Efficiency Maine:

Investing in Energy Savings and Knowledge

by Tim Vrabel

On the morning of April 3, 2008, the lobby of the Augusta Civic Center opened its doors to a focused and determined population of businesspeople as the Governor's Energy Efficiency Summit began. I served as a member of the conference planning team, and we asked ourselves the usual questions: Is this a useful and timely issue for business owners? Will they take time out of their day to come?

They certainly did. More than 540 business people and policy experts attended. At the end of a full day of case studies and panel discussions, participants were asked to comment on the proceedings. The energy professionals in the room were not surprised to hear that the business community considers energy efficiency to be a great investment. But we were struck by a new sense of urgency around the topic. The "fifth fuel," as it is sometimes described, had reached new popularity as the first fuel of choice.

During the conference, practically every breakout session and energy-related conversation dealt with projects involving Efficiency Maine. This statewide efficiency effort, which has been in place at the Maine Public Utilities Commission (MPUC) since 2002, has established itself as a cost-effective program that brings substantial energy savings to all of Maine. Since its inception, Efficiency Maine has provided incentives, technical assistance, training, and other services, which will avert the consumption of some three million megawatt hours (MWh) of electricity—enough to power 46,000 Maine homes for a decade. These efforts will save Maine business and residential consumers more than $310 million. And it will negate the emission of pollutants associated with electricity generation and climate change. The carbon dioxide (CO_2) emissions reductions from the Efficiency Maine programs are equal to removing 39,000 cars from our roads for the next 10 years.

As the conference discussions demonstrated, Efficiency Maine is the leading electric energy-saving initiative in Maine. Each year since its inception its programs have demonstrated consistently strong results by investing electric ratepayer dollars in energy efficiency, and "purchasing" those saved kilowatt hours (kWh) for an equivalent cost of three cents apiece—compared to the roughly 10 cents per kWh on the open market, using a 10-year levelized average of energy and supply cost.

The Efficiency Maine programs are funded through an assessment known as the "system benefit charge," which is less than a penny per each kWh sold by Maine electric utilities to all but the very largest industrial customers. That amounts to about $8 a year on a typical residential electricity bill.

Through these program investments, Efficiency Maine is helping consumers to understand and implement efficiency options through program incentives, training, and other avenues. By statute, Efficiency Maine then reports annually to the Maine legislature regarding the results of the program year and explains the costs and benefits of the various programs (all reports are available at efficiencymaine.com). The goal is to deliver a minimum of one dollar saved for every dollar spent. Collectively, the programs are actually delivering (and verifying) a return of three to four dollars for every dollar spent.

At the same time, Efficiency Maine has delivered its services to our state by using the smallest system benefit charge in New England, according to a review by the Consortium for Energy Efficiency (full report available at www.cee1.org/ee-pe/cee_budget_report.pdf). A February 2008 report delivered to the Connecticut Energy Advisory Board also found that

Efficiency Maine has the lowest program administrator cost per lifetime kWh saved over the 15 programs they reviewed in the Northeast (www.ctenergy.org/pdf/ECPFinal.pdf).

THE TIMES WE LIVE IN

On the morning of the 2008 conference, Charles Colgan delivered a research paper co-authored by Samuel Merrill of the Muskie School of Public Service, University of Southern Maine (USM) and Jonathan Rubin of the Margaret Chase Smith Policy Center, University of Maine. The paper framed the conversations of the day perfectly, defining three major challenges by concluding: energy prices are high and rising; Maine pays more for energy than most other states; and Maine's economy is more energy intensive than most other states (Colgan, Merrill and Rubin 2008). The potential benefits from energy efficiency are eye-opening. The report found that aggressive efficiency investments could save commercial and industrial consumers in Maine some $450 million per year in avoided energy costs at today's prices and use rates. And the report forecast other benefits from such investments: "the analysis suggests that by 2020 Maine stands to create between 1,500 and 2,500 new jobs and expand Maine's GDP by between $170 million and $260 million depending on overall energy prices" (Colgan, Merrill and Rubin 2008: 3).

Moreover, as determined in a report prepared for Maine's public advocate by Optimal Energy, Inc., and the Vermont Energy Investment Corporation (2002) even doubling the Efficiency Maine budget to $30 million would still only capture approximately 33 percent of economically achievable efficiency savings.

Maine's resources are limited to existing programs and available finance. Our options may soon be expanded with the formation of the Regional Greenhouse Gas Initiative (RGGI), with a new energy conservation budget and an active stakeholder discussion that will offer recommendations to a new legislature. But there are still many unknowns around these possibilities because each of these and other individual entities are being challenged to combine resources into one common effort for the benefit of our state.

CURRENT EFFICIENCY MAINE PROGRAMS

Business Programs

In the 2008 program year (July 1, 2007, through June 30, 2008), 690 businesses participated in Efficiency Maine programs, resulting in $54.3 million in avoided electrical cost. The business programs offer incentives and expertise for efficiency improvements in lighting systems and equipment. At the core of these programs is an effective network of 588 professional tradespeople called "trade allies" throughout Maine who get the job done on-site. Efficiency Maine depends on this group of contractors and businesses to incorporate the energy incentives into their daily business for the benefit of their customers.

Residential Programs

During fiscal year 2008, more than 1.1 million compact fluorescent lamps (CFLs) were distributed through a number of Efficiency Maine programs. This is one crucial piece of evidence that a growing awareness of efficiency options is transforming Maine's marketplace. These CFL sales and distributions alone will save Mainers more than $51.1 million over the bulbs' lifetimes.

Efficiency Maine also partners with MaineHousing, the State Planning Office, and the Office of Energy Independence and Security to offer programs to low-income families—many of them renters. These efforts involve removing and replacing outdated appliances, improving lighting, and partnering with local agencies such as community action programs to deliver services.

Other Programs

Knowing that education and training are fundamental aspects of increasing public awareness, Efficiency Maine provides a nationally certified building operator certification (BOC) program. This eight-day course takes place over a four-month period, and facility managers learn about how to apply energy-efficient technologies and ways to reduce maintenance costs. To date, the program has graduated more than 400 participants whose efforts will avert the consumption of nearly 12,000 MWh, cutting more than $10

million from their facilities' energy bills. Efficiency Maine sponsors training in additional technical areas to boost awareness of energy-efficiency opportunities, such as advanced lighting design, pumping systems, compressed air, HVAC performance, energy management planning, electric motor systems, solar thermal installation, and commercial energy auditing.

Efficiency Maine receives federal Department of Energy (DOE) funding to promote more energy-efficiency programming. The DOE money helps provide commercial and agricultural energy audits, and, in partnership with the Finance Authority of Maine, low-interest loans for efficiency investments by small businesses. Efficiency Maine also sponsors the Maine Energy Education Program and is collaborating with the Maine Mathematics and Science Alliance to deliver a comprehensive energy curriculum to grades four through eight during 2008 and 2009.

The People Who Deliver the Programs

The strongest attribute of the Efficiency Maine network is the personal commitment to energy efficiency made by the people who work in this field. First, the staff and the contractors who constitute the program management and delivery team of Efficiency Maine have a remarkable depth of technical expertise and an equally strong belief in the work they do. The broad national experience they offer combines an awareness of new technologies, an in-depth understanding of the utilities and energy world, knowledge of the business and industrial network of Maine, and an understanding of the unique regional characteristics of our state. Second, the many organizations in Maine that have committed time and resources to tracking new technologies and policies are now in a position to advance these ideas. Efficiency Maine staff and the program delivery team are actively engaged in the exchange of ideas with these organizations.

This combined knowledge and exchange of ideas offers the greatest opportunity of all. Maine is in the enviable position of having at its fingertips an experienced and talented resource base. From a practical perspective, this range of skills in the field of energy efficiency contains the solutions Maine is seeking. The state's energy decisions must involve these resources to arrive at the best possible outcome.

THE CHALLENGE

In May of 2008, the American Council for an Energy-Efficient Economy (ACEEE) published a major report which concluded, "the evidence suggests that efficiency can make an even larger contribution towards stabilizing energy prices and reducing green house gas emissions—should we choose to fully develop it" (ACEEE 2008: iii). The report also described energy efficiency as a success story that is invisible and poorly understood, which makes it likely to miss out on needed future investments.

If the state combines its collective knowledge of energy efficiency with leadership commitment, we will, first, be able to cope more successfully with our current energy predicament, and second, be able to prepare and implement policies that will prevent many of these circumstances from occurring again in Maine's future.

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The efficient use of energy is a responsibility that makes sense on many levels. Efficiency Maine's efforts are designed to serve as examples of what can be done and to verify the value of these actions. None of this effort is sustainable, however, unless each resident, business owner, or government official accepts responsibility for putting a long-term plan into effect. By infusing energy-saving decisions into our daily routines, we can continue to reduce energy consumption, save money, and help the environment at the same time. These actions are an excellent match to a Maine culture that incorporates sensible economies into our everyday lives.

Please turn the page for references and author information.

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Tim Vrabel has a 30-year background in the energy field. During the energy crisis in the 1970s, he served as an energy extension agent for the Office of Energy Resources in Aroostook County and in western Maine. He earned utility expertise by working for Central Maine Power Company for several years. Today he is employed as the deputy director of energy programs at the Maine Public Utilities Commission.