

RHODE ISLAND ENERGY EFFICIENCY AND RESOURCE MANAGEMENT COUNCIL

Annual Report to the General Assembly | Required Under RIGL 42-140.1-5: April 2011



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TABLE OF CONTENTS

Letter from the Chair	1
Council Membership	3
Role and Responsibility of the Energy Efficiency and Resource Management Council ..	4
2010 Energy Efficiency Program Performance Report	5
2009-2011 Energy Efficiency Procurement Plan	6
Energy Efficiency in Rhode Island: An Engine for Economic Growth	6
System Reliability Procurement Planning	10
Opportunity Report	11
Energy Savings Targets	13
Incentives to Customers in Rhode Island Cities and Towns	16
Residential Program	17
Small and Medium Size Business Program	18
Large Commercial and Industrial Program	19
Low Income Eligible Program	19
Rhode Island Weatherization Assistance Program	19
Deliverable Fuel Weatherization Program offered through EnergyWise	21
Energy Efficiency Financing Report	21
Regional Greenhouse Gas Initiative	22
Energy Trends	24
Policy Recommendations	25
Appendix 1: Residential and Commercial Energy Efficiency Case Studies	31



LETTER FROM THE CHAIR

To Governor Lincoln D. Chafee, Senate President M. Teresa Paiva-Weed, House Speaker Gordon D. Fox, and the Members of the General Assembly,

On behalf of the Energy Efficiency and Resource Management Council (“EERMC” or “Council”) please accept this April 2011 Annual Report to the General Assembly, for the period April 16, 2010 to April 15, 2011, the Council’s fourth year of operation. As required by R.I.G.L. § 42-140.1-5, this Annual Report includes a summary of the “activities of the Council, its assessment of energy issues, the status of system reliability, energy efficiency and conservation procurement and its recommendations regarding any improvements which might be necessary or desirable.”

2010 was a great year for championing energy efficiency. Energy efficiency has been recognized as a critical solution to some of Rhode Island’s most pressing issues – rising energy costs, high unemployment rates, energy independence, and climate change. Energy efficiency is the easiest, most cost-effective way to:

1. collectively reduce our energy bills
2. stimulate economic growth and job creation
3. stem the flow of our energy dollars out-of-state
4. reduce greenhouse gas emissions
5. enhance energy security and
6. reduce the need for additional costly generation plant construction and transmission and distribution infrastructure.

Since 2008, Rhode Island has risen from being ranked 11th in the nation by the American Council for an Energy Efficient Economy to 9th in 2009 and 7th in 2010. These gains are due to the General Assembly’s foresight in 2006 in adopting Least Cost Procurement legislation which established an economic model requiring investment in all cost-effective energy efficiency before more expensive supply, in order to reduce Rhode Island’s energy costs. This strategy is “least cost” because energy efficiency costs less than traditional energy supply. Energy efficiency costs approximately 4¢ per kilowatt-hour (kWh) while electric supply costs between 8¢ and 12¢ per kWh. For every \$1 invested in energy efficiency, more than \$3 in savings is realized. These savings are an important part of resolving our state’s economic crisis by reducing customer costs, generating economic activity, reducing the flow of energy dollars outside of Rhode Island, and improving our global competitiveness by lowering the cost of doing business in the state.

The EERMC is extremely supportive of the General Assembly’s efficiency legislation passed in 2010 – which contained three key policy reforms to remove barriers to efficiency and ensure investment in cost-saving energy efficiency resources.

First, the General Assembly established the policy of “revenue decoupling” to break the link between the amount of energy that gas and electric utilities sell and their revenues. This removes the utilities’ disincentive to support cost-saving energy efficiency and better aligns the utility’s bottom line with their customers’ economic interests. Second, the General Assembly passed amendments that direct the RI Public Utilities Commission to approve funding for all energy efficiency measures that are cost effective and cost less than traditional supply resources, provided that the EERMC review and approve the plans’ cost-effectiveness. Third, the General Assembly required the utility to invest in all cost-effective natural gas energy efficiency for its customers, expanding Least Cost Procurement from just electric efficiency to natural gas efficiency as well and opening the door to greater investments in cost-saving efficiency through measures such as insulation, air sealing, and more efficiency heating and hot water systems. As noted in the policy section there is a legislative technical correction needed this session to ensure investments in all cost-effective natural gas efficiency that is cheaper than supply are made, saving natural gas customers tens of millions of dollars and creating hundreds of in-state jobs.

The EERMC is committed to working cooperatively with legislators and



all of Rhode Island's energy stakeholders to ensure the implementation of these policy reforms and continue the state's leadership in the realm of energy efficiency.

This 2011 Annual Report contains a summary of the activities of the EERMC over the past year including its role in:

1. The implementation of the 2010 Energy Efficiency Procurement Plan;
2. The development of guidelines and recommendations for System Reliability Procurement;
3. Identifying and quantifying opportunities for cost-effective energy efficiency in Rhode Island; and
4. The development of electric and natural gas energy savings targets for 2012-2014.

The Annual Report also includes the Council's assessment of energy issues and its recommendations for improvements that will benefit the energy consumers of Rhode Island and the state's economy.

The Council is excited that 2011 marks the third year of the 2009-2011 Least Cost Procurement Plan for energy efficiency. The reach and breadth of Rhode Island's energy efficiency programs continues to grow. Enabled by the 2010 energy legislation passed by the General Assembly, the 2011 Electric Energy Efficiency Plan submitted by National Grid, reviewed and supported by the EERMC and the Division of Public Utilities and Carriers, TEC-RI, and Environment Northeast, and approved by the Commission unanimously on December 22, 2010 will serve many more customers than last year and achieve greater savings for each customer. Total projected participation will increase by over 64 percent in 2011. Moreover, the 2011 Plan includes a statewide marketing campaign designed to ensure that all customers are aware of the opportunities and encouraged to participate in the cost-saving energy efficiency programs. Other improvements in the 2011 Electric EE Plan include: (1) low interest loans for heating system upgrades, (2) increasing participation of local independent weatherization contractors, (3) targeting lighting and heating opportunities to hard-to-reach customers who have never participated in energy efficiency, (4) delivering energy assessments and installing measures door-to-door to small businesses, (5) integrating gas and electric measures into comprehensive projects for large commercial and industrial customers. The efficiency programs carry out the General Assembly's far-sighted, nation-leading 2006 mandate to ensure that it is Rhode Island policy to invest first in low-cost, clean efficiency resources (at 3-5¢ per lifetime kWh saved) before buying more expensive supply (8-12¢ per kWh).

However, in order for these benefits to be realized, the EERMC recommends a technical change be made as soon as possible to the Least Cost Procurement legislation to fully effectuate the purpose of the May 2010 legislation and clarify and align the funding provisions for electric and natural gas energy efficiency with all the provisions of the least cost procurement statute. In particular, the EERMC recommends that the General Assembly approve Senate Bill 293 and House Bill 5281, which eliminate the unintended inconsistency and ensure that the funding provisions for electric and natural gas energy efficiency are consistent and run concurrently with all the Least Cost Procurement provisions in R.I.G.L § 39-1-27.7 in order to save consumers tens of millions of dollars and create hundreds of local jobs.

The 2010 Energy Efficiency Procurement Plan was part of a larger 3-year "Least Cost Procurement Plan," for 2009, 2010, and 2011 that was approved by the PUC in April 2009. The 3-year plan encourages National Grid to significantly increase investments in cost-effective energy efficiency measures for homeowners and businesses when they are cheaper than supply. The plan calls for steadily expanding the depth and breadth of Rhode Island's energy efficiency programs. Successful implementation of the programs approved over the 3-year period will generate well over \$469 million in net lifetime benefits for ratepayers, save 2,979,198 MWh over the lifetime of the energy efficiency measures, and avoid 1,446,645 short tons of greenhouse gas emissions. The EERMC is looking ahead to the next 3-year Least Cost Procurement Plan for 2012-2024, which will deliver even greater savings and economic benefits to Rhode Island electric and natural gas customers.



We look forward to continuing to work together to improve the affordability, efficiency, and economic benefits of Rhode Island's energy system in the year to come.

Respectfully Submitted,
S. Paul Ryan, Chair
Energy Efficiency and Resources Management
Council
April 15, 2011

VOTING COUNCIL MEMBERS

Christopher Powell- Large C&I Users

Brown University, Director of Sustainable Energy & Environment

Dan Justynski- Small C&I Users

Citizen's Bank, Head of Property Operations

Dr. Abigail Anthony- Environmental Issues Related to Energy

ENE (Environment Northeast), Policy Analyst

Joseph Newsome- Low Income Users

Joseph Cirillo- Energy Design/Codes

Former Building Commissioner

Dr. Marion Gold- Residential Users

University of Rhode Island, Co-Director of Energy Center

EX-OFFICIO MEMBERS

Ed White – Electric & Gas Utility

Vice President of Customer and Business Strategy, National Grid

Awaiting formal appointment

Tom Teehan – Electric & Gas Utility

Senior Counsel, National Grid

Awaiting formal appointment

Victor Allienello

President, East Providence Fuel Oil

Kenneth Payne

Executive Director and Secretary
Commissioner

Office of Energy Resources

ROLE AND RESPONSIBILITY OF THE ENERGY EFFICIENCY AND RESOURCE MANAGEMENT COUNCIL

The Council was established by the Comprehensive Energy Conservation, Efficiency and Affordability Act of 2006 to maximize benefits to Rhode Island energy consumers. The Council has had a very productive year pursuing its four primary purposes established in R.I. General Law § 42-140.1-3:

“(1) Evaluate and make recommendations, including, but not limited to, plans and programs, with regard to the optimization of energy efficiency, energy conservation, energy resource development; and the development of a plan for least-cost procurement for Rhode Island; and

(2) Provide consistent, comprehensive, informed and publicly accountable stake-holder involvement in energy efficiency, energy conservation, and energy resource management; and

(3) Monitor and evaluate the effectiveness of programs to achieve energy efficiency, energy conservation, and diversification of energy resources; and

(4) Promote public understanding of energy issues and of ways in which energy efficiency, energy conservation, and energy resource diversification and management can be effectuated.”

In working toward these purposes, the EERMC has a statutory role to advise and partner with the Office of Energy Resources (“OER”). The Commissioner of the OER serves as the Executive Secretary and Director as a non-voting, ex-officio member of the EERMC. The seven voting members of the Council represent large commercial/ industrial customers, small commercial/industrial customers, residential customers, low-income customers, environmental issues pertaining to energy, energy designs and codes, and energy regulation and law. Three additional non-voting, ex-officio members represent the electric distribution utility, natural gas distribution utility, and home heating oil industry.

The Council engages in policy and planning to advise the Governor, General Assembly, and Public

Utilities Commission, and in 2010 participated in several PUC dockets regarding the annual electric and natural gas energy efficiency program plan, energy savings targets, and the electric and natural gas procurement standards.

The Collaborative that previously helped oversee the evolution and implementation of the utility energy efficiency programs now operates as a sub-committee of the EERMC. National Grid, the Division of Public Utilities and Carriers, TEC-RI, EERMC members, and the Consultant Team participate regularly in these meetings. Other community groups have participated in the past, and the group continues to be open to representatives of the Rhode Island community who can participate on a regular basis.

In 2010 the VEIC/Optimal Energy Consulting Team provided technical support to the EERMC on all areas of energy efficiency program planning and delivery, best practices, and policy development. ●

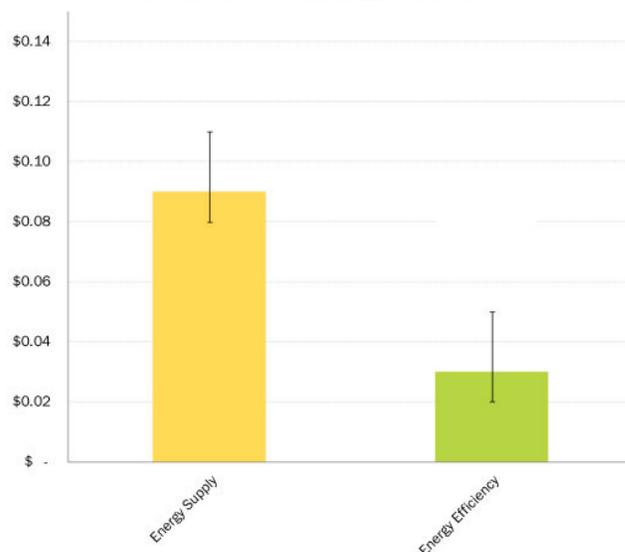
2010 ENERGY EFFICIENCY PROGRAM PERFORMANCE REPORT

Energy efficiency, which includes insulating homes and businesses, replacing inefficient heating equipment and appliances, and upgrading lighting, motors and air conditioning is now bringing real savings to Rhode Islanders in the form of lower energy bills. It will also boost local economies and reduces pollution of many kinds. Energy efficiency decreases demand for expensive energy and reduces greenhouse gas emissions from power generation. Because these efficiency investments cost less than traditional fossil fuel supply (the lifetime cost of saving a kWh of electricity via consumer efficiency programs is only 4 cents, while the cost of purchasing supply is between 8 and 12 cents) – efficiency is the best way to help Rhode Islanders save money on their energy bills. Lower energy bills reduce the cost of doing business in the state, helping Rhode Island businesses to remain competitive in a global economy.

Rhode Island has already begun to benefit from the efficiency solution. Beginning in 2006, the state embarked on a bipartisan policy to increase investments in energy efficiency. It enacted an ambitious, comprehensive energy law and created a much needed energy planning process, guided by a new stakeholder council –the Energy Efficiency Resources Management Council (EERMC).

As a result, Rhode Island has increased its investment in energy efficiency for all electric customers from \$16 million in 2008 to \$45.6 million in 2011. Recent economic studies show that for every \$1 invested in efficiency Rhode Island customers save \$4. Rhode Island has been recognized for its leadership in energy efficiency. In 2010, the American Council for an Energy Efficient Economy (ACEEE) ranked Rhode Island as 7th in the nation in the State Energy Efficiency Scorecard¹; a scoring system that assigns credit for states’ utility and public benefits programs and

Chart 1. Price of Electric Supply vs. Energy Cost per Unit of Energy (\$/kWh)



policies, transportation policies, building energy codes, combined heat and power, state government initiatives, and appliance and equipment efficiency standards. This top ten ranking clearly indicates that Rhode Island’s energy efficiency legislation, policies, and programs are national models to be emulated.

In 2010, the Rhode Island Public Utilities Commission (PUC) approved a significantly expanded energy efficiency plan that supported National Grid’s plan to increase investments in energy efficiency resources that will deliver over \$123 million in total benefits to electric ratepayers.

In 2010, Rhode Island’s electric energy efficiency programs served over 150,329 participants, resulting in over 920 million kilowatt-hours saved at a cost of \$0.029 per kWh saved. These energy efficiency measures will save customers \$12.3 million in 2010 and \$139.5 million over the lifetime of the efficiency measures and avoid over 432,000 shorts tons of greenhouse gas emissions.

The natural gas energy efficiency programs served 6,900 participants in 2010, reducing natural gas consumption by 2,090,528 MMBTUs and saving

Table 1. 2010 Year-End Preliminary Results

	Customers Served	Annual Energy Savings	Annual Bill Savings	Lifetime Energy Savings	Lifetime Bill Savings	Lifetime Avoided GHG Emissions
Electric	150,329	81,246 MWh	\$12,319,323	920,622 MWh	\$139,593,840	432,428
Natural Gas	6,938	140,091 MMBTU	\$2,202,232	2,090,528 MMBTU	\$32,863,092	122,272

¹<http://aceee.org/sector/state-policy/scorecard>

customers \$2.2 million in 2010 and \$32.8 million over the lifetime of the efficiency measures. The natural gas energy efficiency measures will also avoid 122,272 short tons of greenhouse gas emissions. ●

2009-2011 Energy Efficiency Procurement Plan

The 2010 energy efficiency programs are part of a larger 3-year “Least Cost Procurement Plan,” for 2009, 2010, and 2011 that was approved by the PUC in April 2009. The 3-year plan guides National Grid to significantly increase investments in energy efficiency measures for homeowners and businesses when they are cost-effective and cheaper than supply.

The following table shows the energy efficiency savings goals set out in the 2009-2011 Least Cost Procurement Plan filed in the fall of 2009. The table includes actual savings and results for 2008 and 2009, and preliminary results from 2010, which are also reflected in Tables 3 and 4.

Energy Efficiency in Rhode Island: An Engine for Economic Growth

The benefits that Rhode Island will see from its investments in energy efficiency are large and urgently needed. ENE (Environment Northeast) conducted an independent study titled “Energy Efficiency: Engine of Economic Growth” to quantify the macroeconomic impacts of investing

in all cost-effective energy efficiency and the results show significant benefits for Rhode Island.

Lower energy bills mean that people will have more money in their pockets to spend on other things, such as dining out or shopping in local businesses. This also keeps more money in the local economy rather than shipping it out of state for imported fuels. Every dollar invested in cost-effective energy efficiency will boost Rhode Island’s Gross State Product (GSP) by \$5.40 to \$7.60, and every \$1 million dollars invested will create approximately 50 new job-years of employment (one full-time job for a period of one year).

Based on the macroeconomic multipliers, electric and natural gas efficiency programs in the 2010 Energy Efficiency Procurement Plan will add over \$170 million to RI’s GSP and create more than 2,000 job years of employment. When fully implemented, the 2009-2011 Least Cost Procurement Plan will boost RI GSP by approximately \$579 million and create 6,200 job years of employment.¹

The “Energy Efficiency: Engine of Economic Growth” report shows that increasing efficiency program investments to levels needed to capture all cost-effective electric efficiency over 15 years (\$1.1 billion) would increase Rhode Island’s economic activity by \$8.7 billion (2008 dollars), as consumers spend energy bill savings in the wider economy.^{2,3} \$5.7 billion of the total increase in

Table 2. Summary of Rhode Island Economic Impacts

	Electric	Natural Gas	Unregulated Fuels
Total Efficiency Program Costs (\$Billions)⁴	1.1	0.41	0.38
Increase in GSP (\$Billions)	5.7	2.3	2.9
Maximum annual GSP Increase (\$ Millions)	336	140	160
Percent of GSP Increase Resulting from Efficiency Spending	12%	11%	10%
Percent of GSP Increase Resulting from Energy Savings	88%	89%	90%
Dollars of GSP Increase per \$1 of Program Spending	5.4	5.7	7.6
Increase in Employment (Job Years)	51,000	20,000	25,000
Maximum annual Employment Increase (Jobs)	3,000	1,200	1,400
Percent of Employment Increase from Efficiency Spending	16%	15%	12%
Percent of Employment Increase from Energy Savings	84%	85%	88%
Job-Years per \$Million of Program Spending	49	48	65

Note: 2008 is the dollar year basis for all figures unless otherwise indicated.

¹ The 2010 Energy Efficiency Procurement Plan did not achieve the goals for 2010 set out in the 2009-2011 Least Cost Procurement Plan due to reduced funding levels.

² ENE (Environment Northeast), “Economic Efficiency: Engine for Economic Growth,” October, 2009. See: http://www.env-ne.org/public/resources/pdf/ENE_EnergyEfficiencyEngineofEconomicGrowth_FINAL.pdf

³ “All cost-effective energy efficiency” is equivalent to “economic potential” as defined in the Opportunity Report, Phase II. These economic benefits result from 15 years of spending on energy efficiency measures continuing through the life of the measures installed. The economic benefits are spread over that period, but are not evenly distributed with most of the benefits occurring in the early years.

⁴ The “Energy Efficiency: Engine for Economic Growth” and Opportunity Report, Phase II both assume an approximate investment of \$70 million per year.

Table 3. Rhode Island Electric Energy Efficiency Program, Documented/Expected Results, 2008-2011⁵

Year		Utility Program Cost	Total Benefits	Cost per lifetime kWh	Total Resource Cost Test Benefit/Cost	Lifetime Energy Savings (MWh)
2008	Planned	\$14,933,400	\$60,341,000	\$0.032	4	636,748
	Documented Results	\$14,933,400	\$98,786,000	n/a	6.21	717,714
2009	Planned	\$22,818,299	\$117,401,800	\$0.039	3.22	932,762
	Documented Results	\$24,951,000	\$123,045,000	\$0.027	3.02	899,331
2010	Planned	\$28,333,300	\$160,918,000	\$0.045	4.25	890,561
	Preliminary Results	\$26,444,200	\$123,297,000	\$0.029	3.40	920,622
2011	Planned	\$45,642,700	\$178,160,000	\$0.047	2.83	1,189,306
TOTAL	Documented Results for (2008-2010)	\$66,328,600	\$345,128,000			2,537,667

Sources: 2008 Year-End Report Docket Nos. 3790 & 3892, 2009 Year-End Report Docket No. 4000, 2010 Energy Efficiency Procurement Plan Docket No. 4116 and Preliminary Results from National Grid, 2011 Energy Efficiency Procurement Plan Docket No. 4209

Table 4. Rhode Island Natural Gas Energy Efficiency Program, Documented/Expected Results⁶, 2008-2011

Year		Utility Program Cost	Total Benefit	Lifetime Energy Savings (MMBTU)
2008	Documented Results	\$6,725,000	\$69,389,700	10,026,912
2009	Planned	\$5,948,500	\$19,127,644	2,041,436
	Documented Results	\$6,280,100	\$26,071,000	2,558,728
2010	Planned	\$4,402,300	\$18,781,500	1,566,146
	Preliminary Results	\$4,993,400	\$25,399,000	2,090,528
2011 ⁷	Planned	\$3,653,700	\$11,355,000	888,983
Total	Documented or Preliminary	\$17,998,500	\$120,859,700	14,676,168

Sources: 2008 Year-End Report Docket Nos. 3790 & 3892, 2009 Year-End Report Docket No. 4000, 2010 Energy Efficiency Procurement Plan Docket No. 4116 and preliminary Results from National Grid, 2011 Compliance Filing, Energy Efficiency Procurement Plan Docket No. 4209

⁵Results from 2008 and 2009 have been documented and reported in National Grid's 2008 and 2009 Year-End Reports. The reported results from 2010 are preliminary and will be refined. The costs and benefits for 2011 are planned.

⁶Results from 2008 and 2009 have been documented and reported in National Grid's 2008 and 2009 Year-End Reports. The reported results from 2010 are preliminary and will be refined. The costs and benefits for 2011 are planned.

⁷Natural gas energy efficiency savings may increase in 2011, contingent on legislative action to clarify funding for natural gas least cost procurement.

economic activity would contribute to the GSP, while \$4.9 billion would be returned to workers through increased real household income and employment equivalent to 51,000 job years. Over 15 years, increased natural gas efficiency (\$408 million invested) would increase state economic activity by \$3.5 billion, boost GSP by \$2.3 billion, and increase household income by \$2.0 billion while creating 20,000 new job years of employment. A program designed to invest in all cost-effective efficiency measures (\$379 million) for unregulated fuels such as home heating oil and propane would increase state economic activity over 15 years by \$4.4 billion, boosting GSP by \$2.9 billion, and increasing real household income by \$2.2 billion while creating 25,000 job years of new employment.⁸

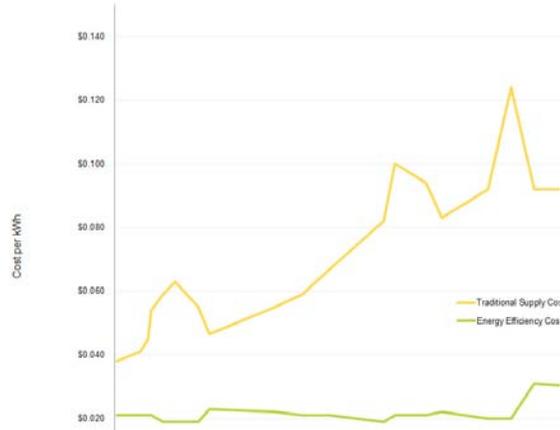
These benefits of efficiency derive from changes in the economy that occur as a result of increased spending on energy efficiency measures and decreased spending on energy. The majority of these impacts (77-90%) result from the energy savings realized by households and businesses. Lower energy bills cause other forms of consumer spending (such as dining out or other discretionary purchasing) to increase. Lower energy bills reduce the cost of doing business in Rhode Island, bolstering the competitiveness of Rhode Island employers and promoting additional growth. ●

The effectiveness of efficiency investments can be evaluated by considering economic benefits relative to efficiency program dollars invested. The table below shows the absolute and relative economic benefits that Rhode Island could realize with increased efficiency investments in electric, natural gas, and unregulated fuels.

Chart 2. Electric Energy Efficiency Program Cost vs. Total Economic Benefits

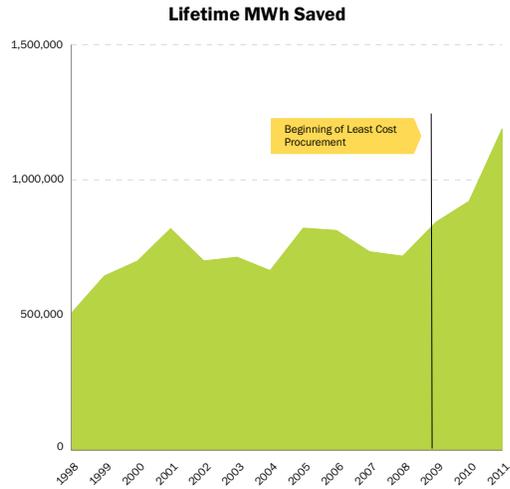


Chart 3. Traditional Supply Cost vs. Energy Efficiency Cost



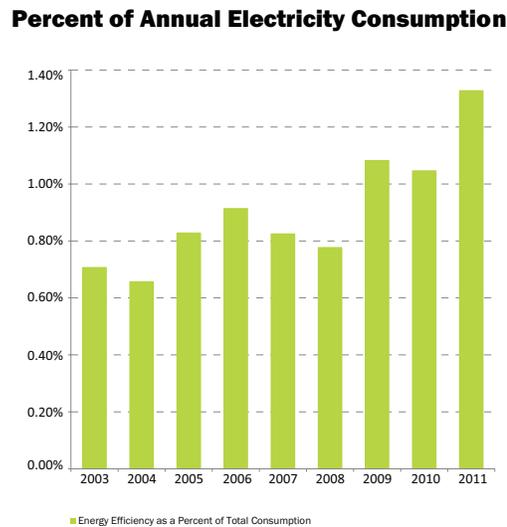
Source: Preliminary ENE estimate based on Energy Efficiency: Engine of Economic Growth, 2009

Chart 4. Total Lifetime Megawatt-hours (MWh) Saved through Energy Efficiency



Source: Preliminary ENE estimate based on extrapolation from past program results

Chart 5. Energy Efficiency as a Percent of Total Annual Electricity Consumption



Source: Preliminary ENE estimate based on Energy Efficiency: Engine of Economic Growth, 2009

SYSTEM RELIABILITY PROCUREMENT PLANNING

Rhode Island's 2006 energy law contains an important and innovative requirement as part of its overarching least cost procurement mandate. RI's electric utilities are required to develop a "system reliability plan" that strategically considers an array of customer-sited energy resources to maximize their benefit to RI's energy system. These "non-wire alternatives" (NWA) include cost-effective energy efficiency measures targeted to reduce peak loads; distributed generation at or near loads; and demand response measures that reduce the peak loads on the electricity grid. These strategies would be combined with actions that can squeeze more out of the existing distribution system. The utility is asked to assess whether an array of such resources could be deployed to avoid dirtier "peaking" generators and enable the utility to defer distribution (and potentially transmission) system investments. Deferring distribution system investments could provide savings over time for customers and could lower the volatility and cost uncertainty of the larger energy and capacity markets in New England by securing sources of energy supply and capacity from in-state resources.

Over the past 18 months, the Council in cooperation with National Grid has developed a process for revising the system reliability procurement standards and a framework for considering NWAs as possible solutions to planning and reliability issues. The Council's objective is to establish a procedure and funding options for systematically identifying customer-side and distributed resources that, if cost-effective, defer or avoid distribution upgrades, improve system reliability, and provide for better utilization of distributed resources. The goal is also to effectively anticipate new technologies (such as electric vehicles and energy storage) and become a model for other states and utilities.

On March 1, 2011, the Council proposed revisions to the System Reliability Procurement Standards with the intent of providing clear guidelines for a planning process that considers both traditional and non-wires alternatives to planning and reliability issues. The recommendations for revising the System Reliability Procurement Standards

are designed to guide National Grid in fully integrating analysis of non-wires alternatives into National Grid's planning functions and evaluating the specific costs, benefits, and comparability of traditional and non-wires solutions. The proposed revisions outline a process in which National Grid and the Council will work with state regulators and other stakeholders to further the collective understanding of non-wires alternatives. This will include the development of more sophisticated analytical tools, development of appropriate evaluation criteria, and potentially, proposing demonstration project installations of cost-effective non-wires alternative solutions. The revisions to the Standards establish a process that enables an objective assessment of the alternatives as the Company integrates the analysis of non-wires alternatives into distribution planning, as required by R.I.G.L. § 39-1-27.7. The recommendations will be considered by the Rhode Island Public Utilities Commission.

National Grid has undergone an impressive internal planning process to incorporate the consideration of NWA options into its Distribution and Transmission planning. This procedure has been approved by National Grid for its own use. The recommended Standards utilize the National Grid's procedure in many areas. ●

OPPORTUNITY REPORT

The General Assembly designed the 2006 Comprehensive Energy Act to maximize ratepayers' economic savings by placing a clear requirement on the distribution utility to procure all energy efficiency that is lower cost than supply. To help determine the quantity of cost-effective efficiency resources and the cost-savings to Rhode Island ratepayers, the General Assembly charged the EERMC with producing an Opportunity Report that would identify the magnitude of cost-effective efficiency resources existing in Rhode Island homes, businesses, and institutions. The EERMC commissioned, directed, and managed a study to meet these goals. The study will be used by National Grid in developing its Least Cost Efficiency Procurement, and by the EERMC, pursuant to the General Assembly's 2006 energy legislation, to propose long-term electric energy savings goals consistent with the objectives and mandate of the 2006 and 2010 energy legislation and the PUC's Standards for Energy Efficiency. Comprehensive Energy Act and the PUC's Standards for Energy Efficiency.

Phase II: "The Opportunity for Energy Efficiency that is Cheaper than Supply in Rhode Island"

On September 1, 2010, The EERMC released the results of an 18-month study designed to identify opportunities for National Grid to invest in cost-saving electric energy efficiency resources. "The Opportunity for Energy Efficiency that is Cheaper than Supply in Rhode Island," commissioned by the EERMC and conducted by KEMA, Inc., shows that the state could capture hundreds of millions of dollars in savings pursuant to R.I.G.L. § 39-1-27.7.1(f) The results have been used to set targets for future expansion of Rhode Island's energy efficiency programs. The report represents Phase II of a two-part study of the opportunities for energy efficiency in Rhode Island.

The goal of the study was to determine the magnitude of the potential for energy and cost

savings from electric efficiency measures in Rhode Island over a 10-year period and was based on over 450 residential phone surveys and on-site visits to commercial and industrial facilities in the state. The potential for energy efficiency opportunities includes, but is not limited to, traditional energy efficiency measures as well as new measures such as behavioral measures, price response programs, and new technologies.

The study finds that 29 percent of Rhode Island's electric energy needs, or 2,140,000 MWh, can be met over 10 years through cost-effective energy efficiency measures that are cheaper than traditional supply options.¹ Possible measures include compact fluorescent light bulbs, outdoor lighting controls, and high-efficiency air conditioners. The following table summarizes the results of the study by showing the electric efficiency potential for different customer sectors over a 10-year period, the savings as a percent of the base energy use, and average annual savings as a percent of the base energy use.

Over 10 years, energy savings become a significant portion of projected energy sales. Capturing the full cost-effective potential results in an average annual reduction in load as compared to the base forecast growth rate of 1.47% per year for energy.

Some of the key findings of the study include:

- There is a large potential energy efficiency resource in Rhode Island in all customer sectors.
- The majority of savings are based on the modeling of National Grid's existing programs.
- To achieve more savings over time, it may be necessary to include new technologies and gain savings from behavioral programs and price response programs.

Some of the key recommendations from the study include:

- Explore expanding existing programs and/or adding new strategies to bring National Grid's overall program effort in line with the all cost-

¹The Phase II Opportunity Report finds that 29% of Rhode Island's electric needs can be met over 10 years through cost-effective energy efficiency measures that are less expensive than traditional supply options. This is referred to in the report as "Economic Potential." The Phase II Opportunity Report also measures "Achievable Potential," which is the magnitude of cost-effective energy efficiency that can be achieved under different budget and investment considerations.

effective energy efficiency savings potential identified.

- The EERMC and National Grid should monitor development in LEDs (light emitting diodes) in all markets. Begin behavioral change programs on a pilot basis.
- Identify programs and activities that give customers access to time-differentiated pricing.

Table 5. Cost- Effective Energy Savings Potential

	Residential	Commercial	Industrial	Total
2010 Base Energy Use (MWh)	2,987,000	3,529,000	975,000	7,491,000
10-Year Economic Energy Efficiency Savings (MWh)	922,000	1,052,000	166,000	2,140,000
Savings Percent of Base Energy Use	31%	30%	17%	29%
Simple Annual Average Savings	3.1 %	3%	1.7%	2.9%

Source: The Opportunity for Energy Efficiency that is Cheaper than Supply in Rhode Island, Executive Summary, Table 1-3.

ENERGY SAVINGS TARGETS

On September 1, 2010, the EERMC submitted energy efficiency savings targets to the Public Utilities Commission for review and approval in accordance with R.I.G.L. § 39-1-27.7.1(f), which states:

“The Rhode Island energy efficiency and resources management council shall propose performance-based energy savings targets to the commission no later than September 1, 2010. The targets shall include, but not be limited to, specific energy kilowatt hour savings overall and peak demand savings for both summer and winter peak periods expressed in total megawatts as well as appropriate targets recommended in the opportunities report filed with the commission pursuant to subdivision 39-2-27.7(c)(3).”

In accordance with the law, the EERMC and its technical consultants devoted substantial time and resources to research and develop cost-effective efficiency savings targets that push forward toward the goal of acquiring all efficiency lower cost than supply. The development of these targets relied, in part, on an in-depth, lengthy study commissioned by the EERMC and conducted by KEMA, Inc. - Phase II of the Opportunity Report (see page 12), which identified the potential savings from cost-effective energy efficiency in Rhode Island.

The EERMC recommended annual electric efficiency savings targets that will achieve a steady increase to the potential identified in the Opportunity Report, recommending targets in 2012, 2013, and 2014 that are 1.7%, 2.1%, and 2.5% of load, respectively (see Table 6). These targets are needed to build the groundwork for procurement and programmatic strategies that will enable investment in all cost-effective energy efficiency.

In terms of efficiency savings targets for 2012-2014 for natural gas, the EERMC's proposed savings goals are designed to triple efficiency savings for consumers from 2010 levels by 2014 to procure gas efficiency resources that are cheaper than supply as required by RI law. Consistent with Rhode Island legislation, the proposed savings goals for natural gas represent aggressive efforts to capture all cost-effective energy efficiency for natural gas customers. The EERMC recommended annual

natural gas efficiency savings target to achieve a steady increase to these levels in 2012, 2013, and 2014 that are 0.75%, 1.0%, and 1.2% of load (see Table X), respectively, and which will save consumers tens of millions of dollars.

Benefits

The EERMC's proposed targets are to achieve electric efficiency savings of 2.5% of total electric consumption annually (adding up to an impressive 25% cumulative savings over 10 years) and for natural gas 1.2% of consumption annually (12% savings over 10 years). These goals represent a tremendous economic opportunity for the state. Preliminary estimates indicate that achieving these efficiency goals – more than doubling over 2010 levels – will save Rhode Islanders approximately \$500 to \$600 million in lower energy bills. ENE (Environment Northeast) estimates that this in turn would increase economic activity and boost Gross State Product by approximately \$1 billion as consumers spend energy bill savings in the wider economy, and create over 11,000 job-years of employment (see Figure 1 and 2).

The energy savings targets are currently being considered by the Public Utilities Commission. ●

Table 6. Electric energy efficiency savings targets*

Program Year	2011	2012	2013	2014
Savings Target (% of 2009 Retail Energy Sales)	1.36%	1.7%	2.1%	2.5%
Annual Energy Savings (MWh)	102,566	128,570	158,820	189,068
Summer Demand (kW)	18,512	23,204	28,664	32,759
Winter Demand (kW)	17,197	21,556	26,628	30,432

* Based on existing Commission-approved EE savings targets for 2011

Table 7. Natural gas efficiency savings goals

Program Year	2011	2012	2013	2014
Savings Target (% of 2009 Retail Energy Sales)	0.5%	0.75%	1.0%	1.2%
Annual Energy Savings (MMBtu)	138,514	263,738	338,120	427,100

¹The PUC approved reduced funding levels for the 2011 Natural Gas Energy Efficiency Program Plan. If funding levels are not restored to the planned level, annual savings in 2011 will be 0.2% of 2009 retail energy sales, or 56,145 MMBtus. See: 2011 Natural Gas Energy Efficiency Program Plan Compliance Filing, Docket No. 4209.

Figure 1. Preliminary Estimates of Net Economic Benefit to Consumers by Program Year

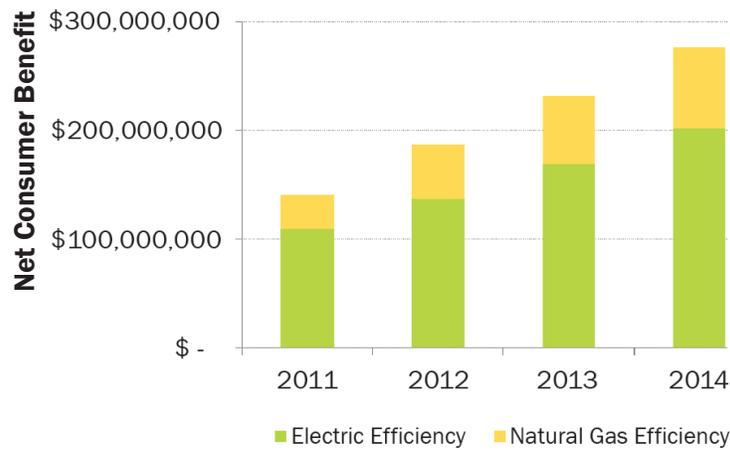


Figure 2. Preliminary Estimates of Job -Years Created from Electric and Natural Gas Efficiency Targets

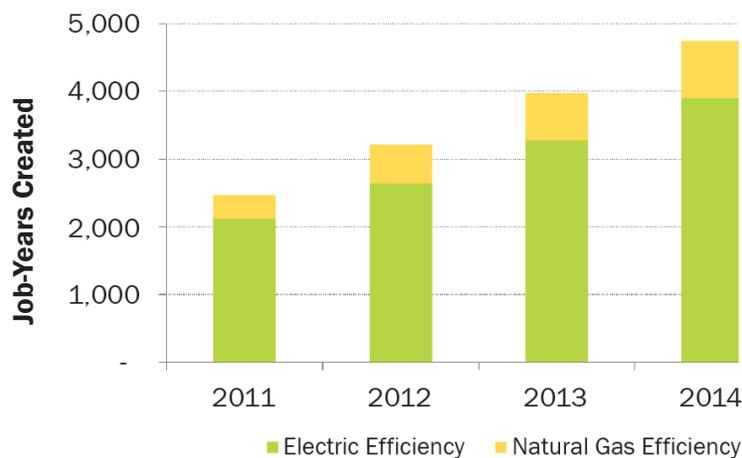
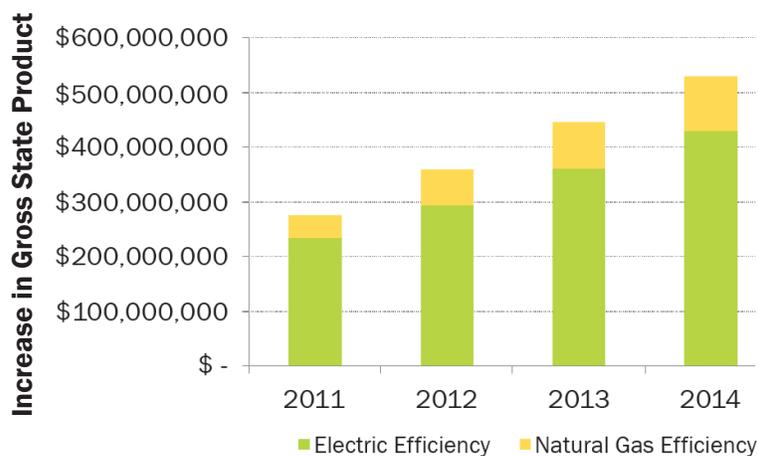


Figure 3. Preliminary Estimate of Increases in Gross State Product from Electric and Natural Gas Efficiency Targets



INCENTIVES TO CUSTOMERS IN RHODE ISLAND CITIES AND TOWNS, 2010

In 2010, Rhode Islanders received \$22.4 million in National Grid incentives and rebates to invest in energy efficiency projects. The rebates and incentives are delivered through numerous National Grid programs targeted to residents, businesses and municipalities. Each year, the amount that each city or town receives is based on customer participation in energy efficiency programs. You can encourage the residents and businesses in your town to participate in National Grid energy efficiency programs by visiting: www.powerofaction.com. ●

Table 8. Energy Efficiency Incentives Provided to Residential, Commercial, and Industrial Customers by National Grid in 2010 (National Grid incentives for gas efficiency not included)

Barrington	\$ 163,403.96	North Kingstown	\$ 685,709.27
Bristol	\$ 361,401.88	North Smithfield	\$ 551,751.90
Central Falls	\$ 150,232.91	Pawtucket	\$ 1,788,432.36
Charlestown	\$ 51,633.18	Portsmouth	\$ 423,245.79
Coventry	\$ 327,918.15	Providence	\$ 3,280,235.17
Cranston	\$ 1,935,219.84	Richmond	\$ 74,775.73
Cumberland	\$ 570,253.27	Scituate	\$ 100,468.22
East Greenwich	\$ 171,288.44	Smithfield	\$ 570,868.88
East Providence	\$ 1,650,330.75	South Kingstown	\$ 467,577.57
Exeter	\$ 73,393.32	Tiverton	\$ 255,841.05
Foster	\$ 53,367.91	Warren	\$ 138,553.41
Glocester	\$ 111,658.56	Warwick	\$ 2,292,843.76
Hopkinton	\$ 69,223.24	West Greenwich	\$ 47,613.15
Jamestown	\$ 105,998.14	West Kingston	\$ 70,107.11
Johnston	\$ 386,096.68	West Warwick	\$ 572,949.47
Lincoln	\$ 562,002.18	Westerly	\$ 590,632.67
Little Compton	\$ 29,888.48	Woonsocket	\$ 936,793.07
Middletown	\$ 710,306.45	Burrillville	\$ 94,063.30
Narragansett	\$ 458,194.75	North Providence	\$ 528,723.74
Newport	\$ 1,047,559.26	Grand Total	\$22,460,556.96

RESIDENTIAL PROGRAMS

National Grid offers a variety of energy efficiency programs for Rhode Island residents. The programs decrease energy use and help customers save on their energy bills. The programs concentrate on creating efficient homes and promoting efficient products.

- EnergyWise offers free home energy audits and incentives for weatherization. During the audit, auditors change light bulbs and fixtures, as they identify potential appliance and weatherization retrofits. Customers then receive incentives to weatherize their homes including heating system upgrades, insulation, and air sealing.
- ENERGY STAR® Homes Program promotes construction of energy efficient homes by offering technical and marketing assistance or incentives to builders of new energy efficient homes that comply with the program's performance standards.
- ENERGY STAR® Products promote high efficiency appliances such as: refrigerators, room air conditioners, and electronics.
- ENERGY STAR® Lighting promotes compact fluorescent lamps, fixtures, and LEDs by discounting the price through instant rebates at retail stores or through mail order.
- ENERGY STAR® HVAC promotes the installation of high efficiency central air conditioners. The program provides contractor training for installation and testing high efficiency systems. The program offers rebates for new ENERGY STAR® systems, incentives for checking new and existing systems, and incentives for oil or propane furnaces and boilers with electric motors.
- High Efficiency Heating Equipment offers rebates for new energy efficient natural gas equipment including boilers, furnaces, water heating equipment, thermostats, and boiler reset controls.
- Residential pilots will be offered in 2011 to explore new opportunities in Deep Energy Retrofits, residential products and behavior programs.

2010 Results

- 26,703 MWh and 140,091 MMBtu saved annually
- 236,067 lifetime MWh and 2,090,529 MMBtu saved
- 105,049 short tons of greenhouse gas emissions avoided
- 153,848 participants
- \$35.4 million in lifetime electric bill savings
- \$42.8million in total economic benefits from gas and electric programs

High Efficiency Heating Program Suspended in 2010

In April 2010, National Grid's High Efficiency Gas Heating Program suspended rebates due to overwhelming demand and limited funding. Rhode Island's record breaking floods last March damaged thousands of homes, increasing the demand for high efficiency heating equipment. After the program's suspension, heating equipment distributors in the state reported that fewer high efficiency units were ordered. The experience is a reminder that energy efficiency rebates shape market demand. The program's suspension was a lost opportunity for investing in energy efficient heating equipment, especially for the flood victims who were not served.

Due to continued limited funding for gas programs in 2011, the High Efficiency Heating program will re-open in later 2011 with a new rebate reservation system. The reservation system will assure customers a rebate before they purchase high efficiency equipment. It will also help prevent another program suspension in the future. For more information about the High Efficiency Heating program, please visit www.powerofaction.com.

See Appendix 1 for Residential Program Case Studies. ●

SMALL AND MEDIUM SIZE BUSINESS PROGRAM

National Grid helps small businesses save energy by providing:

- A free on-site energy assessment that identifies potential energy savings.
- A customized report that details energy-efficient recommendations.
- Installation is completed at the customer's convenience.
- Old fluorescent lights and ballasts are removed and recycled.
- National Grid pays up 70% of installation and equipment costs.
- Customers can finance their share of the project over 24 months on their electric bill, interest free.

Eligible projects include:

- High performance T8 lamps and electronic ballasts
- Retrofit reflector kits
- High efficiency fluorescent fixtures
- Compact fluorescent lamps (CFL)
- LED exit signs
- Occupancy sensors
- Energy Management Systems
- Walk-in cooler/refrigeration controls and LED lighting upgrades
- Site-specific customer projects

2010 Results

- 12,745 MWh saved annually
- 154,679 MWh saved over the lifetime of the energy efficiency measures
- 921 participants
- 68,833 short tons of greenhouse gas emissions

avoided

- \$23.2 million in lifetime electric bill savings
- \$23.4 million total economic benefits. ●

LARGE COMMERCIAL AND INDUSTRIAL PROGRAM

National Grid offers two programs for large commercial and industrial customers that use more than 200kW. Each program includes financial incentives to reduce the incremental cost barrier to investing in efficiency. National Grid also reduces the efficiency barriers by offering technical assistance including efficient engineering information, as well as identifying and analyzing opportunities for efficiency. The programs are integrated to offer customers assistance with gas and electric projects at the same time.

- The Commercial New Construction program encourages energy efficiency in new construction, renovations, remodeling, planned replacement of aging equipment and replacement of failed equipment through financial incentives and technical assistance to developers, manufacturers, vendors, customers and design professionals. The program also includes a Combined Heat and Power program, High Performance School program, an Industrial Initiative program, training for trade allies, and promotion of building codes and standards, and more services and initiatives.
- The Large Commercial Retrofit Program encourages the replacement of existing equipment and systems with energy efficient alternatives when the customer is not otherwise planning any investments in the equipment and systems. The program also offers whole building assessments and retro-commissioning, industrial process improvement assessments, commercial and municipal Benchmarking Services, gas energy assessments, a Building Operator Training and Certification initiative, in addition to more programs and services.

See Appendix 1 for Large Commercial and Industrial Program Case Studies. ●

LOW-INCOME ELIGIBLE RESIDENTIAL PROGRAMS

National Grid helps reduce electricity and heating costs for income eligible customers. No co-pay-

ment fees are required to take advantage of energy savings in this program. The process includes:

- Customers contact their local community action agency to determine if they are eligible.
- An energy manager from a local community action agency conducts an energy audit and determines energy and cost savings.
- Instant savings measures are installed during the energy audit, including: water saving devices, room air conditioner timers, and CFLs.
- Heating system replacements and weatherization, such as air sealing and insulation, are installed during a follow up visit.

Eligible efficiency projects may include:

- ENERGY STAR® refrigerators
- ENERGY STAR® lighting
- Water saving measures
- Insulation and air sealing measures
- Heating system replacement

2010 Results

- 2,205 MWh saved in 2010
- 27,201 MWh saved over the lifetime of the energy efficiency measures
- 12,104 short tons of greenhouse gas emissions avoided
- \$4.08 million in lifetime electric bill savings
- \$4.06 million in total economic benefit

For more information, please visit:

<http://www.energy.ri.gov/lowincome/cap.php>.

See Appendix 1 for Low -Income Eligible Residential Programs Case Studies. ●

RHODE ISLAND WEATHERIZATION ASSISTANCE PROGRAM

The RI Weatherization Assistance Program (WAP) helps make the homes of income-eligible residents warmer, safer, and more energy efficient through

the installation of a number of energy efficiency measures. Those measures, which are provided at no cost to the resident, include pipe, wall, and ceiling insulation, air sealing and foaming, low-flow showerheads and faucet aerators, and window sealing. The RI WAP has the twin goals of increasing the quality of life of residents through warmer homes and lower heating bills and increasing overall community energy efficiency and responsible resource use.

Between January, 2009 and June, 2010 the RI WAP weatherized 2,564 units, helping more than 4,700 individuals. The RI WAP weatherized 166 homes per month on average, compared to 130 in 2009, and 93 in 2008.

The RI WAP spends approximately \$2,800 per household for the installation of energy efficiency and health and safety materials in the non-ARRA supported program (funds are leveraged from the

Department of Energy (DOE), Health and Human Services (HHS), and National Grid). ARRA has augmented WAP spending, allowing for an average spending level of \$4,730 per home. The overall administration, infrastructure, and program support cost to the Community Action Program (CAP) agencies is \$1,370 per household.

All energy auditors in the RI WAP program are Building Performance Institute (BPI) certified or have an equivalent amount of experience. After the energy audit, only those measures which the auditor estimates will have positive long-term savings are recommended for installation. Those measures are then verified through the National Energy Audit Tool to have positive savings-to-investment ratio (SIR; i.e. estimated utility savings over the lifetime of the measure divided by the total cost of installation). The measures, installed by a private contractor, are then verified to have been installed correctly by CAP personnel and RI

Table 9. Homes weatherized by RI WAP, January 2009-June 2010

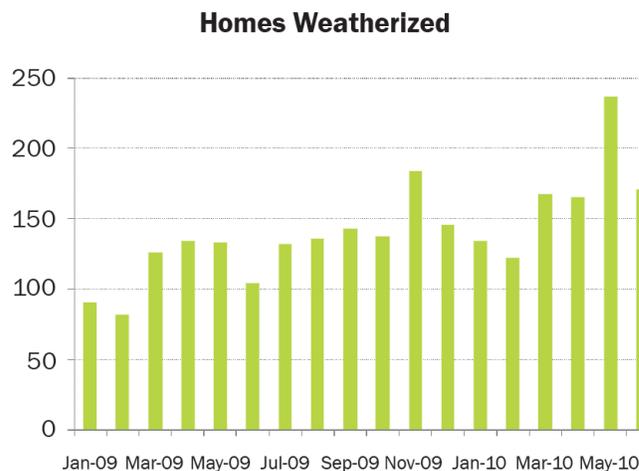


Table 10. RI WAP Expenditures per Unit by Funding Source (January 1 - June 30, 2010)

Units Completed	Per Unit	Category
286	\$2,529.62	DOE Measures
718	\$4,412.47	ARRA Measures
1004	\$317.20	HHS Measures
1004	\$970.15	Program support per unit
1004	\$401.69	Admin per unit
286	\$4,218.66	Total DOE house
718	\$6,101.51	Total ARRA house

Office of Energy Resources inspectors.

DOE estimates that, nationwide, for every \$1 invested in WAP, \$1.37 is saved. DOE also estimates that weatherization upgrades save, on average, \$437 in heating costs per unit annually. This is approximately 25% of a Rhode Islander's fuel bill and extrapolates to \$440,000 saved in total on heating bills in 2010 alone. This is of particular importance at a time of rising fuel prices and threatened decreases in Low Income Heating Assistance funds. ●

DELIVERABLE FUEL WEATHERIZATION PROGRAM OFFERED THROUGH ENERGYWISE

The Deliverable Fuels program provides rebates for energy efficiency retrofits to homes that heat with oil, propane, or other deliverable fuels. The program is made possible by State Energy Plan (SEP) funds from the American Recovery and Reinvestment Act (ARRA). Residents receive a free home energy assessment through National Grid's EnergyWise program. The home energy assessment then recommends weatherization measures eligible for a rebates up to \$2,250, such as:

- Insulation of attics, walls, floors, ducts and pipes;
- Air and duct sealing;
- Attic ventilation;
- Installation of programmable thermostats;
- The replacement of heating systems over 15 years old; and/or
- The replacement of water heaters over 10 years old.

The program began in August 2010. By the end of 2010, EnergyWise audited 1,431 homes heated with deliverable fuels. Through the Deliverable Fuel Program, 427 of those homes received rebates for heating system replacements and 119 received rebates for weatherization. These energy efficiency

actions will help customers save more than 2,000,000 gallons of fuel over 20 years. At today's cost of oil, customers could save \$7 million dollars through lower heating bills. The program also created 8,600 hours of work for Rhode Islanders.

The program is expected to end mid-2011. To schedule a free home energy assessment, please call EnergyWise at 1-888-633-7947. ●

ENERGY EFFICIENCY FINANCING REPORT

One of the recognized reasons families and businesses do not invest in all cost-effective efficiency options is the lack of available capital. This is often true even if the investment could pay for itself over time through reduced energy bills. Finance options are essential to assist customers overcome investment barriers for energy efficiency projects. Therefore, a number of finance initiatives are being launched in 2011.

National Grid established Small Business Revolving Loan Fund in early 2011. The initial investment came from use of Innovative Financing and Partnership Account¹ funds received in December 2010. The revolving loan fund is a sustainable solution that assists small commercial customers with energy efficiency projects through on-bill repayment.

The Office of Energy Resources also approved a plan to use additional Innovative RGGI funds from 2008-2010 auctions to expand the revolving loan fund to include large commercial and industrial customers, although funding has not yet been released to implement this plan. Additionally, National Grid is exploring a financing mechanism for municipalities to encourage them to move forward with energy efficiency projects.

The RI Economic Development Corporation, National Grid, and the Office of Energy Resources are working together to launch a large commercial and industrial revolving loan fund that will finance the customer's portion of energy efficiency retrofit projects. The State Energy Plan (SEP) funds from

¹The Final RGGI Regulation and Plan approved in September 2009 specifies that 40 percent of RGGI proceeds "shall be allocated to the Innovative Financing and Partnership Account at the Utility for the sole purpose of investing in new partnerships, research, and pilot programs including innovative financing options and partnerships that can drive efficiency program development and enhancements to accelerate and broaden the energy savings for Rhode Islanders."

the American Recovery and Reinvestment Act (ARRA) provided the initial investment for this loan fund.

In the residential sector, National Grid is launching the Heat Loan Program in 2011 with support from Innovative RGGI funds. The Heat Loan Program is an interest buy-down program that will offer 0% interest loans through local RI banks. Customers who receive retrofit recommendations from their home energy assessment will be quickly connected to local banks to finance retrofits such as weatherization and heating system replacement. ●

REGIONAL GREENHOUSE GAS INITIATIVE (RGGI)

The Regional Greenhouse Gas Initiative (RGGI) is a market-based cap and trade program designed to reduce carbon dioxide emissions from electric power plants in the northeastern and mid-Atlantic states. RGGI is the first binding system in the United States to cap and reduce greenhouse gas emissions over time. Under RGGI, utilities with over 25 megawatts (MW) of fossil-fuel burning generating capacity must purchase emissions allowances for every ton of greenhouse gas emitted. Utilities that reduce emissions will require fewer allowances and utilities with low emissions may sell surplus allowances to utilities less able to meet emission reduction targets. RGGI thus harnesses the market’s capacity to search out cheap emissions reductions and rewards climate-friendly innovation in the electric power sector

States participating in RGGI (Connecticut, Rhode Island, New Hampshire, Vermont, New York, New Jersey, Vermont, Maine, Massachusetts, and Delaware) accrue significant economic benefits from energy efficiency investments funded by the program. In Rhode Island, revenue from auctions of allowances (permits to emit one ton of CO2) is used to finance energy-saving programs that save customers money while reducing fossil fuel imports and carbon emissions. Efficiency savings flow into the local economy, boosting economic output and creating jobs economy-wide.

RGGI’s original Memorandum of Understanding (MOU) allowed each participating state to determine how to distribute allowances independently, as long as at least 25 percent of the value of allowances is used for “consumer benefit.” Rhode Island wisely chose to use 100 percent of the allowance revenues to benefit consumers through re-investing the allowance revenues in cost-effective energy efficiency. Efficiency investments benefit consumers in a number of ways. First, reduced energy consumption due to energy efficiency brings down monthly bills. Second, reduced consumption decreases wholesale electricity prices, delivering additional savings to all consumers. Third, reduced demand for electricity brings down emissions from fossil fuel-fired power plants, decreasing the demand for emissions allowances and the overall cost of RGGI.

Efficiency investments provide additional benefits throughout the economy by creating local efficiency-related jobs, reducing expenditures on

Table 11. Rhode Island RGGI Economic Benefits

Revenue (\$ Millions)	\$12.3
EE Funding (\$ Millions)	\$12.3
Savings (\$ Millions)	\$39.4
Jobs Multiplier (Job Years/\$Million of EE Investment)	48.7
Job -Years Created	601
GSP Multiplier (GSP impact/\$1 EE Investment)	\$5.40
GSP Growth (\$ Millions)	\$66.6

Table 12. Summary of Rhode Island RGGI Auction Revenues

		Auctions 1-9		Auction 10		Totals to Date	
		Allowances	Mean Price	Allowances	Mean Price	Allowances	Mean Price
Control Period							
2009-2011		4,445,623	\$2.46	377,378	\$1.86	4,823,001	\$2.25
Control Period							
2012-2014		208,231	\$2.07	18,039	\$1.86	226,270	\$1.90
Projected Auction Proceeds Recipients							
Efficiency Programs	100%	\$11,604,733		\$735,476		\$12,340,209	
Total	100%	\$11,604,733		\$735,476		\$12,340,209	

imported fossil fuels, and boosting consumer spending on other goods and services. Direct employment benefits range from energy service contractors who install insulation and efficiency equipment to manufacturers of advanced energy saving technologies. Indirect employment benefits accrue across the economy as the money consumers save on their monthly energy bills is spent locally.

Recent analysis of the impacts of efficiency investments in RGGI states has made it possible to quantify the economy-wide benefits that RGGI has produced thus far. The following table from ENE (Environment Northeast) draws on a number of sources to arrive at calculated benefits. Auction revenue data is provided by RGGI, Inc, the official administrator of the 10-state program. Figures on energy efficiency funding are drawn from ENE’s analysis of Rhode Island’s allowance allocations and spending plans. Consumer savings are based on the Synapse Energy Economics report “Electricity Energy Benefits of RGGI Proceeds: An Initial Analysis.” Job creation and gross state product (GSP) figures are based on ENE’s report: “Energy Efficiency: Engine of Economic Growth.”

In 2010, 40% of Rhode Island’s RGGI allowance proceeds were dedicated to “Innovative Financing and Partnership” programs designed to tackle the most difficult barriers to energy efficiency. The revenue allocated for Innovative Financing and Partnership will be used to elevate Rhode Island’s energy efficiency performance through innovative programs focused on the future of energy efficiency planning and financing, market transformation, deeper, whole-building energy savings, and tackling the split incentive barrier for

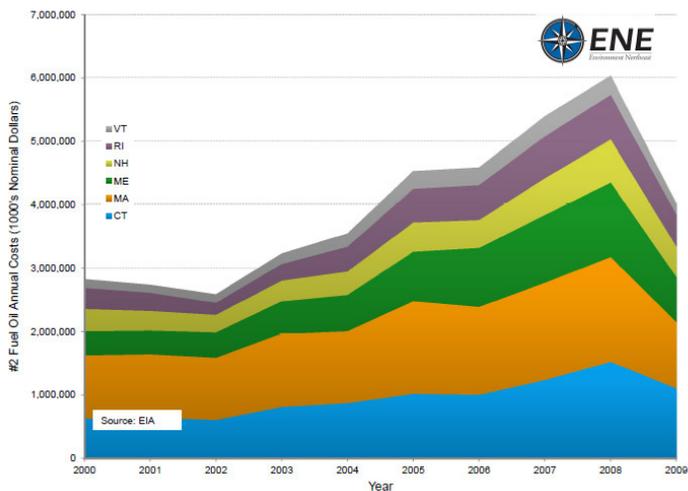
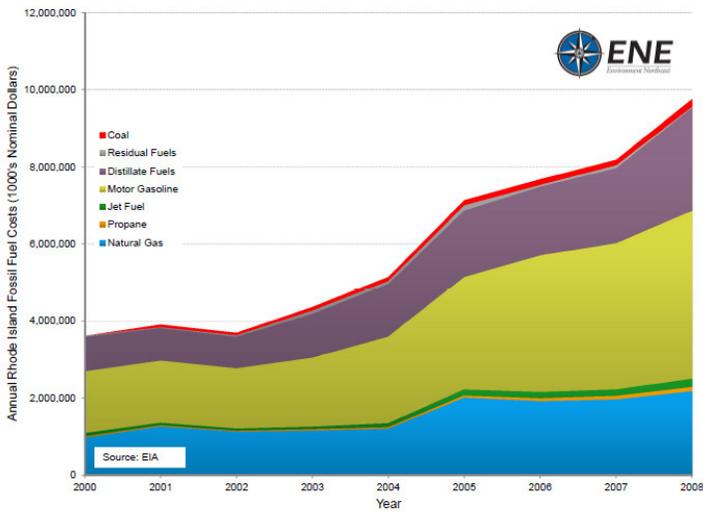
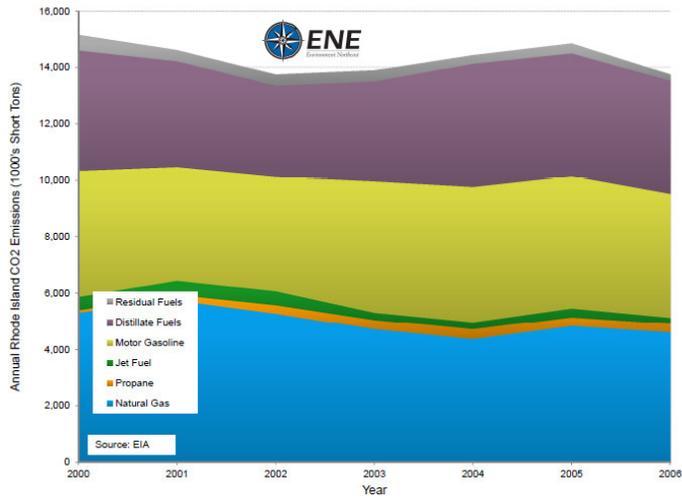
landlords and tenants. Funding these programs will carry-over into the 2011 program year.

Auctioning allowances and investing the proceeds in energy efficiency is arguably the key policy innovation of RGGI, and it establishes an important precedent for maximizing consumer benefit in a cap and trade system. Auctions send clear market signals and raise vital mitigation funds, while efficiency investments cost-effectively reduce emissions, increase energy independence, and boost employment and growth. RGGI’s auction and invest model creates a virtuous cycle that guides the market toward lower-emitting technologies while using program revenue to benefit the climate, consumers, and Rhode Island’s economy.

In order to deliver maximum benefit, Rhode Island should continue to auction allowances and dedicate revenue to energy efficiency investments. Rhode Island’s commitment to energy efficiency through RGGI sends a signal that the state is serious about taking control of its energy future and reducing energy costs for all Rhode Islanders. To stay true to this commitment Rhode Island must continue to implement the established RGGI plans and fund the leveraged efficiency programs in order to deliver continuing consumer benefit and keep the costs of the program down. ●

ENERGY TRENDS

The electricity that National Grid delivers to Rhode Island customers is generated using a number of different resources. The tables below show greenhouse gas emissions trends from different energy resources in Rhode Island, as well as the state's fossil fuel expenditures. ●



POLICY RECOMMENDATIONS

The Council was established by the Comprehensive Energy Conservation, Efficiency and Affordability Act of 2006 to maximize benefits to Rhode Island energy consumers. In carrying out this purpose the Act established the Council's role in providing policy recommendations to the General Assembly, the Public Utilities Commission, and the Office of Energy Resources. Specifically, the 2006 Act requires that the EERMC's annual report include the Council's —recommendations regarding any improvements which might be necessary or desirable, R.I. General Law § 42-140.1-5.

Accordingly, the EERMC respectfully submits the following two priority policy recommendations to the General Assembly and looks forward to working with the General Assembly and all interested parties and stakeholders in further refining and accomplishing these objects in the months and years ahead.

It is important to note that this first recommendation was also an EERMC policy recommendation last year — and was an apparent success story as the General Assembly passed legislation establishing “least cost procurement” for cost-effective natural gas efficiency resources that are cheaper than supply. A technical change to the law is required, however, to harmonize electric and natural gas energy efficiency funding with the provisions of the least cost procurement statute. Doing so is needed to enable investment in all energy efficiency resources that cost less than supply, lowering customers' energy bills.

Priority Recommendation #1: The EERMC recommends that the same Least Cost Procurement (LCP) investment requirement that applies to electricity – and the ability to fund it – be required in Rhode Island law for natural gas service delivery as well.

The EERMC recommends a technical change be made as soon as possible to the Least Cost Procurement legislation to fully effectuate the purpose of the May 2010 legislation and clarify and align the funding provisions for electric and natural gas energy efficiency with all the

provisions of the least cost procurement statute. In particular, the EERMC recommends that the General Assembly approve Senate Bill 293 and House Bill 5281, which eliminate the unintended inconsistency and ensure that the funding provisions for electric and natural gas energy efficiency are consistent and run concurrently with all the Least Cost Procurement provisions in R.I.G.L § 39-1-27.7 in order to save consumers tens of millions of dollars and create hundreds of local jobs.

In May 2010 the General Assembly passed key policy reforms to remove barriers to investing in natural gas energy efficiency resources that are lower cost than supply through revisions to R.I.G.L. § 39-1-27.7. Those revisions extended the same Least Cost Procurement mandate that already applied to electric efficiency to natural gas efficiency resources as well and also directed the Public Utilities Commission to fund investment in all cost-effective electric and gas efficiency measures that are lower cost than supply. This legislation positioned Rhode Island to make greater investments in cost-saving and job-creating gas efficiency measures such as insulation, air sealing, and high-efficiency heating and hot water systems for commercial, industrial, business, and residential natural gas consumers.

On December 22, the Commission successfully implemented part of these policy reforms by unanimously approving the electric efficiency Least Cost Procurement plan for 2011 that will deliver net economic benefits of more than \$175 million. However, in the December 22 decision, inconsistencies in the statute arising from outdated provisions led the Commission not to approve the natural gas efficiency Least Cost Procurement plan for 2011 presented by National Grid and supported by the EERMC and other diverse parties. This recent decision — not to fully fund gas efficiency resources that are lower cost than supply — is at odds with the intent of the May 2010 legislation passed by the General Assembly. If not remedied, this will mean:

- more than \$16 million in lost efficiency of savings for natural gas consumers;
- a 75% decrease in gas efficiency participants –

cutting from 12,800 participants down to 3,200; and

- a lost opportunity to create an estimated 290 job-years of local employment.

Senate Bill 293 and House Bill 5281 will eliminate the unintended inconsistency in the statutes and ensure that the funding provisions for electric and natural gas energy efficiency are consistent and are consistent with all of the Least Cost Procurement provisions in R.I.G.L. § 39-1-27.7 that are designed to save consumers tens of millions of dollars and create hundreds of local jobs.

Priority Recommendation #2: The EERMC recommends that the OER, National Grid, and the General Assembly work aggressively to ensure that cost saving, comprehensive, all-fuels efficiency services are available to all unregulated fuel users (heating oil, kerosene or propane) like they already are for electric and natural gas customers.

For a limited time in 2010 and 2011 National Grid has been able to extend the benefits of energy efficiency to customers who heat their homes and businesses with oil, kerosene, or propane. The Deliverable Fuels Program has been an overwhelming success. It was made possible by State Energy Plan funds from ARRA and provided residents with incentives and rebates for weatherization measures such as insulation, air and duct sealing, and high-efficiency heating and hot water systems. Over the course of five months, 427 delivered-fuel heated homes received rebates for heating system upgrades and 119 received rebates for weatherization measures, saving customers \$7 million through lower heating bills. The program has helped reduce heating oil consumption by 2 million gallons over the next 20 years. However, the ARRA program funding is ending and a long-term solution to the high costs of home heating oil and other delivered fuels customers is still needed.

The opportunity to reduce Rhode Islanders' heating burden is great and ultimately, it makes sense for the infrastructure to deliver whole-building efficiency in Rhode Island to be supported by a policy that makes the same level of cost-saving services available to Rhode Islanders who live in delivered fuel-heated homes – approximately 42%

– as those who live in natural gas-heated buildings.

The state needs a sustainable model for all Rhode Islanders that would be similar to the comprehensive weatherization services offered to National Grid's natural gas and electric customers through the three-year Least Cost Procurement efficiency plan.

The EERMC recommends that the General Assembly institute a stable revenue stream for sustained efficiency programs for homes heating by heating oil, kerosene or propane.

Working with the oil dealers and other stakeholders, such an effort could be funded by a cost-saving efficiency charge for oil customers to provide a revenue stream that would be used to do comprehensive efficiency and weatherization work for oil heating homes. For the Rhode Island homes that heat with natural gas, the existing efficiency programs have succeeded in reducing heating bills by up to 30% with a benefit to cost ratio of \$4 in savings for every \$1 invested in energy efficiency. If Rhode Island did the same for the 42% of Rhode Island homes heating with oil, kerosene, or propane those consumers would save tens of millions of dollars and hundreds of local efficiency and weatherization jobs would be created.

The current and repeating cycle of rising delivered fossil fuel prices and projected cuts in Low Income Heating Assistance Program services from the federal government highlight the need for developing this strategy in Rhode Island.

The EERMC commits itself to continue to work with the General Assembly, fuel oil dealers, and other stakeholders to establish a sustainably funded, cost-saving efficiency program offering for consumers who heat with oil, kerosene, or propane. Successful delivery models, including National Grid's Deliverable Fuel program, should be examined for application to a sustainable program.

Policy Updates

Align Utility Incentives with Consumers Interests via Revenue Decoupling.

In order to ensure investment in all efficiency resources that are cheaper than supply and all system

reliability resources that are less expensive than traditional wires, poles, and substation infrastructure, the EERMC has recognized it is important to examine the current incentives built into the regulatory system to ensure they align with their customers' interests and with the mandate for Least Cost Procurement.

In 2010 the EERMC advocated for a new system in which the utility would no longer be in effect "rewarded" for having higher sales and making infrastructure investments that could be avoided with lower cost efficiency and system reliability resources that reduce consumers' bills. The EERMC urged that this new approach should ensure the alignment of interests so that both the utility and consumers would benefit financially from full and aggressive investment in lower cost energy efficiency and system reliability resources.

The EERMC commends the General Assembly for adopting comprehensive decoupling legislation in 2010 (now R.I.G.L. § 39-1-27.7.1), that will help remove barriers to hundreds of millions of dollars in cost savings to customers. The EERMC will monitor the development of National Grid's plan for decoupling to ensure that the legislative goals and purposes of procurement more cost saving efficiency resources are fully implemented.

Prompt Deployment of RGGI Funds to Support Energy Efficiency Programs and Lower Ratepayer Costs.

R.I.G.L. § 23-82-6 states that the allowance revenue from the RGGI programs "shall be used for the most cost-effective available projects that can reduce consumer energy costs and lower the costs of the RGGI program for consumers [.]". The EERMC agrees with the General Assembly's foresight with regard to the use of the RGGI proceeds and with the Office of Energy Resources' determination in 2009 to dedicate 100 percent of the RGGI proceeds to energy efficiency. One of RGGI's most important design precedents is the decision to invest auction proceeds in energy efficiency. In addition to saving consumers money on monthly bills, efficiency programs reduce demand for electricity, thus decreasing power plant emissions and making RGGI more cost-effective. Efficiency savings also boost economic output and job growth in the state,

as consumers spend less money on imported fossil fuels and more money in the local economy.

However, in 2009 and 2010 the RGGI revenues were not made available to the energy efficiency programs in the time needed to benefit electric customers. Delays resulted in efficiency program interruptions and cancellations. To ensure that Rhode Island consumers realize the benefits of the RGGI program, the EERMC recommends that the General Assembly and the Office of Energy Resources take all necessary steps to facilitate and expedite the delivery of RGGI revenues to the energy efficiency programs.

Energy Affordability for Rhode Island Consumers.

The structural constraints faced by lower income energy users are growing steadily – led by rising fuel prices, colder than average New England winters, escalating utility shut-offs, and stagnant or fixed household incomes and the growing likelihood of decreased federal funding for the Low Income Heating Assistance Program (LIHEAP). The Council believes that these constraints pose a serious threat to the health and well-being of the entire Rhode Island community and that a comprehensive set of just/equitable solutions must be found soon.

The EERMC intends to reach out to and solicit the participation of a broad group of stakeholders before July 1, 2011 to seek solutions to the daunting challenges of providing sufficient energy resources – gas, electric, oil and propane – to customers referred to as "lower-income," which includes a large number of elderly citizens. Stakeholders will include, but not be limited to, select representatives of the EERMC, the OER, the General Assembly, RI Housing, National Grid, representatives of Rhode Island housing organizations, and Rhode Island Advocacy organizations.

The goal of this outreach will be to identify specific strategies that will increase the effectiveness of current low income energy services, including Weatherization and gas and electric utility programs. The outreach will also be designed to identify other strategies that can support energy-vulnerable Rhode Islanders over the long term.

Longer Term Strategies

In terms of longer term policy recommendations and implementation, the EERMC suggests the following:

Financing Strategies

The EERMC is committed to exploring, and where appropriate, supporting strategies that can effectively leverage utility ratepayer funding by encouraging and enabling customers in Rhode Island to pay for more of the upfront costs of energy efficiency themselves.

An effective way to increase customer participation can be to develop innovative financing strategies that help make the up-front costs of energy efficiency improvements more affordable for customers, removing a barrier to adopting efficiency measures. Experience in other jurisdictions has shown that different customer segments have different financing needs. The EERMC makes the following recommendations:

- **Financing for Small and Medium Sized Commercial Customers:** National Grid is effectively using customer financing through short-term lending and on-bill payment for a portion of energy efficiency costs with small commercial customers, municipalities, and increasingly, certain groups of larger commercial customers

The EERMC has actively supported the growth of this program component, and in 2010, some RGGI funds were used to capitalize a revolving loan fund managed by National Grid, and used directly as a part of its energy efficiency services to small and medium sized commercial customers. On-bill repayment over a two year period provides a high level of customer convenience.

***Recommendation/Update:** The EERMC will continue to monitor this program and support increased capitalization if it is appropriate.*

- **Financing for Large Commercial and Industrial Customers:** With the support of the Office of Energy Resources (OER), the Rhode Island Economic Development Corporation

(EDC), and National Grid, progress is being made in developing a loan fund to help finance large commercial and industrial retrofit projects. This effort would use ARRA funds as an initial source of capital, and then leverage other funds to expand the pool of investment dollars available.

***Recommendation/Update:** The EERMC has helped advocate for this innovative program and will continue to support and monitor its development. The EERMC strongly recommends that the ARRA funds be made fully available for the prompt implementation of this promising financing initiative.*

- **PACE Financing:** The EERMC will, in 2011, review an option, known as Property Assessed Clean Energy (PACE) financing. Initial enthusiasm for this approach led to the passing of authorizing legislation for this innovative financing approach in a number of states. That enthusiasm was dramatically reduced by decisions on the part of Fannie Mae and Freddy Mac (major lenders in the national secondary mortgage markets) that they would not accept loans that had PACE liens on properties.

***Recommendation/Update:** Some new approaches to address this issue are being crafted, including new approaches to PACE financing. The EERMC will also continue to review models of various utility and community-based financing strategies.*

- **Residential Loan Fund:** During 2010, preliminary discussions were held between National Grid, RI EDC, OER, Rhode Island Housing, and the EERMC about the possibility of creating a residential retrofit loan fund. One proposal has been to use an initial block of funding to provide a “loan loss reserve” that would permit the leveraging of significant additional funds at reasonable rates.

***Recommendation/Update:** The need for a public purpose entity to take the lead and be the host of the fund was recognized as a critical step, but so far no willing candidates have been identified. Those discussions between National Grid, RI EDC, OER, RI Housing, and the EERMC will*

be pursued further in 2011 as National Grid ramps up its residential retrofit programs. While the EERMC does not have a specific proposal as to who that candidate might be, it looks for guidance in authorizing an appropriate entity to play that role, should such enabling authority be needed.

Codes and Standards

If properly designed to “push” efficiency levels, rather than just codify current practice, building codes and other product and design standards can be effective tools for institutionalizing cost-saving energy efficiency in the marketplace.

The Department of Energy has required states to implement very high-efficiency building codes for 2017 as a condition of its ARRA funding. One challenge is that energy code compliance is difficult to monitor and aggressive building codes can become “fictional savings” that are really just on paper if they do not really change actual building practices. The opportunity is for the EERMC and National Grid to work with code officials to meet these DOE goals in a mutually beneficial way.

The EERMC recognizes that National Grid is actively supporting the effective implementation of both residential and commercial building efficiency codes in Rhode Island by facilitating training events, and otherwise educating and supporting designers and builders to meet and exceed code requirements

The EERMC believes that National Grid should be supported in efforts that will increase effective code implementation and regular code updating as part of an overall strategy to promote cost-saving energy efficiency in Rhode Island.

Recommendation/Update: *The EERMC proposes to help develop with National Grid and propose to regulators an approach that would support steady code advancement, and more comprehensive code adoption/implementation. This activity would, if done right, allow National Grid to claim some savings from code support activities. This approach would help meet the state DOE timeframe and EE goals simultaneously.*

Smart Grid

Smart grid refers to a complex set of technologies and innovations that have the potential to make the electric utility grid more intelligent and efficient in a number of ways.

The Smart Grid is defined by the Federal Energy Regulatory Commission as “a power system architecture that permits two-way communication between the grid and essentially all devices that connect to it, ultimately all the way down to consumer appliances.”

Recommendation/Update: *The EERMC proposes to facilitate an informed discussion of the Smart Grid with the goal of assessing how the Smart Grid could integrate with and enhance LCP and System Reliability implementation in Rhode Island.* ●

Appendix 1



EnergyWise

Single family home, Rhode Island



I am completely satisfied with both the work performed and the results. The crew that arrived was very professional and didn't leave a trace of mess behind. I've found that my home is retaining a comfortable temperature at a lower thermostat setting. The 25% savings on the job was substantial. I've been recommending this program to all my friends and colleagues! ”

-Roberta Rounds

National Grid customers can request a FREE in-home energy assessment by calling the EnergyWise program.

An assessment will determine your home's current energy use and provide recommended measures you can make to improve the efficiency of your home and save money.

Roberta Rounds had an in-home energy assessment completed at her ranch style home located in Cumberland, RI. The home has 1000 square feet of living space, and was built in the 1960s. Upon completion of the work, Roberta received 8 hours worth of free air sealing, free CFLs, and a rebate of over \$2,300 towards the cost of insulation.

Project Summary

- ◆ Air Sealing
- ◆ Attic and Basement Insulation
- ◆ Boiler Replacement
- ◆ Refrigerator Brush
- ◆ Roof Vent
- ◆ Bath Fan Exhaust Hose & Vent
- ◆ Thermadome

Savings Summary

Project Cost	\$8,539.42
National Grid Incentive	\$2,366.62*
Annual kWh Savings	621 kWh
Annual Therm Savings	180.57
Annual Cost Savings	\$1,209.64
CO2 Lifetime Reduction	5.04 tons

For more information on National Grid's energy efficiency programs, please visit www.powerofaction.com/efficiency or call 1-888-633-7947.

* American Recovery & Reinvestment Act contributed \$2,057.60

EnergyWise

Single family home, Rhode Island



I am very satisfied. The house seems to retain heat longer. The boiler doesn't come on nearly as often. The 25% savings from the program was a big factor in why I decided to go forward with all the work. I've told my neighbors and now they all want to do the same thing. It's a very good program.



-Paul Blanchard

National Grid customers can request a FREE in-home energy assessment by calling the EnergyWise program.

An assessment will determine your home's current energy use and provide recommended measures you can make to improve the efficiency of your home and save money.

Paul Blanchard had an in-home energy assessment completed at his ranch style home located in Cranston, RI. The home has 1000 square feet of living space, and was built in the 1960's. Upon completion of the work, Paul received free air sealing, free CFLs, and a rebate of over \$1,900 towards the cost of insulation.

Project Summary

- ◆ Air Sealing
- ◆ Attic and Basement Insulation
- ◆ Boiler Replacement
- ◆ Refrigerator Brush

Savings Summary

Project Cost	\$7,303.66
National Grid Incentive	\$1,917.24*
Annual kWh Savings	467 kWh
Annual Therm Savings	196.96
Annual Cost Savings	\$498.16
CO2 Lifetime Reduction	0.799 tons

For more information on National Grid's energy efficiency programs, please visit www.powerofaction.com/efficiency or call 1-888-633-7947.

* American Recovery & Reinvestment Act contributed \$1795.48

Large Commercial & Industrial Case Study

F.M. GLOBAL CORPORATE HEADQUARTERS JOHNSTON, RI



F.M. Global is a world-wide provider of commercial and industrial property insurance, risk management solutions, engineering-driven underwriting, and property loss prevention research. F.M. Global has a strong commitment to sustainability, efficiency and corporate responsibility which is showcased in their unique set of building standards.

When F.M. Global constructed their 366,660 square foot corporate office in Johnston, Rhode Island, they wanted to design a building that would embody their vision of sustainability and efficiency. With help from National Grid, F.M. was able to exceed their design goals and achieve the distinguished designation of LEED (Leadership in Energy and Environmental Design) gold.

National Grid provided F.M. Global with technical assistance and over \$390,000 in gas and electric efficiency incentives to help F.M. Global realize their efficiency goals. The company installed energy efficient electric equipment such as lighting controls, motors, and rooftop air conditioning units to achieve savings of over one million kWh. In addition, the company implemented gas measures like boiler, domestic hot water heaters, and wall insulation, resulting in savings of over 35,000 therms annually.



ENERGY STAR® Homes

Coddington Point Condominium Project



We are very proud of the Coddington Point project. We are especially pleased that the energy savings realized through the use of ENERGY STAR® appliances and the energy efficient equipment in each unit will reduce the overall utility and maintenance costs associated with the site, which in effect will continue to keep the units affordable for Newport families.

Dana Angelo
Project Manager



The Coddington Point condominium project was revitalized into an affordable and energy efficient housing complex. Construction began in the Fall of 2009 and was completed in June 2010, resulting in 32 units of housing with 26 two-bedroom units and six three-bedroom units. Keeping utility and maintenance costs to a minimum through the installation of energy efficiency measures ensures the affordability of this development for local Rhode Island families.

Project Summary

Energy Efficiency
Measures Installed

- High efficiency boilers and instantaneous domestic hot water systems—92.5 AFUE.
- ENERGY STAR refrigerators, dishwashers and energy-efficient lighting
- Insulation and air sealing
- Meets 2005 EPACT Energy Efficient Home Tax Credit

Strategic Partners

Coddington Point
National Grid

Savings Summary

The Need—

To provide an affordable housing alternative by reducing monthly operating costs.

The Solution—

Install various energy efficiency measures including high efficiency appliances and lighting, insulation and air sealing.

The Result—

Total Project Cost	\$7.7 million
National Grid Incentive	\$32,000
Annual kWh savings	36,237 kWh
Annual therm savings	4165 therms
CO ₂ Lifetime Reduction	200 tons
SO ₂ Lifetime Reduction	0.11 tons
No _x Lifetime Reduction	0.06 tons

For more information on this energy efficiency program, please visit www.powerofaction.com/efficiency or call 1-888-887-8841.

Visit www.rieermc.ri.gov

**RHODE ISLAND ENERGY EFFICIENCY
AND RESOURCE MANAGEMENT COUNCIL**

Annual Report to the General Assembly | Required Under RIGL 42-140.1-5: April 2011