

Deleted: 4755

## 2019 Residential Energy Efficiency Solutions and Programs

Deleted: 8

### Table of Contents

1. Introduction.....	1
a. Solutions and Programs Featured in Attachment 1 .....	2
2. Non-Income Eligible Electric and Gas Goals by Program .....	4
3. Income Eligible Electric and Gas Goals by Program .....	6
4. Whole Home Programs and Solutions .....	7
5. EnergyWise Single Family (Electric and Gas) .....	9
a. Overview.....	9
b. New in 2019.....	10
i. Customer engagement and convenience.....	10
ii. Deeper savings and overcoming barriers.....	10
iii. Serving all customers.....	11
6. Multifamily (Electric and Gas) .....	12
a. Overview.....	12
b. New for 2019 .....	13
i. Removing barriers to participation through refined program design.....	13
ii. Continued Focus on Finance Opportunities .....	14
7. Income Eligible Services (Electric and Gas) .....	14
a. Overview.....	14
b. New for 2019.....	16
i. Cold climate mini-split heat pumps for electric resistance heat customers with existing a/c	16
ii. Increasing participation through coordination of multiple Income Eligible touch points	17
iii. Exploring Mutual Benefits for Healthcare and Energy Efficiency.....	17

8.	Residential New Construction (Electric and Gas) .....	17
a.	Overview .....	17
b.	New for 2019 .....	18
i.	Path to Zero Energy Ready .....	18
ii.	Shifting toward all electric homes .....	19
iii.	Open Home Energy Rater Market .....	19
iv.	Codes and Standards .....	19
9.	Behavior and Products Programs .....	20
10.	Home Energy Reports (Electric and Gas) .....	21
a.	Overview .....	21
b.	New for 2019 .....	22
i.	Improved Tip Targeting and Personalization .....	22
11.	ENERGY STAR® Lighting (Electric) .....	23
a.	Overview .....	23
b.	New for 2019 .....	24
12.	Residential Consumer Products (Electric) .....	24
a.	Overview .....	24
b.	New for 2019 .....	25
13.	High-Efficiency Heating, Cooling and Hot Water (Electric and Gas) .....	25
a.	Overview .....	25
b.	New for 2019 .....	26
i.	Cold Climate Mini-Split Heat Pumps .....	26
ii.	Central Air Conditioners .....	27
iii.	Gas Equipment and Marketplace .....	27
14.	Community-Based Initiatives .....	27
a.	Overview .....	27
b.	New for 2019 .....	28
15.	Residential Connected Solutions .....	29
16.	Marketing .....	30
a.	Overview .....	30

The Narragansett Electric Company  
d/b/a/ National Grid  
Docket No. XXXX  
Attachment 1

Deleted: 4755

b. Delivery and 2018 Success ..... 30

c. Energy Innovation Hub ..... 31

17. Residential Measures and Incentives ..... 33

## 1. Introduction

Rhode Island residential customers rely on – and place trust in – National Grid to keep their homes comfortable, their lights on, be there in moments of crisis, and continue to innovate with consumer technologies.

As such, the Company continues to implement its nationally recognized energy efficiency program with a focus on developing new services that give customers control of their energy, help reduce their bills, ensure financial well-being, and provide equity for all.

National Grid's Residential Energy Efficiency portfolio of solutions provides customers with incentives and support for their every-day energy choices. For the customer building a new home, the Company will model and test the home for energy efficiency. For the tech-savvy customer, the Company will work with retail and wholesale channels that sell the "latest and greatest", as well as the "tried and true" energy saving products to integrate new technologies into their existing residence. For the customer working two jobs to put their children through school, the Company can help to reduce energy bills and increase comfort in the home through its retrofit programs, many times at no cost at all.

The following sections cover these residential energy solutions, the energy saving goals the Company has set for 2019, and how the Company plans to achieve these goals in an ever-changing energy landscape.

For 2019, the Company will build on the transformations identified in the 2018-2020 Three-Year plan and programs implemented beginning in last year's 2018 Annual Plan. Smarter products will continue to make their way into the programs, products will be offered mid-stream or upstream, program designs overall will begin a shift towards increasingly customer-centric models (e.g. Revising Multifamily participation guidelines and processes to serve more customers), and new ideas will continue to be tested to better understand how customers interact with their products and energy. As the energy efficiency market continues to evolve, the Company will pursue workforce related studies related to such changes. These studies will be developed in coordination with the Jobs Study and Potential Study as outlined in the "2019 Evaluation, Measurement and Verification Plan" section. The Company will also communicate other efficiency or energy savings opportunities provided by the Company or external parties that benefit the customer.

Deleted: 4755

Deleted: a great deal of

Deleted: . They look to the Company

Deleted: and to

Deleted: to keep up

Deleted: The Company takes this charge incredibly very seriously as it and its employees are part of the very community it serves.

Deleted: is

Deleted: always

Deleted: looking for more ways to provide even greater value to these customers through

Deleted: them

Deleted: customer

Deleted: solutions

Deleted: are one way to contribute to all of the above-mentioned goals.

Deleted: has a program to help you do so in an incredibly efficient manner.

Deleted: looking

Deleted: , the Company works with retail and wholesale channels that sell energy products and provides incentives that help customers get the "latest and greatest", as well as the "tried and true" energy saving devices at an affordable cost.

Deleted: 2018

Deleted: In the 2018-2020 Three-Year Plan (RIPUC Docket 4684), the Company noted that the lighting program – which has been a key source of savings since the energy efficiency program's inception – will have a significant reduction in savings opportunities attributed due to the confluence of widespread adoption of light emitting diode (LED) technology, reduced manufacturing costs for LEDs, and robust efficiency programs and policies. have reduced opportunities for the programs to attribute efficiency savings to lighting, which has been a key source of savings since the energy efficiency program's inception. This market transformation of LED lighting creates a need for increased focus on ...

Deleted: the Company,

Deleted: 8

Deleted: aims to be a transformative year for ...

Deleted: ;

Deleted: ;

Deleted: online sign up forms for assessments

Deleted: ;

Deleted: 4755

The 2018-2020 Three-Year Plan details four central principles that encompass an advanced and innovative approach to serving all residential customers. The Company finds that these four principles are apparent in all aspects of the 2019 Plan and incorporates the planning process, which included many brainstorming sessions from internal teams to external stakeholders. In addition, each of the Company's strategies, programs, and initiatives are focused on meeting the needs of customers, the environment, and preparing for the future. Below are the four key priorities the Company has identified for the 2018-2020 Plan.

Deleted: The Company is excited to bring this new energy future to its customers. ¶

Deleted: 2018

Deleted:

**Customers** - Deliver comprehensive services encompassing all market segments and customers. Such services will enable customers to control their energy use, reduce their bills, and help support their financial well-being.

**Least Cost** - Deliver energy efficiency services as cost-effectively as possible through optimizing finance and promoting upstream initiatives. Continuing to deliver cost effective energy saving under Least Cost Procurement will create cost savings to all customers, while creating economic benefits that create and maintain local jobs and businesses. Demand Response efforts will also contribute to cost savings to all customers.

**Environment** - Provide solutions that minimize greenhouse gas emissions and contribute to Rhode Island's clean energy policy goals, including the Resilient Rhode Island Act.

**Future** – Innovate to capture savings from new technologies and strategies to position energy efficiency programs for the future, including the integration of energy efficiency with demand response, renewable energy, and smart grid technologies. This includes incorporating outcomes from the Rhode Island Power Sector Transformation Initiative and Docket 4600.

#### a. Solutions and Programs Featured in Attachment 1

Solutions	Programs Highlighted	New for <u>2019</u>
Whole <u>Home</u> Programs	Single Family and Multifamily retrofit programs where customers experience no-cost	<u>Increased participation goals</u> <u>Revised Multifamily participation guidelines to remove barriers</u>

Deleted: 2018

Deleted: House

Deleted: Online portal for multifamily condos

	assessments and comprehensive upgrades. Also included are the <b>Residential New Construction</b> program, and the <b>Income Eligible Services</b> program.	<u>and serve more customers</u> <u>Expanded Single-Family and Multifamily cold climate heat pump installations</u> <u>Parity of delivered fuel incentives</u> <u>Path to zero energy ready homes</u> <u>Online scheduling of EnergyWise assessments</u>
<b>Behavior and Products Programs</b>	<b>Home Energy Reports, ENERGY STAR Lighting, Residential Consumer Products, and HVAC</b> programs.	<u>More personalized HER behavior tips and product promotions</u> <u>Beneficial electrification demonstration within HVAC</u> <u>Upstream Heat Pump Water Heater incentive</u> <u>Low-e storm windows</u>
<b>Initiatives</b>	<b>The Community-Based Energy Efficiency initiative</b> to educate customers and increase program participation.	<u>New Website landing page for community recruitment</u> <u>Expanding new goal-based program model to four communities</u> <u>Including workforce trainings and new metrics such as demand response participation</u>
<u>Marketing</u>	<u>Efforts to build awareness, educate customers, and drive participation in the Company's efficiency</u>	

**Deleted:** 4755

**Deleted:** Automated benchmarking for multifamily facilities¶

**Deleted:** Heat

**Deleted:** Pump

**Deleted:** Installations

**Deleted:** Enhanced

**Deleted:** Revolving loan fund for Capital Good Fund¶

**Deleted:** Updated HER messaging for income eligible customers

**Deleted:** s

**Deleted:** National Retail Products Platform¶

**Deleted:** Updated program design for deeper municipal participation

**Deleted:** Residential Demonstration and R&D

**Deleted:** 4755

**Deleted:** Various demonstrations of projects and new technologies such as Home Energy Disaggregation, Automated Lighting controls and more.

**Deleted:** Marketing

**Formatted:** None

**Comment [JR1]:** To be updated in 2<sup>nd</sup> draft

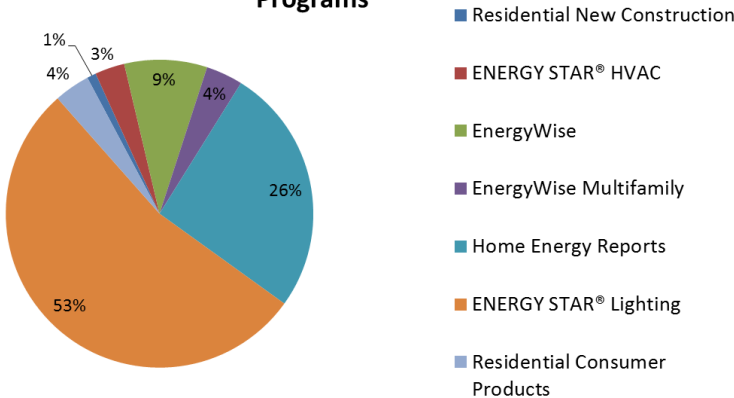
## 2. Non-Income Eligible Electric and Gas Goals by Program

Program	Demand Reduction (Annual kW)	Energy Savings (Annual MWh)	Gas Savings (Annual MMBtu)	Customer Participation
Energy Star Lighting	<u>5,766</u>	<u>49,606</u>	<u>N/A</u>	
Home Energy Reports	<u>4,278</u>	<u>24,130</u>	<u>115,520</u>	
EnergyWise	<u>1,273</u>	<u>8,068</u>	<u>27,806</u>	
EnergyWise Multifamily	<u>295</u>	<u>3,592</u>	<u>16,043</u>	
Residential Consumer Products	<u>556</u>	<u>3,484</u>	<u>N/A</u>	
Energy Star HVAC	<u>633</u>	<u>2,897</u>	<u>28,120</u>	
Residential New Construction	<u>118</u>	<u>882</u>	<u>4,240</u>	
Residential Codes				

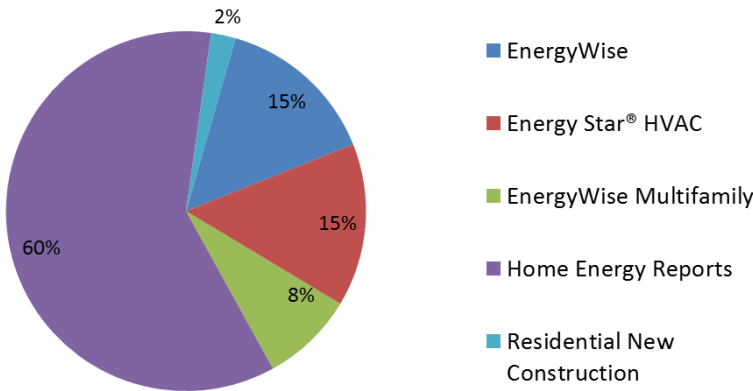
**Comment [JR2]:** To be updated in 2<sup>nd</sup> draft

Deleted: 4755

**2019 Annual MWh Savings Goals for Residential Electric Programs**



**2019 Annual MMBTU Goals for Residential Gas Programs**



Formatted: None



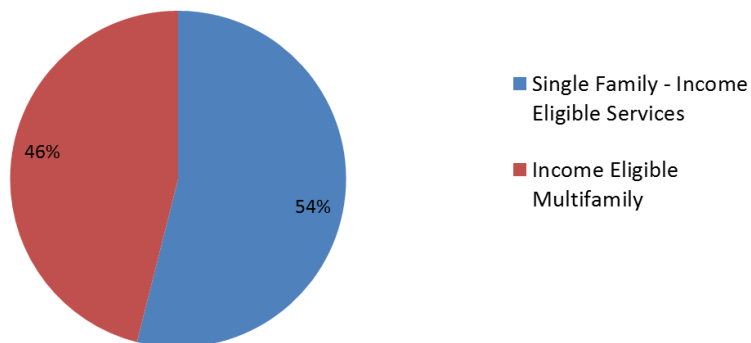
**Deleted:** 4755

### 3. Income Eligible Electric and Gas Goals by Program

<u>Program</u>	<u>Demand Reduction (Annual kW)</u>	<u>Energy Savings (Annual MWh)</u>	<u>Gas Savings (Annual MMBtu)</u>	<u>Customer Participation</u>
<u>Income Eligible Services – Single Family</u>	<u>889</u>	<u>3,771</u>	<u>9,178</u>	
<u>Income Eligible Multifamily</u>	<u>223</u>	<u>3,219</u>	<u>20,487</u>	

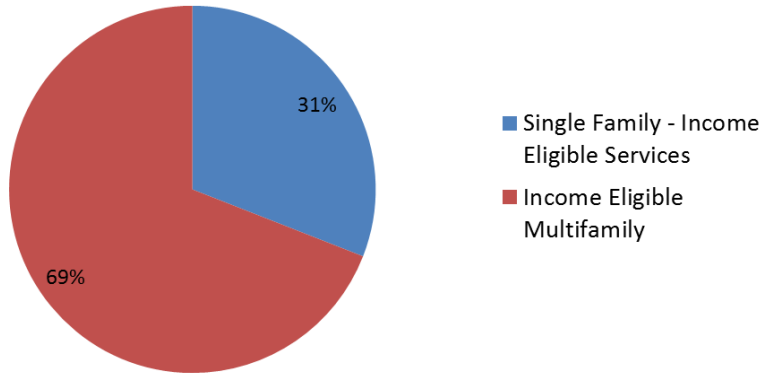
**Comment [JR3]:** To be updated in 2<sup>nd</sup> Draft

**2019 Annual MWh Savings Goals for Low Income Electric Programs**



Deleted: 4755

### 2019 Annual MMBTU Goals for Low Income Gas Programs



## 4. Whole Home Programs and Solutions

Whole Home Solutions provide the most comprehensive level of energy and cost savings for both single family and multifamily customers. For existing homes, the home energy assessment is the first step to identify how much energy the home uses as well as any structural or mechanical problems, that when corrected, save significant amounts of money over time.

The home energy assessment for a single family customer connects energy specialists at a customer's residence to both educate the resident on where the home may be losing energy through air leaks and inefficient energy systems, and to also provide solutions that reduce the energy losses. These solutions require a commitment by the customer in both time and money and may require multiple visits by an energy specialist to the home. The end result of implementing all the energy solutions will be a home that is more comfortable and energy efficient.

An initial home energy assessment can take several hours, starting with an energy specialist acquiring information from the homeowner about heating, cooling, and

Deleted: House

Deleted: House

Deleted:

Deleted: to the home and may require multiple visits

Deleted: 4755

ventilation concerns. Next, the energy specialist conducts a diagnostic assessment of the attic, walls, basement, doors, windows, mechanical systems and appliances to assess existing levels of insulation and air sealing and equipment safety and efficiency. During the initial visit the energy specialist will install no-cost instant savings measures (ISMs) energy saving upgrades including lighting upgrades, pipe insulation, water aerators, and advanced power strips for electronic systems.

Deleted:

If the customer decides to move forward with recommended energy efficiency solutions identified in the above-described assessment (e.g. insulation, sealing air leaks or heating/cooling system or appliance replacement) additional savings will be realized. Energy efficiency solutions require subsequent visits from a respective service or product provider, and could take several days to complete. While the home energy assessment and instant savings measures ("ISMs") are at no-cost to the customer, the subsequent visits may require a financial investment by the home owner. The company provides financing opportunities and healthy incentives to help the customer move forward with these higher cost measures.

Deleted:

Deleted: onsumer

Deleted: n

For those customers who reside in multifamily facilities, the no-cost assessment experience is still comprehensive, yet the process is a bit different. The Company's Multifamily Coordinator will work directly with property managers, facility owners and/or condominium associations to coordinate the audit and subsequent upgrades. The first on-site assessment will review a representative sample of units to build a plan for retrofit opportunities. The owners and/or tenants are then provided with a list of measures that could be installed in their units and common areas. Incentives are available for weatherization (air sealing, insulation), heating and domestic hot water, cooling, lighting, and appliances.

Deleted: <sup>1</sup>

Residential New Construction offers both technical services and incentives to help customers design and construct new energy-efficient homes. Beginning with a review of plans, the Company's lead vendor can advise a customer how changes in the design can improve efficiency. During construction, the vendor works directly with the builder to provide on-site technical support for incorporating best practices and techniques. The program provides the HERs rating of the home to determine the energy efficiency upon completion of the project. Incentives are provided based on the HERs rating as well as additional incentives for high-efficiency heating, cooling and hot water systems.

With a wide variety of customer and site-specific needs, National Grid approaches the whole house solutions market through channels that address the housing structure by

Deleted: 4755

number of housing units in the building as well as by income eligibility to ensure as many customers as possible can participate in the program and receive the benefits of energy savings at discounted, low or no cost.

The whole house programs will continue to seek ways to integrate renewable technology in ways that support energy efficiency. Currently the Renewable Energy Growth (RE Growth) Solar Marketplace provides cross-marketing and encourages customers to do an energy assessment prior to adding solar. The RI Office of Energy Resources and CommerceRI's Renewable Energy Fund (REF) program requires an energy assessment in order to receive the incentive. The Company will continue to collaborate with both programs and will discuss possible marketing enhancements through digital engagement channels, including web, social media, and email to a general residential customer audience.

Deleted: ,

## 5. EnergyWise Single Family (Electric and Gas)

### a. Overview

EnergyWise consistently captures energy savings at customer homes (1-4 units in one building) while educating them about all energy management opportunities. In 2018, EnergyWise was awarded the ENERGY STAR Partner of the Year Sustained Excellence in Energy Efficiency Program Delivery. This honor is presented by the US Environmental Protection Agency and Department of Energy recognizing continued excellence in program delivery to customers. The Rhode Island EnergyWise program in 2017 installed over twenty-five lighting products during home energy assessments. These savings support continued delivery of no-cost first visits to the customer. The combination of instant savings and a no-cost initial visit is a very powerful tool to engage customers in whole home services.

**Deleted:** EnergyWise is the whole home solution that addresses single family (1-4 units in one building), non-income eligible customers.

**Deleted:** In 2017, EnergyWise received the joint federal Environmental Protection Agency and Department of Energy ENERGY STAR® Partner of the Year Award in Program Implementation for the second consecutive year.

**Deleted:** The volume of homes served and savings achieved were noted as success factors for the programs.

**Deleted:** 6

Since 2009, the Company has provided home energy assessments to over 15% of single family, market rate customers in Rhode Island. Customers that have participated in the program learn how their home functions from an energy perspective and are provided solutions to improve energy performance when opportunities exist. EnergyWise leverages customer touch points to present solutions that make sense for the household. As more offerings are available, they will also be bundled in and presented with the program offerings.

Deleted: 4755

An evaluation completed in 2018 supports the continued success of zero-percent financing through the HEAT loan in facilitating program adoption. The financing reduces the upfront customer cost associated with upgrades to home's insulation levels, heating system, or water heating systems. At the August customer listening forum as well as the energy expo, residential customers expressed an interest in financing solar improvements as well as upgraded windows.

Deleted: le

#### b. New in 2019

In 2019 EnergyWise will focus on the following strategies to achieve the aggressive targets:

##### i. Customer engagement and convenience

EnergyWise will implement an online assessment to educate customers on where household opportunities for greater comfort and energy savings exist. This component will allow customers to learn about energy management offerings at their own convenience and receive information about specific improvements and available incentives. For customers interested in an in-person home energy assessment, online scheduling will be available in 2019 allowing for transparent scheduling at a convenient time for the customer.

Deleted: EnergyWise participants include renters and homeowners of all heating fuel types. Customers are also able to finance the cost of weatherization improvements through the 0% HEAT Loan.

##### Deleted: <#>2018 Goals¶

The overall goal of EnergyWise is to educate consumers about energy efficiency and introduce instant savings through efficient lighting upgrades, water efficiency solutions, and advanced power strips. Customers can then learn about the areas in their home that could benefit from air leakage reduction and additional insulation (aka weatherization) while experiencing actual energy savings from immediate upgrades. If the customer chooses to invest in weatherization for their homes, deeper energy savings and added comfort can be achieved.¶

##### 2018 EnergyWise Electric and Gas Goals¶ Electric¶

Demand Reduction (Annual kW)

Deleted: EnergyWise

##### ii. Deeper savings and overcoming barriers

There are numerous in-home attributes that can prevent installation of weatherization due to health and safety concerns. The presence of asbestos, vermiculite, knob-and-tube wiring, heating systems not drafting flue gasses correctly, and a home that is "too tight", meaning not enough air exchanges per hour for optimal health, are examples of health and safety issues that will result in a recommendation to resolve the issue before weatherization can proceed. This program has been testing a method to reduce the cost of the "too tight" issue by putting in mechanical ventilation that controls the exchange of air while using minimal energy. By outlining a procedure to use a few standard configurations for mechanical ventilation, the program can minimize costs to the customer while optimizing the success of the installation. The mechanical ventilation also removes the barrier so that weatherization and air sealing can proceed.

Moved (insertion) [2]

The program will also be testing a duct sealing initiative in 2019. Leaky ducts can result in a loss of 20% of the heating and cooling system efficiency. While large leaks can be addressed with exterior duct sealing tapes and paste, many smaller gaps can be more

difficult to address from the exterior of the ducts. A new initiative will investigate the success of airborne, spray sealants that can be applied within the duct work that can reduce overall system leakage.

The Company will also complete the implementation of and assess the results from its 150 customer pilot of the Department of Energy's Home Energy Score, which began in 2018.

### iii. ~~Serving all customers~~

Making sure that all Rhode Islanders are participating in the energy efficiency offerings is of growing interest for many stakeholders. One area that has brought increasing interest is with customers with an average median income (AMI) of 60% - 100%. Looking at participation information from 2014 – 2017, the Company finds that for customers where income can be determined, those falling into the 60% - 100% AMI range have completed weatherization after receiving home energy assessments at a slightly higher rate than customers whose income are above 100% AMI. This data demonstrates that the program is attractive to a range of customers across all income levels.

In 2019, the program is redesigning the approach to serve renters and landlords in single-family (1-4 unit) homes that participate in the program. In order to encourage landlord participation in the weatherization component of the program, the Company will remove the customer co-pay portion of the program, up to the program maximum of \$4,000. This redesign will remove the classic "split incentive" where investments in upgrading the insulation levels of the home may not be returned to the landlord, but may in fact go to the tenants that pay the heating bills. The split incentive has been one component that may deter an investment in rental property, as renters are frequently unable to change the building structure without landlord permission.

Another area of stakeholder interest has been in the area of deliverable fuels. Customers that heat their homes with deliverable fuels have participated in the no-cost home energy assessment portion of the program, but have continued to undergo weatherization installations at a lower rate than customers that heat with electricity or natural gas. While incentives for deliverable fuel homeowners has continued to rise, the program has been testing parity in incentive levels since Q3 of 2018 and will strive to continue this parity through 2019.

**Deleted:** 4755

**Deleted:** Customer engagement and convenience

**Moved up [2]:** There are numerous in-home attributes that can prevent installation of weatherization due to health and safety concerns. The presence of asbestos, vermiculite, knob-and-tube wiring, heating systems not drafting flue gasses correctly, and a home that is "too tight", meaning not enough air exchanges per hour for optimal health, are examples of health and safety issues that will result in a recommendation to resolve the issue before weatherization can proceed. This program has been testing a method to reduce the cost of the "too tight" issue by putting in mechanical ventilation that controls the exchange of air while using minimal energy. By outlining a procedure to use a few standard configurations for mechanical ventilation, the program can minimize costs to the customer while optimizing the success of the installation. The mechanical ventilation also removes the barrier so that weatherization and air sealing can proceed.¶  
The program will also be testing a duct sealing initiative in 2019. Leaky ducts can result in a loss of 20% of the heating and cooling system efficiency. While large leaks can be addressed with exterior duct sealing tapes and paste, many smaller gaps can be more difficult to address from the exterior of the ducts. A new initiative will investigate the success of airborne, spray sealants that can be applied within the duct work that can reduce overall system leakage.

**Deleted:** <#>Deeper savings and overcoming barriers¶

**Deleted:** ¶  
**Serving all Customers¶**

**Deleted:** nd

**Deleted:** undergo

**Deleted:** In 2018 EnergyWise will focus on the following strategies to achieve the aggressive targets:¶  
<#>Customers¶  
National Grid conducted a participation study in 2017 to investigate the number of unique customers served from 2009 – 2015 and to the extent possible, demographic and economic factors...

**Deleted:** National Grid is very aware that savings from energy efficient lighting will contribute less to overall residential savings in the coming years. In preparation for this reduction in kWh savings, EnergyWise has tested new products and processes...

**Deleted:** To reach savings goals EnergyWise will be promoting Wi-Fi thermostats for energy savings as well as the opportunity to partner with National Grid's Connected Solutions demand response demonstration (see section 16 a below).

Deleted: 4755

## 6. Multifamily (Electric and Gas)

### a. Overview

The Rhode Island Market Rate and Income Eligible Multifamily programs continue to innovate and refine techniques to serve more customers with more measures. The 2018 program saw the introduction of cold climate mini-split heat pumps, for customers with electric resistance heat, the use of a condo website portal, and the creation of new relationships to offer more finance opportunities to customers. For 2019, the company looks to grow these efforts, with a special emphasis on the deployment of cold climate mini-split heat pumps, and remains committed to offering a comprehensive program that is both cost effective yet thorough in treating this diverse segment of the population. The Rhode Island Multifamily program has a single lead vendor that utilizes a network of Rhode Island sub-contractors to serve all customers, including income eligible.

Deleted: (ccMSHP)

Deleted: are poised for an exciting year in 2018. In early 2017, the Company undertook a deep review of the current program design and process before going through an extensive Request for Proposals (RFP) process for lead vendor services. As a result, new ideas, technologies and approaches were identified and will be implemented in 2018.

Deleted: It

Deleted: remains the Company's goal to

Eligible Multifamily program participants are defined as the following:<sup>2</sup>

- Buildings with 5 or more units
- Properties consisting of four or more 1-4 unit buildings that meet both of the following requirements:
  - Are within a reasonable geographical distance<sup>3</sup> from each other, or to a 5+ unit building, and
  - Are owned by the same individual or firm.

Deleted: Are connected or neighboring

Deleted: to

Deleted: <sup>4</sup>

Both market-rate and income-eligible multifamily properties are subject to the above-outlined multifamily eligibility requirements for coordinated services. For the income-eligible properties, co-payments for energy efficiency services and measures may be waived.

Deleted: /affordable

The income-eligible multifamily sector is defined by properties that meet one of the following criteria:

<sup>2</sup> Stand-alone 1-4 unit buildings that do not meet these requirements are considered "single-family" and are served traditionally through *EnergyWise* Single Family or Income Eligible Services Single Family programs, as appropriate.

<sup>3</sup> "Reasonable geographical distance" is determined at the discretion of the vendor. The prior program guidelines required buildings to be neighboring each other. This revised guideline will allow the vendor to treat more units for a single owner where those units may be located down the street from each other.

Deleted: 4755

- Owned by public housing authorities or community development corporations
- Receive affordable housing tax credits or any type of low-income funds/subsides from the state or federal government
- Consist of building units where a majority of customers qualify as income-eligible customers (receive utility service on the A-60 Low-Income rate and/or have a household income of less than 60% of the Area Median Income)

Furthermore, a multifamily property may be eligible for services and incentives under both residential and commercial programs. As an example, a building with 20 units that is electrically sub-metered (20 residential accounts) with a commercial electric account for common areas and one commercial gas account serving a central heating/hot water system will likely qualify for incentives through both Multifamily and the Commercial & Industrial Multifamily programs. While this adds a layer of complexity for the Company, it is critical that the Company maintain accounting via these various program budgets in order to ensure equity for all customers funding energy efficiency through the energy efficiency program charge. In contrast, the customer will not need to deal with this added layer of complexity, and will instead receive a consolidated incentive for all efficiency work completed at the site<sup>5</sup>.

## b. New for 2019

### i. Removing barriers to participation through refined program design

A key theme for the 2019 multifamily retrofit program is to remove barriers that prevent customers from participating in the programs. In order to do so, the Company will make several changes to the program in order to unlock value for customers. Beginning in January, the Company's lead vendor for the multifamily retrofit program will begin serving individual condo-unit owners and utilize the time on-site as an opportunity for face-to-face recruitment of the other units at the facility. This not only has the benefit of ensuring each customer who wants to participate is served, but also helps increase condo unit participation which has traditionally been challenging. Further, the Company will target facilities that did not move forward with retrofits in years past due to low on-site participation and will remove the 5-year waiting period between assessments.

Deleted: Continued 2017 Enhancements ¶

In 2017, the Company put forth multiple program enhancements that it will continue through 2018 and beyond. Offering heating systems in the income eligible multifamily program provided great pipeline and opportunity through 2017 with over 50 central boilers installed. As such, the Company will continue to offer these replacements<sup>6</sup> and consider in-unit heat pump applications where cost effective. Further, the Boiler Monitoring & Optimization effort of 2017 is showing favorable, though preliminary, results. The Company will continue learning from this technology in 2018 and consider including it as a standard program offering.¶ Finally, in 2018 the Company remains committed to treating a number of facilities served by delivered fuels through both the market rate and income eligible electric programs.

<sup>5</sup> For the past four years National Grid has offered a Multifamily Coordinator for RI customers looking to participate in the multifamily program to reduce any confusion and ensure a smooth enrollment process.

Deleted: three



Deleted: 4755

For the customer who may not know what program best suits their needs, the Residential New Construction, Multifamily Retrofit, and the Small Business Direct Install programs have built channels of communication for 2019 to streamline customer intake processes and serve sites that did not fit into one of the traditional program structures. For example, a non-profit group home that serves at-risk children may now be served by the income eligible multifamily retrofit program if the offerings within that program are better suited to the needs of the customer. In all cases, the experience should be seamless.

#### ii. Continued Focus on Finance Opportunities

During 2018 the Company's lead vendor for multifamily services partnered with Ascentium to offer financing to cover the customer co-payment portion of larger multifamily market-rate projects. As in years past, the Company will work with partners such as the Rhode Island Infrastructure Bank (RIIB), RI Housing, and other key stakeholders to explore new sources of capital and potential financial products and mechanisms such as on-bill repayment for residential customers.

## **7. Income Eligible Services (Electric and Gas)**

### **a. Overview**

National Grid's Income Eligible Services Program (IES) assists low-income customers in addressing energy affordability by providing energy education, home energy assessments, insulation, air sealing, and replacement of inefficient heating systems, appliances, and lighting to reduce household energy burdens and improve overall comfort for occupants.

IES is a fuel neutral program (electric, gas, oil and propane) and is available for customers who live in 1-4 unit residences and qualify for the Low Income Home Energy Assistance Program (LIHEAP)<sup>7</sup>, also known as "fuel assistance," or who qualify for the National Grid discount utility rates (A-60 and or 1301 rates).<sup>8</sup>

<sup>7</sup> The federal government has set an income level, tied to the median income of each state, which defines the uppermost income boundary for LIHEAP participation. Individual states have some flexibility in defining income eligibility as long as it is not set above the federally defined maximum. Eligibility in this program will track the eligibility for LIHEAP set by the State of Rhode Island.

<sup>8</sup> These eligibility requirements are subject to change as a result of any regulatory directives, or as deemed necessary by the Company to enhance participation and/or savings.

Deleted: <#>¶  
<#> A key theme for the 2019 multifamily retrofit program is to remove barriers that prevent customers from participating in the programs. In order to do so, the Company will make several changes to the program in order to unlock value for customers. Beginning in January, the Company's lead vendor for the multifamily retrofit program will begin serving individual condo-unit owners and utilize the time on-site as an opportunity for face-to-face recruitment of the other units at the facility. This not only has the benefit of ensuring each customer who wants to participate is served, but also helps increase condo unit participation which has traditionally been challenging. Further, the Company will target facilities that did not move forward with retrofits in years past due to low on-site participation and will remove the 5-year waiting period between assessments.¶

<#>For the customer who may not know what program best suits their needs, the Residential New Construction, Multifamily Retrofit, and the Small Business Direct Install programs have built channels of communication for 2019 to streamline customer intake processes and serve sites that did not fit into one of the traditional program structures. For example, a non-profit group home that serves at-risk children may now be served by the income eligible multifamily retrofit program if the offerings within that program are better suited to the needs of the customer. In all cases, the experience should be seamless.¶  
<#>Continued Focus on Finance Opportunities¶

<#>During 2018 the Company's lead vendor for multifamily services partnered with Ascentium to offer financing to cover the customer co-payment portion of larger multifamily market-rate projects. As in years past, the Company will work with partners such as the Rhode Island

Deleted: <#>Heat Pumps and Smart Technologies¶  
<#>As proposed in the 2018-2020 Three-Year Plan, the Company intends to focus on introducing more innovations to secure untapped energy savings. In the multifamily sector specifically, this will include offering more smart thermostats and introducing the installation of ductless mini-split heat pumps in electrically-heated facilities and possibly facilities served by delivered fuels if cost effective. Especially relevant in the case of heat pumps, customers will benefit from training on how to use these products to ensure a reduction and not an increase in energy usage. The company will

Deleted:

Deleted: 4755

The success of the Program can be attributed to several key elements of the program design:

- Streamlined contracting process between the Lead Vendor and the RI Community Action Programs ("CAPs")
- Processes for leveraging funds, providing ongoing contractor training, and engaging with the six RI CAPs quarterly to ensure consistent implementation of best practices.
- On-going customer feedback and communication.

IES is administered through a Lead Vendor that manages the day-to-day operations of the Program and works directly with the six Rhode Island territorial-based CAPs to deliver IES. The CAPs manage the customer intake, the energy assessment, and the coordination of contractors to provide services.

The program benefits from leveraged funds managed by State of Rhode Island Department of Human Services (DHS) Weatherization Assistance Program (WAP)<sup>9</sup> and the Low Income Home Energy Assistance Program (LIHEAP)<sup>10</sup>. These leveraged funds amount to approximately 35% of total customer incentive benefits for weatherization and heating system replacements. These funds also allow customers to receive non-energy related health and safety improvements that would not be available with rate payer dollars only.

#### Services Provided – IES Program and WAP/LIHEAP

Income Eligible Services (IES) Program*	Federally-funded Weatherization Assistance Program (WAP)*
<ul style="list-style-type: none"><li>Conduct whole house Energy Assessment and provide customer education</li><li>Review utility bills</li><li>Replace incandescent and halogen light bulbs with LED light bulbs</li><li>Install smart power strips and domestic hot water measures</li><li>Install weatherization measures if</li></ul>	<ul style="list-style-type: none"><li>Conduct whole house audit/ energy efficiency evaluation (not appliances)</li><li>Install weatherization measures (insulation, air sealing, duct sealing)</li><li>Replace inefficient heating equipment if deemed inefficient or unsafe</li><li>Improve minor health and safety issues in the home.</li><li>Conduct field inspections and testing</li></ul>

<sup>9</sup> overseen by the federal Department of Energy

<sup>10</sup> overseen by the federal Department of Human Services

Deleted: Community Action Program agencies (

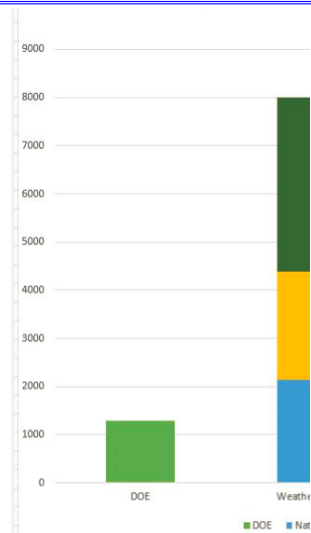
Deleted: )

Deleted: The Lead Vendor also works directly with the

Deleted: to leverage approximately \$10M in federal funding to complement the approximate \$18M in ratepayer energy efficiency funds.

Deleted: Together these funds provide a comprehensive set of measures

Deleted: to more customers that might not be feasible with just rate payer generated funds.



Deleted: National Grid's single family Income Eligible Services (IES) Program provides comprehensive, fuel neutral (electric, gas, oil and propane), no-cost services to educate customers about energy efficiency, and helps them to reduce their electric and heating bills and improve the thermal comfort of their home. Income Eligible Services are available for customers who live in 1-4 unit residences and qualify for the Low Income Heating Assistance Program (LIHEAP)<sup>11</sup>, also known as "fuel assistance," or who qualify for

Deleted: <#>Assess whole house energy efficiency from attic to the basement. ¶

Deleted: smart power-strips and ¶  
Install water efficient showerheads

Deleted: <#>Discuss opportunities to save energy and money through weatherization and upgrading eligible heating, cooling and hot water systems and appliances¶

<u>needed</u>	
• Replace eligible <u>appliances and heating, cooling and hot water systems (HPWH)</u>	
• <u>Conduct field inspections and testing</u>	

\*Both the IES and the WAP offer all services and products at no-cost to the customer.

In 2018, the IES Program added clothes washers and dehumidifiers to the list of no-cost measures. These products have been very well received and will continue in 2019.

#### **b. New for 2019**

**Researching the feasibility to add new measures including:**

##### **i. Cold climate mini-split heat pumps for electric resistance heat customers with existing a/c**

As the main objective of the IES Program is to provide comprehensive energy efficiency solutions that help to reduce energy costs and improve a home's thermal comfort, National Grid will install a small number of cold-climate mini-split heat pumps through the IES Program in hopes to provide clarity on up-front "installed cost" as well as customer satisfaction and ease of use.

Eligibility criteria to take advantage of this offering are as follows:

- Completion of IES energy assessment and weatherization
- Existing electric resistance heat and window a/c

This program will be implemented in coordination with the HVAC Electric program offering. HVAC contractors working solely on the IES will need to complete the HVAC Electric Program's "Quality Installation Verification" training process to ensure that cold climate heat pump systems are sized and installed in accordance with manufacturer specifications, and that customers will be properly informed about appropriate use of the systems.

**Deleted:** 4755

**Deleted:** Insulation, air sealing and duct sealing if needed¶

**Deleted:** and appliances if they are deemed inefficient or unsafe

**Deleted:** IES is administered through a Lead Vendor that manages the day-to-day operations of the Program. The Lead Vendor maintains consistency and quality assurance of the services among the CAPs by providing ongoing technical and best practices training for the CAPs' energy efficiency auditors and home performance professionals. The Vendor also performs field verifications and testing to verify consistency and quality of completed work. ¶  
The Lead Vendor works directly with the six Rhode Island territorial-based Community Action Program agencies (CAPs) to deliver IES. The CAPs manage the customer intake and application processes for IES. National Grid provides the CAPs with marketing collateral, videos, and tools to increase awareness of – and comfort level for – IES Program. ¶  
The Income Eligible Services program works in close collaboration with the State of Rhode Island Department of Human Services Weatherization Assistance Program (WAP), overseen by the federal Department of Energy, and the Low Income Home Energy Assistance Program (LIHEAP), overseen by the federal Department of Human Services. IES leverages its ratepayer-funds and the federally-funded Weatherization Assistance Program (WAP) and Low Income Home Energy Assistance Program (LIHEAP). This collaboration ensures that customers receive the greatest possible benefits to reduce their energy use and costs.

**Deleted:** dryers

**Deleted:** <#>2018 Goals¶

The overall goal of the Income Eligible program is to provide comprehensive energy efficiency services that help to reduce energy costs and improve a ...

**Formatted** ...

**Formatted**

**Deleted:** c

**Deleted:** <#>¶

**Deleted:** <#>How Goals Are Achieved ¶

**Deleted:** b

**Deleted:** egin

**Deleted:**

**Deleted:** to offer

**Deleted:** . This new offering will

**Deleted:** Eligibility criteria

**Deleted:** or oil heat

**ii. Increasing participation through coordination of multiple Income Eligible touch points**

In 2019, the IES Program will work with the Company's call center to provide targeted information to help Income Eligible customers to quickly understand the opportunity to participate in the IES program. For example, call center representatives will be able to see if a customer is on an income eligible rate and would be able to notify customers of upgrades that would be relevant to their specific situation (e.g. promoting cold climate heat pumps to customers heating with oil heat and electric resistance heat).

**iii. Exploring Mutual Benefits for Healthcare and Energy Efficiency**

In 2019, the company will engage with local and national stakeholders and thought-leaders to discuss the interplay of benefits between the healthcare and energy industries. Recently, there has been increased focus on the health benefits associated with certain housing retrofit and rehabilitation measures that are offered through utility-run energy efficiency programs, with a special emphasis on opportunities within the income eligible population. The company will work with stakeholders to look into issues such as, the monetary value of health benefits, delivery models for measures that drive both health and energy savings, and possible co-funding opportunities where appropriate.

## 8. Residential New Construction (Electric and Gas)

### a. Overview

The RNC Program utilizes the following resources to assist builders, developers, and owners to design and build energy-efficient single family and multifamily homes with lower operating costs and increased durability, comfort and safety:

- Code compliance and technical trainings
- Energy modeling and design assistance
- In-field inspections
- HERS Rating
- Optional ENERGY STAR® Homes verification for projects seeking the EPA label
- Complimentary ENERGY STAR bulbs and WaterSense® showerheads

Deleted: 4755

Moved (insertion) [1]

Deleted: ility

Deleted: ¶

Deleted: ¶

Formatted: Level 3

Deleted: ,

Deleted: ¶

Moved up [1]: In 2019, the IES Program will work with the Company's call center to provide targeted information to help Income Eligible customers to quickly understand the opportunity to participate in the IES program. For example, call center representatives will be able to see if a customer is on an income eligible rate and would be able to notify customers of upgrades that would be relevant to their specific situation (e.g. promoting heat pumps to customers heating with oil heat and electric resistance heat).

Deleted: ¶

Deleted: <#>In order to achieve these goals the Company will utilize several strategies and tactics. ¶  
<#>Technical Training and Financial Incentives ¶  
<#>Conduct trainings and best practices meetings for CAP auditors and program inspectors throughout the year: ¶  
<#>Weatherization Technical Committee meetings to define and ensure consistent measure installation across the state. ¶  
<#>ASHRAE trainings – best practices for ventilation systems ¶  
<#>Provide updates as necessary to the WAP/IES Operations Manual and conduct training addressing all updates. ¶  
<#>Partner with the RI Department of Human Services to conduct and or host trainings as well as update program implementation materials. ¶  
<#>Participate in relevant training sponsored by third-party organizations including: ¶  
<#>RI Department Human Services (DHS) ¶  
<#>DOE Weatherization Assistance Program ¶  
<#>Industry experts ¶  
<#>Provide whole-house no-cost energy efficiency solutions to income eligible customers. ¶  
<#>Streamlining the Customer Experience ¶  
<#>Participate in Community Expos to help customers understand how to reduce their energy bills and manage their energy expenses. ¶  
<#>Make available to CAPs the use of the Energy Innovation Hub to provide education and training to their respective communities. ¶

Formatted: Default Paragraph Font, Font: (Default) Calibri, 11 pt

Deleted: -

- Financial incentives based on the level of the energy efficiency of the structure<sup>13</sup> and equipment.

In 2018 the RNC program continued to see strong enrollment, higher levels of energy efficiency, more electrically heated homes, and more multifamily developments. The Company also engaged the building community via a Zero Energy Marketing Forum, a Passive House Design Forum and an Energy Efficiency Listening Forum to assess the needs for building professionals to design and build zero energy and Passive House certified projects.

In 2019, the Company will incorporate the feedback from the three forums and will continue to offer technical training and envelope and equipment incentives and will add program elements and incentives to help the building community build zero energy or Passive House projects. In addition the RNC program will continue to seek adaptive reuse projects such as mill conversions. The Company will continue to work closely with the Rhode Island Builders Association to further refine program offering and promote program developments to the RI building community.

## b. New for 2019

### i. Path to Zero Energy Ready

The building community, the Rhode Island Residential Stretch Code, the “Zero Energy Building Pathway to 2035, Whitepaper Report of the Rhode Island”, and the “Energy 2035: Rhode Island State Energy Plan” have helped to influence the need for – and development of – a new energy efficiency incentive mechanism called the “Path to Zero Energy Ready” that will be offered in 2019 under the Residential New Construction Program. This new path for incentives will use the existing tiered energy efficiency performance levels offered in RNC as a prerequisite and will include additional incentives for reaching the following goals:

- All electric homes
- PV ready and EV ready + building certification (DOE Zero Energy Ready Homes, the Passivhaus Institut (PHI) / Passive House Institute U.S. (PHIUS), LEED-H, and Living Building Challenge or ENERGY STAR Certified Home as a minimum)

<sup>13</sup> Compared to the energy baseline of the average energy performance of a home built in RI, referred to as the 2017 User Defined Reference Home (UDRH).

Deleted: 4755

Deleted: energy efficient

Deleted: The

Deleted: Residential New Construction and Renovation/Rehabilitation (

Deleted: )

Deleted: is

Deleted: -

Deleted: a fuel neutral program (like the other whole house programs) that provides comprehensive energy savings opportunities for single-family and multi-family projects for both the market rate and income eligible<sup>14</sup> markets. The program offers a combination of no-cost services and incentives to assist in the design and development of high-efficiency homes. In 2017, the Program set a goal of 550 projects with approximately 50% planned for new construction projects and 50% for renovation/rehabilitation projects.

Deleted: to

Deleted: ¶

The RNC program’s baseline for efficiency is derived from the average energy performance of a home built in RI, referred to as the User Defined Reference Home (UDRH). The RNC program has a tiered energy-efficiency incentive structure that compares a home’s energy performance against the UDRH. In 2017, the RI UDRH was updated based on current industry practice, which resulted in a substantial increase in the efficiency level of this baseline. The new 2017 UDRH will present a challenge for developers and builders to achieve incremental improvements above the RNC program baseline. Since the UDRH results demonstrate market transformation, they will also provide the basis for a comprehensive review of the existing RNC program structure and will inform how the program incentives will be offered in the future. As with any market transformation, the future holds promise for the development of new programs. To gain insight and collaboration, the Company will collaborate with, and possibly convene, other regional stakeholders to discuss the future of RNC programs and the prospect of – and best practices for – zero energy home programs.

Deleted: ¶

¶

¶

Deleted: \*Based on the 2011 User Defined Reference Home  
\*\*Based on the 2017 User Defined Reference Ho

Deleted: th

Deleted: add the following additional incentives

- Compliance with the Rhode Island Residential Stretch Code
- Other considerations for this pathway: demand response, smart home technologies, battery storage and energy monitoring systems.

The Path to Zero Energy Ready will also include education and awareness, training, professional certification, project certification and marketing and a model home that will be used as a demonstration for a set period of time.

The Company will continue working with Rhode Island Housing (RIH) and Rhode Island Office of Energy Resources (OER) on issuing an RFP to solicit a team to design and construct a Zero Energy Building (ZEB) housing unit(s) to serve moderate income/income eligible residents in Rhode Island. The project will be required to employ solar PV and air-source or ground source cold climate heat pump technologies to achieve ZEB status which will be funded by OER. In 2019 the Company and OER may pursue a similar demonstration project, but targeted at the market-rate community.

## ii. Shifting toward all electric homes

A significant number of projects that are already in the RNC pipeline for both single family and multifamily have electric heat pump heat and hot water and more are expected to enroll in 2019. This shift will require the need for more up-front design and technical assistance for project-teams, for contractors to be properly trained to accurately size the equipment and homeowners to be educated on the use and performance of the equipment.

## iii. Open Home Energy Rater Market

National Grid will continue to support the expansion of the larger local network of trained energy efficiency professionals, promote workforce training and development, and facilitate the successful transition to a model in which Rhode Islanders can compete effectively with experienced HERS Raters from surrounding states.

## iv. Codes and Standards

The 2017 residential baseline study showed that, while increasing compliance rates have reduced the remaining savings from energy code support, some homes are still built to levels below the state's building energy code. Since there remains an opportunity to elevate all projects to increased code compliance, the RNC program

Deleted: 4755

Deleted: the

Deleted: low- and moderate-income

Deleted: OER may

Deleted: As Rhode Island adopts progressively more efficient building energy codes (notwithstanding the current delayed code update), reaching the energy savings needed to warrant efficiency incentives becomes more difficult (assuming level compliance). Therefore, the Company is considering a re-design of the RNC program over the next three years to optimize the available savings and will push toward a zero energy home that will also support the Zero Energy Task Force Recommendations and the Power Sector Transformation efforts.

See the Commercial & Industrial plan filing for additional detail regarding the Company's Energy Codes and Appliance Standards support initiative.

Multifamily: There has been a recent increase in the new construction and major rehabilitation of large multifamily projects in Rhode Island, both in the market rate and affordable housing sector. While some of these projects fall clearly under residential programs and others commercial, there are many occasions where projects intersect, and design and construction teams interact with both programs for services and incentives. Examples include: mixed-use buildings; mid to high rise residential buildings; housing developments with extensive common areas, parking lots and garage lighting; and master-metered residential projects. To provide comprehensive, seamless service and capture all savings on behalf of both the RNC and the C&I New Construction programs, the RNC program lead vendor works, in close collaboration with the C&I program lead vendor to develop a custom program specifically designed for these types of projects.

Deleted: <#>How Goals Are Achieved ¶  
Program elements for the Program in 2017 include: ¶  
Technical Training and Financial Incentives ¶  
Partner with the RI Code Compliance Enhancement Initiative (CCEI) to conduct hands-on infield train

Deleted: and will

Deleted: expansion of the local HERS Rater community by training, certifying, and mentoring Rhode Island based individuals and companies to perform HERS ratings for projects enrolled in the RNC program. This will create a larger local network.

Deleted: A new residential baseline study completed in 2017 replaces the 2011 Baseline Study of Single-family Residential New Construction and serves as the basis for the Rhode Island User Defined Reference Home.

Deleted: Study

Deleted: s



continues to support code trainings to educate contractors. Additional energy code savings potential would become available in the event that the state updates its energy code.

[See the Commercial & Industrial plan filing for additional detail regarding the Company's Energy Codes and Appliance Standards support initiative.](#)

## 9. Behavior and Products Programs

Behavior and Products Programs serve customers in a different way and at a different point-in-time than Whole Home Solutions. With the Whole Home Solutions, a customer may not be familiar with all aspects of energy efficiency but can rest assured they are learning more about their home from trusted energy professionals. Products Programs generally work with the customer during the point-of-purchase either in a retail environment or by energy professionals assessing heating and water heating systems whereas behavior programs target and influence "how" a customer interacts with those products.

For example, a customer may replace a household energy item upon failure and may not have spent much time researching varying options since the last time a similar product was purchased. Replacing simple light bulbs twenty-years ago required considering size and overall wattage. With today's lighting purchase, a customer could consider how bright they would like the light to be (lumens per watt), the wattage, type of color, the number of lifetime hours, and the integration of smart technologies. Moreover, while switching to an efficient product is a great step, customers who leave lights running all day, or wash clothes on the hottest setting, are not fully realizing the benefits of living an efficient lifestyle.

The above example highlights the need to educate customers about efficient products prior to the purchase period and the need to continue working with customers on how they interact with these products through the years. The education process can be a complicated endeavor since the challenge is to engage customers when they are not in the market for a new item, when a bad usage habit has already formed, and National Grid's messaging is competing against other life demands. In 2019, to reach a wider range of customers, the Company will consider how it could present efficiency solutions alongside renewable energy measures a customer may be considering.

Deleted: 4755

Deleted: Considerable opportunities to streamline HERS Rating support across both the RNC and Codes and Standards are available in anticipation of such an update. See the Large Commercial and Industrial New Construction Program for details for the Codes and Standards training program.

Deleted: <#>¶  
<#>Residential Codes Savings\*¶  
<#>\*Code Savings is included in the 20198 Goals for Residential New Construction listed in section 8b.¶  
<#>Electric: Energy Savings (Annual MWh) ...

Deleted: B

Deleted: and

Deleted: onsumers

Deleted: 8

Deleted: 4755

## 10. Home Energy Reports (Electric and Gas)

### a. Overview

The Home Energy Reports (HER) program is the Company's key program to achieve energy savings through changes in customer behavior. This is achieved by presenting personalized energy usage data and encouraging desired behaviors to reduce energy consumption. Globally, over 15 million homes receive HERs from more than 100 utilities serviced by the Company's vendor. Since its launch in Rhode Island in April 2013, the HER program has helped the Company to achieve portfolio-wide savings goals while also maintaining cost efficiency.

Deleted: . In 20176 alone, the program generated over \$6.57 million<sup>15</sup> in customer bill savings.

The HER program is a statewide energy efficiency program that provides benefits for all Rhode Island residential customers. While over 288,000 customers receive HERs (i.e., the treatment group) by way of direct mail and/or e-mail, all account holders have access to insight into their energy consumption via the web tools located on the National Grid website. The program has evolved since 2013 from offering only mailed insights to now being integrated into the Company's website with online assessment tools, sending Non-Advanced Metering Infrastructure (AMI) High Usage Alerts, and utilizing segmentation to target different populations with relevant messaging.

Deleted: 300

Program savings are derived from sending hardcopy or electronic HERs (eHER) with personalized energy insights, normative messages, efficiency tips and recommendations, and promotional messages for efficiency programs in the Company's wider portfolio. The program measures energy savings by comparing on-bill energy usage between a treatment group (customers who receive the HER) and control group (customers who do not receive the HER), using both pre and post-treatment data (i.e. A Randomized Control Trial or RCT).

**Tell us about your home for a better comparison.**

To see a more accurate comparison and helpful tips, update your home profile. It won't take long—just 2-3 minutes.

✓ Home type	Single family
✓ Home size	1400 sq. ft.
? Own or rent	Unknown
? Heating type	Unknown
✓ Pool	Yes
? Dryer	Unknown
✓ Second fridge	Yes
✓ Fireplace	No

Sign in to your account and visit Track Usage.  
Go to What Uses Most to update your profile.

[UPDATE HOME PROFILE](#)

Deleted:

Since the country's first HER



Deleted: 4755

programs began in 2008, there have been numerous evaluations that validate the savings generated from these behavioral programs. Furthermore, while customers may move forward with taking an action such as changing their lighting to LED or purchasing a new piece of energy efficient equipment, the simple act of receiving the report alone may create habitual energy saving behaviors that account for the majority of savings attributed to the program<sup>16</sup>. The frequency or persistence of these habitual actions, such as turning off lights or adjusting the thermostat, is directly correlated to the cadence and even medium (i.e. print or digital version) of the reports.

The program is administered by a Lead Vendor that developed and launched the first HERs in the country. Since 2013, the Company has employed the Lead Vendor to implement the HERs in all three of its jurisdictions (Massachusetts, New York, and Rhode Island). The Lead Vendor is responsible for maintaining HER distribution groups, tracking data, managing the Web Portal, and documenting energy savings. The Lead Vendor works with the Company to craft the messaging and delivery of the HERs, and also works with the Company to introduce additional program enhancements, aligning with the Company's state-wide comprehensive marketing efforts.

## b. New for 2019

### i. Improved Tip Targeting and Personalization

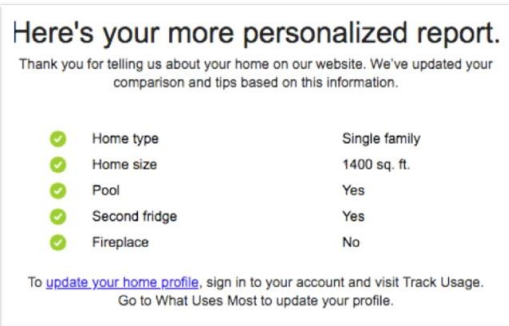
Improvements to the tip targeting algorithm will be a focus of the 2019 program in order to include better "cross-channel smartness", which avoids sending the same tip too often to customers, and an expanded set of recommendations with the most current technologies, like virtual assistant devices. Using device detection algorithms, customer input from the Home Energy Analysis survey online, and utility-sourced data, electric vehicle and solar tips can be targeted towards customers that are most likely to

Deleted: <#>2018 Goals¶

In 2017, the program underwent an updated impact evaluation that resulted in adjustments to the realization rates the program was operating under. These new realization rates are applied to the 2018 goals resulting in greater gas savings but a slight reduction in electric savings. ¶

Program

Deleted: Seasonal Efficiency Modules



<sup>16</sup> Khawaja, M. Sami and J. Stewart 2014. "Long-Run Savings and Cost-Effectiveness of Home Energy Reports Programs" Cadmus Group Inc. Winter 2014/15

Deleted: 4755

benefit from and participate in these programs.

Email Home Energy Reports will begin to include annual or bill-level disaggregation pie charts of customers' individual energy usage, helping them identify drivers of high bills. The reports will also pair these insights with specific tips to address the high-use categories. Additionally, customers who are consistently using more than their neighbors will receive an experience that tracks their progress towards reaching an attainable "neighbor rank goal".

**Deleted:** Rather than providing a static experience for customers, the Company will continue to include messaging in the digital and print versions of the HERs that align with the seasons. For example, this could take the form of a "Prep for Winter" module sent to gas customers with the goal of reminding them to be aware of their thermostat settings as winter approaches. In the case of inclement winter weather, the Company could offer an "Ice Dam Prevention" module and drive customers to have their EnergyWise Home Energy Assessment. These seasonal campaigns have shown a clear boost to savings rates.

**Deleted:** <#>Customer Notifications and Segmentation¶

Further, the team in 2019 is committed to identifying more customer attributes such as those who are disengaged, would benefit from income eligible offerings, or have the potential for solar or other renewable energy installations etc. The company will then send highly personalized reports based on the customers most important attributes.

## 11. ENERGY STAR® Lighting (Electric)

### a. Overview

National Grid has offered residential lighting incentives since the mid 1990's and the savings from this program has consistently contributed to the overall residential portfolio. During the intervening decades, lighting technologies have changed for the better and combined with supporting legislation (Energy Independence and Security Act), a nearly, full market transformation of residential lighting is anticipated by the end of this decade. An energy efficient light bulb has become so synonymous with energy efficiency that it is frequently used to represent the "green" concept and national and regional campaigns have revolved around challenging consumers to take the first step with installing an energy efficient lamp. Another nice aspect of lighting leading the efficiency charge was the low purchase cost and simplicity of installation and operation.

**Deleted:** <#> In June of 2017, the Company began emailing Non-Advanced Metering Infrastructure (AMI) High Use Alerts to customers who were trending to exceed the prior month's usage by 30% due to seasonal change. Weather-based forecast algorithms are able to predict customers' bills without AMI Data. These insights are delivered via email on an opt-in or opt-out basis, and are designed to help residential customers become aware of their trend toward higher energy usage and giving them the option to modify their behavior, thus saving energy and money. This is similar to phone plans that alert customers when they are trending to exceed their allotted data. Giving customers this information can help plan for what would have been an unexpected high-bill. ¶  
<#>Further, in fall of 2017, the Company began offering a different email alert to those customers on income eligible rates directing them to RI assistance programs such as no-cost home energy assessments, information on health and safety, budget billing options, and other payment assistance opportunities. This approach to segmentation has also been applied to the standard print HER and eHER and will continue through 2018. ¶

Deleted: N

Deleted: R

National Grid has been a leader in lighting market transformation through the early application of upstream and midstream lighting incentives thereby influencing more lighting products at retail shelves and encouraging retailers to stock more ENERGY STAR lighting products. This continuous program influence still impacts the overall marketplace today when compared to program states that have discontinued direct lighting support. A lighting evaluation completed this year in RI confirms the contributing impact that the program has achieved in transforming the market. Another key strategy that has made the lighting program successful and created consumer engagement is quick, online flash sales. Customer response over the past several years

Deleted:

**Deleted:** Recent shelf surveys show that states with continuous programs have a larger percentage of ENERGY STAR lighting products than states without program support.

Deleted: 4755

to these short-term offerings has been robust. Finally, the use of a pop-up retailer that communicates the benefits of efficient lighting while selling the product at non-traditional retail locations supports education as well as energy savings.

#### b. New for 2019

In 2019, the ENERGY STAR Lighting program will continue its market transformation. The most recent program year has concluded with the program exceeding the planned goal which limited some program activity. This year there will be a concerted effort to provide a robust budget and reach new retailers that have not yet participated in the program. A few external drivers that present uncertainty to the program include tariffs applied to Chinese made products, where the majority of light emitting diode lamps (LED) are manufactured. There is also some discussion about rolling back the Energy Independence and Security Act (EISA) of 2007 in Washington D.C. which continues to increase lighting baselines through 2020. Both of these external factors have the potential to increase the prices of LEDs which will reinforce the value of the ENERGY STAR Lighting program.

Deleted: <#>2018 Goals¶  
Demand Reduction (Annual kW)

Deleted: in

Deleted: s

**Deleted:** In 2018, the ENERGY STAR Lighting program will contribute almost 50% of the non-income eligible annual electric energy savings and almost 60% of lifetime savings. These robust targets will require that the program still target all consumers and sockets that currently do not use or have efficient lighting installed. A majority of the promotion will occur through mass market channels with information shown at the point-of-sale. There will be additional emphasis on providing incentives to hard-to-reach communities where traditional retail channels may not have as large of a presence as discount retailers. Discount retailers, locally owned mini-marts, and continued placement at food banks will all be strategic partners in expanding the reach of ENERGY STAR Lighting program.¶  
Lighting is still a well-recognized cornerstone of efficiency and with the success of online, social media based flash sales, the program has cross promoted items that are not as well-known, such as hot water saving shower products and advanced power strips. One large benefit of the rapid lighting transformation has been a corresponding drop in the cost of light emitting diode (LED) lighting. This allows the program to reduce the incentives paid on lighting products. The program will also be following the results of the Emerging Lighting Control demonstration to see if there are savings to be realized with smart, controllable lighting combined with behavior messaging.¶  
The Lead Vendor of the program, which is also the Lead Vendor of the Residential Consumer Products program, has introduced online training modules for retailers' sales staff to provide up-to-date and easily accessible product information about both ENERGY STAR lighting products as well as Residential Consumer Products. This tool allows for retailers and their employees to engage in product specific training as their schedule allows. Online education is also supported with in-store visits that verify accurate signage, discuss customer interest in various product lines, and support customer education and outreach events.

Deleted: and

Deleted: 2018

## 12. Residential Consumer Products (Electric)

### a. Overview

Residential Consumer Products incorporates both the federal Department of Energy and Environmental Protection Agency ENERGY STAR categories of consumer appliances and electronics as well as some energy savings items not included by the federal agencies. The largest savings element of the Consumer Products program comes from recycling older refrigerators, freezers, dehumidifiers, and low emissivity (low-e) storm windows. By removing these energy inefficient products from use, consumers can reduce household energy bills. The program also supports a combination of upstream and midstream incentives as well as post purchase consumer incentives. The upstream and midstream incentives encourage retailers and manufacturers to support ENERGY STAR with production and availability of products. Consumer incentives are designed to bring efficient products costs in line with less efficient equipment, thereby encouraging the adoption of the more efficient item.

In 2019, the program will support dehumidifiers, dehumidifier recycling, dryers, refrigerator and freezer recycling, room air cleaners, room air conditioners, advanced power strips, and efficient shower heads. Historically, the program has been most

successful when there is continuity in product lines as well as incentive levels to reduce both retailer and consumer confusion. The rapidly evolving consumer marketplace has made continuous support challenging due to overall improvement of appliance and consumer electronics standards.

#### b. New for 2019

In RI there are still numerous homes with single-pane glass windows. By installing lower cost storm windows, a homeowner can find increased comfort and energy savings. The low-e storm windows are priced at 20% over a clear storm window while providing an additional 50% of energy savings. The low-e storm window initiative will be designed and tested in 2019. Considerations include the trade-off between reaching the largest number of purchasers versus getting specific information about the heating fuels used where windows are installed.

National Grid will also be looking for opportunities to incorporate new items as well as continuing to support consumer products that are cost effective.

### 13. High-Efficiency Heating, Cooling and Hot Water (Electric and Gas)

#### a. Overview

The electric and gas High-Efficiency Heating, Ventilation, Air Conditioning and Hot Water Programs (HVAC Programs) promote and incentivize the installation of high efficiency equipment through customer rebates and contractor incentives. Contractors are provided training opportunities and incentives to improve accuracy of equipment sizing, installation verification and distribution system improvements.

In 2018 the HVAC Electric Program added heat pump water heaters in a mid-stream delivery model in collaboration with Lowe's in Rhode Island. This model is designed to provide an instant rebate at point of purchase thus eliminating the time a customer waits for a rebate check. If this model is successful, the Program will see a significant increase of quantities of products and corresponding budgets, and it could open the door to other products being offered in a mid-stream model.

Also in 2018, a small number of cold climate mini-split heat pumps (MSHP) were added as a measure to displace electric resistance and delivered fuel heating systems. In response to assessing the market potential and input from stakeholders and regulators,

Deleted: 4755

Deleted: National Grid will be looking for opportunities to incorporate new items as well as continuing to support consumer products that are cost effective.

Deleted: <#>2018 Goals ¶  
Demand Reduction (Annual kW)

Deleted: in

Formatted: Left

Deleted: ¶

Deleted: In 2018, the Residential Consumer Products program will investigate the support of ENERGY STAR's Retail Products Platform which is a collaborative midstream initiative that engages retailers nationwide in supporting energy efficient consumer products. This effort will allow the program to support additional appliances and electronics at a lower incentive level. The nationwide approach supports participating retailers with a dedicated scale and benefits program administrators with better tracking information. National Grid anticipates designing the program in the first half of 2018 and launching the initiative in the second half.¶  
The Company will also continue special, limited time promotions to draw consumer interest in specific items at different periods of the year. An enhanced refrigerator and freezer recycling promotion and advanced power strip flash sale have been positively received.

Deleted: Cooling

Deleted: (HVAC Programs), for both gas and electric systems,

Deleted: space heating and cooling equipment, water heating measures, and controls

Deleted: the use of tiered

Deleted: . The programs also provide

Deleted: training and

Deleted: for proper

Deleted: quality

Deleted: 17

Deleted: 4755

the quantity of MSHP estimated for 2019 will significantly increase in the HVAC program. MSHP will be promoted via targeted marketing to customers, contractor training, Home Energy Assessments, community outreach, new construction and income eligible services.

A Combination Furnace (Combi-Furnace) also called Natural Gas Furnace w/electronically commutated motor (ECM) and On-Demand Domestic Hot Water was added to the HVAC Gas Program in response to customer and contractor request.

In 2019, the Company will continue coordination between the High Efficiency Gas Program and the Gas Sales Program to promote high efficiency heating systems during the gas conversion process. This seamless integration will provide the maximum value for the customer at the time of conversion – when energy efficiency improvements make the most sense.

#### **b. New for 2019**

##### **i. Cold Climate Mini-Split Heat Pumps**

Building off of the 2018 roll out of electric heat pumps in the HVAC program, and the in-depth conversations with RI stakeholders and regulators, the program will grow in scope significantly in 2019. The HVAC electric program will increase the quantities of MSHP based on customers who have previously completed their energy assessment and weatherization. The EnergyWise, Multi-Family and Income Eligible Services Programs will promote the beneficial heating through their respective retrofit programs. And the new construction program will work with project teams to develop all-electric homes.

The overall beneficial electrification program will be run through the HVAC electric program and will entail the following:

- Assessing and refining equipment incentives for market rate and income eligible customers
  - The Company seeks to standardize installation costs and will work with stakeholders to ensure equitable costs.
- Community-based marketing
  - The four towns that will be part of the 2019 Community Initiative will have MSHP as one of the performance metrics in their program. The Company will work with the towns to provide marketing materials and education about the program.
- Oil/propane dealer training and support for the installation of MSHP

**Deleted:** <#>The programs are administered by one lead vendor that provides outreach and programmatic support to participating contractors and distributors to ensure they have the knowledge to effectively communicate the program offering to customers, and the technical expertise to offer quality installations. The Lead Vendor provides contractor meetings and trainings during the year, participates in relevant industry events and offers ongoing technical assistance to participating contractors.¶  
<#>While the Lead Vendor is the face of the Program, contractors continue to serve as the Program's primary delivery mechanism. The Lead Vendor works closely with the contractor community to provide trainings and outreach to ensure accurate and efficient delivery of Program services to customers, while also improving contractors' skills and capabilities. In 2018 contractor outreach events will continue to cover equipment specifications, right-sizing equipment, proper installation of outdoor reset controls, sealing and insulating equipment to achieve optimal performance, awareness of current code requirements, and the best ways to assist customers with rebate submissions. Particular focus will continue to be given to the technical requirements of condensing boilers to ensure that contractors accurately install the equipment to achieve the efficiency potential of the equipment. In 2018, the program will collaborate with NEEP and other stakeholders to develop and offer training to contractors on proper sizing and installation of heat pump systems. ¶  
<#>Participation in the Program is attributed to two channels: contractors offering energy efficient products/incentives and customers' request for efficient equipment to reduce energy bills. ¶  
<#>In 2017 the Company offered qualified electronically commutated motor (ECM) pumps in an upstream incentive model. The program proved to be effective in increasing the amount of ECM rebates issued in 2017. In 2018, the Company will build off the ECM success and offer heat pump water heaters in either an upstream (to the manufacturer) or midstream (distributors and contractors) delivery model. The outcome of this initial launch, along with review of other successful regional programs (i.e., Connecticut upstream models), will inform the process for delivering future HVAC

**Deleted:** in

**Formatted:** Numbered + Level: 1 +  
Numbering Style: a, b, c, ... + Start at: 1 +  
Alignment: Left + Aligned at: 0.25" + Indent at: 0.5"

**Formatted:** Font: Bold

Deleted: 4755

The HVAC Electric program team will participate in regional cold climate heat pump /strategic electrification working groups such as NEEPs Cold Climate Air Source Heat Pump Working Group. Other NEEP engagement will include contributing to a study that is aimed at demonstrating integrated control strategies to maximize usage of ductless mini-split heat pumps and identify additional savings. In addition, the Team will work closely with OER, the Collaborative, EERMC, contractors and customers to obtain feedback for implementing and/or improving the program.

Deleted: mini-split

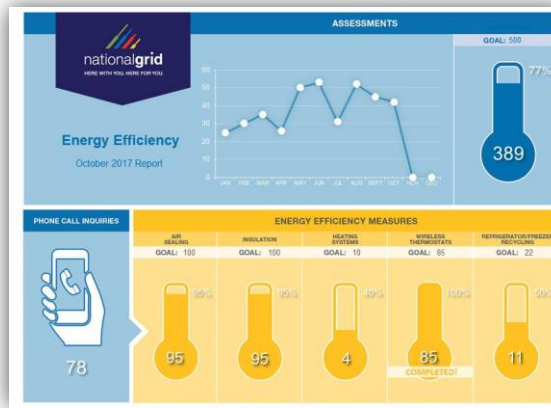
Formatted: Heading 3, Numbered + Level: 1 + Numbering Style: i, ii, iii, ... + Start at: 1 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.75"

## ii. Central Air Conditioners

Because central air conditioners (CAC) place a large demand on the grid, the HVAC Electric program will launch an Early Retirement HVAC program in 2019. The HVAC Electric team will work closely with the RI EnergyWise team and RI HVAC contractors to identify customers that could be eligible for early replacement of their CAC.

## iii. Gas Equipment and Marketplace

In 2019, the Gas Program will re-introduce the Indirect Hot Water Heater to provide customers another high efficiency water heating option. In addition, the Online Marketplace will be updated to provide customers online access to instant incentives on programmable and wireless thermostats and other small measures that align with customer self-install products.



Deleted: In 2018, the Company added a modest number of ductless air-source heat pumps in an effort to begin the process of a long-term market transformation of displacing electric resistance or delivered fuels heating systems with high-efficiency cold climate electric heat pumps. Qualified cold climate heat pumps are an effective technology for providing space heat in the New England region as demonstrated in the NEEP Northeast/Mid-Atlantic Air-Source Heat Pump Market Strategies Report 2016 Update. In addition, providing space heat via high efficiency heat pumps is an important strategy for reducing greenhouse gas and other air emissions produced by fossil-fuel fired heating equipment. As this program develops and evolves, Rhode Island can also benefit from the best practices that are available from other states in New England including Vermont, Connecticut, and Maine. ¶

The Company proposes developing a cold climate heat pump program offering in 2018. The program offers a small number of units in 2018 as the program development will take place in the beginning of the year. The proposed program offering would include customer education about the benefits of the technology, criteria for proper use and optimal operation of the units; contractor education about the product, sizing and installation requirements; strategic marketing to customers through program segmentation; research, and piloting of available enhancements (i.e., integrated controls that tie into both the heat pump and existing heating system, mid/up-stream markets, bundling of incentives); an incentive structure that both builds the market and ensures the heat pump is used as the primary heat source in the home; potential required contractor qualifications, methodology for QA/QC. Future incentive structures may include a bundling strategy to include heat pumps, weatherization and PV for a deeper saving and potentially a more compelling offering. ¶ Based on the marginal cost effectiveness of heat pumps per the MA/RI Cadmus Ductless Mini-Split Heat Pump Evaluation (December 30, 2016), this program will start out offering a small quantity of qualified heat pumps in order to develop, test, and refine the program if installation or implementation issues arise. The program will need time in 2018 to develop proper training tools (based on NEEP design, selection, installation and operation best practices guides), incentives, program implementation processes and to properly identify eligible customers where this technology can be the most cost effective. The program will need to ...

Deleted:

## 14. Community-Based Initiatives

### a. Overview

The Rhode Island Community-Based Initiative is the Company's energy efficiency awareness campaign that drives program participation by deep municipal engagement through the advocacy of local officials and town residents. The Company provides goals for efficiency measure increases and small business program projects to municipalities.



Deleted: 4755

These municipalities, in turn, work to achieve the goals with the help of volunteers and promotions at local events. Small businesses are invited to workshops organized in conjunction with the local chamber of commerce or other local business organizations. These workshops will inform customers about the National Grid Small Business Direct Install Program, C-PACE financing, and demand response.

Start-up funding is provided, along with comprehensive marketing toolkits and training to have a discussion about energy efficiency with their residents and small businesses. Frequent check-in calls allow the communities to speak with the Company regarding progress and share tactics and ideas with other participating municipalities. At the end of the year, municipalities earn grant monies directly correlated to the increase in volume of the identified goal. These funds are then utilized for energy saving projects on a municipal property, or on educational energy programs for community members.

#### **b. New for 2019**

In the first quarter of the year, the Company will recruit<sup>18</sup> four (4) Rhode Island municipalities based on past program participation and possible demand response opportunities. The Company shall use the RI System Data Portal ("Portal") which was developed in 2018. The Company will provide goals to these municipalities based on increases in energy efficiency measure adoption, demand response program enrollment, small business projects, and more.

A major focus for 2019 will be the promotion of new technologies within the communities such as cold climate mini-split heat pumps, Wi-Fi Thermostats, and demand response offerings. The Company will also create case studies highlighting the efforts of the municipality and the energy saving projects that were installed as a result of the program, thus informing all residents of the contribution they made to the betterment of their community.

In 2019 the Community Initiative will expand to include large commercial and industrial customers as well as the municipal buildings themselves. By bringing awareness and recognition of energy efficiency efforts at the corporate and municipal levels to employees, the Company can broaden its reach to these sectors.

Deleted:

---

<sup>18</sup> In addition to the company actively recruiting participants, a new landing page on the Company website is currently being created through which all interested communities or residents may contact the program manager and express interest in participation.

Deleted: 4755

Additionally, the Company commits to promoting workforce development through the creation of customized materials which municipalities may distribute as part of the program. Where appropriate, the Company will also promote the hosting of workforce and code trainings within the communities.

## 15. Residential Connected Solutions

National Grid will implement an active demand reduction program based on the recent evaluated demonstration efforts. National Grid ran residential active demand reduction demonstrations in the summer of 2016, 2017, and 2018 targeting summer cooling loads. The Company believes the modifications made to the demand response program due to lessons learned during the demonstration will allow the program to reach scale and operate cost-effectively.

In 2019 the core model remains focused on reducing cooling demand during summer peak events, typically targeting twenty hours per summer. The Program Administrators may have to consider more hours to ensure the peak hour(s) achieve demand reduction. The design is a bring-your-own-device (BYOD) model, starting first with communicating thermostats (typically Wi-Fi) controlling central air units. Additional eligible connected/communicating devices may include batteries, lighting, water heaters, pool pumps, electric vehicles, and other devices. Incorporation of additional devices will depend on device saturation, manufacturer concentration, and the costs associated with integrating and enabling load control on each type of device. Customers with eligible technology will be offered the opportunity to enroll in the active demand offering and given financial incentives to participate in demand reduction during summer peak events. Connected Solutions will seek to enroll both customers with devices already installed and customers installing devices through the energy efficiency delivery pathways.

Eligible customers' devices will be connected to a platform through an application programming interface (API), a mechanism that allows two different electronic systems to exchange core data and interact in a common language. Program Administrators will send a signal to the device during an event that causes the controller to reduce the demand of the connected device. Events will be called in advance, primarily in the months of June, July, August, and September.

Deleted: ¶

**Deleted: <#>Overview ¶**

<#> For the past four and a half years, the Company has been on-the-ground in 17 of Rhode Island's 39 cities and towns speaking directly with customers about the benefits of energy efficiency. The initial call to action was for customers to pledge to find four ways to save by making simple behavioral changes in their homes over the course of approximately 20 weeks. Mayors, Administrators, and other local elected officials lent their voices to the message of efficiency through passage of resolutions, mailed communications, and attendance at events. When the participation goal was achieved, the town was named an *Energy Champion* and granted \$5,000-\$10,000 to be used for energy efficiency improvements on a municipal project. ¶

<#>The program evolved over the years; from a simple ask to save more energy by turning off lights to running a Video Challenge engaging thousands of students across the state and encouraging the creation of Energy Task Forces in local communities. For 2018, the Company proposes to continue this evolution in creating a slightly different community model focused more directly on participation and savings goals. ¶

<#>2018 Goals¶

<#>Early in the program year, two Rhode Island municipalities will be recruited and assigned goals based on historical performance (e.g. mini-split heat pumps installed, refrigerators recycled, weatherizations, home energy assessments, etc.). These municipalities will then be provided with start-up funding, comprehensive marketing toolkits, and supported with training to have a discussion about energy efficiency with their residents. Frequent check-in calls will allow the communities to speak with the Company regarding progress and share tactics and ideas with other participating towns. At the end of the year, towns will be rewarded with grant monies directly correlated to the increase in volume of the identified measures. ¶

<#>The Company will work closely with municipal leadership to identify community voices in the schools, local clubs and businesses. Unique to the initiative in 2018, the Company will engage more directly with large and small business owners within the community to not only engage them as energy saving advocates for their employees, but to also encourage their participation in the Company's C&I energy efficiency programs.¶

Deleted: "

Deleted: "

Deleted: ¶



Deleted: 4755

## 16. Marketing

### a. Overview

The goals of the Company's marketing efforts are to build awareness, educate customers, provide a positive customer experience, and drive participation in the Company's efficiency offerings and services. The Company uses an integrated approach with general awareness tactics (i.e. print ads and radio) as well as digital and direct one-to-one tactics (such as e-mail and direct mail) at the program level to generate interest, in addition to face-to-face interactions at events to educate customers at a personal level.

### b. Delivery and 2018 Success

Rhode Island continues to see strong residential customer familiarity levels of energy efficiency, up nearly 5 percentage-points year-to-date (as of July, 2018). In support of growing familiarity with energy efficiency programs, the Company launched a broad-based, offline energy efficiency awareness campaign inclusive of broadcast and cable TV, radio, and print. This combination of offline channels has shown significant impact on online metrics, tying broad-based, high-frequency awareness channels to consumer interest and intent to participate. Year to date, the Company has seen a 10% increase in website visits, and 71% increase in on-site conversion related actions.

In addition, the Company set several key strategic marketing approaches to meet 2018 goals. These approaches were included as part of an overarching strategic marketing plan and were developed based on residential customer research, propensity modeling, media habits research and understanding behavior data. One key strategy incorporated in 2018 was to re-orient the marketing approach to better support the customer during micro-moments.

Recognizing that consumer purchasing behaviors are continually changing, the 2018 B2C marketing effort sought to adapt to these habits, shifting the strategic approach to be more considerate of the global customer experience. Four stages of the customer journey were identified as key insertion points to connect to the consumer: Awareness, Desire, Consideration, and Conversion.

B2C programs and products were grouped into two categories (Whole Home Solutions & Home Products) to better align with the customer behavior. Whole Home Solutions products and programs were classified as those that required a more long-term

Deleted: <#>Residential Demonstration and Research and Development¶  
<#>Connected Device Demonstration ¶  
<#>National Grid will continue its connected device demonstration project which began in 2016. The main focus of this pilot in 2018 will be to reduce program administration, marketing, software, and vendor costs while maintaining customer incentives in order to make this a cost effective program (BCR > 1). This will involve putting the demand response management system (software) and the vendor fees out for competitive bids. Early in 2018 National Grid will finish a load potential study and a study on the applicability of various residential appliances for demand response. The Company will expand its program to include any appliances that have a reasonable chance of being cost effective. The Company will also improve the customer experience in 2018 by including information on customers' demand response enrollments in their National Grid portal and by streamlining the enrollment process.¶  
<#>Energy Storage¶  
<#>The Company will test behind-the-meter energy storage activated during summer peak periods. This effort will be coincident to the Connected Solutions program and will be dependent on homeowners owning batteries that can be controlled and deployed during summer peak timespeak times. is going to spend 2018 working with a human-centered design company to conduct consumer research to better understand customer driven needs and opportunities for the intersection of distributed generation, battery storage, and electric vehicles. Currently there is very little marketplace understanding of consumer demands or desire for the suite of products. Ideally, the design firm will assist in developing varying consumer packages, at different price points, that can then be tested informally in a focus group setting. The consumer packages will be refined as a result of customer feedback and will then be sent out to a larger population of RI customers that have already invested in solar for their homes. National Grid believes the findings of this research could lay the foundation for a demonstration in 2019. The Company will also be observing activities in neighboring states and around the nation in order to cross-compare and share learnings across jurisdictions.¶  
<#>Emerging Lighting Controls¶  
<#>The Company seeks to evaluate the potential opportunity presented by lighting controls, paired with LED lighting, for customers. The prior year's demonstration consisted of 85 customers split (...)

Deleted: , provide

Deleted: 4755

decision-making process, research, planning, and greater monetary investment (ex. a heating system replacement). Home Products were classified as a purchase driven by need or promotion with a lower cost investment (ex. LED bulbs).

Whole Home Solutions and Home Products each supported specific stages of the customer journey with corresponding media tactics to align with micro-moments within the customer journey. For Whole Home Solutions, large canvas channels such as native and print as well as digital channels across devices were utilized. Home Products were supported in large part by the ecommerce promotions with special offers as well as Facebook and Paid Search to drive online sales.

[Need to insert paragraph on websites visits, conversions and product sales on ecommerce site]

### c. Energy Innovation Hub

In the Rhode Island Energy Innovation Hub (“Hub”), located in the southwest corner of the Dunkin’ Donuts Center, Providence, RI, is a community engagement destination designed to expand customer education and outreach and enrich the customer’s understanding of energy. The space and exhibits will reflect energy solutions accessible to all customers, innovative solutions for system reliability and will provide visitors with a vision of a sustainable future. Exhibits will present technologies available to create smart, energy-efficient homes, information about demand response programs, examples of renewable technologies, information on electric vehicles, storm management and core utility services. The exhibits are designed to encourage customers to take action and sign up for the many services and incentives offered to help reduce energy consumption. The Hub will also serve as a convening space for gatherings to discuss, and elevate, energy-related issues.

The three main goals of the Hub are to educate customers about energy topics, empower customers to take action to sign up for ways to reduce their energy consumption, and to provide a convening space for organizations to discuss the clean energy future.

The Hub will be reserved on Thursdays for organizations to hold meetings in the space. The Company will proactively reach out to the following categories of organizations to encourage them to visit the Hub as well as reserve the space for meetings:

- State and local government

Deleted:

**Deleted:** <#>Marketing ¶  
<#>Overview ¶  
<#>The goals of the Company’s marketing efforts are to build awareness, educate customers, provide a positive customer experience, and drive participation in the Company’s efficiency offerings and services. The Company uses an integrated approach with general awareness tactics (i.e. print ads and radio) as well as digital and direct one-to-one tactics (such as e-mail and direct mail) at the program level to generate interest. ¶  
<#>Delivery and 2017 Success ¶  
<#>Rhode Island continues to see strong residential customer familiarity levels of energy efficiency, increasing 1 percentage-point year-over-year (as of July, 2017). In support of growing familiarity with energy efficiency programs, the Company launched energy efficiency advertisements on cable television for the first time in mid-June, 2017. This offline channel has shown significant impact on online metrics, tying broad-based, high-frequency awareness channels to consumer interest and intent to participate. During the first month, the Company saw a 77% increase in related search volume and a 13% participation increase in the featured program. ¶  
<#>In addition for 2017, the Company set several key strategic marketing approaches to meet 2017 goals. These approaches were included as part of an overarching strategic marketing plan and were developed based on residential customer research, propensity modeling, media habits research and understanding behavior data. The key strategic marketing approaches include: targeting micro-segments, advancing the digital path to participation and activating influencers, discussed below. ¶  
<#>Micro-Segment Targeting ¶

Deleted: 2017 the Company designed and built

Deleted: . The Energy Innovation Hub (“Hub”)

- Non-Profit organizations
- Businesses (owners, developers, tenants)
- Residents
- Energy Thought Leaders
- Universities and Colleges, Technical/Vocational Schools, Schools K – 12
- Trades
- Employees and Executives

By partnering with local colleges and universities National Grid envisions the Hub as a multi-faceted nexus thriving with innovation, excitement and passion. The Company intends to empower students and faculty to join us by integrating their disciplines in areas such as energy, engineering, hospitality, policy, marketing and community service. By including educational partners in the development of the Hub, National Grid will create stewards for the energy future of tomorrow.

Deleted: 4755

Comment [JR4]: To be updated for 2nd draft.

## 17. Residential Measures and Incentives

The following tables list the groups of measures offered in the residential programs, their planned quantities and incentives. Each group may be comprised of many measures.

Electric Programs			
Program	Measure	Units	Incentive
EnergyWise Single Family	Aerator - Dual Fuel Only	100	Average Incentive based on measure mix
	Air Sealing Kit (Oil)	1000	
	FIXTURES	400	
	LED Bulbs	220000	
	LED Fixture	250	
	LED Outdoor Fixture	500	
	Pre-Wx	100	
	Refrig rebate	60	
	Refrigerator Brush	6300	
	Showerhead	250	
	Smart Strip	13000	
	Thermostat - Elec Heat only	300	
	Thermostat - Oil Only	60	
	Torchiere	15	
	WiFi Thermostat	100	
	WiFi Thermostat - DR Enabled	150	
	Wx - GAS	2275	
	Wx - OIL	1823	
	Wx Elec - Elec Heat only	183	
EnergyWise Multifamily	Pipe Insulation	30	Average Incentive based on measure mix
	Participant	10000	
	Participant	6000	
	Aerator	569	
	Aerator Oil	161	
	Air Sealing- Electric with AC	1461	
	Air Sealing - Oil	51	
	Common External LED Fixture	1457	
	Common External Reflector	217	
	Common Internal LED Fixture	3955	
	Common Internal Reflector	651	
	Dwelling External LED Fixture	31	
	Dwelling External Reflector	3	
	Dwelling Internal EISA Exempt	6595	
	Dwelling Internal Reflector	2630	
	Insulation-electric with AC	1090	
	Insulation-Oil	41	
	Pipe Wrap Domestic Hot Water- Oil	62	
	Pipe Wrap Heating Oil	14	
	Refrig rebate	19	
	Showerhead Elec	221	
	Showerhead Oil	66	
	Smart Strip	4225	
	Thermostat Elec with AC	2263	
	Thermostat-Oil	37	
	TSV Showerhead-Electric	63	
	TSV Showerhead-Oil	39	
	Common External LED Bulbs	1301	
	Common Internal LED Bulbs	4368	
	Dwelling Internal LED Bulbs	15840	
	Custom	11	
	Vending Miser	9	

The Narragansett Electric Company  
d/b/a/ National Grid

Docket No. XXXX

Attachment 1

Page 34 of 53

Deleted: 4755

Residential New Construction	CODES AND STANDARDS	1	Average Incentive based on measure mix
	LED Bulbs	10000	
	Renovation Rehab CP	50	
	Renovation Rehab Tier 1 Home	40	
	Renovation Rehab Tier 2 Home	2	
	Renovation Rehab Tier 3 Home	2	
	Tier 1 Home	85	
	Tier 2 Home	60	
	Tier 3 Home	7	
ENERGY STAR®HVAC	Central Air QIV	65	\$ 175.00
	Central Air SEER 16.0 EER 13	376	\$ 250.00
	Central Air SEER 18.0 EER 13	18	\$ 250.00
	Down Size 1/2 Ton	20	\$ 250.00
	Duct Sealing	5	\$ 100.00
	ECM Furnace	328	\$ 100.00
	Circulator Pump	2400	\$ 100.00
	Mini Split Heat Pump QIV	27	\$ 175.00
	Heat Pump SEER 16.0 EER 12 HSPF 8.5	15	\$ 250.00
	Heat Pump SEER 18.0 HSPF 9.6	13	\$ 500.00
	Mini Split HP SEER 18.0 HSPF 9	400	\$ 250.00
	Mini Split HP SEER 20.0 HSPF 11	551	\$ 500.00
	Heat Pump Water Heater <55 gallon, Electric	750	\$ 750.00
	WiFi Enabled Thermostat with Cooling - Gas	750	\$ 25.00
	Oil Fuel Switching	15	\$ 3,000.00
ENERGY STAR® Products	Oil Fuel Switching ROF	5	\$ 3,000.00
	Electric Resistance Fuel Switching	25	\$ 3,000.00
	Dehumidifier Rebate	400	\$ 30.00
	Dehumidifier Recycling	150	\$ 30.00
	Energy Star Dryer	300	\$ 50.00
	Freezer Recycling	300	\$ 63.00
	Ladybug shower adapter electric hot water	40	\$ 11.00
	Ladybug shower adapter Gas Hot Water	40	\$ 11.00
	Ladybug shower adapter Oil or Propane Hot Water	10	\$ 11.00
	Pool pump - 2 speed	50	\$ 250.00
	Pool Pump - variable	100	\$ 600.00
	Refrigerator Recycling	2000	\$ 63.00
	Refrigerator Recycling (Primary)	2500	\$ 63.00
	Roadrunner Showerhead Gas Hot Water	75	\$ 15.00
	Roadrunner shower head electric hot water	100	\$ 15.00
	Roadrunner Showerhead Oil or Propane Hot Water	75	\$ 15.00
	Room Air Cleaners	120	\$ 40.00
ENERGY STAR® Lighting	Smart Strip	5000	\$ 20.00
	Advanced Power Strip	100	\$ 35.00
	Room Air Conditioner 10.8	100	\$ 40.00
	LED (15,000) -Hard to reach	120000	\$ 2.00
	LED Bulb (15,000)	600000	\$ 1.50
	LED Bulb (Hard to Reach)	40000	\$ 3.50
	LED Bulbs	200000	\$ 2.75
	LED Bulbs (EISA EXEMPT)	20000	\$ 3.50
	LED Fixture	220000	\$ 9.00
	LED Outdoor Fixture	2300	\$ 9.00
	LED Reflectors	240000	\$ 5.00
	LED School Program Bulb	8000	\$ 6.50
	School Program	120000	\$ 3.50
	Speciality Bulbs	36000	\$ 7.50

The Narragansett Electric Company  
d/b/a/ National Grid

Docket No. XXXX

Attachment 1

Page 35 of 53

Deleted: 4755

Home Energy Reports	New Mover electric	23135	\$ 8.65
	New movers dual fuel	13736	\$ 8.65
	Opt-out dual fuel	99951	\$ 8.65
	Opt-Out electric	118910	\$ 8.65
	Refills	29268	\$ 8.65
Single Family - Income Eligible Services	Window AC Replacements	550	Average Incentive based on measure mix
	Appliance Removal	5	
	Dehumidifier Rebate	30	
	DHWater Measure (elec)	20	
	DHWater Measure (gas&other)	20	
	DHWater Measure (OIL)	20	
	Participants	2750	
	Replacement Freezer	165	
	Heat System Replacement	270	
	LED Bulbs LI	63250	
	Refrig rebate	1760	
	Smart Strip	3575	
	Waterbed	3	
	Wx DelFuel	440	
	Wx Elec	35	
EnergyWise Income Eligible Multifamily Retrofit	Aerator- Oil	320	Average Incentive based on measure mix
	Air Sealing- Electric with AC	2	
	Air Sealing- Oil	102	
	Common External LED Fixture	1189	
	Common External Reflector	468	
	Common Internal LED Fixture	4999	
	Common Internal Reflector	43	
	Custom	20	
	Dwelling External LED Fixture	29	
	Insulation - Electric with AC	90	
	Insulation- Oil	82	
	Participant (Non-energy Benefits)	4800	
	Pipe Wrap Domestic Hot Water- Oil	122	
	Pipe Wrap Heating Oil	41	
	Refrigerator Rebate	65	
	Showerhead Electric	27	
	Showerhead Oil	210	
	Smart Strip	1802	
	Thermostat AC Only	2	
	Thermostat Elec with AC	2	
	Thermostat Heat Pump	2	
	Thermostat Oil	205	
	TSV Showerhead Electric	186	
	Dwelling External Reflector	20	
	Dwelling Internal EISA Exempt	1317	
	Dwelling Internal Reflector	122	
	Common External LED Bulbs	866	
	Common Internal LED Bulbs	3088	
	Dwelling Internal LED Bulbs	7137	
	Vending Miser	4	

The Narragansett Electric Company  
d/b/a/ National Grid

Docket No. XXXX

Attachment 1

Page 36 of 53

Deleted: 4755

Gas Programs			
Program	Measure	Units	Incentive
EnergyStar® HVAC	BOILER RESET	25	\$ 100
	Boiler90	250	\$ 450
	Boiler95	350	\$ 800
	COMBO CONDENSING	100	\$ 650
	COMBO CONDENSING 95	375	\$ 1,200
	Furnace95ECM	225	\$ 300
	Furnace97ECM	135	\$ 500
	WATER HEATER - ON-DEMAND 82	225	\$ 250
	TANK WATER HEATER 67	30	\$ 100
	WATER HEATER - ON-DEMAND 94	250	\$ 600
	WiFi Thermostat - cooling and htg	300	\$ 75
	WiFi Thermostat - gas ht only	300	\$ 100
	Programmable Thermostat	100	\$ 25
	Combo Furnace	300	\$ 450
EnergyWise	Aerator	150	Average incentive based on measure mix
	Weatherization	2,275	
	Air Sealing Kit (Gas)	1,000	
	Showerhead	260	
	Pipe Wrap	1,250	
	THERMOSTAT	400	
EnergyWise Multifamily	WiFi THERMOSTAT	95	Average incentive based on measure mix
	Air Sealing	3,914	
	Custom Non-Lighting	30	
	Participant	2,500	
	Faucet Aerator	1,517	
	Insulation	3,511	
	Low-Flow Showerhead	593	
	Pipe Wrap (Water Heating)	509	
	Programmable Thermostat	480	
Home Energy Reports	TSV Showerhead	346	\$ 3.80
	WiFi thermostat gas	140	
	New movers dual fuel	13,738	
	Opt-out dual fuel	73,908	
Residential New Construcion	Opt-out gas only	16,971	\$ 3.80
	Refill	34,383	\$ 3.80
	CODES AND STANDARDS	1	Average incentive based on measure mix
	CP	15	
	CP-DHW	15	
	RR CP	70	
	RR CP-DHW	70	
	RR Tier 1	3	
	RR Tier 1 - DHW	3	
	RR Tier 2	60	
	RR Tier 2 - DHW	60	
	RR Tier 3	1	
	RR Tier 3 - DHW	1	
	Tier 1	31	
	Tier 1 - DHW	31	
	Tier 2	75	
	Tier 2 - DHW	75	

The Narragansett Electric Company  
d/b/a/ National Grid

Docket No. XXXX

Attachment 1

Page 37 of 53

Deleted: 4755

Gas Programs			
Program	Measure	Units	Incentive
Single Family - Income Eligible	Heating System Replacement	175	Average incentive
	Weatherization	500	based on measure
Income Eligible Multifamily	Air Sealing_LI	759	
	BOILER Commercial_LI	33	
	BOILER_LI	15	
	CUST NON-LGT_LI	40	
	Faucet Aerator_LI	2,549	
	FURNACE_LI	15	Average incentive
	Insulation_LI	774	based on measure
	Low-Flow Showerhead_LI	1,126	mix
	Participant (NEB)_LI	3,500	
	Pipe Wrap (Water Heating)_LI	701	
	Programmable Thermostat_LI	780	
	TSV Showerhead_LI	294	
	Wifi Thermostat gas_LI	20	