

Rhode Island Energy Efficiency

First Quarter 2015 | National Grid

May 8, 2015

Overview

National Grid is off to a great start for the first quarter of 2015. At the end of the first quarter the Company achieved 16.5% of the electric savings goal and 16.8% of the gas savings goal.

For the second year in a row, National Grid partnered with the RI Office of Energy Resources (OER) and the RI Energy Efficiency and Resource Management Council (EERMC) to host the Rhode Island Energy Expo at the 2015 RI Home Show on March 5-8th. Attendance was on par with last year, with a remarkable 22,026 attendees.

Attendees could visit over 100 vendors and attend seminars on lowering energy bills, home heating options; learn from educational displays including insulation and lighting comparisons, blower door testing, infrared cameras, and do-it-yourself air sealing; and enter to win a \$2,500 Home Energy Makeover.

The Expo helped increase attendee awareness of energy efficiency and National Grid's program offerings. Over 400 leads were created for the Home Energy Assessment program and boxes of energy efficient lighting sold out again this year.

The 2014 Jobs Study was also finalized in the first quarter. The Study concluded that 639.4 full-time equivalent (FTE) workers were employed in 2014 as a result of investments by National Grid in energy efficiency programs provided to its Rhode Island electricity and natural gas customers. This is an increase in 17% of the 2013 FTEs. The study also identified 899 companies and agencies involved in National Grid's 2014 energy efficiency programs, 77% of which were located in Rhode Island. The companies identified include those whose employees were counted in the FTE analysis, as well as additional companies who assisted customers to secure equipment rebates, for example through the New Construction or High Efficiency HVAC programs.

Based on the strong first quarter results, National Grid believes that 2015 will be a year full of innovation and success.

2015 Program & Initiative Updates

Residential New Construction

- During the first quarter there were 216 enrollments in the program, including affordable housing.
- Projects included 10 units at the East Greenwich Housing Authority, a reno/rehab project for 57 apartments at Dean Street Studios in Providence, and a reno/rehab project for 10 units in two historic homes in the Parkis-Comstock Historic District.
- In total there were 115 completions during the first quarter, with 75% of completed homes achieving top tier levels.
- Four homes achieved Tier 3 during the first quarter. This included a triplex reno/rehab project in Providence that achieved 57% savings over the User Defined Reference Home (UDRH) and a single family, new construction, home in Exeter that 54% savings over the UDRH.

Income Eligible

- First quarter production and spending was slightly below the first quarter goal of 25%. The harsh winter took its toll on weatherization appointments, requiring many jobs to be rescheduled. When comparing year on year: gas is up 30% for spend and up 50% for savings. Electric is up 13% for spend and down 20% for savings (this is due to some costs increasing and some savings values decreasing from evaluation results).
- During the first quarter, quality control inspector training and testing continued. Several auditors passed the written test and will take the field test during the second quarter.
- The draft tri-fold marketing brochure for the Income Eligible Services (IES) program was also released in the first quarter. CLEAResult and the seven CAP agencies contributed to developing the brochure for the Rhode Island IES program.
- Two Weatherization Technical Committee meetings were held in first quarter. At the meetings training opportunities for contractors, auditors and monitors were discussed and a list of trainings was compiled. Subsequent meetings will have a training component based on these training requests.
- Training on the proper installation of Heat Pump Water Heaters has been completed for all auditors and monitors in the IES program.
- The IES Field Manual aligned with the Department of Energy (DOE) Standardized Work System was completed and sent to the DOE for approval. When the manual is approved there will be a general training for all RI IES contractors as well as individual training with Jules Junker.
- The implementation of the National Grid background check program was discussed at many meetings and in agency discussions. This program will ensure the safety of customers and contractors. The lead time afforded by National Grid has allowed agencies and contractors time to formulate questions about and become comfortable with background checks.

- The Rhode Island Department of Human Services (DHS) and CLEAResult began investigating the integration of budgets based on funding from Federal DOE and LIHEAP programs, and National Grid energy efficiency funds. The goals are to maximize the leveraging of funds, match funding to capacity, and build a reliable funding stream for the CAP agencies.

EnergyWise

- During the first quarter, 1,841 audits and 589 weatherization jobs were completed.
- During the Rhode Island Energy Expo at the 2015 RI Home Show on March 5-8 there were 404 sign-ups for home energy assessments.
- The program submitted the 2014 Home Performance with ENERGY STAR Annual Report.
- Heat Loans continued in the first quarter of 2015 with 300 loans completed for almost \$2 million.
- Comparing first quarter 2015 with 2014, gas audits resulting in weatherization have declined by 13% (from 49% to 36%). Some of this change might be due to the decline in the incentive level from 75% to 50% of project cost. In addition, challenging weather conditions in January and February slowed down gas weatherization projects in early 2015.
- Planning will ensue to determine how to increase gas weatherization activity.

EnergyWise and Income Eligible Multifamily

- The benchmarking initiative is progressing as planned. There were several rounds of solicitations to building owners to participate in the initiative during the first quarter. All participants were identified by the end of the first quarter and data processing of energy and water information is currently being completed.
- A special focus for multifamily in 2015 is to improve the participation of individual condo owners in direct savings measure installations. Traditionally around 30% of condo owners participate in, in-unit savings measures. A combined effort of Rise, Smart Power, and National Grid is working to improve the participation rate through direct outreach and enhanced engagement. Plans may also follow where a celebration is planned to reinforce the savings condo owners should find and enhance efficiency education after the work is completed.
- National Grid and Smart Power met with the Providence Housing Authority (PHA) in the first quarter to see if they would like to be a business partner in the Rhode Island Energy Challenge. PHA may also participate in benchmarking during the summer of 2015.
- Challenging weather conditions in January and February slowed down gas weatherization projects in early 2015.

ENERGYSTAR® Lighting and Appliances

- During the first quarter of 2015, the pop-up retailer, TechniArt, was present at the Rhode Island Energy Expo, the Northern Rhode Island Spring Home Show, and the Southern Rhode Island Home Show.
- At the end of March, Sylvania had an education table at Lowe's in Cranston to demonstrate the difference between an LED bulb and an incandescent bulb.
- In the first quarter the transition from the current fulfillment contractor, Blackhawk, to Energy Federation Inc. began. The transition will be complete by June 1st.
- ENERGY STAR initiated its first clothes dryer specification on January 1st. The Appliance program is supporting this new specification with point of purchase (POP) information and a \$50 incentive.

ENERGYSTAR® HVAC (Heating and Cooling)

- For heating, boilers and furnaces were the most robust measures in the first quarter, bringing in the largest percentage of savings. The program is over budget by 50% due to the number of applications with higher rebate levels that were carried over to 2015 after the program was suspended in 2014. Program strategy and execution teams are working to identify options for the remainder of the year.
- For cooling, heat pump water heaters and heat pumps continued to have high participation bringing in the greatest amount of savings to the program during the first quarter.

Home Energy Reports

- In February, Nick Corsetti presented at the PowerUp Conference. PowerUp brings together utility industry professionals focusing on behavioral science/marketing in energy efficiency. The topic was "Unlocking Value from Hard to Reach Customers". With certain segments, including small and medium businesses and low-income households, being difficult to reach the panel spoke to lessons learned, and strategies for how they are bridging the engagement divide.

Community Initiative

- The Rhode Island Energy Challenge: Find Your Four! kicked off 2015 by celebrating the success of the Video Challenge. Over 11,000 votes were cast for the top 36 videos. Winners from Central Falls, Scituate, John Deering Middle School, and North Kingstown Senior High School received commemorative street signs at the Rhode Island Home Show and will be accepting grants for their sustainability initiatives in June 2015.
- Rhode Island Housing Authority took the Challenge to get 25% of all employees to sign up for Find Your Four! and pledge to be more energy efficient (standard employer pledge rate has been 10% of employees).

- On March 31st, North Providence became the newest municipal partner in the RI Energy Challenge: Find Your Four!. Mayor Charles Lombardi, the town, and Tri-Town CAP agency will work closely to encourage residents to commit to finding four ways to save energy. This is the second municipality to team with a CAP to achieve a broader reach into the community (Warwick was the first in 2014).
- The Rhode Island Energy Challenge has teamed up with RISE Engineering to run a pilot aimed at increasing energy efficiency in the multi-family condominium communities. This May, the Challenge will host educational tables at condominium complexes to compliment the extremely popular EnergyWise program.
- National Grid, The Office of Energy Resources, RISE Engineering, and the Rhode Island Energy Challenge held two seminars for some of the 143 parish priests of the Roman Catholic Diocese of Providence. The goal of these seminars was to teach pastors about the difference National Grid program offerings can make for their parishes and the difference the Challenge can make for their congregants.

Comprehensive Marketing

- The 2015 marketing campaign focuses on "Energy savings make the things that matter better". Radio spots began at the end of February and will be supported with print ads and billboards in March and April.

Codes Initiative

- Five residential trainings were held during the first quarter with 109 attendees. This included 2 classroom trainings at the Rhode Island Builders Association (RIBA), a session at the Rhode Island Building Officials Association (RIBOA), a carpentry and weatherization training for 16 participants at the Amos House, and training for 18 students at Chariho Career and Technical Center.
- Four commercial trainings were also held at RIBA in the first quarter with 46 attendees.
- The Rhode Island Residential New Construction Field Guide was promoted during the first quarter through email and at local events.

Large Commercial New Construction

- Upstream Lighting:
 - Upstream lighting performed below the Company's expectations in the first quarter. The program manager has investigated this issue and believes that the strong winter storms were main factor in lower than expected performance.
- Upstream HVAC:
 - Two system errors are preventing the Company from accurately accounting for upstream HVAC savings. They are in the process of being fixed and results will be reported in the next quarter.
- BOC

- A Level I class is scheduled to begin on April 22 in Providence. This class will end on July 22nd.
- Street lighting:
 - Incentive levels for lights and controls were announced for customer owned LED street lighting in January at the League of Cities & Towns' annual meeting.

Large Commercial Retrofit

- The Company proposed a budget transfer for the C&I Electric sector. The transfer will enable more customers to participate in New Construction, Retrofit, and Small Business Direct Install offerings than were planned for 2015. The EERMC and Division approved the budget transfer in March.
- The Company projects it will meet the electric goals by year-end, even though it has been a slow quarter. While paid applications are fewer in number than same time last year, the number of applications generated by end of this quarter are higher than last year and have more savings associated with them.
- The gas program had a slow first quarter but the Company is working hard to focus on gas applications and savings.
- In the first quarter of 2015, the Company worked on finalizing the contract with the lead vendor Leidos. Scope and goals were finalized for a three-year period as well as a list of large customers that will be pursued.
- There continues to be a good pipeline of industrial applications this year. The lead vendor was in contact with customers in first quarter and many applications are expected to close at the end of the year. The vendor also visited some industrial distributors, these visits were well received and the Company expects significant business from the industrial distributors.
- The Company also continued to work closely with OER to bring in projects that save more than 15% of electric or gas or total energy per facility. At the end of 2014, there were 78 projects that met the criteria. The Company needs another 22 projects this year to meet the goals of the Rhode Island Public Energy Partnership (RI PEP).
- In the first quarter, work also started on a customer combined heat and power (CHP manual). This manual will be similar in content and breadth to the CHP manual that exists for Massachusetts.

Small Business Direct Install

- The Small Business program had a strong start in 2015. Almost 14% of the electric goal has been achieved and paid to date. Over 20% of the gas goal has been achieved and paid to date. Although it is still early, the Company projects that the program will meet or exceed its goals for both fuels in 2015.

Pilots

- National Grid continued the testing and evaluation of heat pump dryer unit demonstrations installed during the fourth quarter of 2014. The Company was

generally pleased with the results of the demonstration. The dryer study provided us with the following results:

- A dryer that is fully loaded (8.45 pounds) will use 13.3% less energy than a similar load that is only loaded at 50% of capacity.
- Unvented dryers installed in an enclosed space should be provided with a source of room ventilation. In our study, the unit which was installed in a small enclosed space used 41% more energy than the other comparable units.
- The type of washing machine used is indicative to the amount of electrical savings that will be realized by the dryer. A top load washer (vertical axis) is less efficient at removing moisture content than a front load washer (horizontal axis).
- A dryness setting of “More” consumed 3.7% more energy, whereas a setting of “less” saved 22.3% energy.
- To achieve optimal energy savings, heat pump dryers need to have a horizontal axis washing machine installed with it at the time of installation.
- A heat pump dryer will decrease electric demand by 2.79 kW.
- The electronically commutated motor (ECM) pump demonstration to explore gas savings and additional electrical savings continued during the first quarter. The Company successfully installed all of the pumps with the associated monitoring equipment with the assistance our Rhode Island plumbing contractor. National Grid used B&G, Grundfos and Taco pumps on the systems which included both single family and multifamily sites. The Company intends to have all of the monitoring equipment removed by June and will begin analyzing the data to determine what benefits can be achieved by the installation of the ECM pumps. The goal is to have all of the data analyzed by the beginning of the fourth quarter.

Evaluation

- The 2014 Jobs Study was completed and found that 639.4 full-time equivalent (FTE) employees had work in 2014 as a result of investments by National Grid in energy efficiency programs provided to its Rhode Island electricity and natural gas customers. The study also identified 899 companies and agencies involved in National Grid’s 2014 energy efficiency.
- Sampling for the Commercial and Industrial gas free-ridership study was scoped and will begin in the second quarter.

Upcoming Events

- Johnson & Wales University Sustainability Resource Fair, Wednesday, April 29 on the Harborside Green Space held.
- Annual Preparedness Conference, Tuesday, August 25, 2015 through Wednesday, August 26, 2015 at the CCRI’s Knight Campus, 400 East Ave, Warwick, Rhode Island.

NATIONAL GRID ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND

Table 1. Summary of 2015 Target and Preliminary 1st Quarter Results

ELECTRIC PROGRAMS Sector and Program	(1) Demand Reduction (Annual kW)			(2) Pct Achieved			(3) Energy Savings (Annual MWh)			(4) Pct Achieved			(5) Customer Participation			(6) Implementation Expenses (\$ 000)			(7) Lifetime savings, MWh		(8) \$/kWh	
	Target	Year To Date	Pct	Target	Year To Date	Pct	Target	Year To Date	Pct	Target	Year To Date	Pct	Target	Year To Date	Pct	Budget	Year To Date	Pct	savings, MWh	\$/kWh		
Commercial and Industrial																						
Large Commercial New Construction	6,846	84	1.2%	33,702	481	1.4%	3,698	310	8.4%	\$9,555.6	\$640.7	6.7%							7,188	\$ 0.089		
Large Commercial Retrofit	6,262	452	7.2%	48,041	3,966	8.3%	574	56	9.7%	\$15,322.2	\$1,786.5	11.7%							43,260	\$ 0.041		
Small Business Direct Install	4,143	638	15.4%	19,539	2,622	13.4%	1,407	197	14.0%	\$11,869.6	\$1,379.1	11.6%							30,391	\$ 0.045		
Community Based Initiatives - C&I																						
Commercial Pilots																						
Comprehensive Marketing - C&I																						
Finance Costs																						
SUBTOTAL	17,252	1,174	6.8%	101,282	7,069	7.0%	5,680	562	9.9%	\$41,211.4	\$7,841.6	19.0%							80,839	\$ 0.097		
Income Eligible Residential																						
Single Family - Income Eligible Services	479	81	16.9%	3,680	616	16.7%	2,500	772	30.9%	\$7,806.7	\$1,307.4	16.7%							5,773	\$ 0.226		
Income Eligible Multifamily	120	36	30.0%	2,907	693	23.9%	8,000	1,172	14.7%	\$2,298.2	\$528.6	23.0%							7,176	\$ 0.074		
SUBTOTAL	599	117	19.5%	6,587	1,309	19.9%	10,500	1,944	18.5%	\$10,104.9	\$1,836.1	18.2%							12,950	\$ 0.142		
Non-Income Eligible Residential																						
Residential New Construction	169	29	17.1%	559	181	32.4%	430	115	26.7%	\$959.8	\$281.4	29.3%							1,912	\$ 0.147		
ENERGY STAR® HVAC	197	46	23.2%	1,020	267	26.2%	1,322	368	27.8%	\$1,314.1	\$272.8	20.8%							3,628	\$ 0.075		
EnergyWise	1,383	218	15.8%	11,157	3,308	29.7%	9,000	2,993	33.3%	\$8,805.8	\$2,016.9	22.9%							34,849	\$ 0.058		
EnergyWise Multifamily	178	12	6.8%	3,898	237	6.1%	4,900	1,288	26.3%	\$3,132.4	\$204.6	6.5%							2,404	\$ 0.085		
ENERGY STAR® Lighting	5,125	1,039	20.3%	38,859	7,865	20.2%	104,825	52,855	50.4%	\$8,656.1	\$1,432.9	16.6%							86,203	\$ 0.017		
ENERGY STAR® Products	652	118	18.1%	4,605	864	18.8%	13,438	3,269	24.3%	\$2,294.7	\$417.6	18.2%							6,573	\$ 0.064		
Home Energy Reports	4,161	1,738	41.8%	25,634	10,867	42.4%	268,733	270,285	100.6%	\$2,517.5	\$1,725.1	68.5%							10,867	\$ 0.159		
Energy Efficiency Educational Programs																						
Residential Products Pilot																						
Community Based Initiatives - Residential																						
Comprehensive Marketing - Residential																						
SUBTOTAL	11,865	3,199	27.0%	85,733	23,590	27.5%	402,648	331,174	82%	\$29,133.1	\$6,472.8	22.2%							146,435	\$ 0.044		
Regulatory																						
EERMC																						
OER																						
SUBTOTAL																						
TOTAL	29,715	4,491	15.1%	193,602	31,969	16.5%	418,828	333,680	79.7%	\$ 81,859.5	\$ 16,252.4	19.9%							234,451	\$ 0.069		
GAS PROGRAMS																						
Sector and Program																						
Commercial and Industrial																						
Large Commercial New Construction				41,802	2,635	6.3%	227	31	13.6%	\$1,448.7	\$268.5	18.5%							54,675	\$ 4.911		
Large Commercial Retrofit				125,711	6,288	5.0%	600	35	5.8%	\$4,120.2	\$289.5	7.0%							61,831	\$ 4.682		
Small Business Direct Install				3,489	763	21.9%	83	29	34.6%	\$313.0	\$30.1	9.6%							5,442	\$ 5.531		
Commercial & Industrial Multifamily				9,396	1,027	10.9%	1,968	437	22.2%	\$692.0	\$45.6	6.6%							15,243	\$ 2.991		
Commercial & Industrial Pilots																						
Comprehensive Marketing - C&I																						
Community Based Initiatives - C&I																						
Finance Costs																						
SUBTOTAL				180,397	10,712	5.9%	2,878	531	18.5%	\$7,249.2	\$648.4	8.9%							137,191	\$ 4.727		
Income Eligible Residential																						
Single Family - Income Eligible Services				8,780	2,085	23.7%	400	103	25.8%	\$3,120.9	\$556.7	17.8%							41,704	\$ 13.348		
Income Eligible Multifamily				19,098	880	4.6%	2,900	461	15.9%	\$1,900.8	\$57.5	3.0%							11,011	\$ 5.221		
SUBTOTAL				27,878	2,965	10.6%	3,300	564	17.1%	\$5,021.7	\$614.2	12.2%							52,715	\$ 11.650		
Non-Income Eligible Residential																						
EnergyWise				68,141	11,633	17.1%	2,400	527	22.0%	\$6,258.6	\$822.6	13.1%							259,823	\$ 3.166		
Energy Star® HVAC				29,081	10,110	34.8%	1,327	627	47.3%	\$1,474.2	\$564.5	38.3%							174,037	\$ 3.244		
EnergyWise Multifamily				15,863	645	4.1%	2,500	511	20.4%	\$1,637.6	\$75.2	4.6%							12,934	\$ 5.811		
Home Energy Reports				50,806	25,774	50.7%	142,220	125,926	88.5%	\$445.4	\$316.1	71.0%							25,774	\$ 12.266		
Residential New Construction				4,796	1,440	30.0%	386	97	25.1%	\$328.5	\$100.5	30.6%							36,010	\$ 2.790		
Residential Products Pilot																						
Comprehensive Marketing - Residential																						
Community Based Initiatives - Residential																						
SUBTOTAL				168,687	49,603	29.4%	148,833	127,688	85.8%	\$10,335.3	\$1,896.6	18.4%							508,578	\$ 3.729		
Regulatory																						
EERMC																						
OER																						
SUBTOTAL																						
TOTAL				376,963	63,280	16.8%	155,012	128,784	83.1%	\$ 23,137.4	\$ 3,188.7	13.8%							698,484	\$ 4.565		

NOTES
(1)(4)(7) Targets from Docket 4527 - Attachment 5, Table E-7 (electric) and Attachment 6, Table G-7 (gas).
(3) Pct Achieved is Column (2)/ Column (1).
(6) Pct Achieved is Column (5)/ Column (4).
(8) Participation was planned and is reported in 'net' terms which takes into account free-ridership and spillover.
(9) Pct Achieved is Column (8)/ Column (7).
(10) Approved Implementation Expenses from Docket 4527, Attachment 5 Table E-4 (electric) and Attachment 6 Table G-5 (gas), adjusted to reflect "Docket 4527 - The Narragansett Electric Company, d/b/a National Grid 2015 Energy Efficiency Program Plan Transfer of Funds Request" approved by the Energy Efficiency Resources Management Council on March 29, 2015, the Division of Public Utilities and Carriers on March 20, 2015, and the Rhode Island Public Utilities Commission on May 7, 2015.
(11) Year To Date Implementation Expenses are net of evaluation expenses.
Small Business Direct Install Electric Includes RGGI funds spent in Quarter 1.
(12) Pct Achieved is Column (11)/ Column (10).
(14) \$/lifetime kWh = Column (11)/Column (13); \$/lifetime MMBtu = Column (11)*1000/Column (13)
System Reliability Procurement targets from Docket 4528, not included in Implementation Expenses Total

**Table 2
National Grid
Revolving Loan Funds**

Large C&I Revolving Loan Fund		Small Business Revolving Loan Fund		
(1)	2015 Funds Available	\$9,057,728	(1) 2015 Funds Available	\$1,702,050
(2)	2015 Loan budget	\$6,500,000	(2) 2015 Loan Budget	\$1,455,000
(3)	Committed	\$2,400,159	(3) Committed	\$235,666
(4)	Paid	\$378,971	(4) Paid	\$258,321
(5)	Number of loans	4	(6) Participants	216
(6)	Participants	4	(7) Savings (MWh)	2,622
(7)	Savings (MWh)	714	(8) Available	\$961,013
(8)	Available	\$3,720,870		

Rhode Island Public Energy Partnership (RI PEP)

(6)	2014/2015 Loan Budget	\$1,000,000
(7)	Committed	\$461,903
(8)	Paid	\$196,336
(9)	Participants	5
(10)	Savings (MWh)	563
(11)	Available	\$341,761

Notes

- 1 Amount Company estimated in 2015 Plan, Table E-10 including 2015 injections.
- 2 Budget adopted by Sales Team for 2015 operations.
- 3 As of March 31, 2015
- 4 As of March 31, 2015
- 5 As of March 31, 2015.
- 6 Unique customer names for large business and unique customer accounts for small business (not adjusted for net-to-gross).
- 7 As of March 31, 2015
- 8 Available funds as of March 31, 2015.
- 9 RI PEP funding is over two years
- 10 As of March 31, 2015
- 11 As of March 31, 2015
- 12 As of March 31, 2015
- 13 Available funds as of March 31, 2015.