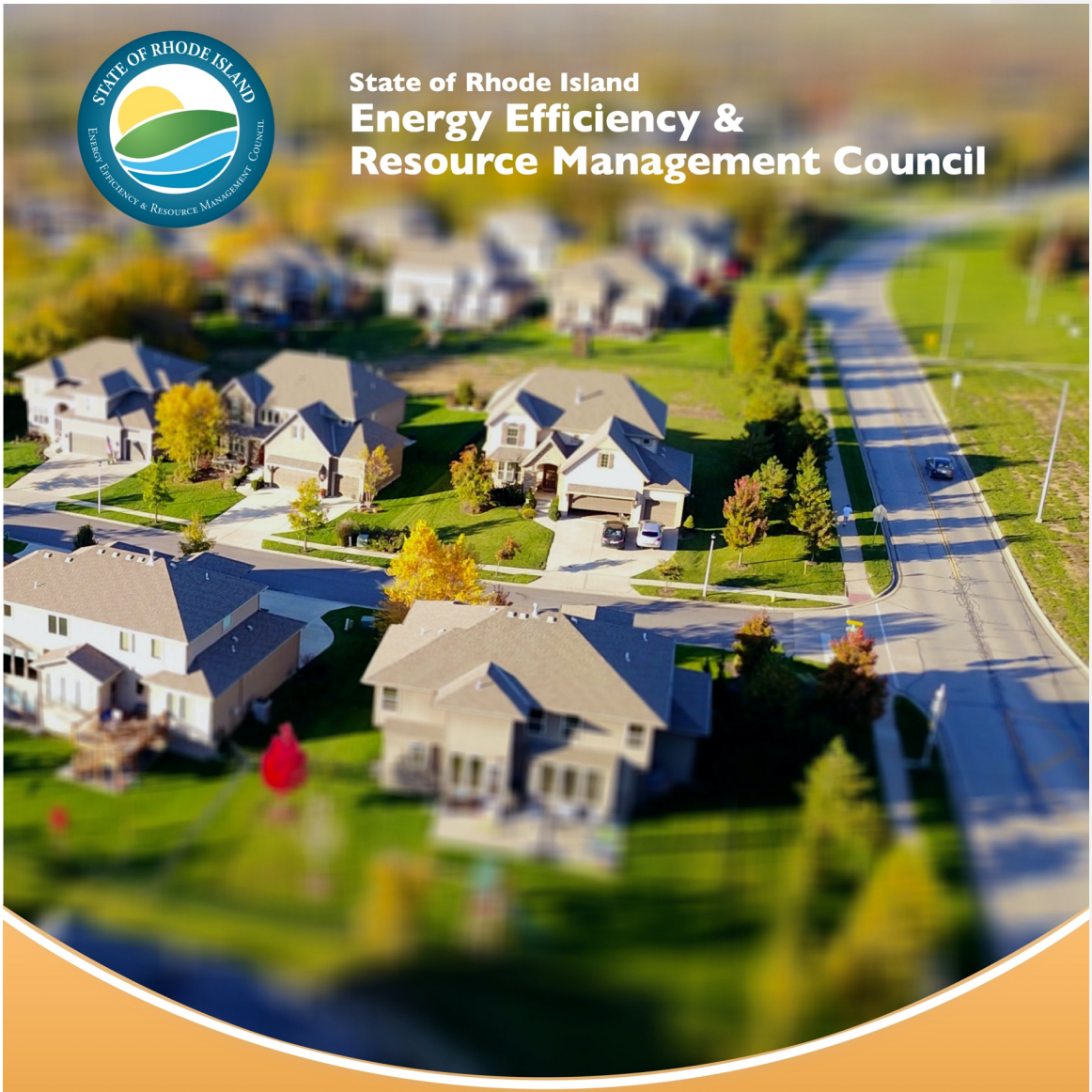

State of Rhode Island

Energy Efficiency & Resource Management Council

Annual Report
2020

DRAFT

March 2020

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STATE OF RHODE ISLAND
ENERGY EFFICIENCY & RESOURCE MANAGEMENT COUNCIL

2020 ANNUAL REPORT EXECUTIVE SUMMARY

How Energy Efficiency is Paying Off for Rhode Islanders

XXX
full-time equivalent jobs in 2019

XXX
firms delivered energy efficiency services in 2019

XXX million
metric tons of greenhouse gas emissions prevented over the life of efficiency measures installed in 2019. Equivalent to taking

XXX cars
off the road for one year

$XXX million
in total benefits achieved by efficiency programs in 2019

2020 Policy Recommendations

Continue Least Cost Procurement Law (§ 39-1-27)

Expand workforce development in energy efficiency and renewables

Share building energy information with new homeowners and renters

Collaborate to ensure program accessibility for all types of customers

Adopt energy and water efficiency standards for appliances

Coordinate across energy programs and policies

The Rhode Island Energy Efficiency & Resource Management Council (EERMC) is a group of stakeholders that represents all Rhode Islanders to ensure the utility is investing in the least expensive energy resource – energy efficiency. Learn more at www.rieermc.ri.gov

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LETTER FROM THE CHAIR

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LETTER FROM THE EXECUTIVE DIRECTOR

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ABOUT THE EERMC

COUNCIL MEMBERSHIP

The EERMC consists of fourteen members appointed by the Governor with the advice and consent of the Senate. Ten members are voting members with knowledge of energy regulation and law, environmental issues pertaining to energy, energy design and codes, energy efficiency education and employment tracking, and energy users in the following sectors: large commercial and industrial, small commercial and industrial, large non-profit, residential, low income, and municipal. Four members are ex-officio, non-voting members including the Commissioner of the Office of Energy Resources and others representing an electric distribution entity, a gas distribution entity and the fuel oil or heating fuel industry. Members serve voluntarily and meet year-round.

COUNCIL MEMBERS

Christopher Powell, Chair
Voting Member Representing Expertise in Energy Regulation and the Law
Director of Energy Management and Commissioning, Yale New Haven Health System

Anthony Hubbard, Vice Chair
Voting Member Representing Low Income Energy Consumers
Director, YouthBuild Providence

Peter Gill Case
Voting Member Representing Expertise in Energy Design and Code
Principal, Truth Box, Inc.

Roberta Fagan
Ex-Officio Member Representing Expertise in Delivered Fuels
President, Energy Marketers Association of RI

Joe Garlick
Voting Member Representing Small Non-Profit Institutions
Executive Director, NeighborWorks Blackstone River Valley

Thomas Magliocchetti
Voting Member Representing Large Non-Profit Users
Former Vice President, Facilities Management, Rhode Island Hospital

Bill Riccio
Voting Member Representing Municipalities
Director of Public Services, City of Newport

Butch Roberts
Voting Member Representing Large Commercial & Industrial Users

Commented [RS4]: Need Title & Association

Kurt Teichert
Voting Member Representing Expertise in Environmental Issues
Senior Lecturer in Environmental Studies, Brown University

Nicholas Ucci
Ex-Officio Member - Executive Director, EERMC
Acting Commissioner, Office of Energy Resources

Karen Verrengia
Voting Member Representing Energy Efficiency Education and Employment Tracking
Building Operator Certification Course Manager, CLEAResult

Bob White
Voting Member Representing Small Commercial & Industrial Users
Energy Consultant (Propane) & Licensed USCG Captain

Appointment Pending
Voting Member Representing Residential Users

Appointment Pending
Ex-Officio Member Representing Utilities

Appointment Pending
Ex-Officio Member Representing Utilities

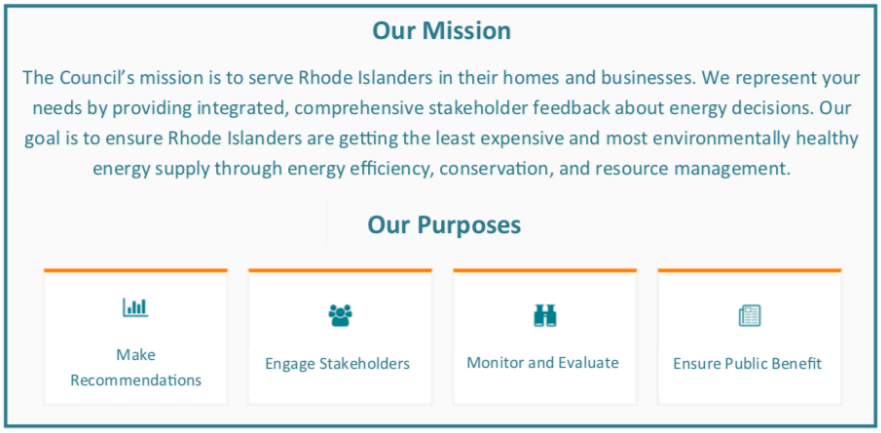
WHO WE ARE & WHAT WE DO

The Energy Efficiency and Resource Management Council (EERMC) has been providing an integrated, comprehensive, public, stakeholder-driven organizational structure to secure for Rhode Island's energy consumers the economic and environmental benefits of energy efficiency since the Council's formation in 2006 under amendments to R.I.G.L. § 42-140.1.

In representing small and large businesses, non-profit organizations, homeowners and renters, and municipalities and government, the EERMC oversees highly successful programs that allow Rhode Islanders to access energy efficiency instead of having to purchase more costly energy supply. A valuable outcome of these programs is to also support a growing industry of Rhode Island energy efficiency service and product suppliers, which support local job growth and in-state financial investments.

The effects of energy efficiency in the last decade now cumulatively account for approximately 20% of Rhode Island's electricity needs. Without the cost-effective energy efficiency investments made over time, which cost on average about 4 cents per kilowatt-hour saved, we would now be paying more than twice that amount to supply that energy.

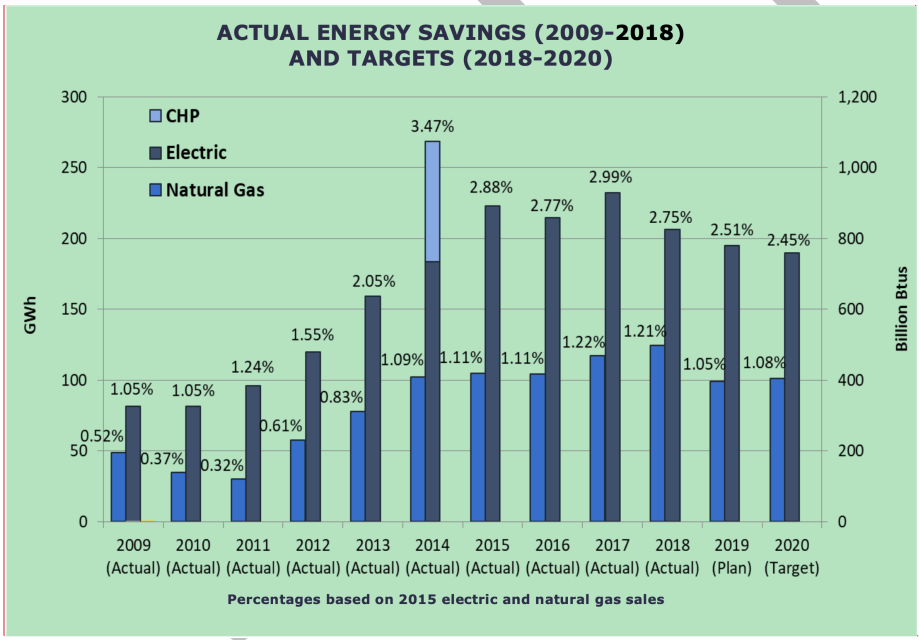
Rhode Island consumers are the focus of Least Cost Procurement, so ensuring the consumer voice in energy efficiency procurement decisions is critically important. The EERMC, assisted by its expert consultant team, provides meaningful input into National Grid's efficiency procurement plans and adds significant stability to investment decisions. The EERMC's model for structured stakeholder participation has been successfully deployed annually in a nationally-recognized process to set appropriate energy saving targets and then establish implementation plans that are equitable, cost-efficient and cost-effective to maximize benefits for all Rhode Islanders.



2019 ACHIEVEMENTS AND HIGHLIGHTS

Rhode Island remains a nationally recognized leader in implementing high-quality energy efficiency programs. Since 2009, Rhode Island has consistently been in the top 10 states ranked by the American Council for an Energy Efficient Economy's State Energy Scorecard. In 2019, Rhode Island maintained the #1 ranking (tied with Massachusetts) in the category of "utility-sector energy efficiency programs and policies" earning a perfect score in that category for the third year in a row.

Overall, Rhode Island ranked #3 by posting some of the highest energy savings levels in the nation, implementing a voluntary residential stretch code, promoting goals to cut emissions 45% below 1990 levels by 2035, promoting and standardizing residential energy labeling practices, consolidating home energy data in a central portal, establishing clear energy goals for state agencies, and working to advance construction of zero energy buildings.



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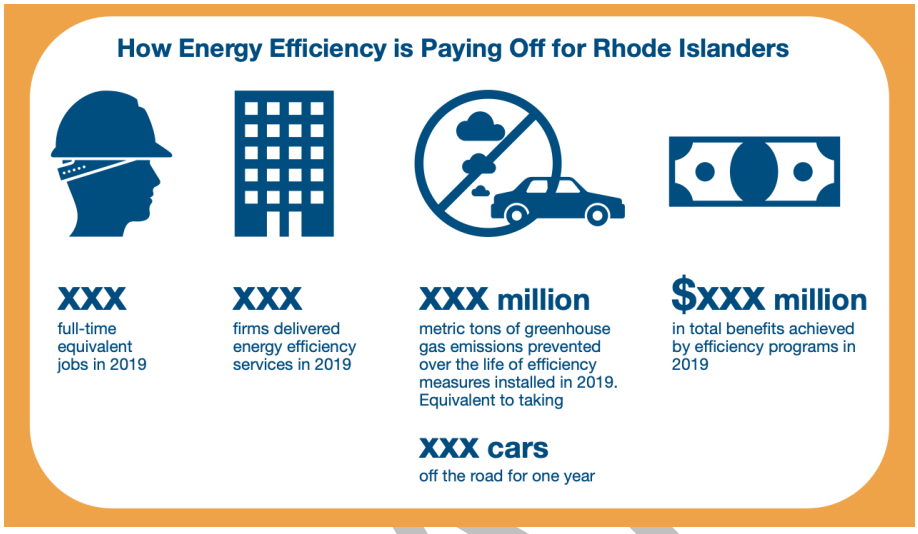


This report describes the activities of the EERMC in 2019, which include:

- Providing oversight and input into 2019 program implementation, which achieved 98% of the electric savings goal and 104% of the natural gas savings goal
- Collaborating with National Grid and key stakeholders on the development of the 2020 Annual Energy Efficiency Plan and the 2020 System Reliability Plan
- Commissioning a comprehensive Market Potential Study to inform the setting of Three-Year Targets in 2020
- Monitoring and supporting finance product enhancements of the Rhode Island Infrastructure Bank, and proposing key recommendations for making energy efficiency more accessible to Rhode Islanders through improved financing options
- Exploring challenges, barriers, and opportunities to have a lower cost, cleaner energy future through comprehensive energy system planning and policies

2020 POLICY RECOMMENDATIONS

R.I.G.L. § 42-140.1-5 requires that the EERMC "Submit to the joint committee on energy an annual report… regarding the activities of the Council, its assessment of energy issues, the status of system reliability, energy efficiency and conservation procurement, and its recommendations regarding any improvements which might be necessary or desirable." The EERMC submits the following recommendations that will support Rhode Island's position as a national leader in energy efficiency and resource conservation.

1. CONTINUE LEAST-COST PROCUREMENT LAW: The EERMC strongly recommends that the executive branch and legislature continue to support Rhode Island's Least Cost Procurement law (§ 39-1-27.7) for electric, delivered fuels, and gas customers by passing legislation that perpetuates, facilitates, and enhances implementation of the law.
2. EXPAND CLEAN ENERGY WORKFORCE DEVELOPMENT: It is anticipated that the energy efficiency workforce will be rapidly changing in the coming years and will require a retooling of existing skillsets. Therefore, current efforts by the RI Department of Labor & Training as well as the Governor's Workforce Board to support the energy efficiency and renewable energy workforce in Rhode Island should be expanded and coordinated with existing energy programs wherever possible. As the energy market continues to grow and transform within the state, training for the future and current workforce is essential.
3. COLLABORATE TO ENSURE ENERGY PROGRAM ACCESSIBILITY: Rhode Island energy efficiency programs should constantly work to ensure that all customers and segments of the market have access to the benefits of energy efficiency savings. There should be a concerted effort to reach those who are economically vulnerable, and those who are currently above poverty guidelines, but need significant assistance to make efficiency investments. Coordination among all utility, state and federal income-eligible offerings/programs should be optimized to enhance the customer experience, increase program efficiency, and to strive for widespread program participation.
4. COORDINATE ACROSS ENERGY PROGRAMS & POLICIES: A concerted effort should be made to coordinate energy efficiency programs with renewable energy deployment, grid modernization, heating sector transformation, state health initiatives, resiliency efforts, and any other relevant state and federal programs that promote well-being and energy security and affordability for all Rhode Islanders.
5. SHARE BUILDING ENERGY INFORMATION WITH RENTERS & NEW HOMEOWNERS: Aggregated or asset-based building energy information should be shared with prospective buyers/renters when a building is put up for sale or lease. This would allow greater transparency in Rhode Island building transactions, would spur the market for more energy efficient homes, and would provide a level of customer protection not currently available to home buyers and renters.
6. ADOPT APPLIANCE EFFICIENCY STANDARDS: Rhode Island should adopt comprehensive appliance efficiency standards that also backstop existing federal appliance standards that may languish. Such action would achieve large energy and cost savings for Rhode Islanders.

Commented [RS6]: As a reminder, EERMC Policy Recommendations are focused on policies that the Governor and/or General Assembly could act on, if they so desired. In other words, they are focused on ideas that could be implemented through legislation, Executive Orders, and/or updates to Rules & Regulations. Anything issue that could be/should be addressed through EE program design or other means under the control of National Grid or others are NOT included here. We actively tailor this section to the report's audience which is the General Assembly and Governor.

2019 PROGRAMS & INITIATIVES

Residential Energy Efficiency Programs

National Grid offers comprehensive energy efficiency solutions for all Rhode Island residential customers. The goals of these offerings and services are to educate residents on saving energy and reducing energy bills while improving the comfort in their homes. The energy efficiency solutions concentrate on creating energy efficient homes, promoting efficient products, facilitating market transformation for efficient products, and educating consumers through community outreach and annual events such as the Energy Expo at the Rhode Island Home Show and the Company's community-based initiative.

2019 Residential Results

- ##### Annual MWh Saved
- ##### Lifetime MWh Saved
- ##### Annual MMBtu Saved
- ###### Lifetime MMBtu Saved
- ####### Metric Tons of Greenhouse Gas Emissions Avoided
- ###### Program Participants
- $### Million in Lifetime Electric Bill Savings
- $### Million in Lifetime Gas Bill Savings
- $### Million in Total Economic Benefits

In 2019, more than 3,100 residential thermostats enrolled in the ConnectedSolutions Program. Over the course of 12 events in the summer of 2019, these customers delivered an average of 1.8MW of active demand response curtailment, helping to lower peak load on the grid.

2019 saw a continuation of residential market transformation in lighting. Progress is expected to continue in 2020 as the program aims to increase LED market saturation.

2019 was also the first full year of offering the heating electrification program to replace or displace electric resistance, oil or propane heating sources with high-efficiency air source heat pumps. Participation significantly exceeded the goals for 2019 across all three fuels.

In its seventh year, the Rhode Island Home Energy Reports (HER) program continues to encourage energy efficiency behavior through personalized print and email reports, and a seamlessly integrated website. Each of the communication channels displays energy consumption patterns and contains a normative comparison to similarly sized and similarly heated homes, as well as to an energy reduction goal for each customer. XXX,XXX Rhode Island customers received reports in 2019.

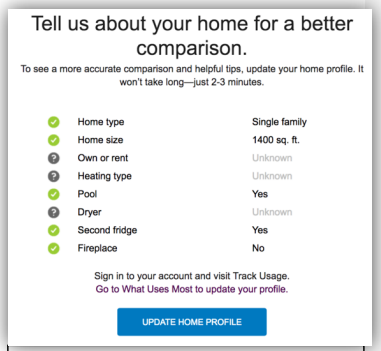


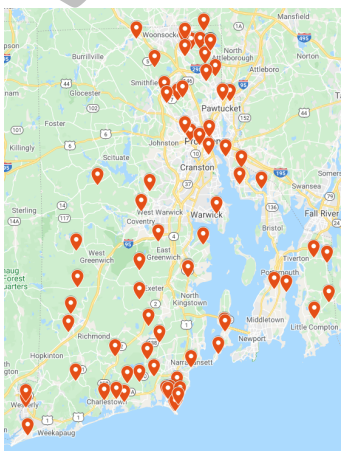
Fig. Online Home Energy Audit Campaign

The Energy Innovation Hub continued to serve as a community engagement destination designed to expand customer education and outreach and enrich

the customer's understanding of energy and opportunities to reduce energy consumption. The Hub helps customers to understand their own energy use as well as how participation in energy efficiency programs contributes to the State's greenhouse gas and energy reduction goals. Located in the lobby of Dunkin' Donuts Center, the Hub draws walk-in customers and groups of customers from local businesses and schools. Phone: 401-572-3560. Email: EnergyInnovationHub@NationalGrid.com.

National Grid continued its core residential energy efficiency programs in 2019:

- ***EnergyWise*** offers single family customers no-cost home energy assessments, weatherization, and information on their actual energy usage. Participants in this program receive personalized recommendations to reduce their energy consumption and improve the comfort in their home, technical assistance and education, and offers for financial incentives to replace inefficient lighting, appliances, thermostats, heating and cooling systems, and insulation with technologies that are more energy efficient. For the fourth consecutive year, the program was awarded the Sustained Excellence, ENERGY STAR® Partner of the Year award in program delivery. This award recognizes the robust savings Rhode Islanders are receiving as well as the innovative program design. The program also celebrated 20 Century Club recipients who are insulation contractors that weatherized 100 or more residential homes in Rhode Island. In 2019, EnergyWise established parity in incentive levels for all weatherization customers regardless of heating energy source. The Company also provided 100% landlord incentives for single family (1-4 units) customers. Finally, an online assessment was introduced at the end of the year.
- ***The Residential New Construction Program*** (RNC) program benefits new construction and major renovation of single-family and multi-family homes for market rate and income eligible customers. The program elements include energy modeling & design assistance, in-field technical assistance, insulation and air sealing inspection, third-party blower door and duct blaster testing (building performance testing), a HERS (Home Energy Rating System) Index rating, energy performance-based incentives (compared on 2017 baseline), optional support for projects seeking additional certifications such as ENERGY STAR® Homes, DOE Zero Energy Ready, Passive House/PHIUS, LEED-H and Living Building Challenge. 2019 metrics indicate that only 38% of completed projects installed gas heat compared to 90% of new homes using gas heat just a few years ago. This trend for high efficiency electrically heated homes is expected to continue in years to come and supports the State's Greenhouse Gas goals. The RNC Program continued to provide training and



Locations of homes completed in the RNC program in 2019

certification opportunities to help create a fully open-rater program model in which Rhode Islanders can compete effectively with experienced HERS raters from surrounding states. In 2019, the RNC Program supported the RI Office of Energy Resources and the RI Housing to issue the Zero Energy for the Ocean State (ZEOS) Request for Proposal (RFP), and award the funding across three project teams to design and construct affordable energy efficient Zero Energy housing units for low and moderate-income residents in Rhode Island. RI Housing and Office of Energy Resources (OER) are leading the effort, with National Grid providing support through the RNC Program. The "Path to Zero Energy Ready" continued in an effort to help accelerate the zero-energy home market.

- *The ENERGY STAR® Consumer Products Program* promoted the purchase of high efficiency household appliances and electronics. 2019 produced strong results with strong consumer interest in dehumidifiers, dryers, pool pumps, room air conditioners, room air cleaners, and advanced power strips. Low-e storm window incentives were offered for the first time in 2019.
- *The ENERGY STAR® Lighting Program* provides negotiated pricing to customers for the purchase of ENERGY STAR® qualified lighting, retail store promotions, and/or pop up stores, and limited online, flash sales. This program benefited in strong promotion with local store short-term offerings. The updated National Grid marketplace was also launched in RI in 2019 and flash sales were moved to this resource. Linear LED bulbs were also included in the program for the first time in 2019.
- *ENERGY STAR® HVAC Programs* (Gas Heat Program and Electric Heating and Cooling) promotes the installation of high efficiency gas and electric space heating and cooling equipment, water heating measures, and controls via tiered customer rebates. In 2019, the gas heating program continued to see a strong participation in energy efficient combination boiler/hot water systems and a decrease in the stand-alone efficient boilers. The HVAC electric program ramped up efforts to develop the electric heating program to install cold climate air source heat pumps (ASHP) for the replacement of electric heat and displacement of oil and propane systems. This program resulted in 490 rebates processed (over $1.15M in rebates), for partial or full displacement of oil/propane/electric resistance heat in a total of 378 homes (313 of which have oil or propane heat). Ten HVAC Check trainings were offered, resulting in 103 contractors being added to the list of Approved Contractors to ensure that ASHP savings are sized accurately, installed correctly, and the equipment is working properly.
- *The Home Energy Reports (HER) Program* continued in 2019 with personalized offerings for specific customer populations. The focus in 2019 was on income eligible customers and HER customers that were high energy users. High energy users were encouraged to select a target rank so that they could view incremental behavioral improvement rather than continued messaging that they were not performing as well as efficient neighbors.
- *The Multifamily Program* concluded 2019 with mixed results for the year. The multifamily program was challenged in meeting its 2019 electric goals due to declining opportunities for lighting savings which make up a significant portion of the programs' savings. In contrast,

the program excelled in achieving its gas goals by identifying numerous energy savings opportunities. Notably the Income Eligible Multifamily Electric program met its first annual Air Source Heat Pump (ASHP) goal, installing 76 electric Air Source Heat Pumps across three multifamily facilities. For the 2020 Annual Plan, the Income Eligible program increased its annual goal from 75 to 125 and the market rate program has set a goal of 50 ASHPs.

Income Eligible Services

The Income Eligible Services (IES) program offers no-cost energy assessments and energy efficiency upgrades to residential income eligible customers without any financial contribution. Income Eligible Services are delivered by Rhode Island's six local Community Action Program (CAP) agencies to customers who are currently on the electric A-60 or the gas 11, 13 rates; qualify for LIHEAP funds from the State; or whose household income level falls below 60% of the Area Median Income (AMI). Participants in this program are eligible for an energy assessment of lighting, appliances, insulation, air sealing and replacement of inefficient or unsafe heating systems or appliances. All IES customers receive all services and equipment upgrades at no cost.

In 2019, the IES program conducted nearly 2,900 energy assessments, and replaced an unprecedented amount of inefficient air conditioners. 2019 was the first full year of the heating electrification program to replace electric resistance or displace oil or propane heating sources with high-efficiency Cold Climate Air Source Heat Pump heating solutions. 12 homes were upgraded from electric resistance to the high efficiency ASHPs which will save customers money. A Process Evaluation was conducted on the IES Program resulting in recommendations for improving the current delivery of the IES program delivery. These recommendations will be implemented in 2020. A Standardization Group was formed to assess the current, and future, state of the RI WAP/IES program to continually improve standardization across RI CAPs.

Overall, in 2019, IES achieved XX% of the gas goal (XX% of savings), and the electric goal (XX% of savings). 2019 electric savings were lower than expected due to fewer opportunities to replace inefficient light bulbs and appliances and insufficient auditor staffing to meet the goals.

2019 Income Eligible Results

- #### Annual MWh Saved
- #### Lifetime MWh Saved
- #### Annual MMBtu Saved
- #### Lifetime MMBtu Saved
- #### Metric Tons of Greenhouse Gas Emissions Avoided
- #### Program Participants
- $#### Million in Lifetime Electric Bill Savings
- $#### Million in Lifetime Gas Bill Savings
- $#### Million in Total Economic Benefits

Income Eligible Program/WAP Collaborative

National Grid's Income Eligible Services are administered along with related and complementary federal, state, and local programs in collaboration with Rhode Island Department of Human Services (DHS), the CAP agencies, and other local agencies.

Low Income Home Energy Assistance Program (LIHEAP)

The Low-Income Home Energy Assistance Program (LIHEAP) block grant is funded through the U.S. Department of Health and Human Services. The purpose of LIHEAP is to assist Rhode Island's income eligible households in meeting the increasing costs of home energy and reduce the severity of any energy-related crisis. Rhode Island's LIHEAP is administered by the Rhode Island Department of Human Services (DHS) Individual and Family Support/Community Services Division. LIHEAP intake and outreach are provided by the six local CAP agencies. Households are determined eligible for LIHEAP assistance according to income guidelines established by DHS.

Weatherization Assistance Program

The Weatherization Assistance Program (WAP) enables income eligible families to reduce their energy bills (and helps LIHEAP funds go farther) by making their homes more energy efficient, while addressing health and safety concerns. Funds are used to improve the energy performance of income eligible dwellings using the most advanced technologies and testing protocols available in the industry.

WAP is funded through annual appropriations from the U.S. Department of Energy's Weatherization Assistance Program and the U.S. Department of Health and Human Services. The state allocates 15% of its annual LIHEAP funding to weatherization.

Commercial, Industrial & Public Program and Initiatives

Large Commercial and Industrial Programs

National Grid offered four types of energy efficiency programs for commercial and industrial class customers. Depending on the customer's energy consumption and demand they could be eligible to participate in one or more of the four main energy efficiency programs.

1. **Large Commercial and Industrial New Construction**: Focused on offerings that target ground up new construction, major renovations, tenant fit-outs and end of life replacement equipment.
2. **Large C&I Retrofit:** Focused on all services and technologies towards retrofits needed for existing buildings.
3. **Small Business/ Direct Install:** Focused on providing turn-key solutions to many types of small businesses. (Note: restricted to customers who consume less than 1,000,000 kWh per year)
4. **Active Demand Response Program:** Focused on reducing peak electric demand and associated costs for large and small commercial customers.

2019 Large C&I Results

- #### Annual MWh Saved
- #### Lifetime MWh Saved
- #### Annual MMBtu Saved
- #### Lifetime MMBtu Saved
- #### Metric Tons of Greenhouse Gas Emissions Avoided
- #### Program Participants
- $#### Million in Lifetime Electric Bill Savings
- $#### Million in Lifetime Gas Bill Savings
- $#### Million in Total Economic Benefits

In addition to the four main efficiency programs, National Grid established a Market Sector Approach for commercial and industrial programs. The Market Sector approach allowed National Grid to provide customized efficiency solutions that aligned with the customers' needs, therefore increasing participation in energy efficiency. The following market sectors were incentivized in 2019: Grocery, Municipal and State Buildings, State Strategic Energy Management Planning, Manufacturing/Industrial, K-12 schools, Hospitality (Restaurants and Lodging), Specialty Building (Farm/Agriculture and Extended Care Facilities), Hospitals, Colleges and Universities, Commercial Real Estate, and Multifamily.

Commercial New Construction Program

The Commercial New Construction Program encourages energy efficiency in new construction, major renovations, planned replacement of aging equipment, and replacement of failed equipment through financial incentives and technical assistance to developers, manufacturers, vendors, customers, and design professionals. The program supports both the commercial and industrial new construction projects with proactive technical assistance during design with energy modeling and analysis.

In 2019 the Company continued outreach on Accelerate Performance, a demonstration started in 2018, for New Construction projects. Accelerate Performance is a performance-

based procurement process whereby the Company engages with developers and building owners early in the project process and helps the owner set Energy Use Intensity (EUI) goals before an RFP is issued to engage a design team. This goal of this demonstration is to achieve deeper energy efficiency savings for New Construction projects.

While we did not have participation in 2019, in Accelerate Performance, we did engage with two potential customers who the Company's hopes to enroll in this demonstration in 2020.

In 2019 the New Construction Program performed well and exceeded goal. Comprehensive projects included higher education buildings, like the University of Rhode Island Engineering Building, Barrington Middle School, an office campus for large bank headquartered in Rhode Island. New Construction projects also included equipment replacement for large industrial customers and health care customers, among others.

Large Commercial Retrofit Program

The Large Commercial Retrofit Program incentivizes the replacement of existing equipment and systems with energy-efficient alternatives when the customer might otherwise not plan on making efficiency investments. The program offered three distinct components that aimed to address specific market barriers and to advance efficiency:

1. Prescriptive Pathway: Prescriptive incentives supported trade allies in advancing energy efficiency sales and provide signals to customers to make direct purchases that encouraged the adoption of more efficient and cost-effective options.
2. Custom Pathway: Custom incentives provided services to investigate opportunities to increase efficiency and support the steps needed to implement the upgrades.
3. Upstream Pathway: Upstream incentives provided an efficient way for customers to receive reduced pricing at the point of sale for energy efficiency equipment.

In 2019, National Grid had several notable developments in the Large Commercial and Industrial space. The Company expanded the retrofit program by adding upstream product offerings and increased customer engagement in the industrial, grocery, and municipal verticals. Additionally, the Company continued its Strategic Energy Management Planning (SEMP) partnerships by renewing one of the six customers to non-binding Memorandum of Understanding's with annual energy reduction goals. In 2020, the Company will look to expand the reach of the SEMP Initiative with colleges and universities, municipal and State-owned buildings, and hospitals. In 2019, the Company also claimed electric savings for the Strategic Energy Management (SEM)/ Continuous Energy Improvement (CEI) demonstration for industrial customers. The Rhode Island cohort of industrial customers meet regularly for workshops and energy treasure hunts to undercover operation and maintenance savings.

Industrial Initiative

The Industrial Initiative leverages the world-renowned engineering firm Leidos, who partners with industrial customers to implement energy efficiency upgrades. In 2019, the Industrial Initiative delivered substantial savings to Rhode Island manufacturers while also exceeded goals for both electric and gas savings. In 2019, approximately 100 project applications were

paid to over 40 unique industrial customers. The program continued to focus on comprehensive custom process measures ranging from installing variable frequency drives to cooling towers. In addition to serving larger industrial customer, Leidos also assisted several smaller customers between 200-400 kW. Project highlights from smaller-scale customers include the installation of an electric molding machine for a packaging manufacturer, and the installation of a new laminator for a food packaging company that expedited the assembly line and reduced energy costs. Project highlights from larger-scale customers include the installation of an energy efficient emissions control system at a manufacturing facility, and a project that resulted in a more efficient steel plate bender for a shipbuilding company.

EnergySmart Grocer Initiative

The EnergySmart Grocer (ESG) initiative delivered cost effective, comprehensive energy savings in the Grocery market segment in 2019 by providing nearly 3,834 net MWh and XXXX MMBtus in annual savings. The Company would like to highlight two projects that were completed in 2019 for smaller sized grocery customers.

1. A Market, a staple for the Newport community for over 25 years, recently moved their store three doors down from their previous location. In making this move, they also implemented a comprehensive energy efficiency plan. Included in this upgrade were the store's lighting, HVAC, kitchen equipment, refrigeration equipment and backend refrigeration system.
2. Urban Greens Co-Op in Providence installed night covers on their produce case and doors on a meat case. Additionally, they installed two CaptiveAire kitchen exhaust hoods with Variable Frequency Drives (VFDs). The project saved 4,600 annual kWh and 85.8 annual MMBtus.

Combined Heat and Power Program

Combined heat and power (CHP) systems are a cost-effective way for customers to achieve energy savings and improve resiliency. Customers who install CHP generate electricity on-site and captures the thermal load for process related needs, thereby eliminating the requirement to procure additional non-electric energy. While the total energy savings from CHP can be substantial, implementing CHP can be challenging due to the long-lead times, complex technical requirements, and substantial capital investments. In 2019, National Grid pursued a 630kW CHP system at a wastewater treatment facility. The treatment facility will leverage its operational byproduct (sludge) as a biomass to fuel the CHP system. While the project made substantial progress in 2019, the CHP system was not able to interconnect before year end.

Solid State Street Light Initiative

The National Grid Solid-State Street Light Initiative provided energy efficiency incentives for street lighting and controls to municipal customers. There are two options for participating in this initiative, customer owned, and Company owned.

- Customer Owned Street Lighting- Rhode Island municipal customers are now eligible to purchase their own streetlights from National Grid. Incentives are being offered for

solid state lighting and controls, as funding allows. In addition to the funding offered by National Grid, the Office of Energy Resources continues to accept applications for street lighting grant funding from communities.

- Company Owned Street Lighting – National Grid filed a company owned street lighting tariff in 2016. If the municipal customer prefers to continue leasing their streetlights from National Grid, the customer will receive the incentive and the Company will claim the savings.

In 2019, the Solid-State Street Lighting Initiative awarded over $300,000 in incentives to 11 different municipalities, resulting in approximately 1,515 MWh of annual electric energy savings. One of the highlights from the Solid-State Street Lighting Initiative included the Pawtucket streetlight and controls project which resulted in the installation of 6,062 street lighting fixtures and over 10,200 MWh of lifetime electric savings.

Commercial ConnectedSolutions

The Company implemented an active demand reduction program in 2019 after having run the program as a demonstration in 2017 and 2018. Under the active demand reduction approach, customers agree to reduce their electric use during the system peak. In 2019, the Targeted Dispatch measure of the Commercial ConnectedSolutions program curtailed and averaged 31.5 MW with 115 customer accounts participating in one event over the summer. In December of 2019, the Rhode Island Public Utility Commission clarified that solar and storage over 25 kW can be eligible for net metering so long as the storage is charged from the solar and not from the grid.

Small Business Direct Install Program

National Grid's Small Business Direct Install program is a retrofit program that provides turnkey services to customers that consume less than 1,000,000 kWh per year. As part of the program, customers receive a free on- site energy assessment and a customized report detailing recommended energy efficient improvements. National Grid then completes retrofit installations at the customer's convenience. In 2019, the program served small businesses of all types including restaurants, non-profits, and small offices.

National Grid pays up to 70% of installation and equipment costs and customers can finance the remaining share of the project over as many as 60 months (typically 24) on their electric bill, interest free, using the Small Business Revolving Loan Fund, providing that funds are available.

The Company would like to highlight several projects that were completed in 2019 for small business customers.

1. RISE provided a major lighting retrofit to Stateline Nissan, saving them over 107,000 annual kWh, or about $16,000 per year on their electric bill. The customer was very impressed at the impact the upgrade had to their site, especially the showroom where their illumination of the dealer's inventory has been greatly improved.

2. RISE served the RI Society for the Prevention of Cruelty to Animals (SPCA) with a 100% incentive offer as a part of a special initiative to drive projects in the late summer months in RI. This project included a complete retrofit of the interior and exterior lighting, including controls (occupancy sensors), and five WiFi thermostats. This retrofit is expected to save over 24,300 annual kWh. This project is expected to save the SPCA approximately $3,650 annually in energy costs, which is a significant impact for this type of organization. The SPCA was delighted with the installations and the impact it had on their space. The lighting will better highlight the adoptable pets, allow the vets to have better lighting conditions for the procedures they carry out, and the WiFi thermostats will allow for a more comfortable space.
3. RISE completed a large, interior and exterior LED retrofit lighting project at MacColl YMCA in Pawtucket, creating a much better illuminated space for the staff and patrons. This project covered several areas including the gym, kitchen, child care center, and parking area. It was a broad mix of re-lamp/re-ballast and new fixture installs. This project saved over annual 260 MWh, or nearly $39,000 of the customer's annual electric energy cost.

In 2019, National Grid continued to utilize the existing contractor/electrician base through the Customer Directed Option (CDO) where customers are allowed to use their own contractors in conjunction with the expertise of the lead vendor in the Small Business Program. These additional "feet on the street" are helping the program maintain its success even as some segments continue to be successfully served through other paths. In 2019, 30% of savings in the SMB/DI program came from CDO contractors.

Farm Energy Efficiency Program

The Farm Energy Efficiency Program offers Rhode Island agribusinesses incentives for prescriptive energy efficiency measures. Program participants receive a free on-site energy assessment and a report detailing recommended energy-efficient improvements. Farmers or agribusiness owners can then choose to install any number of recommended electric or delivered fuels measures. Delivered fuels measures are eligible for incentives equal to 75% of their installed costs. Electric measure incentives vary depending on the application, but any approved electric measure cost not covered by an incentive can be paid back, interest free, through National Grid's on-bill payment system provided that funds are available.

In 2019, 12 Rhode Island farms received no-cost, farm-specific energy assessments. With help from a University of Rhode Island Energy Fellow, additional outreach was conducted at 20 farmers markets in 15 towns across 5 counties, connecting directly with over 50 farms. Additionally, several written profiles and a short video profile were developed to highlight the success of past participants and the benefits the program has provided to their businesses. Presentations were also given at 3 workshops and further outreach was conducted via social media: Facebook and Instagram (@RIFarmEnergyResources).

State Lead by Example: State and Municipal Entities

In December 2015, Governor Gina Raimondo issued an Executive Order directing State agencies to 'Lead by Example' by achieving robust clean energy targets and developing clean energy practices. As of December 2019, Rhode Island State agencies have reduced their energy consumption by 10.5% (2014 baseline), saved $4.75 million (FY 2018) from competitive energy procurement processes, and continue to procure 50% of their electricity supply from "green" energy sources. The Lead by Example initiative is also promoting interdepartmental cooperation, unlocking opportunities to invest in comprehensive energy efficiency and renewable measures that can reduce and stabilize public sector energy costs, shrink government's carbon footprint, and support Rhode Island's burgeoning clean energy economy. Major projects completed in 2019 include, the deployment of solar PV installations on the Attorney General's new building, Camp Fogarty National Guard campus, and two buildings at Rhode Island College, , the continued conversion of State and municipal streetlights to cost-effective LEDs, and the expansion of electric vehicle charging infrastructure across the State, and a number of interior LED lighting retrofits and HVAC upgrades at State facilities.

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The programs and initiatives spurred by the Lead by Example executive order are also available for municipalities and quasi-public agencies. Specifically, public entities can receive technical assistance, and in some cases financial support, from Rhode Island's Office of Energy Resources and National Grid to better manage their energy bills through Portfolio Manager (a free online tool from the U.S. Environmental Protection Agency), improve the energy efficiency of their buildings, install renewable energy systems and electric vehicle charging infrastructure, and purchase all-electric or hybrid fleet vehicles. Lead by Example efforts are meant to serve as a model for businesses, organizations, and citizens as we all work together to move Rhode Island toward a more secure, cost- effective, and sustainable energy future.

Key 2019 Lead by Example accomplishments include:

- Supporting the installation of solar arrays on four state buildings
- Continued support of State and municipal LED streetlight retrofits, with 60% of all Rhode Island streetlights now converted
- Ensuring that 50% of electricity consumed by State facilities comes from renewable energy resources
- Reducing the energy consumption across State facilities by 10.5% compared to 2014 baseline
- Supporting the installation of 24 new dual port electric vehicle charging stations at facilities across the State
- Participating in a Demand Response Program to reduce peak energy demand and generate revenues for the State
- Promoting the State's first a voluntary building Stretch Code

- Developing and managing competitive electricity and natural gas supply contracts for all state agencies
- Utilizing a centralized utility bill payment system for all state agencies that saves money by avoiding late fees and increasing staff efficiency
- Converting multiple facilities lighting to LED
- HVAC and control improvements at Powers Building (DOA), the RI State Police Barracks, and the Department of Labor and Training.
- Installation of a high-efficiency chiller in the Powers Building (DOA)

Commercial, Industrial & Public Finance

Large C&I Revolving Loan Fund

Through the electric LC&I revolving loan fund, the Company offered $XXX million in on-bill financing to XX Large Commercial customers through XX loans resulting in electric savings of XXXX annual MWh. At the end of 2019, the fund had a balance of $XXX million, money that will be available for more loans in 2020 and in the future.

Through the gas LC&I revolving loan fund, the Company offered $XX million in loans to XX Large Commercial customers resulting in gas savings of XXX,XXX MMBtu. At the end of 2019, the fund had a balance of $XXX million, money that will be available for more loans in 2020 and in the future.

The Company continued to manage a revolving loan fund in support of the Rhode Island Public Energy Partnership (RIPEP). No customers participated in this offering in 2019. At the end of 2020, the fund had a balance of $XXXX.

Small Business Revolving Loan Fund

Of the XXX customers that participated in the Small Business Direct Install program, each received financing to cover 30% share of the project costs, either over 24 months at zero (0) percent interest or a lump sum payment with a 15% discount. Overall, the Small Business Revolving Loan fund was able to provide $XXX million in loans that led to more than XXXXX MWh in annual energy savings. At year end, the fund had a balance of XXX million.

Efficient Buildings Fund (EBF)

Since 2015, National Grid, the Rhode Island Office of Energy Resources (OER), and the Rhode Island Infrastructure Bank (RIIB) have been working together to leverage system benefit charge (SBC) funds and drive energy improvements in facilities in cities and towns across Rhode Island.

The seed money to support this unique revolving loan fund came from a $1.8 million allocation of rate-payer (SBC) funds, mandated by the law, and $3.0 million in funds from the Regional Greenhouse Gas Initiative (RGGI) controlled by OER. In addition, National Grid, based on a requests from RIIB, and working in conjunction with the Technical Working Group each program year, agreed to transfer $5 million in energy efficiency program funds to RIIB in 2019 and $5.2 2020 to support EBF. These transfers were included in their respective Energy Efficiency Plans and related budgets.

In 2019, the EBF helped support energy efficiency projects in the towns/cities of Pawtucket, Barrington, Cumberland, East Providence, West Warwick, and Westerly. EBF helped Pawtucket continue its comprehensive installations of energy efficient equipment in several city buildings and begin LED streetlight retrofitting. The Town of Barrington utilized EBF financing to begin comprehensive renovations to their public library and senior center. The city of East Providence used EBF to begin the process of LED streetlight conversion. 2019 was the most successful year in EBF since inception with 1,858 net annual MWh claimed. The vast majority of these savings came from converting streetlights from less efficient technologies to LED.

Commercial Property Assessed Clean Energy (C-PACE)

National Grid has one C-PACE project in progress with the City of Providence. However, no gas or electric savings were claimed related to this project in 2019. Outreach by the Rhode Island Infrastructure Bank and National Grid will continue in 2020.

Other commercial financial developments

National Grid is committed to making sure that customers have a robust selection of financial mechanisms that have proven themselves successful in other programs across the United States and Canada. In 2018, National Grid began discussing Metrus Energy's Efficiency as a Service offering with select customers Metrus has completed projects with numerous Fortune 500 companies across the United States. Metrus has restricted this offer to customers with a combined energy gas and electric spend of greater than $1,000,000 dollars annually. There were no completed projects supported by Metrus in 2019.

CROSS-SECTOR PROGRAMS

Community Initiative

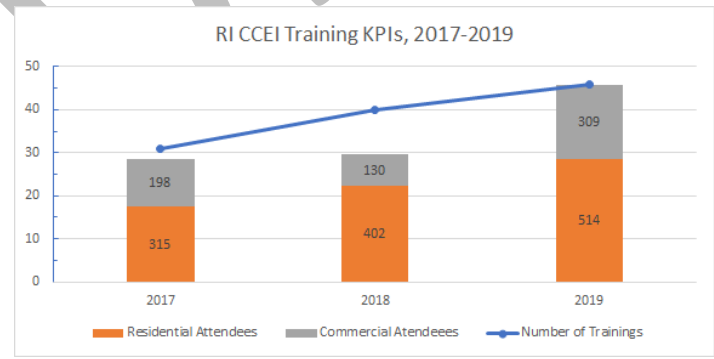
In 2019, the Community Initiative engaged the largest number of municipalities since the program's inception, launching campaigns in five municipalities. The cities and towns of Glocester, Westerly, Portsmouth, Middletown and Newport all participated in the initiative. Specified metrics were again set for these new participants including residential energy assessment goals, weatherization jobs, Wi-Fi thermostats, Small Business projects, homes converted to mini-split heat pumps, and refrigerators recycled. New for 2019, the program also set goals for demand response program participation. All communities had great success and surpassed their stretch goals for home energy assessments, a 25% increase over the prior year's participation, along with many other goals.

The participating communities, along with the Company, engaged residents and small businesses beginning in the summer and running through December. Custom marketing materials were created, along with social media and webpage postings, and letters from municipal leadership. Local events were attended by Company vendors to enroll customers in the EnergyWise home energy assessment program. For small business customers in the communities of Westerly and Newport, the Company and its vendor created a "Main Street" approach, whereby local businesses, on select days, received no cost direct install measures at their place of business and an opportunity for greater measure installations in the near future.

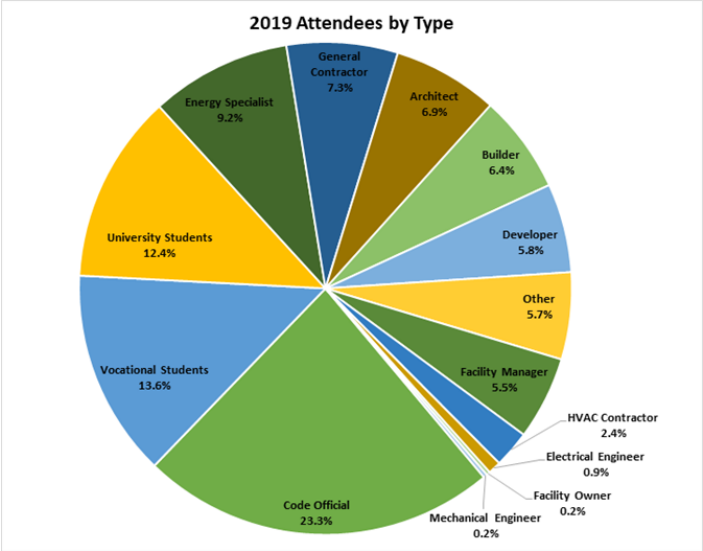
Codes and Standards

The Codes and Standards initiative provides targeted stakeholder outreach and technical guidance to improve compliance with minimum energy efficiency policies currently in effect and accelerate the improvement of these minimum efficiency requirements. In 2019 the Company continued to expand its energy code compliance support services to a variety of stakeholder groups and directly supported enhancements of the state's energy code for the first time.

In 2019, the Code Compliance Enhancement Initiative (CCEI) conducted 46 training events across the state with 823 total attendees. Both metrics continue to increase year-over-year.



CCEI trainings continue to draw diverse attendees. While code officials remain the primary audience, student engagement was a particular focus in 2019.



In addition to trainings, CCEI also provides project-specific technical assistance as well as development and dissemination of energy code documentation/compliance assistance tools.

The Company submitted 11 code change proposals as part of the state's 2018 IECC adoption process, which began in fall 2019. The primary goal of these proposals is to remove previous amendments to the state's energy code that weaken its energy savings potential.

The Company also continues to support awareness and use of the RI Stretch Code through CCEI, including promotion at every training event and fundamental technical guidance.

Block Island Energy Efficiency Program

Through the Regional Greenhouse Gas Initiative (RGGI), proceeds were allocated to the Block Island Utility District to support the development and delivery of cost-effective energy efficiency programs and incentives to customers over three years. In 2019, OER worked in coordination with Block Island Utility District management and customers to develop their first Energy Efficiency Plan to leverage utility and RGGI funds to implement cost-effective efficiency measures in the community of New Shoreham. This program is anticipated to begin in 2020, pending Public Utility Commission approval, and is modeled on the Block Island Saves Pilot Program, which ran from 2015-2017.

Block Island Saves was a pilot program to deliver energy efficiency assessments, education, incentives, and rebates to New Shoreham year-round residents and small businesses. The New Shoreham community faced unique energy challenges prior to 2017, including high energy prices stemming from electricity generation powered by imported and price-volatile diesel. The recent construction of North America's first offshore wind farm three miles off the coast of Block Island also resulted in connecting the island with the mainland electric grid. This connection has helped stabilize electric prices while strengthening reliability. However, reducing energy use on the island remains critical to ensuring long-term energy affordability and reliability for this important and unique community.

OER collaborated with National Grid to leverage best practices for program development and energy efficiency offerings in the pilot were carefully chosen to align with existing programs available elsewhere in Rhode Island.

Over the course of the pilot, 79 residents and 31 businesses received free energy assessments, along with rebates and incentives for energy efficiency upgrades. These energy efficiency improvements will save 3,600 MWh of electricity over the lifetime of the improvements (equivalent to the electricity needed to power over 500 Rhode Island homes for one year), in addition to 4,800 MMBtu of oil and 2,300 MMBtu of propane.

Participants were able to decrease their energy bills, too. In total, program participants are saving an aggregate $597,968 (residential) and $714,396 (business) over the lifetime of the efficiency upgrades.

The final report on the Block Island Saves Pilot Program is available on OER's website.

Energy Efficiency in Pascoag Utility District

Through the Regional Greenhouse Gas Initiative, proceeds were allocated to support the accelerated adoption and delivery of cost-effective energy efficiency measures by customers located in the Pascoag Utility District. OER worked with Pascoag Utility District management to begin implementing elements of the multi-year strategy they jointly developed in 2018, starting with a significant increase in home energy audits. In 2019, the Utility District was able to increase the number of home energy audits ten-fold, from 12 to 120, vastly expanding the reach of their efficiency programming. In conjunction with OER and their efficiency consultant, Pascoag staff began optimizing program incentive levels and streamlining program delivery to better encourage and facilitate the adoption of energy efficiency in homes and businesses.

Zero-Energy Buildings (ZEB) Task Force and Working Group

In 2019, the "Path to Zero Ready" program continued to introduce zero energy building strategies in order to grow the zero energy home market. The Path to Zero Ready Program focused on four key elements:

1) Education and Awareness

In an effort to raise awareness of the design, construction, benefits and beauty of zero energy homes in RI, XX Zero Energy presentations were held in 2019 with over XXX

attendees. In addition, tours of zero energy homes were conducted to provide hands on learning for building professional and customers.

2) Workforce Development

In 2018, the Zero Energy Advisory Group was created. The Group is comprised of eight Rhode Island construction professionals at different stages of understanding of the zero-energy building market. A spirit of collaboration is the hallmark of the group as they strive to create momentum in the zero energy and zero energy-ready markets. Members meet periodically over the year to refine best practices and marketing opportunities.

Support for architectural drawing revisions as well as a design charrette were conducted through this program to provide technical support to facilitate decision-making as project teams evaluate the opportunity to build a zero-energy ready project.

A series of infield trainings were held at a development in North Kingstown to demonstrate Zero Energy construction techniques including the framing stage, the rough stage before insulation, and at the point of final inspection

3) Project Incentives

In addition to the technical support and financial incentives provided through the RNC program, a project that commits to zero energy ready can receive additional technical support as well as additional incentives for meeting the RI Stretch Code or being PV and EV ready.

4) Marketing

National Grid held a strategic planning session to gather input and insights as to how to create a market for Zero Energy Homes – who to target, how to learn from and leverage what's currently working and develop priorities and next steps to move the local market forward.

Building Operator Certification

In 2019, the Company sponsored discounted or free Building Operator Certification (BOC) to building operators in Rhode Island. Those that completed the course are expected to benefit from holding the professional BOC credential, being better able to communicate with occupants about maximizing facility efficiency, being able to identify low-cost energy conservation opportunities, and knowing how to implement best practices in preventative maintenance.

Rhode Island Energy Innovation Hub

The Energy Innovation Hub (Hub) is a community engagement destination designed to provide a hands-on opportunity for customers to learn about energy efficiency, renewable technologies, electric vehicles, state energy goals, and a vision for a clean energy future. The Hub content, and knowledgeable staff and energy interns, provide information to customers to

empower them to take action to reduce their energy use, adopt smart technologies and learn about renewable power and electric vehicles. The space and its exhibits showcase: (a) energy solutions accessible to all customers; (b) innovative advancements for system reliability; and (c) a vision of a sustainable energy future. Visitors learn about technologies available to create smart, energy-efficient homes and businesses, renewable technologies, demand response, electric vehicles, storm management, and core services that the Company provides. In 2019, the Energy Innovation Hub hosted x,xxx customers via on-site meetings, trainings, tours, events and walk-in customers.

COUNCIL PUBLIC EDUCATION EFFORTS

2019 EERMC Public Forum

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On October 29, 2019, URI Cooperative Extension assisted the EERMC in hosting its annual public forum at Ironworks Tavern in Warwick, RI. Titled "Building Rhode Island's Workforce with Energy Efficiency Programs", the event saw over 70 industry professionals and decision-makers come together for a keynote address from Carolyn Sarno-Goldthwaite of the Northeast Energy Efficiency Partnerships, followed by two panels, each with three speakers and a moderator. The first panel, "Jobs in Energy Efficiency", featured representatives from the BW Research Partnership, Building Future RI and the RI Department of Labor and Training. The second panel, "Industry Innovation", featured industry leaders representing Viessman, Stephen Turner, Inc. and the Oil Heat Institute discussing the role of businesses in training new and incumbent workers in light of new policies and incentives that are changing the energy landscape. Attendees also heard from EERMC Chair Chris Powell and EERMC member Karen Verrengia who talked about the Council and how to engage in the energy efficiency planning process. The forum closed with a robust and illuminating dialog among attendees and speakers around the challenges and opportunities related to workforce and efficiency.

Plugged Into Energy Research Lecture Series at the University of Rhode Island

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Since 2015, the University of Rhode Island's Plugged into URI Energy Research (PIER) Lecture Series has provided stakeholders with research-based information on important energy topics and highlighted ongoing academic energy research. In 2019, the EERMC sponsored two evenings of lectures themed around real-time energy management and energy equity. On December 5, 2019, speakers on real-time energy management included Dr. Valerie Maier-Speredelozzi, Associate Professor in the URI Department of Industrial & Systems Engineering, Ron Gillooly, Industrial Energy Program Director at Leidos and Jeff Broadhead, Executive Director of the Partnership for Rhode Island Streetlight Management. On December 9, 2019, speakers on energy equity included Yasmin Yacoby, Energy Justice Program Manager of the RI Office of Energy Resources, Marty Davey, Director of Product & Service Development at New Ecology, Inc. and Sam Ross, Consultant with Optimal Energy. There were 90 attendees between to the two evenings, including energy professionals, equity professionals, students, educators and members of the general public.

2019 Combined Heat and Power Public Meeting

On May 2, 2019, the EERMC hosted the Annual Rhode Island Combined Heat and Power (CHP) Public Meeting at the Energy Innovation Hub in Providence. As part of a legislative mandate, these meetings are designed to collect stakeholder feedback on challenges and opportunities related to the state's CHP program. The meetings also serve to inform developers and potential participants on program details, any updates for the current year, and finance options. This year the majority of attendees were CHP developers or vendors who

provide related technical assistance or financing. RI Energy Efficiency and Resource Management Council (EERMC) members Karen Verrengia and Tom Magliocchetti welcomed attendees and introduced the Council and its purpose. Representatives of National Grid and the Rhode Island Infrastructure Bank (RIIB) presented on program updates and finance opportunities. This year's meeting also featured a representative of the CHP Technical Assistance Partnership between the U.S. Department of Energy and the University of Maine, which provides technical assistance and resources for CHP projects in the northeast. Attendees had the opportunity to ask questions and communicate their on-the-ground perspectives of implementing CHP projects in Rhode Island.

Farmer Education

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Due to the volatile nature and seasonality of many farm businesses, keeping costs low is vital to their success. However, participation in the half-dozen available farm energy programs has remained low. Conversations with stakeholders, energy program administrators, and National Grid suggest low participation is due, in part, to a lack of knowledge of available programs. In 2019, the EERMC and National Grid co-funded an Energy Fellow (University of Rhode Island student) from March through December to assist with outreach to the farm community regarding energy management. Outreach was conducted at 20 farmer's markets in 15 towns across 5 counties, connecting directly with over 50 farms. The Energy Fellow also developed a Farm Energy Guide which helps farmers navigate the many energy programs and incentives available to them. Additionally, several written profiles and a short video profile were developed to highlight the success of past participants and the benefits the program has provided to their businesses. Presentations were also given at 3 workshops and further outreach was conducted via social media: Facebook and Instagram (@RIFarmEnergyResources).

INCENTIVES BY TOWN

Table 1. National Grid Gas and Electric Energy Efficiency Incentives Provided to Residential, Commercial and Industrial Customers in 2019

Barrington	$966,562	New Shoreham	$ 18,735
Bristol	$ 1,002,930	Newport	$ 1,410,416
Burrillville	$ 486,968	North Kingstown	$ 2,077,634
Central Falls	$ 442,437	North Providence	$ 950,288
Charlestown	$ 318,331	North Smithfield	$ 856,669
Coventry	$ 1,800,204	Pawtucket	$ 3,369,187
Cranston	$ 7,758,724	Portsmouth	$ 1,449,755
Cumberland	$ 2,392,272	Providence	$ 16,329,530
East Greenwich	$ 2,135,064	Richmond	$ 224,274
East Providence	$ 3,561,259	Scituate	$ 584,068
Exeter	$ 209,328	Smithfield	$ 1,608,986
Foster	$ 184,307	South Kingstown	$ 489,153
Glocester	$ 321,751	Tiverton	$ 680,352
Hopkinton	$ 259,937	Warren	$ 537,001
Jamestown	$ 261,928	Warwick	$ 5,443,079
Johnston	$ 2,554,431	West Greenwich	$ 409,702
Lincoln	$1,822,282	West Warwick	$ 1,567,820
Little Compton	$ 167,282	Westerly	$ 1,356,724
Middletown	$ 1,164,078	Woonsocket	$ 1,564,363
Narragansett	$ 2,000,283	**Grand Total**	**$ 70,738,094**

NATIONAL GRID 2019 ENERGY EFFICIENCY WORKFORCE STUDY

National Grid hired Guidehouse, Inc. (formerly Navigant) to conduct a study of the job impacts from National Grid's energy efficiency programs in 2019. The study estimates the number of full-time equivalent (FTE) employees engaged in all aspects of energy efficiency programs where National Grid provided funding support in 2019.

The FTE counts cover a wide range of energy efficiency services, including independent contractors and plumbers, rebate processers, engineers, and National Grid Staff. The study also includes counts of Weatherization Assistance Program (WAP) FTEs that are employed by the Community Action Program agencies that deliver low- income energy efficiency services. A complete list of all contractors and subcontractors involved in 2019 Rhode Island energy efficiency programs is included in Appendix B of this report.

Full-Time Equivalent Employment Associated with Energy Efficiency Programs in Rhode Island in 2019

Programs	Total FTEs
Electric Programs	
Commercial and Industrial	####
Residential Income Eligible	####
Residential Non-Income Eligible	####
Gas Programs	
Commercial and Industrial	####
Residential Income Eligible	####
Residential Non-Income Eligible	####
National Grid EE Staffing	####
WAP/LIHEAP Income Eligible Programs	####
Total 2019 Rhode Island FTEs	####

The study's findings were developed through interviews with energy services and equipment vendors and National Grid contractors, as well as through a detailed review of National Grid's records of all energy efficiency measures installed in homes, apartment buildings, businesses, and industries throughout the state in 2019. Guidehouse calculated the labor hours required for each installation based on industry standards and discussions with contractor experts.

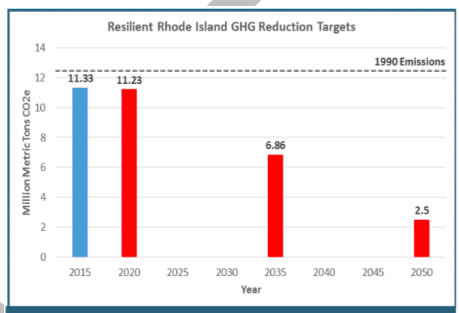
Guidehouse determined that XXX full-time equivalent (FTE) employees had work in 2019 supported by investments by National Grid in energy efficiency programs provided to its Rhode Island electricity and natural gas customers. One FTE equals 1,760 work hours, or the total of one person working 8 hours a day for 220 workdays in an average year. Because a "full-time equivalent" employee often represents the labors of more than one person over the course of a year, the number of individual workers employed as result of Rhode Island energy efficiency programs funded by National Grid is far larger than the total of FTEs. Most of the jobs supported by energy efficiency investments were local because they were tied to installation of equipment and other materials.

The study also identified XXXX companies and agencies involved in National Grid's 2019 energy efficiency programs, XX% of which were located in Rhode Island. The companies identified include those whose employees are counted in the FTE analysis, as well as additional companies who assisted customers to secure equipment rebates, for example through the New Construction, Commercial Upstream Lighting, or High Efficiency HVAC programs.

The study fulfills General Law 39-2-1.2, which was enacted by the General Assembly in 2012. The study will benefit those who work in workforce development, training or those interested in the state's green jobs.

PLANNING INITIATIVES

State Goals: State Energy Plan & GHG reduction goals



Graph adapted from the Rhode Island Greenhouse Gas Emission Reduction Plan[1]

Energy 2035: The Rhode Island State Energy Plan, formally adopted in October 2015, lays out a long-term, comprehensive energy strategy for Rhode Island. The vision of the Plan is to provide energy services across all sectors—electricity, thermal, and transportation—using a secure, cost-effective, and sustainable energy system. The Plan demonstrates that Rhode Island can increase sector fuel diversity, produce net economic benefits, and reduce greenhouse gas emissions by 45 percent by the year 2035. The Plan proposes state-of-the-art policies and strategies to achieve those goals.

The Plan identifies energy efficiency as the state's "first fuel" and a centerpiece strategy for achieving the Rhode Island Energy 2035 Vision. The State Energy Plan identifies energy efficiency as

the lowest-risk, lowest-cost, and arguably, the most sustainable energy resource available for Rhode Island. The Plan also lists Least-Cost Procurement as one of Rhode Island's cornerstone energy policies, and the primary vehicle for delivering the benefits of energy efficiency to Rhode Island consumers and businesses.

Since the development of the State's Energy Plan, Governor Raimondo has passed multiple Executive Orders focused on reducing greenhouse gas emissions across the state. Her Executive Order 19-06 tasked the Office of Energy Resources and the Division of Public Utilities & Carriers to create a strategy to support the decarbonization of Rhode Island's heating sector. In 2020, Executive Order 20-01 also committed the state to 100% renewable electricity by 2030. To achieve the objectives of these Executive Orders, the Energy Efficiency and Resource Management Council is working closely with the Office of Energy Resources to ensure that Rhode Island's energy efficiency programs are laying a strong foundation for the necessary energy demand reduction.

Market Potential Study & Savings Targets Setting

In preparation for the development of the 2021-2023 Three-Year Energy Efficiency and System Reliability Plans, the EERMC commissioned a Rhode Island Market Potential Study (RI MPS) to quantitatively assess the level of energy savings that can be achieved over the next several years. The EERMC selected Dunsky Energy Consulting to conduct the study, which covers energy efficiency, demand response, heating electrification, combined heat and power, and behind-the-meter distributed generation and renewable energy. The MPS covers calendar years 2021-2026 and will be used as a key input in the process of setting three-year Energy Savings Targets, which are developed by the EERMC and approved by the Public Utilities Commission. The study is being overseen and continuously reviewed by the MPS Management Team, which consists of the EERMC Consultant Team, the RI Office of Energy Resources and the RI Division of Public Utilities and Carriers. National Grid is also participating as appropriate.

Annual Energy Efficiency Program Plan

In addition to the three-year plan, annual energy efficiency program plans (Annual Plans) are developed by National Grid with significant stakeholder input. These annual plans clearly define how the energy efficiency programs will be implemented and specify how the programs will be cost-effective. The annual plans are also reviewed and ruled on by the PUC. Work on the 2021 Annual Plan will commence in summer 2020.

System Reliability Procurement

Through System Reliability Procurement (SRP), the Company identifies customer-side and grid-side opportunities that are safe and reliable, environmentally responsible, cost-effective, and provide a path to lower supply and delivery costs for customers in Rhode Island. As part of meeting this purpose, the Company develops and implements non-wires solutions.

Non-wires solutions use clean energy technologies to address electric grid needs. Clean energy technologies can include, but are not limited to, solar PV, energy efficiency and conservation, demand response, storage, and other types of renewable energy systems.

Non-wires solutions can help the grid deliver electricity to homes and businesses when electricity demand is highest, sometimes at a lower cost than upgrading the traditional wires, transformers, and substations. Non-wires solutions can also provide clean renewable energy, which may reduce net greenhouse gas emissions.

National Grid issued requests for proposals and evaluated project proposals for three opportunities for non-wires solutions in 2018-2019. While none of the proposed projects were both technically and economically viable, National Grid will continue to pursue non-wires solutions from the market for two of the three opportunities in 2020. National Grid has also identified at least one more opportunity for a non-wires solution and will pursue a third-party solution in 2020. National Grid also committed to further review of their procurement and evaluation processes for non-wires solutions to mitigate market barriers in 2020.National Grid

continued enhancing the Rhode Island System Data Portal[1] (Portal) in 2019. The Portal is an online, interactive mapping tool that provides information about National Grid's electric distribution system in Rhode Island. The goal of the Portal is to provide the market with information about grid-beneficial locations for siting distributed energy resources, like solar and energy storage. In 2018, National Grid initiated the Portal with maps that include characteristics of the distribution system, approximate levels of load on distribution lines and substations, and an annual snapshot of how much distributed generation can be hosted on each distribution feeder (called "hosting capacity").

In 2019, National Grid added functionality to the Portal maps related to electric vehicles and charging infrastructure. National Grid also added practical information about company-led procurement of non-wires solutions with links to the appropriate resources needed for third-party solution providers to take the next step. Finally, National Grid also enhanced their company website to include a series of pages about non-wires solutions and open opportunities.[2]

National Grid continued their outreach and engagement with third-party solution providers in 2019. Market engagement is important to increase industry knowledge about grid-beneficial non-wires solutions and resources available, including the Portal and opportunities for non-wires solutions. 2019 outreach and engagement included four webinars, two in-person demonstrations of the Portal, four email campaigns, and direct vendor contact. National Grid will continue outreach and engagement through 2020, including hosting webinars and trainings.

Additional details on 2019 SRP activities and the 2020 SRP Plan can be found in the Company's 2020 System Reliability Procurement Plan Report filed in Docket 4980 and approved by the PUC on December 20, 2018.

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Power Sector Transformation

In March of 2017, Governor Gina M. Raimondo charged the Public Utilities Commission (PUC), the Office of Energy Resources (OER), and the Division of Public Utilities and Carriers (DPUC) with developing recommendations to advance power sector transformation (PST) in Rhode Island. The goal of the PST Initiative is to transition to a more dynamic utility regulatory framework in order to achieve a cleaner, more affordable, and reliable energy system for the 21st century and beyond. The three agencies partnered to solicit input from Rhode Island stakeholders and national experts, submitting a final Phase One Power Sector Transformation report with recommendations to the Governor in November 2017. The final report drew upon previous work to date by the EERMC, the Distributed Generation Board, the Systems

[1] https://ngrid.apps.esri.com/NGSysDataPortal/RI/index.html

[2] https://www.nationalgridus.com/Business-Partners/Non-Wires-Alternatives/

Integration Rhode Island Working Group, and the PUC's Docket 4600 Investigation of the Changing Distribution System.

Following the submission of the PST report, National Grid filed an electric distribution rate case with the PUC to request the first change to electricity delivery rates since 2012 which addressed several topics identified in the PST report. In May 2018, National Grid, the DPUC, OER, and several other parties submitted a settlement agreement relative to National Grid's rate case at the PUC.

Among other items, the PUC ordered National Grid to implement two of their proposed initiatives. Through the Electric Transportation Initiative, National Grid is conducting a pilot to understand how rebates can encourage electric vehicle drivers to charge off peak, providing advisory services to fleet managers to understand the value proposition for transition to an electric fleet, providing incentives to make sites ready for electric vehicle charging infrastructure, and offering a discount on demand charges for DC Fast Charger hosts. Through the Energy Storage Initiative, National Grid is installing two battery energy storage facilities, one of which will be paired with electric vehicle charging infrastructure. OER is engaged with the implementation and evaluation of these programs; learnings will have implications for how we manage the electric distribution grid in an environment of increased transportation electrification and distributed generation. OER is also actively participating National Grid's PST Advisory Group to refine a longer-term proposal for grid modernization and to develop a business case for advanced metering functionality. National Grid is anticipated to file these two items with the PUC in 2020.

For more information on the Power Sector Transformation Initiative, please visit: www.ripuc.ri.gov/utilityinfo/electric/PST_home.html.

LOOKING FORWARD: 2020 ENERGY EFFICIENCY PROGRAM PLAN HIGHLIGHTS

2020 Residential Programs

Residential New Construction

In 2020 the Company will continue to work with building industry representatives to determine the cost-effectiveness of offering the zero energy ready initiatives in the RNC program. The Company will work with the Office of Energy Resources (OER) and RI Housing to support the three companies that earned a portion of the Zero Energy in the Ocean State (ZEOS) RFP funding for low – moderate income customers. continue to work with the Zero-Energy Buildings Advisory Group to develop a robust plan for residential zero energy homes.

The High-Efficiency Heating and Cooling Programs (Gas Heat Program and CoolSmart Program)

In 2020 the Company the electric heat program can only offer incentives for air source heat pumps to replace/displace electric resistance heat program to ensure that contractors are properly trained in cold climate air source heat pump (ASHP) system design and installation as well as delivering customer education. The electric heat program will focus on replacement or displacement of electric resistance heat (2020 program cannot offer program for oil/propane customers due to RI Public Utilities determination. The Company will work on determining the effectiveness of the electric heat offering to ensure customer satisfaction and use as the primary heating source. The Company will continue to deliver heat pump water heaters through an efficient and cost effective up-stream model with big-box retailers and RI distributors.

Income Eligible Enhancements

In 2020, the Program aims to develop strategies to respond to the 2019 Process Evaluation recommendations. Cold climate air source heat pumps for replacement/displacement of electric resistance heating will continue to be offered. The IES Program will continue to participate in the Community Expos services to provide customer service and increase participation in the IES program.

Community Initiative

The Community Based Initiative in 2020 will continue the model put forward in the prior program year that emphasized the importance of achieving certain energy saving metrics to ear the grant monies that will be used on energy efficiency projects at a municipal site. The Company will recruit up to five new communities for 2020 and is looking to continue working with the Aquidneck Island communities in 2020 with measures that will drive deeper energy efficiency in those communities. The communities will again be provided with start-up funding and marketing kits to promote efficiency throughout the year.

Home Energy Reports

Target Rank reports will be run over another six months. This new approach will encourage customers to aim for higher ranking, so they know their energy saving actions are having an

impact on their usage. Context-aware tips and personalized tip savings estimates will be provided in 2020.

Multifamily Program

In 2020, the company has set a goal of installing 175 ductless air source heat pumps (ASHP) to displace electric resistance heat. The Company remains committed to offering a comprehensive program that is both cost effective yet thorough in treating this diverse segment of the population. One example of this is the Company's commitment to serving non-profit group homes seamlessly through the multifamily program.

2020 Commercial and Industrial Sector

In 2020, the Commercial and Industrial sector will focus on a number of new initiatives in effort to increase participation among smaller-to-medium sized customers, to provide services to underrepresented market segments, and to better identify energy efficiency savings opportunities. Additionally, the Company will make minor adjustments to the Targeted Dispatch and Daily Dispatch demand response initiatives to improve adoptions rates and better align load curves with curtailment.

The Commercial and Industrial New Construction program will have two significant changes compared to the 2019 program structure. First, there will be different program requirement thresholds and incentive structures from small and large buildings. Second, a tiered structure will be added to create a higher savings target and incentive rate for new construction projects that go beyond the code baseline. These changes will encourage new participation and yield deeper savings among new construction developers and building owners.

The Large Commercial Retrofit Program will launch three new initiatives aimed at increasing savings for underrepresented market segments and to provide those customers with more options to save energy. The new initiatives will center on national and regional chain restaurants, lodging, and commercial laundries.

- The Serve Up Savings Initiative will serve regional, multistate, and national restaurant chains not currently engaged in the Strategic Energy Management Planning (SEMP) partnership. The Serve Up Savings vendor will develop relationships with the key stakeholders—often the corporate Energy Manager—to motivate restaurants projects to move forward. In 2020, the Company plans to achieve 1,100 MWh and 21,000 therms in energy savings through various multi-measure installations at a minimum of 25 locations.

- The Lodging Initiative will look to serve Rhode Island hotels, motels, and resorts by offering no-cost audits to identify energy efficiency opportunities for refrigeration, lighting and controls, HVAC and controls, and kitchen equipment. For smaller hotels and motels, the program will use an inform-to-invest strategy where the success of the first project is leveraged to pursue deeper and more capital-intensive measures.

- The On-Premise Laundry Initiative will offer a suite of measures specifically catered to commercial laundry facilities, laundromats, and college and university laundry operations. The offering associated with this initiative include Xeros polymer laundry solutions and Dry Smart solutions. Due to the high cost of commercial dryer replacement, the Company has focused its offerings on a number of retrofit solutions that provide cost effective energy savings.

The Small Business Direct Install Program is eligible to commercial customer who have less than 1,000,000 kWh in annual usage. After a Small Business Energy Specialist conducts a no-cost site assessment, the Specialist works with the customer to identify strategies to pursue the appropriate energy efficiency measures. For 2020, the Small Business Direct Install Program will institute a number of changes in an effort to increase participation and to set goals/target with specific communities. For example, in 2020, the Company will continue to work with local Chambers of Commerce and other local small business groups to schedule workshops that address many of the small business needs including energy efficiency and demand response. Additionally, the Company will be working with community leaders and stakeholders to set goals for serving businesses in areas with lower incomes and those in Environmental Justice Zones.

In 2019, the Company implemented an active demand reduction program based on demonstrations done in 2017 and 2018. Under this active demand reduction approach customers agree to reduce their electric use during the system peak. Customers participating in the Demand Response Program are free to curtail their energy use by any means in this technology agnostic program. In 2020, the Company plans to adjust the Targeted Dispatch program structure to permit weekend curtailment events for commercial and industrial customer who have weekend operations. This will enable the Company to curtail loads on weekends to prepare for future high weekend loads similar to what happened during the summer of 2019. For the Daily Dispatch program, the Company will attempt to increase adoption rates for the Commercial and Industrial energy storage incentive program and evaluate if and how the Net Metering and RE Growth programs could be adapted to allow paired solar and storage facilities greater than 25 kW.

APPENDIX A: *Case Studies*

APPENDIX B: *2018 Energy Efficiency Vendors*