MAINE DEPARTMENT OF
Energy Resources

Informational Webinar:
Factors Driving Electricity Prices in Maine

February 11, 2026

Agenda

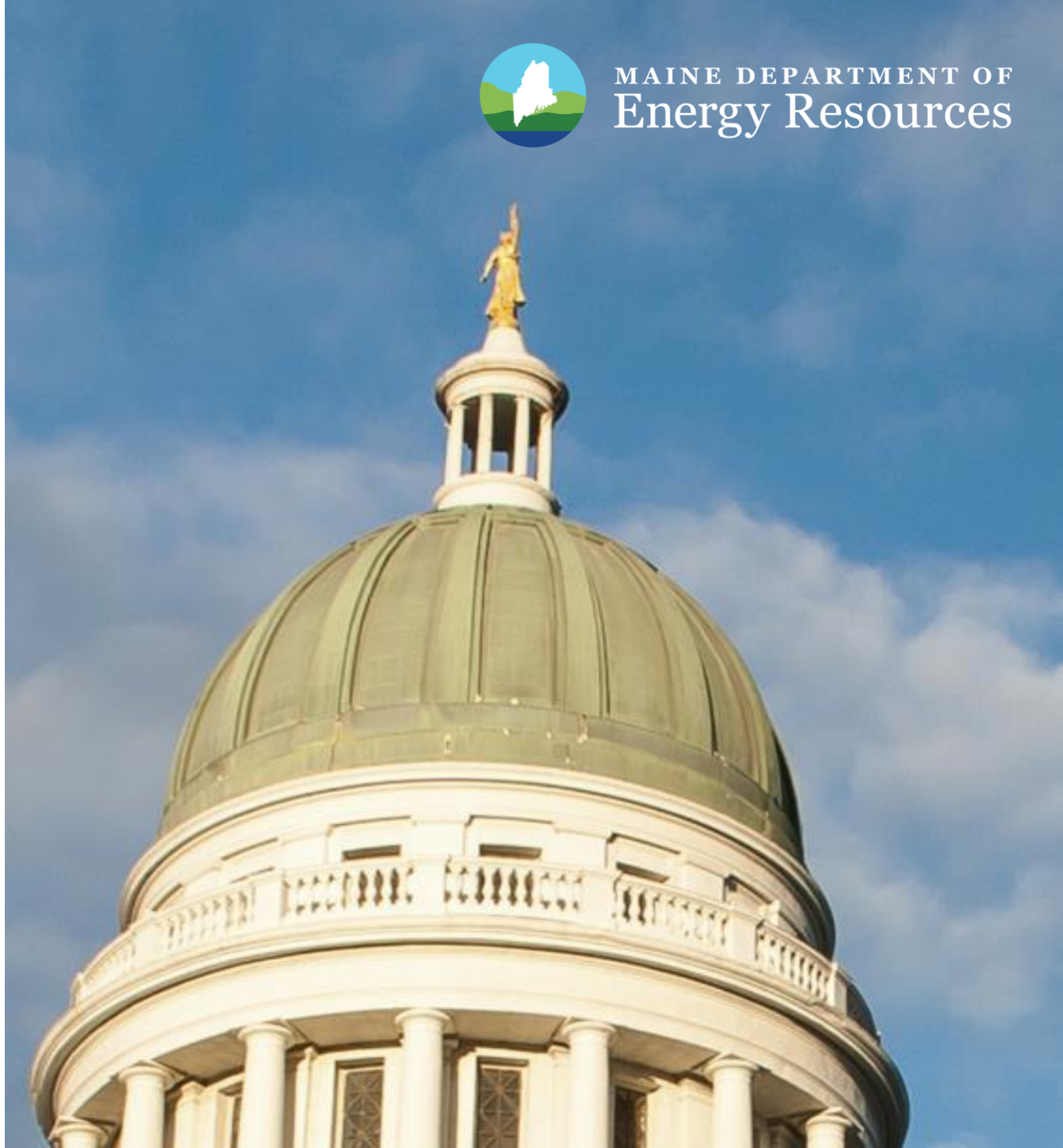
- Welcome
- Overview of DOER and study background
- Study overview and key findings
- Audience Q&A
- Wrap up

Maine Department of Energy Resources (DOER)

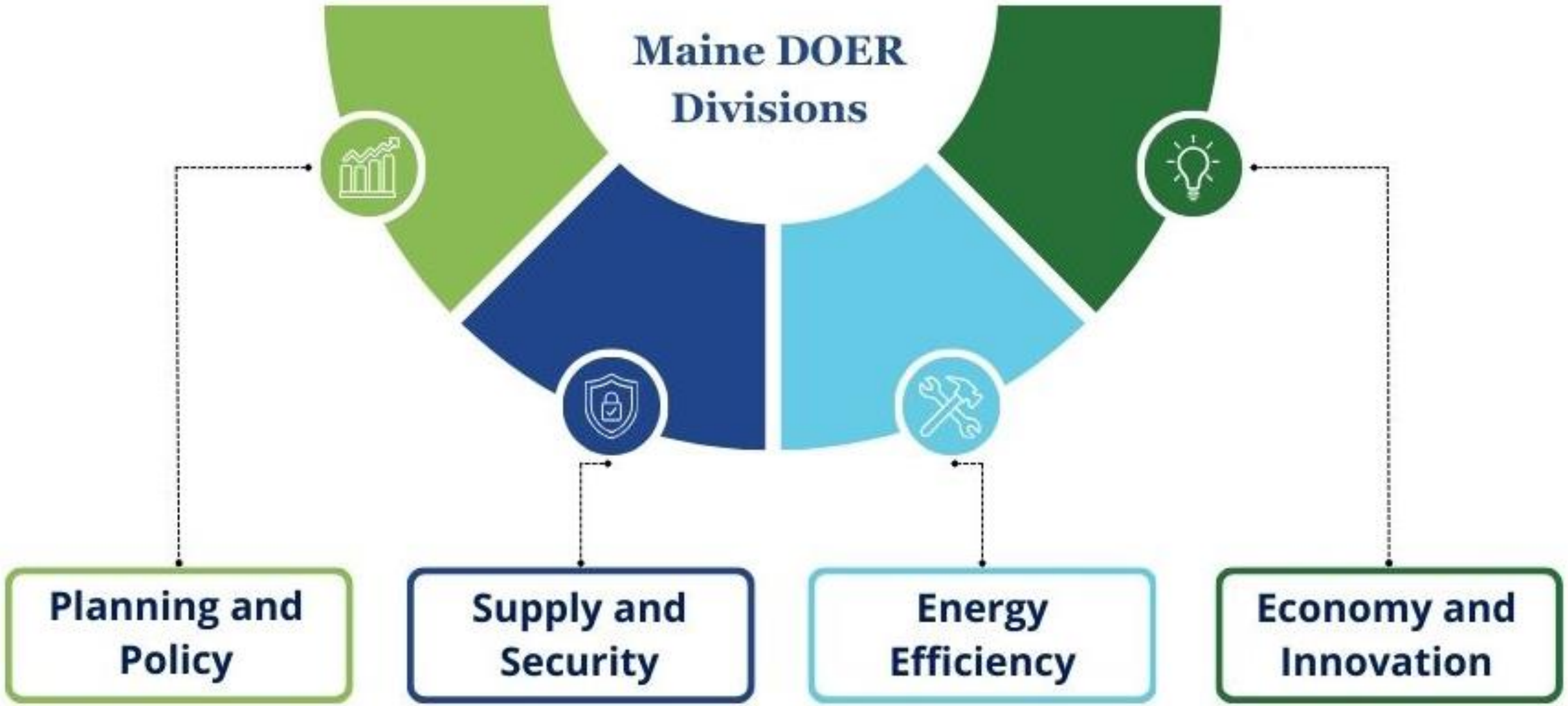
- The Maine Department of Energy Resources (DOER) was established September 24, 2025, replacing the Governor's Energy Office per Public Law 2025, chapter 476 (L.D. 1270)

- DOER is the designated state energy office tasked with a wide range of activities relating to state energy policies, planning, and development

- The office provides policy leadership and technical assistance, develops energy programs, monitors energy markets, and reports on heating fuel and energy prices.



Maine DOER Divisions



MAINE DEPARTMENT OF
Energy Resources

Powers & Duties of the Department

State Energy Plan

By January 15 of each odd-numbered year, DOER shall prepare a comprehensive state energy plan informed by public input.

The plan shall identify and evaluate:

- Energy supply, demand, and cost data for all available sources;
- Progress toward state goals (clean generation, energy storage, oil dependence reduction);
- Resource, transmission and distribution, and infrastructure needs, including procurement schedule
- Technology costs to meet state goals; and
- Supply and demand forecasts which shall be considered by other planning efforts.

Annual Report

By January 15 of each year, DOER shall prepare and submit a report to the EUT Committee.

The report shall:

- Describe the activities of the department in carrying out its duties;
- Describe the state's progress in implementation of the state energy plan; and
- Detail funding received from private sources and the department's annual accounting.

Oil Dependence Reduction Plan

Develop a plan to reduce the use of oil in all sectors of the economy. The plan must be designed to achieve the statutory reduction targets.

Coordination of State Energy Policy

The Department is designated as the energy office for the state of Maine.

Commissioner advises the Governor and Legislature on matters related to energy.

DOER shall advise state agencies on energy-related principles for agencies to consider.

Commissioner serves as a member of the Efficiency Maine Trust (EMT) Board.

Commissioner serves as a member of the Board of Directors of the Maine Technology Institute (MTI).

Commissioner acts as a representative for the State in RGGI.

Ongoing Responsibilities & Programs

Collect & analyze energy data considering all available sources.

Coordinate the dissemination of energy information for the public.

Provide technical assistance to the Governor and Legislature.

Administer DOE's State Energy Program.

Work with T&D utilities, PUC, state agencies to negotiate agreements that create value for electric customers.

Monitor transmission capacity planning and policy; make recommendations.

Monitor and report on petroleum product inventories, deliveries, and shortfalls.

Prepare a state energy security plan in accordance with federal requirements.

Ensure state goals, policies, plans align with and support State GHG reduction obligations.

Coordinate with PUC and EMT to monitor beneficial electrification.

Review and report on the impacts and implementation of the RPS.

Manage a program to promote clean energy job development and business innovation (CEP).

Develop a Distributed Solar and Energy Storage Program.

Initiate and conduct procurements for energy, RECs, and other services from renewable and clean resources, energy storage, demand management or related transmission.

MAINE DEPARTMENT OF
Energy Resources

MAINE DEPARTMENT OF
Energy Resources

Maine's Next Energy Plan

Advancing Affordable, Reliable, and Cleaner Energy for All Maine People

2026 Timeline

Q1
Information and Data Collection

Q2
Scenario Forecasting and Analysis

Q3
Strategy Development and Prioritization

Q4
Finalize Maine Energy Plan

Public Engagement and Input

Study Background

- Affordability is core to the work of DOER and the next Maine Energy Plan, to be developed over the course of 2026
- This study looks at factors that have contributed to electricity price volatility in recent years to inform the next Energy Plan, along with stakeholder input and other studies
- **Key takeaways:**
  - Electricity price increases are driven primarily by natural gas, storm costs, aging infrastructure, and inflation
  - Diversifying our energy sources and investing energy efficiency can help mitigate that volatility

Factors Driving Electricity Prices in Maine

DEAN MURPHY

NOAH RAUSCHKOLB

PAIGE VINCENT

PREPARED FOR THE MAINE DEPARTMENT OF ENERGY RESOURCES

FEBRUARY 2026

Brattle

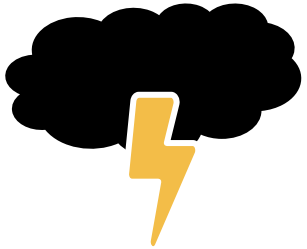
Overview

Electricity rates in Maine are under pressure due to a combination of factors, including dependence on fossil fuels for electricity generation, growing storm-related costs, aging infrastructure, and inflationary pressures

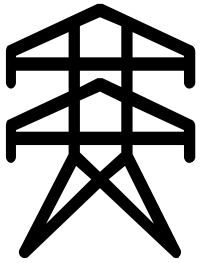
- Maine is part of the New England electricity grid, which is heavily dependent on natural gas for electricity generation and supply. This means Maine ratepayers take on substantial risk when gas prices rise.
  - Historic volatility in natural gas prices has been driven by **winter storms, global competition, and (non-gas) generation outages**
  - Future price increases will likely also be driven by **increased national demand from data centers and expanded domestic LNG exports**
- **Transmission and distribution (T&D) charges are less volatile**, but have been rising due to increased equipment and construction costs, aging infrastructure in need of replacement, and storm repairs

Maine can mitigate consumer risks by **accelerating clean energy** development, investing in **load flexibility** and **cost-effective energy efficiency**, and strategically **electrifying end uses that rely on fossil fuels**

FOSSIL FUEL DEPENDENCE



GROWING STORM COSTS



AGING INFRASTRUCTURE

INFLATION

Understanding Electricity Bills in Maine (2015-2025)

Electricity bills in Maine include several different costs:[1]

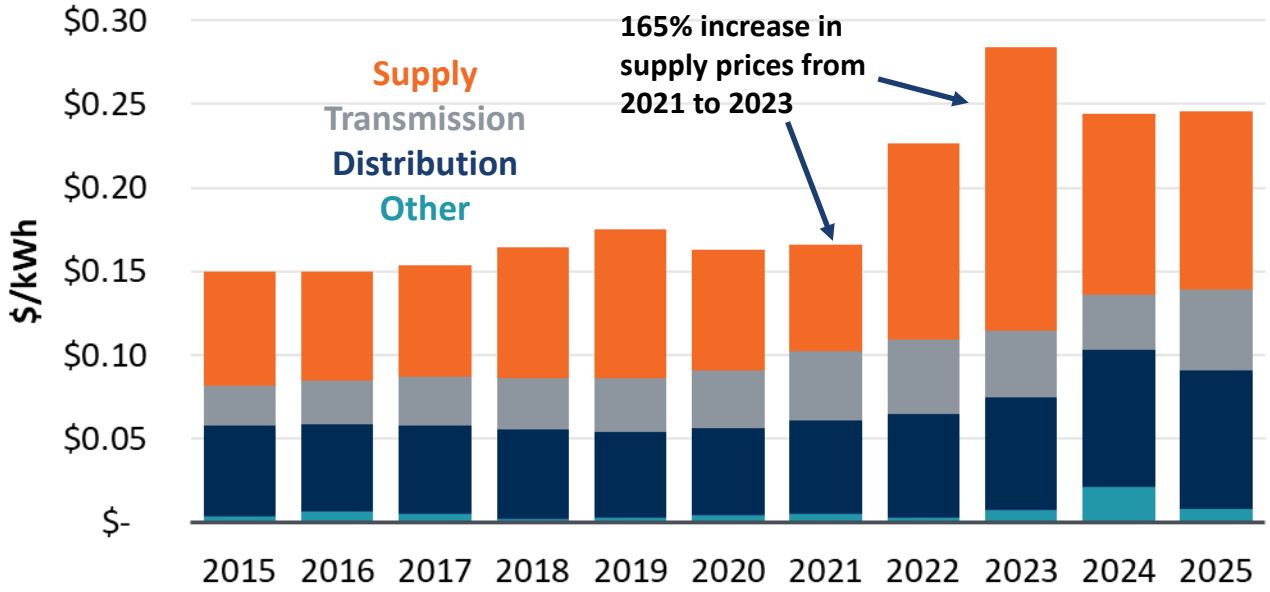
- **Supply** (6-17¢ per-kWh): Reflects the cost of wholesale electricity purchased for utility customers.
  - This includes **energy** costs, which compensate generators for providing energy hour by hour; **capacity** costs, which are paid to ensure that there are enough generating facilities available to meet forecasted peak demand; and **ancillary service** costs, which pay for reliable and flexible power system operations.
  - The default residential electricity supply price, also known as the "**standard offer**," is set annually by the Maine Public Utilities Commission through a competitive bidding process. Energy suppliers that participate in the bidding process primarily base their proposals on expectations for electricity costs in the coming year. Because the actual future costs are unknown, standard offer prices reflect the risk of this uncertainty.
- **Transmission** (2-5¢ per-kWh): Pays for the regional high-voltage transmission network. Rates are regulated by the Federal Energy Regulatory Commission (FERC).
- **Distribution** (5-8¢ per-kWh): Pays for the local delivery system (poles, wires, substations, metering, and customer service) and recovers the distribution utility's operations and maintenance costs as well as some storm costs. Rates are regulated by the Maine Public Utilities Commission (MPUC) and include an allowed rate of return on invested assets.
- **Other** (0-2¢ per-kWh): Covers the cost of some long-term power contracts and provides support for renewable energy and energy assistance programs.

1. Ranges presented cover years 2015-2025, showing weighted average basic residential service rates across Maine Investor-Owned Utilities (Central Maine Power and Versant) for. Adapted from CMP Filing Average Price by Rate Class 2015-2024; Versant Chapter 815 Report, March 2025; and updated data provided by Maine DOER. Weighted by annual load from Residential Electric Rates, Maine Public Utilities Commission, 2025.

How Rates are Changing

- **From 2021 to 2023, Maine supply prices nearly tripled, from 6.4¢ to 17¢ per-kWh**, due to gas price increases – driven by global natural gas shortages caused by Russia's invasion of Ukraine
  - According to a recent report from LBNL,[1] **volatility in natural gas prices contributed to a +/- 5¢ per-kWh swing in electricity prices in Maine between 2019-2024, causing uncertainty for consumers**
- Transmission and distribution costs have also grown due to storm repair, storm hardening, and new transmission projects
  - These costs are **more predictable than supply**; once an investment is made, its cost is amortized over decades on a fixed depreciation schedule
  - Storm costs vary based on the frequency and intensity of extreme weather events. Costs associated with 2024 winter **storm recovery currently cost the average residential CMP customer about $20 per month**[1]

Average Maine Residential Electricity Rates by Component[2]

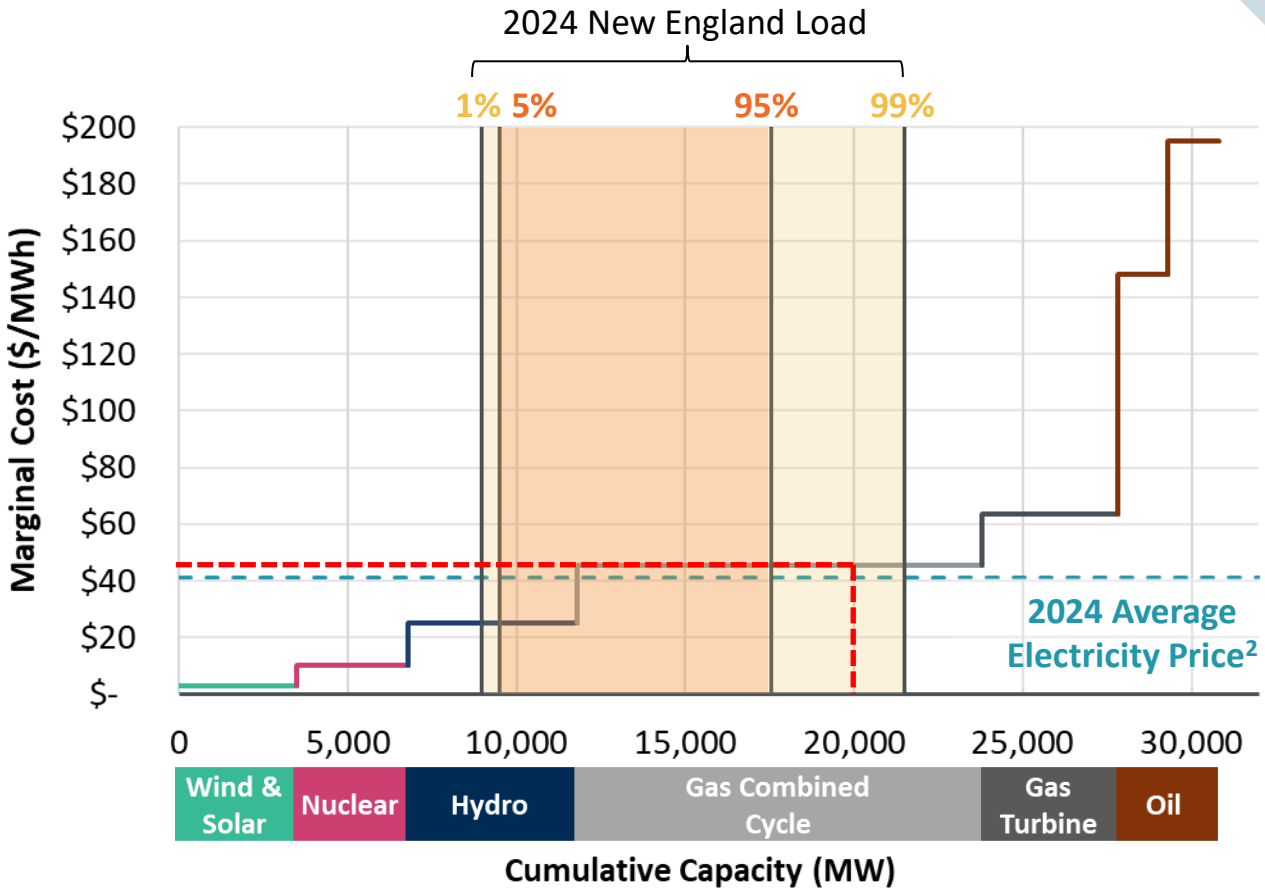


1. Electricity Prices FAQ, Maine Department of Energy Resources, 2025. Storm recovery costs are typically recovered over 1 to 3 years, whereas new distribution investments are recovered over much longer periods.
2. Weighted average of Residential Rate A electricity prices across Central Maine Power, Versant BHD, and Versant MPD. Prices for 2015-2024 adapted from CMP Filing Average Price by Rate Class 2015-2024; Versant Chapter 815 Report, March 2025; and updated data provided by Maine DOER. Weighted by annual load from Residential Electric Rates, Maine Public Utilities Commission, 2025. Prices for 2025 are based on residential rates provided by DOER and weighed based on 2024 loads. Supply costs are determined by the Standard Offer Contract. Transmission costs cover the cost of maintenance and investments associated with high voltage wires and transformer equipment. Distribution costs are inclusive of distribution wires and infrastructure, and can include storm recovery costs. CMP "Stranded Costs and Other" include long-term power contracts, costs and benefits of renewable energy and energy assistance programs (Central Maine Power Annual Price Adjustments, July 2019). Versant "Stranded Costs and Other" include conservation costs, remaining costs from electricity industry restructuring and retired power plant costs. (Versant Power Rate Changes, September 2025).

Energy Supply Curve and Marginal Cost Pricing

- To minimize costs, electric generators in New England are dispatched based on *merit order*:
  - Resources with low/no fuel costs (such as wind, solar, and nuclear) dispatch first
  - Then more expensive resources such as combined cycle gas units and gas turbines dispatch as needed
  - At just the highest demand hours each year (or when natural gas is capacity constrained) high variable cost units such as oil-burning peaker plants must be dispatched
- All units are paid based on the market clearing price, governed by the variable cost of the **marginal generation resource** (the last unit dispatched), setting the **wholesale energy price**.
  - For example, in the illustrative chart on the right, if the demand equals 20,000 MW (the vertical red dashed line), all generators to the left of that point are dispatched and compensated at a *clearing price* of $45/MWh, including those with lower marginal costs
  - The **Standard Offer** price paid by Maine customers is determined in part by expectations of this wholesale price.

Illustrative Winter ISO-NE Merit Order[1]

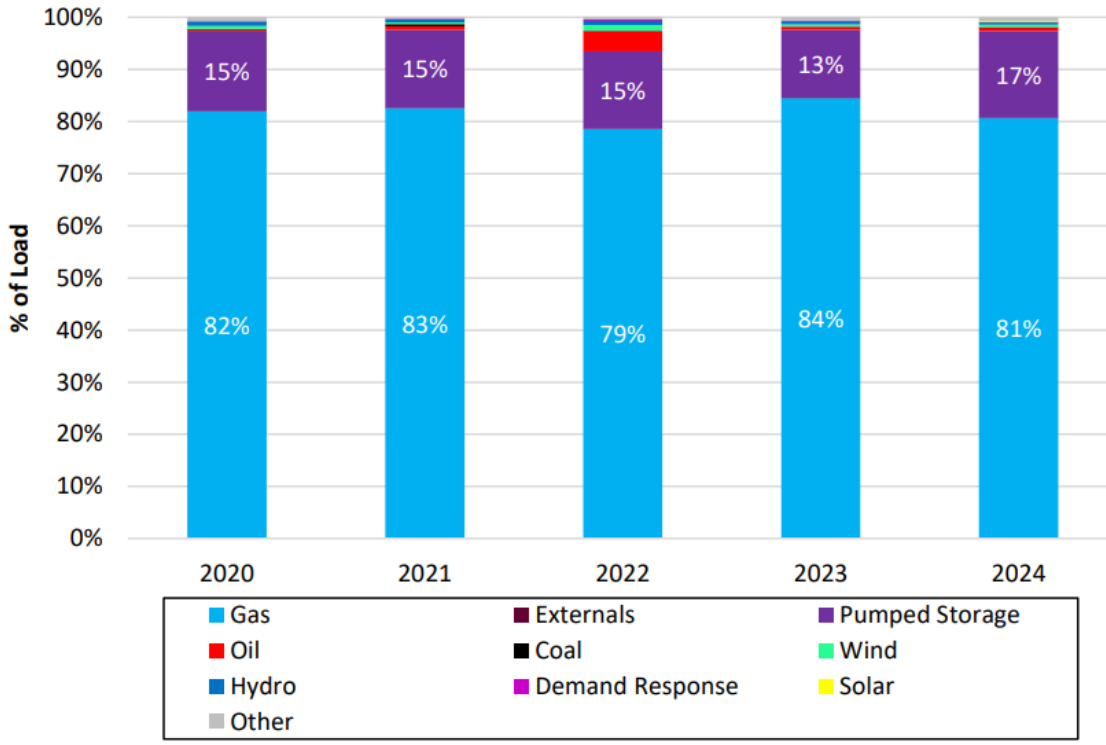


1. Illustrative marginal cost for New England assumes typical operating costs.
2. Based on day ahead locational marginal price

Natural Gas Drives Electricity Prices in New England

- In New England, the marginal generation resource is almost always fueled by natural gas
  - In 2023, **natural gas was directly on the margin for 81% of load hours**
  - Another 17% of marginal load hours were met by pumped storage; its price is determined indirectly by the natural gas price since it typically charges when gas is on the margin and shifts the power (and the price) in time
- The pipelines supplying natural gas to New England may become capacity-constrained during winter cold spells, causing gas prices to spike. These spikes typically last for a few days to a few weeks at a time.
  - During the coldest days of the year, natural gas prices are set by liquefied natural gas (LNG), which is far more expensive than pipeline gas due to the cost of liquefaction and transport
  - Adding new interstate pipeline capacity to New England would reduce the number of hours that prices are set by LNG. However, the potential operational cost savings should be weighed against the capital cost of the new infrastructure and associated risks.

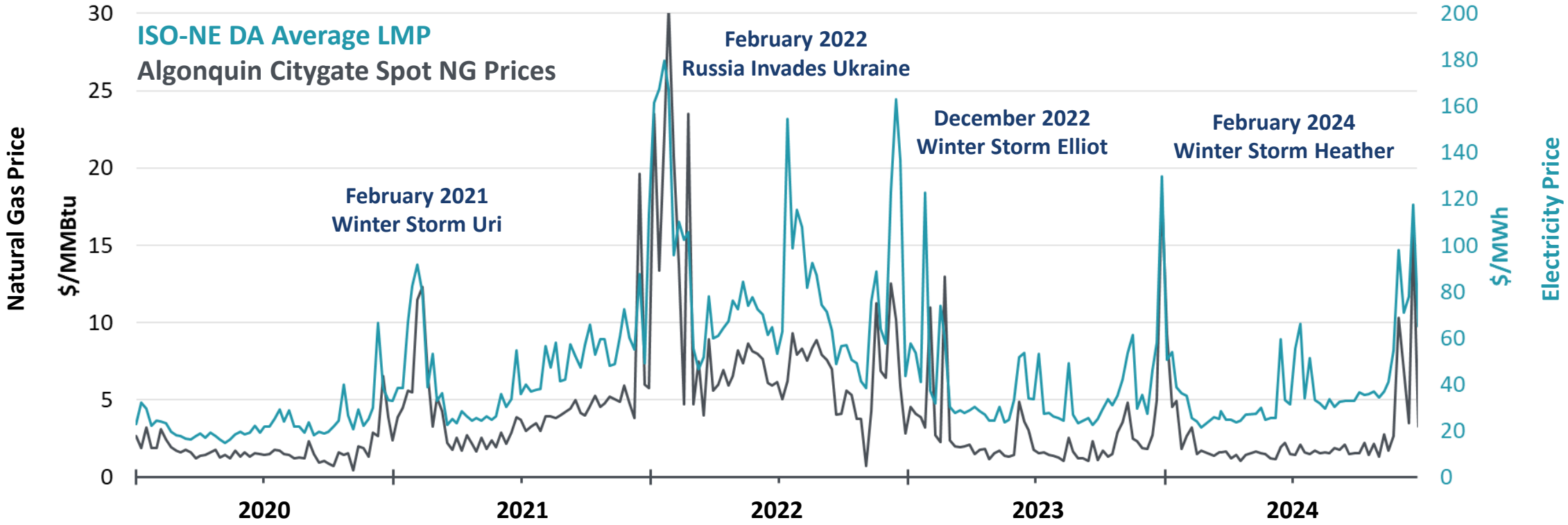
New England Marginal Generation Resource[2]



1. DEPTH Tool: Drivers of Electricity Pricing Trends & History, Lawrence Berkeley Laboratory, 2025
2. 2024 Annual Markets Report, ISO-NE. The contribution of each marginal resource is based on the total amount of load when that resource is setting the price. If more than one resource is marginal (when the system is constrained), the contribution of each marginal resource is based on the amount of load in each constrained area.

Volatility in Natural Gas and Electricity Prices

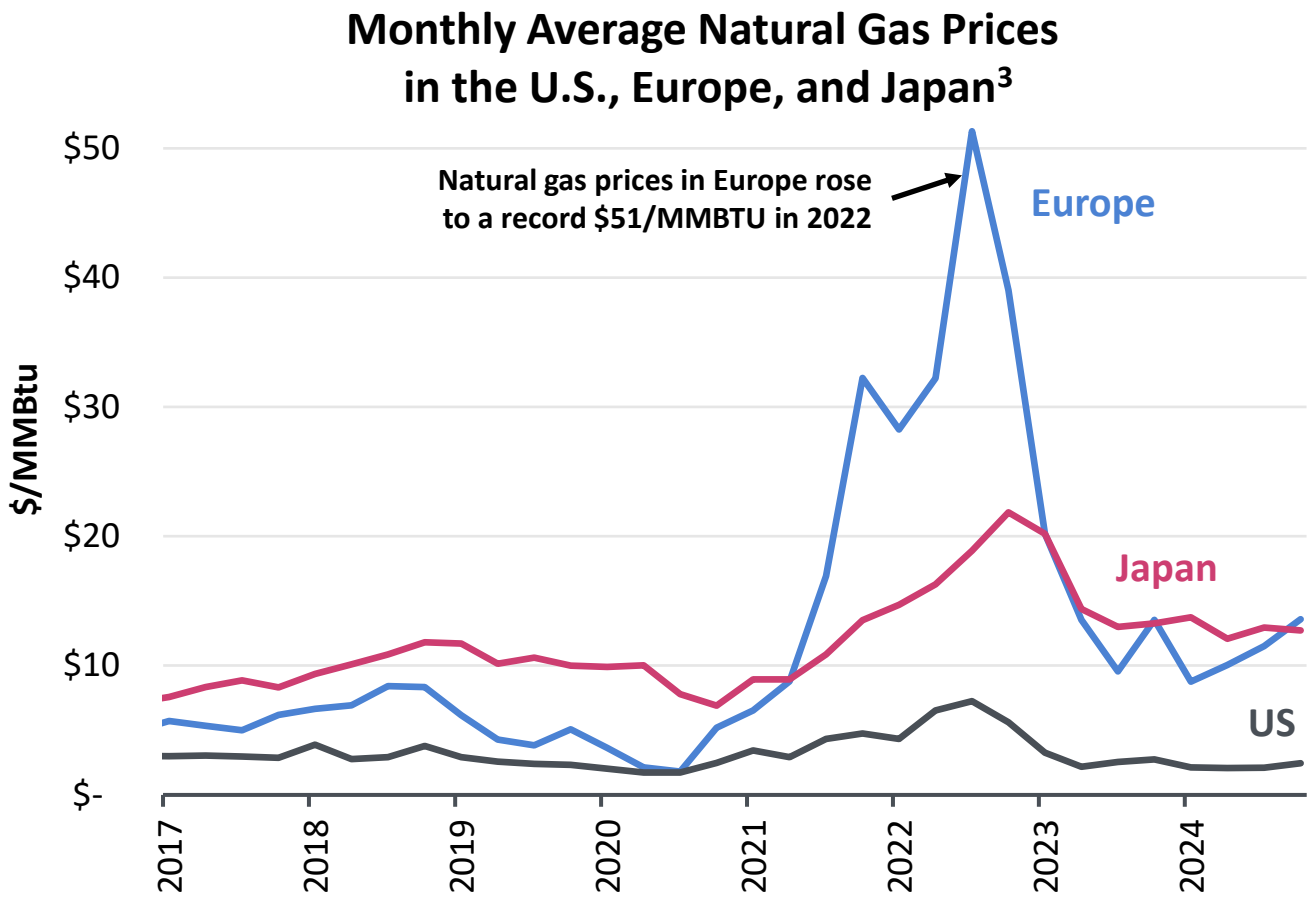
- Natural gas prices (and consequently, electricity prices) are volatile, driven by weather, pipeline constraints, geopolitical events, (non-gas) generator outages, and production disruptions (e.g. Winter Storm Uri)
- Due to pipeline constraints along the eastern seaboard, natural gas prices in New England are occasionally set by LNG, adding an additional source of volatility and risk for Maine ratepayers[1]



Emerging Trends

Several emerging trends indicate that the price of natural gas is likely to go up and become more volatile, which will make electricity more costly for customers in Maine. While many of these factors are outside Maine's control, there are steps the state can take to mitigate impacts.

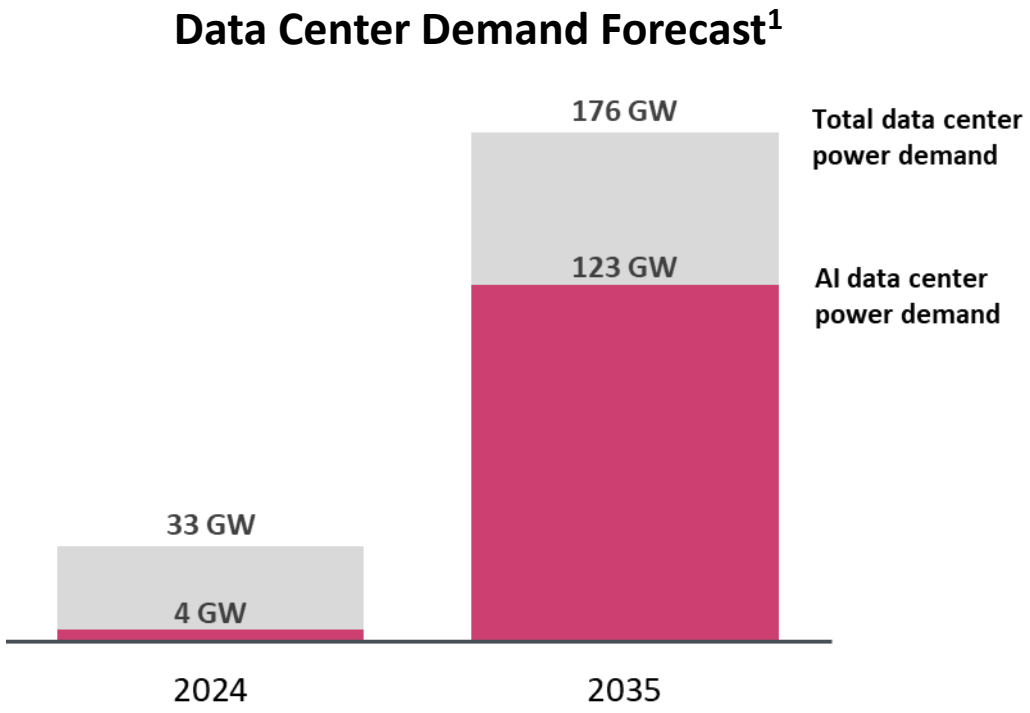
Increased Liquefied Natural Gas (LNG) Exports



- U.S. natural gas prices have historically trended **significantly lower than global gas prices**, enabling natural gas to become the key price-setting fuel for the electricity sector
  - After Russia's invasion of Ukraine, European gas prices shot up to a record $51/MMBTU
  - Japanese prices increased by a factor of three, as importers competed with Europe for LNG
  - U.S. prices[1] doubled, but remained well below international indices due to limited export capacity
- As the U.S. continues to increase its LNG export capacity (projected to increase by 58% by 2030[2]), **U.S. consumers will compete more directly with foreign importers, who are willing to pay significantly more for the same commodity**
  - This will drive up U.S. pipeline natural gas prices, which will then raise electricity prices

1. Based on the Henry Hub index in Louisiana
2. Based on EIA U.S. Liquefaction Capacity Data, October 2025
3. Based on World Bank Commodity Markets Outlook Pink Sheets Natural Gas data 2017-2024.

Data Center Load Growth Could Drive Future Price Increases



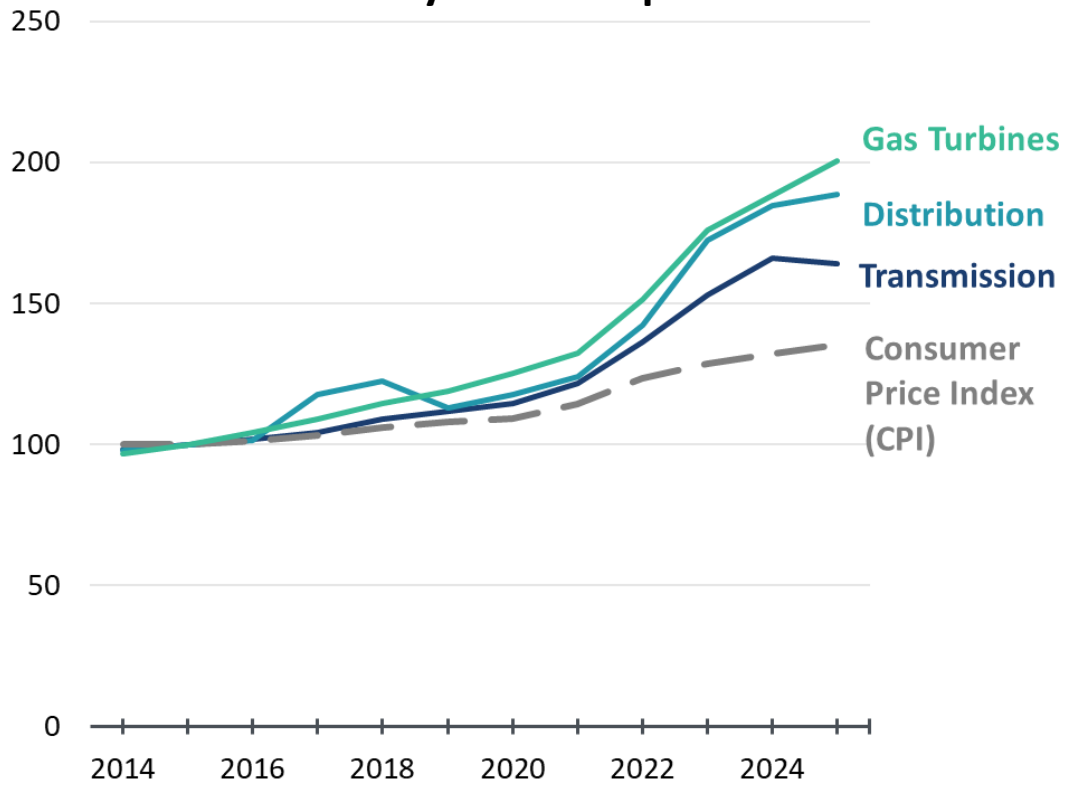
- Electricity demand from data centers has been forecasted **to increase by 5x by 2035, to 176 GW[1]**, adding ~23% to U.S. peak coincident demand (760 GW today[2])
- Load growth from data centers is already impacting supply prices in PJM, and is likely to increase the cost of natural gas, and electricity, elsewhere in the country
- Even if most new data centers are built outside of New England, increased national electricity demand from these large loads are likely to **drive up natural gas prices (and therefore electricity prices) across North America**
- Increased natural gas demand from data centers is generally viewed as a secondary effect to LNG exports in the short-run, but could become very significant in the long-run if demand growth persists[3,4]

1. Adapted from Deloitte 2025 AI Infrastructure Survey.
2. "Today in Energy: U.S. electricity peak demand set new records twice in July" U.S. Energy Information Administration, August 5, 2025.
3. Data Centers Driving U.S. Gas: Hyperscale or Over-Hyped?, Citi Group
4. Data centers to lift US gas demand, but LNG looms larger, analysts say, S&P Capital IQ

Rising Equipment Costs

- The cost of transmission and distribution equipment has risen over the last 10 years, **substantially outpacing inflation**
  - The U.S. imports power system components from a global market, where prices have been increasing with growing electricity demand[1]. For example, the global price of copper (a key input for both transformers and wires) has increased by ~50% since 2016[2]
- The **cost of new gas generating capacity has risen even more**
  - The price of gas turbines has increased by 46% over the last decade due to increased global demand and constrained supply. Presently, firms are waiting 5+ years for new gas turbines.
- **While renewables have seen prices fall** over the last decade, shifting dynamics are driving up costs more recently
  - According to EIA estimates[3], the cost of new wind turbines and solar photovoltaic arrays have decreased by 21% and 56% respectively since 2016
  - However, rising interest rates and inflation[4], tariffs on steel and other components[5], and interconnection delays[6] have been driving up development costs over the past several years
  - The One Big Beautiful Bill Act made changes to federal energy policy (including removing tax incentives for wind and solar) that are expected to increase development costs by 30% or more

Producer Price Indices for Major Power System Components[7]



1. Wood Mackenzie, Transformer troubles: manufacturing and policy constraints hit US transformer supply
2. Indices of Market Prices for Non-Fuel and Fuel Commodities, 2021-2025, International Monetary Fund. All percent changes adjusted for inflation based on U.S. CPI.
3. Based on the *overnight capital cost* estimate from EIA AEO Cost and Performance Characteristics of New Generating Technologies, 2016, 2024
4. NREL, Offshore Wind Market Report: 2024 Edition
5. Berkeley Haas Energy Institute, Tariff Trial and Error in the Solar Energy Sector
6. LBNL, Queued Up: 2024 Edition
7. PPIs from Whitman, Requardt & Associates, LLP, "The Handy-Whitman Index of Public Utility Construction Costs." CPI data from FRED.

Recommendations to Manage Electricity Costs

Transition to Clean Electricity Generation

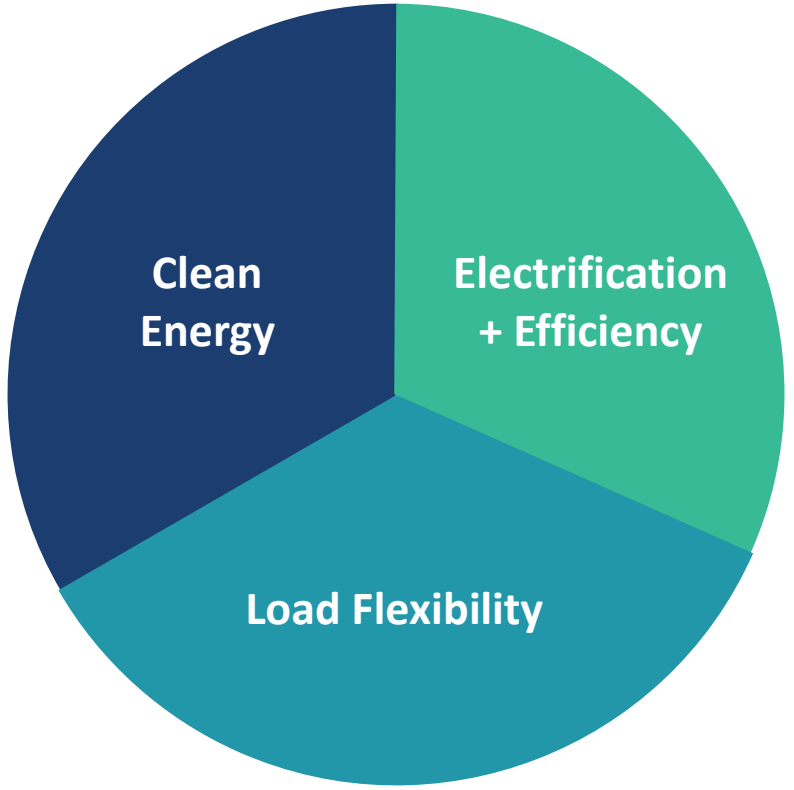
- Clean electricity generation, such as wind and solar, displace energy production from thermal plants, which means Maine ratepayers will be less exposed to short-run volatility in natural gas prices
- Cancellation of federal tax credits and support for renewables will make electricity generation more expensive. This makes it more important for Maine to streamline the development process for clean energy (reducing administrative costs) and enable developers to be able to tap into other capital pools

Invest in Load Flexibility

- A 2025 Brattle report finds that load flexibility in Maine can substantially reduce costs across the generation, transmission, and distribution systems[1]
- Virtual power plant (VPP) capacity used to serve peak load costs ~40–60% less than gas peakers and utility-scale batteries[2]. Adopting a strategy that employs load flexibility can mitigate the need for utilities to install costly new equipment.

Adopt Economical Electrification and Energy Efficiency

- Because fuel oil and propane boilers are more costly to operate than electric heat pumps, shifting customers from these systems to heat pumps can reduce energy expenses, even if electricity prices rise[1]



1. Maine Pathways to 2040: Analysis and Insights, The Brattle Group (January 2025)
2. Real Reliability: The Value of Virtual Power, The Brattle Group (May 2023)

MAINE DEPARTMENT OF
Energy Resources

Questions?


MAINE DEPARTMENT OF
Energy Resources
Thank You
maine.gov/energy
Please keep in touch and
sign up for our newsletter