

Natural Gas Price Volatility in New England

Fall - 2025

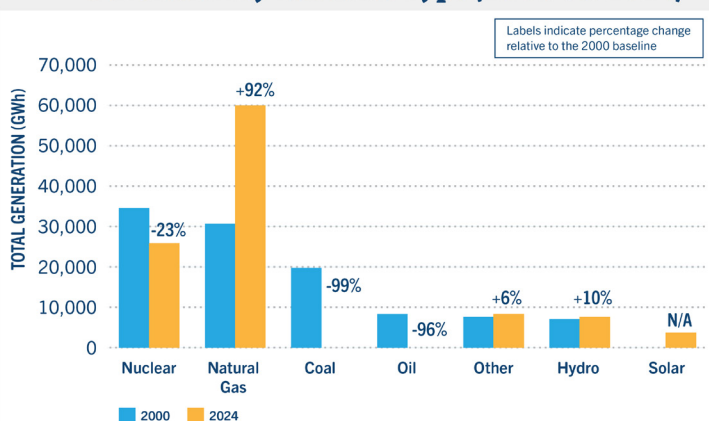
WHAT IS NATURAL GAS, AND HOW IS IT USED IN NEW ENGLAND?

Natural gas is a fossil fuel that is heavily relied upon in New England both as a fuel in power plants to generate electricity and as a fuel in buildings for heating, water heating, and cooking. In 2024, natural gas power plants accounted for **55% of total electricity generation** in New England, and 37% of homes in the region **rely on natural gas** as their primary heating source. In Massachusetts and Rhode Island, more than half of homes rely on natural gas as their primary heating source. New England obtains most of its natural gas via interstate gas pipelines, plus small amounts imported in the form of Liquefied Natural Gas (LNG) via ship.

WHAT IS NATURAL GAS PRICE VOLATILITY, AND WHY IS NEW ENGLAND PARTICULARLY VULNERABLE TO IT?

Natural gas can vary significantly in price across any given season or any given year. These price swings are often volatile—fluctuating substantially even across short periods of time—and the price can be influenced heavily by unpredictable global events. As a result of the region's heavy reliance on natural gas, fluctuations in the cost of this fuel have significant impacts on both electricity costs and the costs of heating homes and businesses.

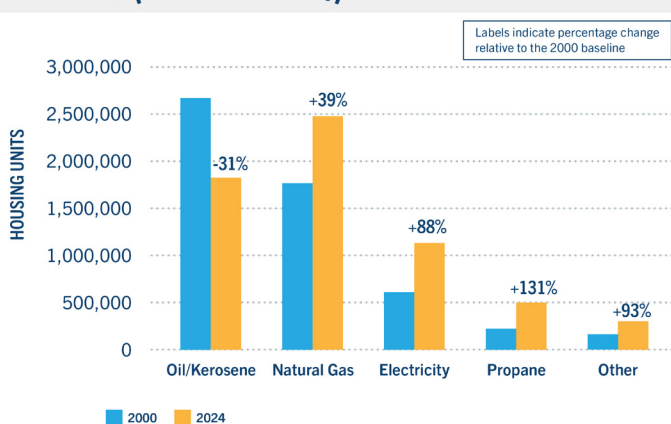
FIGURE 1
New England Shift in Total Annual Electricity Generation by Resource Type (2000 vs. 2024)



Source: Acadia Center analysis of ISO-NE's Net Energy and Peak Load by Source

Over the past two decades, natural gas has taken over as the dominant fuel for producing electricity in New England. As the figure below shows, natural gas has steadily displaced other fuel sources in New England's power mix since 2000. The large growth in natural gas use has come at the expense of a more balanced energy generation mix, leaving the region overexposed to price swings. While some renewables like wind and solar are starting to grow, the figure below shows why much more investment in clean energy is needed to reduce our dependence on natural gas and create a more stable, resilient and affordable power system.

FIGURE 2
New England Shift in Primary Home Heating Fuel (2000 vs. 2024)



Source: Acadia Center analysis of ISO-NE's Net Energy and Peak Load by Source

Similarly, when focusing on how homes in the region are heated, Figure 2 below shows how natural gas has become the dominant home heating fuel in New England. This means winter natural gas price spikes hit many families directly through their heating bills, while simultaneously impacting the price of electricity, which all homes are reliant upon to varying extents. This highlights the double-dependence on natural gas that makes New England so vulnerable. Together, these two shifts—increased reliance on natural gas both in the electricity sector and in the home heating sector—help to explain why the region's bills rise and fall with the price of gas.

The double dependence on natural gas for both electricity generation and building heating creates major risks in New England, particularly in the winter. Although total electricity demand in the region is

significantly lower in winter than summer (which is driven higher by air conditioning use), in the winter, power plants must compete for limited amounts of natural gas with natural gas utilities who need to provide heating fuel to customers during the coldest portion of the year. This tends to drive spikes in gas prices that increase winter electricity and gas bills—as felt starkly by consumers this past winter (2024-2025).

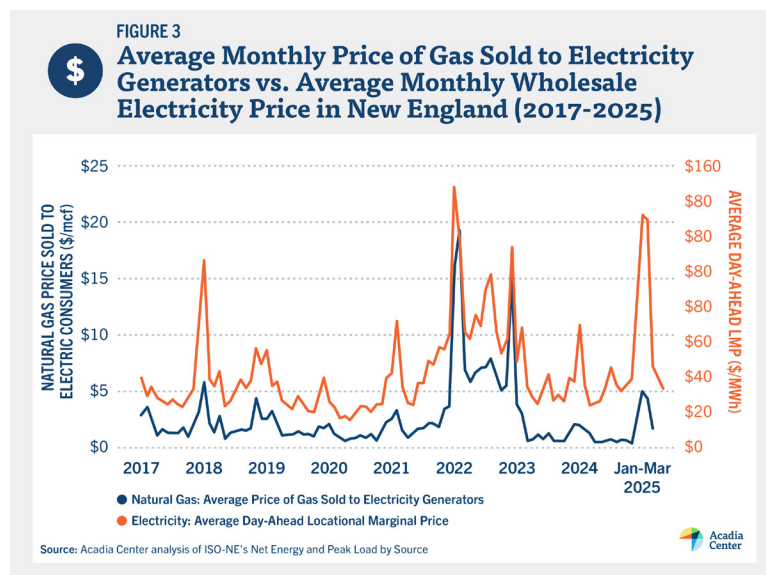
When so much of the region's electricity is reliant on a single, unpredictable fuel source, dramatic increases in the prices of natural gas—and a more general risk premium tied to the volatility—are passed through to electricity consumers in the form of higher monthly electricity bills. The price volatility of natural gas is not just a short-term inconvenience or a quirk of the market; it is a deep, longstanding risk for energy affordability in New England. New England does not have in-region natural gas production, requiring the fuel to be imported from other regions of the U.S. or from abroad. This is done via interstate pipelines, which are at full capacity during many peak periods, or via LNG imported from other countries via ship. This lack of local supply, combined with New England essentially being at the “end of the pipeline,” makes the region uniquely vulnerable to price surges from events that are outside of the region's control.

The region's dependence on natural gas leaves electricity bills uniquely sensitive to many unpredictable factors such as weather events, global market shifts, or supply chain disruptions. In August, the Energy Information Administration (EIA) [projected](#) natural gas prices nearly twice as high in 2026 as they were in 2024 at Henry Hub, a key natural gas distribution hub in Louisiana that serves as the primary benchmark for national natural gas prices. This type of systemic vulnerability hits low-and-moderate income (LMI) households the hardest, who typically spend a larger share of their income on energy already and are the most vulnerable to price shocks.

WHAT ARE SOME CLEAR EXAMPLES OF THE IMPACT OF NATURAL GAS VOLATILITY?

Natural gas volatility is already a lived reality for the New England region:

- **Winter 2024-2025:** The most recent winter in New England was the first since 2014 to see below-normal temperatures over the course of an entire season, with each month (Dec.-Feb.) coming in colder than average, according to [ISO Newswire](#). According to the power grid operator's [Quarterly Markets Report](#), this harsh winter resulted in the highest winter electric load in the region since winter 2014-2015 and the highest electricity prices paid by power suppliers since winter 2013-2014. Specifically, “wholesale” energy market costs totaled \$4.5 billion, up 116% (or \$2.4 billion) from winter 2024 costs, driven by a 179% year-over-year rise in natural gas prices.



- **Global Market Shifts:** In 2020, there was a dip in both New England natural gas and electricity prices due to a lack of natural gas demand during the Covid-19 pandemic. Conversely, in 2022, Russia's invasion of Ukraine led to a steep jump in natural gas and electricity prices. During this time, both natural gas prices and wholesale electricity prices were about 2 times higher than the 5-year average.

- **Significant Increases in Gas Pipeline Capacity Over Last Decade Haven't Alleviated Price Volatility:** Notably, despite a roughly 51% increase in regional natural gas pipeline capacity since 2014 (per Acadia Center analysis of EIA and DOE data), the price and volatility of natural gas still remain significant, with many lingering impacts on electricity prices.

HOW ARE NATURAL GAS AND ELECTRICITY PRICES IN NEW ENGLAND CONNECTED?

The figure below illustrates the fluctuating prices of electricity and natural gas sold to power plants. Peaks and dips in both prices are aligned with each other, and dramatic swings in price can be linked back to specific events, including unprecedented weather events, supply chain disruptions, or global market shifts.



WHAT ARE ACADIA CENTER'S RECOMMENDATIONS?

To address New England's overreliance on natural gas and reduce the region's exposure to price volatility, Acadia Center recommends the following priorities to diversify the region's energy supply, emphasize clean and efficient solutions, and save consumers money:

- **Add Clean Power to the Grid:** Transitioning the region's grid to renewable energy generation sources (wind, solar, hydropower), while simultaneously deploying battery storage and smartly expanding transmission, is essential to reduce dependence on gas-fired power plants. A renewable grid will protect consumers from the price instability of the natural gas markets.
- **Prevent Interstate Gas Pipeline Expansion:** Building new interstate natural gas pipelines would increase the region's dependence on natural gas and undermine any efforts to transition away from it. Doing so would also do nothing to address another major driver of energy costs: rapidly rising costs for gas distribution infrastructure, or the local pipes underneath neighborhood streets—separate from the gas itself. Instead, the region can prioritize affordability and resiliency by investing in clean infrastructure that can harness local resources and protect the region from fuel price shocks.
- **Deploy Efficient Electric Heating:** Replacing natural gas heating systems in homes and businesses with efficient electric heat pumps is critical to cutting demand for gas in the winter. Paired with grid decarbonization, this strategy can both clean-up building heating and make households more resilient to heating fuel price spikes. Recent [analysis](#) supported by Acadia Center and other advocacy organizations highlights the ability for seasonal heat pump rates to ensure cost-savings for an even greater share of households switching to heat pumps for heating and cooling.
- **Invest in Energy Efficiency to Reduce Building Heating Loads and Stress on the Grid:** Investing in insulation and other forms of energy efficiency will reduce both gas and electric heating demand. And, as the region continues the transition to efficient electric heating in the coming decades, investing in efficiency will help reduce winter peaks on the grid and alleviate concerns about gas supply constraints. Reducing peak demand via energy efficiency will also help reduce the need for electric grid infrastructure and lower the overall costs of the energy transition.

For more information:

- [Why is Your Energy Bill So High? Blame Natural Gas Volatility and Utility Profits](#)
CommonWealth Beacon
- [New York's Household Energy Burden Imperative: Challenges and Solutions](#)
Acadia Center
- [Commentary: Don't Cut R.I.'s Energy Efficiency Programs Amid Our Energy Affordability Crisis](#)
Boston Globe