Rhode Island Energy Efficiency

Second Quarter 2018 | National Grid

August 16, 2018

Overview

National Grid had a solid first half of 2018, with the Company achieving 59.3% of the electric Annual MWh savings goal and 41.8% of the Annual MMBTU gas savings goal. Both the electric and gas sectors are on track to meet their goals for 2018 and post another strong year for Rhode Island energy customers.

For residential customers, the second quarter saw the resuming of sending High Bill Alerts for eligible customers in Rhode Island to help reduce bills, approximately 100,000 customers are enrolled in the program. On the C&I side, the Industrial Initiative had several great projects in second quarter. One such project was a new energy efficient thermo forming machine at a specialty plastics manufacturer. The machine is now in place and expected to save the customer 183,000 net kWh per year.

For communities, the town of Coventry receiving a Lead by Example Energy Award from the Office of Energy Resources for investing \$5,000,000 over a five year period in energy efficiency improvements to schools. For the Communities Initiative the town of Warren began on the ground promotions beginning in the second quarter with customized marketing materials being created for both Woonsocket and Warren.

2018 Program & Initiative Updates

Residential New Construction (RNC)

- Residential New Construction had a slow first half of 2018, achieving 128 Annual MWh of electric savings (21% of goal) and 922 Annual MMBtu of gas savings (30% of goal).
- The program enrolled 80 customer homes in the second quarter and completed 65 customer homes.
- A No-cost HERS Rater training was held in April in an effort to increase the number of local certified energy efficiency third party verifiers in the state. Six people successfully completed a five-day training including classroom and onsite training and a final written exam. Attendees need to complete several online exams and perform the required supervised HERS ratings to earn their official HERS Rater certification provided by RESNET.

Income Eligible Services (IES)

- The National Grid Income Eligible Services program had a good start to the year, achieving 1,804 MWh of electric savings (43% of goal) and 5,521 Annual MMBtu of gas savings (44% of goal).
- An Appliance Management Program (AMP) Training was held at the National Grid Energy Innovation Hub. 12 AMP Auditors participated and shared information about AMP implementation and to become aware of the Hub.

EnergyWise

- EnergyWise had a solid first half of 2018, achieving 3,503 Annual MWh of electric savings (57% of goal) and 12,522 Annual MMBtu of natural gas savings (47% of goal).
- One thousand, seven hundred and twenty-nine gas weatherizations and 5,152 audits were completed in the first quarter.
- The program also had a "Summer Sizzler" for deliverable fuel customers with 75% incentives through August 31st.

EnergyWise Multifamily, Income Eligible Multifamily, C&I Multifamily

- The Multifamily programs had mixed first half of 2018 due to lengthy installation times. All programs are still forecasting to achieve all of their annual savings goals.
- The EnergyWise Multifamily program achieved 894 Annual MWh of electric savings (21% of goal) and 8,091 MMBTU of natural gas savings (67% of goal).
- The Income Eligible Multifamily program achieved 847 Annual MWh of electric savings (26% of goal) and 3,430 MMBTU of natural gas savings (21% of goal).
- The C&I Multifamily program achieved 2,238 MMBTU of natural gas savings (34% of goal).

ENERGYSTAR® HVAC (Heating and Cooling)

- In the first half of 2018 the ENERGYSTAR® HVAC (Heating and Cooling) program had a good start, achieving 740 Annual MWh of electric savings (35% of goal) and 6,683 Annual MMBtu of natural gas savings (35% of goal).
- The program conducted five contractor trainings in the second quarter, with 45 attendees form 17 companies. Outreach efforts focused on handing out the new rebate summary sheet to distributors.

ENERGYSTAR® Lighting

- ENERGYSTAR[®] Lighting had an excellent first half of 2018, achieving 29,342
 Annual MWh of electric savings (75% of goal) and 3,303 Annual kW of electric
 demand (75% of goal), driven primarily by the transformation of the lighting
 market.
- Lighting continues to be ahead of schedule in 2018 with lighting sales and is projected to be above goal.
- Moving forward, the program is closely monitoring spending and savings targets and will remove flash lighting sales.
- Outreach events were held at the Johnson & Wales Sustainability Resource Fair in April and additional events at the Lowes in North Smithfield, RI and Home Depot in Warwick in May.

Residential Consumer Products

- Residential Consumer Products had a strong first half of 2018, achieving 1,280 Annual MWh of electric savings (45% of goal) and 187 Annual kW of electric demand (43% of goal).
- A pool pumps promotion continued through April in advance of the summer season.

Home Energy Reports (HER)

- The Home Energy Reports program had a strong first half of 2018 with solid performance for electric savings and an excellent first half for natural gas savings. The program achieved 11,455 MWh of electric savings (75% of goal) and 84,697 Annual MMBtu of gas savings (110% of goal).
- In May of 2018 the company resumed sending the Non-AMI High Bill Alerts for the eligible Rhode Island population. These digital communications contain a targeted Income Eligible message, for those customers on the Income Eligible rate codes. These communications go out every Tuesday and Thursday to eligible customers. 100,00 customers are enrolled in the program. Gas alerts will go out starting the end of September.

Community Initiatives

 The town of Warren Rhode Island began on the ground promotions beginning in the second quarter. Customized marketing materials were created for both Woonsocket and Warren, as well as an energy efficiency communication to be included in residential and small business customer utility bills during the third quarter.

Code Compliance Enhancement Initiative (CCEI)

- In the second quarter of 2018, the Code Compliance Enhancement Initiative (CCEI) continued supporting the building community through a time of change and uncertainty.
- CCEI held 12 trainings this quarter drawing 166 attendees.
- CCEI conducted its first trainings on the Residential Stretch Code, which was published last quarter.
- CCEI launched a new effort to directly engage property appraisers through two training events delivered in partnership with the local Appraisal Institute chapter.
- While the ongoing delay of the state's energy code update interferes with the
 delivery of this program, CCEI is keeping stakeholders engaged by adding
 new trainings on hot topics that encouraged increased code compliance like
 heat pump selection/installation and zero energy construction.



Members of the Rhode Island Builders Association (RIBA) taking in our new Introduction to Zero Energy Homes training.

Large Commercial New Construction

- The Large Commercial New Construction program had a solid first half of 2018, achieving 4,912 MWh of electric savings (35% of goal) and 16,888 Annual MMBtu of gas savings (40% of goal).
- The Industrial Initiative (covering both New Construction and Retrofit) had several great projects in the second quarter. One such project was a new energy efficient thermo forming machine at a specialty plastics manufacturer. The machine is now in place and expected to save 183,000 net kWh per year.

Large Commercial Retrofit

- The Large Commercial Retrofit program had a solid first half of 2018, achieving 21,893 MWh of electric savings (29% of goal) and 28,544 Annual MMBtu of gas savings (15% of goal).
- The streetlighting incentive for the town of Tiverton helped the town to close their fiscal year in the black.

Small Business Direct Install

• The Small Business Direct Install program had a very strong start to 2018, achieving 6,483 MWh of electric savings (36% of goal) and 886 MMBtu of gas savings (29% of goal).

Pilots and Demonstrations

Home Energy Monitoring

 This quarter saw the first customers receive a free U.S. Home Energy Score as part of their EnergyWise audits. The Home Energy Score Pilot will provide this for 150 customers.

Evaluation

- All evaluation studies are conducted by 3rd party contractors, and vetted and reviewed by the EERMC consulting team. All final evaluation executive summaries are made available on the EERMC's website.
- The Impact Evaluation of plan-year (PY) 2015 C&I Upstream Lighting Initiative
 was finalized in August. The study provide updates to claimable savings and
 realization rates for C&I upstream lighting projects, which make up a
 significant portion of the C&I Retrofit's program's Annual MWh savings (20 30%).
- For the Impact Evaluation of PY2016 C&I Small Business Initiative, metering and analysis has been completed at most sites. A final report is expected in August/September. This study covers SBS lighting projects only; other end uses will be addressed in a subsequent study.
- For the Custom Gas study, meter collection and analysis is underway for the sites in the Impact Evaluation of C&I Custom Gas Installations. A draft report is expected this summer, pending completion of MA sites.
- For the Custom Electric study the work plan for the Impact Evaluation of C&I Custom Electric Installations (PY2016) has been approved, site M&V plans are under development, and meter installation has begun. This study is expected to be completed in February 2018.
- The Annual jobs study was finalized in the second quarter. The study calculates the number of full time job equivalents created by the energy efficiency programs in Rhode Island annually and the number of vendors and contractors which participate in Rhode Island energy efficiency programs. A copy of the final study can be found in the Company's Year End Report.
- A work plan has been finalized for the RI/MA Diagnostic Study. The study is moving forward, with completion expected this winter.

Customer Listening Forum

 Over 90 people attended the Rhode Island Customer Listening Forum on August 1st. The purpose of the Forum was to gather direct feedback from Rhode Island customers on the Company's energy efficiency programs and provide information on more comprehensive energy offerings the Company is examining or providing including: solar power, electric vehicles, the Rhode Island System Data Portal, and Advanced Metering Functionality.

Upcoming Events

Energy Summit at Gillette is scheduled for October 25, 2018.

NATIONAL GRID ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND Table 1. Summary of Electric 2018 Target and Preliminary 2nd Quarter Results

ELECTRIC PROGRAMS Sector and Program	(1) (2) (3) Demand Reduction (Annual kW)		(4) (5) (6) Energy Savings (Annual MWh)			(7) (8) (9) Customer Participation			(10) (11) (12) Expenses (\$ 000)		(13)	(14)	(15)				
			-	Year End				Year End			-			-	Lifetime		
		Year To	Pct	Forecast		Year To	Pct	Forecast		Year To	Pct		Year To	Pct	savings,		Planned
Commercial and Industrial	Target	Date	Achieved	kW	Target	Date	Achieved	MWh	Target	Date	Achieved	Budget	Date	Achieved	MWh	\$/kWh	\$/kWh
Large Commercial New Construction	1,728	840	48.6%		13,959	4,914	35.2%		139	48	34.2%	\$6,111.7	\$2,088.4	34.2%	74,261	\$ 0.028	\$ 0.029
Large Commercial Retrofit	11,910	3,647	30.6%		75,616	21,893	29.0%		2,193	972	44.3%	\$24,030.7	\$6,338.0	26.4%	256,586	\$ 0.025	\$ 0.024
Small Business Direct Install	1,034	1,001	96.8%		9,940	6,483	65.2%		565	418	74.0%	\$6,924.5	\$3,414.8	49.3%	79,195	\$ 0.043	\$ 0.058
Commercial Demonstration and R&D												\$993.8	\$155.0	15.6%			
Community Based Initiatives - C&I												\$40.9	\$0.0	0.0%			
RI Infrastructure Bank												\$5,000.0	\$0.0	0.0%			
SUBTOTAL	14,673	5,487	37.4%	103.0%	99,515	33,290	33.5%	101.0%	2,897	1,438	49.6%	\$43,101.6	\$11,996.2	27.8%	410,042	\$ 0.029	\$ 0.033
Income Eligible Residential	·																•
Single Family - Income Eligible Services	696	352	50.5%		4,185	1,804	43.1%		2,750	1,815	66.0%	\$9,329.3	\$4,700.8	50.4%	19,453	\$ 0.242	\$ 0.261
Income Eligible Multifamily	170	53	31.0%		3,287	847	25.8%		4,800	633	13.2%	\$2,557.4	\$807.8	31.6%	9,391	\$ 0.086	\$ 0.106
SUBTOTAL	865	404	46.7%	105.0%	7,472	2,651	35.5%	103.0%	7,550	2,448	32.4%	\$11,886.7	\$5,508.6	46.3%	28,844	\$ 0.191	\$ 0.198
Non-Income Eligible Residential																	
Residential New Construction	49	21	43.8%		619	129	20.8%		501	129	25.7%	\$764.6	\$301.7	39.5%	2,127	\$ 0.142	\$ 0.103
ENERGY STAR® HVAC	433	166	38.5%		2,091	740	35.4%		1,794	638	35.6%	\$2,206.6	\$721.6	32.7%	10,742	\$ 0.067	\$ 0.084
Energy Wise	286	167	58.3%		6,157	3,503	56.9%		10,000	5,873	58.7%	\$14,916.3	\$6,049.7	40.6%	28,353	\$ 0.213	\$ 0.380
EnergyWise Multifamily	329	76	23.2%		4,207	894	21.2%		6,000	1,280	21.3%	\$3,062.6	\$731.7	23.9%	9,397	\$ 0.078	\$ 0.099
ENERGY STAR® Lighting	4,413	3,303	74.8%		38,891	29,342	75.4%		292,150	234,181	80.2%	\$6,768.6	\$5,765.3	85.2%	158,601	\$ 0.036	\$ 0.032
Residential Consumer Products	429	187	43.4%		2,849	1,280	44.9%		9,682	4,739	49.0%	\$1,831.1	\$844.6	46.1%	10,018	\$ 0.084	\$ 0.083
Home Energy Reports	3,325	1,338	40.2%		25,054	11,455	45.7%		213,750	216,948	101.5%	\$2,629.3	\$1,288.1	49.0%	11,455	\$ 0.112	\$ 0.105
Energy Efficiency Educational Programs												\$40.0	\$0.0	0.0%			
Residential Demonstration and R&D												\$922.6	\$170.8	18.5%			
Community Based Initiatives - Residential												\$163.0	\$42.6	26.2%			
Comprehensive Marketing - Residential												\$556.7	\$248.7	44.7%			
SUBTOTAL	9,264	5,259	56.8%	107.0%	79,868	47,341	59.3%	107.0%	533,877	463,788	86.9%	\$33,861.5	\$16,164.9	47.7%	230,693	\$0.070	\$ 0.094
Regulatory																	
EERMC												\$686.1	\$195.0	28.4%			
OER												\$686.1	\$343.0	50.0%			
SUBTOTAL												\$1,372.1	\$538.0	39.2%			
TOTAL	24,802	11,150	45.0%	104.7%	186,855	83,282	44.6%	103.7%	526,299	467,674	88.9%	\$ 90,221.9	\$ 34,207.6	37.9%	669,579	\$0.051	\$ 0.052
RGGI													\$ 0.1				
Municipal LED Street Lights													\$ 44.6				
System Reliability Procurement												\$ 399.3	\$128.6	32.2%			

- NOTES
 (1)(4)(7) Targets from Docket 4755 Attachment 5, Table E-7 (electric)
 (3) Pct Achieved is Column (5)/ Column (1).
 (6) Pct Achieved is Column (5)/ Column (4).
 (7) 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 Budget from Docket 4755, Attachment 5 Table E-2 (electric).
 (11) Year To Date Expenses include Implementation expenses.
 (12) Pct Achieved is Column (11)/ Column (10).
 (14) S/lifetine kWh = Column (11)/ Column (10).

- (14) S/lifettime kWh = Column (11)/Column (13)
 (15) Planned \$/lifettime MWh from Docket 4755 Attachment 5, Table E-5 (electric) adjusted to reflect format of quarterly report. Program Implementation Expenses/lifetime kWh.

 System Reliability Procurement targets from Docket 4755 Attachment 5, Table E-7 (electric), not included in Expenses Total

NATIONAL GRID ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND Table 2. Summary of Gas 2018 Target and Preliminary 2nd Quarter Results

(1)	(2)	(3)	1	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(1	11)	((12)
Sector and Program Energy Savings (MMBtu)			1)	Customer Participation			Expenses (\$ 000)							
Approved Target	Year To Date	Pct Achieved	Year End Forecast MMBTU	Approved Target	Year To Date	Pct Achieved	Approved Budget	Year To Date	Pct Achieved	Lifetime savings, MMBtu			\$/Lif	anned ifetime MBtu
42,764	16,888	39.5%	i '	105	34	32.2%	\$2,658.1	\$1,060.3	39.9%	211,209	\$	5.02	\$	3.33
186,780	28,544	15.3%		158	31	19.7%	\$3,643.3	\$1,154.5	31.7%	280,958	\$	4.11	\$	1.99
3,059	886	29.0%		30	48	156.6%	\$132.5	\$43.3	32.7%	7,233	\$	5.99	\$	4.45
6,643	2,238	33.7%	i'	1,698	320	18.8%	\$410.2	\$138.7	33.8%	25,064	\$	5.53	\$	4.40
							\$482.1	\$0.0	0.0%					
							\$9.8	\$0.0	0.0%					
239,246	48,557	20.3%	103.5%	1,992	433	21.7%	\$7,335.9	\$2,396.8	32.7%	524,465	\$	4.57	\$	2.67
12,620	5,521	43.7%	<u> </u>	675	265	39.3%	\$4,032.4	\$1,832.5	45.4%	110,424	\$ -			15.98
16,222	3,430	21.1%	<u> </u>	3,500	907	25.9%	\$2,349.5	\$365.0	15.5%	59,491	\$	6.14	\$	8.20
28,842	8,951	31.0%	105.6%	4,175	1,172	28.1%	\$6,382.0	\$2,197.5	34.4%	169,915	\$	12.93	\$	11.84
<u> </u>				<u> </u>										
26,787	12,522	46.7%	<u> </u>	2,275	1,784	78.4%	\$8,370.8	\$3,856.6	46.1%	294,797	\$.	13.08	\$	12.84
27,513	9,683	35.2%	<u> </u>	1,557	913	58.6%	\$1,730.4	\$759.4	43.9%	159,359	\$	4.77	\$	3.63
12,069	8,091	67.0%	'	2,500	1,578	63.1%	\$1,267.1	\$727.5	57.4%	125,457	\$	5.80	\$	6.39
77,220	84,697	109.7%	'	104,250	93,474	89.7%	\$428.7	\$207.5	48.4%	84,697	\$	2.45	\$	5.55
3,117	922	29.6%	'	255	61	23.9%	\$587.4	\$251.2	42.8%	22,953	\$	10.95	\$	9.38
1			I	ĺ		ļ	\$19.6	\$0.0	0.0%					
1			I	ĺ		ļ	\$73.7	\$39.1	53.0%					
				<u> </u>			\$39.2	\$8.0	20.4%					
146,706	115,914	79.0%	122.3%	110,837	97,810	88.2%	\$12,516.7	\$5,849.4	46.7%	687,263	\$	8.51	\$	8.53
1			I	ĺ		ļ								
1			I	ĺ		ļ	\$279.8	\$81.3	29.1%					
Щ				<u> </u>			\$279.8	\$140.0	50.0%					
							\$559.6	\$221.3	39.5%					
				<u> </u>										
414,795	173,423	41.8%	110.0%	117,004	99,414	85.0%	\$ 26,794.3	\$ 10,665.0	39.8%	1,381,642	\$	7.72	\$	5.63
	Approved Target 42,764 186,780 3,059 6,643 239,246 12,620 16,222 28,842 26,787 27,513 12,069 77,220 3,117	Approved Target Year To Date 42,764 16,888 186,780 28,544 3,059 886 6,643 2,238 239,246 48,557 12,620 5,521 16,222 3,430 28,842 8,951 26,787 12,522 27,513 9,683 12,069 8,091 77,220 84,697 3,117 922 146,706 115,914	Approved Target	Energy Savings (MMBtu) Approved Target Year To Date Pct Achieved Achieved Year End Forecast MMBTU 42,764 16,888 39.5% 186,780 28,544 15.3% 3,059 886 29.0% 6,643 2,238 33.7% 103.5% 239,246 48,557 20.3% 103.5% 12,620 5,521 43.7% 16,222 3,430 21.1% 28,842 8,951 31.0% 105.6% 26,787 12,522 46.7% 27,513 9,683 35.2% 12,069 8,091 67.0% 77,220 84,697 109.7% 3,117 922 29.6% 146,706 115,914 79.0% 122.3%	Page	Participar Par	Approved Target	Energy Savings (MMBtu	Part Part	Energy Savings (MMBtu) Year End Forecast Approved Target Date Date Achieved Approved Year To Date Approved Approved Year To Date Approved Approved Year To Date Yea	Part Part	Energy Savings (MMBtu) Year To Pet Target Approved Year To Date Approved Year To Pot Approved Year To Date National Pot National Pot Nationa	Energy Savings MMBtu Year To Date Approved Approved Year To Date Approved Approved	Energy Savings MMBtu Year To Approved Year To Date Approved Approved Year To Date Approved Approved Approved Year To Date Approved Approv

NOTES

- (1)(4) Targets from Docket 4755 Attachment 6, Table G-7 (gas).
- (3) Pct Achieved is Column (2)/ Column (1).
- (3) Pct Achieved is Column (2)/ Column (1).
 (4) Participation was planned and is reported in 'net' terms which takes into account free-ridership and spillover.
 (6) Pct Achieved is Column (5)/ Column (4).
 (7) Approved Implementation Budget from Docket 4755, Attachment 6 Table G-2 (gas).
 (8) Year To Date Expenses include Implementation expenses.

- (9) Pct Achieved is Column (8)/ Column (7).
 (11) \$/lifetime MMBtu = Column (8)*1000/Column (10)
 (12) Planned \$/lifetime MMBtu from Docket 4755 Attachment 6, Table G-5 (gas) adjusted to reflect format of quarterly report. Program Implementation Expenses/lifetime MMBtu.

Table 3 National Grid Revolving Loan Funds

Large C&I Electric Revolving Loan Fund

Small Business Electric Revolving Loan Fund

	Income Statement			Income Statement	
(1)	2018 Funds Available	\$9,283,015	(1)	2018 Funds Available	\$1,919,057
(2)	2018 Loan budget	\$10,000,000	(2)	2018 Loan Budget	\$2,800,000
(3)	Committed	\$4,454,754	(3)	Committed	\$550,301
(4)	Paid	\$1,456,875	(4)	Paid	\$1,698,923
(5)	Repayments	\$3,094,949	(5)	Repayments	\$1,403,599
(6)	Available 03/31/18	\$7,183,320	(6)	Available 03/31/18	\$1,954,375
	Program Impact			Program Impact	
(7)	Number of loans	30	(7)	Participants	600
(7b)	Participants	20	(8)	Savings (Net MWh)	6,483
(8)	Savings (Net MWh)	5,120	(9)	Lifetime Savings (Net MWh)	79,195
(9)	Lifetime Savings (Net MWh)	64,681	(10)	Saving (Net kW)	1,001
(10)	Saving (Net kW)	671			

Rhode Island Public Energy Partnership (RI PEP)

C&I Gas Revolving Loan Fund

	Income Statement			Income Statement	
(1)	2018 Funds Available	\$805,153	(1)	2018 Funds Available	\$2,009,110
(2)	2018 Loan Budget	\$0	(2)	2018 Loan Budget	\$2,000,000
(3)	Committed	\$0	(3)	Committed	\$908,096
(4)	Funds returned to OER	\$700,000	(4)	Paid	\$446,389
(5)	Repayments	\$168,237	(5)	Repayments	\$307,995
(6)	Available 03/31/18	\$273,390	(6)	Available 06/30/18	\$953,510
	Program Impact			Program Impact	
(7)	Number of loans	0	(7)	Number of loans	9
(7b)	Participants	0	(7b)	Participants	6
(8)	Annual Savings (Net MWh)	0	(8)	Savings (Net MMBtu)	9,032
(9)	Lifetime Savings (Net MWh)	0	(9)	Lifetime Savings (Net MMBtu)	65,219
(10)	Saving (Net kW)	0			

Note

- 1 Amount available as of January 1, 2018.
- 2 Budget adopted by Sales Team for 2018 operations. Budget includes projections of repayments made during 2018.
- 3 As of June 30, 2018.
- 4 As of June 30, 2018.
- 5 As of June 30, 2018.
- 6 Fund balance as of June 30, 2018. Committed funds are subtracted from this amount.
- $7\,$ As of June 30, 2018. Number is associated with paid loans.
- The Unique customer names for large business (one customer name can have multiple sub accounts as is in the case of a franchise). Customer accounts used for small business (not adjusted for net-to-gross). Number is associated with paid loans. The number of SBS participants included here is the Q1 total and will be updated with actuals for Q3.
- $8\,$ As of June 30, 2018. Number is associated with paid loans.
- $9\,$ As of June 30, 2018. Number is associated with paid loans.
- $10\,$ As of June 30, 2018. Number is associated with paid loans.