

Factors Behind Connecticut's High Electric Rates

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Issue

This report updates OLR Report [2015-R-0108](#) describing (1) why Connecticut's electric rates are higher than those in most other states and (2) related measures taken by the legislature since 2015.

Summary

As of November 2024, Connecticut had the fourth highest average residential retail rates in the country (behind Hawaii, California, and Massachusetts). As previous reports on this topic have noted, Connecticut's electric rates have been higher than other states for some time (second highest rates in 2014 and 2008, third highest rates in 2006, fourth highest rates in 1998, when the legislature partially deregulated the electric industry). High rates are a regional phenomenon, and all six of the New England states plus New York are among the 10 states with the highest rates.

We are aware of no empirical analysis as to why Connecticut's rates are so high, and this report does not provide one. However, it appears that several factors that largely apply across New England and interact with each other are the primary causes. These include, in no particular order, (1) the mix of fuels used to generate power in the region and, in particular, the region's reliance on natural gas; (2) the industry structure, electric retail suppliers, and standard service procurement practices in volatile periods; (3) federally approved wholesale market rules; (4) state-mandated energy procurements; (5) state renewable energy policies; (6) system benefit charges; and (7) transmission projects.

Since 2015, the legislative response to these ongoing high electric rates has included (1) promoting energy efficiency and conservation, (2) enacting consumer protections in the retail supply market, (3) expanding renewable energy incentive programs, and (4) authorizing the Public Utilities Regulatory Authority (PURA) to establish a low-income discount rate.

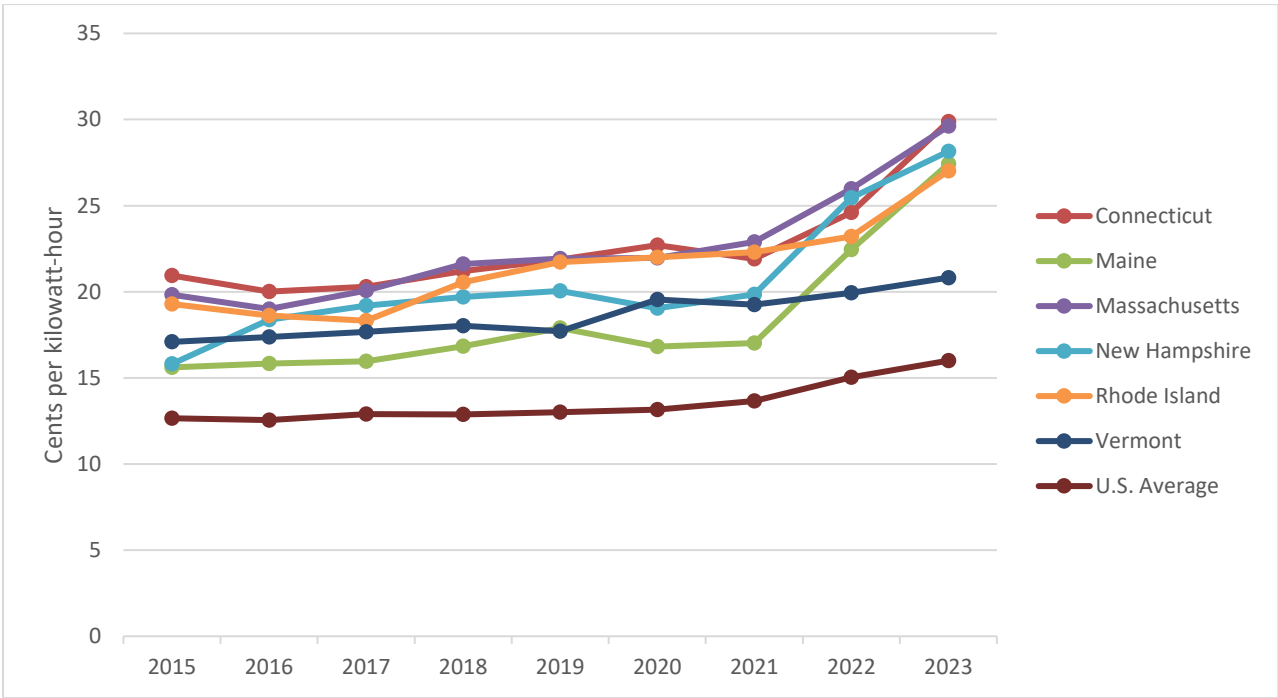
More specifically on rate regulation, the legislature has enacted two wide ranging regulatory reform bills in 2020 ([PA 20-5, September Special Session \(SSS\)](#)) and 2023 ([PA 23-102](#)). Among many other provisions, these laws prohibit utilities from recovering certain costs in their rates and give PURA more time and more powers in conducting its rate cases.

Connecticut’s High Electric Rates

As of November 2024 ([latest available data](#) from the U.S. Energy Information Administration (EIA)), Connecticut had the fourth highest average residential retail rates in the country (behind Hawaii, California, and Massachusetts). As previous reports on this topic have noted, Connecticut’s electric rates have been higher than most other states for some time.

High rates are a regional phenomenon, and all six of the New England states plus New York are among the 10 states with the highest rates. Figure 1 below shows average annual retail rates in New England states compared with the national average.

Figure 1: Average Retail Price of Electricity in New England States



Source: [EIA](#)

Factors Contributing to High Electric Rates in Connecticut

Fuel Mix

New England depends more heavily than other regions on natural gas as a generating fuel. [According to ISO-New England](#), higher natural gas prices explain why the New England region exhibited the highest average energy prices when compared to other ISO markets in the eastern half of the country. The region's reliance on constrained interstate pipelines and liquefied natural gas (LNG) imports leads to increased prices in the winter when demand for natural gas for use in heating increases and supply remains limited.

[A 2024 EIA analysis](#) noted that from 2013 to 2023, prices rose fastest in most of New England and California, increasing more than 2% annually. EIA attributes this in part to (1) higher natural gas and fuel oil costs and (2) higher transportation costs for fuels due to competition for limited pipeline infrastructure into the region.

While higher supply rates in winter have become expected, recent events have further exacerbated rate spikes driven by reliance on natural gas. In 2022 and 2023, Russia's invasion of Ukraine caused demand for LNG to spike. Because generators use LNG when their access to natural gas is constrained, this increase in demand led to further price increases that caused supply rates (and standard service rates, see below) to increase significantly.

Industry Structure: Standard Service and Retail Suppliers

Connecticut's deregulation of the electric industry in the late 1990s required the electric companies to sell off their generation assets and buy power on the regional wholesale market (see below). While PURA continues to set rates for transmission and distribution, using a cost-of-service approach or performance-based regulation, the regional wholesale power market is under the jurisdiction of the Federal Energy Regulatory Commission (FERC), which approves the rules governing this market. The electric companies pass on the cost of power they buy on this market to their standard service offer customer, but do not earn a rate of return on their purchased power.

Customers who do not receive their power through the companies' standard service offer choose to instead purchase their power through retail suppliers, who also buy their power on the regional wholesale market. Prices from retail suppliers can vary widely and are offered through a variety of fixed and short-term pricing plans.

To the extent customers are paying more than necessary by contracting with an electric supplier, that may be increasing Connecticut's average electric rates. [A 2023 analysis from the Office of](#)

[Consumer Counsel](#) showed overpayments, ranging from \$34 million to over \$59 million in the aggregate in each year from 2015 to 2021. However, customers that used electric suppliers saved money when compared to customers on the standard service in 2022 (over \$12 million) and 2023 (over \$103 million).

In [a subsequent report to the legislature](#), PURA attributed high standard service prices during this period to volatility in natural gas prices (discussed above), but also reviewed standard service procurement practices and identified changes that could lower prices (e.g., starting the procurement more than one year in advance) (Table 11, p. 48).

Regional Wholesale Market Rules

Prices set in [ISO-New England's electric energy markets](#) are not based on power plants' cost of service. Instead, ISO-New England estimates the amount of power needed and accepts bids to provide this power, beginning with the lowest bid, until it has enough supply to meet projected demand. All of the winning bidders are paid the price charged by the highest selected bidders. This price is often set by plants that use natural gas.

When the wholesale market is tight, these market rules can lead to rates that are higher than would apply under a cost-of-service approach. On the other hand, when there is ample generation supply on the market, the rates produced can be less than those that a cost-of-service approach may yield. This is because plant owners will provide power, even at rates that are below their full cost of service, so long as they are able to at least recover their fuel and other operating costs.

In the past, Connecticut utilities have asserted that the cost-of-service approach for existing and new power plants in the state would have resulted in lower rates when compared to market outcomes, but we found no recent analysis on this point. Because the markets are regional, New England states with higher electric demand may push prices upwards, whereas Connecticut generally supplies more electricity than it demands. Additionally, ISO-New England's market structures, which generally must be fuel neutral and favor the lowest cost bidders, may have contributed to a lack of fuel diversity in the region.

Procurements

In 2017, the legislature authorized the Department of Energy and Environmental Protection (DEEP) to direct electric distribution companies (EDCs, i.e., Eversource and United Illuminating) to procure energy from zero-emissions sources in an effort to keep the company that owns Millstone Power Station from closing the plant. Under the resulting contract, the EDCs pay a set price for energy over 10 years. The EDCs can resell the purchased energy and recover costs (e.g., the difference between

the purchase price and the sale price) from ratepayers through a reconciling component of their bills (or distribute the profits to ratepayers if they resell the procured energy for more than the purchase price). Thus, the cost or benefit of the procurements is borne by ratepayers.

During periods of high wholesale prices, the Millstone contract has resulted in a credit to ratepayers. However, more often, the contract price has been higher than wholesale prices. Millstone-related costs contributed significantly to a rate increase in July 2024.

Several other procurements have been authorized and implemented for other resources, including solar facilities, fuel cells, and offshore wind. In the long term, diversifying the fuel mix may alleviate the region's dependence on natural gas and the associated rate impacts of that dependence. These procurements may also help the state meet its carbon emissions goals and have other positive environmental effects. However, in the short term, to the extent projects receive contract prices that exceed market prices, these procurements may increase electric rates when the price difference is passed on to ratepayers.

Renewable Energy Policies

While a transition to renewable or zero-carbon energy may, in the long term, mitigate rate impacts currently driven by the region's reliance on natural gas, programs to accelerate this transition also impact rates in the short term. According to [a 2024 report from the Lawrence Berkeley National Laboratory](#), for states with renewable portfolio standards (RPS) that require a certain portion of energy to come from clean energy sources, the average cost of compliance is 4% of an average retail electric bill. The report estimates that cost for Connecticut at just above 5%. Similarly, participation in the Regional Greenhouse Gas Initiative can impact rates more in participating states (including all of New England) than in states that do not have similar programs.

Systems Benefit Charge (SBC)

By law, the SBC reimburses Eversource and United Illuminating for various public policy mandates generally related to customers having difficulty paying their bills ([CGS § 16-245](#)). This charge varies over time and by utility based on the utility's expenses for the covered costs. The SBC has recently increased, due in part to extended hardship protections during the COVID-19 pandemic.

Transmission Projects

Transmission lines move electricity long distances at high voltages from generation sources to distribution systems. Transmission owners receive payment through rates determined by FERC. PURA does not set transmission rates for Connecticut but instead passes these FERC-determined rates through to Connecticut ratepayers. [According to ISO-New England](#), transmission spending in

the region was approximately \$11.2 billion from 2022 to 2023, with another \$1.5 billion planned through 2027 (pp. 23-24). ISO-New England notes that these upgrades have reduced congestion and certain other costs. However, according to [consumer advocates in New England states](#), transmission rates in the region have doubled in the last 10 years. These advocates have called for reforms in transmission planning processes, particularly with regard to “asset condition projects” (i.e., repairing, replacing, and upgrading existing high-voltage transmission lines).

At the same time, opposition in various states to new transmission projects has impeded bringing electric supply into the region that could help lower supply prices.

Legislative Response

Since 2015, the legislature has focused on limiting the overall cost of electricity by, among other things, (1) promoting energy efficiency and conservation, (2) enacting consumer protections in the retail supply market, (3) expanding renewable energy incentive programs, (4) enacting regulatory reforms, and (5) authorizing PURA to establish a low-income discount rate. Notably, in recent years, the legislature has enacted two wide ranging regulatory reform bills in 2020 ([PA 20-5, SSS](#)) and 2023 ([PA 23-102](#)). Below are brief summaries of each year’s public acts since 2015 that could affect electric rates. (For a similar list of legislative actions from 2008 to 2014, see OLR Report [2015-R-0108](#). A complete list of energy and utility-related laws for each year can be found in [OLR’s Acts Affecting Energy and Utilities reports](#).)

2015

[PA 15-5, June Special Session \(JSS\)](#), § 105, requires PURA to adjust an EDC’s residential fixed charge so that it only recovers the fixed costs and operation and maintenance expenses directly related to metering, billing, service connections, and providing customer service.

[PA 15-5, JSS](#), §§ 102 & 103, authorizes a pilot program to investigate how distributed energy resources can be reliable and efficiently integrated into the distribution system to maximize value to the electric grid, electric ratepayers, and the public.

[PA 15-90](#) prohibits retail electric suppliers from entering into variable rate contracts for residential electric generation services or automatically renewing these contracts.

[PA 15-107](#) allows the DEEP commissioner to issue multiple solicitations for long-term contracts for various energy resources.

2016

[PA 16-135](#) requires EDCs to integrate electric vehicle charging load projections into their distribution planning.

2017

[PA 17-73](#) prohibits the Connecticut Municipal Electric Energy Cooperative from holding out of state meetings and establishes the position of municipal electric consumer advocate.

[PA 17-64](#) gives customers more time to cancel a renewed contract with a retail electric supplier without paying a fee.

[PA 17-144](#) (1) makes several changes to the Class II renewable portfolio standard, including limiting which types of facilities qualify as Class II sources and lowering the alternative compliance payment and (2) extends the Low Emission Renewable Energy Credit and Zero Emission Renewable Energy Credit (LREC/ZREC) program, which requires EDCs to enter into contracts with certain renewable projects.

2018

[PA 18-50](#), among other things:

1. expands the types of technologies considered Class I in the renewable portfolio standard;
2. replaces traditional net metering and the LREC/ZREC program with clean energy programs (Residential Renewable Energy Solutions (RRES) and Nonresidential Renewable Energy Solutions (NRES));
3. extends and expands the state's RPS to increase each year until it reaches 40% on January 1, 2030; and
4. reconfigures Conservation and Load Management (C&LM) funding.

[PA 18-81](#) reduces by \$10 million a transfer from C&LM funds to the General Fund.

[PA 18-82](#) expands the state's greenhouse gas reduction goals.

2019

[PA 19-71](#) authorizes DEEP to solicit proposals for up to 2,000 megawatts (MW) of offshore wind.

2020

[PA 20-5, SSS](#), among other things:

1. requires PURA to develop and adopt a performance-based regulation framework;
2. extends PURA's deadlines for EDC rate case decisions by 200 days;
3. requires PURA to consider whether to make a utility company's rate recovery for certain executive and employee compensation dependent on the company meeting performance targets;
4. allows PURA to consider implementing an interim rate decrease, low-income rates, and economic development rates for EDC customers;
5. extends PURA's deadline to approve or disapprove certain types of utility company debt;
6. requires proportional representation for Connecticut on utility boards of directors and extends hearing and approval deadlines for PURA in proceedings to approve mergers;
7. prohibits EDCs from recovering costs related to PURA rate-making hearings;
8. raises the limits on civil penalties for EDCs that fail to comply with any standard related to emergency preparation or service restoration;
9. requires EDCs to give residential account credits and compensation for spoiled food and medicine during prolonged service outages;
10. allows PURA to order utilities to pay customers restitution for failure to comply with laws, orders, or regulations;
11. requires DEEP to study the state's reliance on ISO-New England's wholesale energy markets; and
12. establishes tax nexus rules and registration and licensure exemptions for certain out of state workers who perform disaster-related work on critical infrastructure.

2021

[PA 21-118](#) increases Class III RPS requirements.

[PA 21-53](#) sets energy storage deployment goals, requires DEEP to solicit proposals for energy storage projects, and requires PURA to initiate a proceeding to implement programs and funding mechanisms for energy storage.

[PA 21-48](#) requires DEEP to establish an energy efficiency retrofit grant program.

[PA 21-43](#) imposes labor and wage requirements on certain renewable energy projects.

2022

[PA 22-5](#) requires the state to eliminate greenhouse gas emissions from electricity supplied to the state's electric customers by January 1, 2040.

[PA 22-14](#) expands the RRES and NRES programs.

[PA 22-55](#) restricts utility ownership of energy storage systems and requires PURA to authorize EDCs to recover their prudently incurred costs for these system during the company's next rate case.

[PA 22-78](#) allows currently operating in-state nuclear facilities (Millstone) to build new nuclear facilities by exempting them from the state's moratorium.

2023

Among other things, [PA 23-102](#):

1. gives PURA more discretion in how it orders EDCs to decouple their distribution revenues from their sales volume;
2. prohibits utilities from recovering certain costs through their rates, including lobbying, advertising, entertainment and gifts, and costs for participating in PURA rate proceedings and sets a related reporting requirement;
3. sets procedures and conditions for PURA to approve a settlement in a rate amendment proceeding;
4. prohibits Eversource from using an on-bill reconciling mechanism to recover certain costs between rate proceedings;
5. requires a unanimous vote by PURA's commissioners to approve an application to reopen a rate proceeding and lowers the threshold for PURA to hold a hearing on the need for an interim rate decrease;
6. gives PURA greater discretion to determine how certain EDC overearnings are returned to customers;
7. creates a program through which a stakeholder group in a PURA proceeding may have certain expenses paid by the company that is subject to the proceeding;
8. requires PURA to study the process for procuring power generation for standard service and supplier of last resort service;

9. changes eligibility criteria and time frame for the Matching Payment Program and gives PURA greater discretion in allowing EDCs to recover their costs;
10. allows hardship customers to contract with a retail electric supplier, so long as the contract is for no more than the standard service rate;
11. requires DEEP to study issues related to energy supply, including the process for and best practices for certain power purchase agreements and the capability of the state's gas supply system;
12. creates the Connecticut Council for Advancing Nuclear Energy Development;
13. expands Class I renewables by (1) including nuclear generating facilities built on or after October 1, 2023, and (2) increasing the maximum capacity of certain eligible run-of-the-river hydropower facilities; and
14. increases the portion of the Class I RPS requirement that may be met with large-scale hydropower under certain circumstances.

[PA 23-170](#) increases the Class II alternative compliance payment.

2024

Among other things, [PA 24-38](#):

1. authorizes DEEP to solicit proposals from certain run-of-the-river hydropower projects for up to 20 MW and
2. requires DEEP to coordinate with other New England states when soliciting proposals from nuclear facilities.

[PA 24-151](#) (1) requires PURA to develop a program to encourage solar facility and energy storage installation at public schools and (2) expands DEEP's multifamily housing retrofit pilot program to allow DEEP to provide grants in addition to loans for energy efficiency, among other things.

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