

Energy Efficiency: Engine of Economic Growth

Frequently Asked Questions – October 2009



ENE's report, "Energy Efficiency: Engine of Economic Growth," quantifies the significant, economy-wide benefits of large-scale increases in energy efficiency investments. ENE's study modeled expansions in investments to approximate capturing all cost-effective efficiency in the 6 New England states (CT, MA, ME, NH, RI, VT) for 3 energy types (electricity, natural gas, unregulated fuels – oil, propane, and kerosene) with investments expanding over a 15-year period.

Why did ENE conduct this study?

Decisions about future of our energy system should be made with strong environmental and economic goals in mind and based on solid data that quantifies costs and benefits. ENE and others have long supported efficiency because of its proven ability to produce savings and reduce greenhouse gas emissions in the near- and long-terms. This study takes the analysis to the next level, showing that the dollar savings from reduced energy use will drive the economy and bring about benefits that will be widespread and felt immediately.

What are the key findings?

Increases in Gross State Product (GSP) from the three modeled program types (electricity, natural gas, and unregulated fuels) would total \$183 billion, if each program were implemented in all states at once. Total program spending over the 15 years would equal \$27 billion. The increase would create about 1,392,000 job-years (one full-time job for one year). The total investment modeled to produce these results is \$16.8 billion for electricity; \$4.1 for natural gas and \$6.3 for unregulated fossil fuels including heating oil, propane and kerosene.

What model was used and how does it work?

The study uses a proprietary, multi-state policy forecasting tool by Regional Economic Models, Inc. (REMI) to project macroeconomic impacts of policy options as compared to a baseline. For this study, the model operates using assumptions about efficiency program budgets, costs to achieve energy savings, and energy prices and consumption levels during the modeled period. ENE developed modeling assumptions based on conservative extrapolations from current and proposed efficiency program data.

What is the scope of the study?

The report analyzes the direct and economic impacts of all six New England states expanding existing electricity and natural gas efficiency programs and creating or expanding programs for heating oil and propane (unregulated fuels) customers over a 15 year period. Programs expand significantly in scale and scope to approximate conservatively a level of investment needed to procure all cost-effective (lower cost than supply) efficiency.

Who conducted the study?

The project modeling team consisted of analysts from ENE and Economic Development Research Group (EDR Group), that provides consulting and software solutions for evaluation of economic impacts and development opportunities. The team was assisted by an informal advisory group of efficiency experts and program administrators from the region, whose input was solicited in the development of the base assumptions and on the draft report. For more information see www.env-ne.org or www.edrgroup.com

8 Summer Street, PO Box 583 Rockport, ME 04856 (207) 236-6470 admin@env-ne.org
Rockport, ME / Boston, MA / Providence, RI / Hartford, CT / Portland, ME
Charlottetown, PEI, Canada / www.env-ne.org / Daniel L. Sosland, Executive Director

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.

How is this study consistent with or different from other assessments of efficiency?

Other assessments typically weigh the costs to the program participants with the savings to the participants. ENE's study takes the analysis a step further to show the full impacts of those savings on the wider economy. This study found that the economic benefits from energy savings, which would be reflected in greater disposable household income and increased competitiveness of businesses due to lower costs, accounted for approximately 90% of the total impacts.

How will this report and data be used?

States, the federal government, utilities, consumers and the regional electric grid operator are each examining new approaches to energy issues. This report will help demonstrate that energy efficiency not only benefits those who directly participate in efficiency efforts, but has much broader economic and employment benefits as money saved by lowering energy bills enters our local economies – rather than going out of region to support imported fuels. ENE hopes this report will provide decision makers and stakeholders with additional information to show that efficiency should be a top investment priority and that funding sources dedicated to efficiency programs should be expanded.

What are some examples of opportunities happening now that this study could help influence?

- CT, MA and RI are evaluating and beginning proposals for statewide efficiency ramp-ups for electricity and natural gas. ME is moving forward with newly adopted legislation requires the Efficiency Maine Trust to develop a Triennial Plan for efficiency programs in the state. This Plan must include a budget for investing electric, natural gas and oil heat programs over the next three years. VT has also significantly increased its commitment to all fuels efficiency and approved expanded programs and budgets.
- Cap and trade programs, such as RGGI – the northeast's regional program – can channel revenues to efficiency programs as a way of controlling the cost of the program.
- U.S. House energy and climate bill (*The American Clean Energy and Security Act* or "ACES") would provide federal funding directly to the states to expand or develop state, natural gas, and oil and propane energy efficiency programs, with the Senate considering expanding funding to include electric efficiency programs.

How do we know that these results would play out in reality? Are state and regional economies and infrastructure ready to handle investment money as model shows they would?

Efforts to expand efficiency are already underway in New England and the states already have entities and processes in place to put efficiency funds from federal, regional and state sources to work to bring savings to customers and reduce energy consumption. As new funding becomes available, these programs and industries can continue to grow to reach more customers and achieve further reductions. Also, the stakeholder boards in place in many states play an important role in planning; establishing goals and guidelines for expanding programs; and, ensuring that these goals are met. They allow for participation from diverse stakeholders and help to ensure that all energy customers are represented in the process and benefit from the programs.

What are reasons to invest in efficiency first – over or before other clean generation?

Most of the benefits in this study are the result of energy savings. It has been consistently shown that energy efficiency is the lowest-cost option for energy procurement – cheaper than traditional generation, and therefore significantly cheaper than alternative energy sources.

Why are large-scale commitments needed to drive customer and business investments in efficiency? And, if the benefits are so significant, why haven't states taken advantage of this resource already?

Lack of information, lack of up-front capital to invest, and other market failures are the primary reasons that we are underinvested in efficiency at this point. High-level policies that overcome these barriers are needed to drive investments. Existing efficiency programs in New England provide technical assistance, consumer outreach and education, and offer incentives to help enable customers and businesses to purchase equipment and take other measures that will help them save energy. States are gaining access to more and better information about the environmental and economic payoffs of these savings, and they have become increasingly committed to efficiency as a resource and an alternative to new generation.