National Grid

The Narragansett Electric Company

2013 System Reliability Procurement Report

November 2, 2012

Submitted to:
Rhode Island Public Utilities Commission

Docket No. 4367

Submitted by:

nationalgrid

LETTER

nationalgrid

Jennifer Brooks Hutchinson
Senior Counsel

November 2, 2012

VIA HAND DELIVERY & ELECTRONIC MAIL

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

RE: Docket 4367 – The Narragansett Electric Company, d/b/a National Grid 2013 System Reliability Procurement Report

Dear Ms. Massaro:

Enclosed are ten (10) copies of National Grid's[1] proposed System Reliability Procurement Report for 2013 (the "2013 SRP Report"). The 2013 SRP Report is being filed as a settlement, agreed to by the participating members of the Energy Efficiency Subcommittee of the Energy Efficiency Resources Management Council ("EERMC").

This 2013 SRP Report is being filed pursuant to the System Reliability and Least Cost Procurement statute, R.I.G.L. § 39-1-27.7 and the revised System Reliability Procurement Standards (the "Standards") that were approved by the Commission on June 7, 2011 in Docket 4202. Similar to last year, the 2013 SRP Report is consistent with the framework established in the Three Year Energy Efficiency Procurement Plan ("Three Year Plan") filed in Docket 4284 to integrate the analysis of non-wires alternatives ("NWAs") into the Company's planning functions by using analytical tools to evaluate the costs and benefits of traditional and NWA solutions, and to identify system needs for which a NWA is the preferred solution.

In this 2013 SRP Report filing, the Company is proposing to continue the Load Curtailment Pilot ("Pilot"), which began in 2012 and was approved by the Commission in Docket 4296, to test the use of load curtailment by customers, or demand response, as a means to manage local distribution capacity requirements during peak periods. In the Company's 2012 SRP Report-Supplement, the Company identified the area served by its Tiverton substation as an appropriate candidate for a NWA pilot. The Pilot area serves 5,600 customers. In order to maximize customer participation in the Pilot over the prior year, the Company is proposing to increase its marketing and outreach campaign as part of the 2013 SRP Report. The Company is also proposing technology updates and enhanced incentive offerings in 2013 based on its initial implementation experiences and lessons learned from 2012.

[1] The Narragansett Electric Company d/b/a National Grid (referred to herein as "National Grid" or the "Company").

The Company is proposing to fund the second year of the Pilot through a combination of leveraging existing energy efficiency funds by targeting certain energy efficiency programs and measures in the Tiverton/Little Compton area, unspent funds from the 2012 SRP Report budget, plus additional funding for increased marketing efforts and incentives. The Company expects to have approximately $90,300 leftover from 2012, which will reduce the amount of customer funding from the proposed budget for 2013. The additional funding proposed is not included in the budget for the 2013 Energy Efficiency Program Plan that is being submitted separately for the Commission's consideration in Docket 4366; therefore, the Company is requesting the Commission's approval of the second year budget for the 2013 SRP Report in the amount of $343,500, and to apply the unspent 2012 funds in the amount of $90,300 to the 2013 budget to reduce the amount of customer funding to $253,200. As indicated last year, if the Pilot is successful in enrolling enough load relief and in providing sustained load relief over a four (4) year period, it will result in deferral of a new substation feeder estimated to cost $2.97 million in 2014,[2] which equates to a net present value cumulative savings of $639,414 over a four-year deferral. While the Company acknowledges that the potential deferral value of the proposed substation upgrade is less than the total cost of the Pilot, this investment continues to be necessary in order to determine the appropriate levels of administration, customer outreach and evaluation necessary to acquire participation in load response events.

It is expected that the 2013 investment will create combined annual summer demand savings of 161 kW and combined lifetime demand savings of 1,914 kW for the residential and commercial and industrial sectors in the Tiverton/Little Compton area. Additionally, in 2013, the Pilot will create combined annual energy savings of 500MWh and combined lifetime energy savings of 5,512 MWh in the same area. In accordance with the Standards' requirements for cost effectiveness, in 2013 the Pilot will create $1.33 of economic benefits for every $1 invested. Overall, the Pilot in 2013 will generate economic benefits of more than $973,000 over the life of the measures.

Similar to last year, the Company is proposing to roll the additional funds needed for the Pilot into the existing Energy Efficiency Program ("EEP") charge, rather than as a separate line item on customers' bills. The total, additional funding needed for the Pilot is $0.00003 per kWh. The proposed EEP charge requested as part of the 2012 EEP Plan is $0.00862 per kWh. With the addition of the SRP funding, if approved, the total EEP charge would be $0.00865 per kWh.[3] As with the Energy Efficiency funds, actual revenues will be reconciled against actual expenses at the end of the year and any difference will be credited or charged to customers in 2014.

The 2013 SRP Report has been reviewed and approved by the EERMC and complies with the Least Cost Procurement statute and the Standards. Accordingly, the Company respectfully requests that the Commission approve this 2013 SRP Report.

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[2] The Company made minor adjustments in the cost of the wires solution over last year to reflect inflation. Additional detail regarding the cost adjustments is set forth in the 2013 SRP Report.

[3] These calculations are based on a January 1, 2013 effective date; however, the Company does not object to utilizing a February 1, 2013 effective date for the change in the EEP charge if the Commission prefers. In such event, the total EEP charge with the additional SRP funding would be $0.00891 per kWh.

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

Very truly yours,

Jennifer Brooks Hutchinson

cc: Karen Lyons, Esq.
Jon Hagopian, Esq.
Steve Scialabba, Division

2013 SRP Plan

2013 SYSTEM RELIABILITY PROCUREMENT REPORT

Introduction

The Narragansett Electric Company's d/b/a National Grid ("National Grid" or "Company") is pleased to submit this annual System Reliability Procurement Report ("SRP Report") for 2013 to the Rhode Island Public Utilities Commission. This SRP Report has been developed by National Grid in collaboration with the Collaborative Subcommittee of the Energy Efficiency and Resource Management Council ("EERMC").[1]

This SRP Report is submitted in accordance with the Least Cost Procurement law, R.I.G.L. §39-1-27.7, the basis for which is Comprehensive Energy Conservation, Efficiency, and Affordability Act of 2006 (as amended in May 2010),[2] and the Rhode Island Public Utilities Commission's ("Commission") revised "System Reliability Procurement Standards," approved by the Commission on June 7, 2011 ("SRP Standards").[3] This Plan is being jointly submitted as a Stipulation and Settlement ("Settlement"), entered into by the Division of Public Utilities and Carriers (the "Division"), the EERMC, The Energy Council of Rhode Island ("TEC-RI"), Environment Northeast ("ENE"), and National Grid (together, the "Parties"), and addresses all issues raised by members of the Collaborative Subcommittee concerning the Company's SRP Report for calendar year 2013.

[1] Members of the Subcommittee presently include the Company, the Division, TEC-RI, and ENE, along with participation from the Office of Energy Resources ("OER"), several EERMC members and representatives from the EERMC's Consulting Team. The Collaborative has functioned as a subcommittee of the EERMC since 2008.

[2] The Comprehensive Energy Conservation, Efficiency and Affordability Act of 2006 (the "2006 Act") provides the statutory framework for least cost procurement of system reliability in the State of Rhode Island. The 2006 Act provided a unique opportunity for Rhode Island to identify and procure cost-effective customer-side and distributed resources with a focus on alternative solutions to the traditional supply options. Over time these alternative solutions may deliver savings to customers by deferring or avoiding distribution system investments, and improving overall system reliability.

[3] The Least Cost Procurement law, R.I.G.L. §39-1-27.7, requires standards and guidelines for "system reliability" that includes the "procurement of energy supply from diverse sources," including, but not limited to, renewable energy resources, distributed generation, including but not limited to, renewable resources and 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 unanimously approved revised standards for system reliability, finding that the standards were consistent with the policies and provisions of R.I.G.L. 39-1-27.7.1(e)(4), (f) and R.I.G.L. 39-1-27.7.3.

Section 2.1(C) of the SRP Standards requires that the Company identify transmission or distribution (T&D) projects that meet certain screening criteria for potential non-wires alternative ("NWA") solutions that reduce, avoid, or defer traditional T&D wires solutions. NWAs are actions by customers that may defer the need for Company investment. NWAs provide demand response either through targeted energy efficiency efforts, controlling load at times of local peak demand, distributed generation used at time of peak demand, and controllers that are programmed to reduce demand at peak demand. Section 2.1 (H) of the SRP Standards further require the Company to submit on November 1 of each year an SRP Report that includes, 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, recommendations for demonstrating distribution or transmission projects for which the Company will use selected NWA reliability and capacity strategies, and the status of any previously approved pilots.

National Grid seeks approval of this 2013 SRP Report in accordance with the guidelines set forth in Section 2.1 of the SRP Standards.

Summary of Company Proposal

As part of this 2013 SRP Report, the Company is proposing to continue the Load Curtailment Pilot ("Pilot") that was proposed in the 2012 System Reliability Procurement Report – Supplement ("2012 SRP Report") and approved by the Commission in Docket 4296. The purpose of the Pilot is to test the use of load curtailment by customers, or demand response, as a means to manage local distribution capacity requirements during peak periods. As explained in the 2012 SRP Report, the Company identified the area served by its Tiverton substation as a candidate for a pilot. The Company will leverage experience from its first few months of Pilot implementation, as well as its previous effort in targeted energy efficiency ("EE") on Aquidneck Island conducted in 2009-2010. That effort was performed as a pilot in the approved Energy Efficiency Program Plan for 2009 using EE funding.

The Company proposes the continued use of EE funds from programs proposed in the 2013 Energy Efficiency Program Plan filing and certain additional funds as proposed below to conduct this Pilot. The Company estimates that $343,500 will be required in 2013. This is in addition to $350,500 in Focused Energy Efficiency costs that will be leveraged through energy audits and provision of equipment through the EE programs. With the 2012 SRP being approved in late February of 2012, the Company did not have a whole calendar year to implement the plan in 2012 and expects to have some of the funding approved for 2012 leftover. These leftover funds will decrease the actual need for customer funding from the $343,500 estimated for 2013 to approximately $253,200. Accordingly, the Company is requesting approval of the 2013 budget in the amount of

$343,500, and to apply the unspent 2012 funds to the 2013 budget to reduce the customer funding amount to $253,200.

The requested funds will be used to enhance energy efficiency incentives, provide additional energy efficiency measures that would not otherwise be offered through the statewide programs, increase marketing in the Tiverton/Little Compton area to increase participation in all aspects of the Pilot and conduct a targeted demand reduction program that will reduce customer air conditioning and lighting loads as well as potential appliance loads. The Pilot area serves 5,600 customers and the Company is seeking enough customers to provide 1MW of load reduction over four years to allow deferral of the new substation feeder for that four (4) year period. If the Pilot is successful in enrolling enough load relief and in providing sustained load relief over a six (6) year period, it will result in the deferred construction of a new substation feeder estimated to cost $2.97 million in 2014.

Projects Reviewed for NWA

The Company screened transmission and distribution projects against the criteria listed in Section 2.1 (C) of the SRP Standards and its internal planning document throughout 2012. The Tower Hill substation was the only project that met these criteria. This substation will require a new feeder in 2014 in order to meet increasing summer demand at this single transformer sub. The load reduction requirement in the first year is 2MW[4] in order to defer the construction of a new feeder. There are 120 customers being served from this substation of which 60% are residential. The Company determined that the amount of load relief required to successfully defer the project would be unreasonable to achieve from such a small and primarily residential[5] customer population. Therefore, the Company is not proposing an NWA solution for this wires project, and will not be including any new NWA proposals as part of this SRP Report.

Forecasted Load Growth in Tiverton Area

Appendix 1 shows historical and forecast coincident, summer peak demands for the Company and its four Power Supply Areas ("PSAs"). The highest peak demand was recorded in August 2006 at 1,949 MWs as compared to the highest winter demand in December 2004 of 1,394 MWs. The Company's distribution system serves approximately 485,000 electric customers in 38 cities and towns in Rhode Island. The residential class

[4] Load increases at the sub are due to forecasted load growth in a power supply area ("PSA"), which is composed of multiple towns not just one (and therefore not simply one customer). The forecasted load growth rate is attributed to economics such as employment and number of households derived from Moody's Economics. Over the next five years the growth rate of employment is strongest in 2014-2015.
[5] This substation serves 37 small business and 10 large commercial customers.

accounts for about 40% of the Company's total Rhode Island load while the commercial class accounts for 48% and the industrial class 12%.

Appendix 2 illustrates that Providence PSA is the Company's largest and fastest growing area. Tiverton is the fastest growing town in the Providence PSA. From 2001 to 2011, total kWh deliveries to Tiverton increased at an average annual rate of 1.4% compared to 0.9% for the Providence PSA and 0.5% for the Company as a whole. Little Compton also grew faster than the state average, by 1.1% per year. In 2011, residential deliveries account for 73% for Tiverton's deliveries and 85% of Little Compton's deliveries.

In addition, Tiverton and Little Compton loads are projected to increase at a higher rate than Providence non-coincident peak forecast. Their growth rates of 1.7% and 1.4% will exceed that of the Providence PSA for the ten year period 2011-2021. As shown in Appendix 3, Providence summer peak is expected to rise at an average annual rate of 1.3% per year, on a weather-adjusted basis.

Tiverton Substation Upgrade Work

At the time of this filing, the Company has determined that there is no change in the expected load growth at the Tiverton substation, nor does the standard engineering loading solution to meet this load growth, and the anticipated load reduction requirement. Therefore, the Company will continue to work toward meeting its load reduction goals for each year and its overall goals for the end of the Pilot's lifetime.

There is, however, a two part cost adjustment to the wires solution to this project. The first adjustment is to the inflation rates used in the calculation of these costs. Per the US Bureau of Labor Statistics (BLS), 2011 inflation is 3.2% and 2012 average inflation through July is 2.2%. The Company continued to use 2.2% as the best estimate of inflation through 2013 and 2014.

The second adjustment is a reallocation of costs between distribution and substation categories to correct a misplaced line item and between capital and O&M breakdowns resulting from the use of new, more accurate estimation tools for project costs. There is no net increase or decrease associated with this second change. These adjustments resulted in the following costs:

	Distribution	Substation	Total
Capital	$1,796,512	$804,253	$2,600,765
O&M	$41,779	$83,559	$125,338
Removal	$167,117	$83,559	$250,676
Totals	$2,005,409	$971,370	$2,976,779

Please refer to the 2012 SRP Report for a detailed description of the engineering work.

2012 Pilot Implementation Summary

Implementation of the 2012 Pilot activities began in March. Internal systems were ramped up and customer registration forms were designed. A marketing campaign was assembled and then launched in June. Marketing tactics consisted of direct mailings and e-mails followed by outbound follow-up calls (telemarketing). These outreach efforts were specifically targeted to customers that either previously had an audit through the EnergyWise program or were identified as having historically high summer usage. The marketing campaign also included broad-based awareness tactics to supplement the direct marketing for an integrated approach. Awareness tactics included social media (messages via Twitter), paid search (Google key word search), and online banner ads on local Tiverton-Little Compton Patch sites. Marketing targeted to C&I customers began in August and is currently focusing on door-to-door interactions with customers. In addition to all of these SRP-specific marketing activities, the statewide EE marketing has also been in effect throughout 2012, promoting the EnergyWise and Small Business Direct Install programs.

The first thermostats were installed in June. At the time of this filing, a total of 20 thermostats have been installed in residential homes. While there have been no C&I thermostat or lighting ballast installations, RISE Engineering has completed four audits of facilities eligible for lighting projects with proposition meetings with the business owners to be held, as well as two more lighting-eligible audits scheduled. In addition, RISE Engineering is working to engage a business customer that has the potential to install six thermostats in their facilities.

While implementing this Pilot according to the plans in the 2012 SRP Report, the Company learned new information about the customers that this Pilot is targeting. For example, the assumption of appliance saturation for central air-conditioning in the area used was the 32% reported by KEMA[6] for the state of Rhode Island. However, through additional research with RISE Engineering, extensive review of past forms customers filled out via clicking on a banner ad, and new EnergyWise audits in the area, the Company has learned that the central air conditioning saturation is actually closer to 20% and that there is a relatively higher saturation of window air conditioners. This helps to explain the slower than expected pace of wifi thermostat installations seen so far, and helps to inform advantageous adjustments to Pilot implementation for future years.

[6] *The Opportunity for Energy Efficiency That is Cheaper than Supply in Rhode Island – Phase II Report* by KEMA, Inc. delivered to Rhode Island Energy Efficiency and Resource Management Council on August 30, 2010.

By the end of 2012, the Company expects that it will achieve about 39% of its original, summer demand savings targets for that year by meeting approximately 37% of its measure installation targets. The Company will continue to heavily market the Demand Link program to customers to maximize 2012 participation.

2013 Pilot Implementation

This 2013 SRP Report reflects the Company's efforts to better tailor the Pilot's offerings to customers' needs while also meeting its load reduction goals. As a result of initial experiences in implementation and lessons learned, the Company proposes updates and changes for the 2013 SRP Report in terms of technology and incentivized offerings. Starting in 2013, the Company plans to offer incentives to customers with window air conditioning units to replace their current product with one that is ENERGY STAR® rated, to recycle the old unit, and to install a Modlet for participation in Demand Response events. The Company will request that all new participants taking advantage of the new incentives sign on for at least two years.

In addition, the 2013 SRP Report proposes to continue many of the strategies being implemented in 2012 that have so far been successful. Most significantly, it will continue recruiting customers and delivering products through the statewide EnergyWise and Small Business Direct Install energy efficiency programs. While the Pilot encourages customers to install specific measures in order to achieve the required load reduction, simultaneously offering them an entire suite of measures offered by the statewide EE programs allows for a whole-house approach to customer service and increases the potential for additional EE savings in the pilot area. The Pilot will also continue to market and install wifi programmable, controllable thermostats to residential and small business customers, though in reduced numbers.

Residential Incentives

Beginning in 2013, the Pilot will broaden its targeted audience to include customers with window air conditioning units to capture what appears to be a rich segment for peak load reduction. These customers will be offered a $50 rebate for a qualifying window AC replacement.[7] The Pilot will also offer a window air conditioning recycling program for qualifying customers,[8] which is something many utilities across the country offer on a regular basis as part of their EE programs. See Appendix 4 for references to other utility programs. Customers will first have to purchase the new Energy Star unit and then will be able to apply for an additional $25 rebate prior to their old unit being picked up.

[7] A qualifying window AC replacement is one where the customer replaces their current AC unit with one that is ENERGY STAR® rated.

[8] To qualify for the window AC recycling incentives, the customer's window AC unit must be pre-2000 and they must have already participated in a qualifying AC replacement through the Pilot.

Customers who take advantage of this incentive will be served on a first-come first-serve basis. The US Department of Energy estimates that a savings of $75 in energy costs can be acquired over the lifetime of Energy Star units compared to pre-2000 units.

Also beginning in 2013 the Pilot will complement the window air conditioning replacements with the Modlet technology (shown below). The Modlet, as seen below, consists of two standard outlets that plug into a standard wall outlet, allowing the customer to pre-program and adjust usage remotely. The Company will be able to send a signal to these devices via wi-fi and initiate cycling activity for a demand response event thereby reducing load levels when necessary. Customers who choose to receive the Modlet and participate in demand response events for at least two years will be given a $25 annual credit in addition to receiving the technology for free. This amount is consistent with rebates offered in other recycling programs such as those referenced in Appendix 4.

Currently, the Modlet is being used by Con Ed in a large program[9] across New York City to better manage summer peak periods with window and wall a/c units. The potential per-household, connected load due to window AC units that Con Ed has documented is 1096W. It assumes 2 window air conditioning units per household. During a five hour event, Con Ed has documented an average household savings of about 26% of its AC load which equates to approximately 284W per household. The Company projects to achieve approximately 40% less savings than the project in New York as a result of differences in geographical location and customer base.

A reduced number of wi-fi programmable controllable thermostats (PCT) will continue to be offered to residential with central air-conditioning. The rebates for these measures will remain the same as they are in 2012. The Company believes that this integrated approach to reducing air conditioning load, which is typically a large contributor to

[9] Con Ed's coolNYC Progam: http://coolnycprogram.com/

summer peak loads in this area, is a promising strategy for deferring the substation upgrade.

Commercial Incentives

Similar to the 2012 SRP Report, the Company is proposing to continue installing wi-fi thermostats in Tiverton and Little Compton small businesses in 2013. The Company will also target 20 Modlet installations for small businesses that don't have central air conditioning in their premises. Small business customers will also be eligible to receive the same incentives for window AC replacements, window AC recycling, and annual participation credit referenced above for residential participants.

Marketing and Retention Plan

The Company's marketing group has found that recent online banner advertising on community websites has increased interest in the program and has delivered higher lead generation in September. The Company's marketing group intends to reevaluate media and communications channels as well as tactics to be used in 2013. Due to the short duration of our customer outreach and education efforts which began in May, it is premature to determine which approaches proved most successful in 2012. However, the Company plans to more aggressively communicate the available customer benefits via the Demand Link and EnergyWise programs. In 2013, the Company's marketing group will use what they have learned in 2012 as the basis to engage the entire customer population within the Pilot target area with increased frequency of our educational outreach messaging. In addition, the Company will consider expanding awareness tactics in 2013, to include more frequent direct mailings, e-mails, additional media selections such as print ads and online banners in the Sakonnet Times and other local websites. Direct marketing efforts will be adjusted to a) generate an increased number of leads, b) improve qualifying those leads, and c) promote a new energy-saving solution designed to allow customers having window (or through-the-wall) air conditioning which is not centrally controlled. These three adjustments are projected to greatly improve program efficacy in 2013. These steps are projected to increase customer participation in our overall program. This increased level of marketing outreach and education activities will require an increased marketing budget for 2013. All broad-based communication will continue to drive customers to enroll in the EnergyWise Home Energy Assessment program, which is a qualifying requirement for participation in Demand Link.

The Company will also explore opportunities to more directly engage community members by holding education and awareness events in the evenings, or creating some type of community challenge or contest between the two towns to further generate interest/excitement about the program. Aside from the obvious benefits of increased awareness and participation, these strategies might also create earned media opportunities through positive customer experiences/success stories.

Monitoring

The Tiverton substation was equipped with additional metering capabilities for the feeders in 2012. This allows the Company's planning engineering groups to examine the loads on the feeders versus the prior capability of simply seeing loads on the transformers, which serve two feeders each. In order to monitor the feeder loads and receive a notification when the load level reaches a certain threshold, the Company will be installing additional equipment. An alert that loading has reached the threshold will be necessary in order to conduct load curtailment events. The Company is working with a number of vendors to install this equipment.

Additionally, the Company understands that there is potential for load growth through new construction which could be detrimental to the Pilot's progress toward load deferral. To minimize this potential, in 2013 the Company will investigate the possibility of reaching the new construction market earlier in order to encourage them to take advantage of the highest levels of energy efficiency available.

Funding Plan

As proposed in the 2012 SRP Report, the Company will submit an updated budget annually for approval. The Company is proposing to fund the Pilot in Tiverton and Little Compton in 2013 through a mixture of leveraged EE funds, unspent 2012 SRP funds, and the additional SRP funds requested as part of this 2013 SRP Report. Similar to the Company's proposal in 2012, the Company is proposing to collect the additional funds needed for the Pilot by rolling it into the existing EE program charge on customer's bills, which is detailed in Table S-1.

SRP Six-Year Budget

The Company does not anticipate spending the full 2012 budget and projects that by the end of 2012 it will have approximately $90,300 leftover. The Company proposes to carry forward the unspent funds and apply these funds to the amount being requested from customers to fund the proposed 2013 budget.

The budget below reflects changes primarily in the evaluation category, which represents a much more informed estimate of actual evaluation costs than was available in 2012. The Company has been working with Opinion Dynamics Corporation ("ODC") to develop an evaluation plan for 2013. This plan has many important and intricate components which are detailed in the next subsection. The results of the evaluation will inform not only changes for future years of this Pilot, but also future NWA project implementation plans based on lessons learned.

The 2013 budget also reflects an increase in marketing costs. The Company has found through both a preliminary marketing analysis completed by ODC [10] and measure installation results in 2012 thus far, that a greater marketing presence is needed in 2013 to spur Pilot participation. As discussed in the previous section, the Pilot plans to more aggressively market the benefits of participation and to target more customers in the area. This greater amount of outreach to a larger customer base drives the increase in budget.

Table S-3
National Grid
System Reliability Procurement - Tiverton/Little Compton
Annual Budgets
$(000)

	Program Planning & Administration	Marketing	Rebates and Other Customer Incentives	Sales, Technical Assistance & Training	Evaluation & Market Research	Total
2012	$30.0	$38.0	$32.4	$5.3	$25.0	$130.7
2013	$50.0	$77.0	$101.6	$14.9	$100.0	$343.5
2014	$50.0	$52.0	$109.5	$2.7	$100.0	$314.2
2015	$30.0	$52.0	$118.1	$3.2	$100.0	$303.3
2016	$30.0	$37.0	$126.7	$3.8	$100.0	$297.5
2017	$30.0	$37.0	$135.3	$4.4	$100.0	$306.7
Total	**$220.0**	**$293.0**	**$623.6**	**$34.1**	**$525.0**	**$1,695.7**

Notes:
(1) The 2013 System Reliability Procurement Report seeks approval only for 2013 funds. Future projections over the life of the Tiverton/Little Compton pilot are estimates subject to change.
(2) The annual totals in this table represent only the forecasted funds necessary to run the Tiverton/Little Compton pilot. They do not include costs associated with focused energy efficiency or with SRP participant costs.
(3) All amounts shown are in $current year.
(4) 2012 numbers have been updated to reflect year end projections.

Please refer to Appendix 5 for a more detailed breakdown of this Pilot's costs.

Evaluation

The Company has contracted with ODC to perform a third-party evaluation of this Pilot. The objectives for 2012 are focused primarily on establishing evaluation processes for the deferral years of the Pilot but also include some preliminary analysis on 2012 activities. The major evaluation objectives for 2012 are (1) assessing the 2012 marketing, recruitment and enrollment through the summer, (2) establishing data tracking processes to enable effective measurement of impacts in future years, (3) developing a methodology to estimate the impact of energy efficiency increases, and (4) developing an evaluation plan for 2013.

Preliminary results from item (1) above have already yielded indicators of lessons to be learned. First, participation in the EnergyWise program in Tiverton and Little Compton has seen an increase in 2012 so far. While it's still too early to tell if this is because of

[10] See Appendix 7 for: Memorandum: National Grid Rhode Island System Reliability Procurement Pilot: Preliminary 2012 Marketing Effectiveness Findings, Opinion Dynamics Corporation, September 2012.

Demand Link marketing or from the statewide marketing, the increase is occurring which means that more customers are being screened for Demand Link eligibility. Additionally, although it is still very early in the Pilot, the analysis indicated that an instance of thermostat installation may only be occurring once out of every six audits. This is much less frequent than the assumption made in the 2012 SRP Report. The preliminary marketing analysis completed in September of this year is included as Appendix 7 of this report. An updated analysis encompassing the entire 2012 Pilot year will be provided as part of a larger report in early 2013. Deliverables associated with items 2 and 3 are targeted to be completed in December of 2012.

A preliminary evaluation plan and associated budget estimate for 2013 was also created in September of 2012. In 2013, in addition to the updated 2012 marketing analysis, the evaluation team will focus on developing a bottom-up impact methodology to determine the extent to which any load reduction seen at the substation can be attributed to this Pilot. It will also conduct participant focus groups and non-participant surveys to better understand why customers do and do not participate in the Pilot. The Company intends to use lessons learned from these efforts to design program implementation strategies and incentives that will ultimately increase the participation rates in all aspects of this Pilot and future NWA projects. Finally, the evaluation will use the energy efficiency impact methodology developed in 2012 to evaluate the impact of 2012 energy efficiency activities on the area load.

Valuation of Deferral and Revenue Requirements

The Company will be able to defer investing $2,976,779 in 2014 through 2017 if enough customers reduce load during peak events during the Pilot. This would allow the Company to prioritize other investment projects without NWA potential. The value from deferral of the proposed wires solution is summarized below. The Company estimated thirty years of revenue requirement from the investment entering service in 2014. The Company proceeded to move the investment one year ahead and calculate the revenue requirement through the next twenty-nine years and continuing for years 2015, 2016 and 2017, respectively, and took the difference between the values from one year to the next. The result of a four-year deferral is the set of net present value benefits as shown in the table below. The Company converted the $2,976,779 estimate (which is in 2014 dollars) to a net present value, which is represented by the $2,649,232 in the "Base Investment" column below. The amounts in the "NPV Annual Value" row below represent the deferral savings achieved in each year by avoiding the wires solution for another year.

Year		2014	2015	2016	2017
	Base Investment	1 Yr Delay	2 Yr Delay	3 Yr Delay	4 Yr Delay
NPV of Revenue Requirement	$2,649,232	$2,472,460	$2,307,482	$2,153,514	$2,009,818
NPV Annual Value		$176,772	$164,977	$153,969	$143,695
NPV Cumulative savings		$176,772	$341,750	$495,719	$639,414

Updated Benefit/Cost Analysis of NWA Solution

The Company is proposing to use the same framework for cost-effectiveness in this 2013 SRP Report as that which was used in the 2012 SRP Report[11] Inputs to the benefit cost analysis from the 2012 SRP Report have been updated to reflect strategic, implementation changes for 2013-2017. Analysis and results for 2012 were kept the same as those in the 2012 SRP Report.

Table S-2
System Reliability Procurement - Tiverton/Little Compton
Summary of Cost Effectiveness ($000)

	2012	2013	2014	2015	2016	2017	Overall
Benefits	**$344.5**	**$973.7**	**$916.0**	**$1,010.1**	**$1,032.8**	**$1,060.6**	**$5,337.7**
Focused Energy Efficiency Benefits[1]	$328.5	$572.7	$439.9	$512.8	$524.8	$535.5	$2,914.1
SRP Energy Efficiency Benefits[2]	$16.0	$401.0	$286.2	$313.8	$331.2	$347.5	$1,695.7
Demand Reduction Benefits[3]	$0.0	$0.0	$13.1	$18.5	$22.9	$33.9	$88.5
Deferral Benefits[4]	$0.0	$0.0	$176.8	$165.0	$154.0	$143.7	$639.4
Costs	**$257.2**	**$731.7**	**$678.2**	**$667.3**	**$661.5**	**$670.7**	**$3,666.5**
Focused Energy Efficiency Costs[5]	$125.0	$384.3	$361.0	$361.0	$361.0	$361.0	$1,953.3
System Reliability Procurement Costs[6,7]	$132.2	$347.3	$317.2	$306.3	$300.5	$309.7	$1,713.2
Benefit/Cost Ratio	**1.34**	**1.33**	**1.35**	**1.51**	**1.56**	**1.58**	**1.46**

Notes:
(1) Focused EE benefits in each year include the NPV (over the life of those measures) of all TRC benefits associated with EE measures installed in that year that are being focused to the Tiverton/Little Compton area.
(2) SRP EE benefits include all TRC benefits associated with EE measures installed in each year that would not have been installed as part of the statewide EE programs.
(3) DR benefits represent the energy and capacity benefits associated with the demand reduction events projected to occur in each year.
(4) Deferral benefits are the net present value benefits associated with deferring the wires project (substation upgrade) for a given year in $2014.

(5) EE costs include PP&A, Marketing, STAT, Incentives, Evaluation and Participant Costs associated with statewide levels of EE that have been focused to the Tiverton/Little Compton area. For the purposes of this analysis, they are derived from the planned ¢/Lifetime kWh in Attachment 5, Table E-5 of the 2012 EEPP in the SF EnergyWise and Small Business Direct Install programs. These are the programs through which measures in this SRP pilot will be offered.
(6) SRP costs represent the 2013 SRPP budget which is separate from the statewide 2013 EEPP budget, as well as SRP participant costs. The SRP budget includes PP&A, Marketing, Incentives, STAT and Evaluation.
(7) All costs and benefits are in $current year except for deferral benefits.
(8) This SRP report seeks approval only for the 2013 System Reliability Procurement Costs. Future projections over the life of the Tiverton/Little Compton pilot are estimates subject to change.
(9) 2012 numbers have been updated to reflect year end projections.

[11] For a detailed descriptions of the cost and benefits associated with the cost-effectiveness framework, see 2012 SRP Report, February 1, 2012, Docket 4296.

This Pilot remains cost effective over its life, with a benefit/cost ratio of 1.46, as well as within each year, as shown in Table S-2 above. The benefit cost ratio for 2013 is 1.33. The BC ratios have decreased from the 2012 projections. There are a number of factors affecting this result. First, the $/lifetime MWh assumption for statewide EE EnergyWise has increased from the breakout of single family from multifamily program activities. Single family activities tend to incur a higher cost per unit of savings than multifamily and since this Pilot is primarily targeting single family homes, it was appropriate to assume the higher, leveraged costs. The cost of leveraging savings from the Small Business Direct Install program has also increased. Second, although the use of window air conditioning units and modlets in the Pilot will help to increase the size of the eligible customer pool, these new measures are also less cost effective than the wifi PCTs and have slightly shorter measure lives, which reduce the overall benefits. Finally, the EnergyWise program was evaluated last year, giving the analysis more accurate estimates for savings leveraged from that program.

This analysis is also inclusive of an updated savings assumption for the wifi PCTs. An evaluation[12] of these measures concluded that their savings were almost double the previous assumption.

It is still assumed that measures in future years will mimic those being used in the current planning year and that participation will remain constant over the life of the Pilot based on what is planned for 2013. This assumption may change in future Annual SRP Reports based on lessons learned from implementation, actual results, or other factors as the Company evaluates the progress of the Pilot.

The Pilot continues to focus both EE costs, EE savings and EE benefits from the EnergyWise and Small Business Direct Install programs for years 2013-2017, which can be seen in Table S-2 of Appendix 6. The focused EE program cost and savings inputs have been updated from the 2012 SRP Report to reflect the program per-kWh costs and program savings assumptions respectively from the 2013 EEPP. The focused program savings are shown in Table S-4 of Appendix 6.

The SRP costs and SRP EE benefits were updated for this 2013 SRP Report to reflect changes in the Pilot's measure offerings. This SRP Report is requesting approval for recovery of costs for 2013 which have been refined for this SRP Report. Costs for future years continue to be estimated and are subject to change in future Annual SRP Reports. It is still assumed that measures not included in the 2013 EEPP will not be included in the statewide EE plans for 2013-2017. Any changes to this assumption will be reflected in future Annual SRP Reports.

[12] See *Wi-Fi Programmable Controllable Thermostat Pilot Program Evaluation* by The Cadmus Group, Inc. Prepared for the Electric and Gas Program Administrators of Massachusetts, September, 2012.

All costs and benefits in this analysis are in current year dollars, meaning that the avoided costs are inflated for each year. The savings associated with this Pilot are categorized in the same way as the benefits. They are shown in Table S-4 of Appendix 6. As projected, this Pilot will create over $5 million in benefits in the Tiverton/Little Compton area over its six year lifetime. For each $1 invested, this Pilot will create $1.46 of economic benefits over the lifetime of the six-year investment. Most importantly, however, it will provide the load relief needed to defer the construction of a new substation through 2017 as shown in Table S-7 below.

Table S-7
System Reliability Procurement - Tiverton/Little Compton
Potential for Wires Project Deferral at Year Begin

	2012	2013	2014	2015	2016	2017	2018
Cumulative Annual kW from Energy Efficiency			**204**	**360**	**517**	**673**	**830**
Focused Energy Efficiency			97	153	209	264	320
SRP Energy Efficiency			106	207	308	409	510
Cumulative Annual kW from Demand Reduction			**172**	**277**	**381**	**486**	**590**
Thermostats - Residential			120	183	245	308	370
Thermostats - C&I			34	59	84	109	134
AC Modlet			17	34	51	68	85
Lighting Tuning - C&I			0.3	0.3	0.3	0.3	0.3
Total Cumulative kW Reduction			376	637	898	1,159	1,420
Total Cumulative kW Reduction Needed to Defer Wires Project			150	390	630	860	1,000
kW in Reserve[3]			**226**	**247**	**268**	**299**	**420**
			60%	**39%**	**30%**	**26%**	**30%**

Notes:
(1) All kW amounts are Summer kW and are cumulative.
(2) This table shows the number of kW have been either installed through EE or have become available to reduce through demand reduction by the end of the previous year to therefore contribute to the deferral of the wires investment in the current year.
(3) kW in Reserve acts as insurance against customers overriding the demand reduction themselves, so that the required reduction is still met.
(4) 2012 amounts included in these calculations have been updated to reflect year end projections.

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

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

11/2/2012

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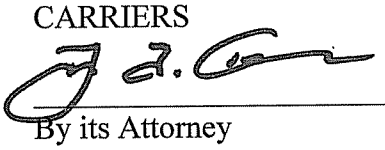
Jennifer Brooks Hutchinson, Esq. Date

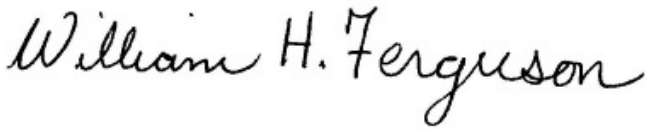
RHODE ISLAND DIVISION OF PUBLIC UTILITIES AND CARRIERS



11/2/12

By its Attorney Date
Jon Hagopian, Senior Legal Counsel
Karen Lyons, Special Assistant Attorney General

THE ENERGY COUNCIL OF RHODE ISLAND



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William Ferguson, Executive Director Date

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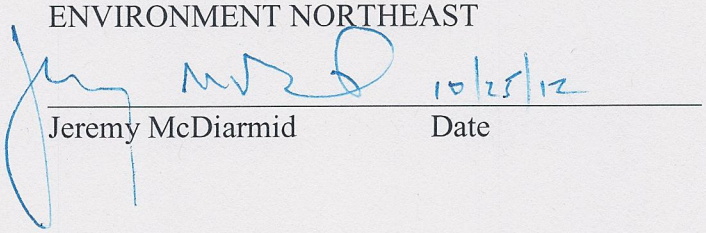

Jeremy McDiarmid Date

THE RHODE ISLAND ENERGY EFFICIENCY AND RESOURCES MANAGEMENT COUNCIL

Oct. 25, 2012

By its Attorney
R. Daniel Prentiss

Date

APPENDICES

Appendices

APPENDIX 1

Appendix 1 – PSA Forecast

PSA FORECAST 2012
NARRAGANSETT ELECTRIC COMPANY
SUMMER PEAK DEMANDS COINCIDENT WITH COMPANY PEAK
ACTUAL HISTORY AND FORECAST WITH EXTREME WEATHER AND DSM
(MW)

Year	Mo	Sum of Narragansett PSAs	Growth Rate	Blackstone PSA	Growth Rate	Newport PSA	Growth Rate	Providence PSA	Growth Rate	Western PSA	Growth Rate
2001	8	1,663.32	12.7%	304.71	9.3%	120.60	10.8%	428.37	8.9%	809.65	16.6%
2002	8	1,687.10	1.4%	310.50	1.9%	117.50	(2.6%)	435.50	1.7%	823.60	1.7%
2003	8	1,635.88	(3.0%)	277.72	(10.6%)	120.20	2.3%	427.66	(1.8%)	810.29	(1.6%)
2004	8	1,601.71	(2.1%)	289.11	4.1%	117.50	(2.2%)	421.30	(1.5%)	773.81	(4.5%)
2005	8	1,787.84	11.6%	321.64	11.3%	127.10	8.2%	450.36	6.9%	888.74	14.9%
2006	8	1,931.98	8.1%	334.90	4.1%	142.80	12.4%	496.53	10.3%	957.75	7.8%
2007	8	1,760.05	(8.9%)	304.10	(9.2%)	128.10	(10.3%)	453.88	(8.6%)	873.97	(8.7%)
2008	6	1,781.26	1.2%	321.39	5.7%	119.10	(7.0%)	469.34	3.4%	871.43	(0.3%)
2009	8	1,675.81	(5.9%)	287.43	(10.6%)	126.70	6.4%	436.01	(7.1%)	825.66	(5.3%)
2010	7	1,748.76	4.4%	267.97	(6.8%)	141.97	12.1%	469.40	7.7%	869.43	5.3%
2011	7	1,776.65	1.6%	308.81	15.2%	142.20	0.2%	419.70	(10.6%)	905.93	4.2%
Forecast											
2012	8	1,821.88	2.5%	297.58	(3.6%)	145.13	2.1%	450.35	7.3%	928.82	2.5%
2013	8	1,832.59	0.6%	297.84	0.1%	146.11	0.7%	451.06	0.2%	937.58	0.9%
2014	8	1,861.34	1.6%	298.44	0.2%	148.59	1.7%	456.06	1.1%	958.25	2.2%
2015	8	1,903.78	2.3%	301.09	0.9%	152.16	2.4%	464.50	1.8%	986.04	2.9%
2016	8	1,932.84	1.5%	303.14	0.7%	154.62	1.6%	469.84	1.2%	1,005.23	1.9%
2017	8	1,947.55	0.8%	304.56	0.5%	155.89	0.8%	471.87	0.4%	1,015.23	1.0%
2018	8	1,957.76	0.5%	305.76	0.4%	156.79	0.6%	472.89	0.2%	1,022.32	0.7%
2019	8	1,966.85	0.5%	306.87	0.4%	157.59	0.5%	473.70	0.2%	1,028.68	0.6%
2020	8	1,976.99	0.5%	308.00	0.4%	158.48	0.6%	474.81	0.2%	1,035.70	0.7%
2021	8	1,986.71	0.5%	309.09	0.4%	159.33	0.5%	475.85	0.2%	1,042.44	0.7%
2022	8	1,996.15	0.5%	310.14	0.3%	160.16	0.5%	476.87	0.2%	1,048.98	0.6%
2023	8	2,005.07	0.4%	311.14	0.3%	160.95	0.5%	477.80	0.2%	1,055.18	0.6%
2024	8	2,013.69	0.4%	312.11	0.3%	161.70	0.5%	478.70	0.2%	1,061.18	0.6%
2025	8	2,022.21	0.4%	313.05	0.3%	162.45	0.5%	479.61	0.2%	1,067.10	0.6%
2026	8	2,030.54	0.4%	313.96	0.3%	163.18	0.4%	480.51	0.2%	1,072.89	0.5%
Compound Annual Growth											
2001-2011 Ten Year			0.7%		0.1%		1.7%		(0.2%)		1.1%
2011-2016 Five Year			1.7%		(0.4%)		1.7%		2.3%		2.1%
2011-2021 Ten Year			1.1%		0.0%		1.1%		1.3%		1.4%
2011-2026 Fifteen Year			0.9%		0.1%		0.9%		0.9%		1.1%

APPENDIX 2

Appendix 2 – Annual MWh Energy and Trend Growth by Power Supply Area and Town

Annual MWh Energy and Trend Growth by Power Supply Area and Town

PSA / Towns	Trend Growth Rate	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Narragansett Electric Company	**0.5%**	**7,341,097**	**7,515,614**	**7,694,092**	**7,822,280**	**7,985,335**	**7,732,329**	**7,879,655**	**7,254,052**	**7,562,490**	**7,751,887**	**7,707,541**
Blackstone Valley	**-0.2%**	**1,350,390**	**1,364,403**	**1,384,622**	**1,373,166**	**1,396,225**	**1,367,047**	**1,375,381**	**1,267,127**	**1,267,796**	**1,329,007**	**1,323,536**
Burrillville	0.1%	38,551	43,426	54,461	46,689	36,787	43,832	38,113	33,948	37,213	38,609	38,823
Central Falls	-2.0%	98,657	92,744	92,393	84,707	87,701	85,964	88,060	81,211	81,781	87,771	80,821
Cumberland	0.9%	199,306	205,185	216,725	226,145	235,396	226,219	222,949	189,680	188,242	213,747	217,108
Lincoln	0.8%	212,656	217,515	226,697	228,931	235,636	239,634	244,953	236,035	228,210	230,867	230,073
North Smithfield	0.8%	92,131	96,776	96,337	99,202	100,312	98,521	99,104	96,502	95,537	99,251	99,887
Pawtucket	-1.5%	442,960	443,705	438,628	431,742	432,773	408,233	407,802	383,379	373,152	383,201	380,928
Woonsocket	0.4%	266,128	265,054	259,380	255,751	267,620	264,645	274,401	246,372	263,661	275,561	275,894
Newport	**0.2%**	**562,673**	**559,424**	**586,237**	**592,187**	**594,590**	**570,924**	**578,698**	**532,314**	**573,184**	**578,947**	**572,272**
Middletown	0.7%	126,047	125,723	133,514	136,991	138,810	133,239	136,869	128,164	133,377	135,041	134,717
Newport	-0.3%	323,740	321,550	333,356	330,811	329,102	318,259	318,526	289,827	315,724	317,989	314,274
Portsmouth	0.9%	112,887	112,151	119,366	124,385	126,677	119,426	123,303	114,323	124,083	125,917	123,282
Providence	**0.9%**	**2,118,397**	**2,152,875**	**2,198,814**	**2,236,030**	**2,320,514**	**2,257,874**	**2,287,098**	**2,108,295**	**2,275,439**	**2,322,588**	**2,326,994**
Barrington	0.7%	72,486	75,197	79,075	80,351	83,132	79,898	80,866	71,052	83,410	80,036	77,840
Bristol	1.3%	122,303	126,408	134,506	136,331	143,916	140,451	144,570	139,022	137,740	138,759	139,731
East Providence	0.2%	357,051	347,364	340,215	339,480	355,597	349,478	351,919	325,208	384,542	361,207	363,864
Little Compton	1.1%	20,648	20,146	21,895	21,728	22,343	20,215	22,024	19,734	21,913	22,689	22,993
North Providence	0.7%	154,819	158,034	162,683	163,681	169,531	162,805	165,190	146,389	158,680	166,597	166,091
Providence	1.2%	1,255,059	1,280,209	1,313,538	1,347,310	1,394,805	1,355,152	1,371,317	1,274,545	1,350,477	1,406,805	1,411,755
Tiverton	1.4%	69,702	76,551	76,764	76,602	80,457	82,526	83,220	71,538	75,734	81,558	80,237
Warren, RI	-0.3%	66,330	68,965	70,137	70,547	70,734	67,350	67,992	60,807	62,944	64,937	64,484
Western Neco	**0.5%**	**3,309,637**	**3,438,913**	**3,524,419**	**3,620,896**	**3,674,006**	**3,536,483**	**3,638,478**	**3,346,316**	**3,446,070**	**3,521,346**	**3,484,739**
Charlestown, RI	1.1%	57,355	59,636	64,576	66,068	66,070	63,685	66,137	64,223	65,263	64,834	64,101
Coventry	0.4%	198,112	200,881	208,754	210,906	221,016	213,260	222,212	201,229	202,266	208,742	205,863
Cranston	0.1%	499,429	524,147	522,944	513,795	534,616	513,690	525,603	501,065	479,436	506,728	502,618
East Greenwich	-1.6%	137,396	138,241	137,954	144,558	137,594	117,296	119,921	106,274	112,193	121,246	116,725
Exeter	1.1%	34,352	35,673	37,872	39,342	42,145	36,579	35,143	32,121	35,643	37,947	38,142
Foster	1.5%	17,193	17,952	19,110	19,557	20,351	19,432	20,022	19,379	19,391	20,424	19,978
Glocester	2.6%	42,762	45,392	51,987	51,882	54,102	52,270	54,114	49,180	53,827	55,936	55,133
Hopkinton	0.9%	43,276	44,277	46,411	47,711	50,470	46,682	48,812	44,938	46,929	48,638	47,510
Jamestown	1.5%	32,293	33,511	35,860	36,349	37,765	35,903	36,963	32,326	35,980	37,740	37,423
Johnston	1.1%	180,695	191,378	188,816	192,862	198,624	197,536	203,751	185,804	196,699	205,507	202,180
Narragansett	0.2%	119,134	120,948	126,589	126,907	127,184	121,294	122,445	111,224	119,565	122,293	121,590
North Kingstown	-0.7%	383,887	392,498	386,587	404,500	368,938	352,057	373,100	352,333	359,414	370,909	356,368
Richmond	-0.4%	48,119	50,242	51,197	52,924	54,981	51,691	50,790	42,268	44,682	46,363	46,136
Scituate, RI	1.5%	47,078	49,145	50,838	52,292	54,294	52,436	52,147	47,058	51,226	54,410	54,898
Smithfield	1.7%	170,886	183,644	187,872	189,462	196,021	194,934	198,442	184,877	215,110	202,160	201,946
South Kingstown	1.5%	204,256	219,874	224,883	234,389	240,846	237,204	243,448	238,352	234,176	234,608	236,776
Warwick, RI	0.1%	681,394	700,315	724,481	732,862	746,302	722,235	735,582	659,550	688,761	701,561	691,053
West Greenwich	6.0%	61,029	69,278	82,567	113,234	119,179	118,906	132,788	103,988	107,841	110,868	108,845
West Warwick	0.6%	166,931	172,929	176,372	186,020	192,108	185,009	188,545	174,998	182,431	168,456	177,876
Westerly	0.8%	184,061	188,950	198,750	205,277	211,402	204,383	208,514	195,129	195,236	201,974	199,578

APPENDIX 3

Appendix 3 – Town Level Peak Demand Growth

Town Level Peak Demand Growth

	vs.Extreme 2011	vs.Actual 2011															vs.Extreme 2011		vs.Actual 2011	
	2012	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2011-2021	2011-2026	2011-2021	2011-2026
Narragansett Electric Company																				
Blackstone	**-3.6%**	**-3.8%**	**0.1%**	**0.2%**	**0.9%**	**0.8%**	**0.5%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.4%**	**0.1%**	**0.2%**	**0.0%**	**0.2%**
Burrillville	-4.1%	-4.3%	-0.4%	-0.3%	0.5%	0.4%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	-0.3%	-0.1%	-0.3%	-0.1%
Central Falls	-4.5%	-4.6%	-0.8%	-0.6%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	-0.5%	-0.3%	-0.5%	-0.3%
Cumberland	-3.3%	-3.4%	0.5%	0.5%	1.1%	1.0%	0.7%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%
Lincoln	-2.7%	-2.9%	1.0%	1.0%	1.6%	1.3%	1.0%	0.9%	0.8%	0.7%	0.7%	0.6%	0.6%	0.5%	0.5%	0.5%	0.6%	0.6%	0.6%	0.6%
North Smithfield	-3.0%	-3.2%	0.7%	0.7%	1.4%	1.2%	0.9%	0.7%	0.7%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.4%	0.4%	0.5%	0.4%	0.5%
Pawtucket	-4.6%	-4.8%	-0.9%	-0.7%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	-0.6%	-0.3%	-0.6%	-0.3%
Woonsocket	-3.2%	-3.4%	0.5%	0.5%	1.2%	1.0%	0.8%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.3%	0.4%	0.3%	0.3%
Newport	**2.1%**	**2.1%**	**0.7%**	**1.7%**	**2.4%**	**1.7%**	**0.9%**	**0.7%**	**0.6%**	**0.6%**	**0.6%**	**0.6%**	**0.6%**	**0.5%**	**0.5%**	**0.5%**	**1.2%**	**1.0%**	**1.2%**	**1.0%**
Middletown	2.4%	2.5%	1.0%	2.0%	2.7%	1.9%	1.1%	0.8%	0.7%	0.8%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	1.4%	1.1%	1.4%	1.1%
Newport	1.7%	1.7%	0.3%	1.4%	2.1%	1.5%	0.7%	0.5%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.0%	0.8%	1.0%	0.8%
Portsmouth	2.6%	2.7%	1.2%	2.2%	2.8%	2.0%	1.2%	0.9%	0.8%	0.8%	0.8%	0.7%	0.7%	0.6%	0.6%	0.6%	1.5%	1.2%	1.5%	1.2%
Providence	**7.3%**	**5.2%**	**0.2%**	**1.1%**	**1.8%**	**1.2%**	**0.5%**	**0.3%**	**0.2%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**1.3%**	**1.0%**	**1.1%**	**0.8%**
Barrington	7.7%	5.6%	0.5%	1.4%	2.1%	1.4%	0.7%	0.4%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	1.5%	1.1%	1.3%	1.0%
Bristol	7.6%	5.5%	0.4%	1.3%	2.0%	1.4%	0.6%	0.4%	0.3%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	1.5%	1.1%	1.3%	1.0%
East Providence	6.6%	4.6%	-0.5%	0.6%	1.4%	0.8%	0.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.9%	0.7%	0.7%	0.5%
Little Compton	7.4%	5.4%	0.3%	1.2%	1.9%	1.3%	0.6%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	1.4%	1.0%	1.2%	0.9%
North Providence	6.6%	4.5%	-0.5%	0.5%	1.3%	0.8%	0.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.9%	0.6%	0.7%	0.5%
Providence	7.5%	5.4%	0.3%	1.3%	2.0%	1.3%	0.6%	0.4%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	1.4%	1.0%	1.2%	0.9%
Tiverton	7.9%	5.8%	0.7%	1.6%	2.3%	1.6%	0.8%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%	1.7%	1.2%	1.5%	1.1%
Warren, RI	6.7%	4.6%	-0.4%	0.6%	1.4%	0.9%	0.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.9%	0.7%	0.7%	0.6%
West NECO	**2.5%**	**1.3%**	**0.9%**	**2.2%**	**2.9%**	**2.0%**	**1.1%**	**0.8%**	**0.7%**	**0.8%**	**0.7%**	**0.7%**	**0.7%**	**0.6%**	**0.6%**	**0.6%**	**1.5%**	**1.2%**	**1.3%**	**1.1%**
Charlestown, RI	3.0%	1.8%	1.4%	2.6%	3.3%	2.3%	1.3%	1.0%	0.9%	0.9%	0.8%	0.8%	0.8%	0.7%	0.7%	0.7%	1.8%	1.4%	1.6%	1.3%
Coventry	2.1%	0.9%	0.5%	1.8%	2.6%	1.7%	0.8%	0.6%	0.5%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	1.2%	1.0%	1.1%	0.9%
Cranston	2.1%	0.9%	0.5%	1.8%	2.6%	1.7%	0.8%	0.6%	0.5%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	1.2%	1.0%	1.1%	0.9%
East Greenwich	0.8%	-0.4%	-0.8%	0.7%	1.6%	0.9%	0.2%	0.0%	0.0%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%
Exeter	2.5%	1.3%	0.9%	2.1%	2.8%	2.0%	1.0%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	1.4%	1.2%	1.3%	1.1%
Foster	2.8%	1.7%	1.3%	2.5%	3.1%	2.2%	1.2%	0.9%	0.8%	0.8%	0.8%	0.8%	0.7%	0.7%	0.7%	0.6%	1.6%	1.3%	1.5%	1.2%
Glocester	3.6%	2.4%	2.0%	3.1%	3.7%	2.7%	1.6%	1.2%	1.1%	1.1%	1.0%	0.9%	0.9%	0.8%	0.8%	0.7%	2.1%	1.7%	2.0%	1.6%
Hopkinton	2.3%	1.1%	0.7%	2.0%	2.7%	1.8%	0.9%	0.6%	0.6%	0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	1.3%	1.0%	1.2%	1.0%
Jamestown	2.4%	1.2%	0.8%	2.1%	2.8%	1.9%	1.0%	0.7%	0.6%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	1.4%	1.1%	1.3%	1.0%
Johnston	2.5%	1.3%	0.9%	2.2%	2.9%	2.0%	1.0%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	1.4%	1.2%	1.3%	1.1%
Narragansett	2.0%	0.8%	0.4%	1.7%	2.5%	1.7%	0.8%	0.5%	0.5%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%	1.1%	0.9%	1.0%	0.8%
North Kingstown	2.0%	0.8%	0.4%	1.8%	2.5%	1.7%	0.8%	0.5%	0.5%	0.6%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	1.1%	0.9%	1.0%	0.9%
Richmond	2.2%	1.0%	0.6%	1.9%	2.7%	1.8%	0.9%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	1.3%	1.0%	1.1%	1.0%
Scituate, RI	2.6%	1.4%	1.0%	2.3%	2.9%	2.1%	1.1%	0.8%	0.7%	0.8%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	1.5%	1.2%	1.4%	1.1%
Smithfield	3.8%	2.6%	2.2%	3.2%	3.8%	2.8%	1.7%	1.3%	1.1%	1.1%	1.0%	1.0%	0.9%	0.8%	0.8%	0.8%	2.2%	1.7%	2.1%	1.7%
South Kingstown	3.1%	1.9%	1.5%	2.7%	3.3%	2.4%	1.3%	1.0%	0.9%	0.9%	0.9%	0.8%	0.8%	0.7%	0.7%	0.7%	1.8%	1.4%	1.7%	1.4%
Warwick, RI	2.2%	1.0%	0.6%	1.9%	2.7%	1.8%	0.9%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	1.3%	1.0%	1.1%	1.0%
West Greenwich	7.2%	5.9%	5.5%	6.1%	6.2%	4.8%	3.4%	2.8%	2.4%	2.2%	1.9%	1.7%	1.5%	1.4%	1.3%	1.1%	4.2%	3.3%	4.1%	3.2%
West Warwick	2.5%	1.3%	0.9%	2.2%	2.9%	2.0%	1.1%	0.8%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	1.4%	1.2%	1.3%	1.1%
Westerly	2.6%	1.4%	1.0%	2.2%	2.9%	2.0%	1.1%	0.8%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	1.5%	1.2%	1.3%	1.1%

APPENDIX 4

Appendix 4 – Window AC Recycling Program References

Attached are references to other utility programs offering recycling programs for window air conditioners.

power®
PPL Electric Utilities

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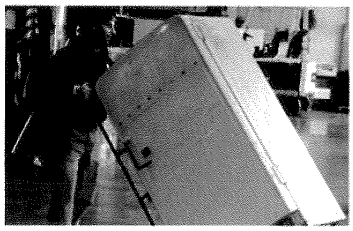
Save
Analyze
Learn
Trade Allies
Information and support materials for trade allies
Stakeholders

HONOR ROLL MEMBERS
PPL ELECTRIC UTILITIES
ENERGY-SMART BUSINESS



Program Status

RESIDENTIAL | SMALL BUSINESS | COMMERCIAL & INDUSTRIAL | INSTITUTIONAL

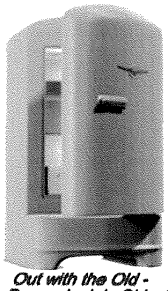
COLOR CODE | CUSTOMER DEFINITIONS | OVERVIEW

Appliance Recycling

Your old, spare residential-sized refrigerator or freezer can use two to three times more electricity than newer, ENERGY STAR® models. Now you can have those inefficient appliances picked up for free, get paid for doing so and reduce your electricity use. Plus, 95 percent of the materials from these appliances will be recycled and not just dumped in landfills.

The refrigerator or freezer must be in working condition and be between 10 and 30 cubic feet in size. You must own the unit and be a PPL Electric Utilities customer. Limit two units per address per calendar year. A $35 incentive check will be mailed to you after the appliance is collected.

Bonus: If you have inefficient, working window air conditioners, we will have those picked up at the same time as your refrigerator or freezer and give you an additional $25 per unit, limit four per household per calendar year.



Out with the Old - Pennsylania's Oldest Refrigerator Contest

Find out now if you qualify and how to schedule a pickup.

Recycle Now

Additionally, PPL Electric Utilities has teamed up with Best Buy and Sears to offer our customers a convenient way to buy a new refrigerator AND arrange to recycle the old one at the same time. Customers can receive from PPL Electric Utilities a $25 rebate for the new refrigerator and a $35 check for recycling the old refrigerator, and Best Buy or Sears will make arrangements for delivery and pickup. Call 1-877-270-3522 or see an in-store sales representative.

CEDAR FALLS UTILITIES - RESIDENTIAL ENERGY EFFICIENC

ELIGIBILITY
Residential

SAVINGS FOR
Clothes Washers/Dryers
Dishwasher
Dehumidifiers
Water Heaters
Lighting
Furnaces
Boilers
Heat pumps
Central Air conditioners
Caulking/Weather-stripping
Duct/Air sealing
Building Insulation
Geothermal Heat Pumps

MAXIMUM REBATE
CFL: 50% of cost, up to 5 (10 per customer per year)
Appliance Recycling: 2

PROGRAM INFORMATION

Eligibility	Residential
More Information	http://www.cfu.net/save-energy/residential-rebates.aspx

Iowa

Program Type	Utility Rebate Program
Rebate Amount	CFL: 50% of cost Fluorescent Fixtures/Ceiling Fan Light Kits: 20 per fixture Clothes Washer: 50 Dish Washer: 50 Refrigerator/Freezer Recycling: 50 Window AC/Dehumidifier Recycling: 25 Central A/C: 200, plus 100 for each SEER above 14 Gas Furnace: 200 Geothermal Heat Pump: 300 - 600 per ton Air Source Heat Pump: 300, plus 100 for each SEER above 15 Gas Water Heater: 300 Boilers: 400 Home Insulation/Duct Sealing: 60% of contracted labor, up to 1 Air Sealing/Weatherstripping: 60% of contracted labor,) up to 2

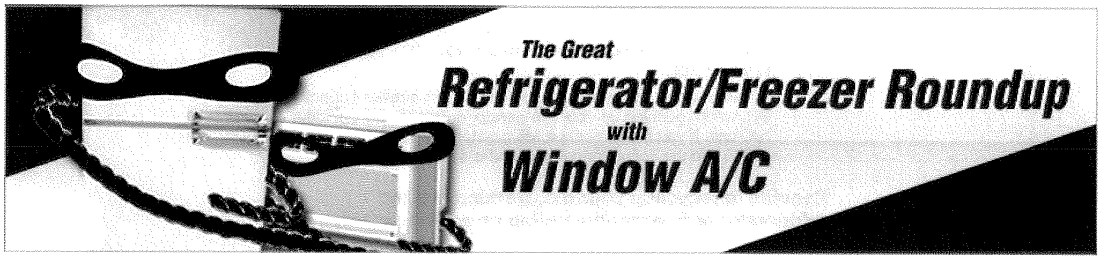
The Cedar Falls Utilities (CFU) Energy Efficiency Rebate Program provides rebates for efficient heating and cooling equipment, thermal envelope improvements and appliance The amount of the rebate varies greatly by technology and all technology must meet sp energy efficiency requirements listed on the program web site. Heating and cooling reb from $200 - $300 per unit with an additional rebate for higher than the minimum require Thermal envelope improvements, including attic, ceiling, in-wall, and foundation insulati eligible for a rebate of 60% of the contracted labor plus up to an additional $1,000 for th equipment and materials. To qualify for the heating and cooling rebates, CFU Energy S must measure your home to determine the appropriate size of the new equipment to be recycled appliances must be in working condition and be picked up by CFU. All receipts mailed to CFU along with a completed application. Contact CFUE for more information program.

Minnesota Power proudly serves 144,000 electric customers in Northeastern Minnesota and Northern Wisconsin.

Search Go

one home one business one community

MP Home > Power of One > One Home > ENERGY STAR® > Special Offers > The Great Refrigerator/Freezer Roundup



one home
What You Can Do at Home
Energy Saving Tools & Info
Rebates & Savings
Appliances & Lighting
Heating & Cooling
Water Heating
Home Improvements
New Construction (Triple E)
Renewable Energy Options

Call **1-866-552-6755** now to schedule your pickup or place your order online!

Through December 31, 2012

We'll pick up and recycle that old energy hog (electric refrigerator or freezer) out of your basement, garage, or rec room and reward you with **$75 when you also recycle up to three window air conditioning units.** If you are only recycling a refrigerator or freezer, it's $50 for the first unit, plus $35 for a second qualifying unit rounded up. Although you do not need to make a purchase to participate, it is a perfect time to recycle your old electric refrigerator or freezer when buying a new one and get rewarded for it (see requirements to participate).

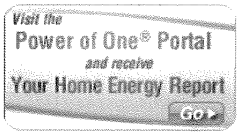
Qualifying customers and products:

1. You must be a residential, retail customer of Minnesota Power (receive your electric bill from Minnesota Power) or a participating municipal utility.
2. The electric refrigerator or freezer turned in must be 10–27 cu. ft. and in working condition (cooling).
3. The electric refrigerator or freezer must be owned by the customer and picked up from the residential address listed on the billing account.
4. You can recycle a maximum of 2 qualifying appliances per year, per dwelling.
5. No purchase necessary to participate in this offer.
6. Working window air conditioner (A/C) can be picked up and recycled only in conjunction with a refrigerator or freezer roundup. Limit 3 window A/Cs per year, per dwelling.

Process to place your order and collect your reward:

Quick Links:

- $75 Reward Coupon
- Participating Utilities
- Appliance Calculator



1. Call 1-866-552-6755 to schedule a refrigerator or freezer pickup or place your order online. You may also add up to 3 working window A/Cs. The customer service representative will determine your qualification for the program and schedule a pickup time for your electric refrigerator or freezer and qualifying window A/C. You must be a customer of Minnesota Power or a participating utility. Please make sure the unit is plugged in and working (cooling) at time of pickup. **The contractor will not pick up non-working units.**
2. A licensed and insured Minnesota Power (MP) contractor will come to your home to round up the unit(s). They will be wearing identification badges designating them as MP contractors. Before taking the appliance out of the house, they will disable it (cut the cord) to ensure it can't be used again. The contractor is responsible for any damage incurred in taking the appliance out of your home.
3. Within 6 weeks of the pickup, you can expect a reward check for $75 when rounding up your refrigerator or freezer with window A/C unit. If you recycle only a refrigerator or freezer the first unit is $50 and the second qualifying unit is $35 , if applicable.

Benefits to recycling your old, working electric refrigerator or freezer and adding on a window A/C:

- Save energy (typically several hundred dollars over its lifetime) and help protect the environment.
- No cost pickup and recycling of qualifying refrigerators or freezers.
- $50 reward for the first unit and $35 for the second one rounded up. $75 Reward for the round up and recycling of a refrigerator or freezer with up to three qualifying window A/Cs.
- Ensure your appliance is properly recycled to meet EPA's Responsible Appliance Disposal (RAD) program requirements.

- Detailed Participation Requirements
- Rebates and Energy Saving Tools
- Refrigerator Rebate

APPENDIX 5

Appendix 5 – Detailed Breakdown of Annual Budgets

	2012	2013	2014	2015	2016	2017	Total
PP&A	$60,000.00	$50,000.00	$50,000.00	$30,000.00	$30,000.00	$30,000.00	$250,000.00
Marketing (programs & modlets)	$40,000.00	$77,000.00	$52,000.00	$52,000.00	$37,000.00	$37,000.00	$295,000.00
PCT Rebates - Resi	$50,000.00	$16,250.00	$16,250.00	$16,250.00	$16,250.00	$16,250.00	$131,250.00
Rebates - DLC	$0.00	$0.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$14,000.00
PCT Rebates - C&I	$16,000.00	$3,250.00	$3,250.00	$3,250.00	$3,250.00	$3,250.00	$32,250.00
$40 Resi PCT DR Credit	$5,000.00	$7,000.00	$9,000.00	$11,000.00	$13,000.00	$15,000.00	$60,000.00
$160 C&I PCT DR Credit		$0.00	$4,800.00	$6,400.00	$8,000.00	$9,600.00	$28,800.00
DLC DR Credit (50% C&I)		$0.00	TBD	TBD	TBD	TBD	TBD
STAT (wi-fi site)	$25,000.00	$1,910.00	$2,650.00	$3,150.00	$3,750.00	$4,350.00	$40,810.00
Evaluation	$25,000.00	$100,000.00	$100,000.00	$100,000.00	$100,000.00	$100,000.00	$525,000.00
Modlets (new installs + $25/yr incentive for existing)	$0.00	$38,000.00	$43,000.00	$48,000.00	$53,000.00	$58,000.00	$240,000.00
A/C Recycling	$0.00	$24,625.00	$19,700.00	$19,700.00	$19,700.00	$19,700.00	$103,425.00
Energy Star Rebate	$0.00	$12,500.00	$10,000.00	$10,000.00	$10,000.00	$10,000.00	$52,500.00
Substation equipment cost	$0.00	$13,000.00	$0.00	$0.00	$0.00	$0.00	$13,000.00
Total	$221,000.00	$343,535.00	$314,150.00	$303,250.00	$297,450.00	$306,650.00	$1,786,035.00

APPENDIX 6

Appendix 6 – 2013 SRP Benefit Cost Analysis Tables

Table S-1
National Grid
System Reliability Procurement - Tiverton/Little Compton
Funding Sources
$(000)

	2012	2013	2014	2015	2016	2017	Total
(1) **Projected Budget:**	**$221.0**	**$343.5**	**$314.2**	**$303.3**	**$297.5**	**$306.7**	**$1,786.0**
(2) **Customer Funding Required:**	**$221.0**	**$253.2**	**$314.2**	**$303.3**	**$297.5**	**$306.7**	**$1,695.7**
(3) **Forecasted kWh Sales:**	**6,459,688,660**	**7,853,900,593**	**7,938,252,901**	**8,124,016,755**	**8,124,016,755**	**8,124,016,755**	**46,623,892,419**
(4) **Additional SRP Funding Needed per kWh:**	**$0.0000342**	**$0.0000322**	**$0.0000396**	**$0.0000373**	**$0.0000366**	**$0.0000377**	**$0.0000364**
(5) **Proposed Energy Efficiency Program charge in 2013 EEPP**	**$0.0058900**	**$0.0086189**					
(6) **Proposed Total Energy Efficiency Program charge**	**$0.0059242**	**$0.0086511**					

Notes
(1)Projected Budget includes only additional funds for SRP. It does not include costs associated with focused energy efficiency.
(2) Proposed Total Energy Efficiency Program charge is the sum of the "Additional SRP Funding Needed per kWh" and "Proposed Energy Efficiency Program charge in 2012 EEPP" lines.
(3) The 2013 System Reliability Procurement Report seeks approval only for 2013 funds. Future projections over the life of the Tiverton/Little Compton pilot are estimates subject to change.
(4) All dollar amounts shown are in $current year.
(5) The Forecasted kWh Sales represent 12 months of sales except for 2012 which represents 10 months of sales due to the timing of the filing.
(6) Forecasted kWh Sales for 2016 and 2017 were not available. 2015 forecasts were held constant through those years as a conservative estimate.

Table S-7
System Reliability Procurement - Tiverton/Little Compton
Potential for Wires Project Deferral at Year Begin

	2012	2013	2014	2015	2016	2017	2018
Cumulative Annual kW from Energy Efficiency			**204**	**360**	**517**	**673**	**830**
Focused Energy Efficiency			97	153	209	264	320
SRP Energy Efficiency			106	207	308	409	510
Cumulative Annual kW from Demand Reduction			**172**	**277**	**381**	**486**	**590**
Thermostats - Residential			120	183	245	308	370
Thermostats - C&I			34	59	84	109	134
AC Modlet			17	34	51	68	85
Lighting Tuning - C&I			0.3	0.3	0.3	0.3	0.3
Total Cumulative kW Reduction			376	637	898	1,159	1,420
Total Cumulative kW Reduction Needed to Defer Wires Project			150	390	630	860	1,000
kW in Reserve[3]			**226**	**247**	**268**	**299**	**420**
			60%	**39%**	**30%**	**26%**	**30%**

Notes:
(1) All kW amounts are Summer kW and are cumulative.
(2) This table shows the number of kW have been either installed through EE or have become available to reduce through demand reduction by the end of the previous year to therefore contribute to the deferral of the wires investment in the current year.
(3) kW in Reserve acts as insurance against customers overriding the demand reduction themselves, so that the required reduction is still met.
(4) 2012 amounts included in these calculations have been updated to reflect year end projections.

Table S-3
National Grid
System Reliability Procurement - Tiverton/Little Compton
Annual Budgets
$(000)

	Program Planning & Administration	Marketing	Rebates and Other Customer Incentives	Sales, Technical Assistance & Training	Evaluation & Market Research	Total
2012	$30.0	$38.0	$32.4	$5.3	$25.0	$130.7
2013	$50.0	$77.0	$101.6	$14.9	$100.0	$343.5
2014	$50.0	$52.0	$109.5	$2.7	$100.0	$314.2
2015	$30.0	$52.0	$118.1	$3.2	$100.0	$303.3
2016	$30.0	$37.0	$126.7	$3.8	$100.0	$297.5
2017	$30.0	$37.0	$135.3	$4.4	$100.0	$306.7
Total	**$220.0**	**$293.0**	**$623.6**	**$34.1**	**$525.0**	**$1,695.7**

Notes:
(1) The 2013 System Reliability Procurement Report seeks approval only for 2013 funds. Future projections over the life of the Tiverton/Little Compton pilot are estimates subject to change.
(2) The annual totals in this table represent only the forecasted funds necessary to run the Tiverton/Little Compton pilot. They do not include costs associated with focused energy efficiency or with SRP participant costs.
(3) All amounts shown are in $current year.
(4) 2012 numbers have been updated to reflect year end projections.

Table S-4
System Reliability Procurement - Tiverton/Little Compton
Summary of kW, and kWh New Installs Per Year

			Capacity (kW)			Energy (MWh)	
			Summer	Winter	Lifetime	Maximum Annual	Lifetime
2012	EE	Energy Wise	16	15	208	62	555
		Small Business	25	14	303	115	1,378
		SRP	2	0	26	1	12
	Non-EE	Demand Response	0	0	0	0	0
	Total		**43**	**29**	**537**	**178**	**1,945**
2013	EE	Energy Wise	1	4	11	180	1,679
		Small Business	55	30	655	248	2,979
		SRP	105	1	1,248	71	855
	Non-EE	Demand Response	0	0	0	0	0
	Total		**161**	**35**	**1,914**	**500**	**5,512**
2014	EE	Energy Wise	1	3	10	158	1,469
		Small Business	55	30	655	248	2,979
		SRP	101	1	1,213	70	842
	Non-EE	Demand Response	277	0	277	7	7
	Total		**433**	**35**	**2,155**	**482**	**5,297**
2015	EE	Energy Wise	1	3	10	158	1,469
		Small Business	55	30	655	248	2,979
		SRP	101	1	1,213	70	842
	Non-EE	Demand Response	105	0	105	3	3
	Total		**261**	**35**	**1,983**	**478**	**5,293**
2016	EE	Energy Wise	1	3	10	158	1,469
		Small Business	55	30	655	248	2,979
		SRP	101	1	1,213	70	842
	Non-EE	Demand Response	105	0	105	3	3
	Total		**261**	**35**	**1,983**	**478**	**5,293**
2017	EE	Energy Wise	1	3	10	158	1,469
		Small Business	55	30	655	248	2,979
		SRP	101	1	1,213	70	842
	Non-EE	Demand Response	105	0	105	3	3
	Total		**261**	**35**	**1,983**	**478**	**5,293**
Grand Total			**1,420**	**202**	**10,554**	**2,595**	**28,631**

Notes:
(1) The "EE" savings include both Focused Energy Efficiency savings and SRP Energy Efficiency Savings.
(2) Measures unique to SRP and not offered in the same way through the statewide EE programs are listed as a separate line item (SRP) under the EE heading. Measures part of the focused EE are listed in the EnergyWise and Small Business program lines.
(3) Savings in this table are not cumulative. Each year shows savings from measures that will have been installed within that year.
(4) 2012 numbers have been updated to reflect year end projections

Table S-5
System Reliability Procurement - Tiverton/Little Compton
Summary of Benefits By Year

			Capacity ($)						Energy ($)					Non-Electric ($)	
			Total Benefits	Summer Generation	Winter Generation	Transmission	MDC/ Deferral(3)	DRIPE	Winter Peak	Winter Off-Peak	Summer Peak	Summer Off-Peak	DRIPE	Resource	Non - Resource
2012	EE	Energy Wise	161,899	10,073	0	4,564	19,175	1,989	8,181	10,672	9,238	6,344	4,122	76,466	11,076
		Small Business	166,558	12,396	0	6,704	28,170	3,376	46,154	11,190	27,601	5,500	9,957	-3,013	18,522
		SRP	16,001	1,393	0	558	2,343	259	0	0	619	185	67	10,578	0
	Non-EE	Demand Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0
		Deferral	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	**344,459**	**23,862**	**0**	**11,826**	**49,689**	**5,624**	**54,335**	**21,862**	**37,458**	**12,029**	**14,146**	**84,031**	**29,598**
2013	EE	Energy Wise	198,917	389	0	255	1,072	100	29,274	38,016	19,106	18,580	12,472	60,259	19,394
		Small Business	373,793	32,298	0	14,724	61,868	8,078	103,380	24,927	61,444	12,299	21,483	-6,745	40,037
		SRP	401,006	61,756	0	28,010	117,691	14,097	42	176	47,240	14,286	6,179	111,531	0
	Non-EE	Demand Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0
		Deferral	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	**973,716**	**94,443**	**0**	**42,989**	**180,630**	**22,275**	**132,695**	**63,119**	**127,790**	**45,165**	**40,134**	**165,045**	**59,431**
2014	EE	Energy Wise	122,930	424	0	227	0	50	26,449	34,157	17,156	16,759	10,477	261	16,970
		Small Business	316,955	38,285	0	14,960	0	2,581	106,840	25,553	63,090	12,685	19,899	-6,975	40,037
		SRP	286,240	71,273	0	27,656	0	4,768	34	144	47,901	14,493	5,674	114,298	0
	Non-EE	Demand Reduction	13,145	5,895	0	6,719	0	0	0	0	531	0	0	0	0
		Deferral	176,772	0	0	0	176,772	0	0	0	0	0	0	0	0
		Total	**916,042**	**115,876**	**0**	**49,561**	**176,772**	**7,398**	**133,323**	**59,854**	**128,678**	**43,937**	**36,050**	**107,585**	**57,007**
2015	EE	Energy Wise	179,598	527	0	230	0	156	27,338	35,031	17,569	17,280	9,626	54,871	16,970
		Small Business	333,232	44,662	0	15,199	0	8,972	110,146	26,114	64,665	13,048	17,582	-7,193	40,037
		SRP	313,801	82,834	0	28,098	0	16,280	35	148	49,117	14,916	5,058	117,315	0
	Non-EE	Demand Reduction	18,461	8,254	0	9,408	0	0	0	0	798	0	0	0	0
		Deferral	164,977	0	0	0	164,977	0	0	0	0	0	0	0	0
		Total	**1,010,068**	**136,277**	**0**	**52,936**	**164,977**	**25,408**	**137,519**	**61,293**	**132,150**	**45,243**	**32,266**	**164,993**	**57,007**
2016	EE	Energy Wise	182,016	643	0	234	0	171	27,995	35,536	17,872	17,660	8,650	56,286	16,970
		Small Business	342,738	51,361	0	15,442	0	9,220	112,844	26,525	66,030	13,344	15,325	-7,391	40,037
		SRP	331,171	95,107	0	28,548	0	16,907	36	150	50,174	15,262	4,469	120,516	0
	Non-EE	Demand Reduction	22,935	9,625	0	12,182	0	0	0	0	1,128	0	0	0	0
		Deferral	153,969	0	0	0	153,969	0	0	0	0	0	0	0	0
		Total	**1,032,829**	**156,736**	**0**	**56,406**	**153,969**	**26,298**	**140,875**	**62,211**	**135,205**	**46,266**	**28,445**	**169,411**	**57,007**
2017	EE	Energy Wise	183,910	771	0	238	0	163	28,627	35,971	18,005	18,006	7,342	57,818	16,970
		Small Business	351,545	58,493	0	15,689	0	8,549	115,762	26,985	67,043	13,654	12,935	-7,603	40,037
		SRP	347,474	108,228	0	29,005	0	15,756	37	152	50,959	15,622	3,798	123,916	0
	Non-EE	Demand Reduction	33,930	17,499	0	15,042	0	0	0	0	1,390	0	0	0	0
		Deferral	143,695	0	0	0	143,695	0	0	0	0	0	0	0	0
		Total	**1,060,553**	**184,991**	**0**	**59,973**	**143,695**	**24,468**	**144,426**	**63,107**	**137,397**	**47,282**	**24,075**	**174,132**	**57,007**
Grand Total			**5,337,667**	**712,185**	**0**	**273,692**	**869,732**	**111,470**	**743,174**	**331,447**	**698,678**	**239,921**	**175,115**	**865,197**	**317,056**

Notes:
(1) The "EE" benefits include both Focused Energy Efficiency benefits and SRP Energy Efficiency benefits.
(2) Measures unique to SRP are listed as a separate line item under the EE heading. Measures part of the focused EE are listed in the EnergyWise and Small Business program lines.
(3) The MDC/Deferral column represents: 2012-2013: the system-average distribution benefit and 2014-2017: the calculated deferral benefit as defined in the notes section of Table S-2
(4) All benefits are in $current year.
(5) 2012 amounts have been updated to reflect year end projections.
(6) Benefits due to EE reflect new installations within the year. Benefits due to Non-EE reflect cumulative installations

Table S-6
System Reliability Procurement - Tiverton/Little Compton
Demand Reduction

	Tstats	Modlet	Lighting
Per- Event Capacity Savings per Residential Participant (kW)	**1.25**	**0.09**	**n/a**
Per- Event Capacity Savings per C&I Participant (kW)	**2.5**	**n/a**	**0.065**

	2012	2013	2014	2015	2016	2017
Number of Forecasted Event Hours	**0**	**0**	**48**	**48**	**48**	**48**
Participants (Cumulative)	**52**	**315**	**575**	**835**	**1,095**	**1,355**
Thermostats - Residential	46	96	146	196	246	296
Thermostats - C&I	4	14	24	34	44	54
AC Modlet	0	200	400	600	800	1,000
Lighting Tuning - C&I	2	5	5	5	5	5
Forecasted Annual Capacity Savings (kW)	**67**	**172**	**277**	**381**	**486**	**590**
Thermostats - Residential	58	120	183	245	308	370
Thermostats - C&I	9	34	59	84	109	134
AC Modlet	0	17	34	51	68	85
Lighting Tuning - C&I	0.1	0.3	0.3	0.3	0.3	0.3
Forecasted Annual Energy Savings (kWh)	**0**	**0**	**6,646**	**9,156**	**11,666**	**14,177**
Thermostats - Residential	0	0	4,388	5,888	7,388	8,888
Thermostats - C&I	0	0	1,422	2,022	2,622	3,222
AC Modlet	0	0	821	1,231	1,641	2,052
Lighting Tuning - C&I	0	0	16	16	16	16
Cumulative Annual Demand Reduction Benefits ($)			**13,145**	**18,461**	**22,935**	**33,930**
Annual Energy Benefits ($)			531	798	1,128	1,390
Annual Capacity Benefits ($)			12,614	17,662	21,807	32,540

Notes:

(1) Forecasted event hours are based on an assumed three days of four-hour events, four times per year. In each event, it is assumed that the demand reduction will be cycled on and off so that full reduction will occur for two of the four hours.
(2) The 2013 System Reliability Procurement Report seeks approval only for 2013 funds. Future projections over the life of the Tiverton/Little Compton pilot are estimates subject to change.
(3) All dollar amounts are in $current year.
(4) 2012 amounts have been updated to reflect year end projections.

Table S-7
System Reliability Procurement - Tiverton/Little Compton
Potential for Wires Project Deferral at Year Begin

	2012	2013	2014	2015	2016	2017	2018
Cumulative Annual kW from Energy Efficiency			**204**	**360**	**517**	**673**	**830**
Focused Energy Efficiency			97	153	209	264	320
SRP Energy Efficiency			106	207	308	409	510
Cumulative Annual kW from Demand Reduction			**172**	**277**	**381**	**486**	**590**
Thermostats - Residential			120	183	245	308	370
Thermostats - C&I			34	59	84	109	134
AC Modlet			17	34	51	68	85
Lighting Tuning - C&I			0.3	0.3	0.3	0.3	0.3
Total Cumulative kW Reduction			376	637	898	1,159	1,420
Total Cumulative kW Reduction Needed to Defer Wires Project			150	390	630	860	1,000
kW in Reserve[(3)]			**226**	**247**	**268**	**299**	**420**
			60%	**39%**	**30%**	**26%**	**30%**

Notes:
(1) All kW amounts are Summer kW and are cumulative.
(2) This table shows the number of kW have been either installed through EE or have become available to reduce through demand reduction by the end of the previous year to therefore contribute to the deferral of the wires investment in the current year.
(3) kW in Reserve acts as insurance against customers overriding the demand reduction themselves, so that the required reduction is still met.
(4) 2012 amounts included in these calculations have been updated to reflect year end projections.

APPENDIX 7

Appendix 7 – Preliminary Marketing Analysis MEMO from Opinion Dynamics Corporation

MEMORANDUM

TO: Lindsay Perry, Christina Skursky, Jeremy Newberger, Tim Roughan (National Grid)

FROM: Amanda Dwelley, Joanne O'Donnell, Bill Norton

DATE: September 17, 2012

RE: National Grid Rhode Island System Reliability Procurement Pilot:
Preliminary 2012 Marketing Effectiveness Findings

This memo serves as the first Marketing Effectiveness Analysis of the Rhode Island System Reliability Procurement (SRP) pilot in the towns of Tiverton and Little Compton. This report reflects information related to the program through mid- to late August 2012. Since March 2012, National Grid has increased marketing and outreach in the pilot communities to encourage participation in select statewide energy efficiency programs, and enrollment in SRP demand management offerings (programmable controllable thermostats and demand-response lighting ballasts). To determine how effective these marketing tactics have been toward meeting participation goals, this memo assesses success metrics such as inquiry rates, and energy efficiency program participation. Findings in this memo cover the period March 2012 through mid-August 2012. Full-year 2012 findings will be reported in an update to this memo in early 2013.

Program Marketing Overview

The pilot's first-year activities center on (a) enrolling residential and commercial customers in the Demand Link program, which includes demand response and direct load control pilot measures, and (b) encouraging participation in existing energy efficiency programs that may contribute to pilot savings. Specifically, the pilot seeks to install programmable controllable thermostats (PCTs) in 125 residential homes and 10 commercial facilities, and install 50 enhanced DR lighting ballasts.[1] To fulfill these goals, National Grid has increased marketing efforts for two statewide energy efficiency programs – EnergyWise and Small Business Direct Install (SBDI). These two programs each perform two functions: They are a platform for determining Demand Link eligibility and encouraging Demand Link participation, and they offer direct install energy efficiency measures that can help reduce peak load on the target substation. The pilot established 2012 energy efficiency participation goals that are double the installation goals for PCTs (250 EnergyWise participants and 20 SBDI participants).

[1] Lighting ballast goals reflect the total number of installed ballasts rather than participants - goals could be achieved by installing 50 DR lighting ballasts in one facility

Pilot marketing efforts to date (through mid-August 2012) include the following:

- Presentations by National Grid in May at two community meetings where both town administrators and the general public were in attendance
- Article posted in May in local online news outlet describing pilot initiative, offerings, and steps to sign up for an audit program
- Direct outreach (phone) to recent EnergyWise Audit participants to describe pilot offerings
- Direct mail letters in June to 12 residential customers from Tiverton and Little Compton that had an audit after January 1, 2012 and before June 1st and who also were flagged as having central air conditioning, a requirement for program participation
- Direct mail in June to 1,461 high-usage residential customers to promote pilot program.[2] Follow-up calls to customers that did not respond to mailing began on August 1st. Five hundred eighty-one follow-up calls have been made as of August 7th.
- Social media activities via Twitter beginning in May through August. Five tweets in total to date publicizing the availability of no cost WiFi thermostat for Little Compton and Tiverton residential customers
- Program overview flyer developed in May and provided at conclusion of residential customer audits
- Direct mail in mid-August to small business customers in Tiverton and Little Compton that highlights the availability of PCTs through the Demand Link program to eligible customers
- Door-to-door initiative beginning in mid-August to promote the pilot offerings to small business customers in Tiverton and Little Compton

These activities are in addition to business-as-usual statewide marketing that may advertise or market to customers in the pilot towns.

I. RESIDENTIAL MARKETING EFFECTIVENESS

This section describes residential marketing effectiveness from three perspectives. First, we look at counts and rates of key success metrics such as program inquiry (to RISE Engineering), EnergyWise program participation rates, and PCT application and enrollment rates for the pilot communities as a whole. Second, we look at these rates among the subset of approximately 1,500 high-usage customers who were targeted in first-year marketing. Third, we look at central air conditioning penetration rates specific to the pilot area to assess whether the pilot is "on track" to reach PCT enrollment goals.

Though the pilot officially started in March 2012, marketing activities did not begin to ramp up until June 2012. Presentations at town meetings and local press releases in both Little Compton and Tiverton began in mid-May 2012. Targeted direct marketing efforts did not begin until late May 2012, with an article in a local online news publication promoting the availability of the pilot, and social media activities via Twitter ramping up during that time. The first direct mail letters were sent

[2] Note that of the 1,538 high usage customers identified, direct mail letters were only sent to 1,461 customers.

in June to 12 residential customers from Tiverton and Little Compton that were flagged as having an audit after January 1, 2012 and before June 1, 2012 and who were also flagged as having central air conditioning, a requirement for participation in the pilot program. The second direct mailing letters to residential customers were also sent in June 2012 to a targeted list of 1,461 high usage customers. Follow-up calls to customers who did not respond to this direct mailing began on August 1, 2012, with 581 follow-up calls having been made to date, and with more continuing through August.

Other planned activities in the coming months include email blasts in September (exact date TBD) to residential customers that had an audit after January 1, 2012 and that were identified as having central air conditioning. Additionally, National Grid is beginning to use paid advertising (banner ads and newsletter ads) with a local online media outlet, and will continue social media activities to promote the pilot. The findings in this report regarding progress-to-date against program goals should be considered very preliminary, as pilot marketing has only occurred on a larger scale for about three months, and future marketing activities are scheduled to occur.

A. Residential Success Metrics

EnergyWise Program Participation

Participation in the EnergyWise program is a key measure of (a) the pilot's success marketing EnergyWise, and (b) the pilot's potential to recruit Demand Link participants. To assess the impact of pilot marketing, we look at trends in program participation in the pilot area, compared to trends in participation in similar, non-pilot towns in the same period. It is important to look at increases in participation in the context of participation in other towns, to determine what increase we might expect due to business-as-usual statewide marketing.

We identified a set of comparison towns that have been exposed to business-as-usual program marketing, but have not been part of recent energy efficiency pilots. The Appendix explains the selection criteria and compares housing and demographic data for these towns. In aggregate, the comparison towns serve as a counterfactual to represent what trends we would expect to see in the SRP pilot towns in the absence of the pilot (but with business-as-usual marketing).

In this report we will examine annual participation counts and rates, comparing 2012 YTD with the baseline period (2009-2011). Though 2012 does include two months that are not in the pilot period, due to the relatively low counts and natural seasonal fluctuations in participation, we believe it is better to look at full-year data at this stage in the pilot. Additionally, since National Grid is reaching out to all 2012 EnergyWise audit participants to offer Demand Link and could meet Demand Link goals from the entire pool of 2012 EnergyWise participants, it is helpful to look at full-year 2012 participation to understand Demand Link enrollment potential. When these marketing effectiveness numbers are updated in early 2013 we will consider augmenting 2012 results with a part-year 2012 analysis (starting in either March 2012 or May 2012, when direct marketing activities began).

The table below shows annual participation counts from each of these communities.[3] Participation in the SRP communities (first column) was fairly stable in 2009-2011, with between 82-90 audits per

[3] Participation counts are based on the number of facilities with site visits in each year, where year is determined by the month in which the site visit occurred, and facilities could have had more than one electric account audited (if multifamily). Visits are assigned to a region based on the town name.

year.[4] In the first 8.5 months of 2012, nearly the same number of audits was completed as for each of the three previous full calendar years (actually a 2% increase). In contrast, audits in the comparison communities through mid-August 2012 are about 13% below their 2009-2011 average annual level. In the absence of SRP marketing, but in the face of increasing statewide program goals, we would have expected the number of audits in the pilot area to be about 18% below previous full-year numbers; however, they are slightly higher than this benchmark.[5] From this perspective it appears that the EnergyWise participation rate under the pilot is higher than it may have been with business-as-usual statewide marketing (i.e., slightly better than the comparison communities).

Table 1. EnergyWise Audits in SRP Pilot and Comparison Communities

Period	SRP Pilot Communities	Comparison Communities
Baseline (2009-2011 Average)	86.3	684
2009 (12 months)	82	635
2010 (12 months)	90	609
2011 (12 months)	87	808
2012 YTD (8.5 months)	88	592
Percentage difference from Baseline	2%	-13%

Visits among customers on the two sub-feeders of concern may be slightly lower than overall visits in these towns. About 58% of site visits conducted in Tiverton and Little Compton ZIP codes 02878 and 02837 in 2011 and 2012 YTD can be tracked to the accounts of customers on Tiverton substation. Two factors could be driving this difference. First, the customer list represents account numbers at a specific point in time - here, February 2012. Customers who were previously on this substation and received audits in 2011 may have moved, or customers new to this substation (since February 2012) could have signed up for audits since moving in; in either case, they would not be on the account list. Second, the ZIP codes that generally define the pilot area may contain customers who are not on substation 33. For the purposes of marketing effectiveness analysis, we will assess the volume and rate of EnergyWise participation for all customers in the two towns, as program marketing such as town meetings and press releases may reach all customers.[6]

[4] We compare these full year counts with 2012 YTD instead of adjusting 2012 numbers to communicate the scale of the program and opportunity to recruit Demand Link participants from among this group.

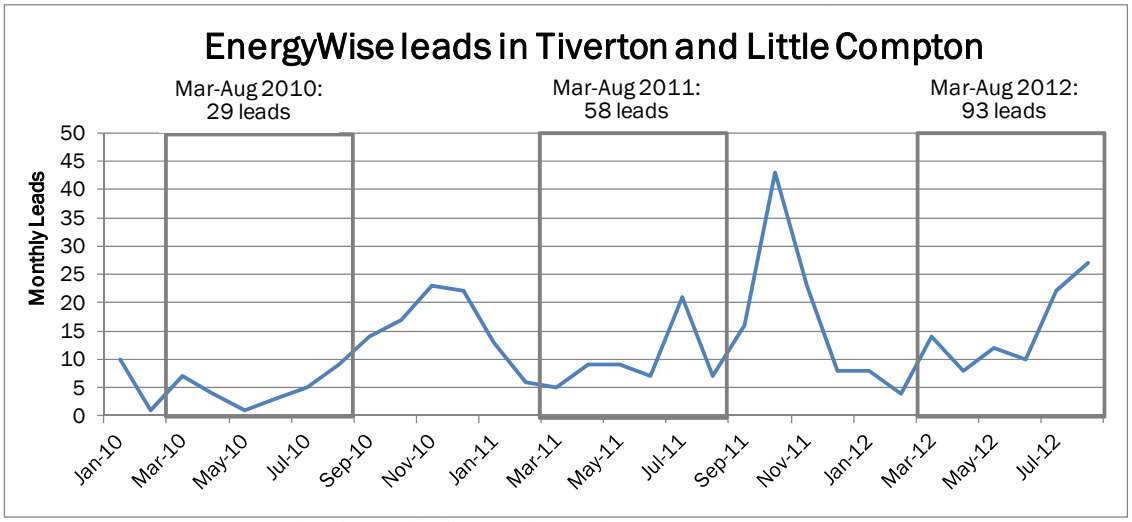
[5] While it is logical that 2012 YTD numbers from 8.5 months are lower than full calendar year counts, all communities face increasing energy efficiency installation and participation goals based on statewide goals, therefore it is difficult to define the exact percentage difference that may be expected 8.5 months into a calendar year vs. previous years, and a comparison group of communities provides one method of benchmarking performance.

[6] For the purpose of Focused Energy Efficiency Impact Evaluation, we will develop a methodology that can account for these discrepancies – for example, judge incremental participation for the towns overall, but only apply an incremental participation or installation rate to measures installed among substation 33 customers. This methodology is under development and will be delivered in December 2012.

Residential Leads & Inquiries

We also looked at EnergyWise audit requests of the program implementer, as a potential leading indicator of program participation. The chart below shows that leads were 60% higher in March through August of 2012 compared with March through August of 2011. While the lead volume suggests that more customers will participate in EnergyWise this year than last, it is uncertain whether lead volume increased due to pilot marketing or enhanced statewide marketing.

Figure 1. EnergyWise Leads, 2010 – 2012 YTD



The goal of 250 EnergyWise audits represents a 182% increase over average annual participation in 2010 and 2011, respectively. For comparison, during the 18 months of the Aquidneck Energy Action pilot, EnergyWise audits increased by 126% compared with the 18 months prior to the pilot. However, the Aquidneck pilot did not see a substantial uptick in EnergyWise participation until about one year into the program (coinciding with enhanced marketing). At this stage in the pilot it is still too early to judge whether the pilot is on track to achieve participation goals, since some ramp-up period may be expected, and marketing efforts did not pick up until summer 2012.

Demand Link Leads & Participants

The pilot directs residential customers to call RISE Engineering to sign up for an EnergyWise home energy audit as the first step to participating in the pilot. Past audit participants who had received their audit beginning January 1, 2012 are also encouraged to call RISE for more information. RISE generally asks customers how they heard about the program, and records this information. However, for the pilot, customers who either call in asking about the Demand Link program or call in for the EnergyWise program in general – but are eligible and eligible for Demand Link – are recorded as a Demand Link lead.

From March 1, 2012 to August 26, 2012, 26 customers (28% of leads) were classified as Demand Link leads. Of the 25 Demand Link leads with known account information, 20 were part of the high-usage customer targeted direct mail list (n=1,461). It is unclear from program tracking how other

customers flagged as "Demand Link" learned of the program – e.g., direct mail, email blast, town meeting, or the RISE call center representative. Going forward, as more customers may come in from general marketing (i.e., outside of a targeted list), we recommend that the program implementer (a) record how customers heard about the program separately from their program interest and/or Demand Link status, and (b) attempt to record "how heard" for more customers in the pilot program area.[7] This will allow the Evaluation Team to assess what marketing channels may be driving customers to call RISE regarding EnergyWise and Demand Link.

Demand Link thermostat installations through August 27th total 12 thermostats in 10 customer homes. The installation count is slightly lower than the number of leads, as some leads are not eligible for the program. Among the nine installations for which we have customer account information, six customers were part of the high-usage customer targeted direct mail campaign. At this stage in pilot implementation it is too early to conclude whether the direct mail program is effective in driving interest in Demand Link (compared with other sources, like the site auditor, or local press).

B. Targeted Customer Success Metrics

National Grid selected 1,461 high-usage customers for a direct mail campaign.[8] On June 26, 2012 a direct mail letter was sent out to these customers, and follow-up calls began on August 1st to those customers who have not responded to the direct mail letter. These customers had average annual consumption of 14,996 kWh and average summer consumption of 5,992 kWh.[9] Through mid-August, 38 of these customers have either inquired about EnergyWise or participated, including 11 program participants. As of mid-August, 20 of these targeted customers expressed interest in Demand Link, and 6 have completed or scheduled Demand Link installations.

Leads from this targeted list represent 36 of the 93 EnergyWise leads from these two towns between March and mid-August 2012 (39%). Note that the targeted list represents 17-29% of residential customers in Little Compton and Tiverton, so the inquiry rate is slightly higher than the natural rate we'd expect from 1,461 residential customers.[10] Customers from this list represent 11 of the 67 EnergyWise participants from March through mid-August (16%).[11]

National Grid also reached out to 12 customers who had completed EnergyWise audits in early 2012 and had central air conditioning, to attempt to recruit them for the Demand Link program. Based on Demand Link tracking data through mid-August, it does not appear that any of these customers have scheduled a Demand Link installation.

[7] For about 53% of all EnergyWise leads from this period, information on how customers heard about the program is blank or classified as "unknown"

[8] About 1,538 high usage customers were identified, and direct mail letters were sent to 1,461 customers.

[9] Usage information is based off the initial database of 1,538 high usage customers

[10] This list represents 17% of all residential customers in Tiverton and Little Compton as of August 2012 (based on ZIP code) and 29% of all residential customers on substation 33 as of February 28, 2012.

[11] The difference between leads and participants may be due to the gap between inquiry and an initial site visit, which is typically a few weeks but could be as short as a few days or as long as a few months.

C. Central Air Conditioning Opportunity Size

In this section we compare multiple data sources with central air conditioning tracking to determine whether there is high enough central air conditioning penetration among residential customers and EnergyWise participants to yield 125 WiFi Programmable Controllable Thermostat participants in 2012. At present, EnergyWise participation *and* central air conditioning are prerequisites for the Demand Link program (among other internet connectivity factors), so the incidence of central air conditioning in the pilot area, and specifically among past EnergyWise program participants, is critical for assessing whether Demand Link participation goals can be met.

- For the State of Rhode Island, National Grid estimates a central air conditioning penetration rate of 32% and window air penetration rate of 53%.[12]
- Penetration rates among potential EnergyWise program participants appear to be lower, ranging from about 20-24%
  - Of the 379 EnergyWise leads from January 2010 through mid-August 2012, 77 (20.3%) had central air conditioning
  - Looking at the 277 EnergyWise audits completed between January 2010 and early August 2012, 20.9% of homes had central air conditioning.
  - Of the 81 EnergyWise audits between January and early August 2012, 19 homes (23.5%) had central air conditioning. The slight difference between the 2012 YTD and 2010-2011 penetration rate is not statistically significant.
- Central air conditioning penetration rates among customers who have expressed interest in demand-side management offerings show slightly higher penetration rates.
  - Tendril/EmPower Pilot: 72 customers from Tiverton & little Compton applied for the pilot; not all qualified.[13] Among all who applied, 40% have central air conditioning, 25% have room air, and 36% have neither.
  - Demand Link leads: Of the 25 customers who were classified as Demand Link leads through August 13th, 14 (56%) have central air conditioning.[14]
  - Still, the relatively small number of customers who have expressed interest in Demand Link indicates that it may be difficult to rely on this group (i.e., customers who actively inquired) to achieve WiFi thermostat installation goals.

[12] Page 8 of SRP proposal to RIPUC

[13] 39 of 72 participated; some did not qualify, while others qualified but then opted out. Those who participated in EmPower will be invited to participate in the SRP pilot in 2013.

[14] The higher penetration rate of CAC among Demand Link leads may be related to lead tracking processes, wherein some customers who call in about EnergyWise in general may be classified as Demand Link leads after the program implementer assesses whether customers have CAC, and offers the program (i.e., eligibility rather than initial inquiry drives classification). At present it is not possible to determine what proportion of customers inquiring about Demand Link or PCTs directly have CAC.

With a goal of 125 Demand Link thermostat installations and the 2012 YTD central air penetration rate of 23.5% among EnergyWise participants, about 533 participants would be needed to yield 125 minimally-qualified households (i.e., with CAC).[15] Even if such participation levels occur, it is unlikely that all households with central air conditioning will (a) meet other pilot requirements, such as wireless internet, and (b) be interested in participating. Based on Demand Link installations scheduled and completed installations to date (10 households) and EnergyWise audits completed since March (67), the conversion rate is less than 1 Demand Link installation of every 6 EnergyWise participants. Based on these very preliminary numbers we estimate that more than 600 EnergyWise participants – and increased eligibility of participants (for Demand Link) – may be needed to yield enough qualified & interested customers to achieve 125 Demand Link installations.

In summary, it is too early to tell what the long-term conversion rate might be since the pilot is just ramping up. We suggest (a) monitoring the relationship between EnergyWise participation, Demand Link eligibility and conversion to Demand Link installations, and (b) exploring this issue further in 2013, in a focus group format. Further research could reveal potential changes to program outreach, messaging or incentives that National Grid may be able to implement before summer 2014.

II. COMMERCIAL MARKETING EFFECTIVENESS

There are 445 commercial customers in Tiverton and Little Compton on substation 33. The majority of these customers (412 customers, or 93%) are small C&I. The SRP pilot is focusing on Small C&I customers to increase participation in the Small Business Direct Install Program (SBDI), and Demand Link.

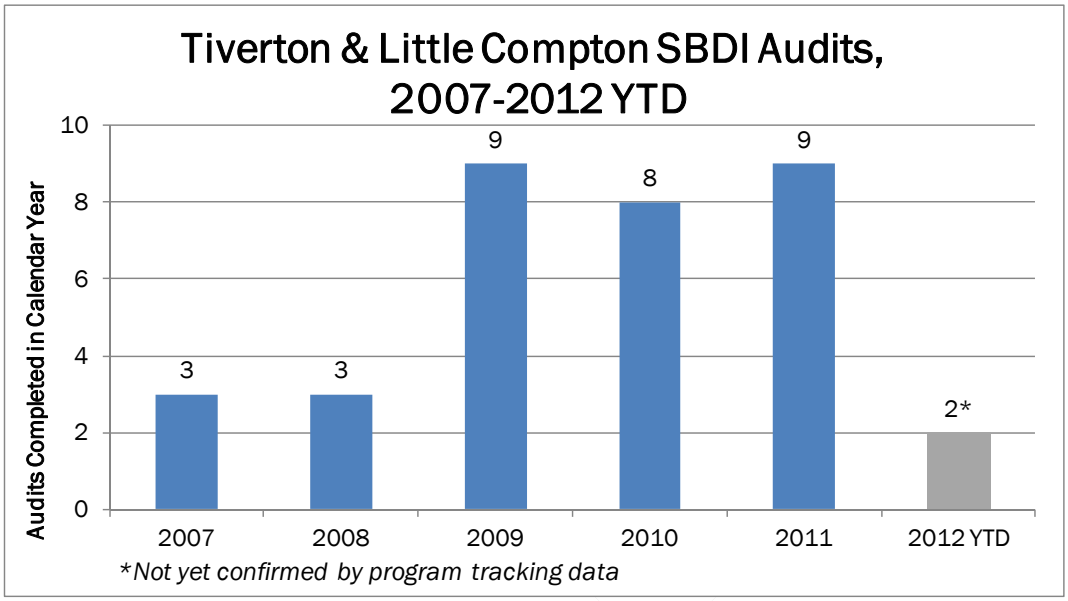
Outreach to C&I customers through direct mail began in mid-August 2012. National Grid mailed letters to all Small C&I customers in the area describing free energy evaluations (the SBDI program) and free WiFi programmable controllable thermostat as part of the Demand Link program. Door-to-door outreach efforts to follow up with customers who received the direct mail piece began in mid-August and may continue into the early fall if necessary.

Through mid-August, three customers have inquired about Demand Link. Two appear to have been audited already, although SBDI participation cannot be confirmed through program tracking data (which includes audits invoiced or paid through August 15th). These two customers were deemed ineligible for DR lighting ballasts based on their operating hours, though they may be eligible for WiFi thermostats.

Participation in the SBDI program does not yet show an increase over previous years. Through mid-August, no completed audits have been recorded in National Grid's program tracking data. This may be due to completed audits not showing up in the program tracking data until they are invoiced. Based on additional information provided by National Grid, participation in previous years has been 8 or 9 customers per year, as shown in Figure 2.

[15] Assuming similar penetration rates as EnergyWise participation increases.

Figure 2. Annual Small Business Direct Install Audits in SRP Pilot Area



These results to date should be considered very preliminary, as outreach efforts are just ramping up, and will continue throughout the fall. Participation counts will all be updated in the full-year 2012 report, to be delivered in the first quarter of 2013.

III. Discussion

These preliminary results represent activity during a ramp-up period, in which awareness is just starting to build, and customers are beginning to understand program offerings. Therefore these results should not be interpreted as a trend or forecast.

Though preliminary, participation counts and central air conditioning penetration rates show that it may be a challenge to reach 2012 participation goals within calendar year 2012. After a few more months as customers are exposed to more marketing and outreach, and National Grid reinforces messages through multiple channels, participation rates may increase. Based on trends in the Aquidneck pilot, it may take up to a year after the official "start" of a program to see an uptick in participation.

Since DR events will not begin until 2014, in the event that 2012 participation is less than desired, there is sufficient time in 2013 and early 2014 to gather more customer feedback on marketing and program offerings (through surveys or focus groups), optimize marketing efforts, and change program offerings, all of which we understand that National Grid is planning.

APPENDIX

A. Incremental Participation Approach

For assessing the pilot's effectiveness in driving increased inquiry and participation in statewide program, we use a comparison group of nearby towns as a proxy for what participation rates and trends would have occurred in the absence of the pilot. The same comparison group of towns will be used to assess an incremental participation rate and incremental savings for Focused Energy Efficiency Impact evaluation. The details of this approach will be delivered as a separate methodology in December 2012.

Incremental participation is the increase in participation in the two pilot towns that would not have happened without the pilot. We will apply a difference-in-differences approach to determine incremental participation. First we will compare the participation rate in the SRP pilot area in the time period under evaluation (here, 2012) to participation the pilot area during a baseline period (we recommend using 2009-2011). Second, we compare this difference in participation in Little Compton and Tiverton between the pilot and baseline periods with the difference in savings in a matched comparison region between the same pilot and baseline periods. The incremental participation analysis compares statewide program activity in the towns targeted by the pilot effort to savings from the same programs in the comparison region. This analysis essentially controls for natural trends, i.e., changes in program participation that would have occurred even without the pilot. This is important because overall statewide goals for energy efficiency programs in Rhode Island increased in 2010 and 2012, and will continue to increase.

Because the pilot and comparison groups are different (a) in terms of numbers of accounts, and (b) in terms of their pre-pilot participation rates, the comparisons must be made in terms of a percent increase between the pre-pilot and pilot period, rather than a change in the number of participants.

As an example:

Assume pilot group participation (P) to be:	P_{base}=Avg. of 80 audits per year
	P_{2012} =250 audits
	P_{change}= 177.8% increase
Assume comparison group participation (C) to be:	C_{base} =Avg. of 700 audits per year
	C_{2012} =800 audits
	C_{change}= 14.3% increase

The "lift" or incremental change attributable to the pilot is 177.8% - 14.3% or 163.5% increase. This number can be applied to the pilot area baseline period count (80 audits) to show that 147.1 audits are incremental. Without the pilot, we would have expected to see a 14.3% increase in audits in the pilot group (or 102.9 expected audits). Instead we saw 250 audits– of these, 147.1 can be considered incremental, or attributable to the pilot program.

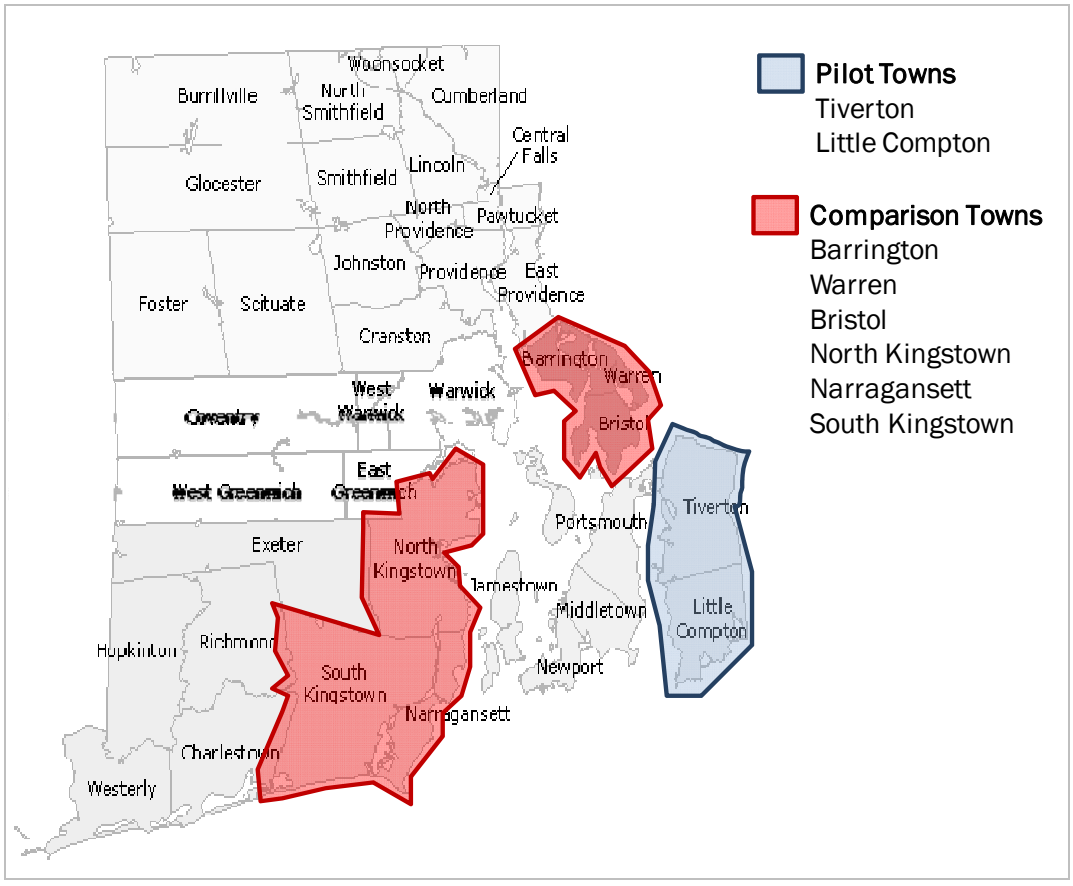
B. Comparison Community Selection

Our community comparison selection process focused on similarities in the residential customer base. Given the relatively smaller expected contribution of commercial customers to pilot goals (approximately 19% of kW reduction) and the relatively small size of the commercial customer base, we prioritized residential similarities over commercial. Specifically, we aimed to identify Rhode Island communities for which:

- EnergyWise participation trends over past few years are similar (i.e., similar rates of increase from year to year)
  - National Grid has aggressive statewide goals for many energy efficiency programs, and expects participation rates to increase everywhere relative to previous years
  - Similarities in participation trends over time may reflect similarities in unobservable factors like receptivity to statewide marketing, as well as similarities in observable factors like demographics or housing.
- Residents may have similar incentive and ability to retrofit homes (assessed by owner occupancy, single-family homes, housing values, and seasonal usage patterns)
  - Because seasonal usage patterns are difficult to measure, the Evaluation Team decided to instead include comparison towns that were most geographically similar (i.e. eligible towns and towns on the southwestern edge of Narragansett Bay)
- Residents may have similar housing stock, related to opportunity and incentive to retrofit (assessed primarily by geographic proximity, year home is built, heating fuel)
  - Even though the majority of the pilot area does not receive National Grid gas service, gas heating in other communities may affect their interest in EnergyWise
- Towns did not participate in the Aquidneck Energy Action pilot

Based on the criteria above, we propose to include the following towns in the comparison group: Barrington, Bristol, Warren, Narragansett, North Kingstown, and South Kingstown.

Figure 3. SRP Pilot and Comparison Communities



Source: Rhode Island Department of Labor and Training

Table 2 shows that the SRP pilot towns have the higher owner occupancy and single-family home rates of the potential comparison community groups.[16] Home values and income are fairly similar across communities (though SRP towns have very slightly lower average income, which may be related to slightly more heads-of-household over age 65). One of the largest differences is in the proportion of homes heated by electric or gas. The majority of homes in the pilot area use oil heat, and few use gas, whereas potential comparison communities have a fairly even mix of oil and gas. Looking across all factors, it appears that South Kingstown is most similar in terms of housing and demographics.

[16] We group the communities based on geography to illuminate slight differences.

Table 2. Housing and Income Characteristics of SRP Pilot and Comparison towns

Subject	SRP Pilot	All Comparison Communities	Barrington, Bristol, Warren	Narragansett, N. Kingstown	South Kingstown
Residential Households[17]	**7,836**	**46,930**	**19,236**	**17,101**	**10,593**
Demographics					
Pct Owner Occupied	80.5%	73.4%	72.1%	73.8%	75.1%
Median Household Income	$65,441	$69,814	$69,812	$68,963	$71,192
Head-of-Household Age 65+	30.2%	24.1%	26.0%	21.5%	25.0%
Housing					
Pct Single-Family	81.0%	73.8%	67.7%	76.0%	79.9%
Home built 1990 or later	23.2%	17.9%	11.1%	18.6%	27.3%
Pct Utility Gas Heat	8.1%	38.8%	44.9%	41.1%	24.1%
Pct Electric Heat	6.3%	10.0%	8.2%	11.7%	10.7%
Median Home Value	$361,025	$373,961	$370,250	$378,516	$373,200

Source: US Census American Community Survey 2006-2010 (5-year estimates)

Next we look at trends in audit participation over a multi-year period within each community. Table 3 and **Figure 4** show similar information, first in counts and then in rates (participants as a percentage of all Census-defined households in the area). Participation is relatively stable in the pilot communities from 2009-2011, though the potential comparison communities show a few differences in trends, including (a) larger increases from 2010 to 2011 (24% - 41%) compared to almost no change in the SRP towns, and (b) higher counts in 2009 vs. 2010 for two of the three sets of towns.

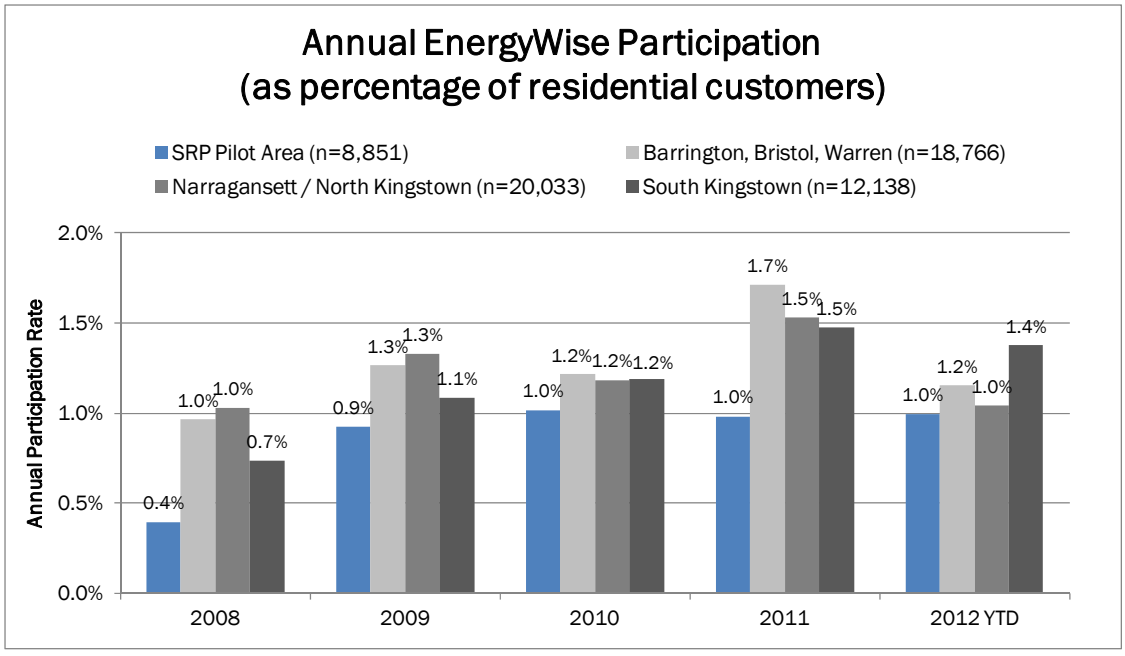
We recommend including a larger group of towns than smaller (e.g., just Narragansett, North Kingstown, South Kingstown), to buffer against future localized participation trends that may be due to community efforts or media that is not affiliated with statewide programs. Though Barrington, Bristol and Warren are the least similar in terms of housing stock, these towns are close in terms of age, income and home value. They are also closest geographically to the pilot communities and may share unobservable characteristics (like common employers, or media sources), that may influence future participation. Finally, annual participation trends are not markedly different across comparison communities, though all three comparison communities showed a larger increase from 2009 to 2011 than observed in the pilot communities. Because we are most concerned with assessing a longer-term trend in participation, we recommend including all of these potential comparison communities. Throughout the course of process and impact evaluation in 2013, as well as in future years, we will continue to assess whether any of the potential comparison towns deviates substantially from the group in a way that may affect difference-in-differences impact evaluation or marketing effectiveness analysis.

[17] The Census defines households as occupied housing units; these counts are not perfectly equivalent to residential customer counts.

Table 3. EnergyWise Audit Participation in SRP Pilot and Comparison Towns, 2008-2012

Year	SRP Pilot Communities		All Comparison Communities		Barrington, Bristol, Warren		Narragansett / N. Kingstown		South Kingstown	
	Count	% Increase over previous year	Count	% Increase over previous year	Count	% Increase over previous year	Count	% Increase over previous year	Count	% Increase over previous year
2008	35		476		181		206		89	
2009	82	134%	635	33%	237	31%	266	29%	132	48%
2010	90	10%	609	-4%	228	-4%	237	-11%	144	9%
2011	87	-3%	808	33%	322	41%	307	30%	179	24%
2012 YTD (8.5 months)	88	1%	592	-27%	216	-33%	209	-32%	167	-7%

Figure 4. EnergyWise Participation in SRP Pilot and Comparison Towns, 2008-2012



Our analysis will define a three-year pre-pilot period (2009-2011) as the baseline. This ensures that we have sufficient data in the baseline period to estimate participation across a variety of marketing activities (which, though statewide, may have stimulated program activity in different areas, at different times). It is not so long as to include 2008, which does not have participation rates in line with 2009-2011 for any of the communities.