

TODAY'S ELECTRICITY SUPPLY

Providence, Rhode Island

New England Power Generators Association
2016





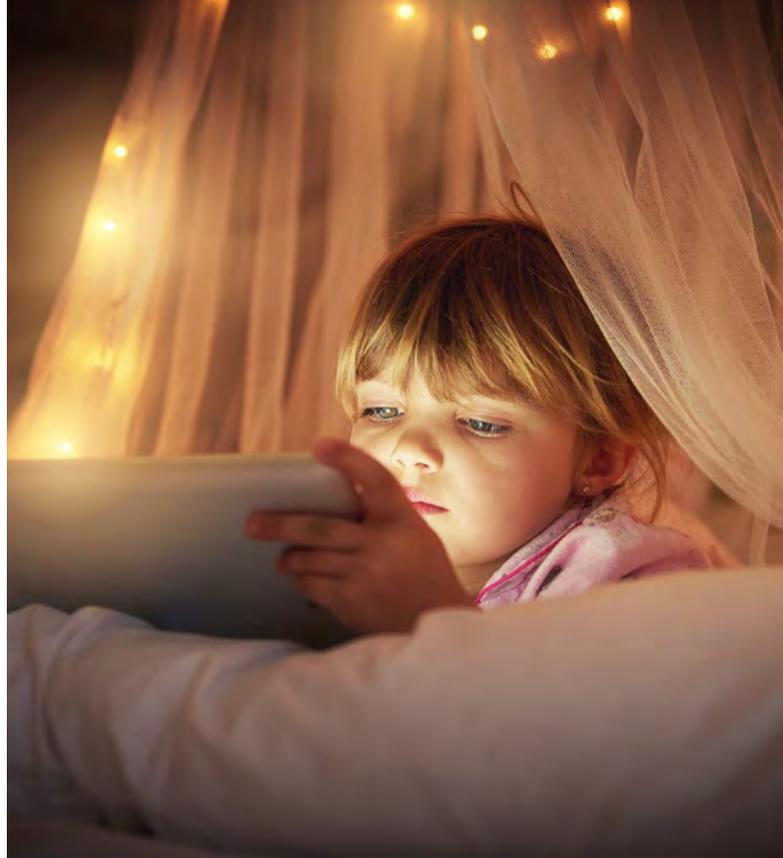
THE POWER OF COMPETITION

Electric generators compete to serve consumers reliably, at the lowest price and with lower emissions

New England's competitive electricity generators have been powering our region's homes, businesses and the economy itself for more than 15 years. Today, power plants in New England are not owned by utilities but instead must compete against each other in the wholesale electricity market with no guaranteed cost recovery. New England was a leader in moving to the competitive electricity market and away from monopoly utility control, which saw guaranteed utility profits and consumers footing the bill for expensive project cost overruns and delays.

Since competition was introduced in the electricity industry, more than \$12 billion in new investment has come into New England to build new facilities, enhance environmental controls and refurbish plants. These investments are being made without state subsidies, without any state-backed long-term contracts and without guaranteed cost recovery.

Power plants in New England employ nearly 5,000 workers and provide



approximately \$300 million in state and local taxes. New projects represent additional thousands of construction jobs and tens of millions of dollars in state and local taxes funding roads, schools, hospitals and other vital municipal services. Being located in local communities, they also use area contractors and businesses for everything from repair work to accounting, janitorial services to electricians. With thousands of employees who live and work here, competitive power generators are committed to supporting their local communities.

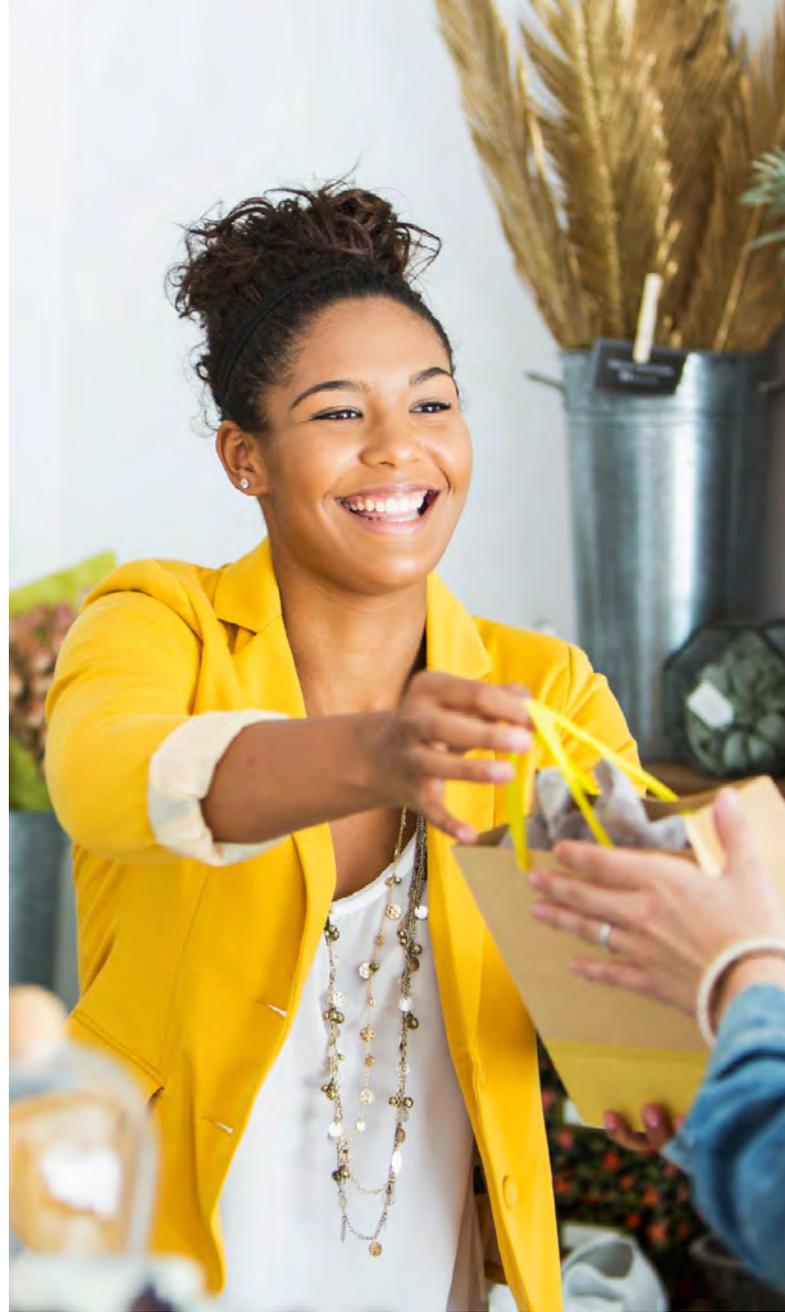
New England's competitive power generators are committed to continuing to provide value for consumers.

VALUE FOR CONSUMERS

Stiff price competition is driving tremendous benefits across the region

Since 2003, the wholesale price of electricity in New England has actually decreased by 30%, when adjusted for inflation. At the same time, the prices of other common household goods, such as a pound of ground beef or coffee, have risen by more than 60%.

Of course, year-to-year and seasonal fluctuations in prices occur, but the wholesale electricity prices produced by New England's power plants remain cost competitive for the region's households and businesses. The promise of competitive markets has held true with lower risks to consumers and maximizing the investments in power plants in the region.



NEW ENGLAND power generators deliver competitive electricity costs for consumers, create thousands of high-paying local jobs and operate one of the cleanest generation fleets in the country—all without rate payer subsidies or government support.

PERCENTAGE CHANGE IN ISO-NE WHOLESALE ELECTRICITY PRICES COMPARED TO CHANGE IN OTHER COMMODITIES PRICES SINCE 2003



- ISO-NE Average Day Ahead LMP
- Lb of Ground Beef
- Lb of Coffee
- Orange juice
- Cable TV - Expanded Basic Service

Commodity data obtained from BLS CPI Components; Cable TV data is from FCC Report on Cable TV Prices, Dec '14

Portland, Maine

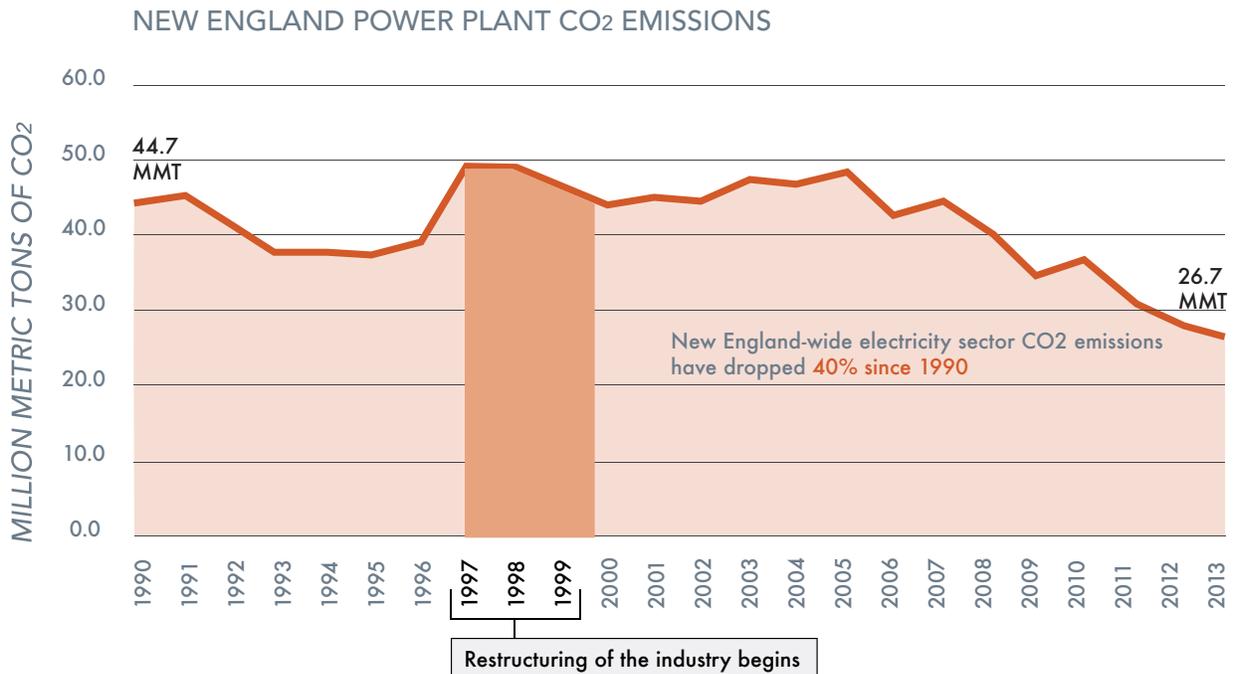


POWER GENERATORS ARE LEADING THE WAY ON LOWER EMISSIONS

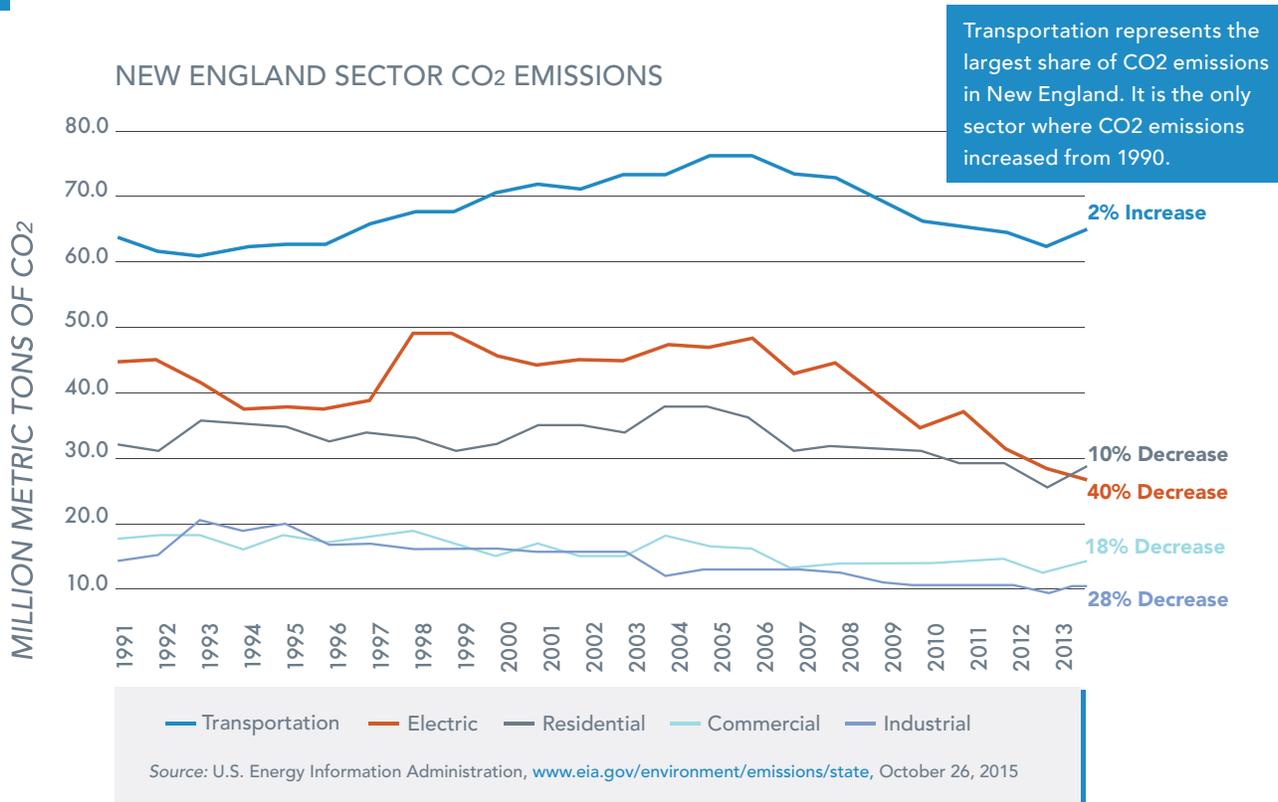
New England has some of the cleanest electricity supplies in the country

New England states have been national leaders on reducing environmental emissions through strict mandates. Today, the region has one of the cleanest electric power generation fleets in the entire country with carbon dioxide (CO₂) emissions down 40% since 1990.

The bulk of these emissions reductions have occurred since competition was introduced in the electricity industry and power plants stopped receiving the guaranteed profits and near certain cost recovery of utility ownership. Competition has driven the most efficient plants to the top improving environmental performance.



THE ELECTRICITY SECTOR has been the main force in driving New England economy-wide CO2 emissions down 16% since 1990.



THE PRESSURES of having to compete power plant to power plant has also forced dramatic increases in the efficiency of individual facilities. Since 1999, the efficiency of plants has increased by 22%, meaning electricity output that used to take 4 plants can now be produced by 3 plants. This means the need for fewer plants and much lower emissions.



A TALE OF TWO POWER PLANTS

In New England, a stark example played out demonstrating the benefits of competitive investments and the risks of rate-base utility plant ownership

Beginning in 2007, the competitively-owned coal and oil-fueled Brayton Point Power Station faced the prospect of significant state and federal environmental emissions regulations. Located in Somerset, Massachusetts, this plant is the second largest power plant in all of New England. The plant's owner made the decision that to keep the plant operating, \$1 billion in environmental upgrades would be necessary. Between

2007 and 2013, the company installed cooling towers, spray dry absorbers and baghouses, powder activated carbon injectors and equipment for catalytic reductions. That entire investment was financed on the company's balance sheet with increased costs, then incorporated into the plant's offer price into the New England electricity market.

Ultimately, falling natural gas prices left a plant designed to be operated nearly 24 hours a day, seven days a week, to produce only 19% of the energy it was capable of generating in 2014. Rather than being able to recover the environmental investments, let alone earn a profit on them, the nearly \$1 billion investment became a sunk cost. The plant is now slated to retire.

Consumers have not had to pick up a single dollar of the ill-fated refurbishment costs for Brayton Point.



Brayton Point Power Station
in Somerset, Massachusetts

Merrimack Power Station in Bow, New Hampshire



In Bow, New Hampshire a very different scenario has played out. In 2006, Public Service Company of New Hampshire (a utility now owned by Eversource Energy) urged the New Hampshire legislature to pass enabling legislation for it to invest in a scrubber on its coal-fired Merrimack Power Station to cut sulfur dioxide emissions. At the time, PSNH told the legislature that it expected the environmental controls to cost \$250 million.

As construction began those cost projections quickly proved to be dramatically wrong. The Merrimack scrubber was ultimately completed at a cost of \$420 million – a nearly 70% cost overrun. Merrimack has faced similar electricity market economics as Brayton

Point with a plant designed to operate as an around-the-clock resource today running as a rarely deployed backup resource. However, in stark contrast to Brayton Point, because the owner of Merrimack is a regulated utility, it is PSNH customers, and not the plant's owners, that face the risk of both picking up the \$420 million tab, but also providing a 9.81% profit to PSNH.

The utility was ultimately 70% off its cost projections for the project despite the fact that the projections were made just 5 years prior. The cost overruns associated with this project, along with the PSNH plants being undercut by competitive wholesale market pricing, now has the utility looking to sell its ratebase power plants.

INVESTING IN NEW ENGLAND'S FUTURE

Generators are powering the economy forward with state of the art plants and major improvements at existing facilities

New England's electricity market is transitioning as older facilities are retiring and investments are being made for the next generation of power supplies. Today, billions of dollars worth of new plants are being constructed, developed and proposed in New England. Nearly all of these facilities are doing so without state subsidy or state contracts and with investors bearing the costs and risks associated with that construction, not consumers.

This isn't the first time this has been done either. The market has demonstrated an

ability to drive this type of investment in the past – 14,000 megawatts of plants have been built in New England since the late 1990s. That represents nearly half of the generation capability of the entire electricity market. New England is now in the first build cycle for electricity supply in over a decade.

Plants are being built with state-of-the-art technology to be some of the most efficient, cleanest and most flexible facilities in the world. They not only provide price competition but are specifically designed to help meet an evolving power grid with more rooftop solar, windmills, electric vehicles and other distributed emerging technologies that require power plants to quickly respond.

As electricity supplies change, one of the biggest benefits of the competitive market in New England is that consumers have not been on the hook for poor investments. Winners and losers are not, and should not be, artificially chosen by the government in the marketplace. Instead, those plants that can operate most efficiently, at the lowest price and meet all environment regulations, compete against each other to serve consumer needs every single day.

These plants are there when you turn on your lights or plug in your phone. They will also be there as the way electricity is used changes, whether for charging your electric vehicle or backing up the solar panels on your roof.

New England's competitive electricity generation industry is the engine powering our economy.





Hartford, Connecticut



For more information visit
nepga.org



Follow us on twitter
[@nepowergen](https://twitter.com/nepowergen)

Brookfield

