

**EERMC Annual Report 2021
FIRST DRAFT**

March 2021

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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

LETTER FROM THE CHAIR

It is astonishing what our nation had to endure over the last year. Many have said that the COVID-19 virus alone was enough to bring our State to its knees, not to mention the global impact. Add civic unrest and the unveiling of inequities that our nation's most vulnerable people face, and you have all the indicators that change is needed.

As these issues took the forefront, energy efficiency seemed to be less important. But I beg to differ. With the increase of families being at home almost full-time, residential demand for energy increased greatly and energy bills along with it. For already struggling households, the increase in energy cost was quite noticeable as families were forced to decide which basic human need they could meet with their limited resources. I find myself wondering, if the most affected households had benefited previously from Rhode Island's energy efficiency programs, would the impact on their household budgets have been more digestible during the pandemic?

Also, I believe many people are starting to understand the importance of energy and environmental justice issues. Using less energy by incorporating energy-efficient appliances, heating and cooling, and lighting can benefit the environment and have a lasting impact on the personal bottom line. So what needs to happen? Access and resources.

As a council, we have identified our income-eligible program as a challenging program. We continue to push for program evaluation and redesign to ensure that we meet the needs of all ratepayers. We must insist on program designs that incorporate engagement strategies to maximize the number of low-income households served.

As a member of the EERMC and the income-eligible representative, I am proud of the commitment and priorities of the council to continue to elevate issues of accessibility to energy programs, skilling the workforce, and achieving the goal of XX by XXXX. As a community leader, I am personally committed to equity and economic stability—the two work hand and hand.

Therefore, I am excited that the council is continuing our commitment to serve all Rhode Islanders, create a more skilled energy efficiency workforce, support emerging technologies to maximize energy savings, and to do so through an equity lens.

Lastly, I would like to say that I am entering my first term as Chair of the EERMC and am hoping that I will make the council proud. I thank the outgoing Chair, Christopher Powell, for his many years of hard work and dedication. I commit to always elevating the voice of those who often remain voiceless in system change conversations.

Respectfully Submitted,

Anthony Hubbard, Chair
Energy Efficiency and Resource Management Council

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

Anthony Hubbard, 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*

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*

Appointment Pending

Voting Member Representing Small Commercial & Industrial Users

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.

Our Mission

The Council's mission is to serve Rhode Islanders in their homes and businesses. We represent your needs by providing integrated, comprehensive stakeholder feedback about energy decisions. Our goal is to ensure Rhode Islanders are getting the least expensive and most environmentally healthy energy supply through energy efficiency, conservation, and resource management.

Our Purposes

 Make Recommendations	 Engage Stakeholders	 Monitor and Evaluate	 Ensure Public Benefit
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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.

2020 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 2020, Rhode Island maintained the #1 ranking (tied with Massachusetts) in the category of "utility-sector energy efficiency programs and policies".

Overall, Rhode Island ranked #4 by continuing to post 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, expanding programs that reduce peak demand, consolidating home energy data in a central portal, establishing clear energy goals for state agencies, and working to advance construction of zero energy buildings.

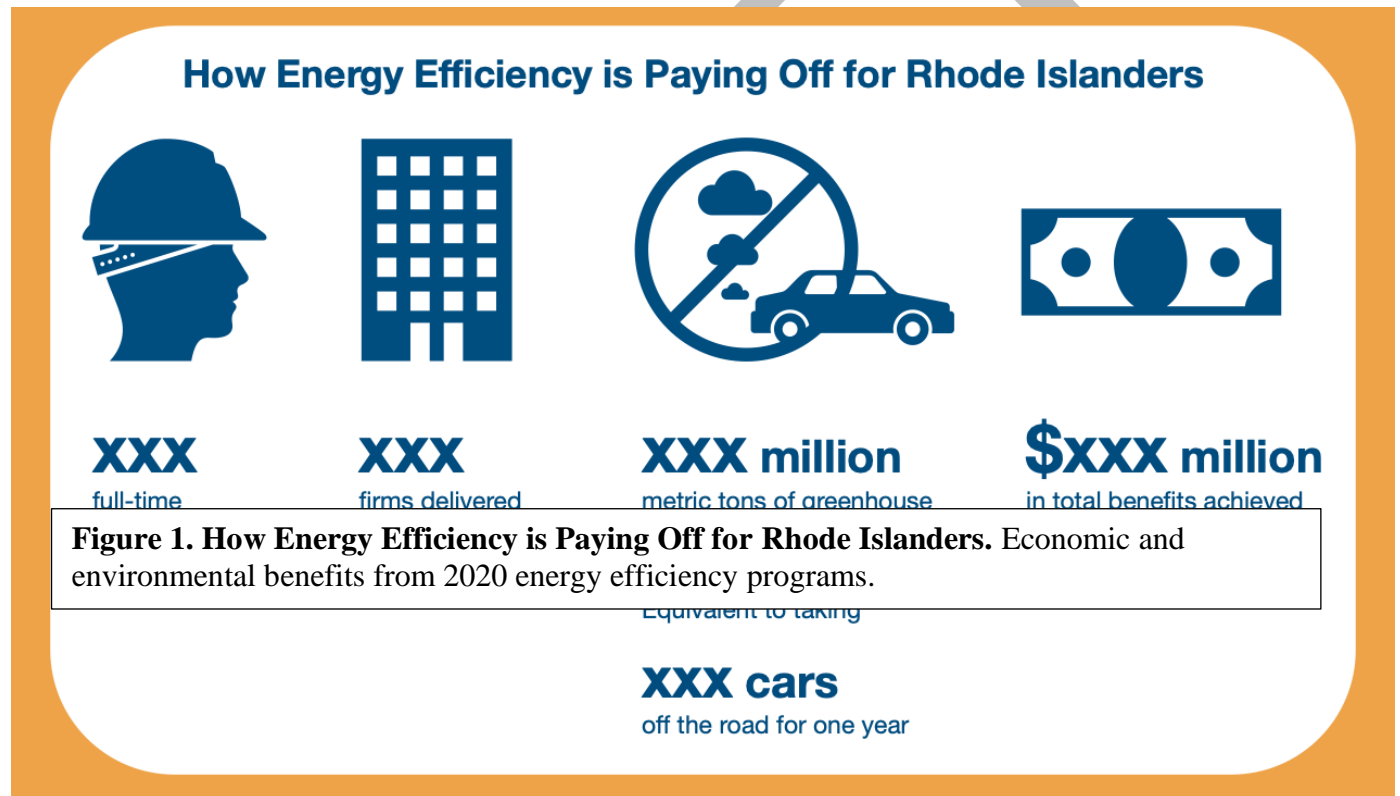


Figure 1. How Energy Efficiency is Paying Off for Rhode Islanders. Economic and environmental benefits from 2020 energy efficiency programs.

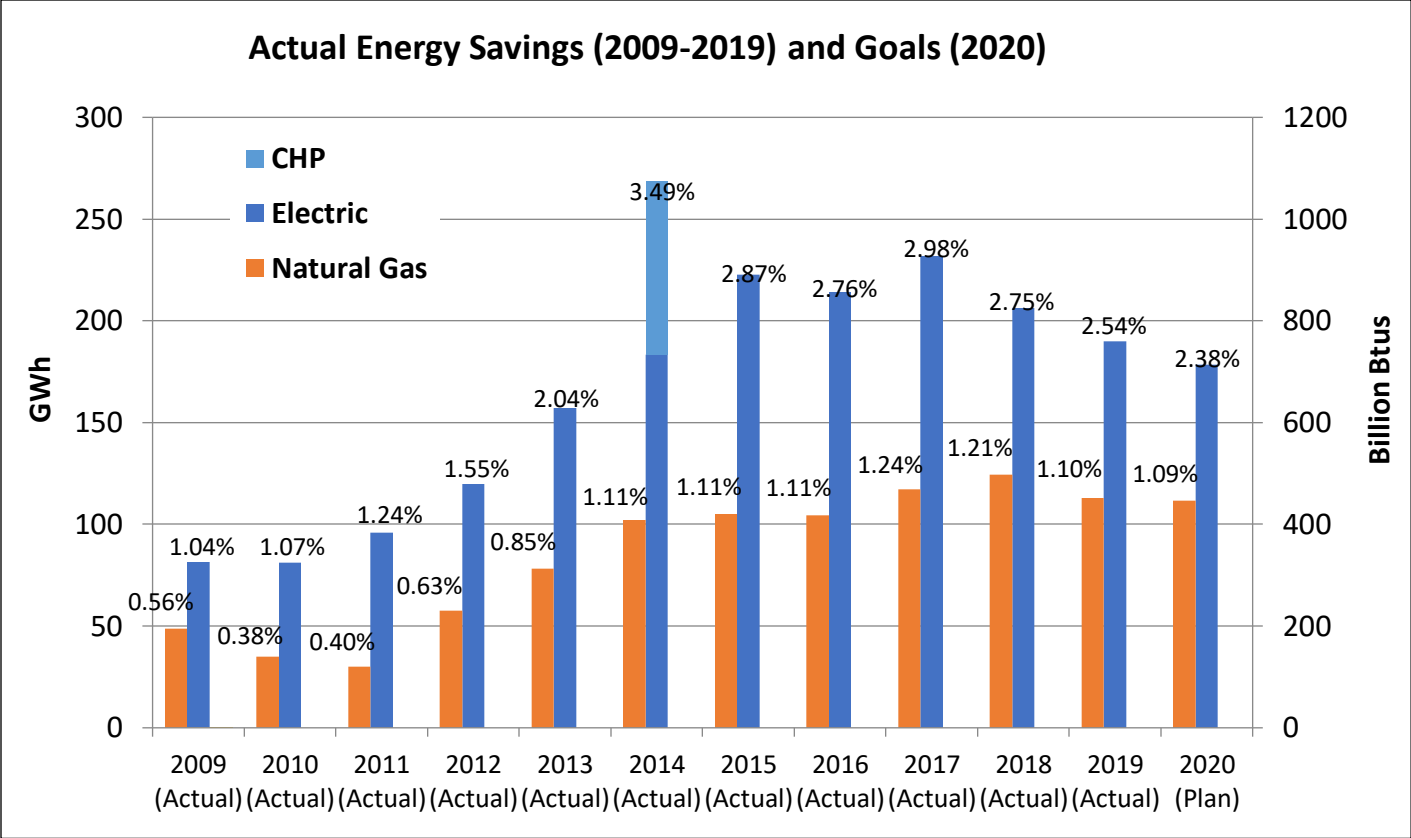


Figure 2. Actual Energy Savings (2010-2020) and Goals (2021). Electric and natural gas energy savings over time shown in GWh, Billion Btus and Percentage of Sales. Percentage is based on forecasted sales for 2009-2011 and reference loads thereafter. 2012-2015 is based on the 2009 Reference Load, 2015-2017 is based on the 2012 Reference Load and 2018-2020 is based on the 2015 Reference Load.

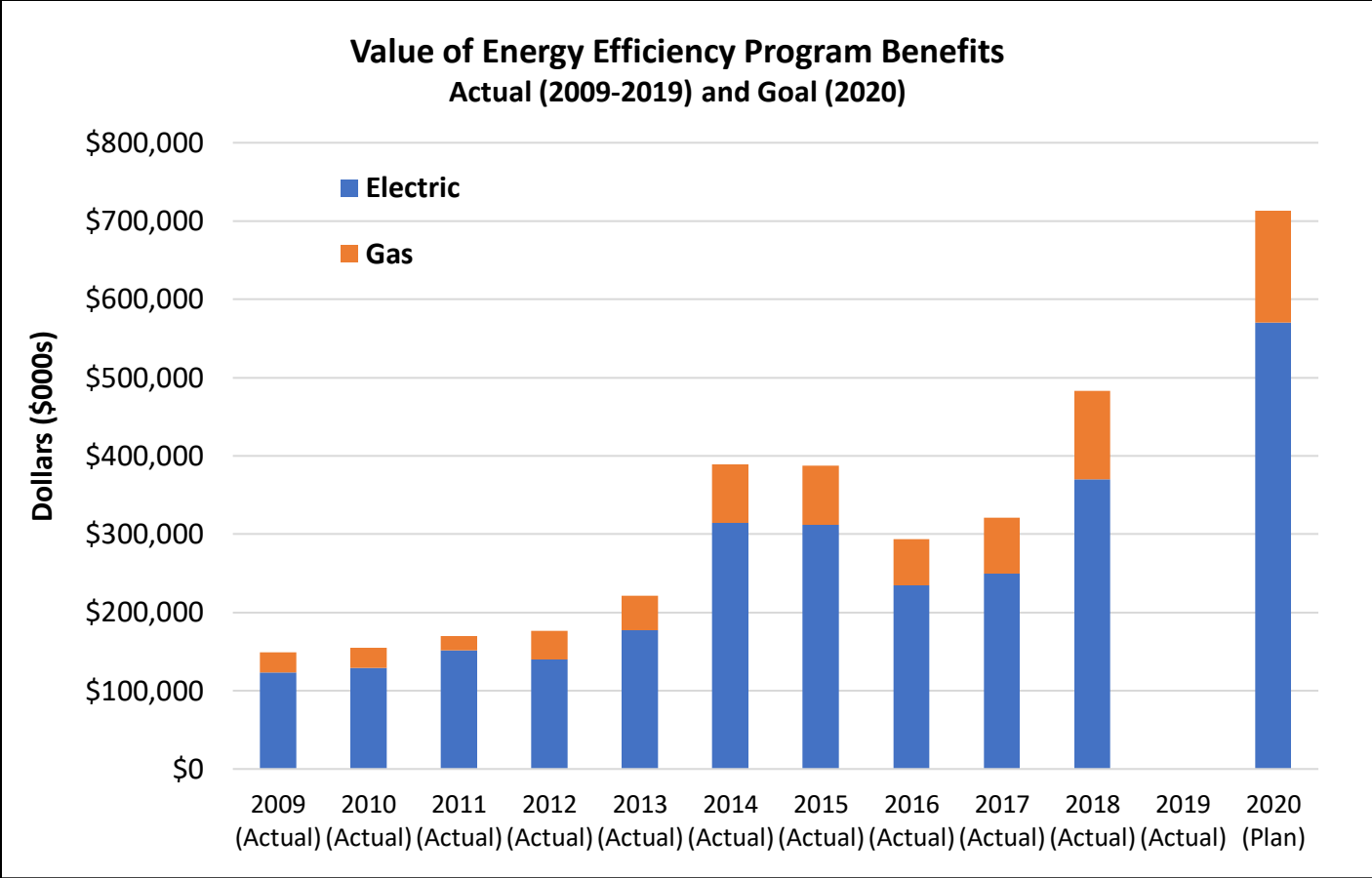


Figure 3. Value of Energy Efficiency Program Benefits Actual (2010-2020) and Goal (2021). Since 2009, National Grid's Energy Efficiency Programs have provided about \$2.7 Billion in realized benefits. Achievement of the 2020 Plan goals will push the total realized value to near \$3.5 Billion.

This report describes the activities of the EERMC in 2020, which include:

- ◆ Providing oversight and input into 2020 program implementation, which achieved **TK%** of the electric savings goal and **TK%** of the natural gas savings goal
- ◆ Collaborating with National Grid and key stakeholders on the development of the, 2021-2023 Three-Year Plan, 2021 Annual Energy Efficiency Plan and the 2021 System Reliability Plan
- ◆ Collaborating with National Grid on responding to COVID-19's impact on energy efficiency programs in Rhode Island
- ◆ 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

2021 POLICY RECOMMENDATIONS

R.I.G.L. § 42-140.1-5 requires that the EERMC “(s)ubmit 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 energy and utility cost reductions for Ocean State residents and businesses; support industry and employment across the state’s clean energy sector; and further Rhode Island’s position as a national leader in energy efficiency and resource conservation.

- 1. EXTEND LEAST-COST PROCUREMENT LAW:** The EERMC strongly recommends that the General Assembly extend 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 for years to come. Currently the law is set to expire at the end of 2023. This law is foundational to all of Rhode Island’s clean energy and greenhouse gas emissions reduction goals. It supports the least-cost means of reducing ratepayer electric and gas bills and lowering carbon emissions. These programs also employ the majority of clean energy workers in Rhode Island – six out of every ten sector jobs (pre-COVID) were derived from these activities.
- 2. CONCENTRATE SUPPORT ON CLEAN ENERGY WORKFORCE DEVELOPMENT:** If Rhode Island is to achieve its economy-wide greenhouse gas emissions targets, it will require a well-trained workforce to install robust energy efficiency measures and modernize heating and transportation equipment. In particular, the energy efficiency workforce will be rapidly changing in the coming years and requires a retooling of existing skillsets. Therefore, current efforts by the RI Department of Labor & Training and the Governor’s Workforce Board should be ramped to accommodate this work and coordinate with existing clean energy programs wherever possible. This is particularly true for historically marginalized communities which may offer unique opportunities to train new workers in fields ripe for employment growth.
- 3. ENSURE/EXPAND 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. 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. According to [ACEEE](#), “(a)pliance efficiency standards prohibit the production and import or sale of appliances and other energy-consuming products less efficient than the minimum requirements. These standards not only save energy but also reduce pollutants, improve electric system reliability, and save consumers significant amounts of money over the life of the equipment. Standards help to assure a level playing field by eliminating products with burdensome operating costs and hastening the development of innovations that bring improved performance.”¹
- 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. Building labeling 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. These outcomes have been demonstrated in states such as Connecticut, Massachusetts, and Vermont.

¹ “Appliance/Equipment Standards.” *Topics* | ACEEE, American Council for an Energy-Efficient Economy, <https://www.aceee.org/topic/appliance-equipment-standards>

EERMC Priorities for the 2022 Energy Efficiency and System Reliability Procurement Annual Plans

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2020 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 through education and energy-efficient products; facilitating market transformation for efficient products and zero-energy homes and buildings; and educating Rhode Islanders through annual events such as the Energy Expo at the Rhode Island Home Show and the Company's community-based initiative. 2020 was an unusual year which resulted in innovation and program enhancements to accommodate shifting rules associated with the COVID-19 pandemic.

In mid-March the Company temporarily suspended the contracted vendor delivery of on-site energy efficiency services. Throughout the second quarter of 2020, all programs were gradually resumed, implementing new strategies that had been developed during the suspension including new health and safety protocol for in-person services, virtual services including assessments, training, quality assurance/quality control inspections, front-door delivery of LED bulbs and appliances.

In 2020, more than 3,800 residential thermostats and 52 residential battery systems were enrolled in the Residential Connected Solutions program. Over the course of 34 events in the summer of 2020, these customers delivered an average of 3.9MW from thermostats, and 0.2 MW from batteries, of active demand response curtailment, helping to lower peak load on the grid.

2020 saw a continuation of residential market transformation in lighting. Sales of lighting products could be continued Progress is expected to continue in 2021 as the final year of the residential lighting program.

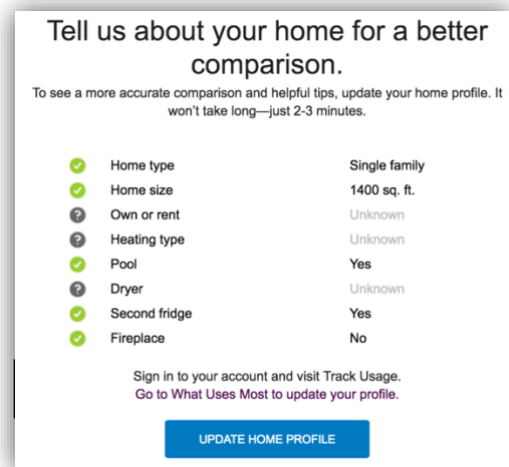
The heating electrification program to replace or displace oil or propane heating sources with high-efficiency air source heat pumps was discontinued due to a determination that under the Least Cost Procurement Law, using electric rate-payer funds to conduct fuel switching was not within the intent of the Law. However, the air source heat pump incentive for electric resistance heating customers remained effective and participation of XXXXXXXX exceed the goals for 2020.

2020 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 its eighth 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. 271,815 Rhode Island customers received reports in 2020.

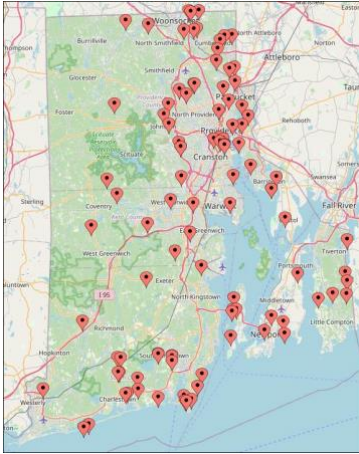
From January – March 2020, the Energy Innovation Hub continued to serve as a community engagement destination designed to expand customer education and outreach and enrich the customer’s understanding of energy and opportunities to reduce energy consumption. The Hub helps customers to understand their 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, prior to the COVID-19 pandemic the Hub drew walk-in customers and groups of customers from local businesses and schools.



In 2020 during the COVID-19 pandemic, the Energy Innovation Hub worked to remain relevant in the communities that our Hub serves by updating our pathways for communication. By utilizing newsletters, social media, virtual presentations, and personal networks, we have created a more expansive platform for our messaging, hosting 106 customers via virtual presentations, and countless others via other electronic means. With an updated web presence, virtual connections will be more accessible than ever. In the future, we will pair these new means of outreach with safe in-person programs at our Hub to maintain a comprehensive and effective strategy for building interaction between customers and our Hub network. Phone: 401-572-3560. Email: EnergyInnovationHub@NationalGrid.com.

National Grid continued its core residential energy efficiency programs in 2020:

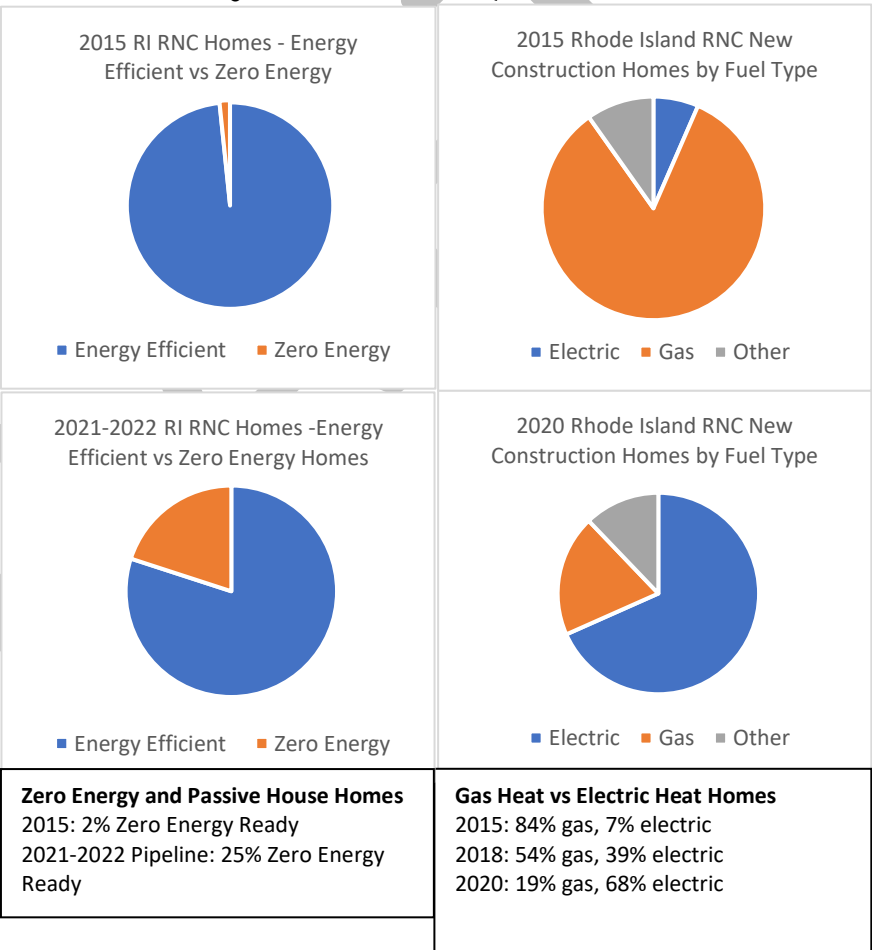
- ◆ **EnergyWise** offers single family customers no-cost home energy assessments, weatherization, and information on their actual energy usage. Participants in this program receive personalized recommendations to reduce their energy consumption and improve the comfort in their home, technical assistance 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 fifth 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 2020, EnergyWise introduced virtual home energy assessments to provide remote access with an energy specialist to assess a home’s energy needs. This new offering addressed customer concerns with in-home visits. Weatherization incentives increased to 100% to develop a pipeline of work for contractors that were furloughed during the beginning of the pandemic.



Locations of homes completed in the RNC program in 2020

32% were affordable housing. In 2020, RNC offered a new High Efficiency Electric Homes incentive that provided an additional \$1,000 per unit for 1-4 unit buildings, and \$500 per unit for 5+ unit buildings that were high efficiency all-electric (fossil-fuel-free) homes with approved, and accurately sized, heating and cooling equipment. 2020 Program trends continue to demonstrate market transformation in electrically heated homes compared to gas heated homes and zero-energy ready and Passive House homes. The RNC Program partners with the EnergyWise Program on master-metered projects to provide envelope and equipment improvements, respectively, and together completed 211 master-metered gas renovation/rehabilitation affordable housing units.

◆ **The Residential New Construction Program (RNC)** benefits new construction and major renovation of single-family and multi-family homes for market rate and income eligible customers. The program elements include plan review, energy modeling, 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 and certification, energy performance-based incentives (compared to the 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. Construction continued throughout 2020 as RI deemed it an essential business, and technical support continued via remote means. In 2020, 482 housing units were built to the RNC standards, and 410 newly planned units enrolled in the Program. Of the 482 units, 68% were market rate and



- ◆ **The ENERGY STAR® Consumer Products Program** promotes the purchase of high efficiency household appliances and electronics. 2020 produced strong results with strong consumer interest in refrigerator and freezer recycling, dehumidifiers, room air conditioners, room air cleaners, dryers, pool pumps, and advanced power strips. No contact refrigerator and freezer recycling pick-ups were introduced in 2020 along with an enhanced incentive. Low-E storm windows moved to an online sales model which effectively resulted in customer participation.
- ◆ **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. Online promotions were utilized when shelter-at-home orders were instituted in the state. When restrictions on staying home were removed, short-term promotions with local stores were also supported.

- ◆ **ENERGY STAR® HVAC Programs** (Gas and Electric Heating, Cooling and Water Heating Program) promote the installation of high-efficiency equipment for gas and electric space heating and cooling water heating, and controls via tiered customer rebates. In 2020, COVID-19 restrictions resulted in cancelling classroom sessions, but the program quickly pivoted to online webinars as an alternative. The gas heating program continued to see a strong consumer purchase of the energy-efficient combination boiler/hot water systems (1100 systems) versus a much lower purchase of the stand-alone energy efficient boilers (236). The Company launched an enhanced incentive for emergency replacement of eligible natural gas heating and water heating equipment during the challenging Covid-19 pandemic. The HVAC electric program continued to promote the replacement of old electric resistance heating systems with high-efficiency cold climate electric air source heat pumps (ASHP) which resulted in XXX rebates processed. 14 HVAC Check trainings were offered, resulting in 70 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. 94 distributor visits were conducted in 2020 (in-person/virtual) to provide ongoing communication about the HVAC Program.
- ◆ **The Home Energy Reports (HER) Program** continued in 2020 with a specific focus on COVID messaging and billing options for customer. High bill alerts continued in 2020 and were adjusted to alert customers earlier if they were trending towards higher use in the month so that they could plan accordingly.
- ◆ **The Multifamily Program** concluded 2020 with mixed results for the year. After a pause on on-premises work during the first phase of the pandemic and reluctance by property owners to allow contractors on premise through most of the year, the program made a strong recovery in the fourth quarter. The program faced greater relative challenges in achieving its gas goals for 2020, primarily because of hesitation from property owners around having contractors perform work on premise. Also, many property managers were reluctant to make large capital investments due to unprecedented rent collection issues as a result of COVID. In contrast, the multifamily program made significant progress toward its Market Rate electric goals, due to excellent lighting opportunities with several large apartment buildings under one property manager. This property management group worked collaboratively with our vendor to complete in-unit measures during their own maintenance visits, which helped to limit onsite visits and limit residents' exposure to onsite workers. The Income Eligible program had greater difficulty achieving its electric goal relative to its gas goal, primarily due to equipment delays, as well as greater difficulty with completion of on-premises work because of a disproportionate number of vulnerable customers, such as those who are elderly or who have varied health issues. Many of the jobs in the Income Eligible electric pipeline had to be delayed to 2021.

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 from the customer. 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). Income eligible customers are eligible for a full energy assessment of their home including lighting, appliances, insulation and air sealing, and if deemed necessary, may receive replacement of inefficient or unsafe heating systems and/or appliances. All IES customers receive all services and equipment upgrades at no cost.

In 2020, the IES program conducted 2,621 energy assessments – 53% in-home, and 47% virtual assessments due to Covid-19 restrictions. Compared to 2019, 2020 did see overall reductions in the installation of insulation, appliances and heating system replacements due to lack of in-home access due to Covid-19, staffing limitations among CAPs, and nationwide appliance shortage of items such as refrigerators and air conditioners. In 2020, the IES Program initiated a Referral Program that allows CAPs to refer weatherization jobs to a third-party that will complete the work. The Referral Program was an effort to support the CAPs in managing their pipeline of weatherization jobs and provide cost-savings benefits to the customers more efficiently. Continuing from 2019, the IES offered replacement of electric resistance heating systems with high-efficiency Cold Climate Air Source Heat Pump heating solutions to help save money on the customers' utility bills, of which six jobs were completed. Progress was achieved, and ongoing, reflective of the recommendations set forth in the Process Evaluation, including an updated audit process to reduce paperwork and redundant data entry; a new Auditor Evaluation process; KPI's to ensure standardized apartment comparisons between agencies; the Standardization Group continues to assess the current, and future, state of the RI WAP/IES program to improve standardization across RI CAPs.

Overall, in 2020, IES achieved **XX%** of the gas goal (**XX%** of savings), and the electric goal (**XX%** of savings). 2020 savings were lower than expected due to Covid-19 restrictions, reduction in CAP staffing and appliance shortages.

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 Community Action Program (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 outreach, intake and income-verification 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) provides funds for income eligible families to insulate and air seal their homes to reduce their energy bills, improve potential health and safety concerns and improve the thermal comfort. These funds provide the most advanced technologies and testing protocols available in the industry to improve the energy performance of income eligible housing.

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.

2020 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

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Commercial, Industrial & Public Program and Initiatives

Large Commercial and Industrial Programs

National Grid offered five Commercial and Industrial energy efficiency programs. Depending on the customer's energy consumption and demand they could be eligible to participate in one or more of the five main energy efficiency programs.

1. **Large Commercial and Industrial New Construction:** Provided offerings that targeted 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:** Offered 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:** Aimed at reducing peak electric demand and associated costs for large and small commercial customers.
5. **C&I Multifamily Program:** Provided joint residential and commercial energy services to condominiums and apartment complexes for energy efficiency upgrades.

The C&I sector encompasses a diverse and complex set of customers, to reach these customers, National Grid leverages a Market Sector approach. The Market Sector approach allows National Grid to provide customized efficiency solutions that aligned with the customers' needs, thereby increasing participation in energy efficiency. The following market sectors were incentivized in 2020: Grocery, Municipal and State Buildings, Commercial and Municipal 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 2020, the New Construction Program performed well and exceeded its electric (175%) and gas (120%) annual energy goals. This was achieved by working with other C&I programs to reallocate additional resources to this program to help balance for lost savings opportunities attributable to COVID-19. Some examples of comprehensive new construction projects include a new location of an RI based supermarket chain, which saved 174 MWh and 2,152 MMBtus, and a project with 1,000 exterior LED light installations, with estimated savings of over 1,000 MWh.

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

2020 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

investments. The program offered three distinct pathways 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 2020, the Company expanded its Large Commercial Retrofit portfolio to include a new market-specific initiative, and several new measure offerings for existing initiatives and programs. The new market-specific initiative is titled “Serve up the Savings” and focuses on working with national and regional restaurants to discover and implement energy efficiency opportunities for franchisees across Rhode Island. In addition to the new initiative, both the Grocery Initiative and the Upstream Program added new measure offerings to help support customers achieve savings and reduce their energy bills. National Grid also signed a contract with a vendor to work with customers in the telecommunications space in 2021. Historically, these customers have been underserved due to a host of technical and nontechnical reasons but have strong potential for future savings. Beyond these new developments, the Company also continued its Strategic Energy Management Planning (SEMP) partnerships and renewed one of the six customers to a non-binding Memorandum of Understanding with annual energy reduction goals. Overall, the Large Commercial Retrofit program finished the program year with XXX,XXX MWh of electric savings and XXX,XXX MMBtus of gas savings.

Industrial Initiative

The Industrial Initiative leverages the world-renowned engineering firm Leidos, who partner with National Grid Sales representatives to determine energy efficiency opportunities for commercial and industrial customers across the state of Rhode Island. In 2020, the Industrial Initiative resulted in approximately XXX project applications, amounting to roughly 16,600 gross annual MWh of electric savings and over 34,886 gross annual MMBtus of nature gas savings. The energy efficiency projects ranged from large-scale lighting installations to complex process and HVAC upgrades.

EnergySmart Grocer Initiative

The EnergySmart Grocer (ESG) initiative delivered cost effective, comprehensive energy savings in the Grocery market segment in 2020 by providing nearly 6,635 net MWh and 1,948 net MMBtus in annual savings. The Company would like to highlight two projects that were completed in 2020 for grocery customers.

1. A RI based supermarket chain completed construction on a brand-new location in Warwick. The project was comprehensive with the following energy saving measures being installed: doors on cases, night covers, HVAC and DHW Heat reclaim, floating head and suction on medium temperature and low temperature rack systems, exhaust fan VFDs on the main kitchen hoods and a Munter’s roof top unit. The project saved 174,893 kWh.
2. An east coast supermarket chain conducted an upgrade of the floating head and suction pressure controls for their 6 locations in Rhode Island: Cranston, Woonsocket, Warwick, Johnston, Pawtucket, and Providence. The projects saved a total of 240,536 kwh.

Serve Up Savings (Regional and national chain restaurant) Initiative

This initiative, new in 2020, worked with more than 24 chain restaurant locations to save 355 net annual MWh and 1,822 net annual MMBtu. In 2021, the Company will build on the momentum generated at several of these chains to explore more HVAC related savings.

Telecommunications Initiative

A contract was signed with Franklin Energy to be the vendor for a new Telecommunications Initiative. This initiative will serve mobile, fiber optic, and cable data companies and their associated infrastructure. This initiative will be deployed by the first quarter of 2021.

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, the CHP installation process can be challenging due to the long-lead times, complex technical requirements, and substantial capital investments. In 2020, National Grid completed 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. The project will result in ~4,089,000 kWh of annual savings.

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 2020, the Solid-State Street Lighting Initiative awarded over \$333,000 in incentives to 3 different municipalities, resulting in approximately 1,628 MWh of annual electric energy savings. One of the highlights from the Solid-State Street Lighting Initiative included a Pawtucket streetlight and controls project which resulted in the installation of 5,971 street lighting fixtures and over 23,100 MWh of net lifetime electric savings.

Commercial ConnectedSolutions

The Company implemented an active demand reduction program in 2020 and 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 2020, the Targeted Dispatch measure of the Commercial ConnectedSolutions program curtailed an average of 24.2 MW with 152 customer accounts participating in three events over the summer. In 2020, the Daily Dispatch measure of the Commercial ConnectedSolutions program curtailed an average of 4 MW with 13 customer accounts participating.

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 2020, the program served small businesses of all types including car dealerships, non-profits, and small offices.

National Grid typically 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. This year the program offered a 100% incentive starting in April to increase participation as the pandemic closed small businesses and owners' attention was focused on business continuation and health/safety concerns. The program also offered virtual audits during the time it was not possible to be in customers' businesses. The Company would like to highlight several projects that were completed in 2020 for small business customers.

1. RISE completed a retrofit lighting project of an office building in Providence. This project will result in savings of 23,000 kWh per year and \$3,600 per year. The customer was very complimentary of the impact the upgrade had on their internal office spaces. In Cranston, RISE served the customer's retail plaza common areas and tenanted spaces with a mix of various LED lighting upgrades and 10, WiFi thermostats. This project captured 20,000 annual kWh and 660 annual therms.
2. The program completed several projects at houses of worship in the fourth quarter. This concluded a year of successful outreach to this segment. Retrofits were completed in over 30 sites. Measures included lighting, lighting controls, domestic hot water (DHW) and WiFi and programmable setback thermostats.

In 2020, 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 2020, 21% of savings in the SMB/DI program came from CDO contractors.

2020 SMALL C&I RESULTS

- ##### Annual MWh Saved
- ##### Lifetime MWh Saved
- ##### Annual MMBtu Saved
- ##### Lifetime MMBtu Saved
- ##### Metric Tons of Greenhouse Gas Emissions Avoided
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- \$### Million in Total Economic Benefits

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. Electric efficiency 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 2020, nine Rhode Island farms received no-cost, farm-specific energy assessments. With help from a University of Rhode Island Energy Fellow, additional outreach was conducted virtually through online webinars, email, and one-on-one phone calls. The Farm Energy Resource Guide, which was developed and finalized in 2019 was printed and served as another valuable resource to guide agricultural business owners through the energy management process. Presentations were also given at several workshops and further outreach was conducted through the program's growing social media presence: Facebook and Instagram (@RIFarmEnergyResources).

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.

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:

- Continued support of State and municipal LED streetlight retrofits, with 65% 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% this is low and not the right number 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 – huge push in State facilities both outdoor (Pastore complex over 1000 lights were replaced with LED) and multiple buildings
- HVAC and control improvements at Powers Building (DOA), the RI State Police Barracks, and the Department of Labor and Training.
- Retro-commissioning of several large State facilities will yield significant electric and gas savings, RI School for the Deaf

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Commercial, Industrial & Public Finance

Large C&I Revolving Loan Fund

Through the electric LC&I revolving loan fund, the Company offered \$5.14 million in on-bill financing to 74 Large Commercial customers through 101 loans resulting in electric savings of 7,570 annual MWh. At the end of 2020, the fund had a balance of \$1.19 million, money that will be available for more loans in 2021 and in the future.

Through the gas LC&I revolving loan fund, the Company offered \$0.46 million in loans to 20 Large Commercial customers resulting in gas savings of 18,173 net annual MMBtu. At the end of 2020, the fund had a balance of \$1.09 million, money that will be available for more loans in 2021 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 2020. At the end of 2020, the fund had a balance of \$0.426 million.

Small Business Revolving Loan Fund

The Small Business Revolving Loan fund was able to provide \$.784 million in loans that led to more than XXXXX MWh in annual energy savings. At year end, the fund had a balance of \$3.144 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.

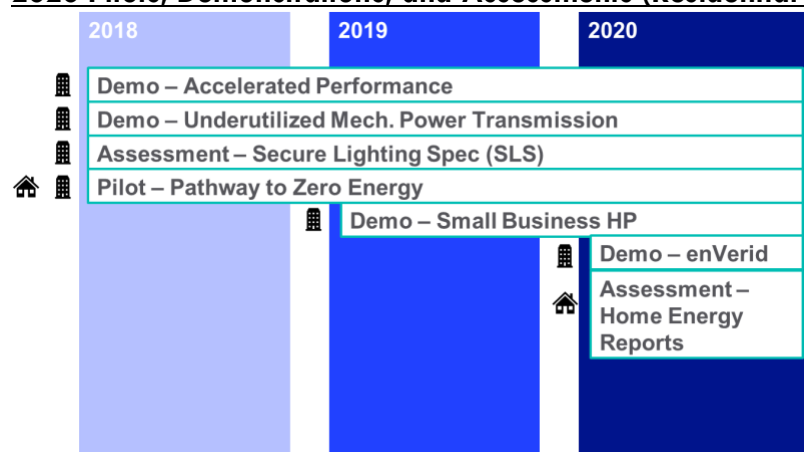
The seed money to support this unique revolving loan fund came from a \$1.8 million allocation of ratepayer (SBC) funds, mandated by the law, and \$3.0 million in funds from the Regional Greenhouse Gas Initiative (RGGI) controlled by OER. In addition, National Grid, based on a request from RIIB, and working in conjunction with the Technical Working Group each program year, agreed to transfer \$5.26 million in energy efficiency program funds to RIIB in 2020 and \$5.0 million in 2021 to support EBF. The transfer in 2021 will be subject to prior approval by the PUC. These transfers were included in their respective Energy Efficiency Plans and related budgets.

In 2020, the EBF helped support a city-wide streetlight conversion from legacy technologies to LEDs in Pawtucket. The EBF also helped support energy efficiency projects in the cities of East Providence and Warwick, as well as supporting an innovative utility scale battery storage system in the Pascoag Utility District. EBF helped East Providence finance a portion of a brand-new high school construction project, which will feature numerous state-of-the-art energy efficiency measures and be built above the required energy code. The City of Warwick utilized EBF financing to undertake LED streetlight conversion citywide. As mentioned above, EBF was able to support the Pascoag Utility District with the installation of a utility scale battery storage system that will help provide resiliency, reduce peak demand, and avoid a much costlier transmission system upgrade. 2020 was one of the most successful years in EBF since inception with 2,172 net annual MWh claimed.

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 2020. Outreach by the Rhode Island Infrastructure Bank and National Grid will continue in 2021.

2020 Pilots, Demonstrations, and Assessments (Residential and Commercial and Industrial)



In 2020, the Company continued or started thirteen Pilots, Demonstrations, or Assessments. These research and development efforts ranged from completing pilots for ZNE pathways for residential and commercial and industrial new construction projects and continuing the Gas Demand Response pilot to demonstrations investigating Network Lighting Controls for HVAC control and Kitchen Exhaust control strategies for energy savings to assessments into the impact of including Home

Energy Reports as part of HEA process. The Company updated the EERMC and PUC of the progress, findings, and next steps of all Pilots, Demonstrations, and Assessments over the course of 2020 in the subsequent Quarterly Reports.

The following table outlines the objectives, brief findings, and next steps of the eight Pilots, Demonstrations, or Assessments completed in 2020. Those five efforts continuing into 2021 will be detailed in the 2021 Look Forward section below.

Pilot, Demonstration, or Assessment	Objectives	Findings	Next Steps
Accelerate Performance C&I Demonstration	Use performance-based procurement to hold design teams contractually accountable throughout design and into occupancy.	Tried six different project recruitment efforts. Customers ultimately not willing to sign up. Projects pivoted to typical whole building approach offerings.	Close demonstration; Pivot to focus on whole building design approach.
Mechanical Power Transmission C&I Demonstration	To investigate adoption of higher efficiency belt and other various types of machinery used in C&I facilities	No installations; common enough understanding to combine with other O&M-type measures using ESPO platform	Transfer replacement of v-belts with synchronous belts and similar settings to ESPO offering suite
Secure Lighting Spec C&I Assessment	Develop a partnership with Lighting Manufacturers Reps, the common quoting software	Partnerships unable to be formed. Software unable to be augmented.	Closed assessment

Small Business Heat Pumps C&I Demonstration	Explore a go-to market strategy for cold climate heat pumps for small business.	Using the energy optimization framework, MA determined cost-effective fuel switching for small business electrification. Currently prohibited in RI, except with elec heat.	Use MA methodology, where applicable for RI (e.g. Elec Resistance)
Absorption Air Cleaner C&I Demonstration	(1) Identify the barriers to adoption of this technology; (2) Measuring energy savings and monitoring (IAQ)	Potential for scalability if energy analysis is simplified; code authorities use prescriptive codes for ventilation	Recommend to offer this measure through our custom gas and electric programs
Pathway to Zero Energy – C&I C&I Pilot	Test if the program design, can successfully drive market participation in Zero Energy Buildings in Rhode Island.	Education, awareness, marketing, and training was deployable. Recruiting, construction, and completion challenging.	Transfer market activity to programs: Whole Building New Construction offering
Pathway to Zero Energy – Resi Residential Pilot	Test if the program design, can successfully drive market participation in Zero Energy Buildings in Rhode Island.	Education and awareness, marketing, and training was deployable. ~100 ZER units in design, development, and construction	Transfer market activity to program: Residential New Construction offering
Home Energy Reports Residential Assessment	(1) identify if HES improved conversion rates, and (2) assess the how HES could be integrated within HEA processes	Participants receiving the score had a higher conversion rate. Due to small sample size no clear conclusion on installing major measures. Sustained marketing needed	<u>Complete</u> ² . Use findings of the evaluation in program design evolution.

² http://rieermc.ri.gov/wp-content/uploads/2020/10/ng-ri-ewsf-impact-and-process-comprehensive-report_final_04sept2020.pdf

CROSS-SECTOR PROGRAMS

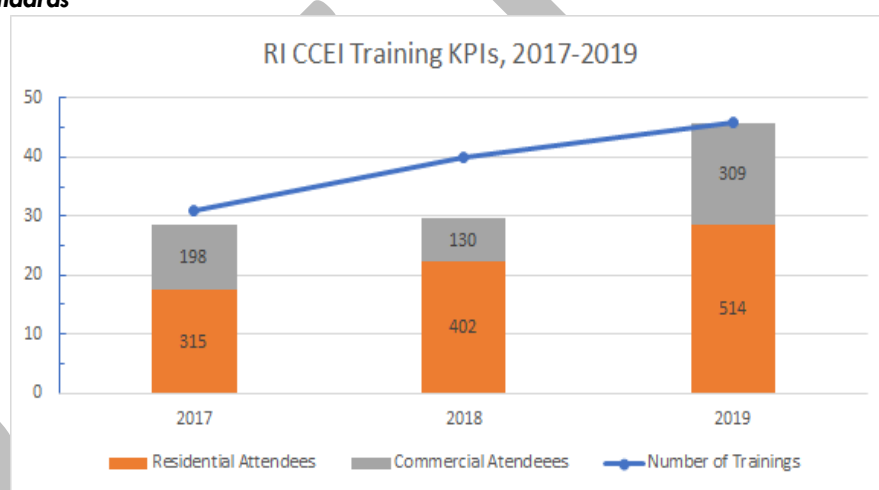
Community Initiative

In 2020, the Company reached out to four towns, however, due to Covid-19 challenges, only one town committed to the initiative. In the third quarter, the city of East Providence enrolled in the initiative. Specified metrics were set for East Providence including residential energy assessment goals, weatherization jobs, Wi-Fi thermostats, Small Business projects, homes converted to mini-split heat pumps, and refrigerators recycled. Due to Covid-19, the initiative's timeframe was extended to the end of April 2021 in order to allow the city to continue to promote the program in order to achieve the metrics to earn a potential financial award.

East Providence, along with the Company, engaged residents and small businesses beginning in the summer and running through December 2020. Custom marketing materials were created, along with social media and webpage postings, and letters from municipal leadership. Local events were not held due to COVID-19.

Building Energy Codes and Appliance Standards

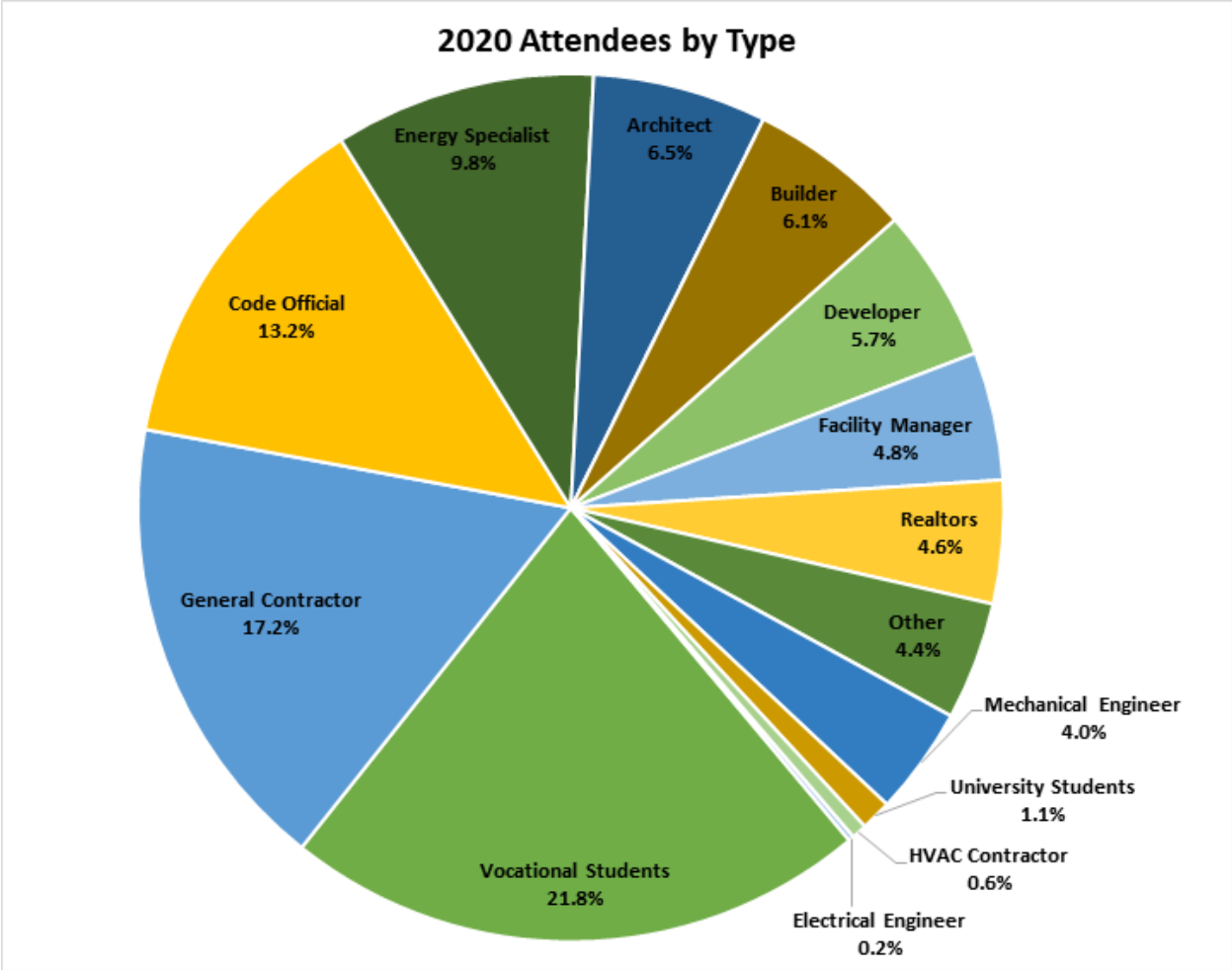
The Codes and Standards initiative provides targeted stakeholder outreach and technical guidance to improve compliance with minimum energy efficiency policies currently in effect and accelerate the improvement of these minimum efficiency requirements. In 2020 the Company continued to expand its energy code compliance support services to a variety of stakeholder groups.



Overview of Performance

In 2020, the Code Compliance Enhancement Initiative (CCEI) conducted 39 training events across the state with 514 total attendees. Both figures were significant decreases from last year's extremely high performance. This is largely attributable to COVID-19 since all in-person trainings scheduled in partnership with organizations were cancelled or postponed until further notice. CCEI responded by expanding its web training offerings and took attempted new ways to keep stakeholders engaged, such as development and delivery of its first ever virtual building tours.

While code officials have historically been CCEI's most targeted audience, reaching construction professionals was a focus in 2020. Through industry partnerships, most notably through incorporation into the curriculum of RIBA's Contractor Training & Development Program, vocational students and general contractors were the groups most engaged by CCEI in 2020 and together comprised about 40% of training participants. Otherwise, CCEI trainings continue to engage diverse stakeholders.



In addition to classroom and on-site trainings, CCEI also provides project-specific technical assistance as well as development and dissemination of energy code documentation/compliance assistance tools. 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 (BIUD) to support the development and delivery of cost-effective energy efficiency programs and incentives to customers over three years (2020-2022). In 2019, OER worked in coordination with Block Island Utility District management and customers to iterate on the successful *Block Island Saves* energy efficiency pilot and create their first Energy Efficiency Plan to leverage utility and RGGI funds to implement cost-effective efficiency measures in the community of New Shoreham.

Building on the success of the pilot program BIUD partnered-with OER to develop a full-scale energy efficiency program. The proposed energy efficiency program was approved by the Utility District’s Board and filed with the Public Utilities Commission (PUC), ultimately receiving approval in May of 2020. The program will provide no-cost energy assessments and direct install measures and will also emphasize important cost-effective savings measures like weatherization, heat pump heating and cooling systems, and programmable thermostats. The goals of the efficiency program are to continue empowering customers to make clean energy decisions that lower their energy usage and costs, reduce energy burdens, and help provide grid stability and reduce challenging peak loads during the summer tourist season.

After PUC approval, OER helped BIUD develop RFPs for a lead efficiency vendor, an energy efficiency consultant, and post-installation inspection services. Once vendors were hired the program was launched in the fall of 2020 and saw immediate demand from residents for home energy assessments, both in-person and virtually. The initial program year will run through April of 2021 and OER will work with BIUD and its consultant to review and evaluate the program and look to grow and improve it year over year. The final report on the Block Island Saves Pilot Program is available on OER's [website](#) and details about the new energy efficiency program can be found on Block Island Utility District'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 (PUD). 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 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.

With the support of OER and their efficiency consultant, Pascoag has managed to grow their efficiency program nearly ten times and continued to safely provide critical energy efficiency programming to customers despite the challenges of COVID-19. Working with their lead vendor, Pascoag was able to begin offering virtual home energy assessments to continue serving customers while also protecting public health. Recognizing the financial strain, the pandemic was having on customers, PUD increased incentive levels for key efficiency measures like weatherization to allow all customers realize critical energy savings even in tighter financial times. They intend to incorporate these adaptive strategies and lessons learned in their 2021 DSM plan as well to ensure they can continue to provide important efficiency services safely and accessibly to their customers.

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

In 2020, the "Path to Zero Ready" program continued with a focus on training and providing technical support and incentives for projects under construction and in the design stage. The Working Group did not convene as the program shifted to project-specific technical support. 2020 Path to Zero Ready Program key elements:

1) Education and Awareness

To raise awareness of the design, construction and benefits of zero energy homes in RI, 5 trainings, were held in 2020 with over 90 attendees. Due to Covid-19, tours of zero energy homes were not conducted.

2) 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.

Building Operator Certification

In 2020, 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 National Grid provides.

In 2020 during the COVID-19 pandemic, we worked to remain relevant in the communities that our Hub serves by updating our pathways for communication. By utilizing newsletters, social media, virtual presentations, and personal networks, we have created a more expansive platform for our messaging, hosting 106 customers via virtual presentations, and countless others via other electronic means. With an updated web presence, virtual connections will be more accessible than ever. In the future, we will pair these new means of outreach with safe in-person programs at our Hub to maintain a comprehensive and effective strategy for building interaction between customers and our Hub network.

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COUNCIL PUBLIC EDUCATION EFFORTS

2020 EERMC Public Forum

The fourth annual EERMC Public Forum, *COVID-19 Crossroads: Achieving Equitable Health Outcomes Through Energy Efficiency*, was held virtually on Thursday, September 24, 2020. Driven by the wide-ranging impacts of the COVID-19 pandemic, the Forum focused on the relationships between public health, equity, and energy efficiency and featured health and energy experts from across the U.S. Nearly 100 industry professionals, decision-makers and joined the event. Anthony Hubbard, EERMC Chair, gave welcoming remarks, followed by keynote speaker Reilly Loveland of the New Buildings Institute in Portland, OR who set the stage talking about the investments needed around efficiency, equity and health – and how that progress can be tracked.

The first panel, *The Intersectionality of Energy, Socioeconomic Status, Race & Health*, featured representatives from RI Office of Energy Resources, United Way of Rhode Island, Tohn Environmental Strategies, and Children's Mercy Kansas City. The second panel, *Opportunities for Improvement: Models and Solutions for the Future*, featured industry leaders representing Energy Marketers Association, Green and Healthy Homes Initiative, NY State Energy Research and Development Authority, and Habitat for Humanity Rhode Island. Attendees also heard from EERMC member Karen Verrengia, who let attendees know how to engage in the State's energy efficiency planning process. The recorded forum can be viewed at <https://www.youtube.com/watch?v=9y08LNU5vzs&feature=youtu.be>.

2020 Plugged Into Energy Research Lecture Series at the University of Rhode Island

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 2020, the EERMC sponsored three virtual lectures themed around the nexus of health outcomes, equity and energy efficiency. The first lecture was held on October 7, 2020 and was titled *Energy Efficiency, Human Health, and COVID-19*. Speakers included representatives from American Council for an Energy-Efficient Economy (ACEEE), Three3 (ThreeCubed), and the University of Illinois at Urbana-Champaign. The second lecture was held on October 28, 2020 and was titled *Energy Efficiency in Schools: Safer Buildings, Healthier Students*. Speakers included representatives from the Harvard T.H. Chan School of Public Health, the RI Department of Education (RIDE), Northeast Energy Efficiency Partnerships, and National Grid. The final lecture was held on November 18, 2020 and focused on *Barriers to Energy Efficiency in Rental and Affordable Housing*. Speakers included representatives from American Council for an Energy-Efficient Economy, Illume Advising, Green and Healthy Homes Initiative, Direct Action for Rights and Equality, Richard Weinberg, Providence Housing Authority, and HousingWorks RI at Roger Williams University.

There were over 250 virtual attendees between to the three events, including professionals in energy, health, education and equity, students, and members of the general public. Another 250 viewers have watched the recorded lectures on YouTube. More information, including lecture recordings, can be found at <https://web.uri.edu/coopext/plugged-into-energy-research-lecture-series/>.

2020 Combined Heat and Power Public Meeting

On May 14, 2020, the EERMC hosted the Annual Rhode Island Combined Heat and Power (CHP) Public Meeting. Due to COVID-19, this year's meeting was held virtually through GoToMeeting. 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. The meetings are timed to allow for any recommendations to be incorporated, as appropriate, into the Three-Year and Annual Energy Efficiency Program Plans. There were over 50 virtual participants, the majority of which were CHP developers or vendors that provide related technical assistance or financing. Outgoing EERMC Chair Chris Powell welcomed attendees and introduced the Council and its purpose. He also invited ongoing participation in the energy efficiency conversation through monthly Council meetings.

The Council's consultant team briefly summarized the CHP-related results from the Rhode Island Market Potential Study as well as the three-year energy savings targets for CHP. Representatives of National Grid and the Rhode Island Infrastructure Bank (RIIB) presented on program updates and finance opportunities. For the first time this year, a survey was distributed in advance of the meeting in an attempt to learn more about the CHP landscape in Rhode Island from those "on-the-ground". The full results and complete slide deck from the CHP meeting can be found on the EERMC's website at www.rieermc.ri.gov.

Farmer Energy Education

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. Due to the COVID-19 pandemic, efforts took a digital approach this year, with outreach conducted virtually through webinars, social media, and email lists. The Energy Fellow also printed the Farm Energy Guide developed in 2019, which helps farmers navigate the many energy programs and incentives available to them and will be a valuable resource for years to come. Presentations were also given at several workshops and further outreach was conducted through a growing social media presence: Facebook and Instagram (@RIFarmEnergyResources).

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Energy Training for K-12 Teachers

NEED provides energy curriculum and training to K-12 teachers and students throughout the United States with over 30 years of programming in Rhode Island with OER and National Grid. The EERMC sought to expand and enhance the NEED energy efficiency and conservation curriculum and training with additions to include energy justice and climate science. Building on NEED’s portfolio of energy curriculum resources and training processes, this expanded curriculum module brings together energy efficiency and conservation (both school and residential), building science, climate science, energy justice, and health for Rhode Island teachers, students and families. The project seeks to include additional components for healthy outdoor spaces, urban landscapes and heat islands as related to energy, efficiency, climate and health. These components will strengthen the use of the curriculum in Rhode Island schools, especially Environmental Science, and nonformal education programs.

ENERGY JUSTICE & EQUITY EFFORTS

In 2020 the EERMC took steps to increase awareness of energy justice and improve the understanding of equity as it relates to energy efficiency.

- **LCP Standards:** OER, in collaboration with EERMC council members and various other stakeholders proposed equity language to the Public Utilities Commission in 2020 for inclusion in the LCP Standards. Rhode Island’s LCP Standards provide definitions and rules that guide the development of energy efficiency program plans that are filed with the Commission. The proposed language was adopted in part and created requirements for describing how proposed energy efficiency investments are equitable and how proposed program designs ensure equitable opportunities to participate along with fair allocations of costs and benefits.
- **EE Equity Working Group:** As a part of National Grid’s 2021 Annual Energy Efficiency Program, National Grid has committed to working with OER to co-host an Equity Working Group. The goal of this working group will be to give impacted communities and the organizations that serve them an ongoing and structured opportunity to collaborate and provide input and feedback on the planning, design, and delivery of National Grid’s energy efficiency programs, with a specific focus on equity. This will be a chance for continued education for all parties involved; Equity Working Group members will receive education surrounding Rhode Island’s energy systems, processes, and energy efficiency, and the hosting organizations will have a chance to learn from communities what the most pressing needs are within the energy efficiency space.
- **Presentation to the EERMC on Energy Justice:** In the December 17th council meeting, the EERMC received a presentation from OER on energy justice. The presentation included an overview of environmental justice, its history relating to segregation and redlining, and the ways in which energy injustice manifests itself today in Rhode Island. It concluded with OER’s current actions towards addressing energy justice. Additional presentations and conversations surrounding the topic are expected in 2021.

INCENTIVES BY TOWN

Table 1. National Grid Gas and Electric Energy Efficiency Incentives Provided to Residential, Commercial and Industrial Customers in 2020

Barrington	\$TBD	New Shoreham	\$TBD
Bristol	\$TBD	Newport	\$TBD

Burrillville	\$TBD	North Kingstown	\$TBD
Central Falls	\$TBD	North Providence	\$TBD
Charlestown	\$TBD	North Smithfield	\$TBD
Coventry	\$TBD	Pawtucket	\$TBD
Cranston	\$TBD	Portsmouth	\$TBD
Cumberland	\$TBD	Providence	\$TBD
East Greenwich	\$TBD	Richmond	\$TBD
East Providence	\$TBD	Scituate	\$TBD
Exeter	\$TBD	Smithfield	\$TBD
Foster	\$TBD	South Kingstown	\$TBD
Glocester	\$TBD	Tiverton	\$TBD
Hopkinton	\$TBD	Warren	\$TBD
Jamestown	\$TBD	Warwick	\$TBD
Johnston	\$TBD	West Greenwich	\$TBD
Lincoln	\$TBD	West Warwick	\$TBD
Little Compton	\$TBD	Westerly	\$TBD
Middletown	\$TBD	Woonsocket	\$TBD
Narragansett	\$TBD	Grand Total	\$TBD



NATIONAL GRID 2020 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 2020. 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 2020.

The FTE counts cover a wide range of energy efficiency services, including independent contractors and plumbers, rebate processors, 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 2020 Rhode Island energy efficiency programs is included in Appendix B of this report.

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 2020. Guidehouse calculated the labor hours required for each installation based on industry standards and discussions with contractor experts.

Guidehouse determined that TK full-time equivalent (FTE) employees had work in 2020 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 TK companies and agencies involved in National Grid’s 2020 energy efficiency programs, TK% 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

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

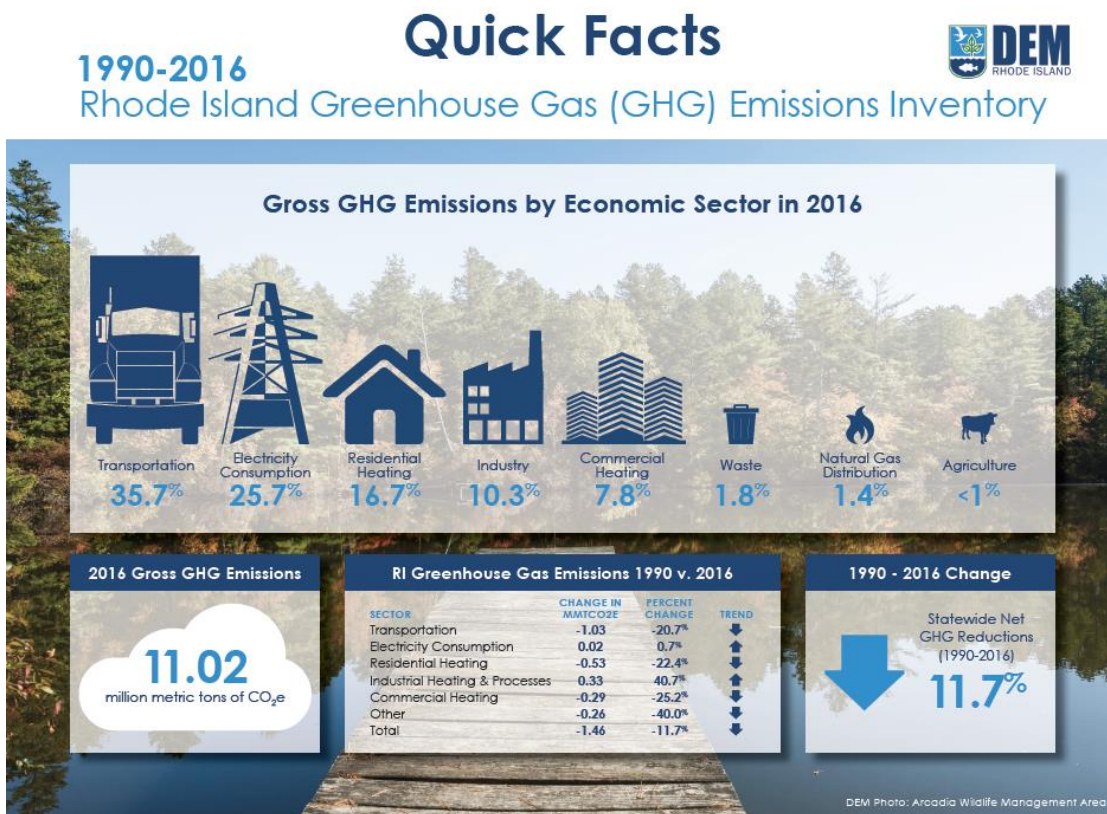
Full-Time Equivalent Employment Associated with Energy Efficiency Programs in Rhode Island in 2020

Programs	Total FTEs
Electric Programs	
Commercial and Industrial	TK
Residential Income Eligible	TK
Residential Non-Income Eligible	TK
Gas Programs	
Commercial and Industrial	TK
Residential Income Eligible	TK
Residential Non-Income Eligible	TK
National Grid EE Staffing	TK
WAP/LIHEAP Income Eligible Programs	TK
Total 2020 Rhode Island FTEs	TK

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.

After the development of the State’s Energy Plan, Governor Raimondo 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. Final reports from these initiatives can be viewed here and here on the Office of Energy Resources’ website.

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 covered calendar years 2021-2026 and was used as a key input in the process of setting three-year Energy Savings Targets, which was developed by the EERMC and approved by the Public Utilities Commission.

The study produced several sets of results, including a maximum achievable scenario, which captures the total pool of energy saving opportunities that can be achieved with very robust energy efficiency programs. The 2021 – 2023 Energy Savings Targets recommended by the Council and approved by the Commission were set based on this scenario and are shown in the tables below.

Energy Savings Targets

Year	Electric Energy (MWh)	Natural Gas Energy (MMBtu)	Delivered Fuel Energy (MMBtu)
2021	1,949,782	9,598,108	3,709,796
2022	2,037,314	9,948,779	3,731,665
2023	2,059,265	9,958,127	3,806,532

Electric Peak Demand Reduction Targets

Year	Total Electric Peak Demand Reductions	Energy Efficiency Passive Peak Demand Reduction	Active Demand Response Peak Demand Reduction
2021	64.7	30.8	33.9
2022	85.9	33.2	52.7
2023	108	33.5	74.5

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CHP Electric Energy and Peak Demand Reduction Targets

Year	CHP Electric Energy Savings (Lifetime MWh)	CHP Peak Demand Reduction (Annual MW)
2021	723,337	11.1
2022	723,337	11.1
2023	723,337	11.1

2021-2023 Energy Efficiency Program Plan (Three-Year Plan)

As part of the legislated triennial process to develop Three-Year Energy Efficiency and System Reliability Plans, the EERMC worked with National Grid, the Office of Energy Resources, the Division of Public Utilities and Carriers, and other key stakeholders to develop the 2021-2023 Energy Efficiency Program Plan for Rhode Island. National Grid filed the Three-Year Plan with the Public Utilities Commission on October 15, 2020. The purpose of this Three-Year Plan is to establish an overarching strategy for the next three years that will enable National Grid to successfully meet the goals of Least Cost Procurement and meet the Energy Savings Targets developed by the EERMC and approved by the Public Utilities Commission. The Three-Year Plan met the objectives of being cost-effective and less than the cost of supply, and is grounded in economics, flexible to changing market conditions, and designed to maximize consumer benefit.

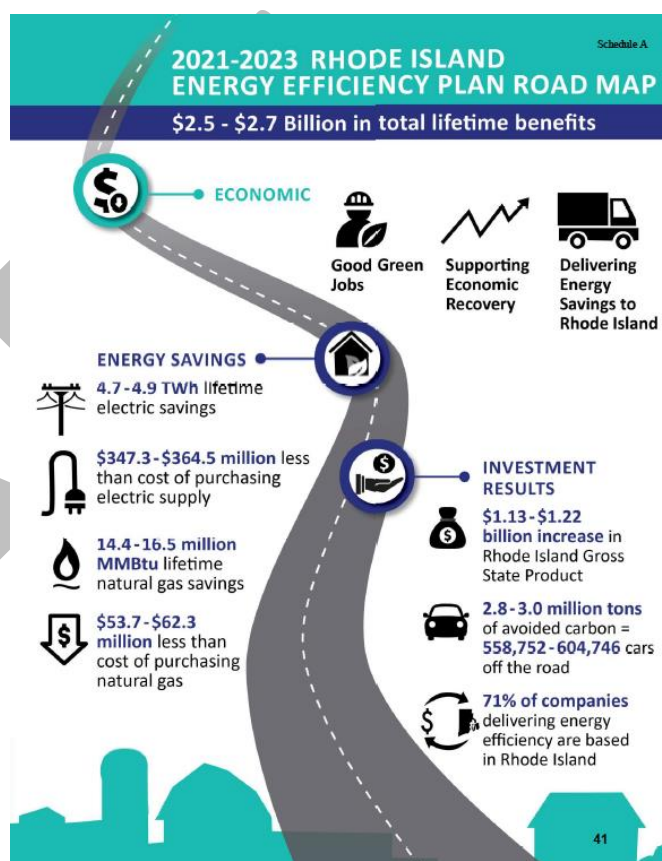
Annual Energy Efficiency Program Plan

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 reviewed and ruled on by the PUC. Work on the 2022 Annual Plan will commence in summer 2021.

System Reliability Procurement

Through System Reliability Procurement (SRP), the Company identifies targeted alternative solutions, through customer-side and grid-side opportunities, that are safe and reliable, prudent, environmentally responsible, cost-effective, and provide a path to lower supply and delivery costs for customers in Rhode Island. The EERMC worked with National Grid to complete all twelve 2020 SRP commitments.

As part of meeting this purpose, the Company develops and implements non-wires alternative (NWA) solutions. "Non-Wires Alternatives" is the inclusive term for any targeted investment or activity that is intended to defer, reduce, or remove the need to construct or upgrade components of an electric system, or "wires investment". NWA 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. NWA solutions can help the grid deliver electricity to homes and businesses when electricity demand is highest, sometimes at a lower cost than upgrading the wires, transformers, and substations through capital investment. NWA solutions can also provide clean renewable energy, which may reduce net greenhouse gas emissions.



In 2020, National Grid continued to analyze its screening criteria and development processes for non-wires solutions generally. The company also explored the benefit streams that could be combined with NWA solutions to improve cost-effectiveness. Continuing to evaluate and improve the process for implementing a non-wires solutions is ongoing into 2021.

National Grid pursued third-party solutions for previously identified non-wires opportunities and investigated viable alternative solution pathways for two non-wires opportunities for which National Grid was unable to source a cost-effective third-party solution.

Similar to non-wires solutions, non-pipes solutions are cost-effective projects that maintain safe and reliable natural gas delivery while limiting traditional infrastructure investment in the pipeline system. In 2020, National Grid conducted background research on non-pipe solutions, explored how non-pipe solutions fit into company policy and regulatory standards, and engaged with stakeholders to discuss and understand opportunities and challenges to implementing non-pipe solutions. The EERMC will continue to work with National Grid to develop a non-pipe solutions program in 2021-2023.

SRP activities are cross-cutting in nature. In 2020, National Grid continued synchronization and coordination with other programs and initiatives, including Power Sector Transformation; National Grid's Grid Modernization Plan and Advanced Metering Business Case; the Energy Efficiency program; the Infrastructure, Safety, and Reliability program; and calculations of shareholder incentives across all programs. The EERMC was represented at each meeting of National Grid's SRP Technical Working Group throughout 2020 to monitor program implementation and inform 2021 program development.

Throughout 2020, the EERMC, National Grid, and other parties actively informed revisions to the Least-Cost Procurement Standards, the set of regulatory rules that describe what should be included (or excluded) from the SRP programs. The EERMC worked closely with National Grid and other stakeholders to develop the 2021-2023 Three-Year SRP Plan in alignment with the revised Standards.

National Grid further enhanced the Rhode Island System Data Portal³ (Portal) in 2020. The Portal is an interactive, publicly-accessible, online mapping tool developed by the Company. The purpose of the Portal is to provide the market with information about grid-beneficial locations for siting cost-effective grid solutions and distributed energy resources (DERs), like solar and energy storage. The goal of the Portal is to reduce costs for Rhode Island customers through such market engagement. 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 (DG) can be hosted on each distribution feeder (called "hosting capacity").

In 2020, National Grid added functionality to the Portal maps related to sea level rise and ZIP code layer. The sea level rise map can be found on the new "Sea Level Rise" tab, with data sourced and mirrored from the National Oceanic and Atmospheric Administration (NOAA) Sea Level Rise Viewer.⁴ The ZIP code map layer has been added to each map tab to display the ZIP code area assignments so that the market and customers can more easily view National Grid's electric system across the state, which is particularly useful for third-party bid proposals to NWA opportunities. Finally, the Portal contains the NWA tab that contains a link to National Grid's publicly accessible NWA website.⁵ National Grid has

³ "Rhode Island System Data Portal." *Business Partners | National Grid*, National Grid, 2018, www.nationalgridus.com/Business-Partners/RI-System-Portal.

⁴ "NOAA Sea Level Rise Viewer." *NOAA Sea Level Rise and Coastal Flooding Impacts*, National Oceanic and Atmospheric Administration of the United States Department of Commerce, <https://coast.noaa.gov/slr/>.

⁵ "Non-Wires Alternatives." *Business Partners | National Grid*, National Grid, 13 Nov. 2019, www.nationalgridus.com/Business-Partners/Non-Wires-Alternatives/.

continued to improve and streamline the NWA website, providing information to the market on the NWA definition, process and sourcing, and open RFP opportunities.

National Grid continued market outreach and engagement in 2020. Market engagement is important to increase industry knowledge about grid-beneficial NWA opportunities and available informational resources such as the Portal and NWA website. 2020 outreach and engagement included two webinars to demonstrate the Portal, two email campaigns, direct vendor contact, and a market survey in Q3 2020 to source vendor feedback on the Portal. The Company has entered a maintenance phase with market engagement for the Portal starting in 2021 because Portal awareness and engagement appear to have achieved market saturation and web traffic appears to have reached a steady state in 2020. Therefore, the only planned SRP market engagement activities for the Portal are to maintain web traffic analytics to the Portal landing page. These web traffic analytics have no cost to operate or acquire.

Additional details on 2020 SRP activities can be found in National Grid's 2020 System Reliability Procurement Year-End Report to be filed in Commission Docket 4980 on June 1, 2021. Additional details on planned activities for 2021-2023 can be found in National Grid's 2021-2023 Three-Year System Reliability Procurement Plan filed in Docket 5080⁶ with the PUC on November 20, 2020. Both reports are also available on National Grid's System Data Portal.

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 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, 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. With the help of the PST Advisory Group, National Grid has since refined a longer-term proposal for grid modernization and to develop a business case for advanced metering functionality. The Public Utilities Commission will review these filings throughout 2021.

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

⁶ "Docket No. 5080 - The Narragansett Electric Co. d/b/a National's System Reliability Procurement 2021-2023 Three-Year Plan (Filed 11/20/2020)." *State of Rhode Island Public Utilities Commission and Division of Public Utilities and Carriers*, The Narragansett Electric Company d/b/a National Grid, 2020, www.ripuc.ri.gov/eventsactions/docket/5080page.html.

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LOOKING FORWARD: 2021 ENERGY EFFICIENCY PROGRAM PLAN HIGHLIGHTS

2021 Residential Programs

Residential New Construction

In 2021 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 continue to offer contractor training – virtually, and when appropriate in-person, and will continue to strive to help participants agree to achieve high efficiency, low-carbon, design and construction through the new All Electric incentive.

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

In 2021 the Company will continue to offer electric resistance heating customers with attractive incentives to replace old electric resistance heating systems. In addition, the Company will support the RGGI-Funded ASHP Program offer that will provide oil/propane heating customers an enhanced incentive (from RGGI funds) to displace/replace their heating system with air source heat pumps. Ongoing training will be offered 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.

Income Eligible Enhancements

In 2021, the Program aims to develop strategies, similar to the new referral program for weatherization, to continue the support of the RI Community Action Programs in delivering the IES services and incentives. 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 2021 will continue the Community Initiative model to support cities and towns in achieving certain energy saving metrics to earn grant monies for future energy efficiency projects at a municipal site. The Company will continue recruit new communities for 2021/2022 to drive awareness and participation in energy savings programs that 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 2021 the company is committed to conducting research studies that will benefit the multifamily program, including a RI Multifamily Census study and a non-participant study. A vendor has been selected to complete these studies and a draft of the workplan has already been completed. The company is also incorporating recommendations from the 2020 Multifamily Impact and Process Evaluation study into the upcoming RFP, these recommendations include increased facilitation of health and safety barrier remediation, updating language and redesigning customer facing documents, and increasing the availability of virtual services. The company also continues to examine a tiered incentive structure to increase engagement in condominium facilities and allow condo owners to work with preferred contractors to increase the ease of participation.

2020 Commercial and Industrial Programs

In 2021, the Commercial and Industrial sector will focus on non-lighting opportunities and program enhancements that help drive progress toward deeper comprehensive measure adoption. The specific priority measures vary by customer, but in general the priority measures are reflective of the opportunities highlighted in the Market Potential Study.

The Commercial and Industrial New Construction program will feature a new four path program structure in 2021 reflecting the incorporation of learnings from pilots run during 2018-2020. The two paths targeting the deepest savings introduce a focus on establishing an energy use intensity (EUI) target early in the design process and is designed to provide support during the design, construction, and occupancy periods to achieve this goal. Another new path introduces a streamlined spreadsheet-based approach to reduce barriers to program participation for smaller projects. This four path approach was designed through regional collaboration and is also being rolled out in neighboring states.

The Large Commercial Retrofit Program will offer new market segment designs that will provide customers with tailored approaches to comprehensive savings opportunities (e.g. the Telecommunication Initiative), and enhancements to existing offerings that make customer participation easier or more attractive (e.g. new offerings for ESPO and Small Business). Listed below, is a synopsis of the Telecommunication Initiative, and a rationale for its addition into the Large Commercial Retrofit Program.

- Telecommunication Initiative (New to 2021): The Telecommunication Initiative is designed to serve mobile, fiber optic, and cable data companies and their associated infrastructure. The objective of the Initiative is to achieve increased savings predominately from non-lighting measures that were highlighted in the Market Potential Study, specifically HVAC related savings from data centers. Additionally, the Company believes this to be an equitable use of ratepayer funds as this market has not been served in previous years.

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. In 2021, the Company will be working on the following enhancements –

1. The Company and its vendor will be actively working towards the goal of increased controls on lighting projects. The goal is that 30% of luminaires and retrofit kits will have integrated controls which allows more energy savings to be claimed.
2. National Grid has budgeted and planned for savings related to HVAC in 2021. Roof top units and kitchen exhaust control are two areas that the Company feels have potential in the small business space.
3. The Company has planned for at least one small business marketing campaign to the women and minority owned business community.
4. National Grid will be increasing efforts to weatherize gas heated small businesses. This allows a customer to save money now and prepares them for the coming era of more efficient electric heating through heat pumps.

Innovating for Future Energy Efficiency Savings for Rhode Island Customers: Pilots, Demonstrations, and Assessments

For 2021, the Company intends to continue or start fourteen Pilots, Demonstrations, or Assessments. These research and development efforts range from continuing the Gas Demand Response pilot to continuing demonstrations investigating Network Lighting Controls for

2018-2019	2020	2021
		Pilot – Gas Demand Response
		Demo – Continuous Energy Improvement
		Demo – Network Lighting Controls +
		Demo – Kitchen Exhaust
		Demo – Gas Heat Pumps
		Demo – New Air Sealing and Insulation
		Demo – Solar Inverter Direct Load Control
		Assessment – Pre-Fab Energy Retrofit
		Demo – Enzyme-based HVAC Coil Cleaning
		Assessment – Refrig. Leak Survey and Repair
		Assessment – HVAC Automation for DR
		Assessment – Shared Laundry Facilities
		Assessment – Submetering to Support EE
		Demo – Smart Valves for CW Systems

HVAC control and Kitchen Exhaust control strategies, gas heat pumps for both C&I and residential customers among other energy savings investigations to assessments into pre-fab retrofit of existing homes and refrigeration leak surveys and repair. The Company will continue to update the EERMC and PUC of the progress, findings, and next steps of all Pilots, Demonstrations, and Assessments over the course of 2021 in the Quarterly Reports.

The following table outlines the objectives, planned activity, and next steps of the fourteen Pilots, Demonstrations, or Assessments underway in 2021.

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PDA	Objectives	Planned 2021 Activity	Next Steps
Gas Demand Response Pilot C&I Pilot	Target hourly peak reduction from Extended Demand Response (EDR) pilot offering, and Peak Period Gas Demand Response (PPDR) pilot offering	Pilot offerings will continue in the winter of 2020/21. Retain current levels of enrollment in the EDR offering and slightly increase participation in the PPDR pilot offering.	Monitor and call events for winter 2020/2021 season, pay customer incentives, assess
Continuous Energy Improvement C&I Demonstration	Will CEI (aka SEM) recruits establish medium/long-term energy savings performance?	Comparing the customer's O&M plus capital measure savings during the test period to pre-intervention savings. Measuring the impact of coaching and education on custom savings.	Continue use of implementation vendor to deliver demonstration
Network Lighting + HVAC Control C&I Demonstration	The benefits and costs associated with integrating NLC systems with BAS? What is the capacity in RI market to support integrated controls projects?	Phase I, completed in 2020, deployed 22 interviews with program staff, customers, and industry representatives. Phase II will include 4 customer installation projects, likely to be initiated in 2021.	Recruit customers, install measures, M&V.
Kitchen Exhaust Controls C&I Demonstration	What is the savings potential of three kitchen exhaust measures?	Phase II will include 4 customer installations of energy recovery and electrostatic filtration products.	Recruit customers, install measures, M&V.
Gas Heat Pumps C&I and Residential Demonstration	Validate performance of newer absorption gas HPs for C&I & Residential	Using assessment research, plan to recruit 3-4 C&I and 2-3 Residential customers for installation, measurement, cost comparisons.	Plan recruitment & customer outreach

New Air Sealing & Insulation Approaches Residential Demonstration	New approaches claim improvement from current infiltration and insulation. Costs and savings need to be measured.	Testing will evaluate the infiltration and insulation improvements of each technology, as well as two homes with both technologies implemented, with the final measurements of air infiltration rate and R-value.	Plan recruitment with residential implementation vendor
Solar Inverter Direct Load Control Residential Demonstration	Can a BYOD type offering targeting customer-owned and connected inverter optimization demonstrate measurable energy and/or demand reduction?	The demonstration will, test recruitment, communication, setting adjustment, and measure impact of adjusting customer-owned inverters.	Plan customer recruitment
Shared Laundry C&I Assessment	Research the feasibility of a midstream or upstream commercial laundry offering to promote the installation of higher efficiency shared washers and dryers.	Research savings and costs for HE equipment, the market, and potential delivery pathways.	Plan research
Pre-Fab Energy Retrofit Residential Assessment	Assess, research and document the capability in the building supply chain to specify, design, and deliver prefabricated exterior improvements to substantially improve housing while residents continue to live in the structures.	The research will look at the building lifecycle “trigger event”, the ability to aggregate owner demand and market power, the building industry capability, and building owner financing opportunities for interventions of this sort.	Plan research and schedule interviews
Enzyme-Based Coil Cleaning C&I Demonstration	Comparing and quantifying savings from conventional HVAC coil cleaning to an approach using an enzyme solution	This demonstration will identify 3-4 customer sites and install submetering with roof-top units. Some RTUs will be treated with enzyme and some just conventional.	Plan recruitment, perform intervention, monitor performance
Refrig. Leak Survey & Repair C&I Assessment	The assessment will answer whether a refrigeration leak survey and repair offering would be cost effective.	The assessment will perform research and interviews to quantify the energy and GHG savings associated with refrigeration leak survey and repair above regulatory requirements.	Plan research

Submetering to Support EE C&I Assessment	Research and document the costs and opportunities associated with supporting installation of submetering through the energy efficiency programs.	Research will assess different types of submetering, what savings opportunities or other benefits they support, costs, and persistence of savings. Using lit review and interviews.	Plan research
HVAC Automation for DR C&I Assessment	Explore the role of incentivizing advanced communications and control infrastructure in enabling increased demand response-ready capacity.	Interviewing the controls and communications vendors, as well as with a range of alternative incentive schemes, to judge best pathways to DR enablement.	Plan research
Smart Valves for Chilled Water C&I Demonstration	Quantify the overall potential of the valve, estimate the energy savings associated with each installation.	The demonstration will include three to four customer installations with M&V and characterize the energy savings for the device.	Contracting and additional customer recruitment

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