



**Rhode Island  
Regional Greenhouse Gas Initiative, Inc. Auction Proceeds Report  
Presented by National Grid  
May 1, 2012**

**Introduction**

Since 2008, Rhode Island (RI) has received approximately \$15.8 million from CO<sub>2</sub> Allowance Auctions through the Regional Greenhouse Gas Initiative, Inc. (RGGI).<sup>1</sup> As of January 2012, National Grid received \$11.5 million of those funds in order to expand energy efficiency (EE) efforts throughout the state. This report is in accordance with the RI Office of Energy Resource’s (OER) 2011 Plan for the Allocation and Distribution of RGGI Proceeds (‘2011 Plan’), which calls for an annual report that describes results for expanded and supplemental EE activities.

**Background**

The following table illustrates the RGGI proceeds that National Grid has or expects to receive:

Auctions	Auction Year	Net Proceeds	EE Funding	Status	EE Initiatives
1-5	2008 - 2009	\$6,581,188	\$3,950,152	Received March 2010	Funded all 2010 EE Programs Saved 115,540 Lifetime MWh in 2010
			\$2,633,434	Received December 2010	Deep Energy Retrofit Pilot New Homes Tier III Pilot Heat Loan Small Business Revolving Loan Fund
6-10	2009 - 2010	\$5,043,347	\$4,034,678	Received January 2012	Small Business Revolving Loan Fund Large Commercial Revolving Loan Fund
11-14	2011	\$2,621,091	\$2,096,873	Anticipated 2012	Plan to use for all EE Programs Plan to save 57,506 Lifetime MWh

Under the OER’s 2009 Plan for the Allocation and Distribution of RGGI Proceeds (‘2009 Plan’) sixty percent of RGGI auction proceeds were allocated to utility energy efficiency programs to be used to fund all energy efficiency programs in 2010. Those funds were used to save 115,540 lifetime MWh. Preliminary results were reported to RGGI, Inc. in February, 2011, and to the OER in the RGGI Auction Proceeds Report submitted on March 1, 2011.

Additionally, National Grid received forty percent of RGGI auction proceeds from Auctions 1-5 in December 2010. Those funds were used to launch the Deep Energy Retrofit pilot, New Homes Tier III pilot, Heat Loan and Small Business Revolving Loan fund in early 2011. This report describes the results of these energy efficiency pilots and finance initiatives throughout 2011.

<sup>1</sup> Source: [http://www.rggi.org/market/co2\\_auctions/results](http://www.rggi.org/market/co2_auctions/results)

Under the OER's 2011 Plan, the Company received eighty percent of proceeds from Auctions 6-10 for innovative finance initiatives, including fully capitalizing the Small Business Revolving Loan fund and establishing a Large Commercial Revolving Loan fund. This report includes a brief update on these ongoing 2012 RGGI activities.

## **Deep Energy Retrofit**

The Deep Energy Retrofit (DER) pilot is designed to determine the energy savings and market potential for super insulation retrofits in Rhode Island. The goal of the DER pilot is to achieve significant energy reductions of 50% or more in a home and learn how DER measures can be applied to retrofit programs in the future for all customers.

A DER is a complex undertaking. Through the DER process, an existing home is transformed to a high performance home in which the dynamics of energy, moisture and air flows are changed in both subtle and significant ways. The contractor or consultant who develops the DER design and takes responsibility for its implementation must have a thorough understanding of how the various measures of the DER change energy, moisture and airflow dynamics. This understanding is essential to managing the risks necessarily entailed in changing how a building works. To qualify for this pilot program and applicable incentives customers are required to go through an in-depth selection process and must be willing to make significant financial investments. For additional program details, please see the program materials and case studies in Attachment 1.

In 2011, the pilot held a full-day workshop to recruit interested builders, designers, and homeowners. Two projects were accepted in 2011 and began construction. They include a two-family residence in North Kingstown and a three-family residence in Providence. Two more projects are currently under review for a three-family in Providence and a single family in Wakefield. Construction on all projects is expected to be completed in 2012.

The North Kingstown DER home, pictured here, was featured in the annual Northeast Sustainable Energy Association (NESEA) Green Building Open House tour in October 2011. The home includes materials from RI businesses such as basement insulation from Aspen Aerogels in East Providence and R-5 windows from Custom Built Window & Door Systems in Warwick. For additional information and photos from the project, please see the DER program materials in Attachment 1. Additional details are also available online at [www.powerofaction.com/der](http://www.powerofaction.com/der).



## **Homes Tier III Pilot**

The Homes Tier III Pilot was intended to demonstrate advanced construction practices necessary for achieving a Home Energy Rating (HER) score of 35. It was also intended to prepare the RI construction, developer and architecture communities for forthcoming advancements in the ENERGY STAR<sup>®</sup> label standards for residential new construction. The Company faced challenges with the pilot. The region does not have an HVAC contractor who has the appropriate accreditation according to the federal government's ENERGY STAR<sup>®</sup> guidelines. Due to the lack of accredited HVAC contractors, eligible customers instead opted to participate in the established Residential New Construction program which had fewer barriers to entry. This barrier is expected to remain throughout 2012; therefore the RGGI funds for this pilot were transferred to Deep Energy Retrofit pilot in January 2012 in order for that pilot to expand to more RI customers.

However, the Company is still committed to advancing design and construction to a new HER level. The Company approached Northeast Energy Efficiency Partnership (NEEP) and the Consortium for Energy Efficiency (CEE) about advocating for a solution to region-wide issue with HVAC accreditation. The Company has also folded the goals of this pilot into its 2012 Residential New Construction program so that it can continue to focus on the pilot's important objectives.

## **Heat Loan**

In 2011, the Company partnered with Navigant Credit Union and Citizens-Union Savings Bank in order to offer customers 0% financing for energy efficiency improvements. The Heat Loan can be used for Insulation and/or Air Sealing Upgrades, Energy Efficient Heating System Replacement, Duct Sealing and Duct Insulation, Energy Efficient Domestic Hot Water System, ENERGY STAR<sup>®</sup> Thermostat(s). Customers are eligible for 0% interest loans up to \$25,000, for period of up to 7 years. Customers must receive an EnergyWise home assessment in order to be eligible for the Heat Loan. During the home assessment, auditors recommend the Heat Loan and leave behind customer-friendly information about taking the next steps. Please see some of the Heat Loan's program materials in Attachment 2.

One hundred sixty customers participated in 2011. RGGI funds were used to buy the interest rate down to 0%, administer the program, and conduct quality assurance inspections. Through the interest rate buy down, customers received a total amount of \$942,159 in loans. The average loan was approximately \$5,900. The Heat Loan helped customers overcome financial barriers to participating in energy efficiency programs. The annual and lifetime energy savings, as well as the benefits and cost savings, from equipment that Heat Loan financed are attributed to the programs, for example EnergyWise or High Efficiency Heating.

Heat Loan will continue in 2012. The program will rely on RGGI funds until they are exhausted. The Company incorporated Heat Loan into the 2012 EnergyWise program, and EE funds will be used to continue to offer finance opportunities.



### Small Business Revolving Loan Fund

The Small Business Direct Install program helps businesses reduce their energy costs with energy efficient equipment such as lighting upgrades, lighting occupancy sensors, walk-in cooler efficiency measures, and site-specific custom projects. National Grid offers incentives for up to 70% of the cost of the installation of qualified equipment and then finances the customers' share of the cost with interest-free financing up to 24 months. The finance can be repaid on monthly electric bills.

In 2011, the Company successfully created a revolving loan fund for small business customers using \$1.8 million of RGGI proceeds. This revolving loan fund replaces the preexisting copayment program for small business customers that relied on DSM funds. Establishing a revolving loan fund potentially provides a source for sustainable finance funding which means that the Company may no longer request DSM funds for copayments. An additional \$2 million in RGGI funds was received in January 2012 to help capitalize the loan fund so that it may continue to revolve and support customer finance in the future. For examples of customer success stories, please see case studies in Attachment 3.

The Small Business Direct Install program had 1,281 customers participate in 2011. The majority of these customers elected to receive finance and repay it on their bills and received a total of \$1,843,371. A fund balance report for the Revolving Loan Fund is included as Attachment 4. Overall, the program was able to save 16,871 annual MWh and 196,601 lifetime MWh. The program created a total lifetime benefit of \$29,226,000 which includes \$20,183,000 in reduced transmission, distribution, summer and winter energy over the life of the measures. For more information about benefits please see the RI 2011 Energy Efficiency Year End Report, Table E-2, filed with the Public Utilities Commission on May 10, 2012.

### Spending & Reporting

The following table illustrates the 2011 budget and spending, as well as the budget for 2012 which also includes RGGI proceeds received in January 2012.

Auctions	Received	EE Funding	Initiative	2011 Budget	2011 Spend	2012 Budget
1 - 5	December 2010	\$2,633,434	Heat Loan	\$ 449,463	\$ 146,698	\$ 302,765
			Homes Tier III Pilot	\$ 65,000	\$ -	\$ -
			Deep Energy Retrofit Pilot	\$ 260,000	\$ 27,848	\$ 297,152
			Small Bus. Revolving Loan Fund	\$ 1,858,971	\$ 1,843,371	\$ 15,600
Total				\$ 2,633,434	\$ 2,017,917	\$ 615,517

Additionally, the Company submitted preliminary 2011 results of the RGGI pilots and finance programs to RGGI, Inc., in March 2011.



## **ATTACHMENTS**

Attachment 1 – DER Program Materials

Attachment 2 – Heat Loan Program Materials

Attachment 3 – Small Business Case Studies

Attachment 4 – 2011 Small Business Revolving Loan Fund Balance



**ATTACHMENT 1**  
DER Program Materials

1. DER Brochure
2. DER Open House

# Achieve significant energy saving and a more comfortable, better quality home with the Deep Energy Retrofit program from National Grid.

National Grid is expanding a pilot program to demonstrate Deep Energy Retrofits in existing single and multi-family homes in Rhode Island in 2011 and in Massachusetts through 2012. A key goal of the pilot is to achieve significant energy reductions of 50% or more.

## What is a Deep Energy Retrofit (DER) project?

Major insulation upgrades including super insulation build-outs are a substantial portion of the initiative, with potential reimbursements of 75% of this cost up to \$42,000 for single family homes involving a deep retrofit of the whole building.

- ▶ Incentive maximums vary based on the number of units in a building.
- ▶ Staged or partial projects will be considered for inclusion in the pilot.
- ▶ Additional incentives will be offered for deep energy retrofit projects in Massachusetts that reach higher performance levels of Net Zero energy, Passive House or Thousand Home Challenge standards.

## How can I participate?

This pilot requires that customers team up with a contractor or designer with relevant experience to identify and propose deep retrofit projects in conjunction with customer planned projects such as siding, windows, basement conversions and/or remodeling. If you are planning to renovate your residential building soon then, you may be a good candidate.

## Am I eligible?

The pilot is limited to:

- ◆ Owners of residential 1-4 unit buildings in National Grid's electric service area in Rhode Island that heat with any fuel or in Massachusetts that heat with any fuel besides natural gas.
  - ◆ Owners of residential 1-4 unit buildings or 5+ unit apartment buildings in National Grid's Massachusetts gas service area that heat with natural gas.
  - ◆ Owners of residential 1-4 unit buildings in National Grid's electric service area in that heat with any fuel besides natural gas.
  - ◆ Owners of 5+ unit apartment buildings in National Grid's electric service area in Massachusetts that heat with electricity.
- ▶ Candidates must be able to secure their own financing of up to \$50,000 or more for a comprehensive single family project (to cover non-energy and non-reimbursable portions of the project).
  - ▶ Projects will require support from the building owner, a willingness to test new technologies in their building as well as to provide cooperation and access for program monitoring, learning and publicity.



This is one of the greenest homes in town — and it saves green, too!

Thanks to the Deep Energy Retrofit from National Grid.

## I'm ready to learn more.

If you are interested and plan to renovate your building, please review the pilot program guidelines at [www.powerofaction.com/der](http://www.powerofaction.com/der). If after doing so you believe you might be eligible, please fill out the questionnaire on the web page.

# Highlights and Benefits of Deep Energy Retrofit Homes

## Highlights of Deep Energy Retrofit in a two-family home in Belmont:

HERS Index 32 - The lower a home's HERS Index, the more energy efficient it is in comparison to the HERS Reference Home where HERS 100 is standard new construction.

- ▶ **Attic Insulation:** R-60 (6" Cellulose, 6" Rigid Polyiso Foam added to exterior)
- ▶ **Wall Insulation:** R-40 (3½" Cellulose, 4" Rigid Polyiso Foam added to exterior)
- ▶ **Basement walls:** R-40 (2" Closed-cell Spray Foam, 7" mineral wool)
- ▶ **Windows:** R-5 triple pane, low E, argon/krypton filled
- ▶ **Air leakage reduction:** 90%, CFM 50 initial 5700, final 590
- ▶ **Heating system:** 95% efficient natural gas forced-air
- ▶ **Heat Recovery Ventilation:** Energy Recovery Ventilator (ERV)
- ▶ **Lighting:** Compact Fluorescent or Light Emitting Diode lighting throughout
- ▶ **Appliances:** Mostly ENERGY STAR®
- ▶ **Renewables:** 4.6 kW Photovoltaic array, Solar DHW with electric back-up

## Customer Testimonials

*A deep energy retrofit is really a modernization of the building envelope — it brings benefits in noise reduction, temperature stability, indoor air quality and durability — as well as saving energy. It's very valuable to do a DER as part of some kind of official grant program because of the support, peer-review and accountability that a good grant program like the National Grid pilot provides.*

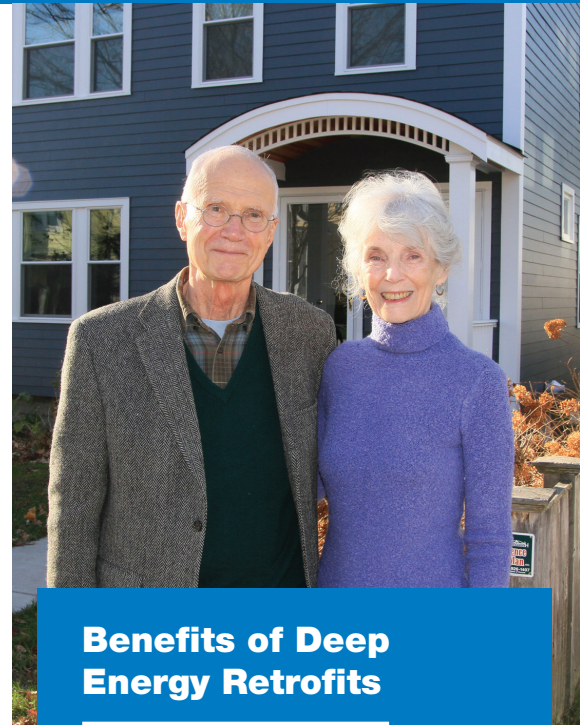
— Owners of a Deep Energy Retrofit Home in Belmont, MA

*"National Grid's commitment, financial and scientific, enabled us to move our renovation project to the Deep Energy Retrofit level. What we have now exceeds all our expectations."*

— Owners of a Deep Energy Retrofit Home in Belchertown, MA

*"This retrofit program is transforming my 1962 duplex into a super-insulated, ultra efficient twenty-first century home!"*

— Owners of a Deep Energy Retrofit Two-family Home in North Kingstown, RI



## Benefits of Deep Energy Retrofits

- ▶ Reduces greenhouse gas emissions
- ▶ Increases the impact of investment in renewables
- ▶ Energy cost savings
- ▶ Builds local economies
- ▶ Increases long term affordability
- ▶ Creates good jobs that cannot be out-sourced
- ▶ Increases passive survivability
- ▶ Stimulates product development
- ▶ Maintains embodied energy and cultural value
- ▶ Builds energy independence
- ▶ Improves durability, indoor air quality, comfort, health and safety



## Deep Energy Retrofit Open House

Saturday, October 1, 2011 • 1 PM — 4 PM

354 Boston Neck Rd • North Kingstown, RI

National Grid will be sponsoring an Open House, with Caldwell & Johnson Custom Home Builders, showcasing the Deep Energy Retrofit of a 1962 two-family home at 354 Boston Neck Rd, North Kingstown, RI. The Open House will coincide with the NESEA Green Building Open House tour.

The owners, David and Christina Caldwell, are second generation home builders in North Kingstown. Caldwell & Johnson Custom Builders has a 43 year history in the Rhode Island market with a long and documented history of building energy efficient and solar houses since the 1970s, and is a leader in new methods of high performance and green building.

The property had been abandoned and condemned. The roof, which was nearly flat, had leaked badly, and the septic system had failed. The property was sold in foreclosure and required a back-to-the-studs “gut” remodel. The buyers saw this as an opportunity to become the first Deep Energy Retrofit in Rhode Island and a case study for other homeowners and landlords.

The super-insulated enclosure, made possible through financial and technical support from National Grid and Building Science Corporation, essentially includes an entire new frame, or exoskeleton, installed over the existing structure. This new structure has created the cavity space necessary to super-insulate the house. Separate heat pumps and heat recovery ventilators in each unit will lower energy use, improve indoor air quality and eliminate cross-contamination between units.

The project is aiming for completion by February 2012.

### Here are some of the highlights of this North Kingstown 2-family DER retrofit project:

- **Roof:** Up to R-60 (open cell spray foam) with new truss roof built over existing for additional insulation.
- **Walls:** R-40 with 1.5” of polyisocyanurate rigid foam on the exterior, 3.5” of high density closed cell phone on the exterior in the new exoskeleton, and 3.5 inches of open cell insulation in the existing wall cavity.
- **Basement walls:** R-20 Dow Thermax
- **Basement floor:** R-10.5 Aspen Aerogel Cryogel Z insulation, 10mm
- **Windows:** R-5 Triple pane windows, Low-E glass, Argon filled, manufactured by Custom Built Window & Door Systems in Warwick, RI
- **Heating:** Heating and Air Conditioning will be Fujitsu Air Source Heat Pumps.
- **DWH:** On-Demand hot water will be a Navien Tankless system in each unit.
- **Ventilation:** Balanced ventilation with 75% efficient Fantech Heat Recovery Ventilators in each unit

### Directions by public transportation to the Open House:

The home is in the Wickford neighborhood of North Kingstown, and is available via RIPTA transportation.

### Directions by car to the Open House:

- Take Route 95 South to Route 4, Exit 9
- Take Exit 5A, RI 102 South to Wickford
- RI 102 becomes Route 1A (also Boston Neck Rd)
- 354 Boston Neck Rd located on the left at a stoplight on the corner of Boston Neck Rd and Elm Drive.



Exterior showing new exoskeleton with closed cell foam



The site opens up to a walkout basement in the rear



Front façade with new entrance portico. The new truss roof allowed for additional insulation as well as improved water management and shading.



**ATTACHMENT 2**  
Heat Loan Program Materials

1. Steps to Heat Loan Program
2. FAQs about the RI Heat Loan Program
3. Heat Loan Minimum Standards and Requirements

## Steps to the HEAT Loan Program

The HEAT loan is available to qualified customers participating in the EnergyWise Home Energy Assessment Program and is designed to promote the installation of high efficiency improvements. Customers must be owners of one- to four- family homes and have a current residential gas and/or electric account with National Grid.

Customers are eligible to apply for a 0% loan and obtain applicable utility rebates for the measures installed.

- 1. Complete an EnergyWise Home Energy Assessment and receive a HEAT Loan Intake Form.**  
Read over the Minimum Standards and Requirements and other program fact sheets provided to you. Visit [www.powerofaction.com/riheatloan](http://www.powerofaction.com/riheatloan) for more information and a list of participating lenders. Call **1-888-633-7947** to schedule the Home Energy Assessment, or if you have any questions concerning the eligible improvements and process.
- 2. If you choose to obtain pre-approval from one of the HEAT Loan participating lenders,** loans are unsecured or secured depending on the lender. Refer to the lender list for pre-approval and loan options.

Eligible Customer 1-4 Unit Property	Type	Loan Amount	Loan Term
Owner Occupied	Micro Loan	\$500 – \$2,000	24 months
Owner Occupied	1-4 Unit Standard Loan	\$2,001 – \$25,000	Up to 84 Months
Non-Owner Occupied	1-4 Unit Rental Property Loan	\$5,000 – \$25,000	Up to 84 Months

*Maximum loan amounts and loan type can vary by participating lender.*

*Note: Units in a condo complex with a condo board are not eligible for a HEAT Loan. Condo complexes are served through the utility's multi-family program.*

- 3. Obtain signed, itemized contractor proposals for the eligible efficiency improvements that you want to finance.**  
The customer is responsible for obtaining proposals from qualified contractor(s) for the eligible efficiency improvements. Do-it-yourself installations are not eligible for HEAT Loan financing. Review the Minimum Standards and Requirement fact sheet and share a copy with your contractor(s).
- 4. Choose the contractor(s) you want to use and provide copies of the contractor proposals to your HEAT Loan Administrator for eligibility review and approval.** The HEAT Loan Administrator will review the contractor(s) proposal(s) the customer submits for the HEAT Loan. The HEAT Loan Administrator will contact the customer if any paperwork is incomplete or does not meet the eligibility requirements.

### Mail or Fax the following information to your HEAT Loan Administrator for Review and Authorization:

- ✓ The original, white copy, of the completed and signed HEAT Loan Intake Form provided at the Home Energy Assessment with section 2 completed and signed.
- ✓ Contractor Proposal(s) for the eligible improvements you want to finance along with all required supporting documentation as described in the Minimum Standards and Requirements on the back of this form.
- ✓ If replacing a heating system please include a heat loss calculation provided by your heating contractor and a proposal stating the make, model and efficiency rating of the proposed new system.

5. **Receive a HEAT Loan Authorization Form.** The Customer provides this form to the lender, then the lender does a final determination on the loan and disperses the funds to the customer in the form of a two-party check.
6. **Check disbursements.** Successful applicants will receive a loan agreement and two-party check(s) made out to the customer and contractor for the full amount of the loan, net any utility rebates.
7. **After all work financed through the HEAT Loan is complete, the customer needs to notify the HEAT Loan Administrator and schedule a verification inspection.** The purpose of the inspection is to verify that the work financed by the HEAT Loan has been installed.

***Note: All payment arrangements including payment of any required initial deposits, subsequent or final payments, along with payments schedule, are solely between the contractor and the customer.***

Financing offer is for a limited time. Participating in the HEAT Loan Program is contingent on being approved for a loan from a participating lender. Financing is subject to funding availability and the Terms and Conditions listed on the HEAT Loan Intake Form are subject to change or cancellation without notice. This program will end on December 31, 2012.

**For questions regarding the HEAT Loan Program contact HEAT LOAN Administrator. Contact information and telephone number will be provided during your Home Energy Assessment.**

## FAQs about the Rhode Island Heat Loan Program (HLP)

### **Am I eligible for the HLP?**

You must be a residential customer with a 1-4 unit property being serviced by National Grid.

### **Who determines if I am eligible for the HLP?**

- The EnergyWise Program determines the eligibility for a customer to participate in the HLP.
- The participating Lender determines the credit-worthiness for a customer to undertake a loan through the HLP.

### **What are the steps to participate in the HLP?**

1. You must first have an EnergyWise Home Energy Assessment completed. An EnergyWise representative will discuss the HLP during the energy efficiency recommendations part of the Home Energy Assessment visit. You will be provided with the following documents during the visit:
  - Intake Form
  - Steps to the Process & Minimum Standards for the Eligible Measures
  - Participating Lender List
2. Contractor proposals and associated documents for eligibility must be submitted to the HEAT Loan administrator for review and approval.
3. HEAT Loan Authorization Form must be submitted to the Lender.
4. You will then proceed with the Lenders' underwriting process.

### **How much does EnergyWise Home Energy Assessment cost?**

There is no cost for residential customers served by National Grid to have an EnergyWise Home Energy Assessment completed.

### **Who do I contact to sign up for an EnergyWise Home Energy Assessment?**

Please visit [www.powerofaction.com/rienergywise](http://www.powerofaction.com/rienergywise) or call 1-888-633-7947 to schedule your Home Energy Assessment.

### **I'm a tenant at a multifamily property. Can I participate in the HLP?**

Financing is not offered to tenants. However, you should discuss energy efficiency upgrades with your landlord. Landlords can take advantage of the HLP if they are the owner of a 1-4 unit residence.

### **Can alternative energy systems be financed through this program (i.e. financing solar systems)?**

No. Financing is only available for energy efficiency projects. Eligible measures include heating systems, hot water systems, solar hot water, and insulation upgrades. For a complete list visit [www.powerofaction/riheatloan](http://www.powerofaction/riheatloan)

# HEAT Loan Minimum Standards and Requirements

The HEAT Loan is available to qualified customers participating in the EnergyWise Home Energy Assessment Program and is designed to promote the installation of high efficiency improvements. To be eligible for the HEAT Loan, the energy efficiency improvements must meet the following requirements and standards.

## Customer Eligibility

To be eligible to apply for the HEAT Loan, you must:

- Be an owner of a one to four family residence
- Have completed a Home Energy Assessment through the EnergyWise Home Energy Assessment Program

## Heating Systems and Thermostat Controls:

Heating systems proposal(s) must state manufacturer, model, Efficiency Rating (AFUE, HSPF, or COP) of the proposed heating system. For all Heating systems, the new system must be sized based on actual heating load calculations for the building according to ACCA Manual J, Manual S, IBR load calculations, or equivalent sizing methods. Installations must be performed by a RI licensed heating contractor.

A copy of the sizing calculation must be provided with the contractor's proposal.

Distribution system upgrades are limited and can only be covered when a customer is switching from Electric baseboard, Electric Radiant heat or when a customer is switching from a steam boiler to a hot water boiler.

When switching from Electric baseboard or Electric radiant heat the new heating system must meet the minimum efficiency standards as listed in the following table.

When switching from a steam boiler to a hot water boiler you must meet the following minimum standards listed below.

- To finance a distribution upgrade with the Heat Loan, new natural gas or propane boilers must be at least 90% AFUE to be eligible.
- To finance a distribution upgrade with the Heat Loan, new oil boilers must be at least 85% AFUE and an outdoor weather responsive control must be installed in conjunction with the boiler to be eligible for the Heat Loan

Not Covered: Oil tanks and air conditioning.

Heating Systems and Controls	Minimum Standard
Furnace — Natural Gas with ECM*	AFUE ≥ 92%
Furnace — Propane	AFUE ≥ 90%
Furnace — Propane with ECM*	AFUE ≥ 92%
Furnace — Oil	AFUE ≥ 83%
Furnace — Oil with ECM*	AFUE ≥ 83%
Steam Boiler — All Fuels	AFUE ≥ 82%
Hot Water Boiler — Natural Gas Natural Gas or Propane	AFUE ≥ 85%
Hot Water Boiler — Oil	AFUE ≥ 85%
Combined High Efficiency Boiler and Water Heater — Natural Gas	AFUE ≥ 85%
Air Source Heat Pump — Electric	HSPF ≥ 8.2
Air Source Heat Pump — Electric	HSPF ≥ 8.2
Ground Source Heat Pump	COP ≥ 3.3
Oil/Propane Boiler's Weather Responsive Controls	
Natural Gas — Market Boiler Reset Controls (After Market)	

\*Electronic Commutated Motor  
HSPF (Heating Seasonal Performance Factor)  
AFUE (Annual Fuel Utilization Efficiency)  
COP (Coefficient of Performance)

### Insulation, Air Sealing, and Duct System Improvements

Insulation, air sealing, and ductwork (duct sealing and insulation) improvements must be recommended at the time of the audit and included on your Action Plan. All measures must be installed to the EnergyWise Home Energy Assessment material and installation standards. Work must be completed by a contractor that has met all of the requirements and is currently eligible to provide program approved weatherization services in the EnergyWise Home Energy Assessment program.

**Insulation proposals need to be itemized by type of work, insulation area, square footage, costs, and inches installed.**

**Domestic Hot Water Systems:** Domestic hot water systems must meet the minimum efficiency standards as noted in the following table to be eligible for the HEAT Loan.

Domestic Hot Water System Type and Fuel	Minimum Standard
Indirect Water Heater	Meets Rhode Island State Code Requirements
Freestanding Electric Water Heater	Energy Factor (EF) $\geq$ .92
On-Demand Tankless Water Heater – Natural Gas or Propane	Energy Factor (EF) $\geq$ .82 with Electronic Ignition
Freestanding Gas, Oil, or Propane Water Heaters	Energy Factor (EF) $\geq$ .61
Heat Pump Water Heater	Energy Factor (EF) $\geq$ 2.0
Solar Hot Water	Collectors must be certified by SRCC (Solar Rating Certification Corporation)
Condensing Water Heater – Natural Gas	Thermal Efficiency $\geq$ 95%

Please refer to the HEAT Loan Steps for information on how to apply for the loan.



## **ATTACHMENT 3** Small Business Case Studies

1. Mews Tavern
2. Phred's Drug Store
3. Spumoni's Restaurant

# Small Business Program

## Mews Tavern



MewsTavern Wakefield, RI

### Mews Tavern

Originally a small fishermen's tavern which opened in 1947, owners Dave and Danny have transformed Mews Tavern into a legendary Rhode Island restaurant and bar. It's an authentic Celtic Pub where you can enjoy the best burger in South County and enjoy live entertainment. There is a great deal of history packed into Mews. People from all over come to visit this legendary establishment and now all patrons will drink and dine under

their new energy efficient lighting that was installed after Mews took advantage of National Grid's Small Business Program. After a free energy evaluation they decided to move forward with recommended measures that helped decrease energy costs and their environmental impact.

### Efficiency Improvements

Mews installed an Energy Management System and new energy efficient custom lighting.

### Savings Summary

#### The Result

#### Project 1:

Project Cost	\$28,159.45
National Grid Incentive	\$19,711.60
Cost to Customer	\$8,447.85
Annual Cost Savings	\$10,438.62
Annual kWh savings	77,750

For more information on National Grid's energy efficiency programs, please visit [www.powerofaction.com/smallbusinessNE](http://www.powerofaction.com/smallbusinessNE).

# Small Business Program

## Phred's Drug



Phred's Drugs Cranston, RI

“  
**The lights are nice and bright and the LED cooler lights enhance the product. I was impressed. It was easy there was no disruption to my business.**”

Charles Rossi, Owner

### Phred's Drug

Established in 1956, Phred's Drug in Cranston, RI has been serving their customers diverse needs for 55 years. The owner, Charles Rossi, comes from a long line of pharmacists and intends to maintain the commitment, to the community that Phred's is known for. As part of that commitment he decided to take advantage of National Grid's Small Business Program and get a free energy evaluation that would identify ways that Phred's could decrease their energy consumption and reduce their energy costs. Charles chose to switch to energy efficiency overhead lights and LED cooler lights.

### Efficiency Improvements

Phred's Drug installed over head lights—T8 lamps and ballasts and changed out refrigeration lights for LED cooler lights.

### Savings Summary

#### The Result

Project Cost	\$21,395.75
National Grid Incentive	\$14,977.05
Cost to Customer	\$6,418.70
Annual Cost Savings	\$4,561.46
Annual kWh savings	46,131

Customer financed their portion of the costs on their electric bill interest-free over 24 months.

For more information on National Grid's energy efficiency programs, please visit [www.powerofaction.com/smallbusinessNE](http://www.powerofaction.com/smallbusinessNE).

# Small Business Program

## Spumoni's Restaurant



Spumoni's Restaurant Pawtucket, RI

### Spumoni's Restaurant

Established in 1978, Spumoni's in Pawtucket is one of Rhode Island's favorite Italian seafood restaurants, offering authentic home made Italian cuisine. A family run business, owner George Jr. and his sister Michele want to uphold the quality and service that their father began when the family entered the restaurant business. In order to cut energy costs and decrease their environmental impact, they took advantage of National Grid's

Small Business Program, got a free energy evaluation and moved forward with recommended measures that decreased their energy costs. George and Michele chose to switch to energy efficiency overhead lights and LED recessed cans.

### Efficiency Improvements

Spumoni's installed over head lights—T8 lamps and ballasts and 14 Watt LED recessed Cans.

### Savings Summary

#### The Result

Project Cost	\$8,281.26
National Grid Incentive	\$6,169.54
Cost to Customer	\$2,111.72
Annual Cost Savings	\$1,638.59
Annual kWh savings	13,857

Spumoni's owners chose to pay their portion of the project cost in one lump and received 15% discount.

For more information on National Grid's energy efficiency programs, please visit [www.powerofaction.com/smallbusinessNE](http://www.powerofaction.com/smallbusinessNE).



**ATTACHMENT 4**  
2011 Small Business Revolving Loan Fund Balance

**NARRAGANSETT ELECTRIC COMPANY**  
**2011 RGGI FUNDED ENERGY EFFICIENCY ADJUSTMENT AND BALANCE**  
**SMALL COMMERCIAL & INDUSTRIAL REVOLVING LOAN FUND**  
12 month(s) of actuals 0 month(s) of estimates

	<u>Actual JAN</u>	<u>Actual FEB</u>	<u>Actual MAR</u>	<u>Actual APRIL</u>	<u>Actual MAY</u>	<u>Actual JUNE</u>	<u>6MTHS Y.T.D</u>
1. TOTAL PAYMENTS RECEIVED	\$93,233	\$91,526	\$52,122	\$46,976	\$100,227	\$92,711	\$476,795
2. TOTAL EXPENSE	\$420,692	\$0	\$92,276	\$105,035	\$256,499	\$8,290	\$882,790
3. Cash Flow Over/(Under)	(\$327,458)	\$91,526	(\$40,154)	(\$58,059)	(\$156,272)	\$84,421	(\$405,995)
4. Start of Period Balance (C)	\$1,858,972	\$1,536,684	\$1,633,037	\$1,597,802	\$1,544,528	\$1,392,729	\$1,858,972
5. End of Period Balance Before Interest	\$1,531,514	\$1,628,210	\$1,592,883	\$1,539,744	\$1,388,257	\$1,477,150	\$1,477,150
6. TOTAL INTEREST (D)	\$5,170	\$4,826	\$4,920	\$4,785	\$4,472	\$4,377	\$28,550
7. End of Period Balance After Interest	\$1,536,684	\$1,633,037	\$1,597,802	\$1,544,528	\$1,392,729	\$1,481,527	\$1,481,527
	<u>Actual JULY</u>	<u>Actual AUG</u>	<u>Actual SEPT</u>	<u>Actual OCT</u>	<u>Actual NOV</u>	<u>Actual DEC</u>	<u>ANNUAL TOTAL</u>
8. TOTAL REVENUE (A)	\$60,786	\$23,399	\$60,831	\$133,297	\$79,531	\$166,495	\$1,001,134
9. TOTAL EXPENSE (B)	\$0	\$260,963	\$134,777	\$9,535	\$196,666	\$358,640	\$1,843,371
10. Cash Flow Over/(Under)	\$60,786	(\$237,564)	(\$73,946)	\$123,762	(\$117,136)	(\$192,145)	(\$842,237)
11. Start of Period Balance (C)	\$1,481,527	\$1,546,925	\$1,313,717	\$1,243,665	\$1,371,409	\$1,258,277	<b>\$1,858,972</b>
12. End of Period Balance Before Interest	\$1,542,313	\$1,309,361	\$1,239,771	\$1,367,427	\$1,254,273	\$1,066,132	\$1,066,132
13. TOTAL INTEREST (D)	\$4,611	\$4,356	\$3,894	\$3,982	\$4,004	\$3,545	\$52,942
14. End of Period Balance After Interest	\$1,546,925	\$1,313,717	\$1,243,665	\$1,371,409	\$1,258,277	\$1,069,677	<b>\$1,069,677</b>
15. FUND BALANCE AT YEAR-END							\$1,069,677

- (A) Revenue Report  
(B) Source: PeopleSoft query  
(C) "End of Period Balance Before Interest" from prior month.  
(D) Commitments are estimated until year-end