

Energy Efficiency:

The indigenous resource that saves Connecticut residents and businesses money, creates jobs, boosts the economy, and improves the environment



Energy efficiency is one of the cheapest and easiest ways for Connecticut residents and businesses to save money through lowered energy bills, while creating in-state jobs, boosting the local economy, and improving the environment. Moreover, energy efficiency is an indigenous resource available in Connecticut's homes and buildings—ready to be mined for potential savings.



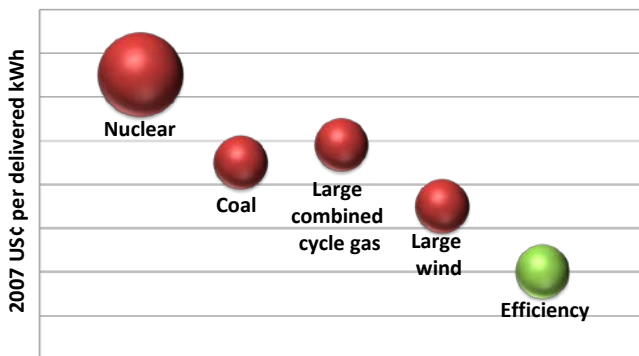
Energy efficiency means using less energy to do the same amount of work through technology, such as a compact fluorescent light bulb (CFL), adding insulation to a home, or using an ENERGY STAR rated appliance. Efficiency differs from conservation, which is a behavioral change—like turning off the lights or lowering the thermostat—but both efficiency and conservation are complementary tools to help reduce energy consumption. Energy efficiency has many immediate benefits. For example, a compact fluorescent light bulb (CFL):

- Uses less energy: A CFL uses 1/3 the electricity of a traditional bulb to produce the same amount of light and lasts 10 times as long.
- Reduces pollution: By using less energy, every CFL could cut carbon emissions by more than 1,000 pounds over its lifetime, because much of the electricity used to provide light in Connecticut's comes from burning fossil fuels.
- Saves consumers money: Lighting accounts for 15% of an average household's electricity bill. Replacing just one standard 100W bulb with a CFL saves about \$23 per year.

The Connecticut Energy Efficiency Fund (CEEF) was created by the General Assembly to address our energy needs and costs, and it has helped residents, businesses, and state and local government use energy more efficiently through energy assessments, rebates, educational initiatives, and other programs. In 2009 alone, these programs resulted in load savings of 34.8 MW and one-year energy savings of 222.5 million kWh, which will continue on to save residents and businesses 2,500 million kWh over the installed measures' lifetimes. Since 1998, Connecticut's efficiency programs have delivered energy demand reductions equivalent to the generating capacity of a 600 MW

power plant. However, in recent years, the General Assembly has diverted efficiency programming dollars for other purposes, and state agencies have resisted investing in capturing all cost-effective efficiency, as is required by law—and as our neighbors Rhode Island and Massachusetts are doing. While its benefits are profound, energy efficiency has been dramatically underutilized in the State because it is often misunderstood. The following examples seek to dispel common myths and misconceptions about energy efficiency.

Relative cost of saving or delivering 1 kWh of new electricity at the retail meter



MYTH: Energy efficiency improvements are expensive and will cost consumers money.

FACT: Cost-effective energy efficiency investments, such as those called for by Connecticut law (Conn. Gen. Stat. § 16-280).

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The cheapest kWh of electricity is the one not used. (Adapted from Amory Lovins and Imran Sheikh's Report No. E08-01, *The Nuclear Illusion*, published by RMI (2008), at 13.)



21 Oak Street Suite 202 Hartford, CT 06106 (860) 246-7121 admin@env-ne.org
Rockport, ME / Boston, MA / Providence, RI / Hartford, CT / Ottawa, ON, Canada
www.env-ne.org / Daniel L. Sosland, Executive Director

ENE (Environment Northeast) is a nonprofit organization that researches and advocates innovative policies that tackle our environmental challenges while promoting sustainable economic development. ENE is at the forefront of state and regional efforts to combat global warming with solutions that promote clean energy, clean air and healthy forests.

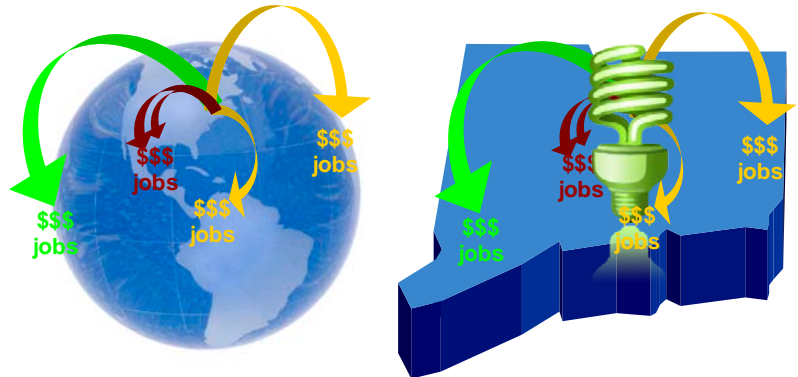
Stat. §§ 16-245m and 16a-3a) cost less per kWh than generating that kWh of energy.

We hear a lot about Connecticut’s high electric rates, but the easiest, quickest, and most available way for Connecticut residents and businesses to save money on energy costs is to consume less energy through efficiency—meaning lower *bills* (since bills = rate x consumption). Efficiency satisfies consumers’ energy needs at the lowest cost even though it requires an up-front investment to cover the cost of the energy efficiency measures. The fact is, for every \$1 invested in efficiency, ratepayers avoid paying \$3-\$4 for the same amount of energy from power plants. In other words, capturing all cost-effective efficiency would save Connecticut’s residents and businesses from sending over \$400 million every year to power plant owners.

MYTH: Savings from energy efficiency are minimal.

FACT: Investing in energy efficiency can save the State’s consumers hundreds of millions of dollars each year on their energy bills, which leaves them with more money to spend in-state, thus creating in-state jobs and boosting the Gross State Product.

While Connecticut must import coal, natural gas, and oil used to meet energy needs, energy efficiency is a resource that we have in abundance. **By locating and “mining” untapped energy efficiency in Connecticut’s homes and buildings, we can invest in ourselves.**



We send hundreds of millions of dollars out of state for coal, natural gas, and oil—as well as jobs—to sustain our energy consumption. Energy efficiency keeps those dollars and jobs in Connecticut.

ENE’s research shows that efficiency programs help our economy and environment by:

- Keeping jobs and money in Connecticut: We send hundreds of millions of dollars out-of-state and overseas for fossil fuels to generate electricity and heat our homes. Efficiency programs support jobs both in and beyond the energy sector.
- Lowering our bills: Efficiency programs help consumers and businesses use less energy, meaning lower energy bills.
- Lowering energy prices: When we use less electricity as a whole, we reduce our demand for the most expensive sources, meaning lower electric prices for everyone.
- Supporting local businesses: Much of the savings Connecticut residents will realize from reduced energy bills will be spent in-state. Businesses will improve their bottom lines, helping them to be more competitive and leading to expansion and new jobs.
- Lowering our emissions: More efficiency means power plants run less and less fuel is used to heat buildings, which reduces emissions of greenhouse gases and other pollutants.

The table below demonstrates some of the economic benefits Connecticut stands to gain from investing in energy efficiency as a first resource.

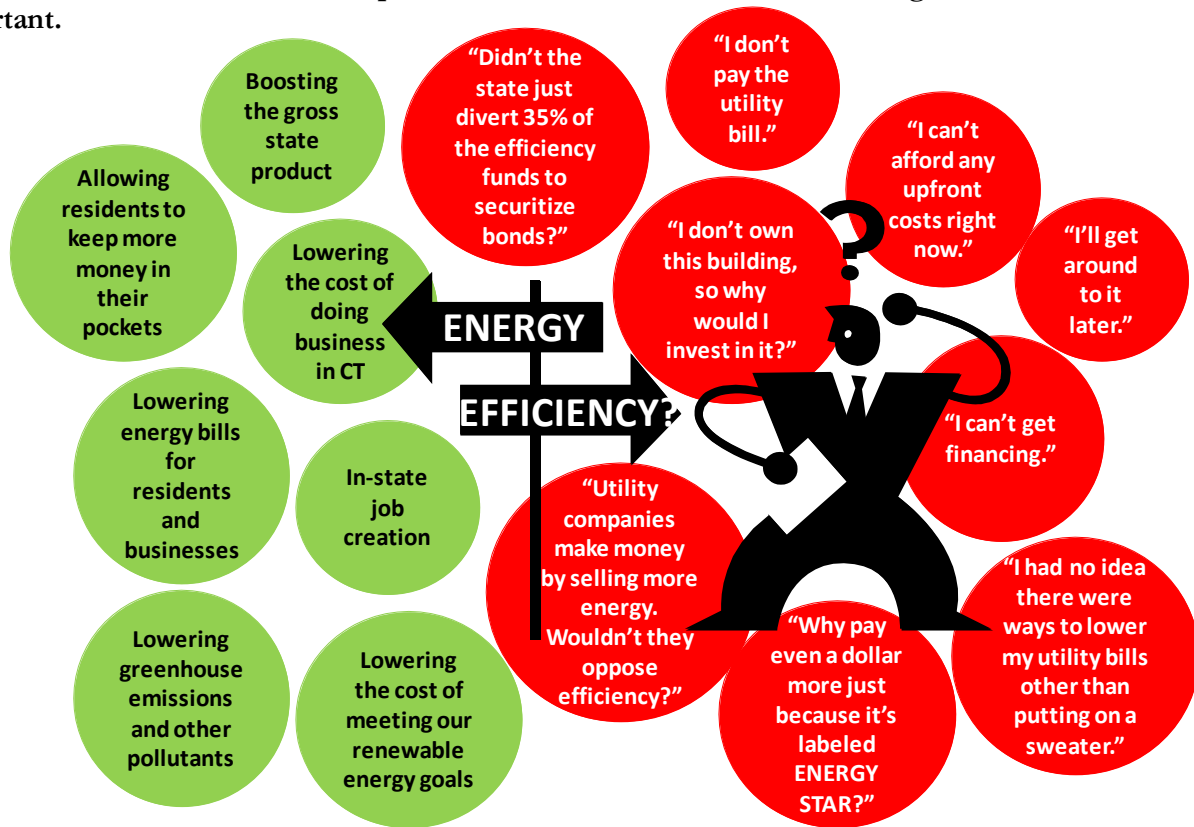
Summary of Connecticut Economic Impacts

	Electric	Natural Gas	Unregulated Fuels
Percent of GSP Increase Resulting from Efficiency Spending	11%	10%	8%
Percent of GSP Increase Resulting from Energy Savings	89%	90%	92%
Dollars of GSP Increase per \$1 of Program Spending	5.7	7.0	7.1
Percent of Employment Increase from Efficiency Spending	15%	14%	11%
Percent of Employment Increase from Energy Savings	85%	86%	89%
Job-Years per \$Million of Program Spending	41	45	48

In 2008 dollars. Adapted from Table 1 from Energy Efficiency in Connecticut: Engine of Economic Growth, available at http://env-ne.org/public/resources/pdf/ENE_EE_ECON_CT_FINAL.pdf.

MYTH: If savings from energy efficiency are so significant, Connecticut's residents and businesses will make the investments on their own.

FACT: Unfortunately, even though spending money to install more efficient lighting, motors, appliances, etc., saves money overall, it's often difficult for consumers and businesses to know where to begin or what the best choices are. It also generally requires an initial investment or commitment. As a result many efficiency investments don't happen because many people don't understand the potential savings, aren't interested in making an investment in a building they don't own, can't afford that first cost, or because they don't have the time to become an efficiency expert. **That is why comprehensive efficiency programs that help customers make smart choices, reduce their upfront costs with incentives, and encourage them to act are so important.**



Comprehensive efficiency programs can address consumers' questions and concerns by helping them to overcome behavioral and informational barriers, which in turn, helps Connecticut realize the many economic and environmental benefits that efficiency can bring.

Connecticut policy makers long ago recognized the wisdom of energy efficiency and decided to require electric utilities to offer these programs and services to consumers through CEEF. They recently adopted a policy that calls for investments in all cost-effective efficiency measures, which over time will save consumers billions of dollars on their electric bills. Unfortunately, and to the detriment of Connecticut consumers and the State's economy, this has not been implemented. That failure will cost Connecticut consumers over \$400 million a year, money that could have been available to purchase other goods and services instead of electricity.

Our neighboring states of Massachusetts and Rhode Island have adopted policies that require all cost-effective investments in efficiency, and they are currently tripling and quadrupling program investments that will save their residents and businesses hundreds of millions of dollars a year, leaving Connecticut at a competitive disadvantage.

Connecticut's new governor and legislature can rectify the failure of our regulatory agencies to follow state policy by strengthening the existing law to ensure that regulators deliver the benefits to Connecticut consumers and the State's economy that policy makers intended when they first directed the DPUC to prioritize efficiency investments.

For Further Information:

Joyce E. Kung, Staff Counsel, (860) 246-7121, jkung@env-ne.org