

# Rhode Island Energy Efficiency

Second Quarter 2019 | National Grid

August 16, 2019

## Overview

Through the first half of the year the Company achieved 32% of the annual MWh savings goal and 32% of the annual MMBtu gas goal. Moving forward the Company is focusing on building the pipeline of C&I customer projects in order to meet the 2019 goals. Specifically, the Company will have a strong focus on commercial projects that deliver electric savings to help close a projected shortfall in annual MWh savings for the commercial electric sector. All other sectors are currently projected to meet their annual MWh or annual MMBtu savings goals.

Second quarter accomplishments included the Residential New Construction program receiving Rhode Island Outstanding Smart Growth Project Awards for two projects in Providence and Burrillville. An online marketplace that sells incentivized energy efficiency products directly to Rhode Island customers over the internet, added heat pump water heaters to its offerings for instant rebates. Since it began in late 2018, the Rhode Island Heat Pump (Fuel Optimization) initiative processed 59 customer rebates to achieve partial or full displacement of oil/propane/electric resistance heat in 45 customer homes (42 with oil heat). Rhode Island Income Eligible Services stakeholders (incl, Department of Health Services, Agency Executive Directors, National Grid and CLEAResult) met to assess the current, and future, state of the RI WAP/IES program; the anticipated growth in IES participants; the need for trained staff; and the need for better standardization across RI CAPs. The meeting's outcome was the development of the Standardization Group, which meets biweekly to define, adopt, and implement best practices.

RI will adopt a new code in August 2019, which will go into effect in November 2019. In the second quarter, the Code Compliance Enhancement Initiative developed and began delivering new training programs and materials to help the RI construction industry meet the increased energy code requirements. In second quarter RISE completed a large, LED retrofit lighting project at MacColl YMCA in Pawtucket, creating a more illuminated space for the staff and patrons while also saving over 260 annual MWh, or nearly \$39,000 of the customer's annual electric energy cost.

Finally, developers and students in RI are recognizing the importance of the clean energy future and are advancing their concepts and projects through the support of the Residential New Construction Program's Zero Energy Pilot. Wynfield Place, a 9-unit project in Warwick, RI aims to be the first Zero Energy custom production-built development in Rhode Island. RI School of Design (RISD) graduate students have teamed up with ONE Neighborhood Builders, to design prototypes for the "Sheridan Small Homes" Passive House community in Olneyville, RI. Also, a three-unit project in Central Falls is being designed to DOE's Zero Energy Ready requirements. To expand the enthusiasm and feasibility around zero energy buildings, the pilot offers training throughout the year, one of which was held at Arnold Lumber in Wakefield, with 49 attendees. These projects and ongoing trainings demonstrate the Company's continued efforts to innovate and test areas of potential program growth in the future.

## 2019 Program & Initiative Updates

### Residential New Construction (RNC)

- The Residential New Construction program achieved 388 Annual MWh of electric savings (51% of goal) and 769 Annual MMBtu of gas savings (16% of goal).
- The program enrolled 209 customer residences in the second quarter and completed 235 customer residences. 42 of these residences were affordable housing units and 88 of those built (37%) utilized electric heat.
- Two Residential New Construction projects received Rhode Island Outstanding Smart Growth Project Awards: 60 King Street, Providence – A 60 unit all electric affordable housing renovation, (revitalization of the former Imperial Knife Co. factory). Also to receive an award was a 96 unit development at the Greenridge Commons in Burrillville.

### Tours and Trainings:

- The Residential New Construction Program sponsored HERS Rater training and certification has resulted in the addition of two Rhode Island companies that have fully certified HERS Raters on staff.



HERs Rater Training, Pictured: Dave DiResto, Energy Geeks Rating Field Inspector (RFI)

- HERS Rater Training: “The training process was an excellent experience and will greatly enhance our business. As energy efficiency continues to gain ground in Rhode Island HERS raters will play an important role as a valuable resource for builders and developers”- Ed Beauchemin, Energy Geeks

### Challenges:

- A more stringent baseline went into effect in 2018, resulting in a 30% decrease in heating, cooling and hot water claimable savings per home.

### Income Eligible Services (IES)

- *Energy savings initiatives are good for the planet and the wallet. Thank you!" - Cynthia, an IES program customer from North Scituate, RI.*
- The National Grid Income Eligible Services program had solid first half of 2019, achieving 1,596 MWh of electric savings (43% of goal) and 3,450 Annual MMBtu of gas savings (38% of goal).
- Rhode Island IES stakeholders (incl, Department of Health Services, Agency Executive Directors, National Grid and CLEAResult) met to assess the current, and future, state of the RI (Weatherization Assistance Program) WAP/IES program; the anticipated growth in IES participants; the need for trained staff; and the need for better standardization across RI Community Action Programs (CAPs). The outcome of this meeting was the development of the Standardization Group, that meets biweekly to define and adopt and implement Best Practices.
- The Rhode Island IES Process Evaluation continued and included interviews with National Grid, CLEAResult, EERMC Consultants, CAPs, and customers.
- The Company presented an overview of the IES program and collaborative process to the Energy Efficiency Resource Management Council.
- IES Program representatives attended five National Grid Energy Expos in the second quarter.
- An IES program Best practice meeting was held.
- IES Program representatives participated in the 2019 Rhode Island Department of Energy Policy Advisory Committee.
- IES Program representatives facilitated visits to CAP of Providence and Comprehensive CAP for EERMC representatives and consultants to help facilitate a greater understanding of the RI WAP/IES program's operations.

### Challenges and Progress:

- The program recognized a need for more trained staff; enhanced alignment between IES and DHS and the need for better standardization across RI CAPs. These factors led to the development of the Standardization Group.

### EnergyWise

- EnergyWise had a solid first half of 2019, achieving 3,051 annual MWh of electric savings (37% of goal) and 13,796 annual MMBtu of gas savings (50% of goal).
- The program completed over 4,718 audits and 2,444 weatherizations through the second quarter.
- 382 Heat Loans were used, financing customer costs of \$2.2 million. The Heat Loan is being used for weatherization, heating and water heating equipment, Air Source Heat Pumps (ASHP) for heating, and batteries.
- The Home Energy Assessment Survey for the second quarter showed an average customer overall satisfaction rating of 9.2 out of 10 and that 97.3% of respondents would recommend the program.
- The Weatherization Survey for the second quarter showed an average customer overall satisfaction rating of 9.2 out of 10 and that 95.6% of respondents would recommend the program.


## Customer Feedback:

- “My opinion is that this is the best program!! It is the best thing I have done for my comfort in my home and my utilities expenses. Anyone who does not take advantage of this program is simply a fool.” – A Bristol customer.
- “The Energy Specialists were very knowledgeable and professional. My house was surprisingly well insulated so not much was needed, but they provided much helpful information.” – A Providence customer.
- “We have already recommended the audit to several people and have had heat pumps installed as a result of the information that we were given.” – A Wakefield customer.

## EnergyWise Multifamily, Income Eligible Multifamily, C&I Multifamily

- The EnergyWise Multifamily program achieved 586 annual MWh of electric savings (16% of goal) and 4,990 annual MMBTU of gas savings (31% of goal) through the second quarter.
- The Income Eligible Multifamily program achieved 573 annual MWh of electric savings (18% of goal) and 9,892 MMBTU of annual gas savings (48% of goal) through the second quarter.
- The C&I Multifamily program achieved 879 MMBTU of annual gas savings (8% of goal) through the second quarter.
- The EnergyWise programs have been challenged in 2019 for achieving their goals for the year. Achieving the electric goals in particular have been difficult due to declining opportunities for lighting savings. As a result, the programs are seeing a greater portion of savings opportunities from non-lighting measures that generally are more complex and take longer to install.
- In the second quarter a “See the Possibilities” campaign for the multifamily programs was planned and was launched in the third quarter as part of a saving gap closer effort. This includes online banners, print ads in the Multifamily Executive and NE Real Estate Journal.
- As a result of planning efforts in the second quarter, included below are an email and bill insert that will be included in third quarter marketing efforts.


View as Web Page




**nationalgrid**

**Upgrade your energy efficiency and raise your tenant retention.**


Losing good tenants costs you good money. So does recruiting new ones. Our energy-efficiency programs for multifamily buildings are designed to help keep your tenants right where they are. We even offer financial incentives and technical assistance to make energy upgrades affordable. Incentives and rebates are available for:




High-Efficiency HVAC Systems



Insulation—Roof, Walls, Windows








Boiler/Heating System Controls



WiFi Thermostats

See the possibilities

National Grid



**nationalgrid**

**Raise your tenant retention by lowering their energy bills.**

**Our energy-saving upgrades are the perfect plan for long-term tenants.**

Keeping your tenants happy can keep them from moving out. And, with our energy-saving upgrades for multifamily buildings, you can simultaneously make your tenants happier by lowering their energy bills while improving the value of your investment. We even offer technical assistance and financial incentives, making it easier to upgrade your building efficiency.

**Take advantage of incentives on:**



High-Efficiency HVAC Systems



Insulation—Roof, Walls, Windows



Boiler/Heating System Controls



WiFi Thermostats

Visit [ngrid.com/multifamilyri](http://ngrid.com/multifamilyri) or call **1-868-633-7947**.

These programs are funded by the energy-efficiency charge on all customers' gas and electric bills, in accordance with Rhode Island law.

©2019 National Grid

Left, an email sent to Rhode Island multifamily landlord customers in the third quarter. Right, a copy of a bill insert to be included in third quarter monthly bills to landlords.

- Heat Pump projects were identified and are currently under construction at the Olney Tower Apartments in Providence and the Waterview Apartments in Rhode Island.

### **ENERGYSTAR® HVAC (Heating and Cooling)**

- The ENERGYSTAR® HVAC (Heating and Cooling) program had a mixed first half of 2019, achieving 535 annual MWh of electric savings (20% of goal) and 16,969 annual MMBtu of gas savings (61% of goal).
- The Gas Heating & Water heating program is performing well in the off-season (summer months) and is projecting exceed its annual net savings goal.
- Since the Rhode Island Heat Pump (Fuel Optimization) initiative began in late 2018, had 59 rebates processed (over \$152k), for partial or full displacement of oil/propane/electric resistance heat in a total of 45 homes (42 of which have oil heat).
- Since late 2018, seventy-six customers have been authorized for fuel optimization loans totaling over \$853k. (45 of the 76 homes have been completed – see bullet above).
- The On-line Marketplace added heat pump water heaters for instant rebates.
- HVAC Technicians can now get certified in Air Conditioning (AC) Check and Mini-Split (MS) Check in one consolidated 4-hour “HVAC Check” session and a one-hour airflow video online. This training affords installers the opportunity to offer Rhode Island Heat Pump Rebates to their customers at \$1,000/ton. 60 Contractors with 95 technicians are currently trained.
- To date the HVAC Check class had 7 classes, with 60 contractors, and 95 technicians.

Quarter	Classes	Contractors	Technicians
1	5	32	59
2	2	28	36

#### **Challenges:**

- Contractors expressed concern about water heaters offered on the marketplace due to customers hiring non-licensed workers to install equipment.

### **ENERGYSTAR® Lighting and Residential Consumer Products**

- ENERGYSTAR® Lighting had a solid first quarter, achieving 20,085 Annual MWh of electric savings (42% of goal) and 2,467 Annual kW of electric demand (37% of goal). Residential Consumer Products had a good first half of the year, achieving 2,088 Annual MWh of electric savings (53% of goal) and 400 Annual kW of electric demand (60% of goal).
- The refreshed energy efficiency marketplace went live on April 26<sup>th</sup>. The website is located at [ngrid.com/shop](http://ngrid.com/shop) . The marketplace has a more

streamlined appearance and the Company's goal is to encourage return visits by customers. Flash sales that result in a strong customer response will now be achieved through this site, so customers will have a central place to look for special promotions. Future enhancements will allow customers to research efficient products and aid in selecting products that meet the consumer's needs.

- The second quarter net promoter score of RI marketplace customers is 69. Net Promoter Scores (NPS) range from -100 to +100. An NPS of 70 is considered "world class". Amazon has an NPS of 70 and while Tesla has a NPS of 96.
- In April, the Residential Consumer Products program began an effort with The Home Depot to promote refrigerator and freezer recycling. Training with sales representatives emphasized responsible recycling and the incentive for the customer.
- General Electric (GE) ran special lighting promotions with Walmart, Lowes, and Target to encourage the sale of LED A-lamp four-packs.
- Educational tables were staffed in North Smithfield and Providence.
- A Dehumidifier turn-in event was held in Johnston on June 8<sup>th</sup>.
- The Consumer Products program began the Low-E Storm promotion with Humphrey's Window and Door Design Gallery in Middletown.
- ARCA is the refrigerator recycling vendor for the Residential Consumer Products program. In June they moved into a new facility where insulation is removed from refrigerators and freezers. At the new facility, 95% of each appliance is either recycled or disposed of in an environmentally responsible manner. The foam below is incinerated at a plant in Haverhill, MA where renewable energy is produced from processing waste.



Left, ARCA refrigerator recycling facility and insulation foam for energy generation.  
Right, educational table at The Home Depot, Providence.

### Challenges:

- A Notable trend during May's Light Fair International included a limited number of new residential lighting products, largely due to manufacturers' hesitancy to invest in research and development with the uncertainty of EISA

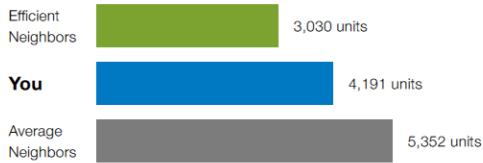
2020 on the horizon. The Department of Energy (DOE) made a ruling in February that rolls back the general service lamp (GSL) definition in EISA 2020. This ruling will allow different types of bulbs including: 3-ways, reflectors, globes and candles to be exempt from the EISA 2020 rule, meaning incandescent and halogen versions of these products can still be manufactured and sold after January 1<sup>st</sup>, 2020.

- Product manufacturers are closely monitoring the Chinese tariff changes since the majority of LEDs and some of the program's consumer products are manufactured in China.
- Retailers are also impacted with more than 600 companies and industry trade associations writing to the White House urging a removal of the levies.

### **Home Energy Reports (HER)**

- The Home Energy electric and gas programs had a good first half of 2019 with the electric program achieving 11,475 annual MWh of electric savings (48% of goal) and the gas program achieving 59,550 annual MMBTU of gas savings (52% of goal).
- During the second quarter Home Energy Reports included messages to promote the ConnectedSolutions program, Home Energy Assessments and to inform the customer of the impact of their energy savings through participation in the program.
- As the spring turned to summer, the Company dispatched ~19,000 non-AMI (Advanced Meter Infrastructure) high bill alerts to inform customers that the increase in cooling use is expected to have an impact on their energy consumption. These high bill alerts are based on customers' historical consumption and weather patterns and predict if they are on track for having higher usage. In total over the second quarter, ~390,000 print reports and ~408,000 email reports were sent to customers informing them of their use versus like neighbors and encouraging energy saving behaviors, measures, and program enrollment.
- The program saw good savings performance during second quarter and has made progress closing a small gap for the year end forecast. While the electric and gas savings are still forecasting to come in slightly below goal, the Company continues to push messaging and strategies that are making a marked improvement.
- An error was made during annual planning setting the annual kW savings goal filed for the Home Energy Reports electric program, resulting in the annual kW goal being set 13% higher than it should have been. The actual annual kW demand savings being reported in the 2019 quarterly reports has been corrected based on evaluation. As a result, the program's corrected annual kW savings for 2019 will end up below the filed annual kW goal for the program.

## Here's how you compare to neighbors



Jun 20, 2013 - Jul 21, 2013

You're compared with 10 homes an average of 6 mi from you that are a similar size (1,200 sq. ft.) and have gas heat. Efficient neighbors are the most efficient 20% of this group. See back for details.

- 😊 Great
- 😄 **Good**
- 😞 Using more than average

**38%** more energy than efficient neighbors

## Did you know?



### You're helping your community save big!

You and other National Grid customers in Rhode Island have saved more than \$36 million and 174,953 MWh of energy since 2013—that's enough electricity to power more than 14,815 homes for an entire year.



**Thank you for doing your part!**

Above is a Home Energy Report that was distributed in May. This report highlights the cumulative energy savings Rhode Islanders have had since the program began.

## Community Initiatives

- The towns of Westerly and Glocester began official participation in the program in the second quarter. On June 26th, a postcard mailing was sent out to residences in Glocester inviting them to have an energy assessment. Further, the Company engaged Newport, Middletown and Portsmouth in discussions for participation in the program and plan on rolling out promotions in the third quarter.

## Code Compliance Enhancement Initiative (CCEI)

### Workforce Development - Student Engagement:

- Twenty-six RISD architecture graduate students received an energy code training and a tour of the energy features of a high efficiency building.





**Developing RI's Next Generation Green Workforce, Providence.** - The Code Compliance Enhancement Initiative engaged 26 RISD architecture graduate students with an energy code training session in their classroom followed by a tour of the energy features of a nearby high efficiency building.

### **Supporting the Design of RI's First Stretch Code Building**

- CCEI provided the Compass School renovation project team with a customized report detailing the energy components of the project and how each can achieve the high efficiency standards set by of the RI Commercial Stretch Code.

### **Relevant KPIs**

- Fourteen training events that engaged 315 industry stakeholders were held during this quarter. Seven of these events were focused on residential construction (183 attendees), and 7 events were for commercial construction (132 attendees).

### **A Challenge Becomes an Opportunity - State Code Update**

- After a three-year delay, Rhode Island will adopt a new code in August 2019, which will go into effect in November 2019. This quarter, the program developed and began delivering new training programs and materials to help the RI construction industry meet the increased energy code requirements.

### **Large Commercial New Construction**

- The Large Commercial New Construction program finished the first half of the year with 2,626 MWh of electric savings (24% of goal) and 9,378 Annual MMBtu of gas savings (22% of goal) and anticipates a significant increase in savings achieved in the 3<sup>rd</sup> and 4<sup>th</sup> quarters.

### Highlights of projects completed in the second quarter:

#### Grocery Initiative

- The Whole Foods Cranston store, with the assistance of the EnergySmart Grocer Initiative, replaced their existing Thermostatic Expansion Valves with Electronic Expansion Valves (EEVs) and lowered the Floating Head Temperature setpoint from 70°F to 60°F. Electronic expansion valves improve the efficiency of the refrigeration process by immediately responding to evaporator's temperature and pressure needs from the refrigerant. The project saved 68.9 annual MWh and generated an incentive of \$10,500. This project was a proof of concept and pre and post metering data confirmed the viability of the technology. Due to its success, EnergySmart Grocer is now looking to make EEVs an Expedited Custom measure for new construction projects.

#### Large Commercial Retrofit

- In the first half of 2019 the Large Commercial Retrofit program achieved 14,834 annual MWh of electric savings (20% of goal) and 20,312 Annual MMBtu of gas savings (13% of goal) the program anticipates a ramp up in the second half of the year as the Company works to build up the number of projects in the pipeline. However, the program will be challenged to meet 100% of its goal for 2019. The Company is currently projecting achieving 95% of the 2019 annual MWh goal for the C&I electric sector and is proactively working to close this gap.
- On May 2<sup>nd</sup> an Informational & Public comment meeting on CHP was held at the Energy Innovation Hub in Providence.

#### Trainings

- On May 21<sup>st</sup> there was refresher training for BOC graduates held at Save the Bay. Commercial codes, lighting updates & controls, cold climate mini-splits & maximizing condenser performance were some of the topics covered. Energy efficiency funding was also addressed by Jerry Drummond (National Grid), Carrie Gill (OER), & Michael Baer (RI Infrastructure Bank & PACE Financing). Twenty-six (26) were in attendance.
- On May 21<sup>st</sup> a Portfolio Manager training was held in Providence to introduce National Grid's Sales team, Program Managers and Technical Reps to the Company's Portfolio Manager interface that "talks" to EPA's Portfolio Manager. Lou Rizzo from National Grid and Emily Bolger from the EPA presented.

### Highlights of projects completed in the second quarter:

#### Grocery Initiative

- In the independent grocery market, the Urban Greens Co-Op in Providence installed night covers on their produce case and doors on a meat case. Additionally, they installed two CaptiveAire kitchen exhaust hoods with Variable Frequency Drives (VFDs). The project saved 4.6 annual MWh and 85.8 annual MMBtus.



CaptiveAire kitchen exhaust hoods (left) and Night Covers (right) at the Urban Greens Co-Op, Providence

### Industrial Initiative

- The Industrial Initiative continues to help customers make upgrades to their process equipment. In the second quarter, Leidos completed numerous projects including work on a more efficient steel plate bender for a shipbuilding company and a new cooling tower for a beverage company.

### Small Business Direct Install

- The Small Business Direct Install program had a good first half of 2019, achieving 5,727 MWh of electric savings (47% of goal) and 1,728 MMBtu of gas savings (68% of goal).

### Highlights of Projects Completed in the second quarter:

- **Newport Congregational**, Newport – RISE served the Newport Congregational site in April of 2019. Although the site is no longer used for worship, it is open as an event site and has a critical need for the users to be comfortable in the space. RISE provided duct insulation to this National Historic Landmark site, saving over 180 net annual MMBtus per year, or about \$3,600 per year for the customer on their heating bill.



Newport Congregational, Newport

- **MacColl YMCA**, Pawtucket – RISE completed a large, interior and exterior LED retrofit lighting project at MacColl YMCA in Pawtucket, creating a much better illuminated space for the staff and patrons. This project covered

several areas including the gym, kitchen, child care center, and parking area. It was a broad mix of re-lamp/re-ballast and new fixture installs. This project saved over annual 260 MWh, or nearly \$39,000 of the customer's annual electric energy cost.



MacColl YMCA, Pawtucket

### **Finance**

- On June 27, 2019 the Public Utilities Commission issued a set of Post-Decisional Data Requests to National Grid concerning the Efficient Buildings Fund (EBF). These questions were answered and returned to the PUC in the third quarter.

### **Residential ConnectedSolutions**

- Our coordinated marketing campaign with thermostat vendors has been very successful, and the Residential Customer Demand Response has 2,180 thermostats enrolled through the second quarter.
- No thermostat Demand Response events were called through the second quarter. However, eight have been called part way through the third quarter.
- The Residential Customer Battery Demand Response program is up and running with nine batteries enrolled.
- There were no battery Demand Response events through the second quarter. However, there have been 20 battery DR events called part way through the third quarter.

### **Commercial ConnectedSolutions**

- In the Commercial and Industrial Customer Daily Dispatch (aka battery) Demand Response program there are no current enrollments for this summer.
- It takes time to install and interconnect large battery systems. Although there has been a lot of interest in the program, the economics of batteries is challenged by the Net Metering tariff not allowing battery systems larger than 25kW. Most commercial scale batteries systems are larger than this, and most commercial battery system are paired with solar to leverage the federal Investment Tax Credit, and combined interconnection process.

## Commercial and Industrial Pilots, Demonstrations, and Assessments

### Pilots

#### Zero Energy Buildings (Commercial)

- Planning for the fall workshop and a webinar series on Zero Energy buildings is in progress. The Company Sales team is currently working on potential C&I Zero Energy Building projects.

#### Zero Energy Homes (Residential)

- The Zero Energy pilot is working with 3 projects in various stages of design and construction. The projects include:
  1. Wynfield Place, a 9-unit project in Warwick, aims to be the first Zero Energy custom production-built development in Rhode Island
  2. RISD/ONE Neighborhood Builders Sheridan Small Homes Passive House Project, which is being run by RISD graduate students, will result in small house prototypes for income-eligible infill lots scattered throughout Providence.
  3. Central Falls Zero Energy Ready Infill Project is a three-unit project that is being designed to DOE's Zero Energy Ready standards and is committing to using local workforce from Central Falls.
- In addition, the Zero Energy Pilot hosted two zero energy presentations to introduce the pilot and encourage participation.

#### Housing Network of Rhode Island

- Their members develop and build thousands of units of affordable housing throughout the state and support numerous neighborhood revitalization efforts.
- The presentation focused on benefits of Zero Energy housing for the community such as indoor air quality, resilience, comfort and reduced energy costs.
- Attendees included representatives from Smith Hill CDC, NeighborWorks Blackstone River Valley, ONE Neighborhood Builders, the City of Providence, East Providence and Coventry.

#### Arnold Lumber in Wakefield

- An event highlighting the energy code and zero energy was held at their newly renovated loft.
- The event was very well attended, with 49 attendees including builders, general contractors, architects, code officials, engineers, energy specialists and energy fellows.
- Presentations covered envelope and building science, HVAC and indoor air quality, the residential energy code, stretch code, zero energy homes and an overview of National Grid's incentive programs.

- “We are all very pleased with the turnout of the training session on Tuesday! I heard lots of positive feedback from the participants”. – Arnold Lumber Company



Energy Code and Zero Energy Presentation, Arnold Lumber, Wakefield

## Demonstrations

### Accelerated Performance (Large Commercial New Construction)

- This demonstration has been assigned a dedicated sales team that is engaging with various customers to participate in this program in 2019. Additionally, resources and trainings for the sales team were developed to engage with customers on this initiative.

### Strategic Energy Management (SEM/CEI): (Large Commercial Retrofit)

- All custom regression models have been completed for sites involved in this demonstration. Treasure Hunts, events that engages employees in identifying energy savings opportunities from behavioral, operational, and maintenance actions have taken place at all but one site. The Industrial Initiative team has been working closely with Cascade Energy on their mutual customers that are participating in National Grid's Continuous Energy Improvement (CEI) program. The team has participated in several Treasure Hunts and will be focusing on developing the capital intensive energy efficiency measures that are identified during the process.

## Assessments

### **Automated Window Shades: (Large Commercial New Construction)**

- National Grid conducted a first phase study of automated window shades as a technology to determine the savings potential and scalability of this technology. Based on a combination of literature review, interviews, energy modeling, and high-level market potential analysis, the study concluded to say that automated shades may not have a strong energy savings or economic reason for implementation when considered with a baseline of dimmable LED lighting. Automated controls may be best when considered as part of a package, including lighting retrofit of LEDs and controls. Additionally, daylight and views impact on occupant satisfaction, work productivity, and student test scores have been well documented. Automated shades may therefore be implemented for their non-energy benefits, with energy savings being an additional bonus. Also, the commercialized products of this technology have yet to be widely known or adopted by building owners and designers, resulting in low market penetration and hence costly to implement.

### **Behavior Change through education of small/medium plant personnel (Large Commercial Retrofit)**

- Early work in this assessment indicates that the ability to recruit customers to participate in this demonstration is low. This demonstration is in early stage research and savings potential determination.

## Evaluation

- All evaluation studies are conducted by 3<sup>rd</sup> 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 2017 Residential Lighting Sales Data Analysis was finalized. The analysis strongly suggests that the ENERGY STAR Lighting Program continued to have positive impact on the energy efficient bulb market. The study found that LED market share increased from 16% to 55% of all bulbs sales from PY2016 to PY2017. A 2018 Residential Lighting Sales Data Analysis is underway and the results will be available in the third quarter of 2019.
- The Appliance Recycling Impact Factor Update was finalized. The study estimated gross, adjusted gross and net energy savings for National Grid sponsored refrigerator and freezer recycling program in Rhode Island. The study found that per unit savings for refrigerators and freezers between 2011 to 2017/2018 decreased by 19% and 36%, respectively due to younger and more efficient units recycled.
- Other Residential and C&I evaluation studies are in progress including Process Evaluation of Income Eligible Single Family Program, Residential Lighting Shelf Survey Analysis, Impact Evaluation of PY2016 C&I Custom Gas Installations, Impact Evaluation of PY2016 C&I Custom Electric Installations and Rhode Island Piggybacking Diagnostic Study. Results from these studies are expected to be available in the third quarter of 2019.

- For the 2021-2026 Potential Study a vendor has been approved by the EERMC and the contract is in the state procurement process, with plans to get the study underway in August and produce results by the end of the year.

### **Upcoming Events**

- October 17<sup>th</sup> - Energy Solutions Summit, Gillette Stadium. 8am – 6pm



NATIONAL GRID ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND

Table 1: Summary of Electric 2019 Target and Preliminary 2nd Quarter Results

ELECTRIC PROGRAMS Sector and Program	(1) (2) (3)				(4) (5) (6)				(7) (8) (9)			(10) (11) (12)			(13) (14) (15)			(16) (17)	
	Demand Reduction (Annual kW)				Energy Savings (Annual MWh)				Customer Participation			Expenses (\$ 000)			Energy Savings (Lifetime MWh)			\$/Lifetime kWh	
	Year To Target	Date	Pct Achieved	Year End Forecast kW	Year To Target	Date	Pct Achieved	Year End Forecast MWh	Target	Year To Date	Pct Achieved	Budget	Year To Date	Pct Achieved	Planned	Year to Date	Pct Achieved	Year to Date	Planned \$/kWh
<b>Commercial and Industrial</b>																			
Large Commercial New Construction	1,409	460	32.6%		10,863	2,626	24.2%		84	38	45.8%	\$ 5,036.1	\$ 1,542.3	30.6%	170,856	39,740	23.3%	\$ 0.039	\$ 0.029
Large Commercial Retrofit	12,558	2,577	20.5%		73,013	14,834	20.3%		2,610	1,621	62.1%	\$ 21,356.5	\$ 4,790.6	22.4%	873,890	167,113	19.1%	\$ 0.029	\$ 0.024
Small Business Direct Install	1,213	785	64.7%		12,163	5,727	47.1%		617	305	49.4%	\$ 8,712.8	\$ 3,085.9	35.4%	145,953	70,163	48.1%	\$ 0.044	\$ 0.060
Commercial ConnectedSolutions												\$ 2,024.1	\$ 149.6	7.4%					
Commercial Pilots												\$ 197.9	\$ 16.9	8.5%					
Community Based Initiatives - C&I												\$ 40.1	\$ 4.4	11.0%					
Finance Costs												\$ 5,000.0	\$ 2,500.0	50.0%					
<b>SUBTOTAL</b>	<b>15,180</b>	<b>3,822</b>	<b>25.2%</b>	<b>95.0%</b>	<b>96,038</b>	<b>23,186</b>	<b>24.1%</b>	<b>95.0%</b>	<b>3,311</b>	<b>1,964</b>	<b>59.3%</b>	<b>\$ 42,367.7</b>	<b>\$ 12,089.7</b>	<b>28.5%</b>	<b>1,190,669</b>	<b>277,017</b>	<b>23.3%</b>	<b>\$ 0.044</b>	<b>\$ 0.036</b>
<b>Income Eligible Residential</b>																			
Single Family - Income Eligible Services	815	323	39.7%		3,742	1,596	42.6%		3,000	1,948	64.9%	\$ 11,694.7	\$ 4,047.4	34.6%	42,940	17,239	40.1%	\$ 0.235	\$ 0.272
Income Eligible Multifamily	223	21	9.6%		3,219	573	17.8%		5,000	1,378	27.6%	\$ 3,382.9	\$ 606.4	17.9%	30,589	8,382	27.4%	\$ 0.072	\$ 0.111
<b>SUBTOTAL</b>	<b>1,039</b>	<b>345</b>	<b>33.2%</b>	<b>106.5%</b>	<b>6,961</b>	<b>2,168</b>	<b>31.1%</b>	<b>103.7%</b>	<b>8,000</b>	<b>3,326</b>	<b>41.6%</b>	<b>\$ 15,077.6</b>	<b>\$ 4,653.8</b>	<b>30.9%</b>	<b>73,530</b>	<b>25,621</b>	<b>34.8%</b>	<b>\$ 0.182</b>	<b>\$ 0.205</b>
<b>Non-Income Eligible Residential</b>																			
Residential New Construction	112	55	49.2%		756	388	51.3%		550	391	71.1%	\$ 858.6	\$ 343.0	40.0%	12,935	8,094	62.6%	\$ 0.042	\$ 0.066
ENERGY STAR® HVAC	590	41	7.0%		2,710	535	19.8%		2,187	824	37.7%	\$ 2,724.0	\$ 870.5	32.0%	39,365	7,647	19.4%	\$ 0.114	\$ 0.069
EnergyWise	1,287	471	36.6%		8,182	3,051	37.3%		10,250	5,768	56.3%	\$ 15,777.5	\$ 6,773.2	42.9%	39,100	14,591	37.3%	\$ 0.464	\$ 0.404
EnergyWise Multifamily	283	32	11.2%		3,593	586	16.3%		4,000	1,441	36.0%	\$ 3,064.9	\$ 456.6	14.9%	28,707	6,505	22.7%	\$ 0.070	\$ 0.107
ENERGY STAR® Lighting	6,681	2,467	36.9%		48,381	20,085	41.5%		236,810	138,425	58.5%	\$ 14,968.2	\$ 6,107.1	40.8%	256,916	114,951	44.7%	\$ 0.053	\$ 0.058
Residential Consumer Products	668	400	59.8%		3,925	2,088	53.2%		13,359	12,429	93.0%	\$ 2,124.5	\$ 1,013.4	47.7%	28,812	13,651	47.4%	\$ 0.074	\$ 0.074
Home Energy Reports	4,278	1,750	40.9%		24,130	11,416	47.3%		291,149	290,785	99.9%	\$ 2,641.2	\$ 1,285.1	48.7%	24,130	11,416	47.3%	\$ 0.113	\$ 0.109
Residential ConnectedSolutions												\$ 283.1	\$ 21.7	7.7%					
Energy Efficiency Education Programs												\$ 40.0	\$ 8.0	19.9%					
Residential Pilots												\$ 222.7	\$ 6.8	3.1%					
Community Based Initiatives - Residential												\$ 121.5	\$ 16.1	13.2%					
Comprehensive Marketing - Residential												\$ 566.5	\$ 28.8	5.2%					
<b>SUBTOTAL</b>	<b>13,898</b>	<b>5,216</b>	<b>37.5%</b>	<b>99.2%</b>	<b>91,677</b>	<b>38,150</b>	<b>41.6%</b>	<b>102.6%</b>	<b>558,305</b>	<b>450,063</b>	<b>80.6%</b>	<b>\$ 43,382.8</b>	<b>\$ 16,930.3</b>	<b>39.0%</b>	<b>429,965</b>	<b>176,855</b>	<b>41.1%</b>	<b>\$0.096</b>	<b>\$ 0.101</b>
<b>Regulatory</b>																			
EERMC												\$ 783.6	\$ 177.2	22.6%					
OER												\$ 989.8	\$ 598.3	60.4%					
<b>SUBTOTAL</b>												<b>\$ 1,773.4</b>	<b>\$ 775.6</b>	<b>43.7%</b>					
<b>TOTAL</b>	<b>30,117</b>	<b>9,382</b>	<b>31.2%</b>	<b>97.3%</b>	<b>194,677</b>	<b>63,504</b>	<b>32.6%</b>	<b>98.9%</b>	<b>569,615</b>	<b>455,353</b>	<b>79.9%</b>	<b>\$ 102,601.5</b>	<b>\$ 34,449.4</b>	<b>33.6%</b>	<b>1,694,164</b>	<b>479,493</b>	<b>28.3%</b>	<b>\$0.072</b>	<b>\$ 0.061</b>
Municipal LED Street Lights												\$ 350.0	\$ 58.9	16.8%					
System Reliability Procurement												\$ 84.0	\$ 38.1	45.3%					

NOTES  
(1)-(4)(7) Targets from Docket 4888 - Attachment 5, Table E-7 (electric)  
(3) Pct Achieved is Column (2)/ 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 4888, Attachment 5 Table E-3 (electric).  
(11) Year To Date Expenses include Implementation expenses.  
(12) Pct Achieved is Column (11)/ Column (10).  
(14) \$/lifetime kWh = Column (11)/Column (13)  
(15) The Rhode Island Infrastructure Bank (RIIB) received a one time payment of \$5,000,000 in 2019. National Grid amortizes this payment and it is recorded quarterly as \$1,250,000.  
(16) Planned \$/lifetime kWh from Docket 4888 - Attachment 5, Table E-5 (electric) - adjusted to reflect format of quarterly report. Program Implementation Expenses/lifetime kWh.  
System Reliability Procurement targets from Docket 4888 - Attachment 5, Table E-2 (electric), not included in Expenses Total

**NATIONAL GRID ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND**  
**Table 2: Summary of Gas 2019 Target and Preliminary 2nd Quarter Results**

GAS PROGRAMS Sector and Program	(1) (2) (3)				(4) (5) (6)			(7) (8) (9)			(10) (11) (12)			(13) (14)	
	Energy Savings (MMBtu)				Customer Participation			Expenses (\$ 000)			Energy Savings (Lifetime MMBtu)			\$/Lifetime MMBtu	
	Target	Year To Date	Pct Achieved	Year End Forecast MMBTU	Target	Year To Date	Pct Achieved	Budget	Year To Date	Pct Achieved	Planned	Year To Date	Pct Achieved	Year to Date	Planned
<b>Commercial and Industrial</b>															
Large Commercial New Construction	42,536	9,378	22.0%		187	20	10.4%	\$ 2,389.2	\$ 742.9	31.1%	708,462	133,854	18.9%	\$ 5.55	\$ 3.37
Large Commercial Retrofit	155,049	20,312	13.1%		70	32	46.2%	\$ 4,214.0	\$ 782.4	18.6%	1,385,654	186,678	13.5%	\$ 4.19	\$ 3.04
Small Business Direct Install	2,559	1,728	67.5%		65	52	80.3%	\$ 124.4	\$ 57.5	46.2%	21,163	20,677	97.7%	\$ 2.78	\$ 5.88
Commercial & Industrial Multifamily	10,829	879	8.1%		2,289	80	3.5%	\$ 918.4	\$ 96.9	10.6%	155,667	12,868	8.3%	\$ 7.53	\$ 5.90
Commercial Pilots								\$ 381.1	\$ 52.3	13.7%					
Community Based Initiatives - C&I								\$ 13.0	\$ -	0.0%					
<b>SUBTOTAL</b>	<b>210,974</b>	<b>32,296</b>	<b>15.3%</b>	<b>102.0%</b>	<b>2,611</b>	<b>184</b>	<b>7.1%</b>	<b>\$ 8,040.1</b>	<b>\$ 1,732.0</b>	<b>21.5%</b>	<b>2,270,945</b>	<b>354,077</b>	<b>15.6%</b>	<b>\$ 4.89</b>	<b>\$ 3.54</b>
<b>Income Eligible Residential</b>															
Single Family - Income Eligible Services	9,178	3,450	37.6%		820	298	36.3%	\$ 5,012.8	\$ 1,917.9	38.3%	183,560	68,992	37.6%	\$ 27.80	\$ 27.31
Income Eligible Multifamily	20,487	9,892	48.3%		3,500	859	24.5%	\$ 2,932.7	\$ 748.9	25.5%	359,611	147,718	41.1%	\$ 5.07	\$ 8.16
<b>SUBTOTAL</b>	<b>29,665</b>	<b>13,342</b>	<b>45.0%</b>	<b>133.4%</b>	<b>4,320</b>	<b>1,157</b>	<b>26.8%</b>	<b>\$ 7,945.5</b>	<b>\$ 2,666.8</b>	<b>33.6%</b>	<b>543,171</b>	<b>216,710</b>	<b>39.9%</b>	<b>\$ 12.31</b>	<b>\$ 14.63</b>
<b>Non-Income Eligible Residential</b>															
EnergyWise	27,806	13,796	49.6%		2,300	2,010	87.4%	\$ 8,466.3	\$ 4,370.8	51.6%	668,615	324,334	48.5%	\$ 13.48	\$ 12.66
Energy Star® HVAC	27,960	16,969	60.7%		1,830	1,789	97.7%	\$ 2,164.9	\$ 1,381.2	63.8%	476,141	273,841	57.5%	\$ 5.04	\$ 4.55
EnergyWise Multifamily	16,043	4,990	31.1%		4,000	307	7.7%	\$ 1,677.5	\$ 387.6	23.1%	255,276	82,108	32.2%	\$ 4.72	\$ 6.57
Home Energy Reports	115,520	63,835	55.3%		107,414	125,399	116.7%	\$ 447.9	\$ 211.8	47.3%	115,520	63,835	55.3%	\$ 3.32	\$ 3.88
Residential New Construction	4,741	769	16.2%		313	162	51.8%	\$ 737.6	\$ 210.2	28.5%	96,976	19,213	19.8%	\$ 10.94	\$ 7.61
Comprehensive Marketing - Residential								\$ 73.7	\$ 13.8	18.7%					
Community Based Initiatives - Residential								\$ 39.0	\$ 5.2	13.3%					
<b>SUBTOTAL</b>	<b>192,069</b>	<b>100,359</b>	<b>52.3%</b>	<b>104.2%</b>	<b>115,858</b>	<b>129,666</b>	<b>111.9%</b>	<b>\$ 13,606.8</b>	<b>\$ 6,580.6</b>	<b>48.4%</b>	<b>1,612,528</b>	<b>763,331</b>	<b>47.3%</b>	<b>\$ 8.62</b>	<b>\$ 8.44</b>
<b>Regulatory</b>															
EERMC								\$ 235.5	\$ 53.3	22.6%					
OER								\$ 304.2	\$ 186.6	61.3%					
<b>SUBTOTAL</b>								<b>\$ 539.7</b>	<b>\$ 239.9</b>	<b>44.5%</b>					
<b>TOTAL</b>	<b>432,708</b>	<b>145,997</b>	<b>33.7%</b>	<b>104.8%</b>	<b>122,789</b>	<b>131,007</b>	<b>106.7%</b>	<b>\$ 30,132.2</b>	<b>\$ 11,219.4</b>	<b>37.2%</b>	<b>4,426,644</b>	<b>1,334,118</b>	<b>30.1%</b>	<b>\$ 8.41</b>	<b>\$ 6.81</b>

NOTES  
(1)(4) Targets from Docket 4888 - Attachment 6, Table G-7 (gas).  
(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-3 (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 4888 - Attachment 6, Table G-5 (gas) - adjusted to reflect format of quarterly report. Program Implementation Expenses/lifetime MMBtu.

**NATIONAL GRID ELECTRIC ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND**  
**Table 3: National Grid 2019 Revolving Loan Funds**

**Large C&I Electric Revolving Loan Fund**

**Small Business Electric Revolving Loan Fund**

<u>Income Statement</u>		<u>Income Statement</u>	
(1) 2019 Funds Available	\$10,018,017	(1) 2019 Funds Available	\$1,919,057
(2) 2019 Loan budget	\$10,000,000	(2) 2019 Loan Budget	\$3,000,000
(3) Committed	\$5,300,151	(3) Committed	\$396,500
(4) Paid	\$338,324	(4) Paid	\$933,678
(5) <u>Repayments</u>	<u>\$1,441,439</u>	(5) <u>Repayments</u>	<u>\$1,115,939</u>
(6) <u>Available 6/30/19</u>	<u>\$5,820,981</u>	(6) <u>Available 6/30/19</u>	<u>\$1,704,818</u>
(7) Outstanding loan volume	\$9,235,555	(7) Outstanding loan volume	\$1,639,926
(8) Loan defaults during period (\$)	\$0	(8) Loan defaults during period (\$)	\$0
(9) Arrears over 120 days at period end (\$)	\$6,901	(9) Arrears over 120 days at period end (\$)	\$39,953
<u>Program Impact</u>		<u>Program Impact</u>	
(10) Number of loans	10	(10b) Participants	341
(10b) Participants	9	(11) Annual Savings (Gross MWh)	5,701
(11) Annual Savings (Gross MWh)	638	(12) Annual Savings (Net MWh)	5,727
(12) Annual Savings (Net MWh)	551	(13) Lifetime Savings (Gross MWh)	69,509
(13) Lifetime Savings (Gross MWh)	7,917	(14) Lifetime Savings (Net MWh)	70,163
(14) Lifetime Savings (Net MWh)	6,909	(15) Annual Savings (Gross kW)	851
(15) Annual Savings (Gross kW)	103	(16) Annual Saving (Net kW)	785
(16) Annual Saving (Net kW)	100	(17) Total associated incentive volume (\$)	\$2,771,771
(17) Total associated incentive volume (\$)	\$338,324	(18) Total annual estimated energy cost savings (\$)	\$762,436
(18) Total annual estimated energy cost savings (\$)	\$101,949		

**Rhode Island Public Energy Partnership (RI PEP)**

<u>Income Statement</u>	
(1) 2019 Funds Available	\$66,060
(2) 2019 Budget	\$0
(3) Committed	\$0
(4) Paid	\$0
(4a) Funds Returned to OER	\$0
(5) <u>Repayments</u>	<u>\$140,059</u>
(6) <u>Available 6/30/19</u>	<u>\$206,119</u>
(7) Outstanding loan volume	\$310,351
(8) Loan defaults during period (\$)	0
(9) Arrears over 120 days at period end (\$)	0
<u>Program Impact</u>	
(10) Number of loans	0
(10b) Participants	0
(11) Annual Savings (Gross MWh)	0
(12) Annual Savings (Net MWh)	0
(13) Lifetime Savings (Gross MWh)	0
(14) Lifetime Savings (Net MWh)	0
(15) Annual Savings (Gross kW)	0
(16) Annual Saving (Net kW)	0
(17) Total associated incentive volume (\$)	\$0
(18) Total annual estimated energy cost savings (\$)	\$0

Notes

- 1 Amount available as of January 1, 2019.
- 2 Budget adopted by Sales Team for 2019 operations. Budget includes projections of repayments made during 2019.
- 3 As of June 30, 2019.
- 4 As of June 30, 2019. This includes all projects paid through June 30, 2019 and the OBR associated with those projects. OBR payment are processed once the associated incentive has been paid usually in batches.
- 4a Funds returned to RI OER.
- 5 As of June 30, 2019
- 6 Fund balance as of June 30, 2019. Committed funds are subtracted from this amount.
- 7 Total outstanding loan balance. Loans lent out that still need to be paid back. This includes loans from previous years.
- 8 Total loan value in default during period.
- 9 Total loan value in arrears for over 120 days as of June 30, 2019.
- 10 As of June 30, 2019
- 10b 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).
- 11 As of June 30, 2019
- 12 As of June 30, 2019
- 13 As of June 30, 2019
- 14 As of June 30, 2019
- 15 As of June 30, 2019
- 16 As of June 30, 2019
- 17 Incentives paid out with loans.
- 18 Estimated energy cost savings to loan fund participants.

**NATIONAL GRID ELECTRIC ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND**  
**Table 4: National Grid 2019 Revolving Loan Funds**

**Large C&I Gas Revolving Loan Fund**

<u>Income Statement</u>		
(1)	2019 Funds Available	\$1,195,976
(2)	2019 Loan budget	\$1,100,000
(3)	Committed	\$1,112,762
(4)	Paid	\$260,199
(5)	Repayments	<u>\$357,642</u>
(6)	Available 6/30/19	<u>\$180,657</u>
(7)	Outstanding loan volume	\$1,386,041
(8)	Loan defaults during period (\$)	\$0
(9)	Arrears over 120 days at period end (\$)	\$4,405
<u>Program Impact</u>		
(10)	Number of loans	12
(10b)	Participants	9
(11)	Annual Savings (Gross MMBtu)	9,595
(12)	Annual Savings (Net MMBtu)	7,900
(13)	Lifetime Savings (Gross MMBtu)	77,483
(14)	Lifetime Savings (Net MMBtu)	63,437
(17)	Total associated incentive volume (\$)	\$143,613
(18)	Total annual estimated energy cost savings (\$)	\$205,290

Notes

- 1 Amount available as of January 1, 2019.
- 2 Budget adopted by Sales Team for 2019 operations. Budget includes projections of repayments made during 2019.
- 3 As of June 30, 2019. Committed in 2019 but to be paid in 2020. Savings not included in 2019.
- 4 As of June 30, 2019. This includes all project paid in 2019 and the OBR associated with those projects. OBR payment are processed once the associated incentive has been paid usually in batches.
- 5 As of June 30, 2019
- 6 Fund balance as of June 30, 2019. Committed funds are subtracted from this amount.
- 7 Total outstanding loan balance. Loans lent out that still need to be paid back. This includes loans from previous years.
- 8 Total loan value in default during period.
- 9 Total loan value in arrears for over 120 days as of June 30, 2019.
- 10 As of June 30, 2019
- 10b Unique customer names for large business (one customer name can have multiple sub accounts as is in the case of a franchise).
- 11 As of June 30, 2019
- 12 As of June 30, 2019
- 13 As of June 30, 2019
- 14 As of June 30, 2019
- 15 As of June 30, 2019
- 16 As of June 30, 2019
- 17 Incentives paid out with loans.
- 18 Estimated energy cost savings to loan fund participants.

**Table 5  
National Grid  
2019 Test Metrics**

2019 Plan Goal		2019 Q2		
ASHP Units	CO2e (Net Tons CO2e)	Q2 Units (YTD)	CO2e (Net Tons CO2e) <sup>1</sup>	% Goal
75	19.90	28	7.58	38%

<b>Customer Satisfaction<sup>2</sup></b>
94.2%

NOTES

<sup>1</sup>This metric is tracked using CO2e (carbon dioxide equivalents)

<sup>2</sup>The Customer Satisfaction metric is based on an average across the EnergyWise, Single Family Income Eligible Services, and Residential Consumer Products Programs. The metric is based off customer responses to the following questions: Would you recommend this service to friend or family? How satisfied are you with the energy efficiency services you received?

**Efficient Buildings Fund**  
**Rhode Island Infrastructure Bank / Office of Energy Resources**  
**January 1, 2019 to June 30, 2019 Report**

*Financing Program Income Statement*

Funds Available (1/1/19)	\$5 million of SBC
Loans Paid Out (disbursements)	\$1,025,968
Loans Repayments (principal only)	\$0
Loans Defaults	\$0
Outstanding Loan Value (principal balance as of 06/30/19)	\$30,011,000
Funds Available (06/30/19)	\$5 million SBC

*Financing Program Impacts*

<i>Participation</i>	
Number of Loans (# - since inception)	14
Number of Participants (# - since inception)	12
<i>Projects</i>	
Total Loan Volume (\$ - since inception)	\$31,322,750
Total Associated Incentive Volume (\$ - since inception)	\$1,935,585
<i>Savings (2019) <sup>Note (1)</sup></i>	
Net Annual Electricity Savings Supported (MWh)	708 MWh
Net Annual Capacity Reductions Supported (kW) (1)	0
Net Annual Thermal Energy Saving Supported (therms)	7,593 therms
Net Lifetime Energy Savings Supported (MMBTU)	3,175 MMBtu
Total Annual Estimated Cost Savings (\$)	\$116,717

Note (1): Savings values only represent savings from projects that have been completed in the first two quarters of 2019