

The Regional Greenhouse Gas Initiative (RGGI) and Energy Efficiency Helping Maine

A 1950's Cape Gets Even Cozier

Case Study

#8



"After the energy upgrade, I just feel so much more comfortable in my home. Now I am even considering using the second floor as my bedroom; I never would have considered that before, because it was just too hot and stuffy."

– Emily Vail, homeowner



Efficiency Maine's Home Energy Savings Program helps homeowners complete home energy improvements that save money on heating and cooling bills year after year. Emily Vail's 1950's extended cape in Brunswick is just one of the homes that has benefitted from this program funded by the Regional Greenhouse Gas Initiative (RGGI), and it has been all the more cozy since.

For more case studies in this series, visit www.nrcm.org

RGGI and Efficiency Maine Saving Energy



At a glance

Challenges

- Heat loss through the foundation, attic, and various air leaks in the house
- Moisture in basement
- High energy bills
- Sweltering second floor in summer, drafty first floor in winter

Solutions

- Air seal basement and attic
- Insulate foundation and attic, increasing R-values to 14 and 50, respectively
- New weather stripping on windows and doors

Financial Analysis

- Project cost: \$225 for home energy audit; \$7,185 for home energy improvements
- Efficiency Maine Incentive: \$1,500
- Projected Savings: about \$600 per year (160 gallons of oil)
- Energy Reduction: 30% reduction in heating and hot water energy usage (and air leakage dropped by 45%)

Overview of Project

When Emily Vail, English teacher and Department Chair at Mt. Ararat High School, bought her first home in 2012, she was thrilled. She adored her well-maintained 1950's extended cape and quickly took to the standard homeowner chores of sprucing things up and making the space her own. After a year of homeownership, Emily attended a local Energy Fair and met DeWitt Kimball, owner of Complete Home Evaluation Services. She commissioned DeWitt for a home energy evaluation and learned how leaky her home actually was. Moisture and cold air leaked into her basement, and poor insulation made the second floor space almost uninhabitable during July and August.

Results of Project

Emily heavily researched contractors, and following DeWitt's recommendation, selected Upright Frameworks to complete her home energy upgrade. Over the span of one week in November, the Upright Frameworks team air sealed her home, adding weather stripping and caulk around doors and windows. They also installed 2" pre-painted rigid foam insulation on her basement walls, and 16" of loose fill cellulose insulation in her attic. "Upright Frameworks gave me two options for insulating the basement and foundation. I selected the rigid foam insulation rather than the space blanket-looking insulation—which was only a small difference in price—because the rigid foam is clean and bright."



A before and after test for air leakage, known as a "blower door" test, revealed that Upright had reduced the air leakage in her house by 45%! Since the improvements, Emily's house has become much more comfortable, and her oil bill has been cut substantially. A \$1,500 cash incentive from Efficiency Maine lowered the upfront cost of the project. In her words, "The house feels cooler in the fair season and more snug in the frozen season!" (As a result of DeWitt's energy audit, she even received \$1,500 back from her realtor and home inspector, who had missed several important details during the home inspection.) All in all, Emily is extremely pleased with her home energy evaluation and upgrade.



RGGI and Energy Efficiency Creating Jobs



Upright Frameworks, Wilton & Portland

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“Upright Frameworks was just terrific. I was very pleased with their thorough and efficient work. They had the whole project done in about a week’s time,” reports a happy Emily. Emily looks forward to completing additional home renovations, now that she has her home cozy and tight: “In time, I would like to get off oil completely, or at least use it only as a back-up. Now at least it’s not such a profligate use of energy to heat this house. Besides, the new insulation will complement any heating source I use now or in the future.”

“It was a pleasure to work with Emily. We do about 100 projects like hers every year, and we are always happy to make homeowners more comfortable in their homes,” said Josh Wojcik, Upright’s founder.

Bright Future for Growing Maine Company

With 20 employees, Upright Frameworks specializes in weatherization of existing buildings and new construction of energy efficient ones. The family-run business has completed projects all over southern and western Maine from Cape Elizabeth to the Rangeley Lakes region. A supportive community member, Upright Frameworks has also completed several charitable projects for local churches, residents, and nonprofits.

Josh Wojcik, founder of the family business, designed the company to implement the recommendations of independent energy evaluators, as a way of guaranteeing the high quality of his company’s work. Since founding the company in 2008, he has been cautiously building his business with the aid of the Efficiency Maine program: “The news of the rebates definitely draws customers in,” he says. “We would take the brakes off our growth if we really knew that the program’s funding would be consistent over time, and it’s finally starting to look that way in Maine.”

The Regional Greenhouse Gas Initiative (RGGI) is a market-based effort among nine states to reduce climate-changing carbon pollution from power plants and spur investments in energy efficiency and clean energy. The program began in 2009, and today delivers cleaner, more efficient electricity, and a more energy-independent and competitive economy for Maine.

RGGI-Funded Grants

Bath Iron Works
Bowdoin College
Corning Life Science
GAC Chemical
Hannaford Brothers
Huhtamaki
Irving Forest Products
Jackson Labs
Lewiston-Auburn Water Authority
Madison Paper
Maine General Health
Maine Wild Blueberry
Mid Coast Hospital
Mid State Machine
Moose River Lumber
Mt. Abram
Old Town Fuel & Fiber
Poland Spring / Nestle
Portland Water District
Pratt & Whitney
Prime Tanning
Rumford Paper Company
SAPPI Paper
Smith & Wesson
State of Maine
Sugarloaf
Sunday River Ski Resort
Twin Rivers Paper
University of Maine
University of New England
University of Southern Maine
Verso
Woodland Pulp

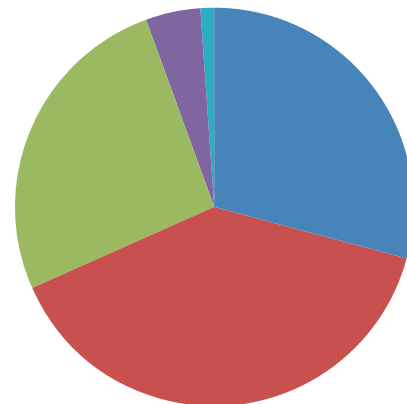
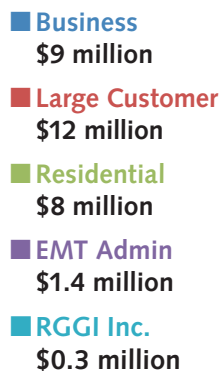
Starting in fall of 2013, a portion of RGGI funds will be devoted to residential heating oil efficiency programs by Efficiency Maine. The Home Energy Savings Program offers technical and financial assistance to homeowners to help them pursue a wide variety of efficiency investments, from weatherization and air sealing to high-efficiency heating systems.

RGGI Protecting Maine's Economy and Climate

For every \$1 of RGGI funds, Maine consumers save \$8 on energy bills, and the state economy grows by \$4

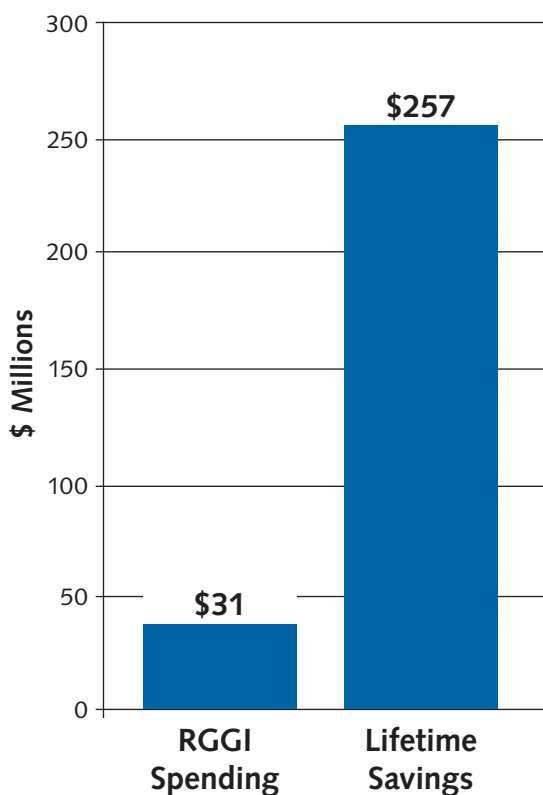
Independent analysis shows that RGGI has driven economic growth in Maine, primarily through investments in money-saving energy efficiency. As of December 2013, Maine had invested over \$31 million of RGGI-generated funds in energy efficiency improvements in homes, businesses and industrial facilities, creating \$257 million of savings over the lifetime of the improvements, including \$75 million for Maine residents. Maine's gross state product (GSP) increases by \$4 for every \$1 invested in energy efficiency programs. To date, Maine's GSP has grown by more than \$100 million because of RGGI.

Allocation of RGGI Spending in Maine (2008-2013)



Source: Efficiency Maine

Total Energy Savings in Maine from RGGI



RGGI is Central to Efficiency Maine Saving Millions for Homes and Businesses

The largest portion of RGGI funds has gone to large customer projects, from paper mills to hospitals. In addition, substantial RGGI funds have gone to households and smaller businesses to help them cut electric bills. In late 2013, Efficiency Maine began using RGGI money to fund weatherization programs that predominantly reduce home heating oil bills. Going forward, 35% of all RGGI funds are being used to help homeowners insulate and tighten up homes, and for investment in high-efficiency heating equipment. So far this weatherization program has helped homeowners reduce heating bills by an average of 33% or \$1,100 per year.

Proposed EPA Limits on Carbon Pollution from Power Plants

RGGI gains new relevance in 2014, as the U.S. Environmental Protection Agency is working to establish national carbon limits for power plants to help address climate change. The EPA plan rewards Maine's leadership with RGGI, and our economy and climate will benefit as our other regions come closer to our standards of clean power.

For more information:

1. To save money in your home or business with energy efficiency, contact **Efficiency Maine**, at www.energymaine.com or call toll-free 1 (866) 376-2463.
2. Learn more about RGGI, energy efficiency opportunities and benefits, clean energy jobs, or additional case studies by visiting the **Natural Resources Council of Maine (NRCM) online** at www.nrcm.org.
3. Please help support strong energy efficiency policies and programs in Maine. Stay informed by joining **NRCM's Action Network**: visit www.nrcm.org or contact Emmie Theberge at emmie@nrcm.org or (207) 430-0105.



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