

September 7, 2011

**VIA HAND DELIVERY & ELECTRONIC MAIL**

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

**RE: National Grid 2012-2014 Energy Efficiency and System Reliability Procurement Plan**

Dear Ms. Massaro:

Enclosed please find an original and nine (9) copies of National Grid's<sup>1</sup> 2012-2014 Energy Efficiency and System Reliability Procurement Plan ("Plan") for approval by the Rhode Island Public Utilities Commission (the "Commission") in compliance with R.I.G.L. § 39-1-27.7 and the revised Energy Efficiency Procurement Standards and System Reliability Procurement Standards ("Standards") approved by the Commission in Docket 4202.

The Plan is comprised of two parts: Energy Efficiency Procurement and System Reliability Procurement. Both parts are the product of many meetings and discussions with the members of the Rhode Island Energy Efficiency Collaborative and representatives of the Rhode Island Energy Efficiency Resource Management Council ("EERMC"). The Energy Efficiency Procurement part of the Plan is further informed by the EERMC's Opportunities Report, Phase II, which was completed in September 2010.

This Plan is submitted for the Commission's review and approval as a framework for the detailed annual Energy Efficiency Program Plans ("EE Program Plans") and System Reliability Annual Reports ("SRP Reports"). These annual filings will be filed with the Commission for review and approval on November 1, 2011 and subsequently on November 1 of each year prior to the subject program year.

Highlights of this Plan include:

- Approximately doubling electric energy efficiency savings, relative to 2011, and increasing gas savings by almost 250%, by 2014, consistent with EERMC's Electric and Natural Gas Least Cost Procurement Efficiency Savings Targets for Years 2012 – 2014 approved by the Commission in Docket 4202.

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<sup>1</sup> The Narragansett Electric Company d/b/a National Grid ("National Grid" or the "Company").

- Description of the implementation initiatives that will be relied on to meet the unprecedented levels of savings. These are centered around four themes:
  - Creating energy efficiency opportunities for every Rhode Island customer.
  - Targeting customer segments through marketing and focused program delivery.
  - Use of the latest innovations in energy efficiency technology and program delivery.
  - Focusing on economic mechanisms to facilitate participation, create economic benefits, and lessen the cost impact of the program on Rhode Island consumers.
  
- A commitment by the Company to update the illustrations of costs and savings in its annual EE Program Plans using the latest information on costs, savings, and program performance, and to review these assumptions annually with the EERMC.

While this Plan is submitted by the Company alone, it reflects the input of many parties, including TEC-RI, the Division of Public Utilities and Carriers, Environment Northeast, EERMC members, and the EERMC consulting team from VEIC. The EERMC itself voted to endorse the Plan at its meeting of August 11, 2011. Many of the Plan components represent areas of significant consensus among the Collaborative Subcommittee members, which the Company anticipates will lead their organizations to submit letters of support for many, if not all, elements of the Plan.

National Grid looks forward to assisting the Commission in the review of this Plan. Thank you for your attention to this transmittal. If you have any questions regarding this filing, please feel free to contact me at 401-784-7288.

Very truly yours,



Jennifer Brooks Hutchinson

Enclosures

cc: Docket 4202 Service List  
Leo Wold, Esq.  
Jon Hagopian, Esq.  
Steve Scialabba, Division

# National Grid 2012-2014 Energy Efficiency and System Reliability Procurement Plan

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## Introduction

"The Comprehensive Energy Conservation, Efficiency and Affordability Act of 2006" ("the Act") provides the statutory basis for Least Cost Procurement in the State of Rhode Island.<sup>1</sup> The general purposes of the Act are (1) to provide Rhode Island residents, institutions and businesses the benefit of stability through diversification of energy resources, energy conservation, efficiency, demand management and prudent procurement; (2) to facilitate the development of renewable energy resources; (3) to make the cost of energy more affordable by mitigating demand and rates charged to low-income households; and (4) to strengthen energy planning, program administration, management, and oversight in a manner that is publicly accountable and responsive.<sup>2</sup>

Specifically, the Act provides for Least Cost Procurement of system reliability and energy efficiency and conservation resources. System reliability procurement includes, but is not limited to, renewable energy resources, distributed generation, targeted energy efficiency, direct load control, and demand response. Energy efficiency procurement includes "procurement of energy efficiency and energy conservation measures that are prudent and reliable and when such measures are lower cost than acquisition of additional supply, including supply for periods of high demand."<sup>3</sup>

The Least Cost Procurement law, R.I.G.L. §39-1-27.7, requires that "each electrical distribution company shall submit to the Commission on or before September 1, 2008, and triennially on or before September 1, thereafter through September 1, 2017, a plan for system reliability and energy efficiency and conservation procurement."<sup>4</sup> The law further specifies that the plan should include "measurable goals and target percentages for each energy resource, pursuant to standards established by the Commission, including efficiency, distributed generation, demand response, combined heat and power, and

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<sup>1</sup> See P.L. 2006, Ch. 236, S2903 Sub B As Amended; P.L. 2006 Ch. 237, H8025 Sub A As Amended (Enacted June 29, 2006).

<sup>2</sup> *Id.*

<sup>3</sup> R.I.G.L. §39-1-27.7 (c)(4)

<sup>4</sup> R.I.G.L. §39-1-27.7 (c)(4)

renewables.”<sup>5</sup> Rhode Island General Laws § 39-1-27.7 was amended in May 2010 to extend Least Cost Procurement to natural gas and to create a fully reconciling funding mechanism to fund all investments in electric and natural gas energy efficiency that are cost-effective and lower cost than the acquisition of additional supply.<sup>6</sup> In 2011, 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 in § 39-2-1.2 (b) and (f) are consistent and run concurrently with all of the Least Cost Procurement provisions of § 39-1-27.7.<sup>7</sup>

This 2012-2014 Energy Efficiency and System Reliability Procurement Plan (“Plan”) is the second triennial electric plan and the first triennial natural gas plan submitted in fulfillment the Least Cost Procurement requirements by the Narragansett Electric Company d/b/a National Grid (“National Grid” or the “Company”) for the State of Rhode Island. The Plan is divided into two parts: Energy Efficiency Procurement and System Reliability Procurement.

The Commission approved the Rhode Island Energy Efficiency Resources Management Council’s (“EERMC” or “Council”) Electric and Natural Gas Least Cost Procurement Efficiency Savings Targets for Years 2012 – 2014 in Compliance with R.I.G.L. §39-1-27.7.1 (“2012-2014 Savings Targets”) in Docket 4202, at the Open Meeting on June 7, 2011. The 2012-2014 Savings Targets set a goal of meeting 2.5% and 1.2% of Rhode Island’s 2009 electric and natural gas load, respectively, through energy efficiency by 2014, and provide high-level guidance for this Plan.<sup>8</sup> The Plan is consistent with the revised Energy Efficiency Procurement Standards and System Reliability Procurement Standards (“Standards”) also approved in Docket 4202 at the Open Meeting on June 7, 2011, and with the cost-effectiveness requirements set forth in R.I.G.L. §39-1-27.7.

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<sup>5</sup> R.I.G.L. §39-1-27.7

<sup>6</sup> R.I.G.L. § 39-1-27.7(c)(5). 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>7</sup> See P.L. 2011 Ch. 028, S0293; P.L. 2011 Ch. 19 H5281 (Enacted May 27, 2011).

<sup>8</sup> Rhode Island Public Utilities Commission, “EERMC’s introduction and summary of proposed Energy Efficiency Savings Targets.” Filed September 1, 2010, Docket 4202.

The purpose of this Plan is to establish an overarching strategy for the next three years that will lead to successfully meeting the goals of Least Cost Procurement.<sup>9</sup> This Plan was developed in collaboration with members of the Collaborative Subcommittee. Members include the Division of Public Utilities and Carriers (“Division”) and Synapse Energy Economics, the Division’s consultant, The Energy Council of Rhode Island (“TEC-RI”), ENE (Environment Northeast), EERMC members, and the EERMC’s consultant team led by Vermont Energy Investment Corporation (VEIC). The EERMC voted to endorse this Plan on August 11, 2011.<sup>10</sup>

National Grid seeks approval of this Plan to guide the development of the 2012, 2013, and 2014 Energy Efficiency Program Plans (“EE Program Plans”) and Annual System Reliability Plan Reports (“SRP Reports”)<sup>11</sup> based on the framework that the Plan establishes. The framework includes annual energy savings targets, transformative energy efficiency themes and implementation strategies, funding plans, shareholder incentive mechanism and system reliability procurement, and will provide the foundation for the more detailed EE Program Plans and SRP Reports. These components are discussed in subsequent sections following a review of the overall results, energy savings, and economic benefits under the first Least Cost Procurement Plan for 2009-2011 that was approved by the Commission on April 17, 2009.

Table 1 below summarizes this Plan’s electric and natural gas energy efficiency savings for each of the next three years, estimated customer benefits, estimated benefit-cost ratios, and the estimated budget to procure the cost-effective energy and customer savings each year. In accordance with Rhode Island law and the Standards the Company seeks the Commission’s approval of these 2012-2014 Savings Targets and preliminary

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<sup>9</sup> As specified by the Standards, the Company will submit to the Public Utilities Commission an Annual Energy Efficiency Program Plan (“EE Program Plan”) and an Annual System Reliability Plan Report (“SRP Report”) on November 1 of each year that will each detail specific steps towards reaching energy efficiency goals and least cost procurement lower than the cost of supply. An EE Program Plan and an SRP Report for 2012 will be submitted to the Commission on or before November 1, 2011.

<sup>10</sup> Consistent with the Council’s powers and duties set forth in R.I.G.L. § 42-140.1-5.

<sup>11</sup> The 2012 Annual EE Program Plan and the 2012 SRP Report will be filed with the Commission for approval by November 1, 2011. Subsequently, a proposed annual EE Program Plan and an SRP Report will be filed with the Commission for review and consideration by November 1, 2013 and November 1, 2014.

budget estimates to provide guidance to the Company as it develops its annual EE Program Plans and SRP Reports. As prescribed by the Standards, on or before November 1 of each year, the Company will submit a detailed EE Program Plan for the upcoming program year for the Commission's review and consideration.

Table 1. 2012-14 Three-Year Plan Summary

<b>Electric Programs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Annual MWh Savings	128,570	158,820	189,068
Lifetime MWh Savings	1,546,997	1,609,419	1,960,550
Savings as a Percent of 2009 Electric Load	1.7%	2.1%	2.5%
Total Benefits	\$198,836,955	\$204,451,077	\$251,198,316
Total Spending*	\$64,385,628	\$75,978,573	\$88,236,598
Benefit Cost Ratio	2.47	2.20	2.26
TRC Cents per lifetime kWh	\$0.052	\$0.058	\$0.056
Utility Cost per lifetime kWh	\$0.040	\$0.045	\$0.044
EE Program Charge per kWh	\$0.0069	\$0.0086	\$0.0098
Participants	288,561	538,561	560,730
*Total Spending include implementation, evaluation, commitments, EERMC, and shareholder incentive; does not include any incremental funds for System Reliability Procurement			

<b>Gas Programs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Annual MMBtu Savings	231,550	284,734	355,917
Lifetime MMBtu Savings	3,316,495	4,420,967	5,526,209
Savings as a Percent of 2009 Gas Load	0.6%	0.8%	1.0%
Total Benefits	\$31,280,215	\$43,686,179	\$56,214,055
Total Spending*	\$13,687,795	\$18,046,503	\$22,602,890
Benefit Cost Ratio	1.39	1.47	1.51
TRC Dollars per lifetime MMBtu	\$6.77	\$6.72	\$6.73
Utility Cost per lifetime MMBtu	\$4.08	\$4.04	\$4.05
EE Program Charge per Dth	\$0.439	\$0.584	\$0.732
Participants	14,099	17,337	21,671
*Total Spending include implementation, evaluation, commitments, EERMC, and shareholder incentive			

Table 1 shows that the three-year electric energy savings replicate the Commission's June 7, 2011 decision regarding efficiency targets in Docket 4202: meeting 1.7%, 2.1%, and

2.5% of 2009 electric load through new energy efficiency measures in 2012, 2013, and 2014 respectively. Cumulatively, this plan will enable Rhode Island customers to reduce baseline energy usage by 6.3% from the start of 2012 to the end of 2014, in addition to the cumulative savings of 2.5% delivered by the 2009-2011 Energy Efficiency Procurement Plan. The Company will be able to meet these saving goals cost-effectively through existing measures and new program innovations and enhancements.

Table 1 shows, however, that while the proposed natural gas savings of 0.6%, 0.8%, and 1.0% of 2009 gas load through new energy efficiency measures in 2012, 2013, and 2014 respectively are generally consistent with those approved by the Commission in Docket 4202, they are slightly lower. 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 and include lower natural gas supply costs, as determined by the 2011 Avoided Cost Study,<sup>12</sup> and updated realization rates from evaluation studies. The Company, working with the EERMC and the Collaborative Subcommittee, examined many planning assumptions and agreed on slightly lower natural gas savings levels that can be met cost-effectively based on the information available at this time.

However, as additional evaluation studies help refine the planning assumptions, more certainty is gained with regard to natural gas supply costs, and program advancements and EE delivery innovation continue, it may become possible to cost-effectively reach the original natural gas savings targets in 2013 and 2014. In developing its annual energy efficiency plans each year, National Grid will re-examine the planning assumptions, natural gas supply costs and corresponding budgets and if applicable, will propose different natural gas savings targets that cost-effectively reach, or get as close as possible to reaching, the targets approved in Docket 4202. In addition, as more robust data becomes available regarding the expected cost and energy savings of the new program enhancements and innovations described in this Plan from field experience, new

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<sup>12</sup> “Avoided Energy Supply Costs in New England: 2011 Report,” prepared by Synapse Energy Economics for the Avoided-Energy-Supply-Component (AESC) Study Group, July 2011. <http://www.synapse-energy.com/Downloads/SynapseReport.2011-07.AESC.AESC-Study-2011.11-014.pdf>.

evaluation studies, or further research, the cost per unit of lifetime energy saved will be reviewed and updated in each annual EE Program Plan. It is possible that the cost to procure a unit of lifetime energy saved will change from the values cited in this Plan. The Company will strive to achieve a lower cost per unit of lifetime energy saved than estimated in this three-year procurement Plan through its submission of detailed and updated Annual EE Program Plans on November 1, 2012 and November 1, 2013.

The EERMC will continue to provide input to, help to oversee, and conduct an in-depth review of the cost-effectiveness of each EE Program Plan that is submitted to the Commission annually on November 1, pursuant to R.I.G.L. § 39-1-27.7(c)(5) and Section 1.2 A.4.a(5) of the Standards, as approved by the Commission on June 7, 2011.

## **Energy Efficiency Procurement**

### ***History of Energy Efficiency under Least Cost Procurement***

In 2008, the Company submitted the 2009-2011 Energy Efficiency Procurement Plan for electric programs, which the Commission approved in Order 19621, and subsequently the Company submitted Annual Energy Efficiency Program Plans, approved in Orders 19608, 20005, 20308 respectively. The 2009-2011 Energy Efficiency Procurement Plan and related Annual EE Program Plans guided the Company to significantly increase investments in energy efficiency measures for homeowners and businesses where cost-effective and less costly than supply. In 2009, the Company served 106,525 participants and successfully reached the goals by saving 81,543 annual MWh, and 899,331 lifetime MWh through energy efficiency, an increase of 35% over the annual MWh saved in 2008. In 2010, Rhode Island's electric energy efficiency programs served over 150,000 participants, resulting in 81,275 annual MWh and 929,242 lifetime MWh saved at a total resource cost of \$0.037 per lifetime kWh saved. These energy efficiency measures will

save customers \$139.5 million over the lifetime of the efficiency measures<sup>13</sup> and avoid over 432,000 short tons of equivalent greenhouse gas emissions. The electric and natural gas efficiency investments made in 2010 are also estimated to add over \$170 million to Rhode Island's Gross State Product and create more than 2,000 job-years of employment.<sup>14</sup> In 2011, the Company continued on the trajectory of savings approved for the first three-year plan, and as of this summer, is on course to meet the 2011 electric savings goal of 102,627 annual MWh and 1,189,306 lifetime MWh.

Table 2 shows the electric savings from the 2009-2011 Energy Efficiency Procurement Plan. The table includes actual savings and results for 2009 and 2010 and planned results for 2011.

Table 2. Summary of 2009-2011 Three Year Plan (Electric)

<b>Electric Programs</b>	<b>2009 (Actual)</b>	<b>2010 (Actual)</b>	<b>2011 (Planned)</b>
Annual MWh Savings	81,543	81,275	102,627
Lifetime MWh Savings	899,331	929,242	1,189,306
Total Benefits	\$123,044,700	\$128,864,300	\$178,160,100
Total Spending*	\$29,535,800	\$29,711,900	\$49,035,700
Benefit Cost Ratio	3.02	3.73	2.86
TRC Cents per lifetime kWh	4.5	3.7	5.2
EE Program Charge per kWh	\$0.0032	\$0.0032	\$0.0053
Participants	106,525	153,611	225,438

\*Total Spending include implementation, evaluation, commitments, EERMC, and shareholder incentive

Sources:

2009 DSM Year-End Report

2010 DSM Year-End Report

2011 Annual Plan

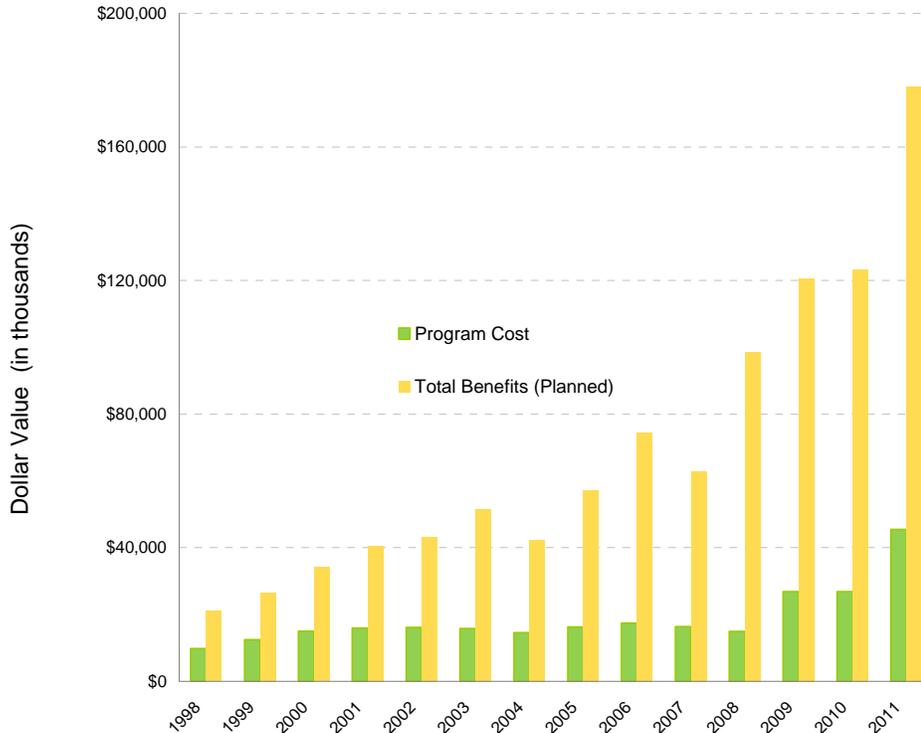
The benefits of electric energy efficiency programs are clear. Since the beginning of Least Cost Procurement in 2009, lifetime energy savings for Rhode Island customers have increased by 50 percent over historical energy efficiency efforts and the total

<sup>13</sup> Measure life is defined as the life of an energy consuming measure, including its equipment life and the duration of an energy consuming measure, taking into account business turnover, early retirement of installed equipment, and other reasons measures might be removed or discontinued. Source: NEEP Glossary of Terms and Acronyms, Version 1. Available: [www.neep.org](http://www.neep.org)

<sup>14</sup> ENE (Environment Northeast) (2009), "Energy Efficiency: Engine of Economic Growth." Additional information and documentation on the macroeconomic multipliers for the economic growth and job creation benefits of investing in cost-effective energy efficiency was filed by ENE on June 20, 2011 in RI PUC Docket 4209.

economic benefit for the state will have doubled from 2008 levels – when Least Cost Procurement began for electric consumers – by the end of 2011 (see Chart 1). Total benefits include the avoided cost of electricity, avoided cost of transmission and distribution, as well as non-electric benefits such as water and maintenance savings.

**Chart 1. Electric Energy Efficiency Program Cost vs. Total Economic Benefits**



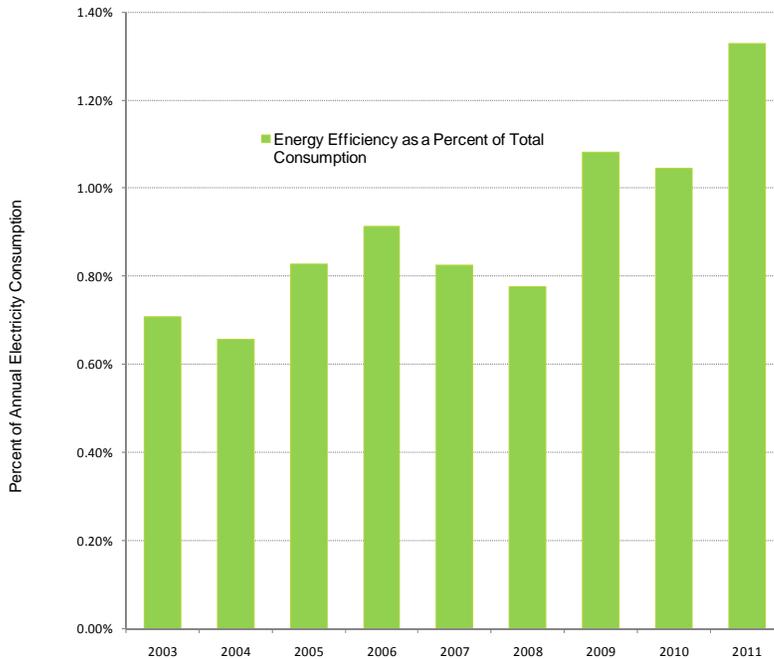
## Opportunity Report

On September 1, 2010, the EERMC released the results of an 18-month study designed to identify opportunities for National Grid to invest in cost-saving energy efficiency resources on behalf of Rhode Island customers. “The Opportunity for Energy Efficiency that is Cheaper than Supply in Rhode Island,” commissioned by the EERMC and conducted by KEMA, Inc., was submitted as part of the 2012-2014 Savings Targets in Docket 4202<sup>15</sup> and the results were used to set targets for future expansion of Rhode

<sup>15</sup> Kema, Inc. "The Opportunity for Energy Efficiency that is Cheaper than Supply in Rhode Island Phase II", August 30, 2010, available at: <http://www.ripuc.org/eventsactions/docket/4202page.html>

Island’s energy efficiency programs. The Commission approved these targets in Docket 4202 on June 7, 2011; the targets guide this Plan and set a goal of meeting 2.5% of Rhode Island’s 2009 electric load through energy efficiency measures by 2014.<sup>16</sup> As illustrated in Chart 2, since the beginning of Least Cost Procurement, Rhode Island has steadily increased the percentage of its electric energy needs met through least-cost energy efficiency from 0.78% in 2008 to 1.33% in 2011. The approved goals represent a continuation of this trend.

**Chart 2. Energy Efficiency as a Percent of Total Annual Electricity Consumption**



The Opportunity Report represents Phase II of a two-part study of the opportunities for energy efficiency and clean energy resources in Rhode Island. KEMA conducted more than 450 surveys with Rhode Island residential electric customers and on-site visits to commercial and industrial facilities over 18 months in order to identify the magnitude of cost-effective efficiency resources that are cheaper than supply available in Rhode Island. The study finds that, cumulatively over a ten year period, 29% of Rhode Island’s electric

<sup>16</sup> Rhode Island Public Utilities Commission, “EERMC’s introduction and summary of proposed Energy Efficiency Savings Targets.” Filed September 1, 2010, Docket 4202

energy needs, or 2,140,000 MWh, can be met through cost-effective energy efficiency measures that are cheaper than supply options.<sup>17</sup>

Some of the key findings of the study include:

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

Some of the key recommendations from the study include:<sup>18</sup>

- Explore expanding existing programs and/or adding new strategies to enable National Grid's overall program efforts to deliver the all cost-effective energy efficiency savings potential identified.
- The EERMC and National Grid should monitor development in LEDs (light emitting diodes) in all markets.
- Begin behavioral change programs on a pilot basis.

These findings factor into National Grid's Energy Efficiency Implementation Strategy, beginning on page 16 of this Plan.

### **Natural Gas Energy Efficiency**

The Company began offering natural gas efficiency programs in mid-2007. Since then, National Grid has worked on integrating gas offerings with electric offerings in order to deliver seamless, "whole house" efficiency programs to customers. From 2009 to mid-2011, funding available for gas energy efficiency was limited to \$0.15 per dekatherm.

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<sup>17</sup> The Phase II Opportunity Report finds that 29% of Rhode Island's electric needs may be met over 10 years through cost-effective energy efficiency measures that are less expensive than traditional supply options. This is referred to in the report as "Economic Potential."

<sup>18</sup> Kema Inc, "Opportunities Report," August 2010, page 1-19.

The limited funding kept energy savings and benefits relatively flat during the period. At the same time, customers have increasingly demanded more natural gas efficiency installations and services and National Grid has not been able to fully satisfy that demand. For example, in March 2010, the state experienced disastrous flooding resulting in hundreds of millions of dollars of damage to homes and businesses. As homeowners began to rebuild, there was urgent demand for high efficiency heating equipment and National Grid was able to help with limited incentives for equipment. However, demand exceeded the available program funding and over the course of a few weeks the Company ran out of funds for high efficiency heating equipment and could not serve customers requesting assistance. The situation represented a missed opportunity to lower customers' future heating and energy bills. Considering these limitations on funding, the natural gas energy efficiency programs were able to serve 6,900 participants in 2010, reducing natural gas consumption by 2,155,112 lifetime MMBTU, creating a total benefit of \$26.3 million over the lifetime of the efficiency measures.

In May 2010, the General Assembly amended the Least Cost Procurement statute to include natural gas and require the procurement of natural gas energy efficiency whenever it is cost-effective and lower cost than supply.<sup>19</sup> In May 2011, the General Assembly amended R.I.G.L. § 39-2-1.2 to remove unintended inconsistencies in the natural gas funding language and align the funding provisions with all of the provisions of Least Cost Procurement.<sup>20</sup> In 2011, the Company plans to serve 6,223 participants and save 1,601,861 lifetime MMBTU. The savings will create a total benefit of \$20.1 million.

### ***Three-Year Objectives***

The primary objective of this Plan is to create a strategy for delivering cost-saving, cost-effective electric and natural gas energy efficiency to Rhode Islanders for the period 2012 through 2014. First, this Plan establishes energy savings and economic benefits goals

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<sup>19</sup> See f.n. 6, *infra*.

<sup>20</sup> See f.n. 7, *infra*.

that are consistent with the EERMC's savings targets for 2012-2014.<sup>21</sup> Second, the Plan highlights the strategies the Company will employ over the next three years in order to meet these savings targets. Third, the Plan illustrates the estimated funding plan, including a shareholder incentive, that will be necessary in order to invest in cost-saving, cost-effective energy efficiency to Rhode Island homes and businesses and fulfill the statutory requirements of the Least Cost Procurement law, R.I.G.L. § 39-1-27.7. A detailed annual program implementation plan and detailed program budget will be developed each year and submitted to the Commission for review and consideration, beginning on November 1, 2011.

### Energy Savings Targets

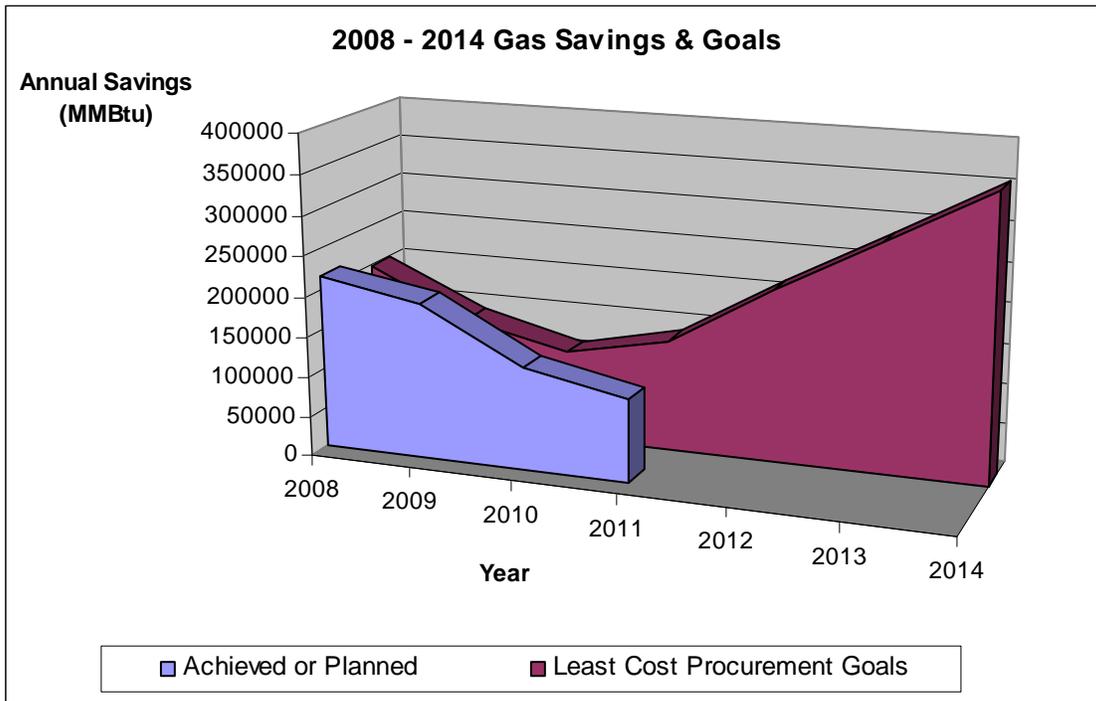
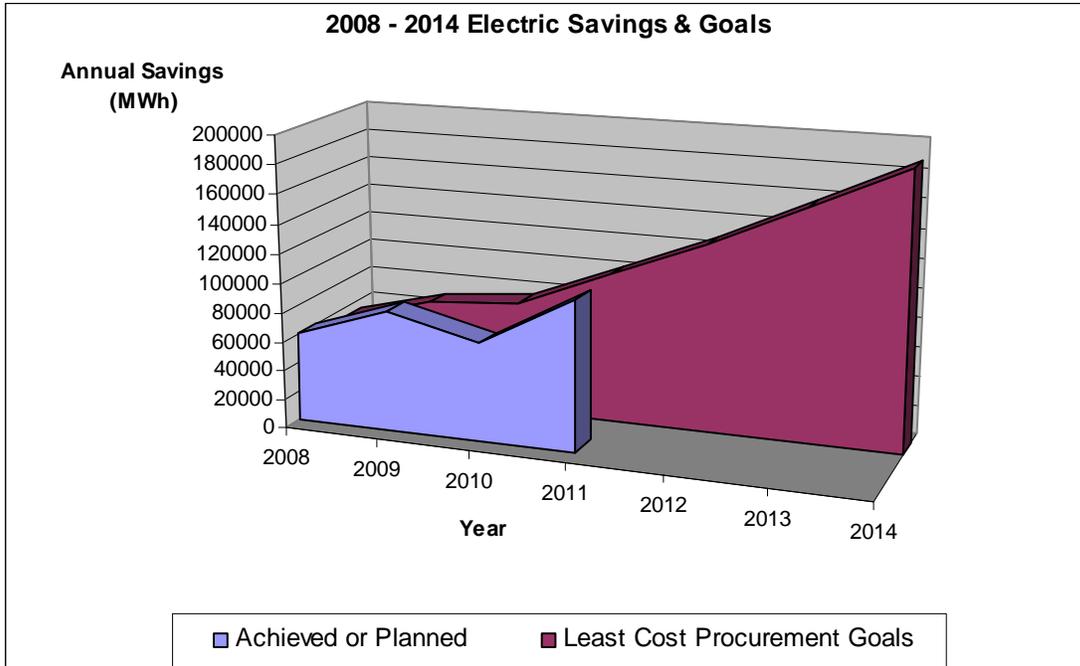
The 2012-2014 electric and natural gas savings targets are ambitious and will deliver cost-effective energy efficiency to Rhode Islanders on a large scale. The procurement of cost-effective energy efficiency resources represents a tremendous economic opportunity for the State of Rhode Island. Meeting the proposed savings goals will make Rhode Island a national leader in energy efficiency. The 2012-2014 goals, as approved by the PUC on June 7, 2011, are shown below in Table 3:

Table 3. 2012-14 Approved Savings Targets

Fuel	2012	2013	2014	Total
Electricity (Annual MWh)	128,570	158,820	189,068	<b>476,458</b>
Savings as a Percent of 2009 Electric Load	1.7%	2.1%	2.5%	
Natural Gas (Annual MMBtu)	263,738	338,120	427,100	<b>1,028,958</b>
Savings as a Percent of 2009 Gas Load	0.8%	1.0%	1.2%	

The cost-effective energy savings to customers will increase over time, as illustrated in the following graphs:

<sup>21</sup> As explained above on page 6 and as shown in Table 1, the proposed natural gas savings goals are slightly lower than those approved by the Commission on June 7, 2011, at 0.6%, 0.8%, and 1.0% of 2009 natural gas load.



National Grid’s 25 years of experience delivering electric energy efficiency in Rhode Island has provided a foundation to achieve the ambitious savings and benefits in this Plan. As an energy provider which serves 99% of Rhode Island homes and businesses,

National Grid is in a unique position to leverage our existing infrastructure while providing programs tailored specifically to Rhode Islanders' needs.

The first challenge will be helping customers achieve deeper electric and natural gas savings. In successfully delivering more than 3 million lifetime MWh of savings from the past three years' program efforts, National Grid has focused primarily on the installation of high-efficiency equipment. Starting in 2012, National Grid will increase its focus on attaining deeper savings through new implementation strategies. This includes behavioral change pilot programs, energy efficiency financing opportunities, and new partnerships, among other new initiatives. The second challenge is to broaden participation and reach as many Rhode Island customers as possible – this includes customers who have never participated in energy efficiency due to financial, information, or situational barriers that the programs will need to address and overcome.

Furthermore, as the natural gas efficiency programs expand to fulfill the Least Cost Procurement mandate, there are several factors that must be considered thoughtfully. Historically, there has been a large market demand in Rhode Island for efficient gas technologies and retrofits; however, limited funding has made it impossible to serve all interested consumers. Due to funding limitations and other market factors, the natural gas energy savings and economic benefits have been relatively flat over the past three years. Additionally, evaluations have been conducted on all natural gas programs over the past four years and are providing verifiable savings, indications of market transformation, and recommendations for implementation improvements. As the high efficiency heating equipment market transforms, the efficiency programs will need to keep innovating, improving, and achieving deeper and broader customer savings to meet customer demand and deliver energy savings and benefits to customers that they would not have otherwise realized. It is generally thought that the incremental cost to achieve deeper energy savings will increase. However, many factors influence the cost of energy savings (both upwards and downwards pressure) and limiting program implementation costs will be a significant focus over the next three years. Finally, the price of natural gas supply has decreased recently, and according to the Regional Avoided Cost study

completed in July 2011, it is projected to be lower than previous forecasts over the next 20 years, which affects the cost-effectiveness calculations for the gas saving measures.<sup>22</sup> These factors add to the complexity of increasing gas efficiency savings and the need to balance growth with cost-effectiveness. National Grid is focused on developing cost-effective and cost-efficient natural gas programs and is committed to increasing gas efficiency savings because it is the least-cost energy resource for the customer.

### ***Energy Efficiency Implementation Strategies***

In order to meet the 2012-2014 Savings Targets, National Grid will focus on creating energy efficiency opportunities for every Rhode Island customer, reaching customers where they live and work, innovating programs, adopting new technologies, and improving the state's economy.

### **Energy efficiency is for everyone**

In order to meet the savings targets, National Grid will have programs that are available to every Rhode Islander. The strategies to reach as many Rhode Islanders as possible include increasing energy efficiency financing options, addressing the renter/landlord split incentive barrier and other market barriers to efficiency, and providing efficiency opportunities to home heating oil customers. 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.

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<sup>22</sup> The Avoided Cost study (page 1-24) notes that there is uncertainty associated with projections of shale gas resource availability, production quantities, regulations, and costs, and that there is a possibility that material changes in the outlook for shale gas production and costs could occur before the initiation of the next Avoided Cost study, scheduled for 2013. Those material changes might be driven by public developments such as published revisions to geological analyses; a legislative body, policy agency or regulatory agency identifying and mandating changes in the regulation of hydraulic fracturing; published estimates of the costs associated with regulatory changes; or changes in natural gas market prices. Such changes may lead to members of the Study Group choosing to determine if the AESC 2011 projections of natural gas prices are still suitable for use in energy efficiency cost-effectiveness analyses. However, if they determine that those projections are no longer within a range of reasonableness, the Study recommends that members of the Study Group should consider revising the natural gas price forecast and the avoided costs. Revised avoided costs would lead to a reassessment of the cost effectiveness projections of Annual EE Program Plans.

Rhode Island's economy continues to struggle and while outward looking forecasts anticipate an improvement in economic growth and unemployment,<sup>23</sup> homeowners, businesses and municipalities will continue to face limited resources when making investments in energy efficiency. The 2012-2014 Plan will adopt new financing options and efficiency opportunities that make it easier for customers with limited capital to benefit from cost-saving energy efficiency investments. Also, while the perception of some residential customers may be that they have already done as much as possible to use energy more efficiently, the 2012-2014 Plan will provide new opportunities for customers who have already participated to further reduce their energy consumption in order to save more money.<sup>24</sup> The Plan also includes new elements intended to increase natural gas savings in the commercial and industrial sector and help achieve the energy savings goals articulated in this Plan.

Below are the specific strategies that National Grid will adopt to reach as many Rhode Islanders as possible over the next three years:

- *Reach residential customers who heat with oil and propane for weatherization.* National Grid has successfully implemented the state's Deliverable Fuel program funded by the American Recovery and Reinvestment Act (ARRA). In 2012, the Company will offer weatherization incentives to residential customers who heat with oil and propane. This program is consistent with the EERMC's policy initiative to secure fuel-blind energy efficiency during the next three years. Our intent is to capitalize on and continue the successful implementation of weatherization services for oil-heat customers while a long term funding strategy is put into place.
- *Address the residential landlord/renter split incentive barrier.* It is often difficult for renters to participate in energy efficiency; while renters pay the energy bills they often have no control over their home's long-term energy decisions, such as insulation, heating systems, and refrigerators. However, landlords have no

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<sup>23</sup> Moody's Analytics, Précis US State Northeast Report for RI, May 2011.

<sup>24</sup> MassSave, "Massachusetts Statewide Energy Efficiency Study, Residential Baseline Study," April 2010.

incentive to pursue all energy efficiency opportunities because they often do not pay the utility bills. This barrier is consequently known as the split-incentive. National Grid will work on delivering new programs and program elements that better address the split-incentive barrier including a low-income split incentive pilot, increasing multi-family initiatives, investigating targeted programs for triple-decker apartments, working in partnerships with Rhode Island Housing, Green and Healthy Homes Initiative, Emerald Cities Collaborative, and the Rhode Island Department of Health and investigating ways in which our home energy assessments and efficiency products programs can be targeted effectively to landlords.

- *Increase finance funds and options for commercial and residential customers.* Although energy efficiency retrofits are cost-effective and deliver substantial returns on investments, it is often difficult for customers to have the initial investment necessary for their share of the project. Access to low-interest finance is a solution for overcoming the initial investment barrier.
  - National Grid will work on increasing the capital available for low-interest revolving loan funds for large and small commercial and industrial (C&I) customers. National Grid already has available an on-bill repayment mechanism for finance programs to large and small C&I customers, so it will be easy for more customers to participate once additional capital is available.
  - With a new shareholder incentive mechanism to incentivize drastic increases in securing other funding, including finance dollars, in order to decrease EE funding required from customer EE charges, National Grid will aim to become the nation's leader in developing and securing finance options for EE projects. The shareholder incentive mechanism for increasing other funding is described beginning on page 38.
  - National Grid will work on identifying capital to create revolving loan funds for residential customers in order to provide a sustainable finance mechanism. Identifying and implementing sustainable finance programs requires collaborative partnerships with the state offices including the

Rhode Island Housing Authority, municipalities, and finance institutions.

If a critical mass of funds necessary to create revolving loan funds can be secured within the next three years, National Grid will invest in revamping the residential billing system to include on-bill repayment. National Grid will continue to offer the Residential Heat Loan as we work on identifying sustainable options.

- National Grid will continue to work with local Rhode Island banks on developing additional finance programs, so that profits from low-interest loan programs remain within the state.
- *Optimize Commercial and Industrial gas program delivery.* The following delivery elements will be assessed to boost participation in the commercial and industrial gas programs:
  - National Grid will explore offering financing options to natural gas program participants that are similar to financing options available to electric program participants.
  - National Grid will work with its technical assistance staff to identify energy efficiency opportunities, particularly in manufacturing locations.
  - National Grid will assess and, if appropriate, develop a streamlined application process designed to provide commercial, municipal and industrial customers with greater flexibility when participating in the Company's programs. The streamlined application process would offer a high percentage of customers' energy efficiency fund contributions as incentives. In exchange for this special treatment, some measures such as building shell treatments (windows) or those with paybacks that are immediate or less than 6 months may not be eligible for incentive treatment. In addition, the total annual potential incentives to an individual customer may be capped at the level of their EE funding contributions.
  - National Grid recommends that the EERMC commission an Opportunity Report for natural gas energy efficiency that identifies opportunities to increase natural gas program participation through the removal of barriers

and the introduction of new technologies; such a report should be limited in scope and be targeted for completion no later than May 1, 2012 to inform the development of the 2013 Annual Plan.

## Reaching Customers

In order to make it easy for customers to participate in energy efficiency programs, we must reach customers where they live and work. From previous experience, the Company has learned that customer segmentation, targeted marketing efforts, and using various delivery channels are effective strategies for increasing participation in energy efficiency. The Company will continue to find new ways to reach customers, specifically:

- *Develop a Long-term Strategic Energy Management Plan (SEMP) for large C&I customers (“LC&I”).* This initiative provides customers with an opportunity to conduct a multi-year approach to planning energy efficiency opportunities that map more closely to their budgeting process. This approach will create an opportunity to go deeper into their operations and reach 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 and to help them remain competitive in their business environments. 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 and offer technical support for other green measures that promote the environment, employee health, and productivity.
- *Enhance the delivery process through various channels.*
  - Use a value proposition to deliver LC&I projects that lower incentive amounts. Energy efficiency projects can deliver much more than energy savings. By understanding what motivates customer acceptance of energy

efficiency beyond the value of energy savings, including productivity improvements, resource savings (such as water) and non-resource savings (such as operations and maintenance), sales personnel can identify, quantify, and communicate additional values to customers. The value-added perspective may allow for the reduction of incentive payments to customers as they perceive the greater benefits.

- Accelerate the comprehensive New Construction design process review. The review process for comprehensive new construction projects is often time-intensive and burdensome for designers. National Grid will work toward improving the process so it is easier to capture comprehensive savings.
- *Target customer segments that may be interested in participating or past energy efficiency customers.*
  - Target customers leveraging behavioral segmentation techniques. The Company will leverage its residential behavioral segmentation model that analyzes customer demographics, attitudes, beliefs and behaviors and helps reveal customer motivations around energy efficiency. The model provides an opportunity for better customer targeting, improved communication, and better aligning of programs with customers.
  - Target past energy efficiency customers. Customers who participated within the past five years are familiar with, and have benefited from, our programs. Leveraging the relationships can lower costs while increasing savings from deeper efficiency measures. Returning to previous customers alleviates the need to educate customers about offerings or the sales process, thus reducing the sales cycle and lowering implementation costs. Additionally, energy efficiency delivery staff can promote deeper savings projects to customers who have already invested in earlier energy efficiency projects.
  - Target manufacturing customers. Beginning in 2012, the Company will employ several of the strategies outlined in this plan to increase the participation of manufacturing customers and better serve their unique

operations. The Company will consider additional supporting services that will increase comprehensive energy efficiency practices through enhanced technical, financial, and operational strategies.

- Target LC&I customers using analytics. Innovative tools now integrate analytics with building energy reporting platforms. These analytical tools enable remote energy performance insight into buildings, reducing the need for costly on-site assessments or questionnaires. This solution 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. These tools allow National Grid and building owners to efficiently benchmark the consumption of entire portfolios of buildings at an end-use level, and influence energy reduction measures at a fraction of cost and time of on-site assessments.
- *Increase participation through upstream incentive mechanisms.* Upstream incentives offer payments to wholesalers or distributors that lower the price of energy efficient products for customers and contractors at the time of purchase. The Company will explore the market potential and sustainability of upstream incentive mechanisms for measures including LED's, Commercial HVAC equipment, and residential HVAC.
- *Develop residential bundling options for program services and products.* National Grid customer segmentation research has shown that customers conceptually 'bundle' energy efficiency programs together while our qualitative purchase cycle research has observed that customers are most likely to participate in multiple programs simultaneously when renovating a home. There are two bundling initiatives that National Grid envisions.
  - First, research illustrates that homeowners participate in energy efficiency programs within three years of purchasing a new home. Additionally, new homeowners have the opportunity to include home renovations in their mortgages if they agree to conduct renovation within two years of a home purchase. Tying these findings together, National Grid will design a bundled program approach for new home buyers. The first phase will

partner with trade allies, develop marketing tactics, and pilot the concept. If successful, additional phases will include fully deploying the concept, expanding trade allies. The bundling of energy efficiency opportunities for new home owners is well timed with the anticipated recovery of the Rhode Island housing market.

- Second, thousands of Rhode Islanders recently renovated their homes and businesses after the disastrous floods of March 2010. FEMA approved \$45 million in assistance for home and small business rebuilding, which is a lost opportunity if the rebuilding is not energy efficient. National Grid's goal is to make energy efficiency part of the rebuilding solution during storm events. In addition to bundling home and small business services and products for storm victims, National Grid will work with trade allies to develop a response plan so that energy audits can occur immediately after insurance audits so that customers and builders know the energy efficiency opportunities available to them.
- *Enhance the Multifamily Initiative.* Often, the type of meter (residential or commercial) on a facility is a barrier to participating in retrofit projects. The Multifamily Initiative begun in 2011 will expand in future years to better serve multifamily facilities with streamlined service while achieving deeper savings. There is a high demand for weatherization among Rhode Island multifamily facilities, especially housing authority properties. The Multifamily initiative will target these opportunities.
- *Continue comprehensive marketing campaigns.* In 2011, National Grid embarked on its first comprehensive marketing campaign for energy efficiency programs in order to increase customer awareness and broaden participation. The Company benchmarked customer awareness at the beginning of the campaign, and aims to increase awareness levels every year over the next three years. Based on marketing research, the Company will develop appropriate marketing tactics to enhance awareness each year over the next three years. Additionally the Company will explore new marketing tactics including social media, blogging, and developing apps.

- *Continue and enhance community initiatives.*
  - In 2010, the Company successfully implemented the Energy Action: Aquidneck and Jamestown community campaign that boosted participation in energy efficiency programs by more than 30 percent in comparison to communities where no such initiatives existed. The Company will continue to use the “community approach” as a delivery channel for energy efficiency programs.
  - In 2011, the Company launched a community grant program to empower capable neighborhood and community organizations to boost participation through their existing networks.
  - The Company will also explore emerging trends in community initiatives, such as pay-for-performance affinity programs and integrating geospatial data tools.

## **Innovation**

The 2012-2014 Savings Targets cannot be met without innovation and new technologies. Since 2009, the Company has piloted several new technologies including heat pump hot water heaters, high efficiency commercial gas kitchen equipment, wireless enabled thermostats and smart home monitors. The purpose of pilots is to discover if the technology is beneficial and cost-effective for Rhode Island customers. The Company will continue its commitment to pilots and innovation while expanding Web-based techniques used to drive participation in energy efficiency. Specifically, the Company will:

- *Continue to test new products and technologies as they emerge.* New products include remote energy performance software, thermostat strategies, heat pump dryers, drain water heat recovery systems, thermal demand boiler controls, demand response technologies, entertainment system controls, smart televisions and gaming systems. National Grid will try to promote efficient cable boxes via a Rhode Island cable provider. The Company will evaluate current pilots to determine if the new technologies will be cost effective and included in future programs, including Programmable WiFi Thermostats (PCT), Solar Thermal Heating and Hot Water Systems and Heat Pump Water Heaters.

- *Promote new lighting technologies and enhance lighting program delivery and implementation.* As the lighting market continues to transform and Energy Independence Security Act (EISA) lighting standards go into effect, the lighting technologies the Company promotes will change as well as the way lighting programs are delivered. The residential ENERGY STAR® Lighting program will investigate market lift and hybrid buy-down strategies for program delivery. Educating customers on the changes in the marketplace will be important. The program will also focus on LED technologies. The C&I lighting sub-program will investigate additional upstream lighting incentives (e.g., for LEDs) as well as launch the reduced wattage HPT8 initiative, and will focus on new lighting technologies. In particular, the Company anticipates significantly more focus on promotion and adoption of LED lighting, where cost-effective. Additionally, exploration of opportunities in municipal street lighting presents a potential area for energy savings.<sup>25</sup>
- *Create a Codes and Standards (C&S) Initiative for residential and C&I sectors that will increase new construction savings.* In collaboration with the codes community, including the Code Commission and Office of Energy Resources, National Grid will help drive compliance with the existing energy code, support improvements to proposed building energy codes and standards in Rhode Island in order to establish more efficient baselines, and seek to document and receive credit for the associated energy savings. These C&S strategies will become part of the LC&I and Residential New Construction programs. Specific actions will include facilitating and supporting training and education efforts for code enforcers, designers and builders, conducting third party inspections, and studying cost effectiveness. Additionally, National Grid will work with national and local code development organizations and federal and state standards development organizations, such as the US DOE's standard-setting group.
- *Improve efficiency in tenant spaces with Office of the Future (OTF).* This initiative will target a portion of the C&I market that is currently underserved, particularly the hard-to-reach tenant office market sector. This initiative will align

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<sup>25</sup> This opportunity may be affected by tariff considerations.

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 that are most receptive to pilots and case-study projects. National Grid will develop a multi-year deployment process beginning with planning, outreach and enrollment, and obtain commitments from large commercial real estate office building owners and tenants to implement energy efficiency improvements to tenant spaces. National Grid will use the National OTF design and best practice resources for recommendations on energy efficiency for such tenant spaces.

- *Adopt Core Performance updates as they are developed by the New Building Institute.* Core Performance is a design guide with program requirements for new commercial construction projects. The anticipated Core Performance 2.0 will provide guidance to achieve savings levels that are at least 20% beyond the International Energy Conservation Code (IECC) 2012. New commercial construction is currently lagging in Rhode Island, but the Company expects that new commercial construction will increase over the next several years.
- *Achieve deeper savings in C&I retrofits.* The Company plans to participate, along with the State of Rhode Island (through the Economic Development Corporation (EDC) and the Office of Energy Resources (OER), Northeast Energy Efficiency Partnerships (NEEP), EERMC, and the New Buildings Institute, in a two-year project managed by NEEP to accelerate comprehensive commercial building energy efficiency retrofits, the development and implementation of “Rhode Island Policy Roadmap to Commercial Building Efficiency Retrofits” (“Roadmap”). If the U.S. Department of Energy selects the proposal, then 80% of the cost will be federally funded and National Grid will provide a 20% cost share as an efficiency program expense. The project will (1) research, develop and support state and local adoption of policy approaches and tools to resolve policy, regulatory and other barriers in the State to cost-effective investments for commercial building energy efficiency retrofits, and (2) attract and provide ongoing access to private investment capital for commercial building efficiency

- upgrades that support a self-sustaining market for commercial building efficiency retrofits.
- *Research the potential for a water-savings pilot to increase non-energy benefits.* Rhode Island businesses, homes, and municipalities can save money by using less water. There are several energy efficient technologies that decrease both energy and water use. National Grid will explore partnering with water boards to leverage their resources in order to deliver these technologies to our mutual customers.
  - *Maximize Combined Heat and Power (CHP) opportunities.* The Company will work on identifying qualified candidates from 25kW and up while exploring smaller system opportunities for greater participation. In July 2011, TEC-RI, the Division and the Company reached a settlement on backup rates that will dramatically reduce the cost of backup service for CHP projects. A decision on the proposed settlement is pending with the Commission.
  - *Design and implement energy efficiency behavior programs.* These programs help customers identify low-cost and no-cost methods of saving energy by using behavioral science techniques and targeted customer communication. The Opportunities Report identified an economic potential for large scale behavior programs. National Grid will pursue two types of behavior programs during the next three years:
    - *Continue the smart home energy monitor pilot that began in 2011 in Tiverton and Little Compton.* In 2012, National Grid will evaluate the pilot for cost-effectiveness and customer satisfaction before determining an implementation strategy that may begin in 2013.
    - *Research the potential for the nation's first statewide behavior program.* With approximately 425,000 residential households statewide, Rhode Island has a unique opportunity to launch the first statewide home energy report program in the nation. Other states have not been able to launch statewide efforts because of the need for customer control groups in order to quantify energy savings through billing analyses. National Grid not only has experience with home energy reports, but also has approximately

400,000 customers in a home energy control group within 100 miles of Rhode Island. Launching the country's first statewide home energy report program will require modifying existing behavior program models.

Therefore, National Grid plans to research the potential for a statewide behavior program in 2012. If successful, the program could launch in 2013.

- *Revamp the Company's efforts in online energy audits as a portal to the program portfolio.* National Grid recognizes the increased accuracy and ease-of-use of newly developed online tools in the marketplace. Through the use of a modern online tool the company will provide education, awareness, and seamless access to services available to customers.
- *Implement cost-effective measures learned from the Deep Energy Retrofit pilot.* The Company will complete projects that began in 2011 and evaluate the energy saving and non-electric benefits. The pilot requires premium efficiency heating and cooling equipment, and design requirements combined with planning and installation guidance methods.
- *Expand best practices for saving energy in LC&I customers' data centers.* Data centers are growing at a rapid pace and energy saving technology is still evolving. The Company will work on marketing new technologies and develop industry partnerships with service providers such as APC and EEC (Electronic Environments) to deliver services.
- *Innovate Large C&I gas programs based on 2011 evaluations.* National Grid will use upcoming evaluation results and recommendations to innovate the program design and delivery of the LC&I gas programs. National Grid is researching trade ally partnerships, innovations in prescriptive measures, and new implementation processes.

## **Economic Growth**

National Grid will focus on using energy efficiency programs to improve the Rhode Island economy as it recovers from the economic downturn. While the 2012-2014 savings goals are given in terms of MWh and MMBtu savings, they are also about creating value for Rhode Island through job creation and lowering customers' energy

bills. A strategy of investing in Least Cost Procurement is proven to lower the future cost of energy for both participants and non-participants, however the benefits of energy efficiency are not always clear to customers. Specifically, National Grid will:

- Continue energy efficiency job-training programs, create opportunities for qualified providers and expand the number of qualified providers in the state.
- Work with partners and trade allies to quantify the number of jobs created through energy efficiency programs.
- Continue to work with the RI Economic Development Corporation to identify energy saving opportunities for the sake of business retention within the state.
- Use energy efficiency as part of a non-wires alternative solution to defer transmission and distribution upgrades. Energy efficiency programs will be part of the integrated System Reliability approach. Please see page 42 for specifics on System Reliability Procurement.

### ***Funding Plan***

The Company's savings goals for the second three-year procurement plan establish a balance between developing new energy saving strategies and leveraging Least Cost Procurement with the requirements of cost-effectiveness and prudence for procurement that are contained in R.I.G.L. § 39-1-27.7. The standard of prudence has been generally interpreted by the Company, the EERMC, and the Collaborative Subcommittee to be (1) the delivery and funding mechanisms that enable the planned program expansion to proceed in a realistic and sustainable manner and (2) high quality installations that will ensure continued optimum energy-savings performance of the installed equipment. This is a strategy for Rhode Island, consistent with the Act and the Standards, that is at once about dramatic energy cost savings, job creation, sustainability, and reliability. At the same time, while providing the higher amounts of savings and benefits over the next three years, it is vital to do so in a least cost manner.

National Grid has worked collaboratively with the EERMC and the Parties to develop an estimated 3-year budget for the 2012-2014 Energy Efficiency and System Reliability

Procurement Plan, detailed in Appendix A attached to this Plan. This budget is an important component in determining the cost-effectiveness of the Plan. The Plan is required to be cost-effective and has been reviewed and approved by the EERMC as cost-effective pursuant to R.I.G.L. § 39-1-27.7(c) (5).<sup>26</sup>

The proposed three year Energy Efficiency Procurement Plan will deliver lifetime benefits of more than \$785 million for Rhode Island customers. In order to deliver these benefits, the Company projects the need for approximately \$282 million in funding over the three-year period. Recognizing that efficiency is a lower cost resource than supply, the Company will continue to seek to minimize the costs in each annual program implementation plan.

### **Delivering Programs Cost Effectively**

National Grid is committed to delivering energy efficiency in the most cost-effective ways that benefit our customers. In order to critically assess the Company's cost of delivering energy efficiency, we have compared historical program administrator delivery costs<sup>27</sup> to similar New England programs, and found that the Company is competitive in terms of dollar per annual and lifetime energy unit of savings. This Plan aims to continue that practice.

In order to maintain program administration delivery costs that are competitive with comparable New England programs, National Grid is committed to maintaining costs similar to the 2011 cost per annual kWh of electricity saved. This is a bold and ambitious commitment since deeper savings, which tend to be more costly, are necessary to reach 2014 goals. National Grid is optimistic that the strategies set forth in this plan will make

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<sup>26</sup> National Grid will work with the EERMC and the Parties to develop an annual program implementation and detailed budget plan – including a fully reconciling funding mechanism proposal - to be submitted to the Commission for review and consideration by November 1, 2011. Under Rhode Island law, the 2012 Annual EE Program Plan and each subsequent annual program plan has to be cost-effective and reviewed and approved by the EERMC as cost-effective according to R.I.G.L. § 39-1-27.7(c)(5).

<sup>27</sup> Program administrator costs typically include: incentives, marketing, sales and technical assistance, evaluation, and shareholder incentive. They do not include customer costs, commitments, and regulatory assessment costs. TRC Costs are the sum of program administrator costs, customer costs, and regulatory assessment costs.

maintaining costs similar to the 2011 costs per annual kWh of electricity saved practicable. In each annual planning process, costs will be reassessed based on program experience and evaluation results and, if necessary, will be adjusted appropriately in the Annual EE Program Plans filed with the Commission.

National Grid has also historically delivered electric energy efficiency cost-competitively on a per lifetime kWh saved basis. Even though the Company is committed to maintaining 2011 costs per annual kWh saved going forward, the cost per *lifetime* kWh of savings increases in 2013 and 2014 as a result of the statewide behavior program, which is recommended in the Opportunities Report. Behavior programs have a one-year measure life and therefore increase the average cost per lifetime kWh.

For the natural gas programs, National Grid delivered programs cost-competitively in 2010, particularly when comparing program administrator implementation costs on a dollar per lifetime of MMBtu saved. In 2011, the planned cost of natural gas programs increased compared to neighboring programs' planned cost because National Grid incorporated the latest evaluation results into the planned savings, increasing lifetime MMBTU cost. For 2012-2014, National Grid has reduced the implementation costs compared to our own costs in 2011. National Grid will continue to compare ourselves to other program administrators and work toward delivering natural gas programs at the most competitive costs.

Natural gas efficiency programs are currently evolving in Massachusetts and Connecticut because of lessons learned from natural gas evaluations. For this plan, National Grid is incorporating evaluation results for all of our natural gas programs in addition to regional cost and market studies completed in 2011. In this regard, the Rhode Island 3-Year Plan is ahead of neighboring states' natural gas plans, which have not yet considered these studies. Therefore, National Grid anticipates that the actual costs for 2011 and the planned costs for 2012 in neighboring states will likely be higher as well.

For 2012-2014, National Grid has proposed to deliver the natural gas programs at a lower utility cost per lifetime MMBtu saved compared to 2011. In order to appropriately balance the high demand for high efficiency heating equipment with anticipated budgets, we have lowered the incentives in that program. Additionally, in 2012-2014, National Grid is committed to ensuring that customers receive the most benefit of the programs through incentives and delivery.

### Three-Year Budget

The estimated 3-year budget for 2012-2014 is provided in Table 1 and is shown in greater detail in Appendix A. A summary table is presented below. This Plan presents budgets that reflect the cost consciousness described above. Furthermore, each fall the annual budget will be refined through the EERMC and Collaborative Subcommittee processes and detailed in the annual EE Program Plan, to be filed with the Commission by November 1 for review, consideration, and implementation beginning on January 1 of the following year. The annual EE Program Plans will include a detailed funding plan and budget – including a fully reconciling funding mechanism proposal.

<b>Electric Programs</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Total Spending*	\$54,035,689	\$64,385,628	\$75,978,573	\$88,236,598
<b>Gas Programs</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Total Spending*	\$6,645,100	\$13,687,795	\$18,046,503	\$22,602,890

\*Total Spending includes implementation, evaluation, commitments, EERMC, and shareholder incentive, and does not include any incremental funding for System Reliability Procurement

Sources: 2011 Annual Plan, 2011 Annual Plan Revised June 15, 2011, 2012-2014 3-Year Plan Projections in Appendix A

### Funding Sources

The following funding sources will be used in each year. The amounts from each source will be detailed in the annual plans.

The sources of the electric funding plan include the following funding sources:

1. One line on the customers' bill labeled "Energy Efficiency Programs" comprised of the existing EE program charge of \$0.0053 per kWh plus a fully reconciling funding mechanism charge in accordance with the revisions and requirements of

- RIGL§ 39-1-27.7. This total of the two factors is represented by the “EE Charge per kWh” row in Appendix A.
2. Projected large C&I commitments.
  3. Revenue generate by the Independent System Operator of New England (“ISO-NE”) Forward Capacity Market (“FCM”).
  4. Revenue generated through Regional Greenhouse Gas Initiative (“RGGI”) permit auctions and distributed by the OER.

The sources of the gas funding plan include the following funding sources:

1. One line on the customers’ bill labeled “Energy Efficiency Programs” comprised of the existing EE program charge of \$0.41 per Dth plus a fully reconciling funding mechanism charge in accordance with the revisions and requirements of RIGL § 39-1-27.7. This total of the two factors is represented by the “EE Program Charge per Dth” row in Appendix A.
2. Low Income Weatherization funds from Base Rates.

There are many uncertainties associated with the exact amount of the additional funding that will be needed: Company sales, customer co-payments, commitments made for future years, the settlement price for future Regional Greenhouse Gas Initiative (RGGI) and forward capacity market auctions, the allocation of RGGI auction proceeds to the Company’s energy efficiency programs,<sup>28</sup> identification of additional outside sources of funding, and the Company’s success in minimizing costs in order to maximize customer benefit.

Because of these uncertainties, the Company illustrates the amount of funding it expects to need in each year of the Plan, and asks for provisional approval of these amounts, which will provide guidance to the Company as it develops its annual EE Program Plans. The Company is required to submit to the Commission its Annual EE Program Plans for review and consideration, including a detailed budget and implementation plan each year by November 1.

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<sup>28</sup> The allocation procedure and formulae are currently under revision by the OER.

While Appendix A does not show sector-specific funding levels, the Company proposes that the energy efficiency programs offered to the low-income sector be subsidized by all the other sectors, residential, and commercial and industrial, in order to provide equity in the availability of program funds and opportunities to benefit from energy efficiency, which is identified as a desirable objective in the adopted Energy Efficiency and System Reliability Procurement Standards, approved by the Commission on June 7, 2011.

The Company intends to work with various market actors (vendors, distributors, designers, and builders) to leverage the expenditure of funds in order to achieve program savings goals while controlling costs. The annual EE Program Plans will reflect progress made in leveraging other sources of funding, including, if applicable, the upcoming November 1, 2011 Annual EE Program Plan filing. Planned program elements to leverage other sources and types of funds include:

- *Expansion of financing options.* Attractive financing lowers the size of direct rebates that are necessary to incentivize customer installation of energy efficient projects. Easy repayment options make financing even more attractive to customers. For several years, the Company has offered attractive financing terms and has provided simple repayment through customer bills for small business and municipal customers. The Company pays 70% of the installation cost, and customers may elect to pay their portion up front or over one or two years through monthly payments on their electric bills. This is a zero-percent interest loan; no interest payments are made with the on-bill payments. The Company has built up an effective revolving loan fund of approximately \$4 million, capitalized with program funds, RGGI funds, and ARRA funds (under a pending agreement with the Economic Development Corporation). The Company intends to expand its use of on-bill financing to remove some of the barriers that exist to program participation. The Company will continue its effort to partner with lending institutions that could make attractive financing terms available.
- *Other sources of funding.* The Company will continue its efforts to secure direct funding of energy efficiency from other sources, such as foundations, granting,

agencies, or market actors who may benefit from expansion of the energy efficiency industry in Rhode Island. Other funding will directly reduce the amount of funds necessary to be collected from customers. Therefore, the Company has proposed an element of the shareholder incentive mechanism to provide extra impetus to continue these efforts.

- *Property Assessed Clean Energy.* As noted in the EERMC's 2011 Annual Report, Property Assessed Clean Energy (PACE) continues to be an option for alternative financing of energy efficiency projects. Under PACE, municipal governments offer a specific bond to investors and then take the funds raised and loan the money to consumers and businesses to invest in energy retrofits. The loans are repaid over the assigned term (typically 15 or 20 years) via an annual assessment on their property tax bill; the loan is attached to the property rather than an individual. The Company plans to actively participate in PACE discussions as they relate to its programs.

### ***Shareholder Incentive***

The shareholder incentive in Rhode Island is a very simple, straightforward mechanism. It has been the same for more than 10 years and is well understood by stakeholders. The same structure is used for gas and electric energy efficiency programs. However, it is the smallest after-tax incentive on a percent-of-spending basis offered to investor owned utilities in the country.<sup>29</sup>

The current mechanism sets a performance target incentive of 4.4% of the spending budget. The spending budget is the amount of funds the Company spends in a given year to achieve energy efficiency savings and is equal to the total budget minus commitments, funding of customer copayments, EERMC costs, and the shareholder incentive. The company will earn 100% of its incentive if it achieves 100% of its annual energy savings goal (kWh or therms) for the year at 100% of spending. There is a savings threshold of

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<sup>29</sup> "Carrots for Utilities: Providing Financial Returns for Utility Investments in Energy Efficiency," American Council for and Energy-Efficient Economy, Report U111, January 2011.

60%, below which the Company does not receive an incentive, and an incentive cap of 125%.<sup>30</sup> There is one adjustment mechanism, introduced in 2008, that effectively penalizes the Company for overspending by more than 5% or rewards the Company for under-spending by more than 5% if 100% of goals are met. This adjustment works by recalculating the annual savings targets at year end by the ratio of actual spending to the spending budget, if the ratio varies by more than 5% from 100%. This is intended to encourage efficiency in spending. Performance metrics, which encouraged activities that were complementary to the energy savings targets, were part of the mechanism for several years. The performance metrics were eliminated in 2011 under the reasoning that, to achieve the state's long term savings objectives, the Company ought to do these activities anyway.

### **Current environment**

The goals proposed by the EERMC and approved by the Commission in Docket 4202 present aggressive savings targets for 2012-2014. The electric savings targets in Docket 4202 and in this Plan for 2014 are almost double the savings targets for 2011; the gas savings targets in this Plan (which are slightly less than the Docket 4202 targets as explained above) for 2014 are more than triple 2011 energy savings.

The acceleration of savings goals and the extra effort, ingenuity, and performance needed to achieve unprecedented savings levels in the next three year period creates a need for potentially higher incentives – even with the advent of decoupling – in order to spur excellent performance toward the achievement of the higher goals. The Regulatory Assistance Project, among others, has stated that “decoupling only removes the throughput incentive; it does not provide an incentive to acquire energy efficiency.”<sup>31</sup> Decoupling simply keeps a utility from over or under collecting its established rate base, due to increases or decreases in deliveries. A meaningful shareholder incentive provides

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<sup>30</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

<sup>31</sup> “Energy Efficiency Incentives for Utilities: A Review of Approaches So Far,” Wayne Shirley and Lisa Schwartz, Presented at Idaho Office of Energy Resources Workshop, October 6, 2009

a utility with a constant motivation to improve implementation, with a focus on exceeding established savings targets at below estimated costs.

## **Proposal**

The following objectives should be paramount in developing a proposal for a revised shareholder incentive for RI

- That it should be aligned with the state's public policy objectives of Least Cost Procurement;
- That it should recognize the increased savings targets proposed for 2012-2014 and focus the Company's efforts on successful achievement of those targets;
- That it provide for increased transparency and accountability in energy savings claimed toward the achievement of savings goals; and
- That it be simple and understood by implementers.

The proposed incentive mechanism for 2012-14 is the same as the current mechanism described above, with three additional elements relating to transparency, review of percentages, and an additional component to secure sources other than customer funds to support the expansion of energy efficiency programs. This mechanism would be in effect for the entire three year plan to drive performance toward the goal of the third year.

**Transparency.** To provide for increased transparency and accountability under the proposed mechanism, the Company will undertake the following three activities as part of this proposal:

- The Company will provide a Technical Reference Manual that documents the savings assumptions and calculation methodologies for the Rhode Island plan. This would be submitted to the EERMC and the Collaborative Subcommittee and other parties as desired with the annual 2012 EE Program Plan.
- The Company would collaborate with the Division, TEC-RI, the EERMC, and their consultants to demonstrate how savings assumptions on a measure level are translated into program cost-effectiveness calculations.

- The Company will provide greater clarity on how program design changes are integrated into changes in savings assumptions.

**Review of Incentive Percentage.** The fundamental structure of the proposed incentive mechanism will not be changed over the three year period. However, the percentage of the spending budget (currently 4.4%) established as the target incentive for meeting the savings goal will be reviewed annually, considering the Company's performance toward meeting the increased savings goals and further evaluation studies.

**Incentive for Securing Outside Funding.** Rhode Island's Least Cost Procurement law requires funding for all cost-effective energy efficiency and the state has established bold efficiency goals over the next three years. The state is experiencing economic challenges and, as the budget for EE is projected to increase as energy efficiency procurement increases, it is critical to continuously try to identify new strategies to keep the energy efficiency charge as low as possible so that the economic benefits of energy efficiency for electric and natural gas customers are maximized.

Therefore, National Grid proposes an additional component to the shareholder incentive mechanism that encourages the Company to pursue solutions that will lower expected incremental increases in the EE charge. Specifically, the Company proposes that as a matter of principle and program design, unless inconsistent with the requirements or criteria of a funding agency, it shall be allowed to receive 10% of any future outside funding resulting in a lower incremental EE charge as a shareholder incentive. Outside funding is defined as any new funding source that does not come from the customers and prospectively lowers the customer EE charge.<sup>32</sup> New funding does not include known outside funding sources such as RGGI, FCM, current ARRA projects including Deliverable Fuels and EDC LC&I Finance. National Grid would be able to receive an incentive for any amount of outside funding obtained, subject to the definitions and limitations prescribed. National Grid must identify the outside funding and manage any

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<sup>32</sup> Depending on the timing of the receipt of outside funding, the impacts on lowering the EE Program Charge may be realized at the time of the development of the next annual EE Program Plan, rather than in the program year in which the funds are secured.

resulting initiatives. Further clarifying definitions will be provided in Annual EE Program Plans.

This would be the first shareholder incentive mechanism of its kind in the country. If successful, this proposal would lower incremental increases in the EE charge, which is an objective shared by all. Other incentives in other jurisdictions to produce outside funding have not been substantial enough to lead to actions that lower the incremental EE charge. Providing an incentive of 10% of future outside funding is significant and bold enough to incentivize the Company to prioritize finding new sources of revenue for EE that will lead to lower EE 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.

This mechanism satisfies the design objectives. It is simple. It focuses on a single measure of achievement – *annual savings* – which presents clear and unambiguous signals to implementers. It supports Rhode Island law – which prioritizes the achievement of all cost-effective energy efficiency while emphasizing efficiency in program delivery – by combining a focus on the creation of benefits *through savings* to consumers with the minimization of costs that are managed by the Company. In so doing, it will help create economic benefits for Rhode Island consumers while minimizing program expenditures. Finally, it provides for greater transparency in the calculation and documentation of savings, and these provisions are consistent with industry standards.

## **Illustration**

The Table below summarizes the funding plan in Appendix A and includes the target incentive for the gas and electric energy efficiency programs for the three years compared to the spending budget and total benefits. The illustration does not include any incentive for outside funding, as that portion of the incentive would be funded independent of the spending budget.

<b>Electric Programs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Spending Budget	\$59,097,446	\$70,079,358	\$81,691,294
Target Shareholder Incentive	\$2,600,288	\$3,083,492	\$3,594,417
Total Benefits	\$198,836,955	\$204,451,077	\$251,198,316
<b>Gas Programs</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Spending Budget	\$12,966,219	\$17,095,149	\$21,392,323
Target Shareholder Incentive	\$570,514	\$752,187	\$961,337
Total Benefits	\$31,280,215	\$43,686,179	\$56,214,055

### ***Timeline***

The Standards outline the following timeline for the development of the annual program implementation plans and detailed budgets. National Grid will work with the EERMC and the Parties to meet these deadlines:

- a. September 1, 2008 and triennially thereafter: Submit the Energy Efficiency Procurement Plan for three years of implementation beginning with January 1 of the following year.
- b. November 1, 2008 and annually thereafter: Submit the annual program implementation plan and detailed budget for the next program year. The November 1 filings shall also provide for adjustment, if necessary, to the remaining years of the Energy Efficiency Procurement Plan based on experience, ramp-up, and increased assessment of the resource levels available.
- c. July 15, 2008 and triennially thereafter: National Grid and the EERMC shall report to the Commission on the planning process for the Energy Efficiency Procurement Plan and program plan.
- d. August 15, 2008 and triennially thereafter: The EERMC will vote whether to endorse the Energy Efficiency Procurement Plan.
- e. October 1 annually: National Grid will submit a draft annual energy efficiency program plan to the EERMC for its review and comment.
- f. October 15 annually: The EERMC will vote whether to endorse the annual energy efficiency program plan.

Timeline for System Reliability Planning:

- a. September 1, 2011 and triennially thereafter: Submit the System Reliability Procurement Plan, which will propose general planning principles and potential areas of focus that incorporate non-wires alternatives into National Grid's distribution planning process for three years of implementation beginning January 1 of the following year.
- b. November 1 annually: Annual System Reliability Procurement Plan and funding plan submitted to the Commission.

## System Reliability Procurement

The 2006 Act identified a unique opportunity for Rhode Island to systematically identify and procure customer-side resources that were not only cost-effective compared to traditional supply options, but that could also provide a cost-effective path to lower supply and delivery costs to customers in Rhode Island. Least Cost Procurement might provide savings over time for customers and might lower the volatility and cost uncertainty of the larger energy and capacity markets in New England by securing sources of energy supply and capacity from in-state resources and/or by the deferral or avoidance of distribution system investments.

Traditionally, the solutions to problems such as overloaded facilities, low voltage, contingencies, loss of load, asset condition, and system losses have been provided by capital projects that enhance the utility's delivery systems: new circuits, new substations, or larger conductors. As developing technologies continue to make improvements in energy efficiency, load management, and distributed generation, the range of possible alternative solutions to traditional utility infrastructure can now increasingly consider demand side management, demand response, direct load control, distributed generation, and dynamic pricing. As technologies and markets continue to mature and gain momentum, these "non-wires alternatives" (NWAs) are becoming increasingly cost-effective. Recognizing the potential economic benefits of cost-effective NWAs, R.I.G.L. § 39-1-27.7(a)(1) requires standards and guidelines for "system reliability" resources to include, but not be limited to: distributed generation, including, but not limited to, renewable energy resources; cost-effective combined heat and power systems; and demand response designed to, among other things, provide local system reliability benefits through load control or using on-site generating capability.

On June 7, 2011 the Commission approved significantly revised standards for system reliability procurement. The revised standards establish a procedure and funding options for systematically identifying customer-side and distributed resources that, if cost-effective, defer or avoid distribution upgrades, improve system reliability, and provide for

better utilization of distributed resources. As a founding member of the Project Get Ready Rhode Island initiative (a national effort to promote electric vehicles), the Company also is working to integrate new technologies such as electric vehicles. Energy storage is also a technology the Company is working on in other jurisdictions and it can use knowledge gained there to help Rhode Island become a model for other states and utilities. The new guidelines will guide the Company in fully integrating analysis of NWAs into the Company's planning functions and evaluating the specific costs, benefits, and comparability of traditional and NWA solutions.

Section 2.1 (A) of the System Reliability Procurement Standards ("SRP Standards") states:

The Utility System Reliability Procurement Plan ("The SRP Plan") to be submitted for the Commission's review and approval on September 1, 2011 and triennially thereafter on September 1, shall propose general planning principles and potential areas of focus that incorporate non-wires alternatives (NWA) into National Grid's ("the Company") distribution planning process for the three years of implementation beginning January 1 of the following year.

This SRP Plan is being submitted consistent with those SRP Standards and as a part of the larger Least Cost Procurement plan. This Plan describes National Grid's proposed approach in Rhode Island to integrate analysis of NWAs into the Company's planning functions using analytical tools to evaluate the costs and benefits of traditional and NWA solutions, and potentially identify system needs for which a NWA is the preferred solution. An annual system reliability procurement report will be submitted to the Commission for consideration beginning on November 1, 2011 and each year thereafter. The annual reports will include, among other information, a summary of where NWAs were considered, identification of projects where NWAs were selected as a preferred solution, an implementation and funding plan for selected NWA projects, and recommendations for demonstration distribution or transmission projects for which the Company will use selected NWA reliability and capacity strategies.

The Company will endeavor to leverage other customer funded mechanisms (i.e., energy efficiency, renewable portfolio standards, forward capacity market participants, etc.) to implement innovative, distributed-resources, technologies and solutions that would exploit this potential for deferral.

As outlined in the planning guidelines, the Company will establish and implement a procedure for incorporating NWAs into its distribution planning process for 2012-2014. The Company will evaluate all transmission and distribution (T&D) projects that meet the screening criteria established in Section 2.1.C of the SRP Standards for potential NWA solutions that could reduce, avoid, or defer the T&D wires solution. The Company estimates that four projects per year will meet the screening criteria and be evaluated for a potential NWA solution(s).

Feasible NWAs will be compared to traditional wires solutions based on the following, among other, factors:

- Ability to meet the identified system needs;
- Anticipated reliability of the alternatives;
- Risks associated with each alternative;
- Potential for synergy savings based on alternatives that address multiple needs;
- Operational complexity and flexibility;
- Implementation issues; and,
- Customer impacts.

To facilitate the screening of potential NWA projects and traditional solutions, the Company commissioned Freeman, Sullivan, and Company (FSC) to develop a modeling tool for assessing NWAs as alternatives to traditional T&D upgrades. Demand response and direct load control data for the tool was taken from several sources, including the FERC National DR survey and FSC evaluations of DR programs at other utilities tailored to Rhode Island weather and population demographics. For targeted energy efficiency, the Company provided data from the Aquidneck Island pilot that reflects the demand

reductions associated with the direct install program for residential and commercial customers. Data in the tool can be updated as program experience is gained. The FSC tool provides clarity in terms of the loading and peaking behavior at the feeder level and will:

- Graphically show behavior of peak loads at the feeder level using historical data from 2006-2010, including: historical peak loads by month, 10 highest load days, allocation of top 100 hours, and total MWh in top 100 hours.
- Estimate market penetration curves as a function of incentives, marketing strategy and program characteristics for the user-selected mix of NWA technologies. Data for this comes from FSC's work testing how customer take-rates vary as a function of marketing delivery channels such as direct mail, phone, and door to door campaigns. In addition, data was also used from FSC's quantification using econometric modeling of dynamic pricing acceptance driven by factors like sign up incentives, multiple touches, seasonality, marketing message, marketing format (letter versus glossy piece), dual marketing with direct control, and customer characteristics. The Company will also investigate strategies that might not have been examined by FSC's prior work but might be helpful in attaining more aggressive uptake and penetration of efforts specifically designed to help with the coincident peak load.
- Link hourly load impacts to peaking conditions that are driving localized T&D upgrades (including both reductions and snapback).
- Estimate tenure of the T&D deferral by providing an analysis of peak load characteristics for a group of feeders based on historical National Grid data.
- Provide an estimate of one time and recurring annual costs to keep customers engaged dependent upon the NWA mix selected.
- Provide estimates on how many participants/devices need to be enrolled in a program to defer a T&D upgrade based on feeder load levels and threshold minimum and maximums as entered by the user.

For each need where a NWA is determined to be the preferred solution, the Company will develop an implementation plan providing a detailed characterization of the need (in

terms of both maximum kW peak reduction and annual required duration hours), the business-as-usual upgrade, a description of the NWA, and a NWA investment scenario, as outlined in the guidelines. This description of the need will include the location and the mix of customers within that location.

Once the annual SRP Report is approved by the Commission, the Company will provide quarterly updates on the progress towards incorporating the consideration of NWAs into the Company's transmission and distribution planning, as well as the progress of any approved demonstration project(s) to the EERMC and Collaborative Subcommittee. After the Company gains experience with initial demonstration project(s) and NWA projects are identified as preferred solutions to system needs, it will propose NWA projects on a regular basis in the annual SRP plans and reports. Part of the demonstration project phase is to learn how these types of projects will be streamlined internally across the organization and successfully implemented on the customer side.

### ***NWA Technology Options***

For the years 2012 through 2014 the Company will focus on NWAs such as baseline energy efficiency, peak demand and geographically-focused energy efficiency, demand response, direct load control, and distributed generation (primarily combined heat and power (CHP) and renewable energy) as potential solutions for deferring transmission and distribution investments. These NWAs are described below.

### **Targeted Energy Efficiency**

Normally, the delivery of energy efficiency program is assumed to be generally proportional to customer population throughout the area. Targeted energy efficiency seeks to concentrate the delivery of specific program or programs in a particular geographic area to provide a desired amount of energy efficiency to reduce load in the area. This targeting can take the form of targeted marketing in the area, community based deployment strategies, and possibly enhanced customer incentives in a specific

geographic location. The Company aims to utilize lessons learned from the Aquidneck Island pilot when employing targeted energy efficiency mechanisms in NWA solutions and will examine targeted energy efficiency as a potential first step to load reduction in a specific region, if it feels this would be the most effective first step at curtailing load.

### **Demand Response and Direct Load Control**

The Company plans on leveraging knowledge gained during prior energy efficiency pilots testing new technology, such as programmable controllable thermostats and demand control lighting, to determine which approach and devices would be suitable for a NWA demonstration project designed with demand response and direct load control. The use of demand response programs which involve shifting load or reducing demand during critical periods of the year on the distribution system will be used in the plan. Using direct load control technologies is similar to demand response except that the utility or contracted company has the ability to control a device on the customer's premise for reducing load. Both types of programs compensate customers for the amount of reduction delivered. For geographically targeted demand response, the Company will attempt to capture readily available load reduction through existing large commercial and industrial (C&I) customers who are either enrolled through curtailment service providers (CSPs) in the forward capacity market (FCM), or can be enrolled directly by the Company to participate. Once this resource is fully tapped, marketing to smaller customers (both commercial and residential) would take place. Having the right customer mix is important to provide sufficient sustained load relief to defer a proposed upgrade several years. Research from the Brockton pilot in Massachusetts indicates that depending on load relief from a single customer class will limit the ability to sustain needed load relief during multi-day heat waves. Details of various pilots the Company has offered are detailed in Appendix B.

The Company may offer a package of incentives for customers participating in such programs, depending on their level of participation during events and contract length. The incentives may consist of benefits such as a sign-on bonus and credits for participating in each event. Marketing to customers in a specific area is challenging because in order to

defer a T&D project, there are only a select group of customers the Company can market to in order for the deferral to be successful without compromising the reliability of the system.

## **CHP**

In reviewing NESCAUM's 2009 CHP opportunity report, *The Potential for Cost-Effective Combined Heat and Power in Rhode Island*, it states that there is potential for over 300 MWs of CHP in the state, although the actual amount of CHP that mirrors the heat and electric loads of customers for maximum CHP efficiency is not known. As such, the report clearly states that without the proposed Phase 2 study, this number is still quite tentative. The Company recommends having the Phase 2 study done to educate this process as well as better understand the actual technical and economic CHP potential for the EE programs in general.

The Company had offered a gas marketing incentive for CHP for approximately 11 years under the Advanced Gas Technology Program. Beginning in the summer of 2010, the Company introduced an electric energy efficiency incentive for CHP. The Company would plan to use existing EE incentives to site cost-effective CHP in a NWA pilot location, in addition to maximizing the installation of cost-effective CHP throughout RI in the non-NWA locations.

## **Renewable Energy**

The Company will work towards integrating a customer's desire to install net-metering eligible renewable energy systems, with their long term energy management plans in conjunction with energy efficiency projects. These projects would potentially need to look at energy storage in order to provide load relief for certain hours of the year.

National Grid is presently required to allow up to three percent of the Company's previous year's peak load as net metered generation. For 2011, this figure is approximately 57 MW of nameplate generation capacity. In addition, the Company is now subject to the requirements of the Distributed Generation Standard Contracts Act, which calls for 40 MW (nameplate capacity) of renewable, distributed generation to be

contracted for by the Company by the end of 2014. With only a small portion of these two supply sources expected to overlap, approximately 90 MW of new distributed, renewable supply will enter service in Rhode Island over the next few years. The impact of these new resources on system reliability will need to be carefully studied, as depending on their concentration and technological make-up, they may either enhance reliability and contribute to NWA solutions, or may cause additional system investments to maintain reliability and power quality for all customers. As noted above, specific aspects of NWA demonstration projects may seek solutions that are more cost effective than new T&D investments, such as targeted storage deployments.

### **Other Technology Options**

The Company, similar to its proposed smart grid pilot filed in 2009, may propose pricing options for customers to incentivize certain behavior (e.g. charging for EVs, peak load rebates to get load relief, etc.). To provide actionable information, the Company may need to provide other tools for customers to participate in pricing pilots, such as interval metering with two-way communication, in-facility load management tools, and education seminars to train customers in the use of such tools. The Company would plan to leverage other smart grid type efforts throughout the other service territories the Company serves to provide these services to customers in RI.

### ***Funding***

This first System Reliability Procurement Plan is different from the Energy Efficiency Procurement Plan because it cannot predict whether a NWA will be identified as the preferred solution to a system need in a given year. It is possible that, for a given year, no NWAs will be identified and implemented. In addition, the components and structure of any given NWA solution, as well as the length of the project deferral (or avoidance), will likely dictate the funding sources. Given this uncertainty, this Plan does not project a three year budget. Annual system reliability budgets will be submitted to the Commission on November 1 of each year, beginning November 1, 2011.

Section G of the SRP Standards approved by the Commission on June 7, 2011 establish five possible funding sources for system reliability investments, including:

1. Capital funds that would otherwise be applied towards traditional wires based alternatives;
2. Existing Utility EE investments;
3. Additional energy efficiency funds to the extent that the NWA can be shown to pass the TRC test with a benefit to cost ratio of greater than 1.0 and such additional funding is approved, which are not currently included in the funding projections presented elsewhere in this Plan;
4. Utility operating expenses to the extent that recovery of such funding is explicitly allowed;
5. Identification of significant customer contribution of third party investment that may be part of a NWA based on benefits that are expected to accrue to the specific customers or third parties.

### ***Conclusion***

The SRP Standards approved by the Commission on June 7, 2011 create a framework for considering NWAs as possible solutions to planning and reliability issues. In the November 1, 2011 annual SRP Report, the Company will further report on its progress toward establishing a procedure for systematically identifying customer-side and distributed resources that, if cost-effective, defer or avoid distribution upgrades, improve system reliability, and provide for better utilization of distributed resources. The annual SRP Report will also report on projects where NWAs were considered, identification of projects where NWAs were selected as a preferred solution, and a comparative analysis guided by the criteria laid out in the guidelines, and recommendations on pilot distribution projects that will utilize NWA reliability and capacity strategies.

## Appendix A: Energy Efficiency Funding Plan

### Rhode Island Energy Efficiency Procurement Plan 2012-2014 Electric Funding Plan

	2011	2012	2013	2014	3 year total
<b><u>PART A: TOTAL FUNDING AND GOALS</u></b>					
1) Projected kWh Sales:	7,731,369,974	7,854,706,802	8,023,273,332	8,158,209,472	
2) 2011 EE Charge per kWh	\$0.00526	\$0.00526	\$0.00526	\$0.00526	
3) <b>Projected DSM Revenues from DSM Charge = (1) x (2)</b>	<b>\$40,682,469</b>	<b>\$41,331,467</b>	<b>\$42,218,464</b>	<b>\$42,928,498</b>	<b>\$296,772,355</b>
4) <u>Other Sources of DSM Funding</u>					
4a) Projected DSM Fund Balance Interest	n/a	\$400,000	\$400,000	\$400,000	
4b) Projected Co-Payments by Customers received in Pgm Year	\$0	\$0	\$0	\$0	
4c) Projected Commitments from prior year	\$750,000	\$5,000,000	\$2,000,000	\$2,000,000	
4d) Projected Entering Fund Balance:	\$4,195,782	\$0	\$0	\$0	
4e) Projected Capacity FCM Payments from ISO-NE:	\$2,305,423	\$1,930,464	\$2,165,900	\$2,693,369	\$6,789,733
4f) Projected RGGI Proceeds	\$6,097,447	\$2,785,709	\$2,785,709	\$2,785,709	\$8,357,126
4) <b>Subtotal Other Sources of DSM Funding</b>	<b>\$13,348,651</b>	<b>\$10,116,173</b>	<b>\$7,351,608</b>	<b>\$7,879,078</b>	<b>\$25,346,859</b>
5) <b>Projected Funding Available from Traditional Sources = (3) + (4)</b>	<b>\$54,031,120</b>	<b>\$51,447,640</b>	<b>\$49,570,073</b>	<b>\$50,807,576</b>	<b>\$151,825,289</b>
6) <b>Program Implementation + Evaluation Expenses to Achieve Goals</b>	<b>\$45,284,376</b>	<b>\$59,097,446</b>	<b>\$70,079,358</b>	<b>\$81,691,294</b>	<b>\$210,868,098</b>
7) <u>Additions to Implementation + Evaluation Expenses</u>					
7a) Co-Payments Projected to be received from Pgm Year Installations	\$0	\$0	\$0	\$0	\$0
7b) Estimated Commitments to Future Years	\$5,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
7c) Outside Finance Funding	\$945,000	\$0	\$0	\$0	\$0
7d) Target Incentive	\$1,992,513	\$2,600,288	\$3,083,492	\$3,594,417	\$9,278,196
7e) EERMC Expenses	\$813,800	\$687,894	\$815,724	\$950,887	\$2,454,505
7) <b>Subtotal Additions to Implementation + Evaluation Expenses</b>	<b>\$8,751,313</b>	<b>\$5,288,182</b>	<b>\$5,899,215</b>	<b>\$6,545,304</b>	<b>\$17,732,701</b>
8) <b>Total Funding Required = (6) + (7)</b>	<b>\$54,035,689</b>	<b>\$64,385,628</b>	<b>\$75,978,573</b>	<b>\$88,236,598</b>	<b>\$228,600,799</b>
<b><u>PART B: POTENTIAL INCREMENTAL FUNDING NEEDED</u></b>					
9) Projected Funding Available = (5)		\$51,447,640	\$49,570,073	\$50,807,576	\$151,825,289
10) <b>Fully Reconciling funding needed from additional source (8) - (10)</b>		<b>\$12,937,988</b>	<b>\$26,408,501</b>	<b>\$37,429,022</b>	<b>\$76,775,511</b>
11) <b>Fully Reconciling funding needed per kWh = (10) / (1)</b>		<b>\$0.0016</b>	<b>\$0.0033</b>	<b>\$0.0046</b>	
12) Total EE Program Charge Funding per kWh = (2) + (11)		\$0.0069	\$0.0086	\$0.0098	
<b><u>PART C: GOALS AND COST/LIFETIME kWh</u></b>					
13) <b>Program Expansion, Units savings relative to 2011</b>	100%	125%	155%	184%	
13a) <b>Goal, Annual MWh</b>	102,627	128,570	158,820	189,068	476,458
13b) <b>Goal, Annual Peak kW Savings</b>	19,142	25,040	26,368	31,428	82,836
13c) <b>Goal, Lifetime MWh</b>	1,189,306	1,546,997	1,609,419	1,960,550	5,116,966
13d) <b>Total benefits</b>	\$178,160,117	\$198,836,955	\$204,451,077	\$251,198,316	\$654,486,348
14) Customer Costs	\$13,251,200	\$18,168,065	\$18,968,975	\$24,940,769	\$62,077,809
15) TRC Cost/lifetime kWh = ((8) + (14) - (7b)) / (13c)*1000	\$0.052	\$0.052	\$0.058	\$0.056	
16) <b>Benefit Cost Ratio = (13d) / ((6) + (7d) + (7e) + (14))</b>	<b>2.86</b>	<b>2.47</b>	<b>2.20</b>	<b>2.26</b>	
17) Utility Spending per lifetime kWh = ((6) + (7d)) / (13c)*1000	\$0.040	\$0.040	\$0.045	\$0.044	

#### Line Notes:

- 1 Sales from Company sales forecast (Sept '10) and includes Streetlights.
- 4a Fund balance interest projections assume \$400,000 in interest earned in a typical year.
- 4b Projected Co-Payments by Customers is projected at \$0 because future repayments will recapitalize in the revolving loan fund, established in 2011.
- 4d Fund balance should be \$0 under Fully Reconciling Funding Mechanism -- any over/under is budgeted in the next year.
- 4e FCM Payments based on planned MW values already bid.
- Projected RGGI Proceeds based on 80% of auctions proceeds under OER's 2011 Rules. RI annual quantity of allowances projected as 1,842,400, based on 70% of RI's allowances being sold due to lower emissions. Allowance price projected at floor price of \$1.89 per allowance. Sources: RI Proceeds by Auction, RGGI Inc, available: [http://rggi.org/docs/RI\\_Proceeds\\_by\\_Auction.pdf](http://rggi.org/docs/RI_Proceeds_by_Auction.pdf); RGGI Emission Trends, May 2010, ENE, available: [http://env-ne.org/public/resources/pdf/ENE\\_RGGL\\_Emissions\\_Report\\_110502\\_FINAL.pdf](http://env-ne.org/public/resources/pdf/ENE_RGGL_Emissions_Report_110502_FINAL.pdf)
- 7a Co-Payments Projected to be received is projected as \$0 because customer repayments will be used to recapitalize in the revolving loan fund, established in 2011.
- 7b Commitments for future years expected to exceed commitments carried in (see row 4c) due to program expansion
- 7c Outside Finance Funding was unique in 2011 and is excluded from Implementation expenses.
- 7d Target incentive is equal to 4.4% of implementation + evaluation expenses
- 7e EERMC Expenses based on 1.2% of implementation expenses
- 15 Commitments are excluded from TRC Cost/lifetime kWh
- 16 Commitments are excluded from the Benefit Cost Ratio

**Rhode Island Energy Efficiency Procurement Plan 2012-2014  
Gas Funding Plan**

	2011	2012	2013	2014	3 year total
<b><u>PART A: TOTAL FUNDING AND GOALS</u></b>					
1) Projected Dth Sales:	33,640,725	30,718,533	30,544,279	30,617,150	
2) 2011 EE Charge per Dth	\$0.21519	\$0.411	\$0.411	\$0.411	
3) <b>Projected DSM Revenues from DSM Charge = (1) x (2)</b>	<b>\$7,238,991</b>	<b>\$12,625,317</b>	<b>\$12,553,699</b>	<b>\$12,583,649</b>	<b>\$37,762,664</b>
4) <u>Other Sources of DSM Funding</u>					
4a) Projected DSM Fund Balance Interest	n/a	\$0	\$0	\$0	\$0
4b) Projected Commitments from prior year	\$0	\$0	\$0	\$0	\$0
4c) Projected Entering Fund Balance:	-\$793,901	\$0	\$0	\$0	\$0
4d) Low Income Weatherization in Base Rates	\$200,000	\$200,000	\$200,000	\$200,000	\$600,000
4) <b>Subtotal Other Sources of DSM Funding</b>	<b>-\$593,901</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$600,000</b>
5) <b>Projected Funding Available from Traditional Sources = (3) + (4)</b>	<b>\$6,645,090</b>	<b>\$12,825,317</b>	<b>\$12,753,699</b>	<b>\$12,783,649</b>	<b>\$38,362,664</b>
6) <b>Program Implementation + Evaluation Expenses to Achieve Goals</b>	<b>\$6,237,728</b>	<b>\$12,966,219</b>	<b>\$17,095,149</b>	<b>\$21,392,323</b>	<b>\$51,453,691</b>
7) <u>Additions to Implementation + Evaluation Expenses</u>					
7a) Target Incentive	\$274,460	\$570,514	\$752,187	\$961,337	\$2,284,037
7b) EERMC Expenses	\$132,902	\$151,063	\$199,167	\$249,231	\$599,460
7) <b>Subtotal Additions to Implementation + Evaluation Expenses</b>	<b>\$407,362</b>	<b>\$721,576</b>	<b>\$951,353</b>	<b>\$1,210,567</b>	<b>\$2,883,497</b>
8) <b>Total Funding Required = (6) + (7)</b>	<b>\$6,645,090</b>	<b>\$13,687,795</b>	<b>\$18,046,503</b>	<b>\$22,602,890</b>	<b>\$54,337,188</b>
<b><u>PART B: POTENTIAL INCREMENTAL FUNDING NEEDED</u></b>					
9) Projected Funding Available = (5)		\$12,825,317	\$12,753,699	\$12,783,649	\$38,362,664
10) <b>Fully Reconciling funding needed from additional source (8) - (10)</b>		<b>\$862,478</b>	<b>\$5,292,804</b>	<b>\$9,819,241</b>	<b>\$15,974,524</b>
11) <b>Fully Reconciling funding needed per Dth = (10) / (1)</b>		<b>\$0.0281</b>	<b>\$0.1733</b>	<b>\$0.3207</b>	
12) Total EE Program Charge Funding per Dth = (2) + (11)		\$0.439	\$0.584	\$0.732	
<b><u>PART C: GOALS AND COST/LIFETIME Dth</u></b>					
13) <b>Program Expansion, Units savings relative to 2011</b>	100%	227%	279%	348%	
13a) <b>Goal, Annual Dth</b>	102,203	231,550	284,734	355,917	872,201
13b) <b>Goal, Lifetime Dth</b>	1,601,861	3,316,495	4,420,967	5,526,209	13,263,671
13c) <b>Total benefits</b>	\$20,163,819	\$31,280,215	\$43,686,179	\$56,214,055	\$131,180,449
14) Customer Costs	\$2,376,000	\$8,764,305	\$11,675,562	\$14,594,453	\$35,034,320
15) TRC Cost/lifetime Dth = ((8) + (14)) / (13b)	\$5.46	\$6.77	\$6.72	\$6.73	
16) <b>Benefit-Cost Ratio = (13c) / ((8) + (14))</b>	<b>2.24</b>	<b>1.39</b>	<b>1.47</b>	<b>1.51</b>	
17) Utility Spending per lifetime Dth = ((6)+(7a)) / (13b)	\$4.07	\$4.08	\$4.04	\$4.05	

**Line Notes:**

1 2011 Forecast from Gas Refined Budget, Docket 4209; 2012-2014 from Company forecasts

2 2011 EE Charge per Dth is averaged based on \$0.15 for January-July and \$0.411 for August-December

4a Fund balance interest projections assume no interest due to lack of historical information

4b Gas programs do not make commitments as of 2010 Annual Plan

4d Fund balance should be \$0 under Fully Reconciling Funding Mechanism -- any over/under is budgeted in the next year.

7a Target incentive is equal to 4.4% of program implementation + evaluation budget

7b EERMC Expenses based on 1.2% of implementation expenses

## **Appendix B: Company History With Targeted Demand Response**

The Company has been actively promoting the current generation of targeted demand response programs since 2002. There are a number of design elements that facilitate the development of a targeted demand response program in a specific area. The first element is a capacity shortfall on transmission system over the course of the project. Due to the nature of distribution and transmission system planning and the lead time for construction projects to be planned and completed, the Company works to select an area which is not in imminent danger of insufficient capacity even without the specific distribution or transmission upgrade, but in the event of delays or extraordinary weather, could become overloaded.

A second element in designing the program is the amount of time the estimated capacity shortfall would exist. If the capacity shortfall requires many hours of interruption to manage properly, customers may not participate enough to provide the needed load relief. However, if the shortfall can be identified to a limited number of days and a limited number of peak load hours during those days, then a load curtailment program may provide the necessary load relief if needed, and typically in New England, heat waves are limited to just a few weeks.

The third component is to determine if the existing population of large accounts could provide the necessary load relief.

Finally, the fourth component is the willingness of customers to modify their electrical loads and to evaluate the amount of financial incentive required to induce this modification. According to a 2001 E-Source report 'Making Peak Load Management Work for the Mid-market Industrials, a payment of at least \$0.50 per kWh appears to be the minimum value for successful projects.

### ***History of targeted demand response at the Company***

- In 2004 the Company undertook a targeted demand response program (filed with the RI PUC as the Summer Load Relief Program) in the Warwick/Cranston area. This program was initiated to provide area load relief in the event the Company's proposed new substation on Kilvert St., in Warwick, were to experience unexpected construction delays which may prevent it from coming on-line before the heat of the summer, and the need to serve the higher electrical loads that come with the heat.

The Company visited 35 customers with demands over 200 kW who had Company distribution service from either the Pontiac substation in Cranston or the Lincoln Ave. substation in Warwick. Twenty-three of these accounts were offered load shed audits to help them determine specifically how they could participate in any load shed request. This project was initiated due to potential construction delays for the new substation as outlined above. The substation was energized in mid-June, and by the end of June, the other substations (Pontiac and Lincoln Ave) had been off-loaded by approximately 20 MWs. Since no above-average loads were experienced in the early summer, the Company did not call any load shed events prior to the substation being energized. As of that date, the Company has only received 4 agreements back from customers willing to participate in the program. Many customers were interested in the program but were reluctant to sign an agreement to participate, even though no penalties existed for non-performance. The Company coordinated its promotion of the targeted demand response area with the ISO-NE's programs, in response to the increased number of price response events called by the ISO. The Company viewed the ISO programs as something all medium to large Commercial and Industrial customers should be interested in. The Company broadly marketed the ISO programs with this in mind, offering audits for customers enrolled in either the Company's demand response program or the ISO-NE programs. The audits provided customer education, efficiency project opportunities, as well as guidance for maximizing benefits from participation in the Company's and ISO-New England's demand response programs.

- In 2005, the Company identified the area that served the area fed by the L190 115 kV expansion project. This consisted of loads fed from the Ashaway, Hope Valley, Wakefield, Bonnet, Westerly, Kenyon, LaFayette, Wood River and Peacedale substations. This was an area in its service territory where there are a sufficient number of large customers who have the ability to shed load in a manner that could help the Company meet potential extreme peak loads or unexpected contingency events in the area prior to completion of the transmission upgrade or resulting from delays in the L190 project. Even though the amount of load relief needed was over 50 MWs if there was a failure of one of the 115 kV lines in place, a smaller program was begun with the understanding that, if needed, a significantly larger program might be built off the smaller one. The program was designed for retail delivery service customers in the area who had a minimum monthly billing demand of 200 kilowatts, and who could curtail load by at least 50 kilowatts on short notice.

The Company paid participating customers capacity payments as well as energy payments based upon the amount of load curtailed in each hour of called interruptions. Capacity payments were \$3.00 per kW-month (for three summer months) and energy payments were 50¢ per kWh curtailed. Performance was measured using the same methodology utilized by ISO-NE in their demand response programs. The payments were provided to customers in the form of a bill credit after the end of the season.

Based on the results of NG-RI's sister company, NG-MA, in its Targeted Demand Response Program (also known as the Brockton Pilot), NG-RI anticipated enrolling approximately forty percent (40%) of the eligible customers in the area that could shed 8% of their total load when called upon. In this selected area, there were 51 large customers that represent approximately 34,000 kW of load. Using the percentages above, the Company anticipated enrolling 20-25 customers, and targeting 2,000 to 2,700 kW's of load relief. Twenty-one customers were enrolled in the

program for a total of 1.95 MWs. No calls were made for the summer of 2005 due to cooler than normal weather.

- In 2006 the Company made three calls for load shed in the area and saw peak load reductions ranging from a low of 1.5 MWs, to a high of 2.1 MWs. Twenty-one customers earned credits totaling over \$32,000.
- No calls were made for the summer of 2007 for the same reasons as in 2005.
- In 2008, The L190 transmission line upgrade was energized, and should meet the needs of the area for a projected 10-year period based on the area's historical load growth. Therefore, targeted load relief in the area is no longer needed.