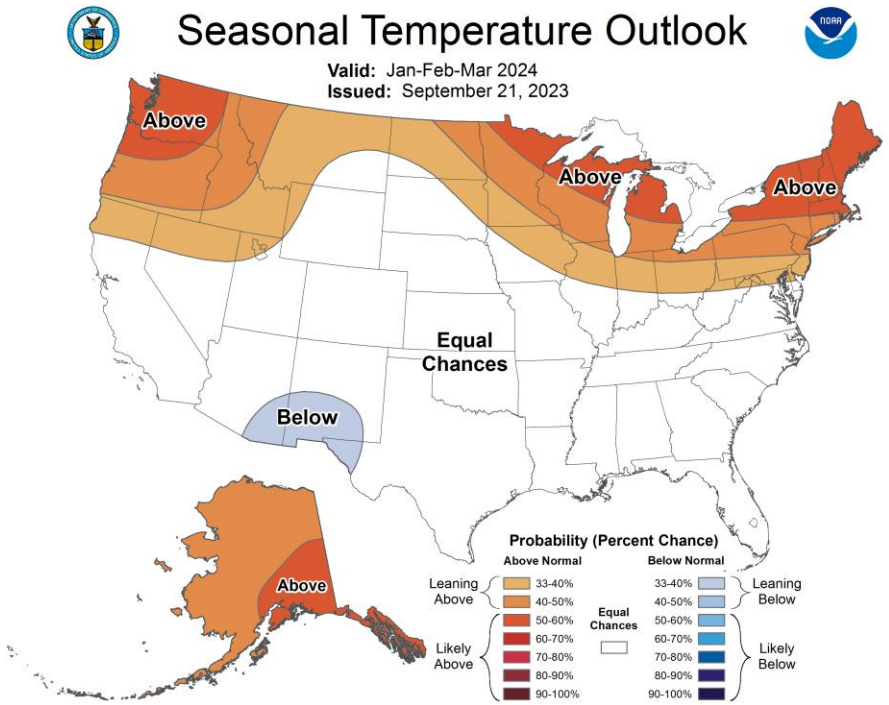

Source: National Weather Service Climate Prediction Center

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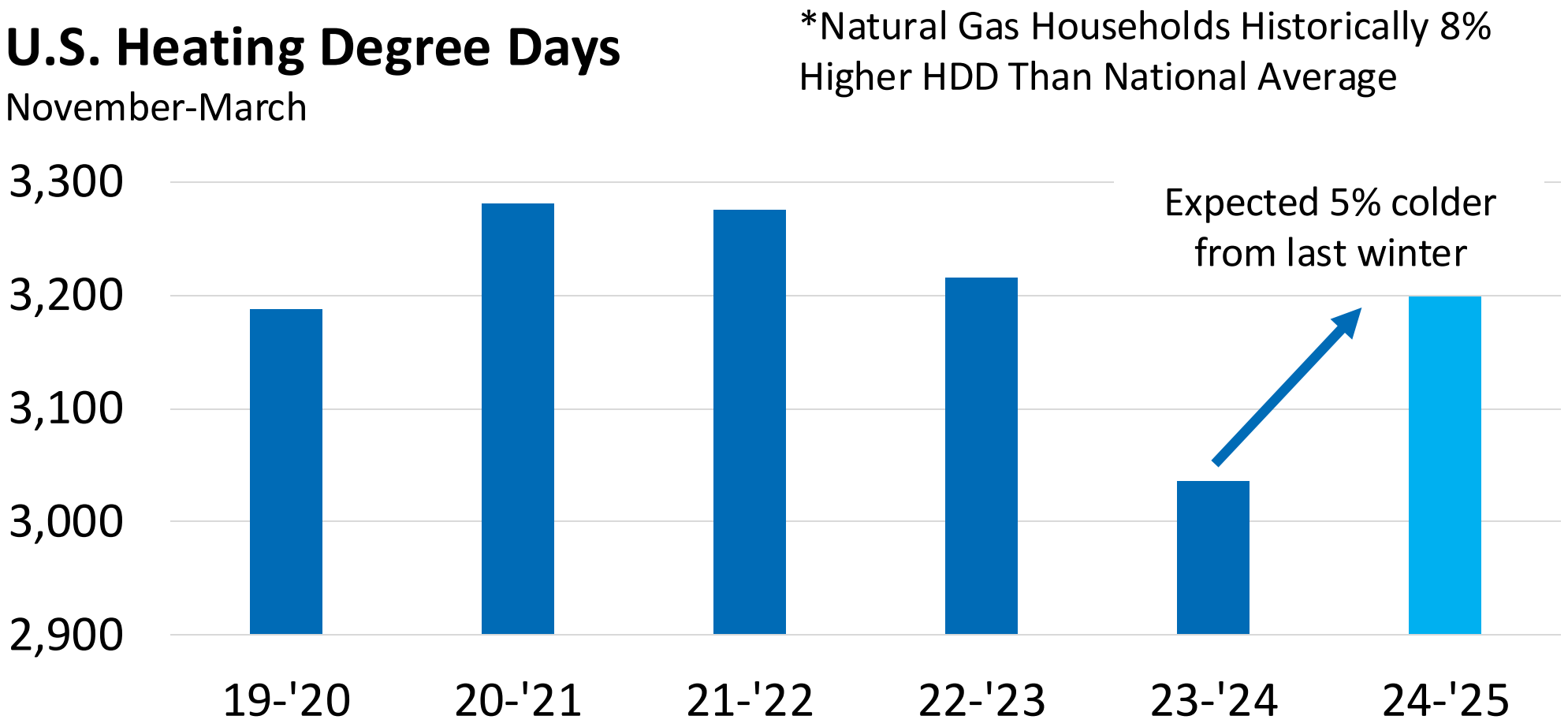
NOAA forecasted 2024-2025 winter temperatures expected to be 5% colder than last year



EIA Winter Fuels Outlook 2024-2025, Oct 8, 2024
**Based on NOAA Utility Weighted HDD Data versus Population Weighted Averages*

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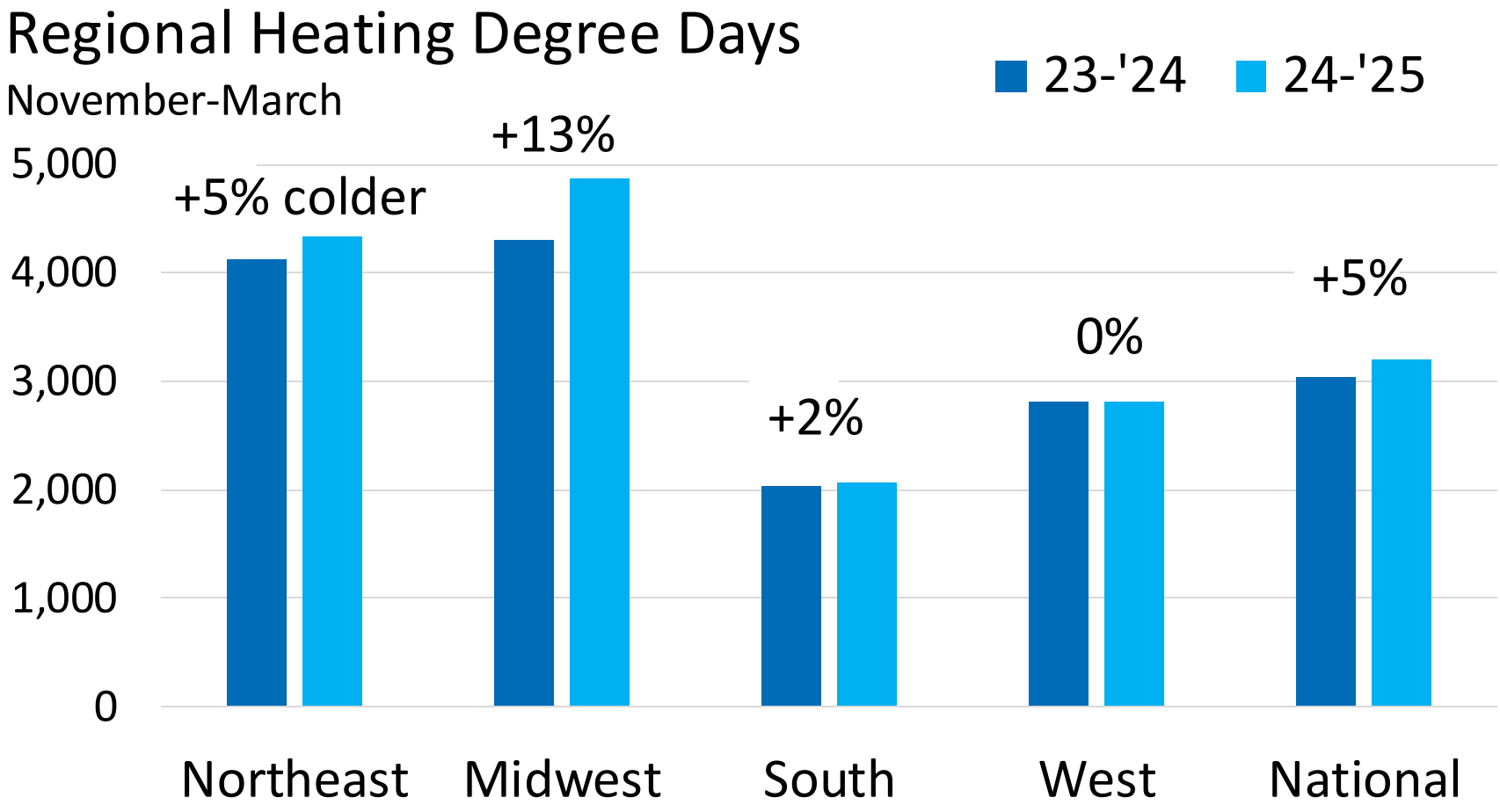
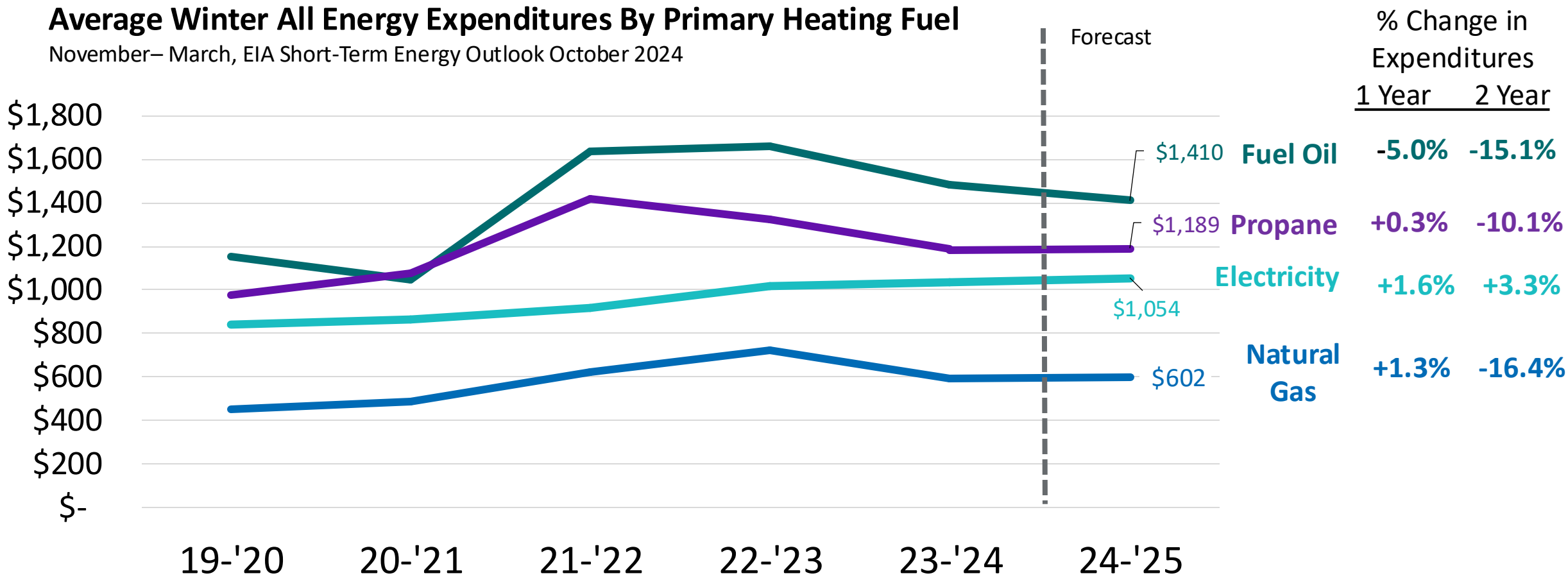
Overall colder winter conditions expected across U.S. lower-48, driving a more space heating in the Northeast and Midwest



EIA Winter Fuels Outlook 2024-2025 Oct 8, 2024

American Gas Association

Winter energy bills are expected to match last year, with natural gas bills forecasted 16% lower than two years ago during similar weather conditions



EIA Winter Fuels Outlook 2024-2025 Oct 8, 2024

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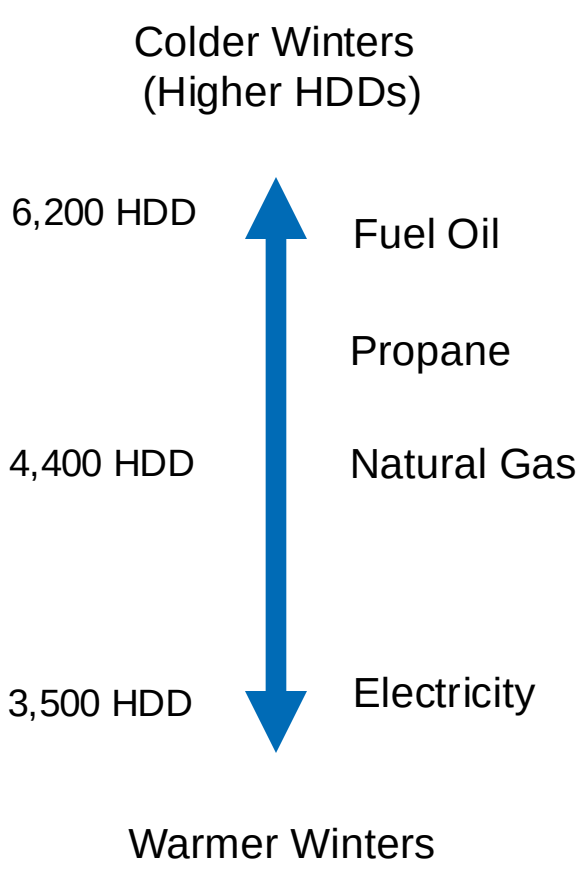
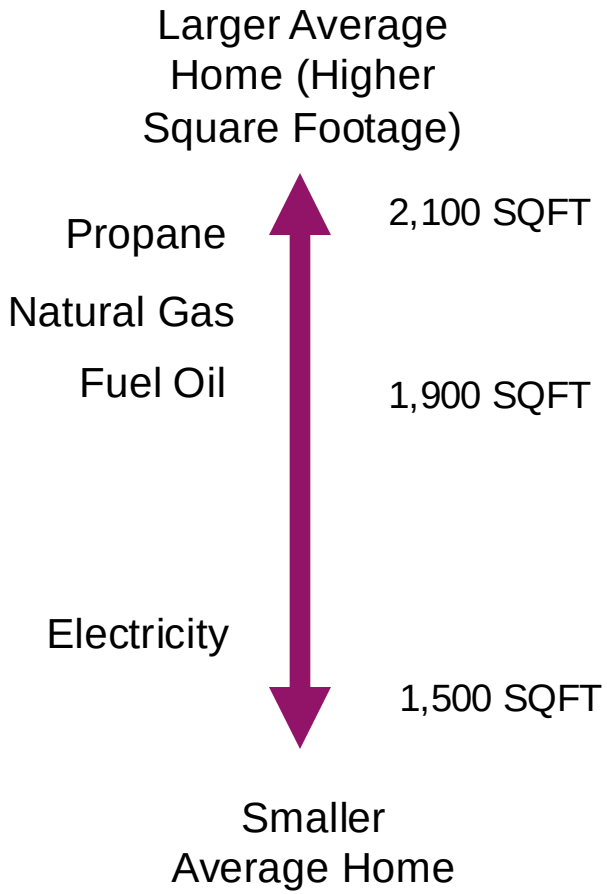
Variations in housing characteristics between heating fuels impact average energy expenditures and heating bills

Households that heat with natural gas experience ***24% colder winters*** and are ***28% larger in square footage*** than homes heating with electricity





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EIA 2020 Residential Energy Consumption Survey, Weighted by Census Divisions

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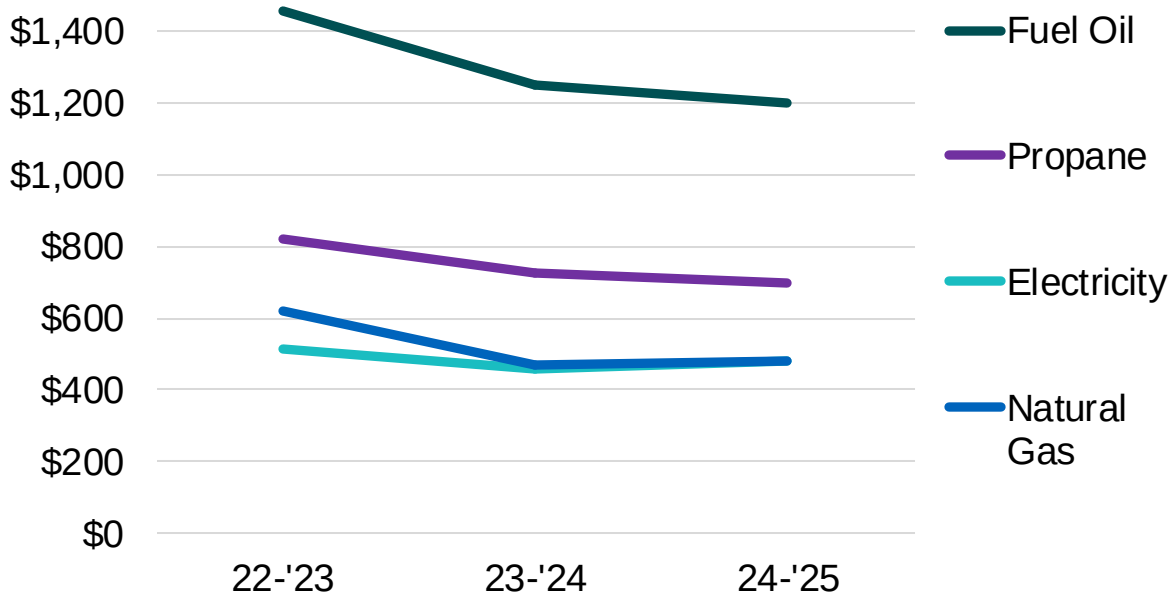
Comparable heating bills to last year, despite a 5% colder winter. Accounting for housing demographics, natural gas households can save 59% to 100%

EIA Average Winter Heating Bills

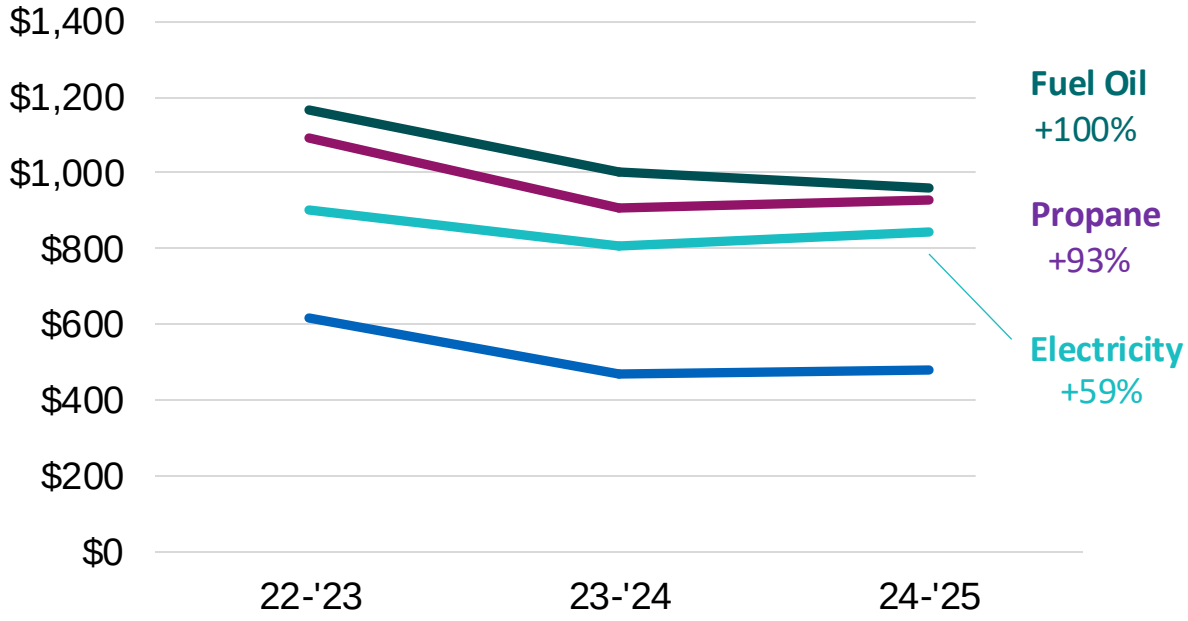
By Primary Heating Fuel (November– March)



Adjusted Winter Heating Bills

Adjusted for Natural Gas Household Characteristics

By Primary Heating Fuel (November– March)



*Adjusted EIA Winter Fuels Outlook to reflect the same average square footage and winter climate for each fuel

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EIA Winter Fuels Outlook 2024-2025 Oct, 8th 2024

EIA 2020 Residential Energy Consumption Survey, Weighted by Census Region

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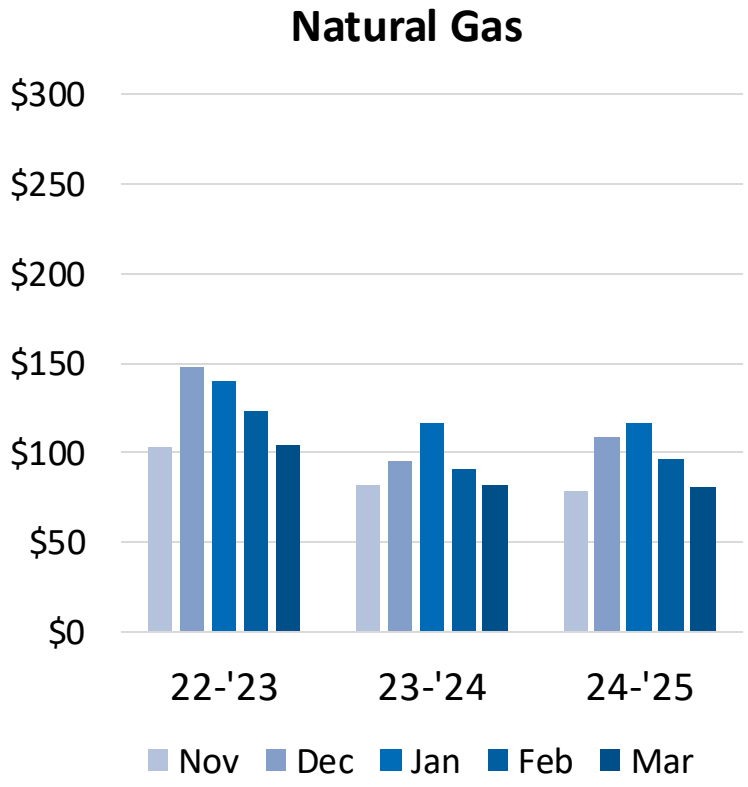
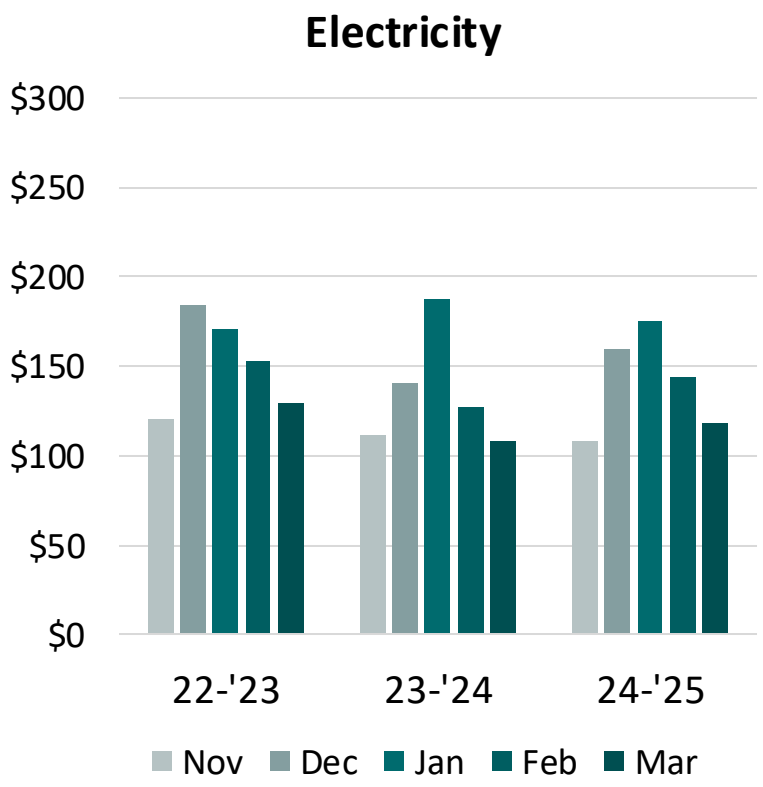
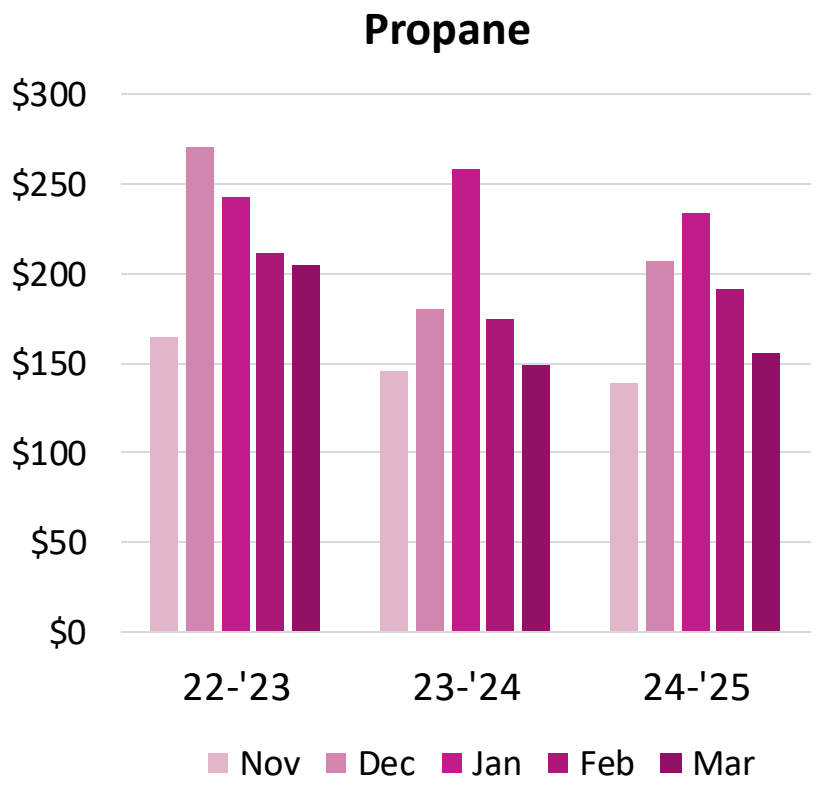
Households heating with natural gas generally show lower monthly bill volatility across the winter heating season







*Adjusted EIA Winter Fuels Outlook to reflect the same average square footage and winter climate

American Gas Association Modeling
EIA Winter Fuels Outlook 2024-2025 Oct 8, 2024
EIA 2020 Residential Energy Consumption Survey

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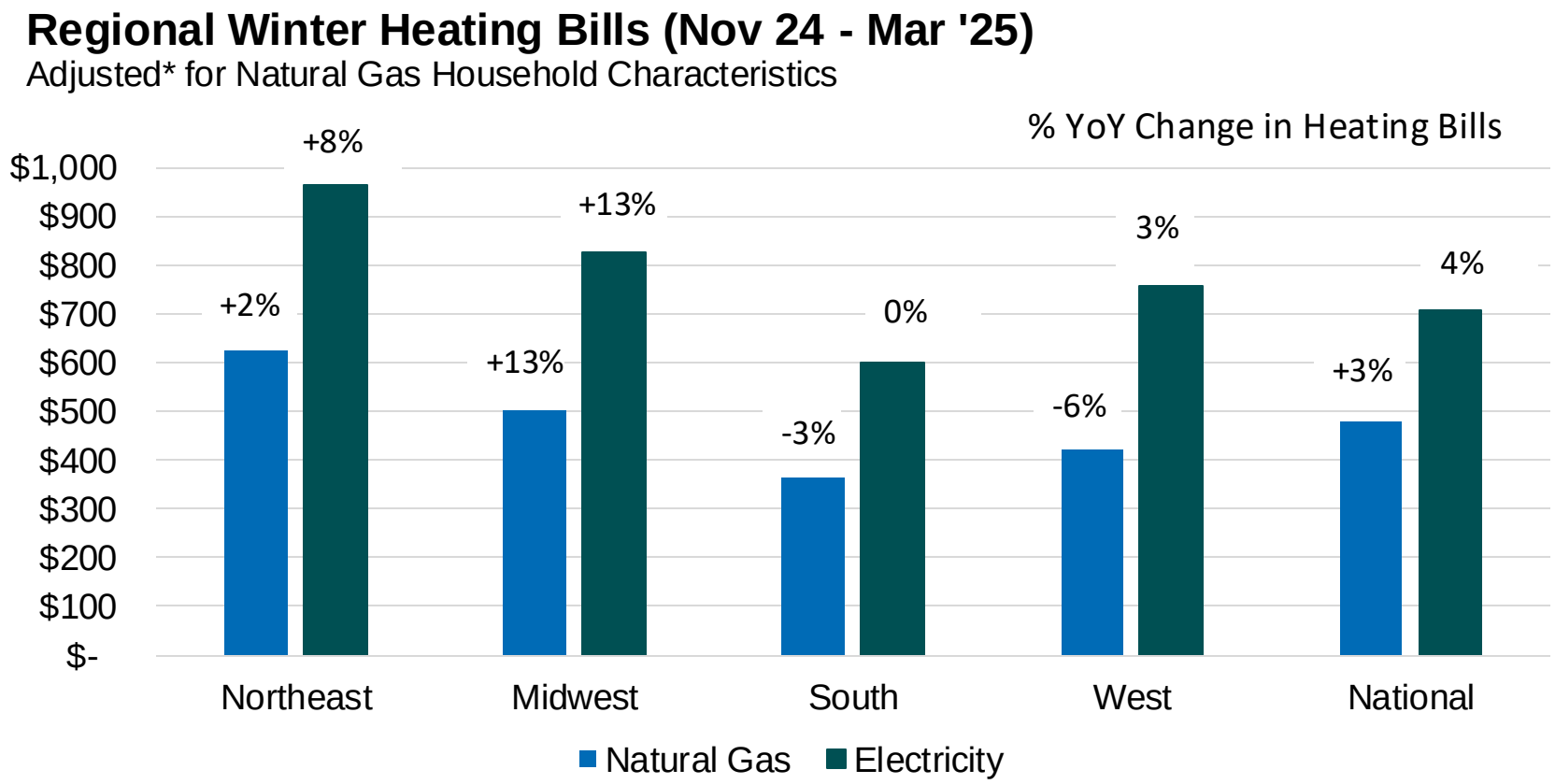
Colder winter expectations in the north and Midwest result in higher bills year over year. Overall natural gas households get more value for less



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American Gas Association Modeling
EIA Winter Fuels Outlook 2024-2025 Oct, 8th 2024
EIA 2020 Residential Energy Consumption Survey

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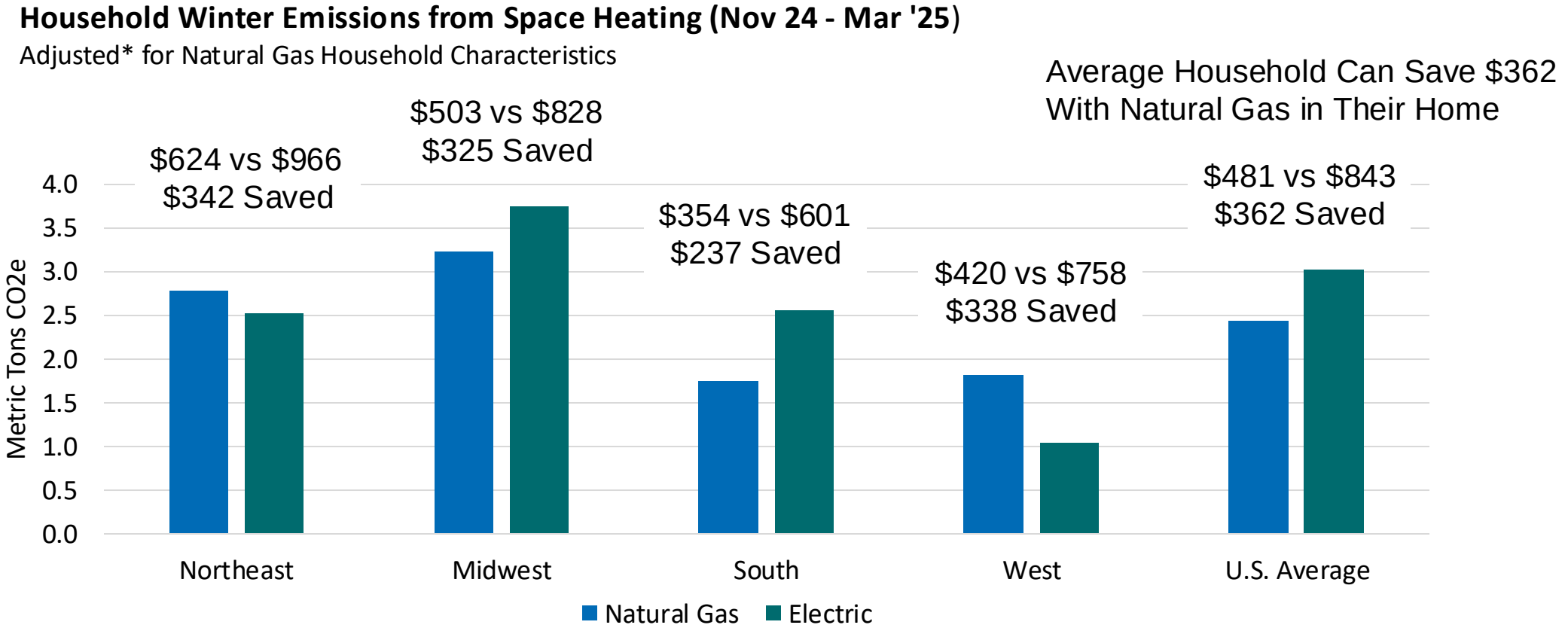
Natural gas household emissions are competitive with electric, reducing Average emissions by 24% while saving $362 in heating costs



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American Gas Association Modeling
EIA Winter Fuels Outlook 2024-2025 Oct 8, 2024
EIA 2020 Residential Energy Consumption Survey
NREL Cambium 2023 Database Future Long-Term Marginal 2025-2026 Emissions

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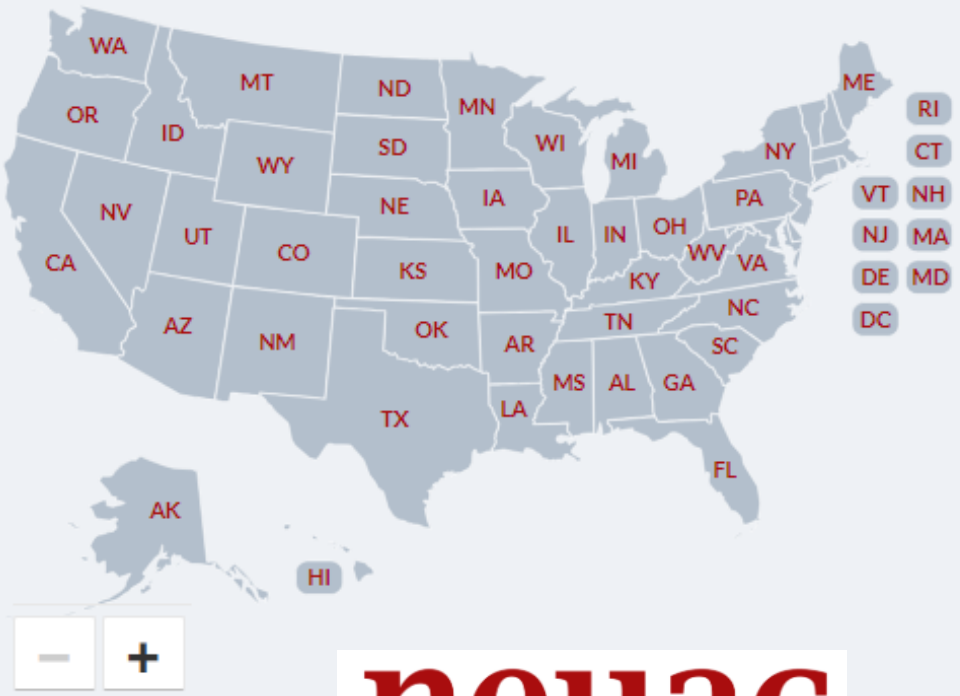
Energy assistance programs are available to help low-income and vulnerable customers

State Resource Directory



neuac
NATIONAL ENERGY & UTILITY AFFORDABILITY COALITION

District of Columbia Resources

District of Columbia LIHEAP

District of Columbia LIHEAP Office Contact Information

Find a Local LIHEAP Program

District of Columbia LIHEAP Metrics

District of Columbia State Sheet

Nonprofit Fuel Funds and Utility Assistance Programs

DC.gov Utility Assistance

Greater Washington Urban League – Pepco Energy Assistance

Utility Discount Program

State Resource Directory and other assistance information is available from the National Energy & Utility Affordability Coalition at neuac.org.

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Forthcoming AGA energy efficiency report

- Survey of North American natural gas companies
- Natural gas efficiency program low-income enrollments increased from 2021 to 2022
- U.S. low-income programmatic expenditures in 2022 of more than $422 million (roughly 32% of total efficiency program expenditures)
- Low-income program efficiency savings of approximately 11.8 million therms in 2022

Final Thoughts

- The natural gas market is set to be **well-supplied** headed into the winter heating season. **Gas utilities plan and prepare** to meet their obligations to consumers.
- **Gas for electric power** remains essential for meeting load growth and peak requirements. Maintaining generation, fuel deliverability, and infrastructure is essential for reliability.
- **The market may tighten** into 2025, but the outlook will be sensitive to production response.
- **New infrastructure will be necessary** to meet growing demand and maintain price stability.


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