## STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS PUBLIC UTILITIES COMMISSION

In Re: The Narragansett Electric Company	)	
d/b/a National Grid	)	Docket No. 4295
<b>Energy Efficiency Program Plan for 2012</b>	)	
	)	

## ENERGY EFFICIENCY PROGRAM PLAN FOR 2012

#### SETTLEMENT OF THE PARTIES

**November 1, 2011** 



November 1, 2011

#### VIA HAND DELIVERY & ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk Rhode Island Public Utilities Commission 89 Jefferson Boulevard Warwick, RI 02888

RE: Docket 4295 – The Narragansett Electric Company, d/b/a National Grid 2012 Energy Efficiency Program Plan

Dear Ms. Massaro:

Enclosed are ten (10) copies of the proposed Energy Efficiency Program Plan for 2012 (the "2012 Plan" or "Plan"). As in past years, the Plan is being filed as a settlement, agreed to by the participating members of the Energy Efficiency Subcommittee of the Energy Efficiency Resources Management Council ("EERMC").

This year's energy efficiency annual plan filing is made pursuant to the System Reliability and Least Cost Procurement statute, R.I.G.L. § 39-1-27.7, and is consistent with the framework and savings goals established in the Three Year Energy Efficiency Procurement Plan ("Three Year Plan") filed in Docket 4284. This year also marks the first energy efficiency annual plan filing since R.I.G.L. § 39-2-1.2 was amended to eliminate unintended inconsistency and to ensure that the funding provisions for electric and natural gas energy efficiency are consistent with all of the Least Cost Procurement provisions of R.I.G.L. § 39-1-27.7.

The 2012 Plan proposes total budgets of \$61.4 million and \$13.7 million for electric and gas, respectively. These expenditures are estimated to create substantial annual and lifetime savings for customers, with Rhode Island customers realizing \$2.47 in benefits for every \$1 invested in the Plan programs. The electric plans are expected to produce lifetime savings of 1,431,379MWh, which translates into lifetime bill savings of approximately \$90 million. The gas plans are expected to produce lifetime savings of 3,643,336 MMBtu, which translates into a lifetime bill savings of approximately \$32 million. Over all, the Plan will generate economic benefits of more than \$228.8 million over the life of the measures, with \$184,873,000 in benefits coming from the electric energy efficiency programs, and \$43,881,000 in benefits coming from the natural gas programs.

This year's Plan proposes implementation strategies to deliver the themes set forth in the Three Year Plan: (i) creating energy efficiency opportunities for every Rhode

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Island customer, (ii) targeting customer segments, (iii) using the latest innovation, and (iv) focusing on economic mechanisms that facilitate participation and create economic benefits. Total projected participants in both gas and electric programs will increase from 231,661 in 2011 to 379,281 in 2012.

In accordance with the requirements of Least Cost Procurement, R.I.G.L. § 39-1-27.7, to achieve the energy efficiency goals, the Plan proposes a fully reconciling funding mechanism that would increase the current \$0.00526 per kWh Energy Efficiency Program ("EEP") charge by \$0.0063 per kWh for a total EEP charge of \$0.00589 per kWh. The Plan also proposes to decrease the current \$0.411 per dekatherm charge by \$0.027 per dekatherm, resulting in a total \$0.384 per dekatherm EEP charge for gas programs. Both the electric and natural gas implementation budgets and EEP charges are lower than was predicted in the Three Year Plan filed on September 7, 2011. This is a result of the Company and the Collaborative Subcommittee having worked together to find additional cost-efficiencies in order to deliver the same energy savings at a lower cost. The members of the Collaborative Subcommittee have reviewed and approved the reasonableness of the Plan funding levels.

Subsection (c)(5) of the Least Cost Procurement statute, R.I.G.L. § 39-1-27.7 provides the EERMC with the specific responsibility for reviewing and approving the cost-effectiveness of the Plan to be submitted to the Commission for review and approval of the full funding. The 2012 Plan has been reviewed and approved by the EERMC and complies with all aspects of the Least Cost Procurement statute. In order to deliver the expected economic benefits from the 2012 Plan and to meet the 2012 goals the Plan seeks to achieve, the Company respectfully requests that the Commission approve this Plan.

Thank you for your attention to this filing. If you have any questions, please feel free to contact me at (401) 784-7288.

Very truly yours,

Jenson Burg Huffer

Jennifer Brooks Hutchinson

cc: Jon Hagopian, Esq. Steve Scialabba, Division

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#### **ATTACHMENTS**

- 1. 2012 Residential Electric and Gas Energy Efficiency Programs
- 2. 2012 Commercial and Industrial Electric and Gas Energy Efficiency Programs
- 3. 2012 Measurement and Verification Plan
- 4. 2012 RI Energy Efficiency Marketing Plan
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#### I. Introduction and Summary

The Narragansett Electric Company's d/b/a National Grid ("National Grid" or "Company") is pleased to submit this Energy Efficiency Program Plan ("EE Program Plan" or "Plan") for 2012 to the Rhode Island Public Utilities Commission. This Plan has been developed by National Grid in collaboration with the Collaborative Subcommittee of the Energy Efficiency and Resource Management Council ("EERMC").<sup>1</sup>

This EE Program Plan is submitted in accordance with the Least Cost Procurement law, R.I.G.L. §39-1-27.7, the basis for which is Comprehensive Energy Conservation, Efficiency, and Affordability Act of 2006 (as amended in May 2010), R.I.G.L. § 39-2-1.2,² and the Rhode Island Public Utilities Commission's ("Commission") "Standards for Energy Efficiency and Conservation Procurement," as revised by the EERMC and approved by the Commission in Order 20419 in Docket 4202 on July 25, 2011 (the "Standards"). This Plan is being jointly submitted as a Stipulation and Settlement ("Settlement"), entered into by the Division of Public Utilities and Carriers (the "Division"), the EERMC, The Energy Council of Rhode Island ("TEC-RI"), Environment Northeast ("ENE"), and National Grid (together, the "Parties"), and addresses all issues raised by members of the Collaborative Subcommittee concerning the Company's electric and natural gas Energy Efficiency ("EE") programs for calendar year 2012.

The 2012 Plan is consistent with the three-year Energy Efficiency Procurement Plan ("EE Procurement Plan") submitted by National Grid on September 7, 2011, in Docket 4284, with approval and support of the EERMC, the Division, ENE, and TEC-RI.

The primary goal of the 2012 EE Program Plan is to create energy and economic cost savings for Rhode Island consumers as required by R.I.G.L. §39-1-27.7. To that end, the 2012 Plan will create annual savings of 128,570 MWh and 231,548 MMBtu and lifetime savings of 1,431,379 MWh and 3,643,336 MMBtu. The Plan will generate economic benefits of more than \$228.8 million over the life of the measures (with \$184.9 million in benefits coming from electric efficiency and \$43.9 million in benefits from natural gas efficiency), which represents a large and urgently needed benefit for Rhode Island's residential, commercial, industrial, and low income energy customers. Table 1 summarizes the 2012 Plan metrics and goals.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> A collaborative group has been meeting regularly since 1991 to analyze and inform the Company's electric and gas energy efficiency programs. Members of the Subcommittee presently include the Company, the Division, TEC-RI, and ENE, along with participation from the Office of Energy Resources ("OER"), several EERMC members and representatives from the EERMC's Consulting Team. The Collaborative has functioned as a subcommittee of the EERMC in 2008. The constitution of the Collaborative Subcommittee has varied since 1991, as some organizations have withdrawn and others have joined.

<sup>&</sup>lt;sup>2</sup> In June, 2011 R.I.G.L. § 39-2-1.2 was amended to ensure that the funding provisions for electric and natural gas energy efficiency were consistent with all of the Least Cost Procurement provisions of § 39-1-27.7. See P.L. 2011 Ch. 028, S0293; P.L. 2011 Ch. 19 H5281 (Enacted May 27, 2011).

<sup>&</sup>lt;sup>3</sup> Consistent with the planning process articulated in the Three Year EE Procurement plan in Docket 4284, National Grid has examined the planning assumptions, supply costs, program enhancements and

Table 1: 2012 Energy Efficiency Program Plan Summary

by Ellicitine	S-	ann i na		ar j			
Proposed							
Implementation	Annual	Annual	Lifetime	Total	TRC	TRC	
Spending in 2012	MWh	kW	MWh	Benefits	B/C	¢/lifetime	
(\$000)	Savings	Savings	Savings	(\$000)	Ratio	kWh	Participants
\$19,603	36,352	5,747	323,567	\$57,900	2.49	6.9	356,211
\$5,615	3,960	482	44,539	\$7,926	1.35	23.7	2,501
\$30,659	88,258	19,250	1,063,273	\$119,047	2.78	4.0	3,662
\$55,877	128,570	25,480	1,431,379	\$184,873	2.57	5.0	362,374
Proposed							
Implementation	Annual		Lifetime	Total	TRC	TRC	
Spending in 2012	MMBtu		MMBtu	Benefits	B/C	\$/lifetime	
(\$000)	Savings		Savings	(\$000)	Ratio	MMBtu	Participants
\$6,034	103,540		1,838,077	\$25,836	2.43	5.6	14,511
\$1,766	7,697		153,932	\$2,976	1.61	11.5	430
\$5,000	120,312		1,651,327	\$15,069	1.69	4.7	1,966
\$12,799	231,548		3,643,336	\$43,881	2.05	5.3	16,907
\$68,677				\$228,753	2.47		379,281
	Proposed Implementation Spending in 2012 (\$000) \$19,603 \$5,615 \$30,659 \$55,877  Proposed Implementation Spending in 2012 (\$000) \$6,034 \$1,766 \$5,000 \$12,799	Proposed Implementation Spending in 2012 (\$000) Savings \$19,603 36,352 \$5,615 3,960 \$30,659 88,258 \$55,877 128,570 Proposed Implementation Spending in 2012 (\$000) Savings \$6,034 103,540 \$1,766 7,697 \$5,000 120,312 \$12,799 231,548	Proposed Implementation Spending in 2012 (\$000)         Annual Annual kW         Annual kW           \$19,603         36,352         5,747           \$5,615         3,960         482           \$30,659         88,258         19,250           \$55,877         128,570         25,480           Proposed Implementation Spending in 2012 (\$000)         MMBtu Savings           \$6,034         103,540           \$1,766         7,697           \$5,000         120,312           \$12,799         231,548	Proposed Implementation Spending in 2012 (\$000)         Annual MWh Savings         Annual Savings         Lifetime MWh Savings           \$19,603         36,352         5,747         323,567           \$5,615         3,960         482         44,539           \$30,659         88,258         19,250         1,063,273           \$55,877         128,570         25,480         1,431,379           Proposed Implementation Spending in 2012 (\$000)         MMBtu Savings         MMBtu Savings           \$6,034         103,540         1,838,077           \$1,766         7,697         153,932           \$5,000         120,312         1,651,327           \$12,799         231,548         3,643,336	Implementation   Spending in 2012   MWh   Savings   Savings   Savings   Savings   (\$000)	Proposed Implementation Spending in 2012 (\$000)         Annual Savings Savings Savings         Lifetime MWh Savings S	Proposed Implementation Spending in 2012 (\$000)         Annual Ryling (\$000)         Annual Ryling (\$000)         Lifetime Ryling (\$000)         Total Ryling (\$000)         TRC Ryling (\$1,000)         TRC Ratio Ryling (\$1,000)         TRC

Note:

Implementation spending does not include customer contributions, evaluation costs, shareholder incentive, and commitments.

The aggressive energy and cost savings for the 2012 program year are consistent with the objectives and requirements of Least Cost Procurement and the savings targets approved by the Commission in Order 20419 in Docket 4202. The electric savings target for 2012 is 1.7% of 2009 electric load and is consistent with the Commission's June 7, 2011 decision regarding efficiency targets in Docket 4202. The natural gas savings target is 0.6% of 2009 natural gas load, which while generally consistent with the target approved by the Commission in Docket 4202, is slightly lower. The savings also meet the Standards' requirements for cost-effectiveness, which mandate that the Plan's Total Resource Cost Test ratio ("TRC Test") - the ratio of Total Benefits/Total Costs- be greater than 1.0. The overall electric EE Program TRC Test ratio is 2.57 and the overall natural gas EE Program TRC Test ratio is 2.05.

The EERMC-proposed and Commission-approved energy efficiency savings goals for the Company will make Rhode Island a recognized national leader in energy efficiency to the benefit of the State's population through cost savings and additional significant economic benefits, such as increased gross state product (GSP) and job creation. In order to meet this challenge, National Grid is committed to establishing and maintaining the infrastructure and the customer relationships to deliver deeper, broader savings. National Grid, with the collaboration of the Parties, is continuing to integrate natural gas and

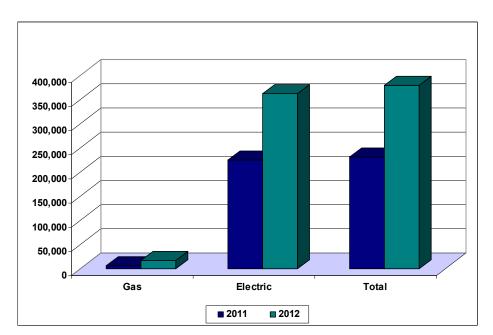
corresponding budgets using the most robust data available for this Plan. Consequently, the TRC cent per kWh and TRC dollar per lifetime MMBtu are lower than projected in the Three Year Plan.

<sup>&</sup>lt;sup>4</sup> The natural gas target for 2012 is the same as the target proposed for 2012 in the EE Procurement Plan. As noted in the EE Procurement Plan (page 6), several factors currently combine to make it not possible to plan to reach the Commission-approved natural gas savings goals cost-effectively as specified by R.I.G.L. § 39-1-27.7. Those factors are explained in detail in the "3-Year Objectives" section of the EE Procurement Plan

<sup>&</sup>lt;sup>5</sup> See Standards for Energy Efficiency and Conservation Procurement, Section 1.2.A.2.

electric energy efficiency programs so that customers have one point of contact, and can easily install and benefit from natural gas and electric energy saving measures at the same time.

The 2012 Plan will reach many more customers (going broader) and achieve greater savings for each customer (going deeper). Compared to approximately 231,000 electric and natural gas participants in 2011, the 2012 Plan will reach over 379,000 participants, as illustrated in Graph 1 below. Expanding the programs to reach this number of participants and higher goals will be done in a manner that ensures quality delivery and is cost-effective and cost-efficient.



**Graph 1: Energy Efficiency Participants in 2011 and 2012** 

The electric and natural gas energy efficiency program budgets proposed for 2012 are consistent with the budget illustrations presented for 2012 in Docket 4284. As highlighted in the 2012-2014 EE Procurement Plan, National Grid's cost-of-saved energy is competitive with, or lower than, other utility-delivered programs in New England.

This cost-effective 2012 EE Program Plan includes an investment of \$55.9 million for electric energy efficiency implementation in 2012.<sup>6</sup> If approved, this will be funded by the existing demand side management charge of \$0.00526 per kWh, as well as other funding sources including Regional Greenhouse Gas Initiative ("RGGI") funds, ISO-New England's ("ISO-NE") Forward Capacity Market ("FCM") auction revenue, and Large C&I copayments. Pursuant to R.I.G.L. § 39-1-27.7(c)(5), a fully reconciling mechanism of \$0.00063 per kWh is needed to fully fund the cost-effective electric energy efficiency

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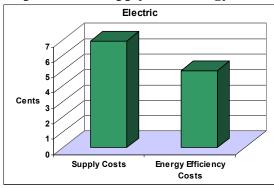
<sup>&</sup>lt;sup>6</sup> The total electric efficiency budget is \$2.9 million lower than the budget projected in the Three Year EE Procurement Plan in Docket 4284 while savings remain the same.

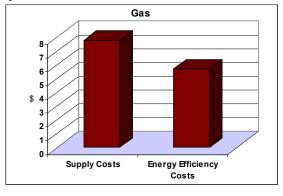
programs for 2012.<sup>7</sup> This funding will allow approximately 137,000 additional Rhode Island customers to participate in 2012 than in 2011, a 60 percent increase, to achieve deeper and broader savings and generate economic benefits of \$185 million.

This Plan also includes a \$12.8 million investment in cost-effective natural gas energy efficiency implementation. If approved, this investment will be funded by the existing demand side management charge of \$0.411 per MMBTU. Pursuant to R.I.G.L. § 39-1-27.7(c)(5), a fully reconciling mechanism of \$(0.027) will be credited to customer charges to fully fund the cost-effective natural gas energy efficiency programs for 2012. This funding will allow 10,600 additional Rhode Island customers to participate in 2012 than from 2011, and will generate economic benefits of \$43.9 million.

In addition to the primary requirement of passing the TRC Test, which requires a value greater than 1.0 for the Plan (the TRC ratio for electric is 2.57 and the TRC ratio for natural gas is 2.05), the cost of electric energy efficiency programs is 5¢ per lifetime kWh saved, which is 1.9¢ less than the current cost of supply, 6.9¢ per kWh. <sup>10</sup> The cost of natural gas energy efficiency is \$5.72 per lifetime MMBTU saved, which is \$2.17 less than the projected cost of supply for residential heating customers, \$7.89 per MMBTU. <sup>11</sup>

Graph 2: 2012 Supply and Energy Efficiency Costs





<sup>&</sup>lt;sup>7</sup> In May 2010, R.I.G.L. § 39-1-27.7 was revised to state that the Commission shall approve a fully reconciling funding mechanism to fund investments in all efficiency measures that are cost-effective as established by the TRC Test. A second revision to § 39-1-27.7 extended the provisions for Least Cost Procurement of energy efficiency and conservation measures to natural gas, requiring the Company to procure all natural gas efficiency resources that are cost-effective and less costly than supply just as has been the case for electric efficiency resources. For the legislative history, see P.L. 2010 Ch. 15 S2841 Sub A; P.L. 2011 Ch. 17 H8082 Sub A (Enacted May 27, 2010).

<sup>&</sup>lt;sup>8</sup> Parentheses indicate a negative number. In addition, the total per Dth Energy Efficiency Program Charge is lower than the charge projected in Docket 4284.

<sup>&</sup>lt;sup>9</sup> The projected customer participation is compared to the 2011 EE Plan as approved by the Commission in a bench decision in Docket 4209 on July 25, 2011.

<sup>&</sup>lt;sup>10</sup> The electric supply cost is based on the Residential Standard Offer Charge through December 31, 2011; Commercial Customer Group fixed price option is 7.03¢ through December 21, 2011.

<sup>&</sup>lt;sup>11</sup> The natural gas supply cost is based on the residential standard offer effective November 1, 2011; Large Customer Low Load cost is \$7.46.

The 2012 EE Program Plan is cost-effective and has a cost that is lower than the cost of acquisition of additional supply for both electricity and natural gas, pursuant to R.I.G.L. § 39-1-27.7 (a)(2). For each \$1 invested, electric programs will create \$2.57 of economic benefits over the lifetime of the investment, and natural gas efficiency investments will create \$2.05 in economic benefits over the lifetime of the investments. Rhode Islanders will receive a total of \$228.8 million in benefits from the 2012 energy efficiency plan investments.

#### II. Strategies to Achieve Goals

The primary goal of the 2012 EE Program Plan is to create economic value and cost savings for Rhode Islanders through energy efficiency. The Plan achieves this goal by implementing four key strategies, introduced in Docket 4284, that will be put into action in 2012 to deliver increased savings and participation:

- **Energy Efficiency is for Everyone** The objective of these strategies is to overcome the traditional barriers that prevent homes and businesses from participating in the energy efficiency programs and provide every Rhode Islander with a fair and equitable opportunity to participate.
- Reaching Customers Where they Live and Work This will employ customer segmentation, targeted marketing efforts, and various delivery channels to increase participation in energy efficiency.
- **Innovation** This is the development and deployment of new energy efficient technologies to continue to move the market to higher levels of energy efficiency.
- **Economic Growth** The 2012 Plan will create value for Rhode Island through job creation, lowering energy bills for both participants and non-participants, and will also look for ways to lower the cost of energy efficiency in future years.

The Company will employ implementation practices consistent with the four key themes introduced in Docket 4284 to deliver energy- and cost-saving efficiency to Rhode Island customers. The application of these strategies is more fully described in the detailed program and marketing descriptions in Attachments 1, 2, and 4.

#### **Energy Efficiency is for Everyone**

The Company proposes to develop several initiatives to ensure that all customers have an opportunity to participate in energy efficiency programs. The Company will continue its comprehensive marketing campaign in order to educate customers about its cost-saving energy efficiency programs. The campaign will focus on driving participation in the entire portfolio of efficiency programs offered to residential, commercial, and industrial natural gas and electric customers. The Company also plans to offer weatherization services to home heating oil customers. The Company will also work with the BRITE Team sponsored by the OER to increase energy efficiency awareness through educational initiatives.

The Company gained useful programmatic experience in the Community Based Initiative on Aquidneck Island and in Jamestown. In 2012, the Community Based Initiative will

transfer some of the lessons learned from the initial pilot to other areas. The Company is continuing community-based work by empowering community organizations to increase energy efficiency participation. Finally, the Company plans to implement strategies to increase participation in the commercial and industrial ("C&I") natural gas programs, such as streamlining the application process.

#### **Reaching Customers Where they Live and Work**

Reaching customers where they live and work means bringing energy efficiency offerings to customers in ways that increase the value of energy efficiency to them and aiding customers in adopting energy efficiency projects in ways that work for them. To this end, in 2012 the Company plans to work with large customers on long term strategic energy efficiency plans. Large customers typically look at investments over several years and this effort will be designed to be consistent with a long range planning horizon. In addition, the Company will use market segmentation techniques to improve and target marketing messages. Additionally, program delivery will be bundled so that customers have an easy, streamlined, "one-stop shopping" experience when participating in the energy efficiency programs.

#### **Innovation**

The third basic strategy of the plan is innovation. New and improved programs and delivery channels are critical to achieving Rhode Island's three-year energy savings goals. The 2012 Plan features several new technologies and lays the groundwork for deploying those technologies in 2013 and 2014. Heat pump hot water heaters and Wi-Fi thermostats are among the new technologies for which incentives are being offered in 2012. At the same time, the Company will be completing work on studies that will support the development of an energy codes initiative in 2013 and the development of an approach for deploying a statewide behavioral/feedback program in 2013. The EERMC's Phase II Opportunity Report, completed in 2010 and filed in Docket 4202, identified behavior/feedback programs as an opportunity with great energy savings potential. In 2012, the Company, with the support of the Parties, proposes to continue its residential pilot programs to test the feasibility and cost-effectiveness of new residential products as they emerge and target behavior change; examples include smart TVs and gaming consoles and dryer moisture strips.

#### **Economic Growth**

The fourth implementation strategy of the 2012 EE Program Plan is to generate economic benefits and bill savings for Rhode Islanders, especially as the recession continues to affect them. Saving 1,431,379 lifetime MWh represents a bill savings of approximately \$90.1 million and saving 3,643,336 lifetime MMBtu represents a bill savings of approximately \$31.7 million.<sup>12</sup> Investing \$68.7 million in energy efficiency implementation leads to the annual creation or retention of 3,343 job-years,<sup>13</sup> and, since

<sup>&</sup>lt;sup>12</sup> Electric bill savings based on total winter and summer energy benefits, Attachment 5, Table E-6; gas bill savings based on Natural Gas Benefits, Attachment 6, Table G-6.

<sup>&</sup>lt;sup>13</sup> ENE (Environment Northeast), Energy Efficiency, Engine of Economic Growth, *A Macroeconomic Modeling Assessment*, October 2009

consumers are spending less on their energy bills and have more disposable income to spend in the local economy, GSP will get a boost of more than \$373.6 million.<sup>14</sup>

The Company proposes to continue and expand initiatives that include job training, increasing opportunities for independent energy efficiency and weatherization contractors to deliver services and installations in Rhode Island, and working with banking and economic development partners to offer energy efficiency financing options for small and large businesses, allowing Rhode Island businesses to be more cost-competitive and retain employees in the state. Specifically, the Company will expand financing opportunities for C&I projects, described below in Section III.C, which maximize savings and reduce costs while offering customers a streamlined process. While financing programs do not directly deliver energy savings, they remove barriers to participation. The effort is part of the Company's commitment to "explore as part of its plan, new strategies to make available the capital needed to effectively overcome market barriers and implement projects that move beyond traditional financing strategies," as required in Section 1.3.A.8 of the Standards.

#### III. Delivering 2012 Goals

National Grid will build on its more than twenty years of experience in order to deliver the energy and cost savings goals in this plan. 15

#### A. Residential Programs

In 2012, the Parties agree to continue the residential programs offered in 2011. The programs are summarized in Table 2, below. Descriptions of these programs are provided in Attachment 1. Included in description of each program are proposed changes from 2011 that are intended to help meet the savings targets for 2012.

<sup>&</sup>lt;sup>14</sup> ENE (Environment Northeast), ibid.

<sup>&</sup>lt;sup>15</sup> Throughout the program year, the Parties may consider additional enhancements beyond those identified herein as more information becomes available to support an informed review of those potential changes. As part of this process of identifying additional enhancements, in addition to continuing to meet with the Subcommittee, the Company will continue its work sessions with the EERMC's consultants.

Table 2. Proposed Residential Energy Efficiency Programs					
EnergyWise Program (Funded by Gas and Electric)	Residential Buildings Efficiency Programs  The EnergyWise program offers single and multi-family customers free home energy audits and information on their actual electric and natural gas usage. The program serves low-income multifamily customers as well. Participants in this program receive recommendations and technical assistance, as well as financial incentives to replace inefficient lighting fixtures, appliances, thermostats, and insulation levels with models that are more energy efficient. The program addresses base load electric use as well as gas and electric heat in all residential buildings. Through this program, participation in other programs is enhanced. In 2012, the Company proposes to offer weatherization services to oil-heated customers. This will increase benefits to these consumers, reduce customers' vulnerability to volatile oil prices, and create greater opportunities for economic benefits and comprehensive energy savings.				
	The program also implements the Heat Loan which offers a 0% interest loan				
Single Family Low Income Services (Funded by Gas and Electric)	for efficiency retrofits through local banks.  The low income program is delivered by the Office of Energy Resources and local Community Action agencies. It provides whole house energy savings to eligible customers, including appliance and lighting retrofits, weatherization and heating system replacements. Eligible customers make no contribution toward equipment installation under this program.				
Residential New Construction (Funded by Electric)	The Residential New Construction Program promotes the building of energy efficient homes in conjunction with the EPA's ENERGY STAR® program by offering technical and marketing assistance, as well as tiered incentives and trainings to builders of new energy efficient homes that comply with the program's performance standards. The program also works with code officials and vocational schools and serves low income new construction projects. The program includes a Homes Version III projects, funded by RGGI proceeds.				
Education Programs (Funded by Electric)  Residential Behavior Pilot (Funded by	The Company promotes energy education to private and public schools and youth groups through the National Energy Education Development (N.E.E.D) Program. This program provides curriculum materials and training to students and teachers in grades K-12.  The Phase II Opportunities Report in Docket 4202 identified potential in behavior programs. A pilot using behavior feedback began in 2011 and will				
Deep Energy Retrofit Pilot (Funded by RGGI)	continue in 2012.  The pilot provides deep retrofit demonstration projects involving superinsulation upgrades and other measures in conjunction with customer planned projects such as re-siding or roofing. The pilot began in 2011; it was funded by RGGI proceeds from Auctions 1-5 which were directed to innovative programs (also known as "RGGI 40%") and projects will continue in 2012.				
Community Based Initiatives (C&I and Residential, Funded by Electric)	The initiative is designed to leverage trusted community partnerships and develop targeted marketing strategies in order to promote all energy efficiency programs, residential and commercial, in specific, targeted communities.				

Residential Efficient Products Programs		
ENERGY STAR®	This is an initiative implemented jointly with other regional utilities. It	
<b>Lighting</b> (Funded by	provides discounts to customers for the purchase of ENERGY STAR®	
Electric Only)	compact fluorescent lamps and fixtures and solid state lighting through instant	
	rebates, special promotions at retail stores, or a mail order catalog.	
ENERGY STAR®	The program is run in collaboration with other regional utilities to promote the	
<b>Products</b> (Funded by	purchase of high efficiency household appliances including kitchen appliances	
Electric Only)	and electronics. These appliances carry an ENERGY STAR® label. The	
	program also offers refrigerator recycling which promotes more efficient	
	refrigerators while removing non-efficient units from the market.	
ENERGY STAR®	This program promotes the installation of high efficiency central air	
HVAC Program	conditioners for electric customers and new energy efficient natural gas related	
(Funded by Electric	equipment including boilers, furnaces, water heating equipment, thermostats,	
and Gas)	boiler reset controls, and furnaces equipped with high efficiency fans. The	
	program provides training of contractors in installation, testing of the high	
	efficiency systems, tiered rebates for new ENERGY STAR® systems, and	
	incentives for checking new and existing systems. The program also includes	
	the oil and propane heating equipment rebates.	
<b>Residential Products</b>	The pilot will test innovative technologies for both gas and electric appliances.	
<b>Pilot</b> (Funded by		
Electric and Gas)		

#### **B.** Residential Low-Income Programs

The Company and Subcommittee want customers who have a high energy burden and/or difficulty paying their electric bills to participate in, and benefit from, the Company's energy efficiency programs, especially in these difficult economic times. For that reason, this segment of the customer base is designated as a unique sector and funding for this sector will be subsidized by both non-low-income residential customers and commercial-and-industrial customers using 10.4% of total funding for the electric programs, and 16.5% for natural gas programs.<sup>16</sup>

Several of the Company's proposed programs provide low-income customers with services that are designed to help reduce their electric bills, including the Single Family Low Income Services Program, the EnergyWise Program, the Residential New Construction Program, and the Commercial Retrofit program. The budgets for serving low income participants in EnergyWise, Residential New Construction, and Commercial Retrofit programs are illustrated in Attachment 1, Table 2 and included in the allocation of available funds to low-income programs. The Single Family Low Income Services Program provides qualifying low income customers in one- to four-unit dwellings with energy-efficiency services. The Residential New Construction program works with housing authorities and developers to build energy efficient multifamily properties while the EnergyWise and Commercial Retrofit programs coordinate to provide electric and gas

<sup>&</sup>lt;sup>16</sup> The proportion of funding for low-income customers is equal to total funding from all programs serving low-income customers, illustrated in Attachment 1, Table 2; compared to total funding for all programs, illustrated on Attachment 5, Table E-2, and Attachment 6, Table G-2.

retrofits to buildings with five or more units. Additional detail about the services offered to economically disadvantaged customers is described among the residential programs in Attachment 1.

#### C. Commercial and Industrial Programs

The Parties agree to continue in 2012 the commercial and industrial programs offered in 2011. The programs are summarized in Table 3 below.

Table 3. Propose	Table 3. Proposed Commercial and Industrial Energy Efficiency Programs		
Small Business Direct Install (Gas and Electric)	The Small Business Direct Install Program provides direct installation of energy efficient lighting, non-lighting retrofit measures, and gas efficiency measures. Electric customers with average monthly demand of less than 200 kW or annual energy usage of less than 300,000 kWh are eligible to participate. The program's lighting and non-refrigeration measures are delivered through one labor and one product vendor selected through a competitive bidding process. The customer pays 30% of the total cost of a retrofit. This amount is discounted 15% for a lump sum payment or the customer has the option of spreading the payments over a two-year period interest free.		
Large Commercial Retrofit (Gas and Electric)	Large Commercial Retrofit is a comprehensive retrofit program designed to promote the installation of energy efficient electric equipment such as lighting, motors, and heating, ventilation and air conditioning (HVAC) systems, gas heating and water heating systems, thermal envelope measures and custom gas systems in existing buildings. All commercial, industrial, and institutional customers are eligible to participate. The Company offers technical assistance to customers to help them identify cost-effective conservation opportunities, and pays rebates to assist in defraying part of the material and labor costs associated with the energy efficient equipment.		
Large Commercial New Construction (Gas and Electric)	Promotes energy efficient design and construction practices in new and renovated commercial, industrial, and institutional buildings. The program also promotes the installation of high efficiency equipment in existing facilities during building remodeling and at the time of equipment failure and replacement. Large Commercial New Construction is known as a lost opportunities program because a customer who does not install energy efficient equipment at the time of new construction or equipment replacement will likely never make the investment for that equipment or will make the investment at a much greater cost at a later time.  The program provides both technical and design assistance to help customers identify efficiency opportunities in their new building designs and to help them refine their designs to pursue these opportunities. The program also offers rebates to eliminate or significantly reduce the incremental cost of high efficiency equipment over standard efficiency equipment. Commissioning or quality assurance is also offered to ensure that the equipment and systems operate as intended.		

Descriptions of these programs are provided in Attachment 2. Included in the description of each program are proposed changes from 2011 that are intended to help meet the savings targets for 2012.

In order to assist customers to overcome the financial barriers to investing in energy efficiency, the Company will concentrate on securing sources of funding to offer finance options to large commercial and industrial customers. The Company expects to dedicate approximately \$4 million of anticipated RGGI auction proceeds for commercial-and-industrial financing through a Revolving Loan Fund, as shown in Table E1-a. 17

The Company is working in partnership with the Rhode Island Economic Development Corporation (EDC) to use funds under the EDC's control for zero interest loans to C&I customers, through the above mentioned Loan Fund. This is targeted to be in place by January 1, 2012. The Company will also focus on securing an additional \$3.5 million in finance funds for the Loan Fund for large commercial-and-industrial customers. The Company is investigating outside sources that can invest in finance projects. The Company may use up to \$1,000,000 to leverage \$3.5 million in financing, including use to cover associated costs and expenses. The cost is included in the C&I budget and cost-effectiveness tests, found in Attachment 5, Tables E-2 and E-5.

#### D. System Reliability Procurement

In a contemporaneous filing, the Company is submitting its System Reliability Procurement ("SRP") Annual Report for 2012 for the Commission's review and consideration. The SRP Annual Report describes the strategies, goals, and funding request for SRP in 2012 to defer an anticipated distribution upgrade in the towns of Tiverton and Little Compton. As detailed in that filing, some of the non-wires strategies proposed in 2012 are targeted energy efficiency programs, which will leverage existing programs. For example, a targeted energy efficiency program may include home energy assessments or small business direct installs that are already a part of the energy efficiency programs; they would simply be coordinated through an incremental effort to a specific town. Targeted energy efficiency was proven cost-effective and successful in the 2009-2010 Energy Action: Aquidneck & Jamestown pilot. The cost of the existing programs which may be leveraged is part of the energy efficiency budget illustrated in Attachment 5, Table E-2. However, the estimated incremental cost of targeting and implementing energy efficiency programs in a specific area for System Reliability is provided in Attachment 5, Table E-2 for informational purposes. However, the incremental cost of implementing energy efficiency for System Reliability is not included in the total budget requested for energy efficiency in this Plan or the proposed Energy Efficiency Program Charge in this filing. The request for incremental funds for SRP is being made in the separate SRP filing.

<sup>&</sup>lt;sup>17</sup> If funding from RGGI expected to be used for financing is not received, because of the importance of financing, the Company may use a portion of its incentive budget for financing.

<sup>&</sup>lt;sup>18</sup> As of the date of this filing, the entities are working on a mutually acceptable agreement for funding, and if successful, the arrangement will be in place by January 1, 2012.

#### IV. Funding, Budgets, Goals, and Cost-effectiveness

Funding, budgets, goals, and cost-effectiveness information is provided in Attachment 5 for the proposed electric energy efficiency programs and in Attachment 6 for the proposed natural gas energy efficiency programs.

#### A. 2012 EE Program Plan Funding Sources

The sources of funding and the amounts of the funding needed for the cost-effective 2012 EE Programs proposed by the Company, with the support of the Parties, are shown in Table E-1 for electric programs and Table G-1 for natural gas programs.

In terms of a means of collecting these funding sources for the 2012 cost-effective programs, the Company proposes: (1) one line on the customers' bill labeled "Energy Efficiency Programs" at \$0.00589 per kWh, as calculated in Attachment 5, Table E-1 (composed of the existing energy efficiency program charge of \$0.00526 per kWh plus a fully reconciling funding mechanism charge of \$0.00063 per kWh and in accordance with the requirements of R.I.G.L. § 39-1-27.7); (2) projected Large C&I commitments from 2011; (3) projected carryover of the year-end 2011 fund balance including interest earned and funds expected to be received from C&I program financing repayments and from large C&I technical assistance co-payments in 2011, if any; (4) revenue generated by ISO-NE's FCM; and (5) revenue generated through RGGI permit auctions, including carryover from 2009-2011 auctions that have yet been allocated. The projected RGGI funding amounts are also shown in Attachment 5, Table E-1a.

The sources of funding for the 2012 natural gas programs are shown in Attachment 6, Table G-1. The Company proposes that the 2012 budget should be funded from the following sources: (1) one line on the customers' bill labeled "Energy Efficiency Programs" at \$0.384 per dekatherm as calculated in Attachment 6, Table G-1 (composed of the existing energy efficiency program charge of \$0.411 per MMBTU plus a fully reconciling funding mechanism credit

<sup>&</sup>lt;sup>19</sup> The total per kWh Energy Efficiency Program Charge is 15% lower than the charge projected in Docket 4284 while savings remain the same.

<sup>&</sup>lt;sup>20</sup> As directed by the Commission, the Company encumbers current funding to cover the expected cost of projects it has agreed to fund although those projects will be completed after the current program year.
<sup>21</sup> OER has revised and is in the process of finalizing both its Rules and Regulations for the Allocation and Distribution of Regional Greenhouse Gas Initiative Proceeds as well as the Allocation Plan for 2011. The Company expects 80% of funding from prior year RGGI auctions to be distributed in 2012 and its funding plan reflects this. If this funding does not materialize in 2012, the Company will reconcile the funding shortfall in its 2013 Plan.

of \$(0.027) per MMBTU<sup>22</sup> in accordance with the requirements of R.I.G.L. § 39-1-27.7); and, (2) projected carryovers or under-recoveries of the year-end 2011 fund balance, including interest.

The 2012 budgets for cost-effective electric and natural gas efficiency investments are dependent on a number of projections that inform the amount of funding, including projections of kWh or therm sales of electricity and natural gas, year-end 2011 large C&I program commitments, capacity payments received from ISO-NE (electric only), and year-end 2011 spending. The Company estimates the electric projected fund balance at year end 2011 will be \$8.58 million, as shown in Attachment 5, Table E-1; the gas fund balance at year end 2011 is estimated to be \$445,500, as shown in Attachment 6, Table G-1.

By November 1, 2012 the Company shall file an Energy Efficiency Program Plan for 2013. It is possible that there could be deviations from the planned budget for 2012 that could occur during the program year. Three scenarios are contemplated and it is agreed that they will be addressed as follows:

- (1) The Company's expenditures and commitments for 2012 may exceed total budget by up to 10% so long as a written explanation is provided to the EERMC and the Commission for any deviation and the expenditures and commitments are reasonably consistent with the original 2012 plan.
- (2) The Company agrees that, during 2012, if the Company anticipates that continued operation of its programs is likely to result in actual expenditures exceeding the total program budget by more than 10%, the Company will seek a vote of approval from the EERMC at its next meeting. Following EERMC action, the Company will be required to obtain approval from the Commission for expenditures in excess of 10% higher than the total program budget in next year's Energy Efficiency Program Charge.
- (3) If the Company did not anticipate, during the program year, that its actual expenditures and commitments would exceed the total budget by more than 10%, but actual expenditures and commitments do exceed such threshold, the Company will bear the burden of demonstrating the reasonableness of its actions, including an explanation of why the over-spending occurred and how the expenditures and commitments are reasonably consistent with the original plan. Such demonstration would be required to be part of the Year End Report, if not sooner.

In each of these three instances, the Commission retains its traditional ratemaking authority to review the prudency and reasonableness of the actions of the Company in such instance.

<sup>&</sup>lt;sup>22</sup> The parentheses indicate a downward adjustment of the natural gas energy efficiency program charge. The primary reason for this reduction is a recent upward adjustment in the Company's sales forecast for 2012.

Other considerations regarding funding sources include:

#### 1. ISO-NE Capacity Market Revenue

Consistent with the Commission's Standards, the EE Procurement Plan, and Commission decisions regarding energy efficiency program plans since 2008, the Company and the Parties recommend that kW-demand savings achieved via the electric energy efficiency programs continue to be reported by the Company to ISO-NE as Other Demand Resources ("ODR"). The Parties fully agree that the Company should recover all prudently incurred FCM expenses from ISO-NE capacity-payment revenue generated by the demand savings from efficiency programs represented by the Company. The Company expects that capacity payments received from the ISO-NE will exceed its administrative and Measurement and Verification ("M&V") compliance costs of participation in the FCM and will result in additional funds being made available to fund efficiency programs for customers. If these participation costs exceed the capacity payments, the Parties agree that the Company may recover its prudently incurred costs from the energy efficiency program fund. (The Parties reserve the right to examine the actions and expenses of the Company to ensure that only prudently incurred expenses are deducted from ISO-NE capacity payments or the energy efficiency program fund.)

In addition, as part of the FCM, all qualified auction participants are required to post Financial Assurance to provide security that the promised resource will deliver the promised MW at the promised time. If, as a result of circumstances beyond the control of the Company, <sup>23</sup> the Company is unable to provide all or a portion of the megawatts of capacity proposed in its qualification packages and capacity auction bids, some or all of the financial assurance monies would be forfeited.

#### 2. Regional Greenhouse Gas Initiative, Inc. Funds

In its 2011 EE Program Plan, the Company filed a funding plan based on expectations of receiving funding from RGGI auctions through the end of 2011. However, as of the filing of this 2012 Plan, the OER has distributed

program efforts into the FCM.

<sup>&</sup>lt;sup>23</sup> Such circumstances may include legislative action to alter the EE charge or discontinue the Company's authority to implement the energy efficiency programs underlying the Qualifications Package or a Commission decision limiting the Company's role in bidding the demand savings acquired through

RGGI auction proceeds only from auctions that were conducted through the third quarter of 2009. This is shown in part in Table E1-a.

The OER is completing the process of revising the rules and regulations for the allocation and distribution of RGGI auction proceeds, as well as the allocation plan for 2011. According to the OER, these changes will greatly improve the timely distribution of RGGI auction proceeds to benefit RI consumers.

The Company anticipates receiving funds from 2009-2011 auctions in 2012 for the purpose of "supplementing and expanding energy efficiency efforts consistent with the PUC approved energy efficiency procurement plan and annual energy efficiency program plans." These funds are built into the funding plan for 2012, as seen in Table E1a, and are therefore already accounted for in the calculation of the energy efficiency program charge increase. Consistent with the allocation plan, the Company has made the assumption that 80% of thus far unallocated RGGI auction proceeds from 2009-2011 will be allocated to the electric energy efficiency programs. However, the Company notes that recent experience indicates that this funding is not assured until it is received. If these funds are not received to maintain continuity in program delivery and meet energy efficiency savings targets approved by the Commission when cost-effective, the Company will seek fully reconciling funding as described above. <sup>26</sup>

### 3. Exceptions to the Natural Gas Energy Efficiency Program Charge:

The Parties agree that natural gas used for distributed generation (excluding natural gas used by emergency generators) will not be subject to the energy efficiency surcharge when natural gas used for that purpose can be clearly identified through uniquely metered use and when so requested in writing by the customer.

The 2006 Act allows the Commission to exempt natural gas used for manufacturing processes from the energy efficiency surcharge where the customer has established a self-directed program to invest in and achieve best effective energy efficiency in accordance with a plan approved by the Commission and subject to periodic review and approval by the Commission. Consistent with prior Commission decisions, the Parties

<sup>&</sup>lt;sup>24</sup> From "2011 Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds: Auctions Held December 2, 2009 – December 1, 2010," RI Office of Energy Resources, , http://www.energy.ri.gov/documents/2011\_RGGI\_Allocation\_Plan\_1.pdf

<sup>&</sup>lt;sup>25</sup> Since the RGGI auctions are related to allowing carbon dioxide emissions from electric generation, the auction proceeds are applied only to electric energy efficiency programs.

<sup>&</sup>lt;sup>26</sup> If the Company can reasonably estimate the level of external funding sources and is confident in their receipt, it may include any estimate in its reconciling mechanism.

have developed recommendations for a process whereby a manufacturer who so chooses may submit its self-directed program and the required annual reports for approval. The Parties recognize that this process may need to be reviewed and modified after the Commission has accumulated sufficient experience with these programs.

#### B. Budgets

The Parties agree that the portfolio of energy efficiency programs and services for 2012 will have an overall projected implementation budget of approximately \$55.9 million for electric programs and \$12.8 million for natural gas programs. The Parties agree to segment the budget into three sectors: residential lowincome, residential non-low-income, and C&I. Proposed sector and program budgets are provided in Attachment 5, Table E-2 and Attachment 6, Table G-2. The derivations of the spending budget and implementation expenses are illustrated in Attachment 5, Table E-3 and Attachment 6, Table G-3. A comparison of these proposed budgets to the 2011 budget is provided in Attachment 5, Table E-4 and Attachment 6, Table G-4. The efficiency resource is 5.0 ¢/lifetime kWh versus 6.9¢/kWh for electric residential supply and \$5.72 per lifetime MMBtu versus \$7.89 per MMBtu for residential gas supply.

The Parties agree that the Company should make every attempt to spend or commit all the funds available for energy efficiency during the program year, including any increases in the fund balance due to increased sales or other factors. The Parties also agree to review the status of budgets regularly to assess whether they are likely to come to a successful completion. If not, the Parties agree to review the advisability of transferring funds to other programs where the money could be more effectively used.

#### C. Transferring of Funds

The Parties will regularly review the amount of funds needed and available for each program (as well as any changes to the overall fund balance, as discussed in Section III.A above) and will transfer monies as needed. The Parties propose to use the same methodology that was used in 2011 for the transfer of funds from one program to another, or from one sector to another. Transfers during the program year may occur as follows:

#### 1. Transfers within a Sector:

A. For transfers of less than 10% of the originating program's budget, the Company can transfer funds from one program to another program within the same sector without prior approval of the Division. However, the Company shall provide a summary of such transfers to the Division and EERMC quarterly.

- B. For transfers of 10% or more of the originating program's budget, the Company can transfer funds from one program to another program within the same sector with prior approval of the Division. Upon seeking such approval from the Division, the Company shall simultaneously notify the EERMC.
- C. For any transfers in the C&I Sector between large C&I programs and small business programs, of more than 5% Division approval is required. Upon seeking such approval from the Division the Company shall simultaneously notify the EERMC. In addition, if a transfer reduces the originating program's budget by more than 20% in aggregate over the course of the program year, the transfer will require Commission approval as well with weight given to the EERMC's recommendation to the Commission on the issue.
- 2. Transfers between Sectors. The Company can transfer funds from one sector to another sector with prior approval of the Division and the EERMC (or its appointed representatives). If a transfer reduces the originating sector's budget by more than 20% in aggregate over the course of the program year, the transfer will require Commission approval as well.
- For transfers requiring Division and/or EERMC, but not Commission, approval, the Parties will inform the Commission of the transfers, both between sectors and within sectors, in a timely fashion. The Company will not be permitted to adjust its goals or incentive target calculations for any transfers between sector budgets.

#### V. Cost-Effectiveness

The Company has projected cost-effectiveness for the proposed 2012 programs using the TRC Test. The use of the TRC Test was required by the Commission's Standards, as established in 2008 and reaffirmed by the Commission in Order 20419 in Docket 4202 on July 25, 2011. The TRC Test requires that the total lifetime savings from the efficiency measures will exceed the total costs of the measures (i.e., program and customers' costs).

As is customary in a TRC Test, in addition to the value of the primary fuel energy savings (electricity and natural gas), the value of other resource benefits is included in the analysis of expected benefits from program efforts. In this case, the other resource benefits for the electric TRC Test include expected fuel and water savings that are incremental to the electricity savings expected through the electric efficiency programs. The other resource benefits for the natural gas TRC Test include expected energy and water savings that are incremental to the fuel savings expected.

For the 2012 EE Program Plan, the Company developed the 2012 Rhode Island Technical Reference Manual (TRM) which documents the savings or savings algorithms for measures proposed to be offered through its programs. The TRM identifies the sources for the savings estimates: evaluation studies, engineering analyses, and/or other research. This TRM is a public document and was provided to the EERMC and its consultants to support and facilitate the determination of the Plan's cost-effectiveness.

Attachment 5, Table E-5 and Attachment 6, Table G-5 provide the calculations of 2012 program year cost-effectiveness. Attachment 5, Table E-6 and Attachment 6, Table G-6 show the energy savings goals based on the proposed budgets. Attachment 5, Table E-7 and Attachment 6, Table G-7 show a comparison of the goals with the approved program goals from 2011. Attachment 5, Table E-5 shows that the proposed portfolio of electric programs is expected to have a benefit/cost ratio of 2.57, which means that approximately \$2.57 in benefits is expected to be created for each \$1 invested in the programs. Attachment 6, Table G-5 shows that the proposed portfolio of gas programs is expected to have a benefit/cost ratio of 2.05, which means that \$2.05 in benefits is expected to be created for each \$1 invested in the programs. This increase in efficiency investment moves closer to acquiring all energy efficiency resources that are cost-effective and lower cost than supply.

The cost-effectiveness analyses of the proposed programs use avoided energy supply costs that were developed by Synapse Energy Economics as part of an August 2011 study, "Avoided Energy Supply Costs in New England: 2011 Report," that was sponsored by all the electric efficiency program administrators in New England, as well as some gas program administrators. They reflect current and expected market conditions and are highly influenced by the cost of fossil fuels and expectations about ISO-NE's emerging forward capacity market. The latest study indicates that natural gas avoided costs are about 30% lower than 2011, due to the introduction of new supply sources into the market. Company-specific transmission and distribution capacity values are also included. The avoided costs used for 2012 are shown in Attachment 5, Table E-8 and Attachment 6, Table G-8.

The electric avoided costs include the demand reduction induced price effect ("DRIPE") benefits that are projected to result from the installation of energy efficiency measures in 2012. These benefits occur when the retail price of electricity is reduced as a result of the reduced long-term demand for electricity stemming from the installation of energy efficiency measures. Some amount of DRIPE benefits have been counted in Rhode Island since 2006.

#### VI. Measurement and Verification Plan

In order to verify the impacts that programs are having on energy savings, the Company hires independent consulting firms to regularly conduct program evaluations as part of its measurement and verification process. These evaluations include engineering analysis, metering analysis, billing analysis, site visits, surveys, and market studies to realize the

actual energy savings that particular measures are having. Every year, the results of the surveys are used to update the TRC test calculations during planning. Attachment 3 lists the evaluations that have occurred since 2007 and their influence on TRC test inputs and program planning.<sup>27</sup> The executive summaries of the evaluations are available in Dockets 3779, 3892, 4000, and 4116, or upon request.

Additionally, the M&V Plan for 2012 is presented in Attachment 3, and includes brief descriptions of each of the proposed studies. The areas proposed for study in 2012 have been chosen based on a number of factors: the relative amount of savings in that program or end use, the vintage of the most recent evaluation study, the relative precision of the recent evaluation study, and the available evaluation budget. In addition, some new program areas are designated for both impact and process evaluations. This list may be added to as the year progresses and different evaluation priorities are identified. In particular, the parties will consider adding Rhode Island-specific impact or process evaluations, as appropriate, that will help inform the Company's efforts towards achieving the goals of least cost procurement.

#### VII. Reporting Obligations

- 1. During 2012, the Company will provide quarterly reports to the EERMC, the Division, the Collaborative Subcommittee, and the Commission on the most currently available program performance for both natural gas and electric efficiency programs. These reports will include a comparison of budgets and goals by program to actual expenses and savings on a year-to-date basis. The reports will also include a brief summary of program progress and will highlight issues by sector for EERMC, Division, and Collaborative Subcommittee attention. Within the C&I sector, there will be separate highlighting of large and small customer program progress and issues.
- 2. The Company will provide to the Parties and file with the Commission its 2012 Year-End Report no later than May 1, 2013. This report will include achieved natural gas and electric energy savings in 2012 and earned incentives for 2012.
- 3. The Company will provide to the Parties a summary of evaluation results obtained since October 1, 2011, together with an attachment summarizing the impact of those results in planning the Company's 2013 programs in the 2013 Plan to be filed by November 1, 2012.

#### VIII. Incentive

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The proposed shareholder incentive mechanism applicable to energy efficiency efforts in 2012 is the same as the incentive mechanism structure applicable to the 2011 electric energy efficiency programs in Docket No. 4209, with one addition described below. For

<sup>&</sup>lt;sup>27</sup> The information in the Attachment is also intended to meet the specific requirement from the 2011 EE Program Plan to provide "a summary of evaluation results obtained since October 1, 2011, together with an attachment summarizing the impact of those results in planning the Company's 2012 programs."

the delivery of electric and natural gas efficiency program savings, the shareholder incentive mechanism will be based on one metric: energy savings targets (kWh or MMBtu) by sector.

The Parties have agreed to retain a target base-incentive rate of 4.40% in 2012 applied to the eligible spending budget for 2012. The projected electric eligible spending budget for 2012 is approximately \$55.3 million (see Attachment 5, Table E-3). The total electric target incentive for 2012 is 4.40% of the proposed spending budget, or approximately \$2.4 million (see Attachment 5, Table E-9).

For natural gas efficiency programs, the proposed target base incentive is equal to 4.40% of the eligible budget. The projected natural gas eligible spending budget for 2012 is approximately \$13 million (see Attachment 6, Table G-3). The total natural gas target incentive for 2012 is 4.40% of the proposed spending budget, or approximately \$570,000 (see Attachment 6, Table G-9).

The savings targets are based on a set of assumptions of savings per measure and other impact factors in each program as well as the proposed budget. The determination of achieved savings will be based on the same set of savings and impact assumptions as is used to develop the savings target in this EE Program Plan. These assumptions have been reviewed and accepted by the parties.

The threshold performance level for energy savings by sector will be set at 60% of the annual energy-savings goal for the sector. The Company must attain at least this threshold level of savings in the sector before it can earn an incentive related to achieved energy savings in the sector. The Company will have the ability to earn an incentive for each kWh or MMBtu saved, once threshold savings for the sector are achieved. The incentive per kWh or MMBtu saved by sector is provided in Attachment 5, Table E-9 and Attachment 6, Table G-9, respectively. The cap for the target incentive amount of energy savings will remain at 125%.<sup>28</sup>

The ability to earn up to 125% of the target incentive is worthwhile because Rhode Island customers will realize additional energy and cost savings if the Company achieves a high level of energy savings performance. Given budget control requirements, this feature will provide the Company with an incentive to improve the efficiency of its program implementation efforts while providing Rhode Island customers with value in excess of the incremental incentive that may be earned by the Company. That is, the Company will have an incentive to increase customers' savings and customers will realize an overwhelming majority of the savings.

Attachment 5, Tables E-3 and Attachment 6, Table G-3 provide the derivations of the eligible electric spending budget that are used to determine the incentive amounts that the Company may earn if it is successful in achieving its goals for energy savings.

 $<sup>^{28}</sup>$  Assuming that savings are achieved proportional to spending, the Company would receive an incentive of 2.64% (60% x 4.4%) of the spending budget if it achieves the minimum savings threshold of 60% and a maximum incentive of 5.5% (125% x 4.4%) of the spending budget.

Attachment 5, Table E-9 and Attachment 6, Table G-9 provide a summary of the incentives related to annual energy-savings goals by sector. These goals by sector reflect the expected cost of savings in each sector informed by evaluation studies, and these goals have been adjusted to take into account changing rebate policies and the changing market being served. These goals have been carefully reviewed by the Collaborative Subcommittee and EERMC representatives to ensure that they represent reasonable and challenging goals for the year.

If the actual spending of funds in a sector at year end from the sources listed in Attachment 5, Tables E-1 or Attachment 6, G-1 is greater than or less than the original spending budgets by more than five percent, and if achieved savings in the sector exceed 100% of the target savings goal, the savings goal for that sector will be adjusted by the ratio of actual spending to the spending budget. This is intended to encourage efficiency in spending in the achievement of energy savings targets.

The one addition to the incentive mechanism for 2012 is an incentive for securing outside funding that will encourage the Company to pursue solutions that will lower expected incremental increases in the energy efficiency charge. Specifically, the Company proposes that as a matter of principle and program design, it shall be allowed to receive as shareholder incentive 10% of any future outside funding resulting in a lower incremental EE Program Charge.

National Grid would be able to receive an incentive for any amount of outside funding obtained, subject to the definitions and limitations prescribed. Other conditions and exclusions for this incentive are as follows:

- Outside funding is defined as any new funding source that does not come from a customer surcharge.
- New funding does not include known outside funding sources such as RGGI, FCM, current ARRA projects including Deliverable Fuels and EDC Large C&I Finance.
- National Grid must play a significant role in identifying and securing the outside funding and manage any resulting initiatives.
- Funds obtained for financing would be eligible for this incentive treatment if such financing lowers the incentive offered to customers, thus lowering the budget.
- The incentive for funds obtained in 2012 would be credited in 2013 after the Company submits, as part of its 2013 Energy Efficiency Program Plan, a calculation of the EE Program Charge comparing the proposed 2013 EE Program Charge with what the charge would have been without the outside funding; such calculation would be subject to the Commission's review and consideration. <sup>29</sup>
- If the requirements or criteria of the funding agency restrict the use of the funds as an incentive to National Grid, no incentive will be claimed from the obtained funds.

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<sup>&</sup>lt;sup>29</sup> This is a change from the proposal included in the Least Cost Procurement Plan submitted in Docket 4284, where it was proposed that the incentive be collected when the funds are received.

- If not specified by the funding agency, application of outside funding to natural gas or electric energy efficiency programs shall be at the discretion of the Company.
- If an incentive is collected on outside funding, the 90% of the funds applied to program implementation will be excluded from the spending budget for the purposes of determining the target incentive for achieving energy savings.

Parties believe that this incentive is significant and bold enough to incentivize the Company to prioritize finding new sources of revenue for EE that will lead to lower energy efficiency charges for customers. If this component of the shareholder incentive mechanism succeeds in affecting the results delivered by the Company, it will be a success for both customers and the long term goals of Least Cost Procurement.

The Company will report final program results and earned incentive in its Year-End Report regarding 2012 Energy Efficiency Program efforts.

#### IX. Miscellaneous Provisions

- **A.** Other than as expressly stated herein, this Settlement establishes no principles and shall not be deemed to foreclose any party from making any contention in future proceeding or investigation.
- **B.** This Settlement is the product of settlement negotiations. The content of those negotiations is privileged and all offers of settlement shall be without prejudice to the position of any party.
- C. Other than as expressly stated herein, the approval of this Settlement by the Commission shall not in any respect constitute a determination as to the merits of any issue in any other proceeding.
- **D.** The Parties agree that the Subcommittee shall meet no less than six times in 2012 to review the status and performance of the Company's 2012 energy efficiency programs and advise on potential energy efficiency programs for 2012.

The Parties respectfully request the Commission approve this Stipulation and Settlement as a final resolution of all issues in this proceeding.

Respectfully submitted, THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID

10/31/11

Date

By its Attorney

Jennifer Brooks Hutchinson, Esq.

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RHODE ISLAND DIVISION OF PUBLIC UTILITIES AND CARRIERS

By its Attorney

Date

Jon Hagopian, Special Assistant Attorney General

THE ENERGY COUNCIL OF RHODE ISLAND

William H. Ferguson

William Ferguson, Executive Director

Date

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ENVIRONMENT NORTHEAST

Jeremy McDiarmid

Date

THE RHODE ISLAND ENERGY EFFICIENCY AND RESOURCES MANAGEMENT COUNCIL

By its Attorney

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# 2012 Residential Energy Efficiency Programs and Initiatives

The Company's 2012 portfolio includes a comprehensive set of residential programs focused on both whole building assessment and energy efficient products. In 2012, the residential programs are focusing on increasing savings through enhanced implementation strategies and broadening the outreach to customers. Achieving these objectives will ensure the Company's success in meeting the bold savings targets set by the Energy Efficiency Resources Management Council (EERMC) in the first year of the National Grid 2012 – 2014 Energy Efficiency (EE) Plan. The 2012 gas and electric savings targets are respectively 127% and 25% higher than their corresponding 2011 targets.

National Grid believes that energy efficiency is for everyone. With that focus in mind, the 2012 residential programs focus on enhancing implementation strategies that ease customer participation, promote innovative products into the market, and create job opportunities. Examples of these strategies include creating a seamless HVAC program with gas and electric offerings, promoting the energy-saving heat pump water heater to the market through various channels, and creating more audit and weatherization opportunities for the independent contractor network.

For residential customers, the Company wants to increase participants and increase energy savings per participant. In order to increase participants, the Company will continue to build upon the successful tactics learned through the Comprehensive Statewide Marketing Campaign, Community Initiative, and Hard-To-Reach initiatives. The Company is also setting bold participation goals for the ENERGY STAR® Lighting and ENERGY STAR® HVAC program, especially for gas heating equipment. Additionally, the Company will continue collaborating with the Office of Energy Resources (OER) and community groups to link our programs together in order to offer opportunities to as many customers as possible. An example of the Company increasing savings per participant is offering weatherization incentives to customers who heat with oil or propane, building on the success of the Federal American Recovery & Reinvestment Act (ARRA) Deliverable Fuels program from 2010-2011. The Company will also intensify focus on following up with customers who receive home energy assessments to see if they have or plan to install recommended measures.

The Company continues to deliver residential programs through two channels: efficient buildings and efficient products. Programs designed to create more efficient buildings include EnergyWise, Single Family Low Income Services, Residential New Construction, Community Initiatives and a Residential Behavior Pilot. EnergyWise and Residential New Construction offer initiatives for low-income customers as illustrated in Table 2 on page 9. All of the efficient building programs provide customers with a single point of contact for a variety of both gas and

electric services and products, while encouraging the customer to participate in one or more of the programs. They also offer efficiency opportunities to the diverse segments of residential customers in the state, including homeowners and renters, low and moderate income consumers, and those constructing new homes. All of the programs include a component of consumer education to help the customer to better understand how to control and manage energy costs. National Grid also offers specific education programs including ENERGY STAR® Home Vocational Education as part of the Residential New Construction program and the National Energy Education Development Project (NEED) to promote these initiatives.

Programs focused on the creation of efficiency through product selection include ENERGY STAR® HVAC, ENERGY STAR® Lighting, and ENERGY STAR® Appliances. Additionally, the Residential Products Pilot will continue to focus on new or underutilized electric and gas technologies. Programs focusing on products continue to use various distribution channels to help influence customer selection. These channels include but are not limited to, installation vendors and retail stores. The Company plans to continue Hard-to-Reach efforts in programs such as ENERGY STAR® Lighting, Residential HVAC, and for several programs through the Community Initiative. The Company continues to value customer feedback by investing in focus groups with program participants. This will help the Company ensure its services are delivered in the manner in which objectives were set.

Table 1. Proposed Residential Energy Efficiency Programs				
Residential Buildings Efficiency Programs				
EnergyWise Program (Gas and Electric)	The EnergyWise program offers single and multi-family customers free home energy assessments of their homes and information on their actual energy usage. Participants in this program receive recommendations and technical assistance as well as financial incentives to replace inefficient lighting fixtures, appliances, thermostats, and insulation levels with models that are more energy efficient. The program addresses base load electric use and heating and cooling energy loads in all residential buildings. The program recommends efficient products that are delivered through National Grid's various programs. The program also serves the low income multi family community. The program will continue to deliver the Heat Loan in 2012 that was funded by RGGI and will begin offer weatherization incentives to customers who heat with oil and propane. Incentives were previously a part of the ARRA Deliverable Fuels program delivered through EnergyWise.			
Single Family Low Income Services (Gas and Electric)	The low income program is delivered by the Office of Energy Resources and local Community Action agencies. It provides whole house energy savings to eligible customers, including appliance and lighting retrofits, weatherization and heating system replacements. Eligible customers make no contribution toward equipment installation under this program.			

Residential New Construction (Gas and Electric)	The Residential New Construction Program promotes the building of energy efficient homes in conjunction with the EPA's ENERGY STAR® program by offering technical and marketing assistance, as well as tiered incentives and trainings to builders of new energy efficient homes that comply with the program's performance standards. The program works with code officials and vocational schools. The program also serves the low income new construction community. In 2012, the program will continue to identify customers and potential for the RGGI Homes Version 3.
Information and Education Programs (electric only)	The Company promotes energy education to private and public schools and youth groups through the National Energy Education Development (N.E.E.D) Program. This program provides curriculum materials and training to students and teachers in grades K-12.
Community Initiative (electric, cross-sector with C&I)	This program is designed to leverage community partnerships and develop targeted marketing strategies in order to promote all energy efficiency programs, residential and commercial, to a localized population.
Residential Pilots (Gas and Electric)	Pilots include a Residential Behavior Pilot and a Residential Products Pilot. The programs will test innovative technologies that achieve savings over existing technology; as well as pilots which will focus on changing customer behavior.
Deep Energy Retrofit (RGGI)	This pilot provides significant financial incentives for deep energy retrofit demonstration projects involving super-insulation upgrades and other measures in conjunction with customer planned projects such as re-siding or roofing. Customers with 1 to 4 family buildings, regardless of heating fuel type are eligible. The program was approved and funded by the Innovative RGGI 40% program in 2010. It will continue in 2012, but requires no additional funding.

Residential Efficient Products Programs			
ENERGY STAR® Lighting (Electric Only)	The program is run in collaboration with other regional utilities to provide discounts to customers for the purchase of ENERGY STAR® compact fluorescent lamps, fixtures and solid state lighting through instant rebates, retail store promotions, or mail order.		
ENERGY STAR <sup>®</sup> Appliances (Electric Only)	The program is run in collaboration with other regional utilities to promote the purchase of high efficiency household appliances including kitchen appliances and electronics. Many of these appliances carry an ENERGY STAR label. The program also offers refrigerator recycling which promotes more efficient refrigerators while removing non-efficient units from the market.		
ENERGY STAR® HVAC Program (Gas and Electric)	This program is a combination of the former electric-only HVAC program and gas-only High Efficiency Heating, Water Heating and Controls program. It has been rebranded to make the delivery to the customer more seamless. This program promotes the installation of high efficiency central air conditioners and heat pumps, and offers rebates for new energy efficient natural gas heating and water heating equipment as well as programmable thermostats. The program provides training of contractors in installation, testing of the high efficiency systems, tiered rebates for new ENERGY STAR® systems, and incentives for ensuring the proper installation and operation of new and existing systems.		
Comprehensive Marketing -Residential (Gas and Electric)	This plan uses mass media to support and amplify the communications efforts in market for the individual Energy Efficiency programs. This will be accomplished by targeting all eligible customers in the state to increase awareness and inform them of the benefits of saving energy and how to do so via the programs offered by National Grid. The communications for this program as well as the individual programs we market in the state will have a synergy making for a more robust campaign in the coming year. For more information, please see the Marketing Plan in Attachment 4.		

# **Residential Building Efficiency Programs**

## **EnergyWise Program (Gas and Electric)**

#### Overview

First offered in 1998, this program provides energy efficiency improvements to customers in existing multifamily and single-family residences. The program provides a free, comprehensive assessment of a customer's energy use and recommends various ways to improve their home's energy efficiency. It includes the no cost installation of measures including CFLs, low-flow showerheads and faucet aerators. Beginning with that assessment, the process is designed to continually reinforce the benefits and convenience of implementing recommended measures.

Participants in this program are offered financial incentives for cost effective gas and electric measures to replace inefficient lighting fixtures, lamps, appliances, thermostats, and insulation levels with versions that are more energy efficient. Where appropriate, customers are also encouraged to participate in the residential HVAC program. In 2012, the program will offer incentives to customers who heat with deliverable fuel sources. The current intention is to offer the incentive levels previously offered by the ARRA Deliverable Fuels program for weatherization, the incentive level will be evaluated throughout the year. The incentives may be increased to mirror the incentives for buildings heated with gas or electric. RI Heat Loan, which provides 0% interest financing to eligible customers, will continue to be offered through the program to support customer adoption of energy efficiency products and services that are recommended during the assessment.

The EnergyWise program also provides services to multifamily properties including low-income multifamily properties. The number of units and funds are illustrated in Table 2 on page 9. Multifamily facilities of five or more units are eligible if they have not already participated in the program in the past five years. All customer co-payments are waived for any measure installed in Public Housing Authorities as well as other low income state and federally funded multifamily facilities.

## **Experience**

National Grid has managed a home energy assessment program for more than 20 years. In previous years, the lack of sufficient gas funding for energy efficiency limited the number of customers the program could serve, including single family homes and larger multifamily gasheated units. The ARRA Deliverable Fuels program successfully launched in 2010 and continued in 2011, allowing customers who do not heat with gas or electric to receive weatherization and

heating system replacements. The ARRA Deliverable Fuels program is anticipated to end in December, 2011.

## Delivery

The program is delivered in three steps: energy assessments, installation, and quality assurance/quality control. The Company currently uses a lead vendor energy assessment model. This model is one of many approved by the Environmental Protection Agency (EPA) and Department of Energy (DOE) for the Home Performance with ENERGY STAR® national initiative. This model minimizes administrative costs, and guarantees customer equity. The lead vendor will be responsible for conducting all energy assessments of single and multifamily customers, coordinating all work resulting in additional energy efficiency measures offered through the program and all the central administrative functions.

In 2012, independent, third party, BPI-qualified, weatherization contractors will be subcontractors to the lead vendor for all single family post-assessment work. This work will be distributed via a merit based process to the approved list of qualified contractors. Weatherization contractors who participate as subcontractors to the lead vendor in the Single Family EnergyWise program can promote and market the program and then "tag" a customer to provide services. This is achieved through appropriate signed documentation between the contractor and the customer, which is then provided to the lead vendor, who will conduct the assessment on the home and assign the work to that contractor. The Lead Vendor will perform quality checks on weatherization jobs to ensure quality installation, energy savings maximization and customer satisfaction.

For larger multifamily facilities, major weatherization measures are put out to competitive bid. Major measures include lighting upgrades, programmable thermostats, replacement of inefficient refrigerators, heat pump testing and tune ups, duct sealing and insulation for electrically and gas heated facilities.

All homes or facilities are eligible to receive lighting fixture upgrades and refrigerator replacement measures as identified through the energy assessment. The Company does not require a co-payment for lighting fixtures or lamps installed in single family homes nor the living units of multifamily facilities in order to avoid lost opportunities.

#### **Gas and Electric Integration**

Building on the integration practices from the past two years, the Company is committed to delivering a comprehensive and seamless model to maximize ease-of-use and value to all customers. For single family households, customers are presented with an energy assessment, regardless of their heating fuel. After the assessment is completed, the energy assessment vendor and the Company complete necessary follow up actions regarding billing and tracking.

<sup>&</sup>lt;sup>1</sup> Consistent with the Three Year Plan agreement to review costs annually, program delivery costs will be examined before the 2013 Annual Plan.

For multifamily buildings, the comprehensive building analysis will be funded by either gas or electric energy efficiency funds but not both, enabling the Company to serve more buildings. Electric or gas funds will be used to provide funding for electric or gas measures including insulation, showerheads, aerators, air sealing, lighting, refrigerator replacement, duct insulation and duct sealing. Master metered multifamily gas weatherization, heating system replacements, or comprehensive gas retrofits will be served through the Large Commercial Retrofit program. Individually metered Multifamily gas weatherization will be served through the EnergyWise program. Not all multifamily properties will have the same attributes. Therefore, the Company is developing a strategy to identify and deliver bundled residential and commercial energy efficiency measures, both gas and electric, seamlessly to the customer in a cost-effective, customer-friendly way.

## **Meeting 2012 Goals**

The aggressive goals for 2012 present considerable program challenges. Generally, the Company and lead vendor will seek innovative alternatives to achieve the objectives of higher savings at time of audit; more audits resulting in post-audit measure installations; deeper savings per residential unit; and emphasis on cross-promoting products from the ENERGY STAR® HVAC and Appliances programs. There will continue to be an increased focus on customer follow up to determine if customers have taken the recommended energy saving actions, and if not, whether there are any barriers that can be removed

Competitive bidding for the program lead vendor(s) in Rhode Island has been initiated, will be determined in 2011 and will be ready for operations on January 1. The program will work with the C&I sector in order to integrate services and create one point of contact for gas and electric master metered multifamily dwellings so that incentives can be provided for portions of the building not tied to individual customer's bills.

#### Quality Assurance / Quality Control (QA/QC)

Through the third party quality assurance, the Company closely monitors the audit and installation processes. The third party monitors 10% of the program goals for both single and multifamily dwellings.

#### **Home Performance Contractors (HPC) Pilot**

Home Performance Contractors (HPCs) are the assessment and weatherization contractors that can provide both energy assessments and measure installations. The Company is planning to offer a pilot effort in 2012 to incorporate HPCs into the program delivery process. The pilot will examine cost-effectiveness, job growth potential, quality assurance, and customer satisfaction. The Company will also observe the progress of similar initiatives in neighboring states in order to learn from their experience. Services to be provided must meet program requirements such as certifications, insurance, established performance metrics and background checks as well as comply with the designated terms and conditions for both themselves and any associated subcontractors. HPCs will be required to subcontract with the lead vendor.

#### Heat Loan Program (for Single Family 1-4 unit residences)

The Heat Loan was successfully implemented in 2011 and provided 0% interest loans for weatherization and high efficiency heating systems to residential customers in Rhode Island. The program began with funding from RGGI 40% Innovative Proceeds Allocation. The primary goal of the Heat Loan program is to provide affordable financing for residents who do not qualify for low income heating assistance but cannot manage the upfront costs of efficiency measures on their own. The Company will continue to look for outside funding but once the RGGI funds are fully dispersed, the program plans to leverage funds in the EnergyWise program to continue this initiative.

The Company believes working with local banks ensures customer satisfaction and stimulates local economic growth. There are currently two lenders participating in this program, Navigant Credit Union and Citizens-Union Savings Bank. The Company will continue to accept new local lenders into the program.

Customers who live in one to four unit single family residences are eligible for a 0% interest loan of a minimum of \$2,000 up to \$25,000 with terms up to seven years and can be applied towards the following energy efficiency upgrades:

- Insulation and/or Air Sealing Upgrades
- Duct Sealing and Duct Insulation
- Energy Star Thermostats
- Energy Efficient Heating System Replacements
- Energy Efficient Domestic Hot Water Systems

The program may expand to include additional measures.

#### **Partnerships**

For more than 15 years, EnergyWise has worked with the RI Housing Authority and their partners that manage income-eligible multifamily buildings throughout the state. A majority of these units have already had energy assessments through the program, however numerous electric and gas energy-saving opportunities still exist. In 2011, the program began to create a more robust relationship with RI Housing Authority and the Company plans to continue the partnership in order to deliver energy efficiency measures in a seamless, efficient, cost-effective way.

## Marketing Strategy

EnergyWise is certified by the Environmental Protection Agency as a "Home Performance with ENERGY STAR®" program in the single family sector. This allows the program to use the ENERGY

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STAR® name for marketing purposes, and ensures that the program meets high health and safety standards.

The program is marketed through direct contact with interested customers and owners, property owners' associations, bill inserts, customer newsletters, the National Grid website, as part of other efficiency programs offered by the company, and other methods. For multifamily facilities the program will target both public housing authorities and privately-owned properties. The program will work in close coordination with institutions such as Rhode Island Housing that are involved in capital planning for retrofitting multiple properties. The program also coordinates with the Community Initiative in order to market the program through community channels and partnerships. The program anticipates increased participation from the comprehensive statewide marketing initiative outlined in Attachment 4.

# Single Family Low Income Services Program (Gas and Electric)

#### Overview

To help control energy use, the Company's residential income eligible program provides eligible customers with a variety of energy savings measures installed in their homes at no cost. An increasing number of the Company's customers may qualify for low income efficiency services during 2012. Heating and electricity bills frequently pose a difficult burden to income-strapped customers who often pay a high percentage of their income to cover their energy costs.

The Company would like customers who have difficulty paying their energy bills to take full advantage of its efficiency programs. Customers who are eligible for the Low Income Heating Assistance Program (LIHEAP), also known as "fuel assistance," and who live in 1-4 unit buildings, are eligible for this program. All indications point to a reduction of LIHEAP and DOE weatherization funds for 2012 which emphasizes this program's continued and even increasing value.

In addition to this program, low income customers in multifamily units are served through the EnergyWise and Large C&I Retrofit programs, and low income new construction opportunities are served through the Residential New Construction program. The following table outlines the number of low income units planned to be served in 2012, as well as their planned incentives and total budget. In the budget and goals table found in Attachments 5 and 6, the low income participants, savings and budgets are attributed to EnergyWise, Large C&I Retrofit, and Residential New Construction.

<sup>&</sup>lt;sup>2</sup> The federal government has set an income level, tied to the median income of each state, which defines the uppermost income boundary for LIHEAP participation. Individual states have some flexibility in defining income eligibility as long as it is not set above the federally defined maximum. Eligibility in this program will track the eligibility for LIHEAP set by the State of Rhode Island.

Table 2: Low Income Units in Residential Building Programs

	Low Income Projections for 2012			
	Program	LI Units	LI Incentives	Total LI Budget
1	Residential New Construction	74	\$88,800	\$191,414
	EnergyWise - Multifamily	556	\$248,171	\$343,219
	Low Income Services - AMP	2,501	\$3,767,491	\$5,862,467
Total Electric		3,131	\$4,104,461	\$6,397,099
	EnergyWise - Multifamily	100	\$68,700	\$106,939
Gas	Low Income Services - AMP	430	\$1,710,000	\$1,843,524
	Large C&I Retrofit*	300	\$295,000	\$313,622
Total Gas		830	\$2,073,700	\$2,264,085
Grand Total		3,961	\$ 6,178,161	\$ 8,661,184

#### Notes:

## **Experience**

In 2011, the Company's lead vendor, OER, continued to meet the Company's goals amidst the significant funding, savings targets, and administrative demands triggered by ARRA weatherization program. The end of the ARRA program as well as diminished levels of LIHEAP and DOE funding for 2012 further emphasizes the importance of the utility funding for this program. OER's relationship with the Community Action Programs (CAPs) will be crucial in meeting the increased electric and gas savings goals for 2012.

## **Delivery**

The services of this program will continue to be administered by OER. OER has a long history of working with the local CAPs across the state providing cost-effective energy saving services to its residents. OER manages the work conducted by participating CAPS for the delivery of energy efficiency services. Collaboration between OER and local agencies is essential in order for the Company to continue serving this program's participants. Local agencies are the primary link between program eligibility and the customers who can take advantage of the program. Once eligibility is determined by the local agency, the customer is informed of the steps involved in gleaning maximum energy savings in their homes. Customers are also informed of the process to receive energy saving services, including the scheduling of any visits from local agencies, and any approved energy professionals who install energy savings measures where they live.

## Meeting 2012 Goals

2012 will present significant increases in savings and participation levels for this program. The Company is targeting 2,500 unique participants for electric services, an increase of

<sup>(1)</sup> Large C&I Retrofit is an estimated number of units that will receive weatherization, whole-building measures such as heating system replacement and are not included in the estimate.

<sup>(2)</sup> Total LI Budget based on percentage of incentivescorresponding with total program budget illustrated in Attachments 5 and 6.

approximately 40% over 2011, and 430 unique participants for gas services, more than doubling participation in 2011. The Company focused on improving cost-efficiencies in the program in 2011 in order to serve the most customers possible, that is why spending levels do not appear to increase as much as participation does in Attachments 5 and 6. In order to meet the 2012 goals, the Company will continue to collaborate closely with OER to develop an evenly paced delivery schedule in serving clients. The incorporation of InDemand, the Company's on-line electric audit, weatherization, and billing system, on the gas side, will provide additional support in this effort, as the systems will continue to accelerate the billing, tracking, and data collection for savings in 2012.

In 2012, the Company will continue to focus on the savings side of heating systems. Traditionally, this program has allowed standard efficiency equipment to be used in heating systems replacements. The Company will continue to explore the savings that come from installing high-efficiency equipment whenever possible, keeping in mind that higher efficiency equipment tends to incur higher costs and leveraging opportunities will be diminished due to decreased funding resources outside of this program. In addition, the success of the HVAC Program in Rhode Island may provide this program with the information it needs to make any appropriate modification requirements. The company will also explore weatherization of mobile or manufactured homes and installing heat pump hot water heaters.

Also during 2012, the Company intends to continue to lend its program delivery expertise to the Green and Healthy Homes Initiative (GHHI) that has been launched in the city of Providence. Any collaboration will be done in conjunction with the OER in order to optimize how eligible populations receive maximum benefits with minimum impacts. Fortunately, OER and the CAP agencies have a proven history of being on the leading edge of lead abatement and lead safe practices in weatherization measures. OER's work with statewide weatherization services, funded by an array of different programs, is best suited to provide the GHHI effort with the understanding how all the local agencies serve eligible populations. The Company will continue to collaborate with the Rhode Island Housing Authority to better serve their residents.

## **Residential New Construction (Gas and Electric)**

#### Overview

The Residential New Construction Program promotes education of builders, the trades and designers along with the construction of energy efficient single and multifamily homes. The program is fuel neutral, consisting of tiered incentives and provides participating builders with technical and marketing assistance. The tiered incentive offering allows for increased energy efficiency and greater program participation. New Construction projects that fall outside the residential program guidelines will be referred to the Commercial New Construction Program.

The Company will continue outreach and education of Builders, Contractors, Architects, Realtors, Developers, Trade Allies and Code Officials regarding the energy saving benefits and value of participating in the Rhode Island New Homes Program.

### Experience

Despite 10.5% unemployment and 15% fewer building permits issued in 2011 over previous years in RI, the Company continues its strong commitment to the Residential New Construction Program. The RI program is a proud participant of the national ENERGY STAR® New Homes program and benefits from regional as well as national advertising efforts of the ENERGY STAR® brand. The program is committed to achieving both a broader market penetration of energy efficient homes from 2011 to 2012 as well as moving builders toward deeper energy savings where possible. In 2010, RI led the region with 32% participation in the ENERGY STAR Homes Program. Through August 2011, signings are at 41% of permits issued.

## Delivery

The program is administered through a HERS implementation contractor (IC) selected through a competitive bid process. The IC oversees the day to day operations of the program, is responsible for tracking and reporting program results to the Company, performs field verifications and testing, and advises the PA of program enhancement opportunities. Quality assurance (QA) is performed by a third party inspection selected through a competitive bid process.

In 2012, the Company will continue offering four tiers of energy efficient new construction including an expanded tier 3.

#### **Code Plus**

This is the entry level tier offered to new builders to the program or to builders that cannot meet the more stringent requirements of the higher tiers, either through lack of experience, budget or other constraints. It raises the level of code compliance, in a region where

enforcement is inconsistent, by offering builders "free" blower door and duct testing in exchange for making other improvements to their buildings. Experience with these types of builders has shown that once they make the required upgrades, and work with a HERS rater, continued improvement is the norm. Code Plus is based on the requirements for ENERGY STAR® Homes Version 2 (V2). Projects will receive CFLS in all available sockets and be eligible for Gas Networks and CoolSmart rebates for high efficiency HVAC and DHW equipment. The Company will also continue its efforts to reach a majority of RI builders.

#### Tier 1

This tier is designed for projects meeting the requirements of ENERGY STAR® Version 2.5 (V2.5) requirements with a HERS Index of 82 to 61. Most projects will fall into this category.

#### Tier 2

For projects that meet Version 2.5 requirements and achieve a HERS Index of 60 to 45. This category will be for those builders who are more experienced and building for clients demanding higher standards of energy efficiency.

Compliance with EPA's ENERGY STAR® Homes Program is not required but available at the Tier 1, 2 or 3 levels for any builder wishing to get an EPA label. The biggest barrier remains the HVAC contractors and Air Conditioning Contractor of America (ACCA) certification. There are currently no certified contractors in RI, and due to the high cost of certification there is really nothing to suggest that will change dramatically in 2012. Also, gut rehabs, which make up a significant and growing sector, would not be eligible for Version 3 (V3) because of the framing and foundation requirements

While it is not practical to require V3 compliance at this time, it does make sense to prepare the market players for the eventual change, which is why for 2012 funding will be set aside for six half day trainings on better building practices focusing on those needed for V3 in particular-advanced framing and HVAC. In 2011, six V3 trainings were delivered to builders, developers and architects. Several shorter seminars were also delivered covering the major changes from V2- V3. The sessions were well attended indicating an interest in understanding V3. The IC's field staff has completed all training required by EPA to deliver V3.

For Tier 1, 2 and 3, sealed combustion appliances and mechanical ventilation are required. For Code Plus, the HERS rater will use the opportunity to explain the health and safety aspects of sealed combustion and ventilation and encourage, but not require these features.

#### Tier 3 - New

This category would be for the next generation of homes that in addition to aggressive energy savings - HERS 45 and below - go beyond current practice and are prepared to share strategies,

project costs and utility bills so that that the experience gained can be used for case studies. This tier could reward exceptional projects and recognize programs and standards including:

- EPA Version 3 (EPA has delayed the roll-out for 2012)
- Zero Energy Challenge
- Passive House
- LEED for Homes Platinum Level single and multi-family
- NAHB Emerald single and multi-family

#### Renovation/Rehab - New

Given the drop in permits in the state and across the region this year, even builders who specialized in new construction are now mostly engaged in renovation work. To expand the Company's reach and capture lost opportunities, the Company will explore offering support to keep builders (who have temporarily abandoned new construction) engaged in energy efficient construction practices. The Company will investigate the applicability and cost effectiveness of including renovation activities into the program. For substantial gut rehabs, activities may include: a pre and post Blower door test, a thermal bypass inspection, and insulation upgrades beyond code where feasible. The Company will reach out to builders who only do renovation work and also to have something to offer for historic building renovation.

#### **Income Eligible Participation**

Nearly half the homes in the program were affordable housing stock in 2011. The Company has a strong relationship with Rhode Island Housing (RIH) and the affordable developers they fund. While RIH requires that developers receiving funds meet the program standards, there has always been a gap for projects that are historic or not doing a full gut rehab, and for this reason RIH would welcome a program that could include their rehabs and historic buildings. The Company may work with RIH to create a set of standards that can apply to both new construction and rehabs. Minimum standards should include the following:

- Air sealing set target for reduction and test for compliance
- Insulation IR cameras could be used to verify quality of insulation installation where walls are not exposed
- Upgrade heating and DHW equipment to sealed combustion appliances
- Ventilation ENERGY STAR® rated bath fans
- USGBC REGREEN or NAHB for remodeling standards could be followed where applicable.

#### **Lighting Design Initiative**

Lighting design assistance is an area that has the potential to be helpful to both the affordable and open market. The Company will consider providing lighting design to one multi-family and one single family project, to determine the potential of whether this type of initiative might have replicable elements that could be applied on a wider scale.

#### **Income Eligible Participation**

Nearly half the homes in the program were affordable housing stock in 2011. The Company will continue to work successfully with RI Housing, OER and developers of affordable housing in 2012.

#### **Homes Version 3 RGGI**

The program received RGGI funding for a Homes Version 3 projects in 2011. The program reached out to customers building high performance homes but did not have any success in qualifying candidates for the pilot's strict criteria of HERS 35. Several projects came close but none achieved this target. The program will continue its outreach in 2011 and 2012 as part of the expanded Tier 3.

### **Meeting 2012 Goals**

For new construction, the efforts to achieve both deeper savings and gain broader market penetration will continue through the offering of multiple tiers and options, one of which continues to push homes closer to net zero energy.

These goals will be challenging in a weak economy and anemic new construction industry. However, the program will have resources dedicated to promote the program, support participating builders and other key stakeholders in the residential new construction market.

#### For 2012 plan:

- Continue to enhance and expand program offering and consumer awareness
- Expansion of participating builders base
- Continue expansion of existing and new market allies
- Bundling of marketing ENERGY STAR® Programs
- Training

The program will also continue the Baseline compliance evaluation that began in 2011 and is in collaboration with NEEP, OER and the RI Building Commission and in conjunction with the C&I baseline compliance study being conducted. The evaluation studies the compliance rate of homes built with the 2009 IECC code. The program will continue efforts to increase code

compliance as it has over the past several years. Increasing code compliance may have a short-term opportunity to increase program savings in the future. Efforts for future code compliance will be in conjunction with the C&I New Construction program, please see details in Attachment 2.

In 2013, the program will undergo significant changes when IECC 2012 goes into effect. The new code will mean fewer savings can be claimed using current program implementation strategies. In order to prepare for upcoming changes, the Company will research cost-effective implementation strategies so that the program can continue to deliver least cost energy savings for Rhode Islanders.

## Marketing Strategy

The Company, directly and through the IC, will continue to educate homebuilders, consumers and trade partners regarding the energy savings benefits and value of energy efficient qualified homes. Marketing efforts will continue to focus on: homebuilder recruitment, continued training and support, community outreach and ad campaigns geared towards builders, consumers and trades. The Company will sponsor and attend various trade show exhibitions as well as continue educational support in building science curriculum of Vocational Tech Schools.

The Company will combine marketing efforts for 2012 promoting energy efficient Homes, HVAC, Lighting and Appliances for standard and affordable housing stock as a means to achieving greater energy savings, containing costs and increasing participation.

## **Community Initiative (Gas and Electric)**

#### Overview

The Community Initiative is designed to promote EnergyWise, Small Business Direct Install, ENERGY STAR® Lighting and ENERGY STAR® Appliances, Refrigerator Recycling and Whole Building Assessment Programs to drive deeper savings with wider participation at the community level. This initiative leverages existing community relationships such as local agencies, schools or church groups focused on saving energy to increase participation in energy efficiency programs. By using a grassroots approach, customers that have not been previously targeted will hear the energy efficiency message of National Grid.

## Experience

The Community Initiative was launched in Rhode Island in 2010 with a focus on Aquidneck Island and Jamestown. Although the original objective was to target areas where electric service was constrained, initiatives in subsequent years focus strictly on communities that can benefit from the community based messaging approach where the Company's other marketing vehicles have not yet touched the customer. The 2011 evaluation of the Aquidneck Island and Jamestown initiative found it to be cost effective and successful at significantly increasing both participation and energy savings compared to communities that did not have an initiative.

In 2011, the Community Initiative selected two local community organizations to target four cities and towns. People's Power & Light targeted the cities of Cranston and East Providence while the University of Rhode Island (URI) focused on South Kingstown and Warwick.

## Delivery

Using a Request for Proposals (RFP) approach, local community agencies will be selected to deliver initiatives to specific local communities. Specific goals for each city or town will be developed. Proposals will be reviewed and selected. Once the agencies have been selected, they attend specific trainings at the program level. The agencies collaborate with National Grid to report progress and troubleshoot issues. The agencies also coordinate with National Grid's Jurisdictional Group and Media Relations. The Company may also target specific towns as part of the System Reliability Procurement Plan (SRP), please see the 2012 SRP Annual Plan for more information.

## Marketing Strategy

As part of the program design, each agency designs a marketing approach to recruit customers using their unique community channels. The approach may include press releases, involvement of local politicians such as Mayors or Representatives, door-to-door canvassing, energy-efficiency events, piggy-backing on community events, web site development for various cities/towns, or other activities focused on spreading the word about the Company's residential

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and small business programs. The Company will also collaborate with agencies to leverage marketing experience.

## Information and Education Programs (Electric Only)

#### Overview

The Company will continue to support energy efficiency education programs in schools with an objective of educating students who will, in turn, teach their family and community members. The two programs targeted below use applied learning techniques. These keep students connected to their communities by promoting the application of their new knowledge to real-life situations.

The Company plans to continue sponsoring the National Energy Education Development (NEED) project in 2012. NEED is a nonprofit education association that works with thousands of schools nationwide to promote energy-conscious education through its "kids teaching kids" model. Shannon Donovan, a NEED teacher at Scituate High School in Providence, was recently named a 2011 Rhode Island Teacher of the Year.

The Company plans to support NEED by providing educational materials to teachers and students. One of the notable topics included in the provided materials is Monitoring and Mentoring, which helps students learn about their personal role in energy consumption, based on their behavior and habits and what kind of impact they can affect through a change in those habits. Funds provided by the Company will be used for training seminars for teachers, and materials for their students. The Company will work with NEED to identify potential participant schools and implement the program.

The Company is also considering partnering with Rhode Island College to support pilot science courses and interdisciplinary topics for elementary education majors and possibly graduate students. Proposed topics of study include "Energy Conservation" and "Energy Efficiency." It is hoped that developing a curriculum that could be used by elementary science teachers will instill an early awareness of responsible energy usage in students that would carry through to when those students become decision-makers in their own households.

## **Residential Pilots (Gas and Electric)**

#### Overview

The residential gas and electric pilots in Rhode Island will focus on new technologies that are deployable in future energy efficiency programs and proven to be safe, reliable and cost effective. These technologies may be independent or integrated into existing program designs. Another focus will be on technologies that promote behavior-changing practices. These innovations have the ability to minimize customer costs by limiting the need for increased infrastructure to satisfy peak usage. The Company's pilots may include but are not limited to communicating thermostats with the ability to present electric meter reads, ECM circulator pumps, communicating thermostats that interface with 3rd party applications to deploy load shifting technology, heat pump dryers, electric vehicle control (installed within 2011 Behavioral Pilot participant pool), technology to measure the thermal load of the building envelope, and thermal demand boiler controls.

## **Experience**

The Company has had tremendous success in 2010 and 2011 with piloting technologies that had not yet been widely accepted. We have deployed and evaluated Heat Pump Water Heaters, Wi–Fi Thermostats and Solar Thermal Heating and Hot Water. The Company works closely with NEEP, CEE and other national organizations to discuss and gain regional/national knowledge on emerging technologies to understand barriers and challenges that face each technology.

The Company will use knowledge gained from analyzing existing programs and results to determine if technologies can be combined to enhance future results. For example the 7% savings achieved per thermostat in the Company's 2011 Wi-Fi pilot could be coupled with a technology that determines the condition of a home's thermal envelope. The technology could be used as a preliminary screening tool to determine the need for a home energy audit to be performed. This combination would eliminate unnecessary audits while providing savings to the customer if successful.

## Delivery

The Company's program managers will manage all aspects of the pilots. They will work with internal experts and utilize external resources to determine what type of technologies customers will deploy and utilize in Rhode Island. The technologies will be installed and executed by a trained professional contractor for each respective technology. New technologies will be installed in homes that align with the Company's residential metering classification, and appear to be a good fit for the technology being assessed.

## Marketing Strategy

Customers will be recruited through a variety of methods which may include community group outreach and targeted communications to customers who will best represent the benefits of piloting a new technology. The Company may target specific towns to provide a baseline for projects in a System Reliability Procurement (SRP) Annual Plan. Please see the 2012 System Reliability Procurement Annual Plan for more information,

## Meeting 2012 Goals

In 2011, the Company defined a process for internally developing a pilot technology. This process enables the Company to work more collaboratively both internally and externally with all of its stakeholders. As previously mentioned, pilots may be used as an integration tools for new technologies that will ultimately be introduced in an SRP project. They continue to act as a pipeline for new measures in the Company's existing residential and multifamily programs.

Identified new technologies will be installed by Rhode Island contractors whenever possible. The program is going to streamline the contractor selection process by issuing an RFP to procure one contractor to install all 2012 pilots. A more streamlined procurement process and a closer working relationship with the lead contractor will enhance the Company's abilities to meet the 2012 savings goals.

The Company will continue to evaluate the results of the Behavior Pilot begun in 2011 to glean best practices and lessons learned. Other strategies that can be integrated into the installed technology will also be considered. The Company will also monitor and evaluate the savings by performing a mid-year, partial evaluation to determine if this type of behavioral strategy is working, and to better understand if the chosen technology will provide cost effective benefits in future years. The completion of this mid-year evaluation will inform decisions and potential adjustments for future pilot strategies.

## **Deep Energy Retrofit Pilot**

#### Overview

The Deep Energy Retrofit pilot was approved and funded as part of the Innovative RGGI 40% proposal in 2010. No additional funds are required to continue the pilot in 2012. It will provide significant financial incentives for deep energy retrofit demonstration projects involving superinsulation upgrades and other measures in conjunction with customer planned projects such as re-siding or roofing. Customers with 1- to 4-family buildings, regardless of heating fuel type are eligible.

Two housing units are currently under contract and should be completed in 2010. An additional 6 units are in the application process for construction in 2012. The Company will collect energy savings data as well as data on building durability and indoor air quality improvement.

# **Residential Products Efficiency Programs**

## **ENERGY STAR® Lighting (Electric Only)**

#### Overview

This program is run in collaboration with other regional program administrators to give all consumers the opportunity to participate in energy efficiency measures. Customers are able to purchase lower cost ENERGY STAR® lamps, fixtures and lighting through instant and mail-in coupons, buydowns, markdowns and discounts. The program makes it affordable for customers to purchase the most cost effective, energy efficient products, including compact fluorescents and LEDs. The Company will continue to pursue new technology and cost-effective lighting products.

This program is effectively implemented in conjunction with the ENERGY STAR® Appliances program. The collaborative members are the same and we leverage ENERGY STAR® branding. Additionally, there are large numbers of overlapping retailers that carry and promote products, lighting and electronics. Also, both the Lighting and Products programs use a common outreach and marketing vendor, as well as a shared incentive processing vendor, resulting in streamlined administrative and marketing costs.

## Experience

The program is run in collaboration with other regional program administrators and organizations such as CEE, NEEP, ENERGY STAR® and the Alliance to Save Energy LUMEN Coalition.

In 2011, National Grid was presented ENERGY STAR® awards for the Lighting and Products Programs on an individual basis and at the regional level through the Northeast Energy Efficiency Partnerships.

## **Delivery**

An important part of the program is educating customers about the Energy Independence and Security Act (EISA) and lighting choices. EISA was signed into law in 2007 by President Bush and requires a 25% to 30% increase in the energy efficiency of common use light bulbs, which initially applies to 100-watt bulbs in 2012 and will gradually expand to include 75, 60 and 40 watt bulbs by 2014. The new standard does not force consumers to use CFLs, nor does it ban the use of incandescents. The standard is performance based and technology neutral, but CFLs

and LEDs are an available option for meeting the standard. EISA will not make CFLs the baseline, therefore significant lighting savings opportunities continue to exist.

Retail stores are an integral channel for promoting efficient lighting. The Company prints and distributes a wide variety of point-of-purchase materials and signs for display in retail stores. The Company also hires an outreach vendor to put up signage, train retail staff, and help with point-of-purchase displays. Discounts are made available through retail store promotions, community and retail events and mail order catalogs. Examples of community events are Newport Family Festival, Pawtucket RedSox / Telemundo Fan Appreciation event. We often obtain customer information from surveys given at events.

The Company will investigate testing a market lift model approach as a new way to work with retailers to promote ENERGY STAR® lighting products. In this type of model, the retailer earns incentives by exceeding a baseline level of sales of energy efficient products. The pros and cons of this approach compared to the markdown/buydown model will be reviewed, but there is the possibility that this approach may reduce free ridership.

## **Marketing Strategy**

The program is targeted to all residential consumers, homeowners and renters - anyone that uses light bulbs and fixtures in their home. A major marketing component for the ENERGY STAR® Lighting Program is at the retail level with in-store signage, point of purchase materials co-promotions and events, as well as co-operative advertising in newspapers. The Company, along with our outreach vendor, will work to identify those manufacturers and retailers that can add value to our program through product placement and in-store signage. The Company also plans to reach out to consumers through bill inserts, email blasts and the lighting catalog. Additionally, along with regional lighting partners, the Company is exploring the potential for utilizing social media and creating a Smartphone application.

Special focus will be made to help educate consumers on the changing landscape in the lighting industry with the phase-out of inefficient incandescent bulbs due to the Energy Independence and Security Act (EISA), the rapidly increasing availability of ENERGY STAR® LED bulbs and fixtures, and a large increase in the number of halogen products. Consumers need to be educated on making light bulb choices based on lumens rather than the familiar method of watts. Therefore, part of the consumer education effort will focus on the new Federal Trade Commission (FTC) Lighting Facts label. This educational effort will be guided by focus groups conducted by our vendor in 2011 with consumers in RI and MA on the topic of EISA specifically.

Additional attention will be paid to those considered hard-to-reach, such as non-English speaking customers and the lower income audience. We will continue to expand Spanish-speaking collateral, which may include in-store signage, a Spanish-language website, and Spanish-language social media and online outlets. Additionally, we plan to use market research tools to help identify other criteria to further characterize hard to reach customers or "stubborn" sockets.

## **Meeting 2012 Goals**

In 2012, the focus of the program will be on:

- Educating consumers on the changing lighting landscape from the implementation of EISA and how to shop for light bulbs, including explaining lumens versus the traditional way with watts.
- Increasing participation in energy efficiency with a bold goal that increases the number of bulbs compared to 2011.
- Continuing to expand marketing and research efforts for the hard-to-reach customers.
- Exploring the market lift model.

## **ENERGY STAR® Appliances (Electric Only)**

#### Overview

This program is part of a regional, joint effort by Program Administrators and energy efficiency organizations to encourage the purchase of ENERGY STAR® qualified major appliances and electronics, which include, but are not limited to, refrigerators, freezers, monitors, room air cleaners and televisions. This program is managed and marketed in conjunction with the ENERGY STAR® Lighting program. The Company can achieve greater efficiencies in marketing and outreach by overlapping participating retailers and outreach vendors. The program partners with other utilities in the region create economies of scale. In coordination with other EE programs, the Company provides retailer support, training, advertising, consumer education, codes and standards review and advocacy, as well as manufacturer labeling.

## Experience

A nationwide study of consumers' awareness of ENERGY STAR® labeling is conducted annually. The most recent study, "National Awareness of ENERGY STAR® for 2010 – Analysis of CEE Household Survey" indicates that the existence of utility sponsored programs increases the awareness of ENERGY STAR® products. National recognition of the ENERGY STAR® label (unaided) was 76% in high-publicity areas versus 68% in non-high-publicity areas. The Company will inform the Collaborative about future awareness study results.

In 2011, National Grid was presented ENERGY STAR® awards for the Lighting and Appliances Programs on an individual basis and at the regional level through the Northeast Energy Efficiency Partnerships.

Also in 2011, the room air conditioner market presented a challenge due to the limited product availability at the higher efficiency level, which is required for cost effectiveness. This type of product seems to be driven by price and consumers tend to purchase lower priced units which may not meet efficiency standards. Therefore, room air conditioners will not be offered as part of the program for 2012.

Pool pumps were also challenging due to a number of factors. The economic climate in Rhode Island is difficult and this product is often considered a luxury item. Additionally, contractors are hesitant to install a new type of equipment such as the variable speed unit at a customer's home. They want to prevent future, potential problems with their installation. The Company will continue to offer pool pump rebates given the potential energy savings.

In 2011, the Company had success with Advanced Power Strips (APS) due to new retail partners and will continue to explore new retail outlets. Additionally, the Company will offer APS via mall tours in 2012, the offer will include APS and lighting package deals at deep discount prices.

Refrigerator recycling will continue to drive Products. The Company saw an increase in participant during the 2011 summer months. This may have been due to publicity generated by the "Fine Art of Recycling" promotion which featured local artists' painted refrigerators in downtown Providence as a public art installation.

## Delivery

Manufacturers build their products to meet or exceed energy efficiency performance specifications established by the ENERGY STAR® label. Together with manufacturers, local retailers, CEE and EPA, the Company works to help identify and promote the purchase of these high efficiency appliances to its customers.

An important part of the program is educating customers about the ENERGY STAR® label. As retail stores are an integral channel for promoting the label, the Company prints and distributes a wide variety of point-of-purchase materials and signs for display in retail stores. The Company also develops media stories and public relations opportunities about ENERGY STAR.® In addition, the Company hires an outreach vendor to put up signage, train retail staff, and help label products.

As the refrigerator recycling program is extremely marketing-driven, the Company will most likely employ a special high-visibility campaign in 2012, similar to the much-publicized 2011 Fine Art of Recycling campaign that was rolled out in collaboration with the Mayor's Office of Arts, Culture and Tourism in Providence.

## **Marketing Strategy**

The program is marketed to consumers of appliances and electronics. Marketing tactics include bill inserts, email blasts and direct mail to residents. Some of these communications will be specific to this program, but also may be included in bundled communication promoting other programs. In 2011, a direct mail piece was sent to customers who had purchased a new refrigerator, asking these customers to consider recycling their old refrigerator, if they still had it. The results of that campaign will be evaluated to test the effectiveness of targeting past participants.

Marketing plans also include newspaper ads (regional and local), co-op advertisements and joint promotions with retailers, bill inserts, community sponsorships and events, and online catalog for electronic advanced power strips. Building on a relationship that was started in 2011, we will continue to explore reaching out to Spanish-language customers via Telemundo radio and television. Additionally, social media outlets may be utilized.

## Meeting 2012 Goals

Objectives for 2012 include continuing to push marketing efforts for the refrigerator recycling program and introducing the heat pump water heater product in the marketplace. A recent

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evaluation reduced net savings per unit associated with refrigerator recycling, but National Grid will continue to promote the cost-effective measure.

The Company will continue to provide consumer education, offer rebates on a variety of these major home appliances and screen higher tiers for products already promoted by the program. The Company will also consider promoting ENERGY STAR® "Most Efficient" units or Top Ten USA. Additionally, the Company will promote advanced power strips and energy efficient pool pumps which currently do not have ENERGY STAR® specifications.

As a new effort in 2012, the Company will begin promoting heat pump water heaters (HPHW) through big box retailers and supply houses in coordination with the HVAC program which plans to promote this product through contractors. The Company will continue to pursue other cost-effective and promising product ideas, particularly on the electronics side, and may introduce them during the program year.

## **ENERGY STAR® HVAC Program (Gas and Electric)**

#### Overview

In 2012, the Company will continue working on integrating heating and cooling programs in order to provide a seamless customer experience that allows for comprehensive energy efficiency home improvements. The HVAC Program is a combination of the Electric HVAC and the High-Efficiency Heating, Water, Heating and Controls (HEHE) Programs. The program offers more than just equipment; it also offers quality installation services and duct sealing.

The purpose of the RI HVAC Program is to make customers and contractors aware of the benefits of high-efficiency heating, water heating, cooling, and system controls and to facilitate the purchase of efficient equipment by offering rebates to offset the premium equipment's higher cost. The program offers an array of rebates including oil heating systems with electronic commutated motors (ECMs). Rebates are tiered to promote the most efficient units in the high efficiency category.

## **Delivery**

Installation contractors are the primary program delivery mechanism. Contractor training and outreach will continue to be offered in 2012 with the joint purpose of broadening contractor skills and promoting the program. Proper installation, system sizing, and code requirements will be emphasized at training sessions along with offering comprehensive services to customers to maximize efficiency.

In 2011, a new rebate processing vendor was selected, resulting in lower administrative costs. The program also established a reservation system for heating equipment to obtain a rebate. Customers can reserve a heating equipment rebate, contact their local installer for services, and then submit their rebate application

In mid-2011 as a preliminary step towards program integration, the high efficiency heating equipment supply house circuit rider started promoting air conditioning equipment and heat pumps as well.

Evidence of proper system sizing for AC installations will be required in 2012. Outreach to supply houses is in progress to gauge the need for contractor training. AC installation contractors currently participating in the CoolSmart program are being informed of the requirement. Quality installation services and duct sealing are offered for electric HVAC. Ways to migrate these practices to heating equipment installation will be explored.

## Experience

Since 2004, the Company has offered a heating and cooling program to promote higher efficiency equipment and improved installation practices in Rhode Island. The Company worked

jointly with the regional CoolSmart and GasNetworks collaborative groups to promote the program.

Recently, there have been unique market, evaluation, and funding factors that have shaped program implementation. First, there has been a high demand in Rhode Island for high efficiency gas equipment, yet historically, there has been limited gas funding. In 2010, the Company was unable to meet the increased demand following the March floods and the High Efficiency Heating Equipment (HEHE) program shut down. In order to prevent this kind of programmatic shutdown again, a reservation system was created in 2011 so that customers would be placed on a waitlist if funding ran out. This system will remain active in 2012 as well.

The high demand for efficient heating equipment is due in part to increased consumer education. Recent evaluations and secondary regional research has indicated that there is a high level of free-ridership for gas heating and water heating measures. Additionally, higher federal standards for heating equipment will become effective in late 2012 for boilers and are tentatively scheduled for mid-2013 for furnaces. These effects have resulted in programmatic changes to the heating measures that we offer to customers.

While there is high free-ridership, market research has also indicated that there are certain customers who do not have the propensity to install high efficiency equipment, we call these customers Hard-To-Reach (HTR). Additional information about HTR customers is listed in the marketing section below.

## Meeting 2012 Goals

The program is meeting 2012 goals through improving the customer experience with integrated services, innovation, and managing the program to meet Rhode Island's unique market.

A primary focus in 2012 will be integrating the previously separate electric and gas programs. The Company will investigate best practices in HVAC integration as well as customer experience and develop a strategy for improving program delivery. Market research may be required to determine a path to integration. While the program focuses on integration, it must also balance participation between electric and gas because electric goals are increasing 25% while gas goals are increasing 127% - this disparity will require careful monitoring. National Grid will continue to explore delivery strategies, equipment, installation practices and marketing tactics that will increase savings in future years.

In 2012, the gas heating measures will have lower incentives than in previous years. These incentives may be lower than neighboring states. The lower incentives are a management strategy developed because of Rhode Island's limited gas funding for the residential sector and anticipated high demand. The lower incentives may have unintended consequences such as lower customer or contractor interest. Direct marketing is planned to counteract lower interest, as well as tie-ins with the Comprehensive Marketing Campaign.

The program is innovating by introducing two exciting new measures, the Heat Pump Hot Water Heater (HPHW) and the Wi-Fi Thermostat. The Wi-Fi thermostat is a programmable thermostat that can be accessed remotely and has advanced programming capabilities. These measures proved to be cost-effective in 2011 as part of the Residential Products Pilot program. HPWHs are domestic water heaters that use heat pump technology to move heat from the air (inside or outside the home) to the water storage tank. HPWHs have much higher energy factors than standard electric resistance domestic water heaters, resulting in higher efficiency and lower energy use. In coordination with other EE programs such as Single Family Appliance Management and EnergyWise, the HPHW will be marketed or available through various channels, including retail box stores and as a recommendation in a home energy audit. The program will provide contractor training sessions on the correct sizing and installation criteria needed to achieve maximum savings for HPHWs. The Company will also develop installation guidelines and QA/QC guidelines.

The Company will also explore strategies to meet goals beyond 2012. Along with regional partners, such as NEEP and regional utilities, the Company will revisit the idea of delivering savings through an upstream model with distributors and manufacturers.

## **Marketing Strategy**

In 2011, the HEHE program conducted extensive market research which resulted in identifying Rhode Island customers that do not have the propensity to participate. A marketing plan was developed with unique tactics for these customers. The marketing campaign began with a small sample of customers in 2011 in order to identify the appropriate tactics. The HTR marketing tactics will continue to be evaluated in 2012. The program has set an ambitious goal that 30% of all heating equipment will be delivered to our HTR customers.

Additionally, a variety of strategies will be used to market the program including tie-ins with the Comprehensive Marketing Campaign, web tactics, and promotion on www.nationalgrid.com. Customers and contractors have the opportunity to download program applications from websites, as well as to familiarize themselves with the program. Direct mail, bill inserts, trade ally events, and sponsorships will also be utilized to market the program. The program will also target contractors since they are the key delivery channel.

The CoolSmart and GasNetworks collaboratives may also offer marketing support. As a result of the joint effort of the collaboratives, a single vendor now visits supply houses to promote electric and gas fueled equipment, distribute literature, and inform installation contractors.

# Comprehensive Statewide Marketing Plan -- Residential Programs

#### Overview

This program supports all of the Energy Efficiency programs in the state of Rhode Island for both electric and gas to provide added support to the marketing efforts implemented by the Company and its supporting vendors who help to administer the programs. This program also serves to increase the awareness of our portfolio of Energy Efficiency program offerings and of the Company in the marketplace

## **Delivery & Experience**

2012 marks the Company's second year with this plan. Last year awareness levels were measured both pre and mid campaign and will be measured again when the campaign ends in December with a post survey. This gives defines benchmarks for awareness levels that will be used to manage goals for the 2012 campaign. The Company also intends to have a more integrated communications approach among the program communications and this campaign to increase market impact.

## Marketing Strategy

The Company will continue to fine tune its customer targeting and creative executions while evaluating all appropriate media vehicles to create an integrated marketing campaign. This campaign includes mass and targeted media that generates awareness and creates a synergy among all communications to reach all Rhode Islanders who are eligible to participate in National Grid Energy Efficiency programs. Additional details on marketing strategy can be found in Attachment 4.

## **2012** Residential Electric Measures

Program	Measure	Units	Incentive
	ESH Heating	405	
Residential New Construction	ESH Cooling	405	•
	ESH DHW	405	Incentive
	Refrigerators	303	
	Dishwashers	162	measure
	ESH Fixtures CFL	203	mix
	CoolSmart AC SEER 15.0 => (Equip) - EER>=12.5	10,368 344	\$ 300
	CoolSmart HP SEER 15.0 => (Equip) - LER>= 12.3	92	
	CoolSmart AC QIV ES	160	
	CoolSmart HP QIV ES	15	\$ 175
	CoolSmart AC Digital Check-up/Tune-up	66	\$ 175
	Duct Sealing - 100 CFM redcution in leaks 20% of flow to 10%	27	\$ 200
	Down Size 1/2 ton	5	\$ 250
	Rightsizing on ES Tier 2 14.5 12	393	
	Early Replacement 10-15 yrs, existing SEER 9or10	10	\$ 1,000
	CS AC SEER =>14.5, EER =>12, NEW Estar -regardless of sizing	58	\$ 150
ENERGY STAR®	CS HP SEER =>14.5, EER =>12, NEW Estar -regardless of sizing	4	\$ 150
HVAC	Right Sizing on Top Tier 15/12.5	234	
	CS HP SEER =>14.5 EER =>12 Mini-Split Heat Pump	331	\$ 500
	Brushless Furnace Fan motor (BFM)	100	
	Wm Air Furnace ECM (GN Reb) CoolSmart AC SEER 16.0 => (Equip) - EER>=13.0	100 605	
	Oil Heat Replacement	230	
	ECM / Oil Replace Furnace	20	\$ 400
	ECM Gas Rebate	50	
	HPWH 50 gallon - Electric	710	*
	HPWH 80 gallon - Electric	40	\$ 1,000
	WiFi Enabled Thermostat with Cooling - Gas	55	\$ 100
	WiFi Enabled Thermostat with Cooling - Oil	60	\$ 100
	EW SF Elec	500	
	EW SF Non Elec	6,000	
	Insulation, Oil	700	
	Air Sealing, Oil	700	
	Duct Seal, Oil	280	
	Duct Insulation, Oil	280	Average
	EnergyWise Multifamily Electric EnergyWise Multifamily Non Electric	2,500 4,017	Incentive
EnergyWise	EW Multi Electric Heat CFL	8,756	based on
	EW Multi Electric Heat DHWs	604	measure
	EW Multi Electric Heat FIXTURES	1,526	mix
	EW Multi Electric Heat REFRIG	457	
	EW Multi Electric Heat SPACE	1,044	
	EW Multi Non Electric Heat CFL	22,386	
	EW Multi Non Electric Heat FIXTURES	9,175	
	EW Multi Non Electric Heat REFRIG	1,816	

Program	Measure	Units	Incentive
_	Refrigerator	7,000	\$ 50
	Pool Pumps- variable	10	\$ 300
	Refrigerator Recycle secondary replaced	1,380	
	Pool Pumps - 2 speed	10	
_	Refrigerator Recycle Primary	1,260	\$ 126
ENERGY STAR®	Electronics- Smart Strips	500	
Products	Electronics- TVs	5,000	\$ 20
	Electronics- Monitors	300	\$ 20
	Room air cleaners	60	*
	Freezers	200	
	Refrigerator Recycle secondary not replaced	2,220	\$ 126
	Freezer Recycling	1,140	
	Screw-in Bulbs	300,000	
	Indoor Fixture	7,246	
	Outdoor Fixture	327	
ENERGY STAR®	Torchiere	427	*
Lighting	LED Bulbs	10,000	
	LED Fixtures	6,000	
	Specialty Bulbs	395,000	
	Hard To Reach Bulbs	81,000	\$ 3
	Baseload	2,501	
	Electric Wx	28	
	Oil Wx	221	
	Heat System Replacement	113	
	CFLs	50,518	
	Replacement Refrigerator	1,166	_
Single Family	Replacement Freezer	131	Incentive
Low Income Services	Waterbed	14	based on
Low income Services	DHWater Measure (elec)	99	measure
	DHWater Measure (OIL)	7	mix
	DHWater Measure (gas&other)	2	
	Appliance Removal	25	
	AC or POOL Timer	186	
	Window AC Replacements	9	
	HPWH 50 gallon - Electric Prod	25	

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## **2012** Residential Gas Measures

Program	Measure	Units	I	ncentive
	Condensing Gas Water Heater (THERMAL EFICIENCY 0.95)	10	\$	500.00
	Furnace (forced hot air) 95% AFUE w/ECM	624	\$	300.00
	Boiler (forced hot water) 90% AFUE	736	\$	750.00
	Boiler Reset Controls	50	\$	150.00
	Indirect Water Heater (attached to gas Energy Star FHW boiler)	25	\$	300.00
	Tankless Water Heaters (EF 0.82)	25	\$	375.00
	Tankless Water Heaters (EF 0.95)	25		600.00
	Energy Star Programmable Thermostats	5100		18.75
	Furnace (forced hot air) >= 96% AFUE	300	\$	450.00
	Boiler (forced hot water) >= 96% AFUE	15	\$	1,125.00
	High Efficiency Stand Alone Water Heater (0.67 EF)	25	\$	75.00
	Heat Recovery Ventilator	5	\$	375.00
	Integrated water heater/condensing boiler	275	\$	1,200.00
	WiFi Enabled Thermostat	500	\$	100.00
	WiFi Enabled Thermostat with Cooling	250	\$	100.00
	Hard-to-Reach Tankless Water Heaters (EF 0.82)	200		375.00
	Hard-to-Reach Indirect Water Heater (attached to gas Energy Star FHW boile	500		300.00
	Hard-to-Reach Furnace (forced hot air) 95% AFUE w/ECM	50	\$	300.00
	Hard-To-Reach Boiler (forced hot water) 85% AFUE	250		375.00
	Hard-To-Reach Boiler (forced hot water) 90% AFUE	200	\$	750.00
	Hard-to-Reach Heat Recovery Ventilator	15	\$	375.00
	Hard-To-Reach Integrated water heater/condensing boiler	30	\$	1,200.00
	Hard-To-Reach Condensing Gas Water Heater (THERMAL EFICIENCY 0.95	1	\$	750.00
	Hard-to-Reach Energy Star Programmable Thermostats	2500	\$	18.75
	Hard-To-Reach Boiler Reset Controls	50	\$	150.00
	Hard-to-Reach Tankless Water Heaters (EF 0.95)	50	\$	600.00
	Hard-to-reach Furnace (forced hot air) >= 96% AFUE	300	\$	450.00
	Hard-to-reach Boiler (forced hot water) >= 96% AFUE	100	\$	1,125.00
EnergyWise	Single Family	1500		erage Incentive
Lifergyvvise	Multifamily	500	Based	d on Measure Mix
Low Income	Weatherization	430	Av	erage Incentive
	Heating System Replacement	148	Based	d on Measure Mix

# 2012 Commercial and Industrial Energy Efficiency Programs and Initiatives

National Grid's Commercial & Industrial (C&I) energy efficiency programs for 2012 lay the foundation for energy savings in the sector for 2012 to 2014, and accelerates RI toward a more cost effective and sustainable energy future. In 2012 the Company intends to explore ways to use a valuable proposition utilizing specific priorities of a customer to assist in overcoming barriers to energy efficiency. Examples of these priorities include environmental considerations, asset management practices and other non-energy benefits as well as resource reductions like water or raw materials, and/or comfort considerations at their location. Using this approach the Company anticipates achieving its objectives to both drive down the financial costs of incentives (utility costs) while achieving maximum levels of participation in this sector through innovative energy efficiency implementation strategies.

The 2012 Plan consists of three prime programs in the C&I sector that address the Company's commercial and industrial customer needs in this existing and new built environment:

- 1. The Large Commercial and Industrial New Construction Program is aimed at time dependent mechanical and electrical (M&E) or thermal systems replacement or equipment purchased for new construction or major renovation for electric and gas measures;
- 2. The Large Commercial Retrofit Program is focused on addressing equipment and energy systems that will provide electric and gas energy efficiencies in existing facilities and
- 3. The Small Business Direct Install Program is targeted at customers with 200 KW or less billing demands or 483,000 KWhs through a turnkey delivery model and integrates both gas and electric energy efficiency measures in installations. National Grid provides 70% of the costs associated with installation of these measures.

The programs and initiatives described below build on 2011's success and experience to continue to provide successful pathways for commercial and industrial customers to reduce their energy consumption and to promote the implementation of energy efficiency. The plan contains specific and actionable items that address the need to reach more customers and penetrate deeper into their buildings for potential energy savings. With continuing economic hardship in the state, these programs are more vital than ever to RI's commercial and industrial sector in ensuring they are capable of both overcoming the capital requirements necessary to continue to invest wisely in their business and can benefit from the assistance provide by the Company to identify effective energy reduction solutions and planning which will enable them to compete more effectively in their business environments. With continued efforts to bring

energy efficiency to everyone, the Company maintains its commitment to achieving the goals set forth in the 3 year plan.

Utilizing targeted marketing, a dedicated staff of energy sales professionals, and innovative approaches to the marketplace this first year will ensure that the programs are prepared to meet the growing challenges of the 3 year plan in future years. By combining the historical success of core programs with new solutions like upstream incentives, multi year energy planning, and a manufacturing initiative, the company's plan provides a successful blueprint for 2012 while preparing to meet the challenges of 2013 and 2014. This ensures helping RI control its energy costs with wise investments in energy efficiency.

#### **Process**

Customer interest in either the Large Commercial New Construction or Large Commercial Retrofit programs begins with the customer contacting or a proactive outreach by Company staff through either the Inside Sales group, a dedicated account executive or a third party vendor. The customer opportunity (lead) is qualified and passed along to the appropriate party. If the energy efficiency opportunity is simply to apply for a prescriptive incentive for better performing equipment, the customer can submit application information and the incentive will be processed. For more complex projects where the energy efficiency opportunity is deeper, the next step in the process for participating is through the custom path. This path is often based on a technical assistance study that features high performance equipment sand systems analysis that integrates both gas and electric energy efficiency solutions that lead to better building practices. The technical assistance work may involve a National Grid Technical Representative, one of its qualified architectural and engineering firms or a National Grid Account Manager and/or RISE Engineering, which is a National Grid vendor.

If an engineering study is required to identify the technical and achievable potential in a customer's facility for both gas and electric energy efficiency measures, the customer will be provided with a list of engineering firms that can provide this service. National Grid will provide copay funding for the engineering study. If an energy assessment or walk through is all that is needed to identify energy savings opportunities, National Grid will provide that service at no cost to the customer. Additional engineering services provided at no cost to the customer include a custom assessment, which includes identifying some custom measures including savings and incentive calculations and a custom review. A custom review is a review of an engineering study.

Once the engineering work is completed the study often identifies deep custom measures and energy systems reduction opportunities. The customer signs an agreement with National Grid to complete the installation. Once the work is done, the customer contacts their Account Manager and the process continues with a post installation inspection. Then invoices are submitted, all information from the transaction is collected in the Company's work management system and the remaining paperwork is completed. At this end the customer receives their incentive.

# **Large Commercial New Construction**

### **Overview**

The Large Commercial New Construction Program targets new construction, major renovations, remodeling and replacement of equipment which has reached the end of its useful life. The Program includes technical assistance and financial incentives to developers, customers, manufacturers, vendors and design professionals. Eligibility is determined by the presence of a non residential natural gas or electric account which contributes to the energy-efficiency charge and will realize energy savings as a result of the project.

Building on prior years' experience with the Large Commercial New Construction Program, the Company will continue to offer energy solutions to the New Construction marketplace.

#### Technical Assistance Services

To foster the development of projects for this program, technical assistance to customers will be offered to reduce barriers to more efficient design by providing education and information to participants in the use of energy-efficient engineering practices, including identifying and analyzing potential efficiency opportunities. Once identified and deemed cost effective, financial incentives will be applied to reduce the incremental cost of investing in efficiency.

In 2012, the Company's Account Executives and Technical Representatives will assist customers in identifying energy efficiency opportunities. In addition, vendors are available to provide energy assessments, custom assessments and scoping studies to help identify opportunities at no charge to the customer. If these assessments determine that a more detailed analysis is needed, this will be done through a Technical Assistance (TA) study.

The Company offers TA services, integrated with the customer's design team if they have one to avoid duplication of effort and delays in initiating projects. The Company will seek to continually streamline the process, and reduce to the greatest degree possible any administrative, technical or process issues that create potential barriers to participation for all building types. In the event that a customer has already completed an energy study equal to or better than a TA study, then the TA study will not be required. The TA covers all gas and electric opportunities that support best practices in building design and considers energy efficient measure identification, equipment metering or monitoring, improved technical design solutions, customer presentations, and design and construction assistance. TA provides customers and their design professionals with detailed engineering studies that identify alternative energy systems that support lower operating costs in the buildings and the operational benefits that come from this selection. The costs of these energy efficiency studies are usually shared 50% with customers.

Newly constructed buildings offer a great opportunity to explore comprehensive gas and electric energy efficiency options, as these projects need to purchase all new equipment and have the

opportunity to utilize more efficient design practices. The Large Commercial New Construction Program seeks to influence projects at this critical phase. The ability to upgrade the equipment or influence the design in these facilities may not appear again for many years since new equipment can sometimes last 10-30 years. This program will also address major renovations, additions to existing buildings and replacement of failed and overly aged equipment. The program will use current RI energy code, IECC 2009, as a baseline for savings because customers are required to meet this at a minimum.

Energy efficiency measures which are eligible for incentives include premium efficiency lighting and controls, variable speed drives, heating, ventilating and air conditioning systems (HVAC), efficient boiler and domestic hot water systems, heat recovery systems, digital energy management systems, process efficiency improvement projects, refrigeration, compressed air, combined heat and power, or any other cost effective gas or electric efficiency improvement.

### **Incentives**

For 2012, the Company will continue to offer integrated and comprehensive incentives to commercial customers. All projects will be presented to customers as a single package of measures with a single incentive offer, simplifying the process for customers and encouraging participation.

#### **Prescriptive Incentives**

Prescriptive incentives are standardized in terms of incentive level and minimum efficiency criteria. They address specific equipment measures like lighting, DHW, compressed air, and HVAC. Prescriptive incentives for high efficiency equipment and systems are offered to customers on a per unit basis. All prescriptive forms will use common branding, format, look and feel, and incentives are generally designed to be presented in a consistent format. The Large Commercial New Construction Program prescriptive measures and incentive offerings are as follows:

#### Prescriptive Gas Space and Water Heating

The Company will continue to promote high gas efficiency space and water heating equipment in the Large Commercial New Construction Program. There will be several changes in the 2012 program. Please see the table at the end of this section for a complete list of 2012 eligible measures. Exploration of an upstream boiler incentive will take place to determine if it is feasible and in the best interest of energy-efficiency in RI.

#### Prescriptive Commercial Kitchen

The Company will continue to promote high efficiency gas kitchen equipment in the Large Commercial New Construction Program. The program was improved significantly in 2009. Savings calculations were revised based on current high efficiency equipment and incentives were increased accordingly. Incentives are available for combination ovens, rack ovens, conveyer ovens, fryers, convection oven, steamers, griddles, and pre-rinse spray valves.

In 2012, the Company will be adding electric equipment to enhance the present commercial kitchen offering. Assuming appropriate measures are identified, these will be added to the prescriptive form to support immediate entry into the marketplace. The Company will continue reaching out to commercial kitchen trade allies and will be a sponsor for the 2012 New England Food Show. The Company will also continue to work with franchised chain restaurants for both custom and prescriptive kitchen incentives. In addition, The Company will work with the Rhode Island Hospitality Association to promote energy efficiency solutions to their members.

#### Prescriptive Motor Incentive

Customers will continue to be eligible for motor incentives as part of the Retrofit VFD/Motor combination incentive discussed in the Large Commercial Retrofit Program description. However, the MotorUp offering expired in 2011 as a result of the Energy Independence and Security Act of 2007 (EISA). That Act required motor manufacturers to meet NEMA premium efficiency on all 1 hp through 200 hp general purpose motors as of December 2010.

#### Prescriptive Variable Frequency Drives Incentive

The Company will continue to promote Variable Frequency Drives (VFDs) in the New Construction Program. In addition to the prescriptive incentive available to all Large C&I customers, the Company has expanded Project Expeditor services, to include VFD installation as one of the turnkey measures offered to both large C&I and small business customers.

#### Prescriptive Small HVAC Incentive

The Company has participated in Cool Choice since 1999, a regional program that focuses on promoting the installation of energy efficient unitary HVAC equipment through Large Commercial New Construction. The program features consistent efficiency incentives revised to follow CEE's Tier 2 specifications for >5.4 Ton to <63 Ton units. Incentives are also offered for dual enthalpy economizer controls, demand control ventilation and electronically commutated motors (ECM fan motors) in packaged air conditioners and gas furnaces.

#### Prescriptive Chiller Incentive

The Company will continue to promote high efficiency chillers in the Large Commercial New Construction Program. The prescriptive incentive is available for single non-process chiller installations. Process cooling chillers and multiple chiller installations must be handled as a custom incentive.

#### Prescriptive Lighting Incentives

The Company will continue to offer prescriptive incentives aimed at promoting the most energy efficient lighting equipment in new construction, major renovation, remodeling and replacement of equipment. A lot of attention has been given to emerging solid state lighting (LED) technology in 2011 with prescriptive offerings that will likely expand for 2012, to be coordinated with the upstream effort.

The Company sees great opportunities in working with the electrical supply houses selling lighting equipment in Rhode Island. In 2009, a successful efficient fixture pilot was conducted in the state. The Company anticipates that by January 1, 2012, the Company will start offering an upstream incentive for select solid state lighting products and that during Q1 upstream incentives on energy efficient reduced wattage T8 and T5HO lamps will also be offered. By introducing upstream incentives for lighting, the program will serve the commercial new construction as well as the commercial retrofit market. The Company realizes that the upstream model might well be appropriate for other products, including but not limited to, other lighting products and small HVAC. In 2012, the Company will be actively working to bring these additional products into the upstream model when it has been determined that the Company understands the sector, market conditions are correct, and the solution is cost effective.

There is potential to transform 90% of the halogen market to LEDs over the next four years. In the next year, the potential is to transform 10-25% of the market. The LED Upstream Initiative incentive is based on up to 75% of the incremental cost difference between halogen and LED lamps. The estimated LED Upstream incentive will be the same as the 2010 prescriptive incentive offering for LED replacement lamps. By switching out halogens and replacing them with LEDs, there is a 75-80% savings.

Upstream incentives help align business goals of the energy efficiency program and the upstream partners. This creates a dynamic whereby the program can leverage the upstream partners to expand their reach to more customers. It also reduces or eliminates the paperwork required for customers to participate, while removing the up-front cost barrier that exists with traditional end-user, post-purchase rebates.

Small Business Direct Install will be exempt from the upstream incentives, as LEDs will be incorporated into the Direct Install Program.

The upstream model could be used to capture savings from other efficiency technologies, such as controls and small HVAC equipment. The Company may add additional items to the upstream program as soon as Q4 2012.

#### **Custom Incentives**

Custom incentives are offered for any qualifying cost-effective efficiency opportunity, based on the unique energy savings and cost criteria of a project. These incentives include projects which are outside the scope of standard prescriptive equipment. In general, incentives for large commercial new construction projects are designed to cover up to 75% of the incremental cost between standard and premium efficiency or to buy down the cost of equipment to the customer to a one year payback, whichever is less. In 2012 the Company intends to explore ways to use a valuable proposition utilizing specific priorities of a customer to assist in overcoming barriers to energy efficiency. Examples of these priorities include environmental considerations, other resource reductions like water or raw materials, and/or comfort considerations at their location. Using this approach the Company hopes to drive down the financial costs of incentives required to achieve energy efficiency implementation.

Project incentive caps may be imposed based on budgetary constraints. Other custom incentives are offered on specific initiatives as described below in additional detail.

The Company will continue to explore opportunities for cooperative advertising and upstream incentives to vendors, suppliers and manufacturers, while working to identify new ways to provide additional incentives to architects and engineers. An example of this will be the exploration of a boiler program. The Company will also continue to identify new, cost effective technologies into the program.

### Initiatives

#### **Building Codes, Federal and State Standards**

In 2012, the Company will continue to use the IECC 2009 (with RI amendments), RI's current state building energy code. In collaboration with the Building Code Commission, Northeast Energy Efficiency Partnerships (NEEP) and in cooperation with the codes community the Company will offer code compliance support and continued improvement on proposed building codes and standards that lead to the future revisions of the Rhode Island State Building Code. This will address residential and commercial buildings and cost-effective electric and gas revisions to the code.

The Company has a long-term strategic plan of pooling resources to maximize its impact on the statewide codes and standards efforts. This fills the hole in the current energy efficiency portfolio by capturing sectors of the market that would not normally partake in traditional, voluntary, incentive based programs. Energy savings will be in the form of incremental compliance rate improvements resulting from program activities and incremental code energy saving improvements resulting from advocacy activities for both building codes and appliance standards. This enables the state of Rhode Island and its local communities to meet their own energy savings and emissions reductions targets.

#### Compliance Enhancement

Achieving satisfactory compliance (with current energy code) with efficient technologies and building practices is a crucial requirement for capturing market change for the long term benefit of society. Multiple approaches may be required to have the desired effect, including measure-based and holistic approaches to compliance enhancement. This can include education and trainings focused on specific measures or technologies that the building community is struggling with, such as high performance building envelopes. Also important is teaching more basic steps that emphasize the importance of providing documentation of code compliance. Code compliance studies (currently under development) will identify program initiatives to overcome barriers to code compliance and help establish baselines to calculate the contribution of the initiative in raising the bar of compliance

#### Code Advocacy

The Company will work with national code development organizations such as ASHRAE to upgrade building efficiency codes and at the local level with Rhode Island in the development of state level energy code amendments. Advocacy and support to the design of future local option energy codes is also part of this activity.

#### Federal and State Standards

The Company agrees to actively track and participate in USDOE's standard-setting process for electric and gas equipment standards. This opportunity for involvement stems from the recent regional agreement by the DOE with ACEEE and AHRI to allow for regional requirements for boilers in the Northeast. The Company would become an active partner in the development and promulgation of new, advanced appliance standards. The Company will provide technical support, market analysis, and stakeholder engagement that complements the resources of ASAP or NEEP and helps facilitate advances to the standards. The Appliance Standards Advocacy initiative's objective would be to accelerate the development and adoption of new appliance standards as the target appliances and their advanced levels of efficiency start to become established as current good practice in the marketplace.

Specifically in 2012, the Company will focus on the following Codes and Standards (C&S) program related activities:

#### Establish Energy Saving Baselines

To support the compliance activities, baseline studies determining code compliance will be established both for residential and commercial buildings. These studies, conducted by contractors, will focus on understanding:

- the energy code compliance process through surveys
- the level of compliance with the energy code in recently constructed buildings through plan reviews and site visits
- Barriers to code compliance
- the energy savings potential for recently constructed buildings

#### **Program Planning**

The Company will spend the remainder of the year identifying long-term program initiatives, specific activities like targeted training or compliance tools and future research to support codes/standards activities and explore attribution methodologies for claiming energy savings.

#### Advanced Buildings, LEED and Sustainable Design

The Company is supporting Advanced Buildings Core Performance developed by the New Buildings Institute (NBI) in cooperation with US EPA, ASHRAE, the US Green Buildings Council and the National Building Operators and Managers Association.

Advanced Buildings is a suite of technical resources and prescriptive design guides that help design professionals create commercial buildings that are energy efficient and provide a healthy work environment for occupants. Advanced Buildings complements the Comprehensive Design Approach with a special emphasis on medium sized buildings. Advanced Buildings also serves to promote better commercial design practices such that advancements in the Rhode Island building code can be implemented at an accelerated rate. The Company has played a lead role nationally in the development and refinement of Advanced Buildings along with other stakeholders and utilities. Advanced Buildings uses a prescriptive approach to new building design elements aimed at achieving energy savings that are typically 15-30% better than the Rhode Island state energy code.

For 2012, the Company will continue to build on the success of the Advanced Buildings that have been promoted for six years in Rhode Island to address the gas and electric efficiency needs of new construction projects for commercial buildings between 10,000 and 100,000 sq. ft. In 2011, the Company partnered with the Rhode Island USGBC chapter to deliver additional Advanced Buildings lighting implementation training to property owners, contractors, and design professionals. The Company will also continue the 2011 prescriptive incentive amount, \$1.50/SF. This incentive is split between the gas and electric efficiency programs based on the project's relative gas and electric energy savings. The prescriptive incentive allows customers to calculate the potential incentive at the beginning of design and to evaluate Advanced Buildings' implementation accordingly. Numerous projects have been designed in the state using Advanced Buildings. It is expected that the number of projects participating in this initiative will grow as architects and their clients realize that buildings designed this way are practical and cost effective and that the new construction market despite the current economy will improve in the near future.

The Company will support customers with designs that incorporate the U.S. Green Building Council's "Leadership in Energy and Environmental Design (LEED) Green Building Rating System™" in their new construction projects using our staff LEED Accredited professionals. For many this will include providing a basic understanding of LEED requirements and guiding them through the process of assembling a qualified design team. Beyond this we will guide customers to the best path for achieving maximum cost-effective LEED points for Energy and Atmosphere, by providing technical support along with financial incentives. Through coordination with the project design team, LEED projects can maximize both energy savings and incentives with Advanced Buildings initiative or through the Company's Comprehensive Design Approach initiative.

In addition to customer focused outreach, the Company will continue its outreach to architects, engineers, contractors, and building owners to build awareness of the Advanced Buildings

initiative. The Company will also continue to partner with the RI USGBC chapter to provide trainings on Advanced Buildings. We continue to nurture relationships with design and construction teams of past Advanced Building projects to encourage them to do additional projects in the future. Once the new construction market in Rhode Island revives, we hope our outreach efforts will result in more projects.

#### **High Performance Schools**

RI public schools continue to be a targeted market segment in need of additional funding for TA (technical assistance) studies as part of the New Construction Program. This is an ongoing effort that is continuing during 2012.

Per Rhode Island School Construction standards, RI public schools shall comply with all requirements set forth in the most recent Northeast Collaborative for High Performance Schools Protocol (Northeast-CHPS), which is on an average 25% above the RI energy code. Through the RIDE Housing Aid Program a school can earn up to an additional 4% of funding from the state if it can be shown that 75% of the project costs can be attributed to energy efficiency, asbestos abatement, or handicapped accessibility. The Company proposes to provide incentives and TA studies to the participating schools that raise the bar by going beyond the 25% requirements of NE-CHPS.

The Company will sponsor BOC (Building Operator Certification) training within the public school segment. By training facility staff in BOC ensures energy efficiency is maintained in the schools going forward. The knowledge gained through BOC training is well worth the investment. The RI Department of Education (RIDE) has a major "asset protection" effort underway that ensures that schools are maintaining equipment that was funded through state housing aid. Refer to section "BOC Training" of this document for more details.

For schools that do not need to comply with the NE-CHPS requirements, the Company proposes to continue funding the full cost of TA studies for new construction or renovation under Large Commercial New Construction. All qualifying cost-effective electric and gas energy saving measures will be addressed through comprehensive treatment. It is anticipated that most projects will involve lighting. A key requirement for this initiative is that projects follow the Comprehensive Design Approach (CDA) track which entails an interactive analysis of proposed measures utilizing whole building simulation tools. In addition, the building must be at least 20% more efficient than code upon completion of the project. As an alternative to CDA, smaller school projects may follow the New Buildings Institute Core Performance standards.

As an alternative to CDA, smaller school projects may follow the New Buildings Institute Core Performance standards.

#### **Building Operator Certification Training**

In 2012, the Company will continue its efforts to support Building Operator Certification (BOC) Training, and encourage the continuing education of building operators statewide. The course provides a core foundation across the various building systems and maintenance practices of a

typical commercial building. This training translates into better building operators who implement and realize savings in their buildings. The Company will investigate a mechanism, based on documented studies, to begin to claim energy savings credit for this support. The Company intends to hold at least two sessions of training in 2012.

#### Improve efficiency in tenant spaces with Office of the Future (OTF)

Office of the Future (OTF) began as a multi-utility initiative to create a national platform which focused on energy efficiency in the hard to reach leased tenant office market sector. National Grid is now in a position to start on the next phase and adapt OTF to its specific requirements and enroll target customers in their service territories. In 2012, the Company will develop a multi-year deployment process beginning with planning and outreach. Subsequent years starting 2013 will focus on enrollment and obtain commitments from large commercial real estate office building owners and tenants to implement tenant space energy efficiency improvements. This initiative will align with the national OTF, which implements pilots around the country. This will involve communicating with large developers that develop significant quantities of 'Class A" office space and that are most receptive to pilots and case-study projects.

#### Commissioning

To ensure that energy savings projects are installed and operated as designed, the Company provides a commissioning service. This service is an independent third party verification that complex building systems, such as HVAC projects involving energy management systems or other controls, are properly installed and operating as designed. In some circumstances customers may wish to use their own engineer in lieu of a TA vendor supplied by the Company. In these cases, these companies must adhere to the same standards and criteria for a technical analysis as engineers supplied by National Grid and their work will be reviewed and approved by the Company's technical support consultant. National Grid requires all projects which receive incentive over \$100,000 to be commissioned. We also promote Commissioning on any projects where the savings are dependent on control measures or operational improvements. Typically National Grid provides these services at no cost.

#### **Ground Source Heat Pumps**

National Grid's experience with ground source heat pumps (GSHPs) is similar to what has been discovered in the residential sector in that as a technology, GSHPs are used as replacement or alternative to a fossil fuel and have much higher first costs. The basis for the higher costs is the inexperience of contractors familiar with the installations of these systems as well as the inherent high costs associated with drilling wells. Additionally the mechanical equipment installed with the GSHPs requires a degree of sophistication in controls, operation and maintenance practices of which not all customers are comfortable.

In some cases GSHPs are considered as upgrades to air source heat pumps, thus not fuel switching. However the incremental costs make the economics of these projects difficult to pass the TRC screening.

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Successful geothermal systems have been installed in places where there is significant experience in the design and construction of these systems. Other factors to successful installations involve investors who are willing to take a longer return on that investment and/or are highly motivated by achieving very low greenhouse gas contributions from their homes. In addition, these individuals are looking for highly sustainable heating and cooling alternatives to the use of fossil fuels. As GSHPs develop over time, the company will continue to monitor its application and potential benefits to customers.

# **Large Commercial Retrofit Program**

#### **Overview**

The Large Commercial Retrofit Program targets existing facilities and energy savings opportunities for existing equipment. The program delivers technical assistance and financial incentives to developers, customers, manufacturers, vendors and design professionals. Eligibility is determined by the presence of a non residential natural gas or electric account which contributes to the energy efficiency charge and will realize energy savings as a result of the project.

The structure of this program is similar to that of the Large Commercial New Construction Program but it seeks to address existing building stock, a much broader component of the customer base. The Large Commercial Retrofit Program educates and raises awareness of the benefits of energy efficiency through investing in energy efficient equipment today to save significant energy dollars in the future. The projects will use the customer's existing facility conditions as a baseline and incentives are paid for those projects which increase the operating efficiency of the facility.

The Large Commercial Retrofit Program provides technical consulting to identify better practices and efficiency improvement opportunities as well as incentives for the installation of many high performance mechanical, electrical and thermal energy efficient equipment and systems. This includes steam trap surveys as a TA study offering. Failing steam traps represent a large loss of energy in commercial or industrial facilities which use steam for heating or process loads. Through assisting customers with the identification of these faulty traps, cost effective repairs can be identified and incentivized resulting in excellent energy savings. Incentive caps may be imposed based on budgetary constraints.

Energy efficiency measures which are eligible for incentives include, but are not limited to lighting fixtures and controls, gas burner controls, steam traps, energy management systems, programmable thermostats, variable speed drives, refrigeration, industrial process, compressed air, ventilation systems and circulation controls and process cooling.

### *Incentives*

For 2012, the Company will continue to offer integrated gas and electric energy efficient solutions and incentives to the customer. All projects are presented to customers as a single package of measures with a single incentive offer, allowing for a simple process for customers, thereby increasing participation. Through the Large Commercial Retrofit Program customers can receive financial incentives either prescriptively or through the custom approach depending on the project scope.

#### **Prescriptive Incentives**

Prescriptive incentives are standardized in terms of incentive level and minimum efficiency criteria. Prescriptive incentives for high efficiency equipment and systems are offered to customers on a per unit basis. These offerings may be expanded as new technologies are identified. The Company will work to add additional prescriptive measures to the current offerings, including new technologies focused specifically to some of RI's commercial market segments. An example of this is the Company is exploring the costs and benefits of a Demand Circ circulation control which has wide applicability and cost effectiveness in the Multifamily market segment.

#### Pre-Rinse Spray Valve

The Company will continue to promote high efficiency pre-rinse spray valves in the RI Large Commercial Retrofit Program. There are two paths for this offering: 1). the Company will provide and install a high efficiency pre-rinse spray valve at no cost to the customer, or 2.) the customer may purchase and install a high efficiency pre-rinse spray valve and receive a \$25 incentive. The installation of the high efficiency pre-rinse spray valve has been incorporated in our energy audits, Whole Building Assessment Initiative and Small Business Direct Install Program. The Company will also consider the merits of a direct, concentrated Pre-Rinse Spray Valve Initiative. The effort could include a partnership with RI's Hospitality Association to specifically target the measure as a means to achieve large quantities of cost effective savings.

#### **Gas Heating Controls**

The Company will promote high efficiency gas heating controls in the RI Large Commercial Retrofit Program. The Company will support single and multi-stage boiler outdoor temperature reset controls in addition to 7 day programmable thermostats.

#### Refrigeration

Currently, some refrigeration retrofit measures are being captured in Rhode Island through the Small Business Direct Install program and through Large Commercial Retrofit and the Large Commercial New Construction Programs. All of these programs require Company involvement well before the equipment is replaced. There is however a missed opportunity based on the short window of opportunity that is presented when a customer's equipment fails, and a replacement is needed quickly. In 2012, the Company will explore ways to expand its prescriptive refrigeration incentives in RI in an effort to realize these missed opportunities. The Company will assemble a small team to examine other best practices nationally to begin designing a program that will address these time of replacement equipment purchases. This team will examine other programs, their assumptions and cost effectiveness in an effort to add additional measures to the C&I programs, with the goal of applying these measures in the 2012 program year. Once measures have been identified, refrigeration contractors will be approached to help promote the offering to customers.

#### Energy Efficient Lighting

The Company will continue to promote high performance lighting practices and incentives that will address the opportunity for customers to select better performing luminaires, controls lamps and ballasts combinations for their buildings and to improve both the visual environment in their buildings and opportunity to reduce energy costs

#### Variable Frequency Drives

The Company will continue to promote Variable Frequency Drives (VFDs) incentives in the RI Large Commercial Retrofit Program. The Company offers a prescriptive retrofit incentive for most HVAC-related fan and pump motors. In 2010 a combination Motor/VFD incentive was added in RI. These incentives target facilities with older motors that are not inverter-duty rated, and therefore can not use VFDs. For customers that are unable to retrofit an existing motor, the combination incentive offers additional money to offset the cost of replacing the existing motor with a new NEMA premium motor.

In addition to the prescriptive incentive available to all Large C&I customers, the Company has expanded Project Expeditor services to include VFD and motor installations as a turnkey measure offered to both large C&I and small business.

#### Steam Traps

The Company will continue to promote failed steam trap replacement in the RI Large Commercial Retrofit Program. This prescriptive incentive will give the customer access to incentives for pro actively managing and repairing traps in their facilities. In 2012, there will be a limit of 10 prescriptive steam trap incentives per customer. The goal of this change is to encourage the customer to follow the more comprehensive method of engaging with the Company in a cost shared Steam Trap survey. This survey identifies all traps and steam system improvements at the customer site. The customer is eligible to have 50% of the cost shared with the Company initially. The customer is incentivized up to 100% of the survey costs provided they commit to implementing at least 50% of identified measures from the survey. The Company will provide incentives as well to encourage implementation of identified opportunities.

#### Energy Management System (EMS)

The Company will continue to promote the installation and expansion of Energy Management Systems (EMS) in the RI Large Commercial Retrofit Program. EMS systems enable energy conserving strategies for HVAC equipment such as 7-day scheduling, optimal start/stop, night setback, DDC temperature control, chilled water reset, and enthalpy economizer. In order to increase participation, the Company has been providing training to controls contractors and vendors to help them understand which EMS components are eligible for an incentive, as well as how to complete and submit incentive applications.

#### **Custom Incentives**

Custom incentives are offered for any qualifying cost-effective efficiency opportunity, based on the unique energy savings and cost criteria of a project. These incentives include projects which are outside the scope of standard prescriptive equipment and offer the opportunity to identify deeper energy savings. In general, incentives for Large Commercial Retrofit projects are designed to cover up to 50% of the total project cost to move to premium efficiency including labor and equipment, or to buy down the cost of equipment or systems to the customer to a one year payback, whichever is less. Project incentive caps may be imposed based on budgetary constraints. Incentives may not be applied toward normal maintenance costs and must offset existing or potential energy usage. Other custom incentives are offered on specific initiatives as described below in additional detail. In 2012 the Company intends to explore ways to use a valuable proposition utilizing specific priorities of a customer to assist in overcoming barriers to energy efficiency. Examples of these priorities include environmental considerations, other resource reductions like water or raw materials, and/or comfort considerations at their location. Using this approach the Company hopes to drive down the financial costs of incentives required to achieve energy efficiency implementation. In addition the Company understands the importance to investigate and apply enhanced approaches to reduce as much as possible the utility costs in reaching these increased savings while still maintaining high customer participation activity. In keeping with this objective there remains the opportunity to continue to use negotiated incentives with customers and other value added financial information to encourage customers to take advantage of the Company's services and incentives to promote better building practices.

# Initiatives

#### Multi-year Strategic Energy Management Planning

New for 2012, the Company will reach out to its top quartile large customers and establish multi-year non binding MOUs with them to establish deeper and long term energy savings goals that map more closely to their budgeting process. This approach will create an opportunity to go deeper into their operations and reach to the technical and achievable potential that comes from master planning and execution over a multi-year design and construction process. This strategy will make it possible to address the technical, financial and operational barriers customers face in trying to go deeper and broader into their energy reduction footprint to significantly reduce costs. One of the primary roles of this initiative will be to engage the highest levels of decision makers, to understand their financial and social motivations for energy efficiency capital spending, and then to channel this partnership to support long-term energy efficiency activities. This planning process will lay out a road map for a robust financial model and guidelines for technical and operational aspects of facilities related to energy efficiency, carbon reduction, employee health and productivity. In particular, this MOU is intended to:

• Establish a special offering of an integrated technical, financial and operations support by the Company to large customers

- Engage the highest levels of decision makers of the organizations, to understand their financial and social motivations for energy efficiency capital spending, and then to channel this initiative to support energy efficiency activities
- Increase energy efficiency savings of the customer portfolio, improve human comfort, gain higher productivity, lower absenteeism, reduce the overall carbon footprint of the organization, and enhance corporate sustainability
- Reduce costs to the customer in terms of reduction in annual utility bills, better operations and reduction in maintenance costs

Integrate the strategic energy planning with the customer's overall mission. The triple bottom line (TBL) is an emerging standard that takes in three larger factors, "people, planet and profit". Using the TBL approach in making a case for energy efficiency allows for a financial analysis that not only economically justifies the project but also demonstrates the close alignment between the organization mission and vision and project outcomes.

#### The MOU will lay out:

- Specific multi-year energy savings goals, based on a blend of the customer's financial criteria (like life-cycle cost, hurdle rate, Net Present Value, Return on Investment etc) and program requirements
- Identify specific ECMs that will be instrumental in attaining these goals
- Pre-determined financial incentives package
- Additional assistance based on customer needs like O&M trainings, marketing/case studies, coordination with other building labeling program etc
- Type of technical and operations support, and roles and responsibilities of both parties in development and implementation of the Energy Plan for the customer

#### **Combined Heat and Power**

In 2012, the Company will offer a Combined Heat and Power (CHP) incentive targeted at a reduction in customer electrical consumption through distributed generation. A CHP system is one which generates electricity with an internal combustion engine, turbine engine or steam turbine, and captures waste heat for use in the facility. For 2012 the emphasis will be on getting this initiative rolled out to vendors and customers. Because of the high capital cost and technical requirements of installing CHP, there is a very long lead time for a successful installation. In 2012, the Company has set a goal of one installation in Rhode Island and identification and proposals for at least two additional projects for future years.

The Company will offer technical assistance on these projects beginning with a preliminary screening of a potential site. This screening will be based on an evaluation of:

- Monthly electric, gas, and other fuel usage.
- All end uses of natural gas
- Proposed project cost

This screening will determine if further study of the site appears favorable for an appropriate application of CHP. Assuming a favorable screening, National Grid will co-fund a TA study of CHP with the customer. The TA study will be performed by an independent, qualifying engineering firm. This study is to measure thermal loads, appropriate CHP size, compile a budget cost estimate, and identify potential barriers to the technology, etc. National Grid will fund 50% of the cost of any TA conducted by a preferred vendor selected by the Company, and up to 50% of the TA for other qualifying independent engineering firms. Any TA by a CHP vendor or its representative which fulfills the CHP TA requirements will be accepted, though no co-funding will be provided. The TA study must be completed, submitted, and approved by the Company prior to implementation. All systems will require electric, thermal and gas metering for commissioning and monitoring of system efficiencies. Metering hardware and data collection services may be provided at little or no cost to the customer.

Incentives for the qualifying, approved and commissioned projects are listed below. The first two items are suggested guidelines for incentives and may be adjusted as required under the guidelines of custom projects under the Large Commercial Retrofit and the Large Commercial New Construction Programs.

- Up to 150 kW \$750/kW per installed kW
- >150 kW Up to \$750/kW per installed kW
- Budgetary limitations and caps may apply
- 20% of incentive payment retained until commissioning is complete
- Incentive may not exceed 50% of the installed cost

#### To Qualify:

- Customers must be in the franchise area served by National Grid Electric
- Systems must provide electric generation and off-set other facility thermal loads.
- A technical assessment study must be completed, submitted, and approved by the Company prior to implementation.

- Annual useful energy = kWh\*3,413/100,000 + utilized thermal output (therms)
- Annual gas input CHP gas input in therms (HHV)
- Passes societal benefit cost test (BCR model > 1), a screening process internal to National Grid.
- Benefit cost test must include cost of all fuels and CHP maintenance.
- The customer has a three year contract for O&M services

#### **Target Marketing**

In the past, the Company has identified specific market segments to focus on the unique energy efficiency needs of that segment. In 2011, 16 of 18 waste water treatment plants in the Rhode Island National Grid service territory were identified for energy conservation measures. TA studies are currently being completed now. These efforts will bear fruit in the first Quarter of 2012.

The hospitality sector was identified and breakfast meetings have been held in conjunction with the Rhode Island Hospitality Association and other hospitality groups to identify energy savings opportunities. All those that participated in the meetings were invited to have follow up visits for an energy assessment and free spray valves. As is evident in the Manufacturing Initiative section of this filing, the Company intends to continue to target specific market segments with tailored efficiency solutions.

#### Analytical Data to support Targeted Marketing:

The Company will explore the feasibility of available innovative analytical tools to enable remote energy performance insight into buildings, reducing the need for costly on-site assessments or questionnaires. As a first step, the Company will test-drive these tools and use them in furthering the technical scoping studies. Once validity of data has been assessed, as a next step, the Company will explore the possibility of using these tools to generate customer leads and target quick, no cost or low-cost energy efficiency solutions and be able to go broader in customer participation. Once validated, these tools will allow National Grid and building owners to efficiently benchmark the consumption of entire portfolios of buildings at an end-use level, and to influence energy reduction measures at a fraction of cost and time of on-site assessments.

#### Road map to Deeper Energy Savings from Existing Buildings

The Company plans to investigate working in consort with the New Buildings Institute (NBI), NEEP and other national organizations examining the potential in the building retrofit market, both at technical and policy level. Similar to the new construction market with the Core Performance guide that leads designers to predictable energy savings in new commercial buildings, the company intends to explore the development of an analogous approach — one

that develops simplified tools that can be applied broadly to different building types and offer owners solutions to higher levels of energy savings. This includes participation in a long-term national level planning effort consisting of a roadmap to advance this concept, building the base, expand the market, bring to scale, and ultimately lead to universal application.

In the shorter term starting 2012, the Company will actively participate in NBI directed forums/workshops focused towards establishing an approach to get to 50% savings in existing buildings. The Company will provide technical input to these forums in the areas of building performance analysis, determining building prototypes, analysis and tool development and identify Pilot Projects.

In the long-term, specific to Rhode Island, this could ultimately fold into identification of best building targets to pursue and identify incentives and support studies around these targeted building types.

#### **Manufacturing Initiative**

In 2012, the Company will launch a new initiative targeting Manufacturing customers in RI. This initiative will explore enhanced technical assistance in an effort to increase participation by many of the larger manufacturing customers in the state. The program will be marketed through the Company's new Account Management structure by approaching their qualifying accounts with an offer to provide this enhanced, focused effort.

The Company plans to work in conjunction with TEC-RI to acquire market intelligence, to better understand the needs of this customer segment and to encourage greater participation. The Account Management team will focus on understanding the needs of this market sector and will customize the initiative to better serve the needs of this audience. Some of the areas include: financing decision making criteria and process, type of assistance needed, both at project management level and administrative, level of technical assistance and turnaround time for technical assessment, inspections and incentive payments. The Company will consider networking opportunities with peers participating in this initiative to provide a platform for peer learning and sharing of ideas.

The scope of this initiative will be limited to 10 participants in 2012. Large manufacturing customers will be defined as consuming over 20,000 dekatherms and/or over 750kW demand a year and have a qualified industrial SIC code. The selected large manufacturing customers will be offered a comprehensive, no cost scoping study up to \$10,000. The Company will provide a list of qualified vendors from which the customer will choose. Initial study results will be discussed with the customer to determine feasibility of identified opportunities. Feasibility will include a discussion of cost of opportunities, potential savings, effect on production, and likelihood of meeting any internal company requirements.

The Company and the customer will also develop a Memorandum of Understanding (MOU) in which the customer and the Company agree to have the level 2 study performed on measures which appear promising in the scoping study. This MOU will also include a commitment from

the customer to implement those measures which meet both the customer's and the Company's cost effectiveness criteria, as defined by the RI BCR. The Company will pay a 50% cost share for this study if the customer opts to not sign an MOU. With an MOU commitment the company will cover 100% of the level 2 study.

Once the Company has established a clear understanding of this customer sector, a consultation will be arranged to select a customer to develop a multi-year Strategic Energy Management Plan (SEMP) (Refer to previous "SEMP Initiative" section on SEMP criteria). Utilizing a third party vendor the Company will assist these customers with having a multi-year road map for a robust financial model and guidelines for technical and operational aspects of facilities related to energy and other green measures that integrate with the customer's mission. It will also include identification of incentives and financing available as well as identification of steps that must be taken and a proposed timeline for implementation. This also allows the Company to better forecast expected savings in this market sector into future years and to plan accordingly.

#### **Whole Building Assessment**

Since 2005, National Grid has offered the Whole Building Assessment (WBA). At its core, this initiative is a planning and communication tool that leads to improved energy savings practices in buildings. It seeks to enable the Company's customers to reduce consumption - immediately and in the long-term - by reducing their uncertainty around project prioritization and by simplifying program participation. It does this by teaching customers about their facility's actual electric and gas usage, the range of possible energy-saving opportunities (from no-cost and low-cost measures to those with up to a 10-year simple payback) through engineering analysis, and the role of long-term planning. WBA covers all fuels.

WBA is designed to help maximize customer participation in efficiency programs over time. For example, by providing project cost and savings estimates, WBA may help customers prioritize and bundle efficiency opportunities, and better understand the value of projects with combined electric and gas savings. Through targeted discussions with WBA staff, customers are then encouraged to use this information to develop multi-year implementation strategies that may be integrated with their own capital budget planning. The information may also help interrupt the like-for-like replacement strategy that many customers follow for equipment repair and replacement.

WBA provides a means for customers to quantify and track energy performance that may, in turn, help them understand and communicate real impacts. As a result, the benefits of efficiency projects can be quantified and reported on throughout the organization, which may stimulate additional participation. Finally, through building occupant education, WBA may support customer efforts to engage personnel at all levels within their organization. In all of these ways, WBA may provide a framework within which the Company can maintain an on-going dialogue with customers and help them move forward with a variety of efficiency projects over time.

Most customers are introduced to WBA through their Account Executive. They may also followup directly through the web site or other marketing materials. WBA is best suited to encourage commercial and municipal customers to make a long-term commitment. The target customer for this initiative has:

- Average monthly demand of 200 kW or greater
- Building(s) at least 75% occupied
- Motivated, available building management and staff
- Relatively low or average Energy Star benchmarking score
- High energy intensity
- Multiple opportunities for improvement
- Portfolio Manager rated building type (helpful but not required)

The initiative assesses one commercial building per customer and covers all fuels. Originally the Company offered 4 buildings per customer. As a result, not as many customers were able to be reached within the budget. By offering one building as a "template" for other buildings – customers can learn the whole building approach and adapt it to their other buildings. They are also encouraged to participate in our other energy-efficiency program offerings. The customer must sign a Letter of Intent which outlines the program features, requirements and cost. The cost of the mechanical assessment is split 50/50 with the customer. For a municipal customer the full cost of the study will be paid by the utility if a project is undertaken by the customer within one year of the Action Plan Meeting.

#### **Building Audits**

Appropriate audits are arranged for the customer's facility. Typically, each facility receives a lighting audit provided either through the Direct Install program or from a Project Expediter, which results in a turnkey lighting project proposal. They also receive a mechanical audit of the HVAC, refrigeration, and other mechanical systems. The audit covers all fuels. The results are presented in a report that generally includes:

- A benchmarking analysis
- An energy use analysis
- A table of efficiency opportunities ranging from no-cost, low-cost measures to projects with up to a 10-year simple payback
- Information about each measure including a description

For buildings that qualify, a whole building assessment is conducted where cost-effective mechanical, lighting, low cost/ no cost opportunities and other efficiency measures are identified. Of course we can offer WBA to any commercial and municipal customers.

However, some customers have a low energy intensity and high benchmarking score. As a result those customers are offered other assistance that better fit their needs and are more cost effective for our program.

#### **Action Plan Meeting**

The next step is a roundtable discussion where Company staff and involved vendors review the audit reports with the customer, discuss the opportunities, and begin the planning process. Very often, the customer discloses plans for upcoming renovations of other facilities and new construction projects during these meetings resulting in additional energy saving opportunities.

#### Implementation and Education

Since behavioral changes can play a part in reducing overall consumption, energy education for company staff and building occupants is included during the implementation step. For the assessment, the Company's Energy Profiler On-Line (EPO) data (a cost based service) which provides energy use patterns within large commercial facilities is shared with the customer. The findings are provided to the customer in an Energy Audit Report and are reviewed with the customer at an Action Plan Meeting. The Account Executives and/or Commercial Efficiency Consultants are responsible for follow-up and assisting the customer with incentive applications.

The marketing is done in Rhode Island through Account Executives (for large customers). Lighting and mechanical service vendors that work with the Company are also in the field, actively seeking participants for this Initiative. The program focus is on commercial and municipal buildings and that focus is expected to continue into 2012.

The program focus has been based on how many customers participate in the initiative. We also serve as a platform for engaging a broader audience, maintaining an open dialogue, and building deeper relationships with these customers. Specific offerings are available for elementary schools, middle/high schools, municipalities and commercial customers.

#### Retro-commissioning

Retro-commissioning is a process of testing, troubleshooting, and adjusting the heating, ventilating and air conditioning (HVAC) systems and controls in an existing building with the expectation to raise existing performance standards. The retro-commissioning process can significantly reduce energy consumption with little capital investment. In many cases the cost of retro-commissioning can be paid back through improved system performance, reduced energy costs, and improved occupant comfort.

The Retro-commissioning Initiative is best suited for the following building types:

- Commercial and industrial buildings that have an electric demand greater than 200 kW, although smaller facilities may be good candidates for this service
- Building operators with a desire to reduce operating costs
- HVAC systems with an energy management system
- Buildings with high benchmarking factors (kWh/SqFt or Mbtu/SqFt)
- The objective of the Retro-commissioning Initiative is to:
- Reduce operating costs during peak and off peak periods
- Develop a comprehensive and well documented operation and maintenance plan
- Identify and implement low cost or no cost conservation measures that can lead to substantial energy savings
- Identify potential capital projects that can lead to substantial energy savings
- Educate the building personnel how to operate the building efficiently

Retro-commissioning will entail an assessment of the major building systems effecting energy used. Data is collected on how the systems operate presently and how they were originally designed to operate. Recommendations on where changes should be made to set points, maintenance practices or new energy efficient equipment are presented in a report.

Incentives will be offered to encourage customers to implement the operations and maintenance (O&M) measures that are cost effective. Retro-commissioning projects also identify capital improvement measures which can receive incentives through our standard prescriptive or custom project approach.

#### **Financing Initiative**

The Company recognizes that perhaps one of the most important enablers to customers to reach deep energy savings in their buildings is the need and access to capital. In order to assist customers overcome the financial barriers to investing in energy efficiency, the Company will concentrate on securing sources of funding to offer finance options to large commercial and industrial customers. The Company's objective is to provide 0% interest, on-bill financing for up to 5 year loan terms.

The company is currently working through a memorandum of understanding (MOU) with the Rhode Island office of Economic Development Corporation (EDC) to utilize \$2.5 million dollars in

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ARRA funds in a revolving loan fund that will be provided to large C & I firms to finance the non-incentive portion of energy efficiency projects. The intent is to promote projects for large C & I customers who would not have moved forward with these projects due to capital constraints.

The Company expects to receive \$2.0 million in Regional Greenhouse Gas Initiative, Inc. ("RGGI") Innovative '40%' funds from 2010 auction proceeds for commercial-and-industrial financing through a Revolving Loan Fund. The Company will work with the state to leverage any remaining ARRA funds intended for energy efficiency financing so that customers may easily and fairly access the finance programs and that the finance funding ensures maximum energy savings.

The Company will also focus on securing an additional \$3.5 million in finance funds for large commercial-and-industrial customers. The Company is investigating outside sources that can invest in finance projects. The Company may use up to \$1,000,000 to leverage \$3.5 million in finance.

#### **Solid State Street Lighting**

In 2012 the Company will focus efforts and work with our Stakeholders to investigate and identify any barriers that could impede implementation of solid state street lighting in National Grid's Rhode Island service area, including product technology, product offerings, financial, regulatory and any other identified barriers. The Company will commit to explore potential pathways and timelines to overcome each barrier, including the mechanisms of setting a new solid state street lighting tariff, and report back to the Collaborative with findings by the end of the first quarter, 2012. While the Company cannot commit to moving forward with a Solid-State Street Lighting initiative within a specific timeframe before the above investigation is completed, the Company will consider pathways that will lead to the implementation of a Solid-State Street Lighting Initiative for both Utility and Customer-owned street lights in 2013.

#### Multifamily High-Rise Initiative Targeting Gas Energy Efficiency

In 2012, the Company will begin to work out a plan for integrating energy efficient gas measures to multifamily master metered accounts. The Company will work closely with the residential multifamily program and coordinate a cost effective way to deliver therm savings to customers that are gas master metered as well as those customers that reside in high-rise buildings falling under the commercial energy code. This expanded approach will better serve multifamily facilities with streamlined service while achieving deeper savings.

#### High Performance Commercial Lighting Design/DesignLights™ Consortium

To continue to promote high quality, high performance lighting with commercial and industrial customers the Company will continue to provide additional outreach on the benefits of high quality lighting design to various lighting equipment vendors throughout Rhode Island. The Company proposes to accomplish this through visits, workshops and breakfast meetings with these vendors and with lighting specifiers. These meetings will be educational but will also provide an opportunity for these market players to promote high quality, energy efficient lighting that qualifies for incentives to their customers.

As part of this outreach, the Company will continue to promote design focused initiatives to the specifications community, such as performance lighting, advanced buildings and comprehensive design approach initiatives. Office of the Future is a targeted outreach focused at opportunities that arise at the time leased office space is fitted out for a new tenant. In addition to lighting, plug load controls, advanced energy management controls and retro- commissioning of HVAC distribution systems will be promoted. Standard incentives for new equipment will apply.

In 2012, the Company will continue to seek out and promote emerging technologies for energy efficient lighting. For example, the Company is following advances in solid state (LED) lighting technology and now offers prescriptive incentives for five different types of solid state lighting. As more of this technology emerges, the Company will promote this to customers.

The Company is very active in EPA's Energy Star Solid State Lighting (LED) Initiative. In addition, through the DesignLights™ Consortium, the Company is working with other energy efficiency program administrators across the region to identify and list LED lighting products that are not covered under Energy Star specifications.

The Company has been offering a "performance lighting" option which provides an incentive based on the ability of a project to achieve lighting power densities (watts per sq. ft.) more efficiently than what's required by the Rhode Island State Energy Code. This option targets architects, building design engineers and lighting equipment suppliers who have to ensure that installed lighting meets the code. Performance lighting achieves two things: 1) makes the practitioner more aware of lighting power density requirements in the code and 2) introduces them to technologies and design that will help their project deliver a lighting power density of 15% to 25% or more better than code. The Company will continue to offer a "performance lighting" option in 2012 but will expand its penetration in the new construction market by offering expanded technical assistance and outreach to lighting practitioners encompassing a two tier approach to initiate design professionals. We continue to offer enhanced prescriptive control incentives for all new construction projects that illustrate the lighting controls savings above code requirements.

The Company will continue to offer prescriptive lighting incentives with a comprehensive number of efficient lighting technology selections. However, LEDs will be removed from the downstream retrofit lighting offering and offered exclusively as an upstream incentive under the Large Commercial New Construction Program.

# **Small Business Direct Install Program**

#### **Overview**

The Small Business Direct Install Program (DI Program) provides turnkey services to commercial and industrial customers with an average monthly demand of less than or equal to 200 kW or annual energy use up to 483,000 kWhs.

The Company has delivered this DI Program for more than two decades through a local vendor ("Regional Program Administrator" or "RPA"), responsible for program management, data entry, and quality control. The RPA is located in Rhode Island, employing local staff, local electricians, and energy efficiency lighting materials procured through a competitive bid process. As of 2011, customers served by natural gas are also eligible for direct installation of natural gas ECM's.

Customers are provided turnkey services consisting of:

- Energy audit
- Direct installation of measures
- Company incentive contribution of 70% of the total project cost
- On bill repayment option for customers' share of the project costs, either over 24
  months at interest free or lump sum payment with a 15% discount, resulting in most
  customers' projects have a positive cash flow when they choose the 24 month
  repayment option

Since its inception when the DI Program focused primarily on lighting and refrigeration direct install measures, it has broadened its scope to include identifying:

- cost-effective "custom" electric and gas measures, such as EMS systems
- Time dependent opportunities such as replacing roof top HVAC units and heating systems
- Participation in residential programs where the building owner may have both commercial and residential properties in the building

In addition to cost-effective custom and time dependent measures mentioned above, the DI Program offers incentives on the following measures:

Installation of energy efficient fluorescent ballasts, lamps, and fixtures

- Hard-wired and screw-in compact fluorescent systems
- LED lighting
- Occupancy sensors and controls
- Energy management systems
- Thermostats
- Insulation
- Hot water reset
- Low flow pre-rinse spray valves
- Refrigeration measures such as evaporator fan controls, efficient evaporator fan motors, automatic door closers and door heater control devices for walk-in coolers
- Boiler reset control (single stage)
- Pipe insulation

#### **Program Changes**

Overall, the Company has a strong foundation of experience delivering this program, enabling it to meet program goals and continue to develop and implement new products and services to these customers such as LEDs, refrigeration measures, and the previously mentioned on bill repayment option. The Company intends to build on these successes with the following program changes or increased focus:

- The Company will continue to offer a "Customer Directed Option" for customers interested in using their own electricians and/or material vendors. This option requires that the RPA verify the audit, enter it in to the work flow system, and insures that the proposed equipment meets the required technical guidelines. The Company will only pay as much for the savings as it would if the project had gone through the direct-install, turnkey method.
- While the most common opportunities for energy efficiency in small business customers' facilities continue to be lighting and refrigeration, the DI Program vendor will continue to identify custom energy efficiency electric and gas measures such as energy management systems and install these measures in customers' facilities.
- A "Main Street" approach that targets towns where small business customers have historically been under-served. Specifically, the Company will:

- Identify twelve towns that have been under-served based on an analysis of overall program participation rates
- Conduct a marketing campaign promoting the "Main Street" approach in which auditors will spend several days conducting audits and promoting the Small Business Program.
- Seek support from local organizations such as the Chamber of Commerce and local town officials in promoting the Company's energy efficiency program in two of these towns and then analyze participation rates to determine the impact of these efforts.
- The Small Business Program will continue participating in the Community Initiative that began in 2010. This initiative which is explained in more detail in the Residential section of this report leverages local community organizations to promote energy efficiency, providing incentives for these leads.
- In other jurisdictions, the Company uses calls in to the Call Center to generate leads for the Small Business Program and intends, subject to Call Center management and union approval, to expand this scope to Rhode Island business customers.

# Comprehensive Statewide Marketing Program - Commercial

#### **Overview**

This program supports all of the Energy Efficiency programs in the state of Rhode Island for both electric and gas to provide added support to the marketing efforts implemented by National Grid and its supporting vendors who help to administer the programs. This program also serves to increase the awareness of our portfolio of Energy Efficiency program offerings and of National Grid in the marketplace

We will continue to fine tune our customer targeting and creative executions while evaluating all appropriate media vehicles to create an integrated marketing campaign that includes mass and targeted media that generates awareness and creates a synergy among all communications to reach all Rhode Islanders who are eligible to participate in National Grid Energy Efficiency programs.

# **2012 Electric Commercial and Industrial Goals By Subprogram**

Program	Subprogram	Annual kWh Goal	Incentive		
	CAIR	1,116,909			
New Construction	Cool Choice	958,149			
	CUSTA	5,282,221	75% of Incrementa		
	HVAC	661,871	Cost		
	Light	1,280,189	Cost		
	Upstream	17,401,371			
	VSD	515,665			
Retrofit	CAIR	192,512			
	CUSTA	15,417,249	50% of Project		
	HVAC	1,651,986	Cost		
	LIGHT	20,880,128	Cost		
	VSD	1,786,341			
Small Business			70% of Project		
			Cost		
Direct Install	SCI	21,113,350	30% Financed		

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# **2012** Gas Commercial and Industrial Measures

Program	Measure	Quantity		ebate Level
	Furnace 95+ AFUE (<150) w/ECM Motor	40	\$	500.00
	Furnace 96+ AFUE (<150) w/ECM Motor	40	\$	800.00
	Condensing boiler <= 300 mbh	61	\$	1,000.00
	Infrared	29	\$	750.00
	On demand, Tankless Water Heater >=.82,	0	\$	500.00
	On demand, Tankless Water Heater >=.95,		\$ \$	800.00
	Indirect Water Heaters (Combined appliance efficiency rating >=85% (EF=.82)		\$	400.00
	Condensing Stand Alone >95% TE, >75000 btu		\$	500.00
	Integrated water heater/condensing boiler (0.9 EF, 0.9 AFUE)		\$	1,500.00
	Condensing boiler 301-499 mbh	50	\$	2,000.00
	Condensing boiler 500-999 mbh	40	\$	4,000.00
	Condensing boiler 1000-1700 mbh	12	\$	7,500.00
New Construction	Condensing boiler 1701+ mbh	12	\$	10,000.00
	Boiler >=96% AFUE, <= 300 mbh	50	\$	1,500.00
	Condensing Unit Heaters	40	\$	750.00
	Fryers	35	\$	1,000.00
	High Efficiency Gas Steamer (Energy Star >=38% efficiency)	8	\$	1,000.00
	High Efficiency Gas Convection Oven (>=40% efficiency)	8	\$	1,000.00
	High Efficiency Gas Combination Oven (>=40% efficiency)	8	\$	1,000.00
	High Efficiency Gas Conveyer Oven (>=40% efficiency)	8	\$	1,000.00
	High Efficiency Gas Rack Oven (>=50% efficiency)	8	\$	1,000.00
	High Efficiency Gas Griddle	7	\$	500.00
	C&I Custom New Construction		Ave	rage Incentive
				Based on
			Mea	sures Installed
	Pre Rinse Spray Valve	503	\$	150.00
	Boiler Reset Controls (retrofit only)	7	\$	225.00
	Thermostat	105	\$	25.00
Large Retrofit	Custom Retrofit		Ave	rage Incentive
				Based on
			Mea	sures Installed
	MF Initiative	500	\$	312.50
Small Business Direct Install	Pre Rinse Spray Valve	503	\$	150.00
	Thermostat	105	\$	25.00
	Steam Traps	90	\$	75.00
	Faucet Aerator	100	\$	12.00
	Low Flow Shower Head	60	\$	36.00
	Pipe Insulation	385	\$	7.00

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# 2012 Measurement and Verification Plan

In 2012, National Grid's Measurement and Verification Plan (M&V) will focus on evaluating Rhode Island specific sites and markets while leveraging as many resources as possible from studies in additional National Grid territories in order to keep costs low. Evaluation budgets are included in Attachment 5, Table E-2 and Attachment 6, Table G-2.

# Custom –Industrial Process and Compressed Air impact evaluation

### Custom - Lighting impact evaluation

The Custom Process and Compressed Air, and Custom Lighting studies will involve impact evaluation of components of the Energy Initiative and Design 2000 Large Commercial and Industrial electric efficiency programs. The studies involve on-site engineering and end-use metering of a statistically drawn random sample of participants. These studies are being performed jointly with Massachusetts program administrators.

# Gas C&I Custom impact evaluation

The Gas C&I Custom impact evaluation will involve impact evaluation of components of the New Construction and retrofit gas efficiency programs. This study will revisit an area covered in a study completed in 2011, because the previous study concentrated on measures installed 2008 and 2009, which may not be representative of current customer installations. The study will involve on-site engineering and measurement of a statistically drawn random sample of participants.

# Residential and Commercial Code Compliance/Baseline studies

To lay the groundwork for an expected code-related program in 2013, these studies will feature site visits to assess the state of residential and C&I code compliance in Rhode Island. The findings will be used to establish the baseline for code compliance and inform the design and potential savings opportunities for a code-related program in 2013.

# **C&I** Gas and Electric Freeridership/Spillover surveys

This study will develop free ridership and spillover rates for the Retrofit, new Construction and Direct Install Programs. It will involve surveys of a large number of 2011 program participants.

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# EnergyWise residential weatherization impact evaluation

This impact evaluation of the EnergyWise program will focus on the heating and cooling savings resulting from the weatherization of electric, gas, and fossil fuel heated homes. It will involve using billing analysis, and may involve site surveys.

# **EnergyWise Process Evaluation**

This evaluation will provide an independent assessment of the Energywise program from a process perspective to determine the effectiveness of the program design and existing levels of customer satisfaction. Changes to program design will be recommended based on program results.

# Residential Behavioral Pilots-Tendril and web-based thermostat impact evaluation

This study will be launched to evaluate the impacts from the tendril and web-based thermostat pilot programs. They will involve a combination of billing analysis and on-site measurement.

The planned studies briefly described above focus on areas of interest to the Rhode Island programs, and build on the deep history of evaluation studies performed by the Company over many years.

Recently completed studies that have informed 2012 planning are identified below, along with a brief summary of the impact of those results in planning the Company's 2012 programs. The results of these studies were incorporated into the benefit-cost modeling of the 2012 plan. Some of these studies may be regional, or may have included other National Grid jurisdictions. The 2012 EEPP is adopting the results of these studies because the Rhode Island programs are judged to be similar, either in the measures offered, or in terms of structure or program delivery. In these instances, the impact evaluations have been judged by National Grid to be applicable to Rhode Island.

2011					
Study	Impact Descriptions				
NMR Group, Inc., Massachusetts Program Administrators Massachusetts Special and Cross- Sector Studies Area, Residential and Low-Income Non-Energy Impacts (NEI) Evaluation, August, 15, 2011.	Identification and quantification of non-energy impacts for residential and low-income programs.				
NMR Group, Inc., The Rhode Island Appliance Turn- In Program Process Evaluation, March 4, 2011.	Combined, these two studies assessed free- ridership rates and savings for the Rhode Island				

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NMR Group, Inc., The Rhode Island Appliance Turn-In Program Impact Evaluation, October 2011.	Refrigerator and Freezer Recycling program. In addition, the evaluation found that there were three distinct groups of refrigerators being recycled through the program – primary, secondary – replaced, and secondary – not replaced. The study produced updated free-ridership rates and savings for the three categories of refrigerators and freezers.		
NMR Group, Inc., Results of the Multistate CFL Modeling Effort, April 15, 2011.	This study examined the 2010 Energy Star® Lighting program. The research effort included participation in a multistate modeling effort which resulted in a revised free-ridership estimate for screw-in CFLs.		
The Cadmus Group, Impact Evaluation for Rhode Island Multifamily Gas Program EnergyWise Program, July 12, 2011	A billing analysis was conducted for 2010 Multifamily gas participants. Results showed a realization rate of 121% indicating ex post verified savings as 21% greater than the engineering savings estimate.		
Opinion Dynamics Corporation, Evaluation of National Grid's Community Pilot Program Energy Action: Aquidneck and Jamestown, September, 2011.	The evaluation examined participation in all energy efficiency programs through the 2009-2010 Community Initiative, known as Energy Action: Aquidneck and Jamestown. The evaluation found that the initiative was cost-effective with a benefit-cost ratio of 2.25. The evaluation also examined processes and made recommendations for increasing participation in future initiatives.		
ERS, Rhode Island Large Commercial and Industrial Retrofit and New Construction Program Custom Gas Evaluation, September 2011	The Custom Gas study produced the first study-based realization rates for the Large Commercial and Industrial Retrofit and New Construction programs. The RI results were combined with MA results from a parallel study in order to increase the statistic significance of the final results. Prior to this study, realization rates in both custom programs were assumed to be 100%. The final therms realization rate for the custom gas program was found to be 69.9%		

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KEMA, Inc., Impact Evaluation of the 2009 Custom HVAC and 2008-2009 Custom CDA Installations, September 1, 2011	Study produced realization rates for energy, seasonal demand, and percent energy on peak for both programs. The RI results were combined with MA results from a parallel study in order to increase the statistic significance of the final results. The final energy realization rate for Custom HVAC is higher than the PY 2011 realization rate by about 10% (increased from 100.5% to 110.4%). The final energy realization rate for Custom CDA is higher than the PY 2011 realization rate by about 20% (increased from 97.2% to 119.6%).
KEMA, Inc., C&I Lighting Loadshape Project, Prepared for the Regional Evaluation, Measurement, and Verification Forum, June 2011.	A compilation of lighting loadshape data from the Northeast. The study provided updated coincidence factors for the Energy Initiative and Small Business Lighting programs. The Small Business program summer coincidence factor went from 0.80 to 0.79, while the Energy Initiative summer coincidence went from 0.88 to 0.89
KEMA, Inc., C&I Unitary HVAC Loadshape Project Final Report, Prepared for the Regional Evaluation, Measurement, and Verification Forum, June 2011.	From end use metering, the study produced updated diversity and equivalent full load hours for unitary HVAC measures
20	10
Study	Impact Descriptions
PA Consulting Group. 2009 Commercial and Industrial Programs Free-ridership and Spillover Study, June 21, 2010.	Free ridership and spillover rates for the Energy Initiative, Design2000plus, and Small Business Services Programs.
The Cadmus Group, Inc./Energy Services, EnergyWise 2008 Program Evaluation, May, 24, 2010	Program savings for the EnergyWise Program
ADM Associates, Inc., Residential Central AC Regional Evaluation, Final Report, October 2009	KWh and kW savings figures for the installation of efficient residential CAC systems
KEMA, Inc., Sample Design and Impact Evaluation Analysis of 2009 Custom Program, June 1, 2010	Realization rates for the custom program
DMI, Impact Evaluation of 2008 Custom Process Installations - Part 1,July 1 2010	Weighted realization rates for specific custom measures

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UTS Energy Engineering, LLC., Impact Evaluation of 2008 Custom process Installations - Part 2, July 16, 2010	Peak percentage coincidence rates for several custom process projects
Sebesta Blomberg, Impact Evaluation of 2008 Custom Process Installations Part 3, July 14, 2010	Analysis of specific custom program projects with diversified energy and demand savings estimates
L&S Energy Services, Impact Evaluation of 2006 Custom CDA Installations, July 11, 2010	Analysis of specific custom program projects with diversified energy and demand savings estimates
20	09
Study	Impact Descriptions
Nexus Market Research, Residential Lighting Markdown Impact Evaluation, January 20, 2009	Energy and demand savings from the use of lighting markdown products
KEMA, Inc., Design 2000plus Lighting Hours of Use & Load shapes Measurement Study, July 2, 2009	Hours of use, hours of use realization rate, on-peak kWh percentage, load profile, connected demand adjustment factor, summer and winter peak combined coincidence and interactive factors for the prescriptive lighting measures installed by participants of the 2007 National Grid Design2000plus program
KEMA, Inc., Sample Design and Impact Evaluation of 2008 Custom Installations, July 21, 2009	Estimations of realization rates for custom measures installed in the year-2008 Energy Initiative and Design2000plus programs.
Demand Management Institute, Impact Evaluation of 2007 Custom Process Installations - Part 1, June 17, 2009	Evaluation of energy total annual energy use reduction, summer and winter peak diversified demand impact, and the percentage of energy savings occurring during peak periods for six of ten Custom Process measures.
UTS Energy Engineering, LLC, Impact Evaluation of 2007 Custom Process Installations - Part 2, June 26, 2009	Annual energy savings, percent of energy savings that occur on-peak, and the summer and winter peak coincident demand savings attributable to the custom projects analyzed.
RLW Analytics, Inc., Impact Evaluation of 2006 Custom HVAC Installations - Part 1, October 31, 2008	Quantification of actual energy and demand savings from six Custom HVAC measures installed through the Design 2000plus program.

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UTS Energy Engineering, LLC., Impact Evaluation of 2006 Custom HVAC Installations - Part 2, May 29, 2009	Quantification of actual energy and demand savings from Custom HVAC projects.
KEMA, Inc., National Grid USA 2008 Custom Lighting Impact Evaluation, June 22, 2009	Quantification of electric energy and demand savings for ten Custom lighting projects through site-specific inspection, monitoring, and analysis.
20	08
Study	Impact Descriptions
PA Consulting Group, 2007 Commercial and Industrial Programs Free-Ridership and Spillover Study, June 23, 2008	Free-ridership, participant spillover, and non- participant spillover for the Design2000plus,Energy Initiative, and Small Business Services programs
Quantec, LLC, Final Report, National Efficiency Benchmarking Study for Residential Air Conditioning, Prepared for National Grid, April 25, 2008	Market effects of National Grid's high efficiency air conditioner programs
Wirtshafter Associates, Inc., Evaluation of Residential Central Air Conditioning: Cooperative Promotions with Industry, April 25, 2008	Reports on National Grid's efforts to develop Residential Central Air Conditioning: Cooperative Promotions with Industry in 2007 in Massachusetts.
Wirtshafter Associates, Inc., Kreitler Research and Consulting, Performance Systems and Development, Inc., 2007 Massachusetts and Rhode Island CoolSmart Evaluation Report, June 6, 2008	Documentation of savings from the CoolSmart program.
Nexus Market Research, Inc., RLW Analytics, Inc., Residential Lighting Measure Life Study, June 4, 2008	Estimation of measure life for lighting products distributed throughout New England
RLW Analytics, Inc., Coincidence Factor Study Residential and Commercial Industrial Lighting Measures Prepared for: New England State Program Working Group (SPWG), Spring 2007	Coincidence factors for residential and commercial and industrial lighting measures.
RLW Analytics, Inc., Coincidence Factor Study Residential Room Air Conditioners Prepared for: Northeast Energy Efficiency Partnership's New England Evaluation and State Program Working Group, June 23, 2008	On peak and seasonal coincidence factors for residential room air conditioning measures.

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Michael Ozog, Summit Blue, Energy Initiative Lighting Billing Analysis, 2007	Estimation of realization rate for prescription lighting measures from participants in the 2007 El program.
RLW Analytics, Inc., Sample Design and Impact Evaluation of 2006 Custom Installations, July 20, 2008	Realization rates for custom measures from the Energy Initiative and Design2000plus program.
Demand Management Institute, Impact Evaluation of 2006 Custom Process Installations - Part 1,May 2, 2008	Total energy use reduction, summer and winter peak diversified demand impact, and the percentage of energy savings during peak periods for custom process installations.
SBW, Impact Evaluation of 2006 Custom Process Installations - Part 2, June 20, 2008	Analysis of savings for a custom Energy Initiative and Design2000plus program
UTS Energy Engineering, LLC., Impact Evaluation of 2006 Custom Process Installations - Part 3, June 24, 2008	Energy and demand savings from custom process installations in the Design2000plus program and the Energy Initiative programs.
Demand management Institute, Impact Evaluation of 2005 Custom HVAC Installations - Part 1, February 27, 2008	Evaluation of energy and demand savings from custom HVAC installations in the Energy Initiative and Design2000plus programs.
SAIC, Impact Evaluation of 2005 Custom HVAC Installations - Part 2, July 10, 2008	Verification of energy and demand savings for custom HVAC installations from the Design2000plus and Energy Initiative programs.
Michael Ozog, Summit Blue, Joint Small Business Services Program Billing Analysis, 2007	Realization rates for lighting measures installed through the Small Business Services program  07
Study	Impact Descriptions
Nexus Market Research, Inc., Dorothy Conant, Consultant, Evaluation of the Massachusetts ENERGY STAR Homes Program, Findings and Analysis, May 2007	Program status and activity report with assessment of buyers and builders of ENERGY STAR and non ENERGY STAR homes, assessment of opportunities to expand the impact of the program on the new construction market, process evaluation of efforts to address the new EPA duct leakage standards, identification of areas of the state likely to see significant multifamily development

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Dorothy Conant, Consultant, The Massachusetts	Progress report and summary of program activity.
ENERGY STAR Homes Program, 2006 Progress Report, May 31, 2007	Trogress report and summary of program activity.
Nexus Market Research, Inc., Memorandum re: Results of the Survey of Past Clothes Washer Purchasers, July 12, 2007	Measure life, persistence and customer satisfaction for ENERGY STAR clothes washers
Nexus Market Research, Inc., Memorandum re: Results of the Appliance Model Availability Analysis, June 14, 2007	ENERGY STAR appliance model availability in various states.
Nexus Market Research, Inc., Massachusetts ENERGYSTAR Appliance Program: Market Share Tracking and Analysis, May 31, 2007	ENERGY STAR appliance market share
Nexus Market Research, Inc., Memorandum on ENERGY STAR Qualified Room Air Conditioner Promotion Effectiveness, July 11, 2007	Determination of standard design practices for lighting and HVAC for significant national accounts in the region, influence of public programs on the design practices, customer decision making process for energy efficiency.
RLW Analytics, Inc., National Grid Lighting Controls Impact Evaluation, Final Report, 2005 Energy Initiative, Design2000plus and Small Business Services Programs, June 4, 2007	Summer diversity factor, Winter diversity factor, Connected kW realization rate, Hours-of-use reduction realization rate, and percent of energy savings on peak for prescriptive lighting control measures through the Energy Initiative, Design2000plus, and Small Business Services programs.
RLW Analytics, Inc., Sample Design and Impact Evaluation of 2006 Custom Programs, July 20, 2007	Realization rates for the Custom Energy Initiative and Design2000plus programs.
Demand Management Institute, Impact Evaluation of 2005 Custom Process Installations - Part 1, June 5, 2007	Evaluation of annual energy use reduction, summer and winter peak diversified demand impact, percentage of energy savings during on peak periods for custom process installations.
UTS Energy Engineering, LLC, Impact Evaluation of 2005 Custom Process Installations - Part 2, June 19, 2007	Quantification of energy and demand savings from custom process installations.

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GDS Associates, Inc., Impact Evaluation of 2005 Custom Process Installations - Part 3, July 11, 2007	Annual energy savings, summer and winter peak diversified demand impact, and percent of energy savings that occur on-peak for custom process installations.
RLW Analytics, Inc., Impact Evaluation Study of 2006 Custom Lighting Installations, July 5, 2007	Verification of energy savings from custom lighting projects.
RLW Analytics, Small Business Services Custom Measure Impact Evaluation, March 23, 2007	Verification of energy savings from custom lighting projects in the Small Business Services program.
RLW Analytics, Impact Evaluation Analysis of the 2005 Custom SBS Program, May 29, 2007	Realization rates for the Small Business Services program

## 2012 RI Energy Efficiency Marketing Plan

### **Program Goals**

National Grid believes that every Rhode Islander should participate in energy efficiency programs. Marketing Strategies and the Comprehensive Statewide Marketing Campaign are essential tools necessary to promote energy efficiency to every electric and gas, residential and commercial customer in Rhode Island.

For the electric programs, the 2012 goal of 128,570 annual MWh savings represents a 25% increase versus 2011. We will need over 362,000 participants to achieve this goal. The gas program goals of 231,548 annual MMBTu savings is a 127% increase versus 2011 and we will need over 16,900 participants to meet this goal.

### **Program Communications**

National Grid plans to continue the Comprehensive Marketing Program in 2012 (see attachments 1 and 3) in order to raise customer awareness and increase participation in for Rhode Island's Energy Efficiency programs.

#### 2011 Highlights:

As part of our 2011 program, National Grid measured awareness of the Energy Efficiency Programs in Rhode Island prior to the Comprehensive Marketing Program and individual Energy Efficiency communications hitting the market. Mid way through the campaign we measured how we were doing so that we could make adjustments to our tactics if we were not making the anticipated impact.

National Grid surveyed 1,884 residential customers and 200 commercial customers. The survey indicated awareness of National Grid's Energy Efficiency Programs increased 7.4%. Specifically, when asked whether they had recently seen or heard National Grid advertising, awareness increased by 7.6%. We continue to monitor customer awareness of the 2011 Comprehensive Statewide Campaign tactics.

The Company had a lot of success with innovative residential marketing tactics such as the Energy Action: Aquidneck & Jamestown pilot where marketing occurred via community channels and with the 'Saving is an Art: The Fine Art of Refrigerator Recycling' that placed local-artist painted refrigerators throughout

downtown Providence. Specific marketing tactics planned for residential programs are more fully described in Attachment 1.

### **Customer Targeting**

In order to achieve the 2012 savings goals under our current challenging economic conditions, the Company will target specific customer groups to help drive participation in Rhode Island's EE programs. We will also test concepts and strategies, analyze the results, and use our findings to inform future efforts for 2013-2014.

For the residential market, previous participants will be targeted to leverage savings from deeper efficiency measures. The Company has found that residential energy efficiency program participation is more likely for homeowners than renters and for those living in larger homes. With that in mind, the Company will target the Rhode Island households that are owner occupied.

The Company will also take into consideration the shifting Rhode Island demographics in its marketing and targeting efforts. We will test expanded multi-cultural marketing efforts to determine its impact on program participation. This might include additional in-language marketing communications to better reach and inform the growing Hispanic population.

Another targeted segment in 2012 will be the Hard-to-Reach residential customers. This group will be targeted in an effort to expand participation in specific EE programs. We will test specific marketing strategies and tactics for this segment given the availability of data.

During 2011 the Company undertook a statistical modeling initiative that analyzed High Efficiency Heating Equipment (HEHE) program participation. This modeling utilized demographic variables, and the interactions between them, to predict the probability of customers to participate in HEHE programs. Customers with lower than average participation are considered to be hard-to-reach, with care taken not to include the majority of low income and HEAP eligible customers as hard-to-reach targets, as programs are available to them already. In 2012 we will target identified Hard-to-Reach customers, as these efforts will be essential to meeting goals in the Residential HVAC program, more fully described in the residential program description, Attachment 1.

The Company will also begin to assess customer targeting potential to address the landlord/renter split incentive barrier. For a long time, a split incentive barrier has been identified for property managers and commercial building owners, including multifamily buildings where the landlord invests in the EE program and the tenant reaps the benefits in the form of lower energy costs. Experience in other states has shown that this barrier may not be as prevalent as once believed and that there are in fact benefits to the landlord. In 2012, the Company will consider and test strategies that might

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include value propositions and messaging that highlight the tenant stability and satisfaction benefits of the Energy Efficiency programs to the multi-family building owner or property manager. A combination of new messaging through a variety of channels will be tested to help build awareness and participation by this segment. The Company will analyze results from these efforts and use the findings to inform next steps for 2013-2014. Lessons learned through this analysis may be beneficial to increasing participation in Multifamily retrofits, further described in both the EnergyWise program description in Attachment 1 and the new Multifamily initiative in the Commercial and Industrial (C&I) Retrofit program description in Attachment 2.

On the business market front, an analysis of the Company's C&I sector program participation has generally shown that the vast majority of energy savings comes from a small percentage of customers. The same is true for Rhode Island. Therefore, to achieve the significantly increased 2012 goals, the Company will continue to identify and target business customers and industry sectors with significant opportunity to reduce consumption, including those sectors with a strong Rhode Island presence.

There are several customer targeting initiatives that are part of C&I implementation strategies for 2012. There will be a focus on industry sectors with the potential for significant energy savings and lower participation levels than seen in other markets. With that in mind, the manufacturing segment will be targeted to help build awareness and participation in EE programs. In 2012, we will test approaches for better understanding and reaching this important sector. This customer targeting will be in conjunction with the Manufacturing Initiative more fully described in the C&I Retrofit program description, Attachment 2.

Additionally, in 2012, the Company will begin developing an Office of The Future Initiative (OTF) that will target the leased-tenant office market. Customer targeting will be essential in identifying and collaborating with commercial real estate office building owners. The Company will also explore the feasibility of available innovative analytical tools (e.g. Iblogix, Nexamp) to enable remote energy performance insight into buildings, reducing the need for costly on-site assessments or questionnaires. This effort will support the Company's marketing effort and will help generate customer leads and target quick, no cost or low-cost energy efficiency solutions and be able to go broader in customer participation. Both the OTF and Analytics initiatives are described in the C&I Retrofit program description, Attachment 2.

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#### Table E-1 National Grid Electric DSM Funding Sources in 2012 by Sector \$(000)

		<u>P</u>	rojections by Secto	<u>or</u>	
		 w Income	Non-Low Income		T 1
(1)	Projected Budget (from E-2):	\$ esidential 5,862.47	Residential \$ 21,009.62	Industrial \$ 34,536.70	Total \$61,408.8
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	Sources of Other Funding:				
(2)	Projected DSM Commitments at Year-End 2011:	\$0.0	\$0.0	\$3,000.0	\$3,000.0
(3)	Projected Year-End 2011 Fund Balance and Interest:	\$857.9	\$2,573.6	\$5,147.2	\$8,578.7
(4)	Projected FCM Payments from ISO-NE:	\$70.0	\$703.2	\$1,157.3	\$1,930.5
(5)	Projected RGGI Payments (from E1-a):	\$161.8	\$647.2	\$809.0	\$1,618.1
(6)	Projected Copayments from LC&I Finance:	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$335.9</u>	<u>\$335.9</u>
(7)	Total Other Funding:	\$1,089.7	\$3,924.0	\$10,449.5	\$15,463.2
(8)	<b>Customer Funding Required:</b>	\$4,772.8	\$17,085.6	\$24,087.2	\$45,945.6
(9)	Forecasted kWh Sales:	282,558,930	2,839,526,853	4,673,573,283	7,795,659,066
(10)	Energy Efficiency Program charge per kWh:				\$ 0.00589
(11)	Currently Effective EE Charge				\$ 0.00526
(12)	Adjustment to Reflect Fully Reconciling Funding Mechanism				\$ 0.00063

- (1) The total projection of FCM revenue is allocated by kWh sales to each sector.
- (2) Copayments from LC&I Finance are the anticipated amount to be repaid in 2012 by large customers who received finance.
- (3) Projected street lighting and sales for resale kWh have been allocated to each sector based on the percentage of sales in each sector excluding expected street lighting sales.

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#### Table E-1a 2012 RGGI Projections

	Auction	Year	Gross Proceeds	RGGI Admin Costs	OER Admin Costs	Net Proceeds	80% of Proceeds	C&I Loan Fund	NET EE Implementation Funding Expected to be Received in 2012
	6	2009	\$944,535	0	\$47,227	\$897,308	\$717,847	\$717,847	\$0
	7	2010	\$1,422,257	\$20,000	\$0	\$1,402,257	\$1,121,806	\$1,121,806	\$0
	8	2010	\$1,298,533	\$0	\$0	\$1,298,533	\$1,038,826	\$1,038,826	\$0
	9	2010	\$961,773	\$0	\$0	\$961,773	\$769,418	\$769,418	\$0
2009 - 2011 Carryover	10	2010	\$735,475	\$0	\$220,902	\$514,573	\$411,658	\$411,658	\$0
	11	2011	\$1,306,120	\$0	\$0	\$1,306,120	\$1,044,896		\$1,044,896
	12	2011	\$402,460	\$20,000	\$0	\$382,460	\$305,968		\$305,968
	13	2011	\$220,748	\$0	\$0	\$220,748	\$176,598		\$176,598
	14	2011	\$220,748	\$0	\$107,504	\$113,244	\$90,595		\$90,595
Total RGGI Funds							\$5,677,614	\$4,059,556	\$1,618,058

- (1) Actual proceeds data through Auction 13 from http://www.rggi.org/market/co2\_auctions/results; Auction 14 assumes Auction 13 proceeds.
- (2) Projected 2012 RGGI Proceeds are estimated to be \$2.7 million, but are not anticipated to be received by year-end 2012 and are therefore not included in the table.
- (3) Proposed 2011 RGGI Allocation Plan allocates 80% of fund to EE for Auctions 6-10 held in 2009-2010; Assumes 2011 RGGI Allocation Plans remain the same.
- (4) The C&I Revolving Loan Fund was approved in 2010 by OER and DOA under the 2009 RGGI Allocation Plan. It has not been fully capitalized yet. The Company is committed to fully capitalizing it in 2012 in order to expand EE efforts, therefore the first RGGI proceeds recieved will go towards it. By using these RGGI proceeds for loan fund capitalization, they are not available for supplementing program implementation, illustrated in tables E-2 and E-3.
- (6) RGGI, Inc. actual costs are based on invoices received by OER, projections based on RI's cost-share of 1.41% in 990 forms, available: http://www.rggi.org/rggi/legal
- (7) OER Administrative costs based on RGGI Allocation Plan, 5% of annual proceeds have been deducted for administrative costs

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#### Table E-2 National Grid 2012 Electric Energy Efficiency Program Budget \$(000)

			Rebates and	Sales, Technical			
	Program Planning &		Other Customer	Assistance &	Evaluation &	Shareholder	
	Administration	Marketing	Incentives	Training	Market Research	Incentive	Grand Total
Non-Low Income Residential							
Residential New Construction	\$30.1	\$15.0	\$518.4	\$472.5	\$81.4	\$0.0	\$1,117.4
ENERGY STAR® HVAC	\$165.2	\$127.7	\$1,958.6	\$225.4	\$60.0	\$0.0	\$2,537.0
EnergyWise	\$166.0	\$207.7	\$5,515.5	\$1,652.3	\$86.4	\$0.0	\$7,627.9
ENERGY STAR® Lighting	\$97.3	\$450.0	\$3,463.9	\$496.2	\$71.4	\$0.0	\$4,578.8
ENERGY STAR® Appliances	\$76.1	\$321.0	\$1,236.7	\$411.6	\$71.4	\$0.0	\$2,116.7
EERMC - Residential	\$299.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$299.0
Energy Efficiency Educational Programs	\$0.0	\$0.0	\$0.0	\$75.0	\$0.0	\$0.0	\$75.0
Residential Behavior Pilot	\$118.3	\$25.0	\$80.0	\$7.5	\$71.4	\$0.0	\$302.2
Residential Products Pilot	\$33.3	\$70.4	\$191.0	\$20.0	\$91.4	\$0.0	\$406.1
Community Based Initiatives - Residential	\$33.2	\$60.8	\$0.0	\$62.5	\$0.0	\$0.0	\$156.6
Comprehensive Marketing - Residential <sup>2</sup>	\$0.0	\$920.0	\$0.0	\$0.0	\$0.0	\$0.0	\$920.0
Shareholder Incentive	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$872.9	\$872.9
Subtotal - Non-Low Income Residential	\$1,018.7	\$2,197.6	\$12,964.1	\$3,423.0	\$533.4	\$872.9	\$21,009.6
Low Income Residential							
Single Family - Low Income Services	\$211.7	\$75.0	\$3,767.5	\$1,561.2	\$0.0	\$0.0	\$5,615.4
Shareholder Incentive	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$247.1	\$247.1
Subtotal - Low Income Residential	\$211.7	\$75.0	\$3,767.5	\$1,561.2	\$0.0	\$247.1	\$5,862.5
Commercial & Industrial							
Large Commercial New Construction	\$273.9	\$25.0	\$5,745.5	\$1,224.6	\$113.8	\$0.0	\$7,382.8
Large Commercial Retrofit	\$688.1	\$132.7	\$8,743.4	\$2,076.0	\$385.8	\$0.0	\$12,025.9
Small Business Direct Install	\$104.1	\$175.0	\$11,022.9	\$562.9	\$64.4	\$0.0	\$11,929.3
Community Based Initiatives - C&I	\$19.9	\$77.6	\$0.0	\$102.5	\$0.0	\$0.0	\$200.0
EERMC - C&I	\$354.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$354.5
Comprehensive Marketing - C&I	\$0.0	\$330.0	\$0.0	\$0.0	\$0.0	\$0.0	\$330.0
Shareholder Incentive	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,314.2	\$1,314.2
Outside Finance Costs	\$0.0	\$0.0	\$1,000.0	\$0.0	\$0.0	\$0.0	\$1,000.0
Subtotal - Commercial & Industrial	\$1,440.5	\$740.3	\$26,511.7	\$3,966.1	\$563.9	\$1,314.2	\$34,536.7
Grand Total	\$2,670.9	\$3,012.9	\$43,243.3	\$8,950.2	\$1,097.3	\$2,434.1	\$61,408.8
Incremental System Reliability	\$60.0	\$40.0	\$59.0	\$25.0	\$25.0	\$0.0	\$209.0

#### Notes:

(1) Includes Total Commitments for 2012, expected to be \$2 million. The allocation between Large Commercial New Construction and Large Commercial Retrofit is:

Large Commercial New Const. Commitments (\$000): \$1,000.0

Large Commercial Retrofit Commitments (\$000): \$1,000.0

These commitments reflect agreements with customers to provide funding for approved energy efficiency projects that will be completed after year-end 2012

- (2) Comprehensive Marketing is a multi-sector initiative with funding from each sector. Please see Attachment 4 for the program description.
- (3) For more information on Outside Finance Costs, please refer to the 2012 EE Plan main text.
- (4) An anticipated \$4 million is also expected from RGGI 2009-2010 proceeds and will be used to capitalize the C&I Revolving Loan Fund, as approved in the 2010 RGGI Proposal. Those funds are not included in this table. Please see Table E1a.
- (5) RGGI Pilots approved in the 2010 RGGI Proposal and begun in 2011 will continue in 2012 using RGGI those funds. Pilots include Deep Energy Retrofit, Heat Loan, and New Construction Homes Version III. Those funds are not included in this table.
- (6) The Residential New Construction and EnergyWise programs include services and incentives for the Low Income sector. Please see Attachment 1 for a detailed breakdown of Low Income services and incentives provided in various programs outside of the Low Income sector.

  (7) Incremental System Reliability funds are included for illustrative purposes. They are part of the 2012 System Reliability Procurement Annual Plan, filed as a separate docket.

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#### Table E-3 Derivation of the 2012 Spending and Implementation Budgets

	Proposed 2012 Budget (\$000) From E-2	Commitments and Copays (\$000)	EERMC Costs (\$000)	Shareholder Incentive (\$000)	Evaluation Expenses (\$000)	Eligible Sector Spending Budget for Shareholder Incentive on E-9 (\$000)	Implementation Expenses for Cost- Effectiveness on E-5 (\$000)
Non-Low Income Residential							
Residential New Construction	\$1,117.4				\$81.4		\$1,036.0
ENERGY STAR® HVAC	\$2,537.0				\$60.0		\$2,477.0
EnergyWise	\$7,627.9				\$86.4		\$7,541.5
ENERGY STAR® Lighting	\$4,578.8				\$71.4		\$4,507.4
ENERGY STAR® Appliances	\$2,116.7				\$71.4		\$2,045.4
EERMC - Residential	\$299.0		\$299.0		\$0.0		\$299.0
Energy Efficiency Educational Programs	\$75.0				\$0.0		\$75.0
Residential Behavior Pilot	\$302.2				\$71.4		\$230.8
Residential Products Pilot	\$406.1				\$91.4		\$314.7
Community Based Initiatives - Residential	\$156.6				\$0.0		\$156.6
Comprehensive Marketing- Residential	\$920.0				\$0.0		\$920.0
Shareholder Incentive	\$872.9			\$872.9			\$0.0
Subtotal - Residential	\$21,009.6	\$0.0	\$299.0	\$872.9	\$533.4	\$19,837.7	\$19,603.3
Low Income Residential							
Single Family - Low Income Services	\$5,615.4				\$0.0		\$5,615.4
Shareholder Incentive	\$247.1			\$247.1			
Subtotal - Low Income Residential	\$5,862.5	\$0.0	\$0.0	\$247.1	\$0.0	\$5,615.4	\$5,615.4
Commercial & Industrial							
Large Commercial New Construction	\$7,382.8	\$1,000.0			\$113.8		\$6,269.0
Large Commercial Retrofit	\$12,025.9	\$1,000.0			\$385.8		\$10,640.1
Small Business Direct Install	\$11,929.3	\$0.0			\$64.4		\$11,865.0
Community Based Initiatives - C&I	\$200.0				\$0.0		\$200.0
EERMC - C&I	\$354.5		\$354.5		\$0.0		\$354.5
Comprehensive Marketing - C&I	\$330.0				\$0.0		\$330.0
Shareholder Incentive	\$1,314.2			\$1,314.2	\$0.0		\$0.0
Outside Finance Costs	\$1,000.0	\$1,000.0			\$0.0		\$1,000.0
Subtotal - Commercial & Industrial	\$34,536.7	\$3,000.0	\$354.5	\$1,314.2	\$563.9	\$29,868.0	\$30,658.6
Grand Total	\$61,408.8	\$3,000.0	\$653.5	\$2,434.1	\$1,097.3	\$55,321.2	\$55,877.3

- Notes:
  (1) There are \$0 for Small Business Direct Install Copays in 2012 due to the creation of the Small Business Revolving Loan Fund, funded by the 2010 Innovative RGGI 40%. The incentives budget for Small Business Direct Install does not include financing because it will come from the revolving loan fund. Customers who receive financing in 2012 will repay it to the revolving loan fund.
- (2) Outside Finance Costs are capital costs to secure outside financing funds. Like the historical treatment of copays, outside finance costs do not directly lead to savings, therefore they are excluded from the eligible spending budget and a shareholder incentive is not collected on these funds. The are counted as an implementation expense.

  (3) Spending budget = Total Budget from E-2 minus Commitments, Copays, EERMC costs, and shareholder incentive.

  (4) Implementation Expenses = Total Budget from E-2 minus Commitments, Copays, Evaluation expenses, and shareholder incentive.

  (5) EERMC Costs = 1.2% of implementation expenses, excluding evaluation expenses.

Table E-4
Proposed 2012 Budget Compared to Approved 2011 Budget (\$000)

		Approved	
	Proposed	Implementati	
	Implementatio	on Budget	
	n Budget 2012	2011	Difference
Non-Low Income Residential			
Residential New Construction	\$1,036.0	\$734.7	\$301.3
ENERGY STAR® HVAC	\$2,477.0	\$1,203.5	\$1,273.5
EnergyWise	\$7,541.5	\$5,753.1	\$1,788.4
ENERGY STAR® Lighting	\$4,507.4	\$2,328.2	\$2,179.2
ENERGY STAR® Appliances	\$2,045.4	\$2,084.3	-\$39.0
EERMC - Residential	\$299.0	\$324.3	-\$25.3
Energy Efficiency Educational Programs	\$75.0	\$50.0	\$25.0
Residential Behavior Pilot	\$230.8	\$387.8	-\$157.0
Residential Products Pilot	\$314.7	\$111.0	\$203.7
Community Based Initiatives - Residential	\$156.6	\$140.9	\$15.6
Comprehensive Marketing- Residential	\$920.0	\$605.4	\$314.6
Subtotal - Non-Low Income Residential	\$19,603.3	\$13,723.2	\$5,880.1
Low Income Residential			
Single Family - Low Income Services	\$5,615.4	\$5,725.4	-\$110.0
Commercial & Industrial			
Large Commercial New Construction	\$6,260.0	¢5 475 7	¢702.2
<u> </u>	\$6,269.0	\$5,475.7	\$793.3
Large Commercial Retrofit	\$10,640.1	\$9,620.8	\$1,019.3
Small Business Direct Install	\$11,865.0	\$9,463.9	\$2,401.1
Community Based Initiatives - C&I EERMC - C&I	\$200.0	\$105.0	\$95.0
	\$354.5	\$489.5	-\$135.0
Comprehensive Marketing - C&I	\$330.0	\$94.3	\$235.7
Outside Finance Subtotal Commercial & Industrial	\$1,000.0	\$945.0	\$55.0
Subtotal Commercial & Industrial	\$30,658.6	\$26,194.2	\$4,464.4
TOTAL IMPLEMENTATION BUDGET	\$55,877.3	\$45,642.7	\$10,234.6
OTHER EXPENSE ITEMS			
Commitments	\$2,000.0	\$5,000.0	-\$3,000.0
Company Incentive	\$2,434.1	\$2,004.5	\$429.7
Evaluation	\$1,097.3	\$1,400.5	-\$303.2
Subtotal - Other Expense Items	\$5,531.5	\$8,404.9	-\$2,873.5
TOTAL BUDGET	\$61,408.8	\$54,047.7	\$7,361.1

#### Notes:

- (1) Implementation Budget excludes Commitments, Company Incentive and Evaluation; dervied on Table E-3
- $(2)\ Total\ Budget\ includes\ Implementation,\ Commitments,\ Evaluation;\ illustrated\ on\ Table\ E-2$

(3)RGGI Pilots approved in the 2010 RGGI Proposal and begun in 2011 will continue in 2012 using RGGI funds. Pilots include Deep Energy Retrofit, Heat Loan, and New Construction Homes Version III. Those funds are not included in this table.

#### Table E-5 Calculation of 2012 Program Year Cost-Effectiveness Summary of Benefit, Expenses, Evaluation Costs (\$000)

		Г		1		1						
	TRC				Program							
	Benefit/		Total	Imp	plementation		Customer	Ev	valuation	Sh	areholder	¢/Lifetime
	Cost <sup>1</sup>		Benefit	E	Expenses <sup>2</sup>	C	ontribution		Cost	Iı	ncentive	kWh
Commercial & Industrial					1							
Large Commercial New Construction	6.39	\$	44,317.1	\$	6,269.0	\$	558.0	\$	113.8		NA	3.2
Large Commercial Retrofit	2.39	\$	44,182.8	\$	10,640.1	\$	7,422.9	\$	385.8		NA	5.7
Small Business Direct Install	2.15	\$	30,546.6	\$	11,865.0	\$	2,310.4	\$	64.4		NA	7.8
Community Based Initiatives - C&I		\$	-	\$	200.0	\$	-	\$	-		NA	
EERMC - C&I		\$	-	\$	354.5	\$	-	\$	-		NA	
Comprehensive Marketing - C&I		\$	-	\$	330.0	\$	-	\$	-		NA	
Outside Finance Costs		\$	-	\$	1,000.0	\$	-	\$	-		NA	
C&I SUBTOTAL	2.78	\$	119,046.6	\$	30,658.6	\$	10,291.3	\$	563.9	\$	1,314.2	4.0
		\$	7,926.1	\$	5,615.4							
Non-Low Income Residential			.,	<u> </u>	2,02211						• •	
Non-Low Income Residential Residential New Construction	2.31			\$	1,036.0	\$	378.3	\$	378.3		NA	
	2.50	\$	4,142.9 8,009.2	\$	1,036.0 2,477.0	\$	669.0	\$	60.0		NA	34.5
Residential New Construction ENERGY STAR® HVAC		\$	4,142.9	\$	1,036.0	-		\$				34.5 21.8
Residential New Construction ENERGY STAR® HVAC Energy <i>Wise</i>	2.50	\$ \$ \$	4,142.9 8,009.2	\$	1,036.0 2,477.0	\$	669.0	\$	60.0		NA	34.5 21.8 14.7
Residential New Construction ENERGY STAR® HVAC Energy <i>Wise</i> ENERGY STAR <sup>®</sup> Lighting	2.50 3.22	\$ \$ \$	4,142.9 8,009.2 27,552.2	\$ \$ \$	1,036.0 2,477.0 7,541.5	\$	669.0 923.6	\$	60.0 86.4		NA NA	34.5 21.8 14.7 4.0
Residential New Construction	2.50 3.22 3.10	\$ \$ \$	4,142.9 8,009.2 27,552.2 14,198.7	\$ \$ \$	1,036.0 2,477.0 7,541.5 4,507.4	\$ \$ \$	669.0 923.6	\$ \$	60.0 86.4 71.4		NA NA NA	34.5 21.8 14.7 4.0
Residential New Construction ENERGY STAR® HVAC Energy <i>Wise</i> ENERGY STAR® Lighting ENERGY STAR® Products	2.50 3.22 3.10	\$ \$ \$ \$	4,142.9 8,009.2 27,552.2 14,198.7	\$ \$ \$ \$	1,036.0 2,477.0 7,541.5 4,507.4 2,045.4	\$ \$ \$	669.0 923.6	\$ \$ \$	60.0 86.4 71.4 71.4		NA NA NA NA	34.5 21.8 14.7 4.0
Residential New Construction ENERGY STAR® HVAC EnergyWise ENERGY STAR® Lighting ENERGY STAR® Products Energy Efficiency Education Programs EERMC - Residential Residential Behavior Pilot	2.50 3.22 3.10	\$ \$ \$ \$ \$ \$	4,142.9 8,009.2 27,552.2 14,198.7 3,997.1	\$ \$ \$ \$ \$ \$	1,036.0 2,477.0 7,541.5 4,507.4 2,045.4 75.0 299.0 230.8	\$ \$ \$ \$ \$	669.0 923.6 - -	\$ \$ \$ \$ \$	60.0 86.4 71.4 71.4 - - 71.4		NA NA NA NA NA NA NA NA NA	34.5 21.8 14.7 4.0
Residential New Construction ENERGY STAR® HVAC EnergyWise ENERGY STAR® Lighting ENERGY STAR® Products Energy Efficiency Education Programs EERMC - Residential Residential Behavior Pilot	2.50 3.22 3.10	\$ \$ \$ \$ \$	4,142.9 8,009.2 27,552.2 14,198.7 3,997.1	\$ \$ \$ \$ \$	1,036.0 2,477.0 7,541.5 4,507.4 2,045.4 75.0 299.0	\$ \$ \$ \$ \$	669.0 923.6 - - -	\$ \$ \$ \$	60.0 86.4 71.4 71.4		NA NA NA NA NA	34.5 21.8 14.7 4.0
Residential New Construction ENERGY STAR® HVAC Energy Wise ENERGY STAR® Lighting ENERGY STAR® Products Energy Efficiency Education Programs EERMC - Residential Residential Behavior Pilot Residential Products Pilot Community Based Initiatives - Residential	2.50 3.22 3.10	\$ \$ \$ \$ \$ \$ \$ \$	4,142.9 8,009.2 27,552.2 14,198.7 3,997.1	\$ \$ \$ \$ \$ \$ \$ \$	1,036.0 2,477.0 7,541.5 4,507.4 2,045.4 75.0 299.0 230.8 314.7	\$ \$ \$ \$ \$ \$ \$	669.0 923.6 - - - -	\$ \$ \$ \$ \$ \$	60.0 86.4 71.4 71.4 - - 71.4		NA NA NA NA NA NA NA	34.5 21.8 14.7 4.0
Residential New Construction ENERGY STAR® HVAC EnergyWise ENERGY STAR® Lighting ENERGY STAR® Products Energy Efficiency Education Programs EERMC - Residential Residential Behavior Pilot Escidential Products Pilot Community Based Initiatives - Residential Comprehensive Marketing - Residential	2.50 3.22 3.10	\$ \$ \$ \$ \$ \$ \$	4,142.9 8,009.2 27,552.2 14,198.7 3,997.1	\$ \$ \$ \$ \$ \$ \$	1,036.0 2,477.0 7,541.5 4,507.4 2,045.4 75.0 299.0 230.8 314.7	\$ \$ \$ \$ \$ \$	669.0 923.6 - - - - - -	\$ \$ \$ \$ \$ \$	60.0 86.4 71.4 71.4 - - 71.4 91.4		NA NA NA NA NA NA NA	34.5 21.8 14.7 4.0
Residential New Construction ENERGY STAR® HVAC EnergyWise ENERGY STAR® Lighting ENERGY STAR® Products Energy Efficiency Education Programs EERMC - Residential Residential Behavior Pilot Residential Products Pilot	2.50 3.22 3.10	\$ \$ \$ \$ \$ \$ \$ \$ \$	4,142.9 8,009.2 27,552.2 14,198.7 3,997.1	\$ \$ \$ \$ \$ \$ \$ \$	1,036.0 2,477.0 7,541.5 4,507.4 2,045.4 75.0 299.0 230.8 314.7 156.6 920.0	\$ \$ \$ \$ \$ \$ \$	669.0 923.6 - - - - - -	\$ \$ \$ \$ \$ \$	60.0 86.4 71.4 71.4 - - 71.4 91.4	\$	NA NA NA NA NA NA NA	23.7 34.5 21.8 14.7 4.0 7.1
Residential New Construction ENERGY STAR® HVAC EnergyWise ENERGY STAR® Lighting ENERGY STAR® Deducts Energy Efficiency Education Programs EERMC - Residential Residential Behavior Pilot Residential Products Pilot Community Based Initiatives - Residential Comprehensive Marketing - Residential	2.50 3.22 3.10 1.89	\$ \$ \$ \$ \$ \$ \$ \$ \$	4,142.9 8,009.2 27,552.2 14,198.7 3,997.1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,036.0 2,477.0 7,541.5 4,507.4 2,045.4 75.0 299.0 230.8 314.7 156.6 920.0	\$ \$ \$ \$ \$ \$ \$ \$	669.0 923.6 - - - - - - - - -	\$ \$ \$ \$ \$ \$ \$	60.0 86.4 71.4 71.4 - - 71.4 91.4	\$	NA N	34.5 21.8 14.7 4.0 7.1

- (1) TRC B/C Test = (Energy + Capacity + Resource Benefits) / (Program Implementation + Evaluation Costs + Customer Contribution + Shareholder Incentive) Also includes effects of free-ridership and spillover.

  (2) For Implementation Expenses derivation, see Table E-3.

(3) System Reliability may leverage some of the energy efficiency savings and benefits. Energy efficiency savings and benefits are attributed to the program in which they occur. The incremental costs of System Reliability appears below along with the resulting Total in order to illustrate that the existing energy efficiency programs are cost effective with the additional expenses. For more information please see the 2012 System Reliability Procurement Annual Plan.

System Reliability Procurement		\$ -	\$ 184.0	\$ -	\$ 25.0	\$	
Total with System Reliability	2.56	\$ 184,872.73	\$ 56,061.33	\$ 12,262.17	\$ 1,419.16	\$ 2,434.13	5.0

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#### Table E-6 2012 Program Year Goals Summary of Benefits, kW, and kWh by Program

Г						Benef	its (000's)							Load	Reduction	in kW	MW	h Saved
				Capacity					Energy			Non E	lectric					
		Gener					Win		Sum	mer							Maximum	
	Total	Summer	Winter	Trans	MDC	DRIPE	Peak	Off Peak	Peak	Off Peak	DRIPE	Resource	Non Resource	Summer	Winter	Lifetime	Annual	Lifetime
Commercial & Industrial																		
Large Commercial New Construction	\$44,317	\$6,389	\$0	\$2,733	\$11,484	\$1,080	\$8,619	\$4,496	\$5,152	\$2,217	\$2,136	-\$30	\$41	9,049	4,895	124,710	27,216	324,394
Large Commercial Retrofit	\$44,183	\$2,876	\$0	\$1,494	\$6,278	\$729	\$12,725	\$6,952	\$7,594	\$3,419	\$3,261	-\$3,862	\$2,717	5,527	4,790	67,675	39,928	486,584
Small Business Direct Install	\$30,547	\$2,271	\$0	\$1,236	\$5,192	\$620	\$8,450	\$2,049	\$5,055	\$1,007	\$1,828	-\$552	\$3,392	4,675	2,577	55,859	21,113	252,295
SUBTOTAL	\$119,047	\$11,536	\$0	\$5,463	\$22,954	\$2,429	\$29,793	\$13,497	\$17,801	\$6,643	\$7,224	-\$4,443	\$6,150	19,250	12,262	248,244	88,258	1,063,273
Low Income Residential Single Family - Low Income Services	\$7,926	\$286	\$0	\$125	\$524	\$42	\$786	\$962	\$449	\$478	\$247	\$2,051	\$1,976	482	916	5,716	3,960	44,539
SUBTOTAL	\$7,926	\$286	\$0	\$125	\$524	\$42	\$786	\$962	\$449	\$478	\$247	\$2,051	\$1,976	482	916	5,716	3,960	44,539
Non-Low Income Residential																		
Residential New Construction	\$4,143	\$354	\$0	\$105	\$440	\$31	\$175	\$221	\$112	\$110	\$52	\$845	\$1,697	246	204	5,044	812	10,153
ENERGY STAR® HVAC	\$8,009	\$819	\$0	\$499	\$2,098	\$158	\$470	\$369	\$435	\$238	\$147	\$1,046	\$1,731	2,085	2,667	22,491	1,964	24,067
EnergyWise	\$27,552	\$453	\$0	\$209	\$879	\$78	\$1,623	\$2,032	\$1,085	\$1,035	\$580	\$9,797	\$9,783	798	1,812	9,580	8,432	95,369
ENERGY STAR® Lighting	\$14,199	\$409	\$0	\$351	\$1,477	\$99	\$2,731	\$3,417	\$1,598	\$1,669	\$1,153	\$0	\$1,294	2,110	4,221	15,532	20,174	154,987
ENERGY STAR® Appliances	\$3,997	\$116	\$0	\$94	\$394	\$32	\$682	\$857	\$407	\$419	\$299	\$0	\$697	507	554	4,158	4,971	38,992
SUBTOTAL	\$57,900	\$2,151	\$0	\$1,259	\$5,288	\$398	\$5,681	\$6,896	\$3,636	\$3,471	\$2,231	\$11,688	\$15,202	5,747	9,458	56,805	36,352	323,567
TOTAL	\$104.0F2	612.072	\$0	\$6.046	\$20.7CC	\$2.0C0	\$2C 2C0	¢21.256	\$21.00Z	¢10.503	¢0.703	¢0.207	\$22.22 <b>5</b>	25 400	22.626	210.5/5	120 550	1 421 270
TOTAL	\$184,873	\$13,973	\$0	\$6,846	\$28,766	\$2,868	\$36,260	\$21,356	\$21,886	\$10,592	\$9,702	\$9,296	\$23,327	25,480	22,636	310,765	128,570	1,431,379

Table E-7 Comparison of Goals to Prior Year

	Propose	ed 2012	Appro	ved 2011	Diff	erence
	Annual		Annual		Annual	
	Energy		Energy		Energy	
	Savings		Savings		Savings	
	(MWh)	<b>Participants</b>	(MWh)	Participants	(MWh)	Participants
Program						
Commercial & Industrial						
Large Commercial New Construction	27,216	761	15,628	204	11,588	557
Large Commercial Retrofit	39,928	503	36,301	392	3,627	111
Small Business Direct Install	21,113	2,398	16,652	1,700	4,462	698
C&I SUBTOTAL	88,258	3,662	68,581	2,296	19,677	1,366
Low Income Residential						
Single Family - Low Income Services	3,960	2,501	3,091	1,813	869	688
Low Income SUBTOTAL	3,960	2,501	3,091	1,813	869	688
Non-Low Income Residential						
Residential New Construction	812	405	616	450	195	(45)
ENERGY STAR® HVAC	1,964	3,709	622	1,695	1,342	2,014
EnergyWise	8,432	13,017	8,716	11,113	(284)	1,904
ENERGY STAR® Lighting	20,174	320,000	15,088	192,503	5,086	127,497
ENERGY STAR® Appliances	4,971	19,080	5,914	15,568	(943)	3,512
Residential SUBTOTAL	36,352	356,211	30,956	221,329	5,396	134,882
TOTAL	128,570	362,374	102,628	225,438	25,942	136,936

- $(1)\ There\ are\ additional\ Low\ Income\ participants\ in\ Residential\ New\ Construction\ and\ Energy Wise.\ For\ additional\ detail,\ please\ see\ Attachment\ 1.$
- $(2) \ Proposed\ 2012\ Participants\ for\ Commercial\ \&\ Industrial\ programs\ based\ on\ average\ savings\ per\ participant\ from\ 2011\ actuals.$

Table E-8
Annual Electric Avoided Costs for Rhode Island

		F	Rhode Islan	d			DRIPE for	Installation	ns in 2012	
	Winter Peak Energy	Winter Off- Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Annual Market Capacity Value	Winter Peak Energy	Winter Off- Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Annual Market Capacity Value
Units:	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kW-yr	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kW-yr
Period:										
2012	0.056	0.048	0.066	0.047	18.75	0.009	0.007	0.010	0.005	0.000
2013	0.057	0.050	0.068	0.049	18.38	0.009	0.007	0.010	0.005	0.00
2014	0.059	0.052	0.071	0.051	18.38	0.009	0.007	0.010	0.005	0.00
2015	0.066	0.057	0.077	0.056	18.38	0.010	0.008	0.010	0.006	0.00
2016	0.066	0.058	0.084	0.057	16.55	0.009	0.007	0.011	0.005	13.79
2017	0.067	0.059	0.084	0.057	24.37	0.009	0.007	0.010	0.005	13.833
2018	0.066	0.058	0.085	0.056	34.05	0.009	0.007	0.010	0.005	13.893
2019	0.064	0.057	0.081	0.055	38.23	0.009	0.007	0.010	0.005	13.334
2020	0.065	0.054	0.074	0.055	53.52	0.004	0.003	0.005	0.003	4.435
2021	0.065	0.055	0.074	0.055	54.56	0.004	0.003	0.004	0.002	4.457
2022	0.066	0.055	0.074	0.055	81.94	0.003	0.003	0.004	0.002	44.788
2023	0.069	0.057	0.076	0.058	98.79	0.003	0.002	0.003	0.002	22.052
2024	0.071	0.057	0.078	0.059	108.15	0.003	0.002	0.003	0.002	10.526
2025	0.070	0.056	0.077	0.059	112.29					5.352
2026	0.071	0.056	0.079	0.059	114.81					2.335
2027	0.072	0.057	0.082	0.060	115.86					
2028	0.075	0.059	0.084	0.062	116.50					
2029	0.077	0.060	0.086	0.064	116.72					
2030	0.079	0.062	0.089	0.065	116.93					
2031	0.081	0.064	0.091	0.067	117.15					
2032	0.083	0.066	0.094	0.069	117.22					
2033	0.086	0.068	0.097	0.071	117.29					
2034	0.088	0.070	0.100	0.073	117.36					
2035	0.091	0.072	0.102	0.076	117.43					
2036	0.094	0.074	0.105	0.078	117.51					
2037	0.096	0.076	0.109	0.080	117.58					
2038	0.099	0.078	0.112	0.082	117.65					
2039	0.102	0.081	0.115	0.085	117.73					
2040	0.105	0.083	0.118	0.087	117.80					
2041	0.108	0.085	0.122	0.090	117.88					

From the 2011 Avoided Cost Study

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## Table E-9 Target 2012 Shareholder Incentive

Incentive Rate: 4.40%

meentive rate.	1.1070						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Target				
			Incentive -			Target	Incentive
	Spending	Incentive	Annual kWh	Annual kWh	Threshold	Incentive Per	Cap - Annual
Sector	Budget	Rate	Savings	Savings Goal	kWh Savings	kWh	kWh Savings
Low Income Residential	\$5,615,389		\$247,077	3,960,083	2,376,050	\$0.062	\$308,846
Non-Low Income Residential	\$19,837,721		\$872,860	36,352,102	21,811,261	\$0.024	\$1,091,075
Commercial & Industrial	\$29,868,045		\$1,314,194	88,257,940	52,954,764	\$0.015	\$1,642,743
Total	\$55,321,155	4.40%	\$2,434,131	128,570,125	77,142,075		\$3,042,664

- (1) Sector budget net of projected commitments and copays. For derivation, see Table E-3.
- (2) 4.40% of the sector spending budget.
- $(3) \ \ Target\ Incentive\ for\ Savings = Incentive\ Rate\ x\ Spending\ Budget\ Total\ (Column\ (1)).$
- (4) Goal for annual kWh savings by sector. This may be adjusted at year end for actual spending relative to the spending budget. If goal is adjusted, values in columns (5), (6), and (7) will be adjusted as well.
- (5) 60% of Column (4). No incentive is earned on annual kWh savings in the sector unless the Company achieves at least this threshold level of performance.
- (6) Column (4)/Column (5). Applicable to all annual kWh savings up to 125% of target savings if at least 60% of target savings have been achieved.
- (7) Column (3) x 1.25.

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#### Table G-1 National Grid Gas DSM Funding Sources in 2012 by Sector \$(000)

#### **Projections by Sector**

(1) Projected Budget (from G-2):		w Income esidential \$1,843.5	]	Non-Low Income Residential \$6,339.5		ommercial & Industrial \$5,502.2	Total \$13,685.2
Sources of Other Funding:							
(2) Actual Year-End 2011 Fund Balance and Interest:	\$	22.3	\$	155.9	\$	267.3	\$ 445.5
(3) Low Income Weatherization in Base Rates:	\$	200.0					\$ 200.0
(4) Total Other Funding:	\$	222.3	\$	155.9	\$	267.3	\$ 645.5
(5) Customer Funding Required:							\$ 13,039.8
(6) Forecasted Dth Sales:							
(7) Forecasted Dth Sales:		1,681,012		16,365,729		16,770,190	34,816,931
(8) Uncollectible Rate of 2.46%:		41,353		402,597	_	412,547	 856,497
(9) Forecasted Dth Sales:		1,639,659		15,963,132		16,357,644	33,960,435
(10) Energy Efficiency Program Charge per Dth:							\$ 0.384
(11) Currently Effective EE Program Charge							\$ 0.411
(12) Adjustment to Reflect Fully Reconciling Fund	ing Me	chanism					\$ (0.027)

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#### Table G-2 National Grid Gas Energy Efficiency Program Budget 2012

	Program		Rebates and	Sales, Technical			
	Planning and		Other Customer	Assistance and	Evaluation &	Shareholder	
Program	Administration	Marketing	Incentives	Training	Market Research	Incentive	Grand Total
NON LOW-INCOME RESIDENTIAL:							
ENERGY STAR® HVAC	\$21.9	\$153.0	\$2,629.8	\$171.3	\$0.0		\$2,975.9
EnergyWise	\$21.9	\$50.0	\$2,398.8	\$230.5	\$42.6		\$2,743.8
Residential Products Pilot	\$21.9	\$0.0	\$80.0	\$32.1	\$0.0		\$134.1
Comprehensive Marketing - Residential	\$0.0	\$130.0	\$0.0	\$0.0	\$0.0		\$130.0
EERMC - Residential	\$92.5	\$0.0	\$0.0	\$0.0	\$0.0		\$92.5
Subtotal - Non-Low Income Residential	\$158.2	\$333.0	\$5,108.5	\$433.9	\$42.6	\$263.3	\$6,339.5
LOW-INCOME RESIDENTIAL:							
Single Family Low Income Services	\$21.9	\$0.0	\$1,710.0	\$33.9	\$0.0		\$1,765.8
Subtotal - Low Income Residential	\$21.9	\$0.0	\$1,710.0	\$33.9	\$0.0	\$77.7	\$1,843.5
COMMERCIAL AND INDUSTRIAL:							
Large Commercial New Construction	\$85.9	\$103.0	\$1,583.7	\$236.0	\$126.4		\$2,135.0
Large Commercial Retrofit	\$156.6	\$134.1	\$1,951.1	\$458.8	\$146.4		\$2,846.9
Small Business Direct Install	\$9.2	\$18.9	\$39.1	\$43.4	\$0.0		\$110.6
EERMC - C&I	\$59.3	\$0.0	\$0.0	\$0.0	\$0.0		\$59.3
Comprehensive Marketing - C&I	\$0.0	\$121.0	\$0.0	\$0.0	\$0.0		\$121.0
Subtotal - Commercial & Industrial	\$310.9	\$377.0	\$3,573.9	\$738.2	\$272.8	\$229.4	\$5,502.2
Grand Total	\$491.0	\$710.0	\$10,392.4	\$1,206.0	\$315.4	\$570.4	\$13,685.2

Notes:
(1) The EnergyWise and Large Commercial Retrofit programs include services and incentives for the Low Income Sector. Please see Attachment 1 for a detailed breakdown of Low Income services and incentives provided in various programs outside of the Low Income sector.

<sup>(2)</sup> Comprehensive Marketing is a multi-sector initiative with funding from each sector. Please see Attachment 4 for the program description.

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### Table G-3 Derivation of the 2012 Spending & Implementation Budgets

	Proposed 2012 Budget From G-2 (\$000)	EERMC Costs (\$000)	Shareholder Incentive (\$000)	Evaluation Costs (\$000)	Eligible Sector Spending Budget for Shareholder Incentive on G-9 (\$000) <sup>1</sup>	Implementation Expenses for Cost-Effectiveness on G-5 (\$000) <sup>2</sup>
NON LOW-INCOME RESIDENTIAL:						
ENERGY STAR® HVAC	\$ 2,975.9			\$ -		\$ 2,975.9
EnergyWise	\$ 2,743.8			\$ 42.6		\$ 2,701.1
Residential Products Pilot	\$ 134.1			\$ -		\$ 134.1
Comprehensive Marketing - Residential	\$ 130.0			\$ -		\$ 130.0
EERMC - Residential	\$ 92.5	\$ 92.5		\$ -		\$ 92.5
Shareholder Incentive	\$ 263.3		\$ 263.3			\$ -
Subtotal - Non-Low Income Residential	\$ 6,339.5	\$ 92.5	\$ 263.3	\$ 42.6	\$ 5,983.8	\$ 6,033.6
LOW-INCOME RESIDENTIAL:						
Single Family Low Income Services	\$ 1,765.8			\$ -		\$ 1,765.8
Shareholder Incentive	\$ 77.7		\$ 77.7			\$ -
Subtotal - Low Income Residential	\$ 1,843.5	\$ -	\$ 77.7	\$ -	\$ 1,765.8	\$ 1,765.8
COMMERCIAL AND INDUSTRIAL:						
Large Commercial New Construction	\$ 2,135.0			\$ 126.4		\$ 2,008.6
Large Commercial Retrofit	\$ 2,846.9			\$ 146.4		\$ 2,700.5
Small Business Direct Install	\$ 110.6			\$ -		\$ 110.6
EERMC - C&I	\$ 59.3	\$ 59.3	-	\$ -		\$ 59.3
Comprehensive Marketing - C&I	\$ 121.0			\$ -		\$ 121.0
Shareholder Incentive	\$ 229.4		\$ 229.4			\$ -
Subtotal - Commercial & Industrial	\$ 5,502.2	\$ 59.3	\$ 229.4	\$ 272.8	\$ 5,213.5	\$ 5,000.0
Grand Total	\$ 13,685.2	\$ 151.8	\$ 570.4	\$ 315.4	\$ 12,963.1	\$ 12,799.4

- (1) Eligbile Sector Spending Budget = Budget from G-2 minus EERMC Costs and Shareholder Incentive
- (2) Implementation Expenses = Budget from G-2 minus Evaluation Costs and Shareholder Incentive

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Table G-4
Proposed 2012 Budget Compared to Approved Compliance Filing Budget for 2012 (\$000)

		Proposed Budget	July 2011 proved Gas	_	
	201	12 from G-2	Budget	D	ifference
Non-Low Income Residential					
ENERGY STAR® HVAC	\$	2,975.9	\$ 1,465.9	\$	1,510.0
EnergyWise	\$	2,701.1	\$ 1,174.7	\$	1,526.4
Residential Products Pilot	\$	134.1	\$ 49.4	\$	84.7
EERMC - Residential	\$	92.5	\$ 82.0	\$	10.5
Comprehensive Marketing - Residential	\$	130.0	\$ 80.2	\$	49.8
Subtotal - Non-Low Income Residential	\$	6,033.6	\$ 2,852.2	\$	3,181.4
				\$	-
Low Income Residential				\$	-
Single Family Low Income Services	\$	1,765.8	\$ 983.9	\$	781.9
Subtotal - Low Income Residential	\$	1,765.8	\$ 983.9	\$	781.9
				\$	-
Commercial & Industrial				\$	-
Large Commercial New Construction	\$	2,008.6	\$ 1,012.5	\$	996.1
Large Commercial Retrofit	\$	2,700.5	\$ 1,142.0	\$	1,558.5
Small Business Direct Install	\$	110.6	\$ 106.3	\$	4.3
EERMC - C&I	\$	59.3	\$ 50.9	\$	8.4
Comprehensive Marketing - C&I	\$	121.0	\$ 23.7	\$	97.3
Subtotal Commercial & Industrial	\$	5,000.0	\$ 2,335.4	\$	2,664.6
				\$	-
Other Expense Items				\$	-
Company Incentive	\$	570.4	\$ 274.5	\$	295.9
Evaluation	\$	315.4	\$ 199.1	\$	116.3
Subtotal Other Items	\$	885.8	\$ 473.6	\$	412.2
TOTAL BUDGET	\$	13,685.2	\$ 6,645.1	\$	7,040.2

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#### Table G-5 Calculation of Program Year Cost-Effectiveness 2012 Values in \$000

		Rhode Island				Program							TRC
		Benefit/		Total	Iı	mplementation		Customer	I	Evaluation	Shareholder	5	Lifetime
		Cost		Benefit		Expenses	(	Contribution		Cost	Incentive		MMBtu
Residential Programs													
Energy Star® HVAC		2.88	\$	18,936.9	\$	2,975.9	\$	3,589.7	\$	-	NA	\$	4.82
EnergyWise		1.99	\$	6,898.8	\$	2,701.1	\$	718.4	\$	42.6	NA	\$	7.27
Residential Products Pilot			\$	-	\$	134.1	\$	-	\$	-	NA		
Comprehensive Marketing			\$	-	\$	130.0	\$	-	\$	-	NA		
EERMC Assessment-Residential			\$	-	\$	92.5	\$	-	\$	-	NA		
	SUBTOTAL	2.43	\$	25,835.7	\$	6,033.6	\$	4,308.1	\$	42.6	263.29	\$	5.65
Low Income Programs													
Single Family Low Income Services		1.61	\$	2,975.9	\$	1,765.8	\$	-	\$	-	77.70	\$	11.47
Large Commercial & Industrial													
Large Commercial Retrofit		1.91	\$	8,917.1	\$	2,700.5	\$	1,828.1	\$	146.4	NA	\$	4.93
Large Commercial New Construction		1.56	\$	5,803.6	\$	2,008.6	\$	1,579.2	\$	126.4	NA	\$	5.51
Small Business Direct Install		2.98	\$	348.3	\$	110.6	\$	6.2	\$	-	NA		
Comprehensive Marketing			\$	-	\$	121.0	\$	-	\$	-	NA		
EERMC Assessment-C&I	•		\$	-	\$	59.3	\$	-	\$	-	NA		
	SUBTOTAL	1.69	\$	15,069.0	\$	5,000.0	\$	3,413.4	\$	272.8	229.39	\$	4.73
			L		Ļ		L_					L.	
	TOTAL	2.05	\$	43,880.6	\$	12,799.4	\$	7,721.5	\$	315.4	570.38	\$	5.72

#### Notes

(1) The TRC Test is equal to the expected dollar value of lifetime resource benefits divided by the sum of Implementation Expenses, Customer Contribution, Evaluation Expenses, and the target shareholder incentive.

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#### Table G-6 Summary of Benefits and Savings by Program

	2012	2				
			Benefits (\$000)		MMBTU	Gas Saved
		Total(1)	Natural Gas(2)	Non-Gas Benefit (3)	Annual	Lifetime(4)
Commercial & Industrial						
Large Commercial New Construction		\$5,803.6	\$5,800.3	\$3.3	39,485	673,830
Large Commercial Retrofit		\$8,917.1	\$8,149.4	\$767.7	75,814	948,796
Small Business Direct Install		\$348.3	\$348.3	\$0.0	5,013	28,701
EERMC - C&I		NA	NA	\$0.0	NA	NA
	SUBTOTAL	\$15,069.0	\$14,298.0	\$771.0	120,312	1,651,327
Low Imcome Residential						
Single Family Low Income Services		\$2,975.9	\$1,361.9	\$1,614.1	7,697	153,932
	SUBTOTAL	\$2,975.9	\$1,361.9	\$1,614.1	7,697	153,932
Non Low Income Residential						
EnergyWise		\$6,898.8	\$4,216.1	\$2,682.7	23,827	476,546
Energy Star® HVAC		\$18,936.9	\$11,828.5	\$7,108.4	79,712	1,361,531
Residential Products Pilot		\$0.0	\$0.0	\$0.0	-	-
EERMC - Residential		NA	NA	\$0.0	NA	NA
	SUBTOTAL	\$25,835.7	\$16,044.6	\$9,791.1	103,540	1,838,077
	TOTAL	\$43,880.6	\$31,704.5	\$12,176.2	231,548	3,643,336
	IUIAL	φ+3,000.0	φ31,704.3	φ14,170.4	431,340	3,043,330

- 1) Equal to the sum of Natural Gas benefits and Participant Resource benefits.
- 2) The value of lifetime natural gas savings valued using the avoided gas costs quantified in "Avoided Energy Supply Costs in New England," August, 2009, prepared by Synapse Energy Economics for the Avoided-Energy-Supply-Component Study Group. This is also the source of the electric avoided costs that have been used to assess electric energy efficiency program cost-effectiveness.
- 3) Non-Gas Benefits are equal to the dollar value of expected electricity savings and non-resource savings that have not been included in National Grid's electric energy efficiency plans for 2011.
- 4) Lifetime savings are equal to annual savings multiplied by the expected life of measures expected to be installed in each program.

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#### Table G-7 Comparison of Goals 2012

	2012					
	Proposed	1 2012	Approved	July 2011	Differe	ence
			Annual			
	Annual Energy		Energy		Annual Energy	
	Savings		Savings		Savings	
	(MMBTU		(MMBTU		(MMBTU	
	Natural Gas)	Participants	Natural Gas)	<b>Participants</b>	Natural Gas)	Participants
Program						
Commercial & Industrial						
Large Commercial New Construction	39,485	624	18,031	176	21,454	448
Large Commercial Retrofit	75,814	1,239	35,445	558	40,369	681
Small Business Direct Install	5,013	103	2,302	48	2,711	55
EERMC - C&I						
SUBTOTAL	120,312	1,966	55,779	782	64,533	1,184
Low Income Residential						
Single Family Low Income Services	7,697	430	3,848	215	3,848	215
SUBTOTAL	7,697	430	3,848	215	3,848	215
Non-Low Income Residential						
Energy Wise	23,827	2,000	9,334	1,126	14,493	874
Energy Star® HVAC	79,712	12,211	33,243	4,100	46,470	8,111
Residential Products Pilot		300		NA	300	NA
EERMC - Residential						
SUBTOTAL	103,540	14,511	42,577	5,226	60,963	9,285
TOTAL	231,548	16,907	102,203	6,223	129,344	10,684

- (1) There are additional Low Income participants in EnergyWise and Large Commerical Retrofit. For additional detail, please see Attachment 1.
- (2) Proposed 2012 Participants for Commerical & Industrial programs based on average savings per participant from 2011 actuals and projected prescriptive participants.

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#### Table G-8 Avoided Costs 2012

Used in Benefit-Cost Model
COMMERCIAL & INDUSTRIAL

	Non	Hot	Hot		
	Heating	Water	Heating	All	
Year		annual			
2011	5.97	5.97	7.74	7.46	
2012	6.49	6.49	8.21	7.94	
2013	6.70	6.70	8.42	8.15	
2014	6.98	6.98	8.81	8.51	
2015	7.56	7.56	9.28	9.01	
2016	7.59	7.59	9.30	9.04	
2017	7.57	7.57	9.29	9.02	
2018	7.59	7.59	9.32	9.05	
2019	7.64	7.64	9.37	9.10	
2020	7.73	7.73	9.47	9.20	
2021	7.83	7.83	9.58	9.30	
2022	7.96	7.96	9.75	9.46	
2023	8.25	8.25	10.03	9.74	
2024	8.44	8.44	10.20	9.92	
2025	8.51	8.51	10.29	10.00	
2026	8.64	8.64	10.42	10.14	
2027	8.77	8.77	10.56	10.27	
2028	8.90	8.90	10.69	10.40	
2029	9.03	9.03	10.83	10.54	
2030	9.16	9.16	10.97	10.67	
2031	9.30	9.30	11.11	10.81	
2032	9.43	9.43	11.25	10.95	
2033	9.57	9.57	11.40	11.10	
2034	9.71	9.71	11.55	11.24	
2035	9.86	9.86	11.69	11.39	
2036	10.00	10.00	11.85	11.54	
2037	10.15	10.15	12.00	11.69	
2038	10.30	10.30	12.15	11.84	
2039	10.45	10.45	12.31	11.99	
2040	10.61	10.61	12.47	12.15	
2041	10.77	10.77	12.63	12.31	

COMMERCIAL & INDUSTRIAL							
Non							
Heating	Heating	All					
annual							
5.91	7.17	6.79					
6.43	7.64	7.27					
6.64	7.86	7.49					
6.92	8.24	7.84					
7.50	8.71	8.34					
7.53	8.74	8.37					
7.51	8.72	8.35					
7.53	8.75	8.38					
7.58	8.80	8.43					
7.67	8.90	8.53					
7.77	9.01	8.63					
7.90	9.18	8.80					
8.19	9.46	9.07					
8.38	9.63	9.25					
8.45	9.72	9.33					
8.58	9.85	9.47					
8.71	9.99	9.60					
8.84	10.13	9.74					
8.97	10.26	9.87					
9.10	10.40	10.01					
9.24	10.55	10.15					
9.37	10.69	10.29					
9.51	10.84	10.44					
9.66	10.99	10.58					
9.80	11.14	10.73					
9.95	11.29	10.88					
10.09	11.44	11.03					
10.24	11.60	11.19					
10.40	11.76	11.35					
10.55	11.92	11.50					
10.71	12.08	11.67					

ALL
RETAIL
END USES
7.10
7.58
7.80
8.15
8.65
8.68
8.66
8.69
8.74
8.84
8.94
9.10
9.38
9.56
9.64
9.78
9.91
10.04
10.18
10.32
10.46
10.60
10.74
10.89
11.03
11.18
11.34
11.49
11.64
11.80
11.96

From 2011 Avoided Cost Study Page D3

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## Table G-9 Target Shareholder Incentive 2012

Incentive Rate: 4.40%

	(1)	(2)	(3)	(4)	(5)
	Eligible				
	Spending	Target	Annual	Threshold	Target Incentive
	Budget	Incentive	Savings Goal	Savings	Per Annual
Sector	\$(000)	\$(000)	(MMBTU)	(MMBTU)	MMBTU
Low Income Residential	\$1,766	\$77.7	7,697	4,618	\$10.095
Non-Low Income Residential	\$5,984	\$263.3	103,540	62,124	\$2.543
Commercial & Industrial	\$5,214	\$229.4	120,312	72,187	\$1.907
Total	\$ 12,963	\$570.4	231,548	138,929	\$2.463

- (1) Sector budget excluding the EERMC Assessment and Shareholder Incentives. See Table G-3.
- (2) Equal to the incentive rate (4.40%) x Column (1).
- (3) See Table G-7
- (4) 60% of Column (3). No incentive is earned on annual MMBTU savings in the sector unless the Company achieves at least this threshold level of performance.
- (5) Column (2)\*1000/Column (3)