

Rhode Island Energy Efficiency and Resource Management Council

# 2022 ANNUAL REPORT



**JUNE 2022**

Third Draft

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STATE OF RHODE ISLAND  
**ENERGY EFFICIENCY &  
RESOURCE MANAGEMENT COUNCIL**

DRAFT

**Rhode Island Energy Efficiency and Resource Management Council  
One Capitol Hill, Providence, RI 02908**

**[rieermc.ri.gov](http://rieermc.ri.gov)**

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# 2022 ANNUAL REPORT EXECUTIVE SUMMARY

## Energy Efficiency is Paying Off for Rhode Islanders



**1,011**

full-time equivalent jobs in 2021



**1,152**

firms delivered energy efficiency services in 2021



**720,000**

metric tons of greenhouse gas emissions prevented over the life of efficiency measures installed in 2021. Equivalent to taking

**154,556 cars**

off the road for one year



**\$595 million**

in total benefits achieved by efficiency programs in 2021

## 2022 Policy Recommendations



Coordinate efficiency programming with Act on Climate mandates



Concentrate support on clean energy workforce development



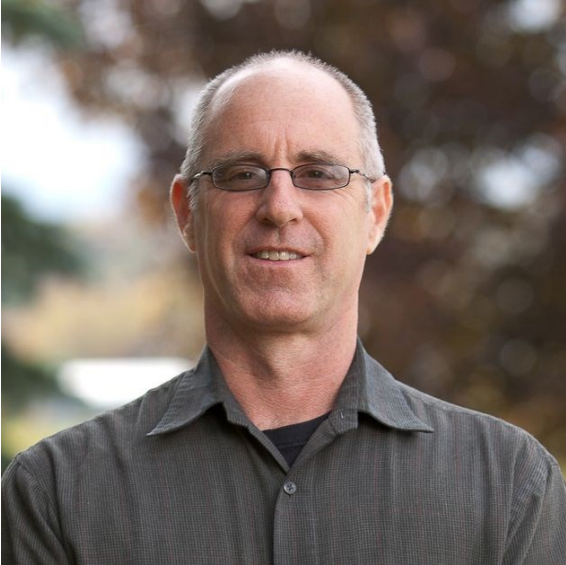
Encourage and embed equity in energy programming



Continued emphasis and investment in energy program accessibility

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

## IN MEMORIAM



### **Michael J. Guerard**

*May 11, 1962 - December 5, 2021*

The Rhode Island Energy Efficiency and Resource Management Council (EERMC) would like to recognize and honor the legacy of Mike Guerard, who served as the lead consultant to the EERMC since 2008.

Born and raised in Woonsocket, Rhode Island, Mike took pride in his home state. Like so many locals, he studied at the University of Rhode Island, earning bachelor's degrees in philosophy and psychology in 1986. He then traveled to the University of Kansas for graduate studies in journalism and communications.

Mike would occasionally mention that he got his start installing insulation in sweltering attics, which no doubt gave him a better understanding of and appreciation for on-the-ground efficiency work. His energy career began to take shape in 1991, when he was

hired by Conservation Services Group (CSG) in Westborough, MA. He went on to spend the next 17 years there managing residential energy services throughout New England, launching the ENERGY STAR™ Home Program for the Energy Trust of Oregon and the Northwest Energy Efficiency Alliance, and directing CSG's LEED for Homes provider services.

In 2008, Mike joined Optimal Energy and, shortly after, found himself partnered with Scudder Parker of Vermont Energy Investment Corporation (VEIC) as the two became the EERMC's first consultant team. Charged with assisting the Council in fulfilling its legislative purpose of overseeing and guiding Rhode Island's energy efficiency planning and implementation, the duo worked closely with the Utility and the Office of Energy Resources. For the next 13 years, Mike provided skilled project management, research, stakeholder coordination and technical analysis to support the Council and help the state achieve some of the most ambitious energy efficiency goals in the country.

Through many changes in leadership and staff within the partner organizations, Mike was a steadfast pillar embedded in Rhode Island's energy community. His understanding of utility and regulatory history, politics and bureaucracy, and the culture of the state helped him see the big picture and make important connections. He worked to cultivate an informed, engaged Council, which matured over the years into a respected voice at the efficiency table.

Ultimately, Mike played an integral role in taking least cost procurement, Rhode Island's efficiency policy framework, from an untested, conceptual mandate to a collection of real-world programs producing significant, measurable results. His work helped to lower energy bills for millions of Rhode Islanders, create thousands of green jobs, and help in the fight against the impacts of climate change. Accumulating over 30 years of experience in the energy efficiency, green building and renewable energy sectors, Mike was insightful, dependable, and passionate about his work.

While Mike was deeply devoted to his career, he was even more devoted as a father to six children. And while he often put in long hours and late nights, he knew how to enjoy himself. To relax, he loved spending time in Matunuck, either on the beach or at his favorite Rhode Island watering hole, the Ocean Mist. He enjoyed watching sports with his sons and friends, particularly soccer, and being active outdoors with his spunky dog, Elle. Mike was easy to be around, known for his calm, laidback persona and, of course, his notorious deadpan humor.

Mike's presence in the Rhode Island energy community will be missed immensely. We take solace knowing that the impacts of his contribution will continue to be felt in the years and decades ahead as our state transforms and evolves toward a brighter, more sustainable future.

The Council has established the EERMC Mike Guerard Energy Fellow position in his memory.





## LETTER FROM THE CHAIR



**Anthony L. Hubbard**  
**2021 Chair, RI EERMC**

*To Governor Daniel McKee, Leaders and Members of the General Assembly, and all Rhode Island energy consumers:*

The second year of the global pandemic was a challenging one, particularly for those struggling at the margins of society. As Chairman of the EERMC, my goal is to ensure our energy efficiency programs create equitable outcomes for all ratepayers.

In this letter, I will define four key areas where we are making progress in our energy efficiency program deployment, as well as challenges that still lay ahead of us. These areas include equity, access to participation, energy efficiency education, and program evolution for the changing needs of our community.

Starting with equity, 2021 was the first year of our equity working group. This group is comprised of citizen advocates who we have brought together to help the Utility (formerly National Grid, now Rhode Island Energy)<sup>1</sup> identify and overcome access to participation in energy efficiency programs. The formation of this working group is an important first step in creating more equitable outcomes, and I'm optimistic about the results we will see in the years ahead.

Breaking down barriers to participation in energy efficiency programs is extraordinary challenge, particularly among income eligible populations and residents of multi-family dwellings. At the heart of this challenge there are several issues, including a lack of adequate education about the benefits of energy efficiency and the availability of programs.

To tackle this issue, we have implemented several educational initiatives. Since online video has become one of the primary ways ratepayers receive information, we have hired a marketing firm to produce several videos that teach the basics of energy efficiency and explain its benefits. We continue with our EERMC public forums and lectures on Zoom to connect legislators, state officials, industry professionals, advocates, and members of the public, in important conversations about energy efficiency policy.

However, we are not just reaching out to adults with our educational initiatives, but school children as well. We are currently working to train Rhode Island educators on energy efficiency lesson plans for grades K-12. Students will grow up understanding the fundamentals of energy efficiency and become more energy conscious adults.

Our programs must continue to evolve to meet the changing needs of the populations we serve. For instance, in years past, we were focused on a statewide initiative to replace incandescent bulbs with energy efficient LEDs in homes and businesses. While that program continues, we must turn our focus toward other energy efficiency measures such HVAC, weatherization and energy efficient home appliances. We must continue to reach out to underserved populations in new ways through their communities, so they can reap the energy and money saving benefits of our programs.

I would like to end by expressing my gratitude for the EERMC board members for their dedication and flexibility, especially while working remotely during the pandemic. This added a layer of complexity to our work and the board members should be applauded for their accomplishments under trying circumstances.

In closing, I reaffirm my commitment to always elevate the voices of those who often remain voiceless in system change conversations.

*Respectfully Submitted,*

A handwritten signature in black ink, appearing to read "Anthony L. Hubbard". The signature is stylized and cursive.

**Anthony L. Hubbard**  
**2021 Chair, Energy Efficiency and Resource Management Council**

<sup>1</sup> In May of 2022, the Utility sold its ownership of the Narragansett Electric Company to PPL Corporation. PPL Corporation operates Narragansett Electric Company under the name "Rhode Island Energy".

# LETTER FROM THE EXECUTIVE DIRECTOR



**Nicholas S. Ucci**  
**Executive Director, RI EERMC**

*To Governor Daniel McKee and Members of the General Assembly:*

The Rhode Island Energy Efficiency and Resource Management Council (EERMC) and Office of Energy Resources (OER) are pleased to present the 2022 EERMC Annual Report.

Despite a second challenging year in which the worldwide COVID-19 pandemic had significant impacts on our community, Rhode Island has maintained its leadership in cost-effective, least-cost energy investments that are foundational to the state's clean energy future and economy. Rhode Island ranks fourth in the nation for its ambitious policies that promote energy efficiency, create jobs, and help lower the cost of electricity and natural gas for local businesses and consumers, according to the latest American Council for an Energy Efficient Economy (ACEEE) scorecard. The independent organization found that Rhode Island "continues to achieve among the highest levels of savings in the country" through its aggressive energy saving targets.

With Rhode Island on the frontlines of global climate change and the April 2021 passage of the Act on Climate, which established an economy-wide net-zero emissions target by 2050, it is more important than ever that our state innovate and deploy cost-effective energy efficiency solutions at scale. Energy efficiency is the only resource in our portfolio that places downward pressure on all other components of our utility bills, such as transmission distribution, and capacity costs. These programs represent the least-cost means of reducing energy consumption, utility bills, and greenhouse gas emissions, all while creating jobs, improving building stock, and enhancing the comfort of our homes and businesses.

Since 2005, Rhode Island consumers have purchased over 128,000 GWhs of electricity. In that same time, ratepayer funded energy efficiency programs have saved Rhode Island consumers over 15,000 GWhs of electricity. The impact of these savings means that instead of Rhode Island's electric load being 9% higher than it was in 2005, it is actually 13% lower today.

Moreover, energy efficiency is an engine of our local clean energy economy. Prior to COVID's impact on our economy, energy efficiency-related employment accounted for six out of every ten clean energy jobs across Rhode Island, as measured by the state's 2021 Clean Energy Jobs Report. Many clean energy jobs are a source of sustainable-wage employment for Rhode Island residents, particularly for high unemployment communities, and represent workforce opportunities that cannot be outsourced. Thanks to this work, we are also improving the quality, comfort, and safety of Rhode Island homes, businesses, schools, and other public sector facilities.

The OER and EERMC look forward to collaborating with policymakers and other valued stakeholders to advance a clean, affordable, reliable, and more equitable energy future for the people of Rhode Island.

*Sincerely,*

A handwritten signature in blue ink, appearing to read "NSU".

**Nicholas S. Ucci**  
**Commissioner, Rhode Island Office of Energy Resources**  
**Executive Director, Energy Efficiency and Resource Management Council**



# ABOUT THE EERMC

## COUNCIL MEMBERSHIP

The EERMC consists of fifteen members appointed by the Governor with the advice and consent of the Senate. Eleven 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, 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 *(As of April 27, 2022)*

### **Anthony Hubbard, Acting Chair**

*Voting Member Representing Low Income Energy Consumers*  
Director, YouthBuild Providence

### **Peter Gill Case, Acting Vice Chair**

*Voting Member Representing Expertise in Energy Design and Code*  
Principal, Truth Box, Inc.

### **Sue AnderBois**

*Voting Member Representing Expertise in Environmental Issues*  
Climate & Energy Program Manager, The Nature Conservancy

### **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

### **Kurt Teichert**

*Voting Member Representing Energy Regulation and Law*  
Senior Lecturer in Environmental Studies, Brown University

### **Nicholas Ucci**

*Ex-Officio Member - Executive Director, EERMC*  
Commissioner, Office of Energy Resources

### **Karen Verrengia**

*Voting Member Representing Energy Efficiency Education and Employment Tracking*  
Account Manager & Building Operator Certification Course Manager, CLEARResult

### **Appointment Pending**

*Voting Member Representing Large Commercial & Industrial Users*

### **Appointment Pending**

*Voting Member Representing Small Commercial & Industrial Users*

### **Appointment Pending**

*Voting Member Representing Residential Users*

### **Appointment Pending**

*Voting Member Representing Municipalities*

### **Appointment Pending**

*Ex-Officio Member Representing Expertise in Delivered Fuels*

### **Appointment Pending**

*Ex-Officio Member Representing Utilities*

### **Appointment Pending**

*Ex-Officio Member Representing Utilities*

## COUNCIL PURPOSE

### *Maximizing Program Benefits for All Rhode Islanders*

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

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

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

Rhode Island consumers are the focus of Least Cost Procurement, so ensuring the consumer voice in energy efficiency procurement decisions is critically important. The EERMC, assisted by its expert consultant team, provides meaningful input into the Utility'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.

### *Protecting the System Benefits Fund*

Energy efficiency is the most cost-effective way to reduce energy use and address climate change in Rhode Island. The funds that enable the implementation of the state's efficiency programs are collected from ratepayers via the System Benefits Charge (SBC) on electric and natural gas bills. Thorough and careful evaluation, planning, and oversight ensure the funds support cost-effective energy efficiency that is less than the cost of supply, as required by the Least Cost Procurement law. Sustained and robust efficiency funding is important to ensuring Rhode Islanders continue to benefit from strong efficiency programs for years to come.

### **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.

# 2021 ACHIEVEMENTS & HIGHLIGHTS

## 2021 Energy Efficiency Program Results



**Total Participants:**  
583,664



**Cost Per Lifetime kWh of Electricity Saved:** \$0.090



**Utility Program Cost:**  
\$130.2 million



**Cost Per Lifetime MMBTU of Natural Gas Saved:** \$10.33



**Total Benefits:**  
\$595.7 million



**Electric Savings as a Percent of 2021 Electric Load:** 1.81%

## NATION LEADING RESULTS

Rhode Island remains a nationally recognized leader in implementing high-quality energy efficiency programs. Since 2009, Rhode Island has consistently ranked among the top 10 states according to the American Council for an Energy Efficient Economy's State Energy (ACEEE) State Scorecard.

In 2021, ACEEE did not complete an official ranking due to impacts of the pandemic. Nonetheless, Rhode Island received recognition in the organization's 2021 Progress Report for progress in appliance and equipment efficiency standards, clean vehicle rules, public transit, finance mechanisms, and electric energy savings.

## Energy Efficiency is Paying Off for Rhode Islanders



**1,011**  
full-time  
equivalent jobs  
in 2021



**1,152**  
firms delivered  
energy efficiency  
services in 2021



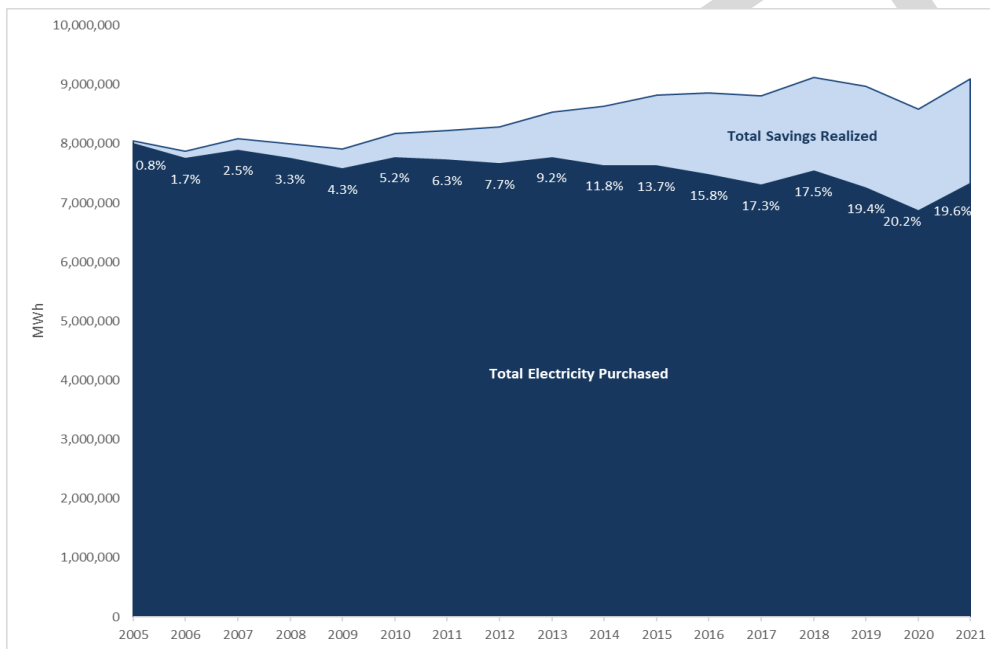
**\$595**  
**million**  
in total benefits  
achieved by  
efficiency programs  
in 2021



**720,000**  
metric tons of greenhouse gas  
emissions prevented over the  
life of efficiency measures  
installed in 2021.  
Equivalent to taking  
**154,556 cars**  
off the road for one year

## ENERGY EFFICIENCY AS A RESOURCE

In general, there are two options for meeting the energy needs of consumers, businesses, and institutions: producing energy supply or reducing energy demand. In other words, energy efficiency is capable of displacing energy supply. Because efficiency programs are generally significantly cheaper to implement than acquiring conventional supply (e.g. buying electricity), efficiency is now widely considered to be not only a resource, but often the “first fuel” of choice. Efficiency programs can also defer expensive upgrades to utility infrastructure, improve system reliability, reduce peak demand, and increase energy security.



**Figure 1. Cumulative Impact of Efficiency Investments on RI Electric Supply Requirements (2005-2021).** Percentages represent the percent of load that cumulative electric savings since 2005 are covering.

Since 2005, Rhode Island consumers in the Utility’s service territory have purchased over 128,000 GWhs of electricity. In that same period of time, ratepayer funded energy efficiency programs have saved Rhode Island consumers about 15,400 GWhs of electricity.

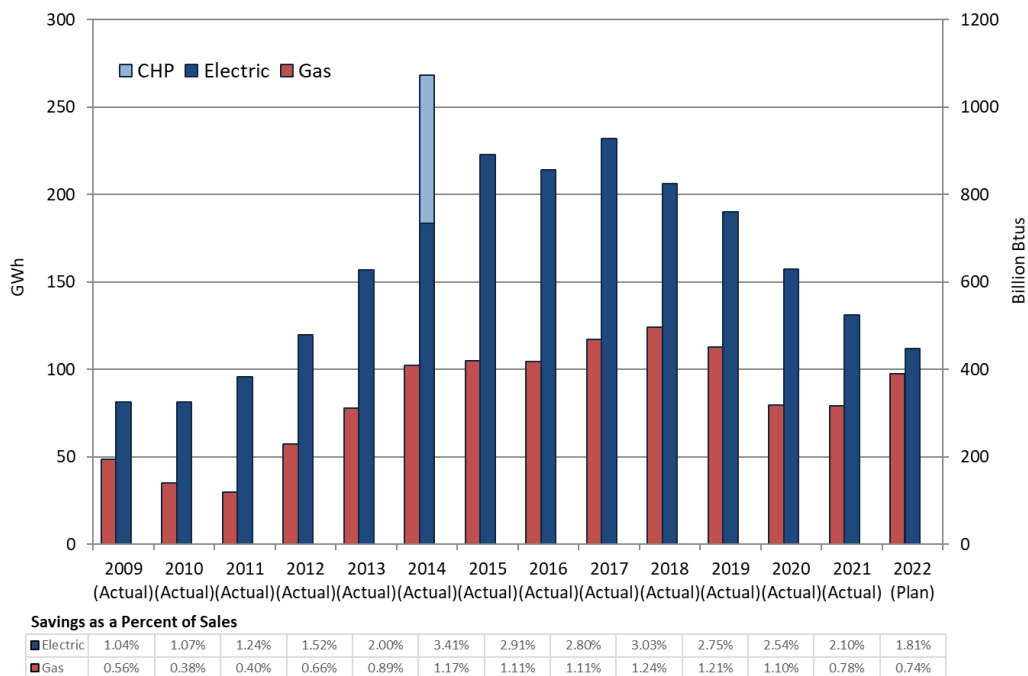
The impact of these savings means that instead of Rhode Island’s electric load being 13% higher than it was in 2005, it is actually 9% lower. Additionally, because savings persist over the lifetime of the measures installed, the cumulative savings realized in 2021 account for over 19% of what the electric load would have been absent the energy efficiency programs.

# 2021 ACHIEVEMENTS & HIGHLIGHTS

## ACHIEVING EFFICIENCY GOALS

Every three years, the EERMC is required to develop targets for annual electric and natural gas reductions as a result of energy efficiency programs administered by the Utility. The targets support the development of the Utility’s triennial and annual energy efficiency program plans by providing guidance on potentially available cost-effective efficiency resources in the state.

The EERMC works with its consultant team to conduct in-depth analysis, research, and stakeholder engagement to establish achievable, cost-effective levels of energy efficiency, which are then used to inform proposed energy savings targets. Once approved by the Council, the targets are submitted to the PUC for final review and approval. Once established, the targets are used to guide the development of the ensuing triennial and annual energy efficiency program plans.



**Figure 2. Actual Energy Savings (2009-2021) and Goals (2022).** Electric and natural gas energy savings over time shown in annual GWh and Billion Btus, respectively. Savings as a Percent of Sales is based on forecasted sales for 2009-2014 and reference loads thereafter. 2015-2017 is based on the 2012 reference load and 2018-2021 is based on the 2015 reference load. 2021-2022 is based on

Since 2009, Rhode Island’s ratepayer funded energy efficiency programs have provided over \$4.5 billion in realized benefits. This compares to total program costs of about \$1.6 billion, resulting in a cumulative benefit-cost ratio of 2.8. Achievement of the 2022 Plan goals will push the total realized benefits to over \$5.2 billion.

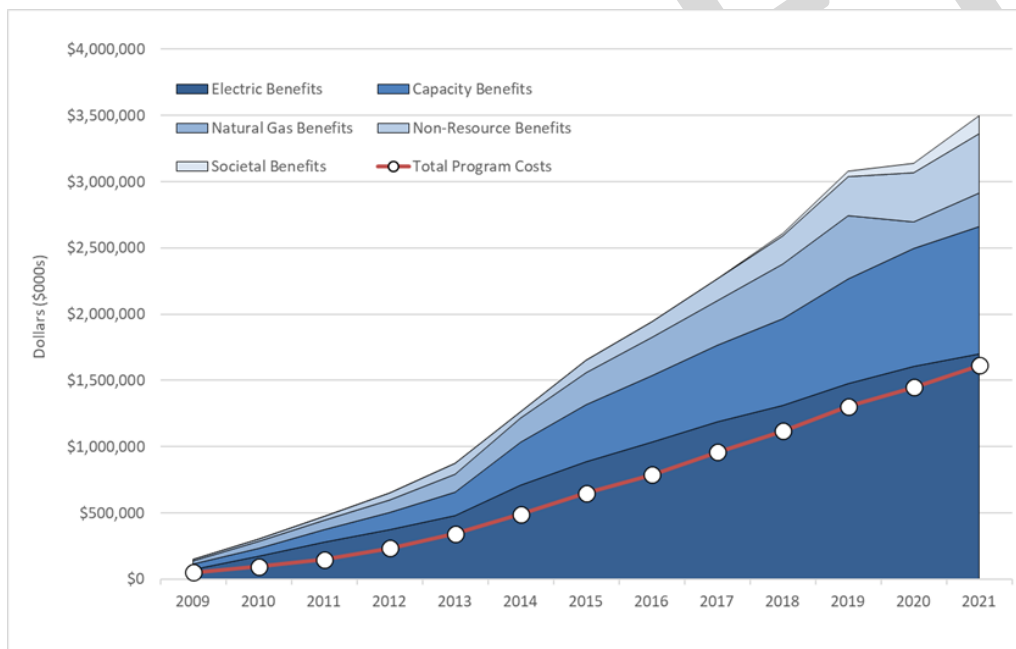


## THE VALUE OF ENERGY EFFICIENCY

Energy efficiency can directly lower energy bills for consumers who participate in programs, but it also has much broader benefits. Efficiency is one of the easiest and most cost-effective ways to reduce energy costs for all consumers, support the local economy, and combat climate change.

When we use less energy, we actually lower energy costs for everyone. By reducing the state's demand for power, for example, we reduce the impact of increasing energy prices, and those savings are passed on to all electric customers. Additionally, using less energy results in less strain on energy generation and distribution infrastructure, which lowers the costs of maintaining and expanding it – costs that the utility passes on to ratepayers. This effect also increases the energy system's reliability and security.

Another important benefit is that, because energy efficiency programs are typically implemented by local workforces, it supports jobs and the economy. Just as importantly, efficiency is a critical tool for addressing climate change and the resulting economic, health, and environmental impacts.



**Figure 3. Cumulative Value of Energy Efficiency Program Benefits vs. Costs.**

Figure 3 illustrates how these benefits of energy efficiency programs stacked up over time far outweigh the costs of implementation. Electric and Natural Gas benefits represent reduced consumption. Capacity benefits are made up of those benefits from the reduced need to generate, transmit, and distribute electricity and natural gas. Non-resource benefits result from reduction in need for heating fuels such as oil and propane, as well as water and sewer benefits from reduced water consumption. Finally, societal benefits are made up of economic developments that are generated in the local economy, as well as reductions in greenhouse gases.

## CONTEXT INFORMING POLICY RECOMMENDATIONS AND ENERGY EFFICIENCY PRIORITIES

The following two sections highlight the Council's Policy Recommendations for 2022 and its Priorities for the 2023 Annual Energy Efficiency Plan. This section provides some information about recent events in the Rhode Island energy landscape that it feels is important to have as context for its Policy Recommendations and Priorities.

### **Sale of the Utility**

Recently, the utility responsible for delivering energy efficiency programs in Rhode Island was sold from National Grid Rhode Island (Narragansett Electric) to Pennsylvania Power and Light (PPL) who will be conducting business in the state as Rhode Island Energy. During this time of transition, it is important to ensure continuity of planning and implementation of energy efficiency programs in Rhode Island, and the Council intends to play its part in ensuring that Rhode Island's efficiency programs are shepherded through the change in ownership. Some of the areas that the Council plans to monitor during the transition include the potential need to assist in bringing new utility staff up to speed on the Council's role and responsibilities; whether differences in data and reporting infrastructure that may draw upon PPL's existing infrastructure requires any adaptive approaches; whether planning and oversight processes need to be adjusted to account for changes in managerial approaches or strategic vision; and how reduced opportunities to directly leverage studies, research, and program design conducted by National Grid's operations in Massachusetts affects overall program outcomes.

### **First Ever Contested Energy Efficiency Plan**

A notable outcome of the most recent annual energy efficiency planning process was that for the first time in its history the Council voted unanimously to not endorse the 2022 Plan put forth by the utility. The EERMC's greatest concerns related to whether the utility considered all cost-effective savings opportunities and the slow pace and incomplete responsiveness of the utility's data and information sharing during plan development. The Council was clear during its discussions that they strongly believed in the value and importance of energy efficiency in Rhode Island, and that the utility's approach to develop the Plan – based on a constrained budget – precluded full discussion of the appropriate balance to be struck in program development and prejudged outcomes both for stakeholders and for regulators. As a result of its decision to not endorse the Plan, the Council submitted a summary report to the PUC for its consideration.

### **Intersection of Energy Efficiency and Climate Change Impacts**

Over the past year, the Council has increased its level of interest and attention paid to the intersection of Rhode Island's energy efficiency programs and Rhode Island's efforts to curtail the unfolding climate crisis. This is complemented by an increasing industry-wide trend toward the consensus view that, while energy efficiency remains a critical grid resource and opportunity for ratepayer savings, it is also a central pillar in any plan that seeks to reduce the greenhouse gas emissions of the energy sector, alongside other clean energy resources such as solar, storage, demand response, electric vehicles, and others. The Council recognizes that its work is part of a larger push to address the impacts of climate change on Rhode Islanders, and is working to ensure that future energy efficiency program planning activities take direct account of, and can be harmonized with, related decarbonization and resilience efforts in Rhode Island, including the not insignificant number of bills relating to energy efficiency, electricity, and clean energy that were proposed in the 2022 legislative session.

# 2022 POLICY RECOMMENDATIONS

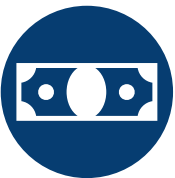
R.I.G.L. § 42-140.1-5 requires that the EERMC “(s)ubmit to the joint committee on energy an annual report... regarding the activities of the Council, its assessment of energy issues, the status of system reliability, energy efficiency and conservation procurement, and its recommendations regarding any 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. COORDINATE EFFICIENCY PROGRAMMING WITH ACT ON CLIMATE MANDATES:** The passage of the Act on Climate legislation in 2021 sets mandatory Greenhouse Gas emission reduction targets that Rhode Island must meet. As stated in the law, “Addressing the impacts on climate change shall be deemed to be within the powers, duties, and obligations of all state departments, agencies, commissions, councils, and instrumentalities, including quasi-public agencies” and this lens should be used by all involved in developing future energy efficiency plans. Energy Efficiency is a key, foundational strategy to achieving the Act on Climate mandates and every effort must be made to coordinate the delivery and expand the programming of our energy efficiency portfolio to help achieve these Act on Climate mandates.



**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 to meet these new and growing equipment needs. Therefore, current efforts by the RI Department of Labor & Training, the Governor’s Workforce Board, and others should be ramped up and focused on training for this work. Where possible, coordination with existing clean energy programs should be encouraged. This is particularly true for historically marginalized communities which may offer unique opportunities to both train new workers in fields ripe for employment growth and to better serve these marginalized communities moving forward.



**3. CONTINUED EMPHASIS & INVESTMENT IN 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. Specifically, continued focus and resources should be placed on implementing strategies and providing new and different customer support mechanisms to realize increased participation in energy efficiency offerings from the Income Eligible and Multifamily sectors.



**4. EMBED EQUITY IN ENERGY PROGRAMS:** Emphasizing and embedding equity considerations in the design and delivery of all state energy programs is critical to ensuring that all Rhode Islanders receive the maximum possible benefits. Barriers to equitable participation in energy programs must be examined and addressed as priorities. Such barriers, as well as recommendations, are identified in the RI Energy Efficiency Equity Working Group’s 2021 Report. Particular attention should be paid towards programs that serve under-represented and disenfranchised communities, such as the income-eligible and multifamily energy efficiency programs. Efforts to incorporate the voices and experiences of those most impacted by energy system inequities must continue to be supported and integrated into decision making in order to achieve equitable outcomes.

<sup>2</sup> Please see the Equity Working Group’s Final Report for 2021 for additional information, available on the Council’s website at: [http://rieermc.ri.gov/wp-content/uploads/2021/09/11\\_2022-national-grid-2021-ewg-final-report.pdf](http://rieermc.ri.gov/wp-content/uploads/2021/09/11_2022-national-grid-2021-ewg-final-report.pdf) .

# EERMC PRIORITIES FOR THE 2023 ENERGY EFFICIENCY PLAN

As part of its fulfillment of the roles and responsibilities legislated in R.I.G.L. §42-140.1, the Energy Efficiency & Resource Management Council (EERMC or Council) provides the following input and direction in the form of Priorities to support development of the 2023 Annual Energy Efficiency Program Plan (2023 Plan) for submittal to the RI Public Utilities Commission (PUC) on October 1, 2022 by the Utility. The EERMC also has clearly defined responsibilities in the PUC-issued Least Cost Procurement Standards (LCP Standards) to both support the development of the plans and to vote on whether or not to endorse the plans to the PUC. Should the EERMC vote not to endorse the plans, the EERMC is then directed to document reasons for that decision and submit them to the PUC for its consideration.

## **Priority #1: Align with Three-Year Plan**

- Identify how each of the “5 Key Priorities” in the Three-Year Plan will apply in the 2023 Plan
- Reference “Base” and “High” Scenarios for savings and benefit goals
- Pursue cost-efficiency to deliver maximum savings and benefits
- Align mix of savings with Market Potential Study (MPS)

## **Priority #2: Comply with Least Cost Procurement (LCP) Standards**

- Apply the clear, outcome-oriented direction provided in the LCP Standards section on General Plan Design and Principles for annual planning
- Include key metrics to be tracked and reported

## **Priority #3: Incorporate Stakeholder Input**

- Reflect Priorities received through the Utility Survey and Technical Working Group member input
- Incorporate input from robust and actionable Customer Feedback Activities

## **Priority #4: Support Equity and Access**

- Fulfill and apply results to 2023 Plan from the 2022 Plan commitments, including:
  - Nonparticipant Market Barriers Study (May 2022)
  - Participation and Multifamily Census Study (May 2022)
  - Enhancements stemming from recommendations of the Equity Working Group (EWG)
- Demonstrate progress on—and build upon—enhancements in 2022 Plan related to EWG recommendations
- Include clear, detailed remediation strategies to assure corrective action on underperforming programs

## **Priority #5: Ensure an Effective and Efficient Development and Review Process**

- Adhere to Key Deliverables and Schedule
- Assure necessary time is afforded the EERMC and stakeholders to participate in, review, and reach clear understanding of the content of the 2023 EE Plan sufficient to make informed decisions on whether to endorse the Plan

## **Priority #6: Give Due Consideration to Act on Climate Mandates**

- Make clear references to how the Act on Climate was considered during the development of the 2023 EE Plan
- Document how anticipated outcomes of the 2023 EE Plan will contribute towards the mandatory Greenhouse Gas emissions reduction targets that were established as part of the legislation

## **System Reliability Procurement (SRP) Plan Priorities**

- Be Responsive – Continued responsiveness to Council and other stakeholder input, including specific points identified in the Council’s comments on the SRP Plan
- Engage Stakeholders – Ensure sufficient opportunities for stakeholder engagement and substantive contributions during SRP planning and implementation
- Actively pursue further development of the Non-Pipes Alternatives (NPA) program and other methodological refinements



## 2021 RESIDENTIAL RESULTS

- 61,670 Annual MWh Saved (117.3% of Goal)
- 227,870 Lifetime MWh Saved (118.8% of Goal)
- 162,011 Annual MMBtu Saved (97.7% of Goal)
- 1,589,829 Lifetime MMBtu Saved (108% of Goal)
- 262,080 Metric Tons of Greenhouse Gas Emissions Avoided
- 570,439 Program Participants
- \$58.4 Million in Lifetime Electric Bill Savings
- \$16.5 Million in Lifetime Gas Bill Savings
- \$71.0 Million in Total Economic Benefits

## 2021 RESIDENTIAL PROGRAMS

### Residential Energy Efficiency Programs

The electric and natural gas distribution utility company (“the Utility”) 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 on energy efficiency. 2021 was an unusual year which saw the continuation of innovation and program enhancements that accommodate shifting rules associated with the COVID-19 pandemic.

In 2021, more than 5,949 residential thermostats and 287 residential battery systems were enrolled

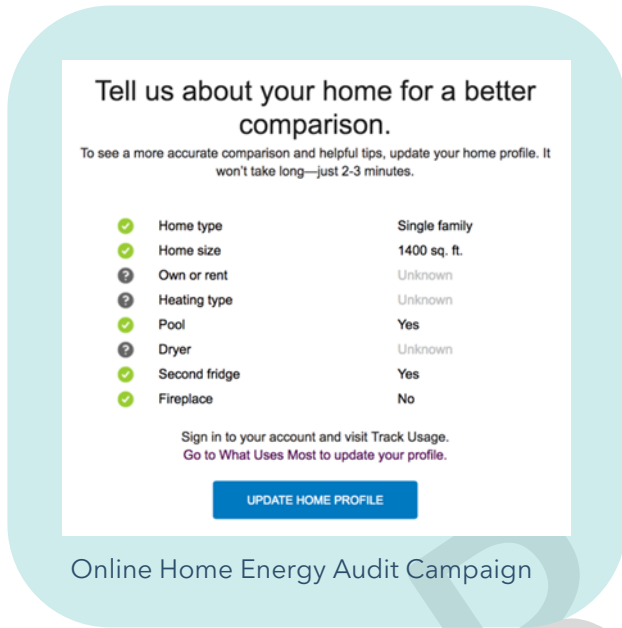
in the Residential Connected Solutions program. Over the course of 12 thermostat events and 28 battery events in the summer of 2021, these customers delivered an average of 383.3 kW from thermostats and 25 kW from batteries, of active demand response curtailment, helping to lower peak load on the grid.

The residential lighting program continued to progress in 2021, its final year. In 2020, the heating electrification program to replace or displace oil or propane heating sources with high-efficiency air source heat pumps was discontinued with the use of energy efficiency funding due to a determination that, under the Least Cost Procurement Law, using electric ratepayer 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 615 exceeded the goals for the 2021 EnergyStar HVAC



program. Additionally, enhanced incentives were offered to oil or propane heating sources with the additional Regional Greenhouse Gas Initiative funding.

In its ninth 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 normative comparison to similarly sized and similarly heated homes, as well as to an energy reduction goal for each customer. 280,677 Rhode Island customers received reports in 2021.

The Energy Innovation Hub was not open during 2021 due to the COVID-19 pandemic. The Hub has helped 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 the 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 2021, through the ongoing COVID-19 pandemic, the Energy Innovation Hub adopted a hybrid approach for customers by leveraging our

updated virtual pathways of communication and the physical Hub space. By utilizing newsletters, social media, virtual presentations, and our networks, the Innovation Hub was able to host approximately 250 in-person visitors within the Hub, approximately 50 customers via virtual presentations, and countless others via other electronic means. The Energy Innovation Hub at its current location closed in March 2022 due to lower than anticipated use by the public.

## EnergyWise Program

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. In 2021, EnergyWise won the ENERGY STAR® Partner of the Year (Sustained Excellence Award from the U.S. Environmental Protection Agency and the U.S. Department of Energy) for the fourth year in a row. It is also the sixth year that the Utility has been recognized as Partner of the Year in Energy Efficiency Program Delivery for EnergyWise. The program also celebrated 25 Century Club recipients who are insulation contractors that have weatherized 100 or more residential homes in Rhode Island. Furthermore, Rhode Island garnered the ENERGY STAR Excellence in Marketing award for its successful promotion of the ENERGY STAR® brand. Program achievements in 2021 include providing assessments and weatherization services to the Narragansett Indian Tribe and partnering with the Rhode Island Office of Energy Resources to design the Regional Greenhouse Gas Initiative Moderate Income offering. The EnergyWise program faced increased participation in 2021 which resulted in an overspending situation. Customers that were not be served in 2020 due to the program being suspended for several

months and a reduced workforce as a result of the suspension created a large influx of customers this year. In 2021, the EnergyWise Single Family program achieved 20,494 net lifetime MWh of electric savings (137.0% of goal) and 786,836 net lifetime MMBtu of gas savings (165.1% of goal).

### Residential New Construction Program

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-blower 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 2021 as RI deemed it an essential business, and technical support continued via remote means. In 2021, 540 housing units were built to the RNC standards, and 512 newly planned units

#### Zero Energy New Construction Homes

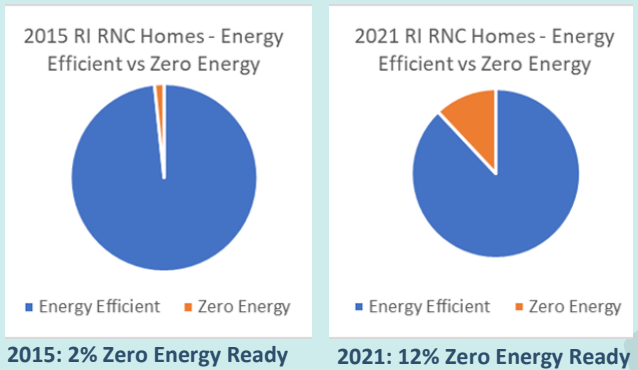


Figure 4. Zero Energy New Construction Homes.

enrolled in the Program. Of the 540 units, 65% were market rate and 35% were affordable housing. In 2021, 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. 2021 Program trends continue to demonstrate market transformation in electrically heated homes compared to gas heated homes and zero-energy ready and Passive House homes. In 2021, the Residential New Construction (RNC) program achieved 14,677 net lifetime MWh of electric savings (91.2% of goal) and 31,532 net lifetime MMBtu of gas savings (56.4% of goal).

#### Gas Heat vs Electric Heat in New Construction Homes

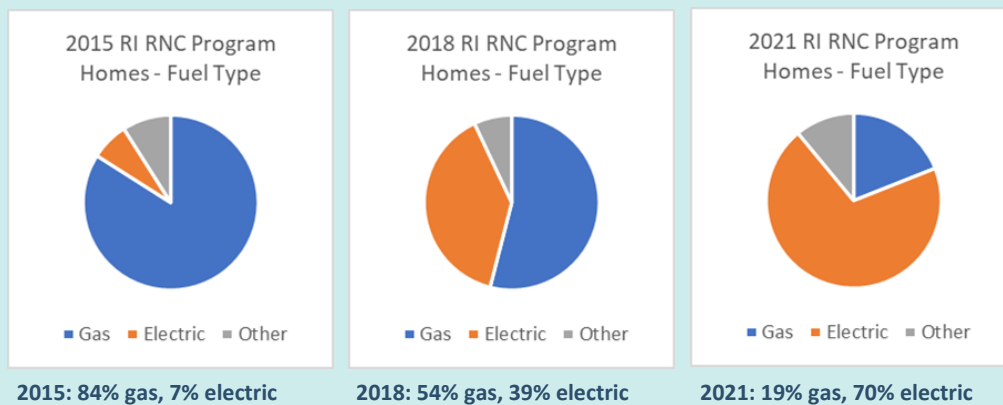


Figure 5. Gas Heat vs Electric Heat in New Construction Homes.

## **ENERGY STAR® Consumer Products Program**

The ENERGY STAR® Consumer Products Program promotes the purchase of high efficiency household appliances and electronics. 2021 produced strong results with high consumer interest in refrigerator and freezer recycling, room air cleaners, dehumidifiers, room air conditioners, dryers, pool pumps, and advanced power strips. In 2021, the Residential Consumer Products program achieved 35,285 net lifetime MWh of electric savings (94.2% of goal).

## **ENERGY STAR® Lighting Program**

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. Notably, 2021 is the final year of the program. All in-store incentives concluded on September 30th to allow for adequate time for final invoice processing. In 2021, the ENERGY STAR® Lighting program achieved 26,542 net lifetime MWh of electric savings (99.0% of goal).

## **ENERGY STAR® HVAC Programs**

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. The gas heating program continued to see a strong consumer purchase of the energy-efficient combination boiler/hot water systems (1,229 systems) versus a much lower purchase of the stand-alone energy efficient boilers (225). 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 603 rebates processed. The HVAC electric program launched a new HVAC Check reporting portal V2.0, which was used to collect, review and

report 647 passing HVAC Check tests by program approved contractors. 22 HVAC Check trainings were offered, resulting in 74 contractors being included on the list of Approved Contractors to ensure that ASHP systems are sized accurately, installed correctly, and the equipment is working properly. A weekly newsletter was developed and distributed to HVAC companies, contractors, technicians, distributors, and other trade allies to provide ongoing communication about the HVAC Program. In 2021, the ENERGY STAR® HVAC (Heating and Cooling) program achieved 76,687 net lifetime MWh of electric savings (170.4% of goal) and 514,514 net lifetime MMBtu of gas savings (77.1% of goal).

## **Home Energy Reports Program**

The Home Energy Reports (HER) Program continued in 2021 with a specific focus on COVID messaging and billing options for customer at the beginning of the year. In mid-2021 the program pivoted back to more traditional messaging. In April, an updated version of home energy reports was distributed to customers in print and by email. This update, called Home Energy Report 3.0, is designed to keep customers engaged in behavioral energy efficiency. In 2021, The Home Energy Reports program achieved 29,975 net lifetime MWh of electric savings (117.4% of goal) and 88,159 net lifetime MMBtu of gas savings (94.3% of goal).

## **Multifamily Retrofit Program**

The Multifamily Retrofit program provides comprehensive energy efficiency solutions to market rate and income eligible gas and electric customers as well as commercial gas customers. In 2021 the program conducted 266 assessments in market rate and 86 assessments in income eligible. Despite the challenges the COVID-19 pandemic created for this customer segment the program performed well. The Market Rate Multifamily Retrofit program achieved 10,294 net lifetime MWh of electric savings (63.0% of goal) and 148,623 net lifetime

MMBtu of gas savings (102.4% of goal). The Income Eligible Multifamily Retrofit program achieved 23,636 net lifetime MWh of electric savings (110.2% of goal) and 186,932 net lifetime MMBtu of gas savings (62.9% of goal). The C&I Multifamily Gas program achieved 57,808 net lifetime MMBtu of gas savings (40.7% of goal). Much of the program's success in market rate can be attributed to increased penetration of the 5–20-unit segment of the multifamily market. This has historically been the most underserved multifamily customer segment and the increase in participation can be attributed to consistent direct outreach to prospective multifamily customers by the program's lead vendor. Another achievement for the program has been the adoption of combined heat and power (CHP) technology for Income Eligible multifamily facilities. In 2021, the program facilitated the installation and interconnection of four 24kW micro-CHP systems at income eligible properties. These systems were installed at no-cost to the customers and in total will save an estimated 540,518 kWh annually.

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## 2021 INCOME ELIGIBLE RESULTS

- 4,262 Annual MWh Saved (91.2% of goal)
- 46,342 Lifetime MWh Saved (77.9% of goal)
- 18,455 Annual MMBtu Saved (75.4% of goal)
- 331,319 Lifetime MMBtu Saved (64.1% of goal)
- 44,463 Metric Tons of Greenhouse Gas Emissions Avoided
- 9,238 Program Participants
- \$6.4 Million in Lifetime Electric Bill Savings
- \$3.5 Million in Lifetime Gas Bill Savings
- \$21.2 Million in Total Economic Benefits

## 2021 INCOME ELIGIBLE SERVICES

### 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 2021, the IES program conducted 3,349 energy assessments – 69% in-home, and 31% virtual assessments due to Covid-19 restrictions. Compared to 2020, 2021 saw overall increases in the installation of insulation, appliances, and heating system replacements.

Field operations with COVID precautions continued in 2021 with all six CAP agencies providing in-home services. Lead Vendor staff participated in Technical Working Group meetings (IES Deep Dive), the WAP Policy Advisory Council Meeting for the State of Rhode Island PY 2021 WAP plan, and the IREC Green Building Career MAP launch. Each quarterly IES Best Practice meeting was held virtually. These meetings focused on 2020 year-end results, 2021 program delivery updates, COVID-19 updates, and the Third-Party Referral Program (including enhanced referrals and a marketing update). The key performance indicator (KPI)



process was implemented throughout all of 2021, to improve communications between CAPs and the Lead Agency. KPI meetings were held with each CAP, the Utility's lead vendor and at least one Rhode Island Department of Human Services (DHS) representative. These meetings ensure that the CAPs are aware of their KPI goals and that they are on pace to meet the goals and provide a dedicated time for constructive dialog. A total of five CAP Executive Directors Meetings were held in 2021. In attendance were most CAP Executive Directors, the Utility, and the lead vendor. The discussion focused on performance, challenges/opportunities, customer communications, sharing of consistent information across all CAPs and opportunity for open discussion.

Overall, in 2021 the IES program achieved 21,500 net lifetime MWh of electric savings (58.3% of goal) and 132,704 net lifetime MMBtu of gas savings (66.0% of goal).

### **Low Income Home Energy Assistance Program**

The Utility'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.

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.



## 2021 LARGE C&I RESULTS

- 55,816 Annual MWh Saved (80.8% of goal)
- 654,445 Lifetime MWh Saved (74.3% of goal)
- 130,019 Annual MMBtu Saved (59.3% of goal)
- 1,458,321 Lifetime MMBtu Saved (73.6% of goal)
- 356,965 Metric Tons of Greenhouse Gas Emissions Avoided
- 3,307 Program Participants
- \$83.9 Million in Lifetime Electric Bill Savings
- \$12.6 Million in Lifetime Gas Bill Savings
- \$156.6 Million in Total Economic Benefits

## 2021 LARGE COMMERCIAL & INDUSTRIAL PROGRAMS

### Large Commercial and Industrial Programs

The Utility offered five Commercial and Industrial (C&I) energy efficiency programs. Depending on a customer's energy consumption and demand, they could be eligible to participate in one or more of the five main C&I 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. Each large C&I customer is assigned a dedicated account representative who helps connect customers with energy efficiency resources, vendors, and incentives. To better serve customers in several market segments, the Utility leverages a Market Sector approach. This approach allows the Utility to provide customized efficiency solutions that align with the customers' needs, thereby increasing program participation. The following Market Sectors were incentivized through

targeted initiatives in 2021: Grocery, Municipal and State Buildings (including K-12 schools), Strategic Energy Management Planning, Manufacturing/Industrial, Restaurants, and Farm/Agriculture, and Multifamily. Customers that in market segments not targeted through industry-specific initiatives are still served by dedicated account representatives (Hospitals, Colleges and Universities, Commercial Real Estate, Retail, etc.).

## Commercial New Construction Program

The Commercial New Construction Program encourages energy efficiency in new buildings and major renovations as well as new equipment installed to replace aging or failed equipment, through financial incentives and technical assistance to customers, developers, manufacturers, contractors, and design professionals.

In 2021, the Utility reimaged the Program, which is now structured around three whole building pathways, including:

- 1) **Zero Net Energy:** For buildings designed to minimize energy use based on energy use intensity (EUI)
- 2) **Whole Building Energy Use Intensity:** Uses EUI as a benchmark to determine performance and energy efficiency incentives
- 3) **Whole Building Streamlined:** Savings and incentives are based on savings compared to baseline systems using a spreadsheet model to calculate savings

Customers can also opt to participate in the Systems pathway, which provides for efficient systems and equipment rather than conducting a whole-building analysis.

At year-end, the Utility had a pipeline of nearly 30 new buildings and major renovations that are likely to participate in the Commercial New Construction Program. Foremost among these are warehouse facilities to support e-commerce, a major mixed-use development project, and several buildings at the Quonset Business Park.

In 2021, the New Construction program performed well, achieving 203,779 net lifetime MWh of electric savings (107.6% of goal) and 699,081 net lifetime MMBtu of gas savings (159.8% of goal). An example of a successful project is an industrial customer that installed two new injection-molding units used to manufacture personal protection equipment. The vendor worked with the customer to select high-efficiency units that saved the customer 38,368 gross annual kWh while reducing operations and maintenance costs by \$2,400 per year (non-energy benefits).

## Large Commercial Retrofit Program

The Large Commercial Retrofit Program incentivizes the replacement of existing equipment and systems with energy-efficient alternatives, as well as enhancements that reduce energy consumption such as advanced controls and variable-frequency drives, when the customer might otherwise not plan on making efficiency investments. The program offers three distinct pathways that aim to address specific market barriers:

- 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 2021, the Large Commercial Retrofit program achieved 450,961 net lifetime MWh of electric savings (60.5% of goal) and 718,401 net lifetime MMBtu of gas savings (49.3% of goal).

## Industrial Initiative

The Industrial Initiative targets manufacturers and other industrial customers. These customers often use specialized equipment for industrial processes and consume large amounts of energy. The initiative is implemented by a world-renowned engineering firm with expertise in this sector. The firm partners with the Utility to implement energy efficiency opportunities for industrial customers across Rhode Island.

In 2021, the Industrial Initiative resulted in 89 electric applications resulting in 17,257 gross annual MWh of savings and 30 gas applications amounting to 27,047 gross annual MMBtu of savings. One major project was for a customer installing a fume mitigation system, which reduced energy use by 1,217 gross annual MWh. The project involved 83 primary fans and 38 assist fans to help meet the state's indoor air quality requirement of removing at least 70% of air contaminants.

## EnergySmart Grocer Initiative

The EnergySmart Grocer (ESG) initiative delivered cost effective, comprehensive energy savings in the grocery market segment in 2021 by providing nearly 36,000 net lifetime MWh (3,972 gross annual MWh) in electric savings. The Utility would like to highlight three projects completed in 2021 for grocery customers.

- 1) A national chain grocer installed coffin case freezers with glass lids and self-contained medium temperature case with doors across 12 locations in Rhode Island, yielding 93 gross annual MWh in savings.
- 2) A new location of a regional grocery chain in Johnston installed a wide range of energy-efficient measures including night covers, destratification fans, variable frequency drives (VFDs), heat reclaim, lighting, and kitchen equipment. These measures are predicted to save 690 gross annual MWh and 2,300 gross annual MMBtu.
- 3) A local supermarket in Pawtucket participated in the Utility's Performance Lighting offering as well as installing night covers. These measures

are predicted to save 50 gross annual MWh and 84 gross annual MMBtu.

## Serve Up Savings Initiative

This initiative worked with seven chain restaurants to achieve 140 gross annual MWh (1,128 net lifetime MWh) and gross annual gas savings of 1,992 MMBtu.

## Telecommunications Initiative

This initiative launched in early 2021. Throughout the year, seven assessments were completed and six were delivered. The remaining assessment will be delivered in 2022. The Utility has been working with the vendor to clarify processes and lay the groundwork for success in 2022.

## 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 capture 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.

## Street Light Initiative

The 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.

- 1) **Customer Owned Street Lighting**— Rhode Island municipal customers are now eligible to purchase their own streetlights from the Utility. Incentives are being offered for solid state lighting and controls, as funding allows. In addition to the funding offered by the Utility, the Office of Energy Resources continues to accept applications for street lighting grant funding from

communities.

2) **Utility Owned Street Lighting** – The Utility filed a Utility owned street lighting tariff in 2016. If the municipal customer prefers to continue leasing their streetlights from the Utility, the customer will receive the incentive and the Utility will claim the savings.

In 2021, the Solid-State Street Lighting Initiative awarded over \$1 million in incentives to 10 different municipalities, resulting in approximately 5 million kWh of annual electric energy savings.

### **Commercial ConnectedSolutions**

The Utility implemented an active demand reduction program in 2021, 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 2021, the Targeted Dispatch measure of the Commercial ConnectedSolutions program curtailed an average of 19.1 net MW with 147 customer accounts participating in six events over the summer. In 2021, the Daily Dispatch measure of the Commercial ConnectedSolutions program curtailed an average of 7.9 net MW with 29 customer accounts participating.





## 2021 SMALL C&I RESULTS

- 9,616 Annual MWh Saved (99.2% of goal)
- 118,133 Lifetime MWh Saved (112.4% of goal)
- 5,949 Annual MMBtu Saved (121.7% of goal)
- 64,537 Lifetime MMBtu Saved (132.1% of goal)
- 53,749 Metric Tons of Greenhouse Gas Emissions Avoided
- 681 Program Participants
- \$15.6 Million in Lifetime Electric Bill Savings
- \$1.3 Million in Lifetime Gas Bill Savings
- \$11.7 Million in Total Economic Benefits

## 2021 SMALL COMMERCIAL & INDUSTRIAL PROGRAMS

### Small Business Direct Install Program

The Utility's Small Business Direct Install (SMB/DI) 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. The Utility then completes retrofit installations at the customer's convenience. In 2021, the program served small businesses of all types including car dealerships, non-profits, and small offices.

The Utility 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, provided funds are available. In 2021, the SMB/DI program achieved 118,133 net

lifetime MWh of electric savings (112.4% of goal) and 64,537 lifetime MMBtu of gas savings (132.1% of goal).

Several highlight projects were completed in 2021 for small business customers.

- The Small Business program completed a project at a facility that serves adults with developmental disabilities. Lighting was converted to LED fixtures and WiFi thermostats with temperature sensors were installed. These thermostats will allow the customer to better balance the heating within the space. The customer is expected to save 10.5 gross annual MWh.
- The program retrofitted a health care office in Cranston. New LED fixtures were installed, and duct insulation was applied to ductwork running through unconditioned spaces. The customer can expect to save 5.2 gross annual



MWh.

- The program completed an installation of wirelessly controlled LED fixtures with program grouping capabilities and occupancy sensors for an insurance company. These luminaires are projected to save 169 net annual MWh per year.
- LED fixtures were installed inside and outside a diner in East Greenwich. Gas saving measures such as kitchen aerators, pipe insulation, and ductwork insulation to ducts running through unconditioned spaces. This customer will save five net annual MWh per year and 42 net annual MMBtu per year.
- The program completed projects at two family-owned restaurants. The first restaurant received CoolTrol refrigeration controls and high efficiency EC motors in the evaporators. Interior and exterior LED fixtures were installed throughout the second restaurant as well as several low-flow kitchen spray valves. The combined savings of the two restaurants is 2.2 net annual MWh per year and 11.4 net annual MMBtu.
- The Providence branch of Boys & Girls Club of America (a non-profit that provides safe and inclusive environments for youth and teens) was retrofitted with new LED fixtures and domestic hot water controls at zero cost to the organization. This retrofit is projected to save 52.7 gross annual MWh and 195 gross annual MMBtus in gas.

In 2021, the Utility 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 2021, 36% of savings in the SMB/DI program came from CDO contractors.

## Farm Energy Efficiency Program

The Farm Energy Efficiency Program offers Rhode Island agribusinesses incentives for prescriptive energy efficiency measures. Program participants receive a free on-site energy assessment and a report detailing recommended energy-efficient improvements. Farmers or agribusiness owners can then choose to install any number of recommended electric or delivered fuels measures. 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 the Utility’s on-bill payment system, provided that funds are available.

In 2021, seven 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, attendance at farmer’s markets, and one-on-one phone calls. A video profile of Verde Vineyards was written, filmed, and produced describing the benefits of several clean energy projects on the farm’s operations and the programs utilized to implement that work. This video profile is the second one developed and helps supplement written energy profiles to share the success stories of agribusinesses tackling clean energy projects. 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 Efficiency Efforts

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 a result, as of December 2021, Rhode Island State agencies

have reduced their energy consumption by 12.7% (2014 baseline), saved \$4.8 million (FY 2021) from competitive energy procurement processes, and are procuring 95% of their electricity supply from renewable 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 the government's carbon footprint, and support Rhode Island's burgeoning clean energy economy.

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 the Utility 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. Significant work in 2021 was done to expand Lead by Example best practices to Rhode Island public schools through the launch of the School LED Lighting Accelerator program through the Office of Energy Resources, which provides technical, procurement, and financial support to qualified school districts for LED lighting upgrades. Initially designed as a two-community (Providence & Central Falls) pilot, the program is being supported through Regional Greenhouse Gas Initiative (RGGI) auction proceeds. It will leverage utility-administered energy efficiency funding and municipal funding streams/on-bill repayment.

### **Key 2021 Lead By Example Accomplishments:**

- Reducing energy consumption across State Government facilities by 12.7% compared to a 2014 baseline
- Renewable energy credits offset 95% of State Government electricity consumption
- Supporting the installation and operation of 64 EV charging stations (121 ports) on State Government properties
- Participating in Demand Response Programs to reduce peak energy demand and generate revenues for the State
- Promoting the State's commercial and residential building Stretch Code
- Development of an enterprise-level Building Automation System to reduce energy consumption and costs at state facilities
- Supporting the retrofit of 100% of State-owned streetlights to high-efficiency, cost-saving LEDs
- Installation of solar generation at 14 State facilities
- Implementation and management of competitive electricity and natural gas supply contracts to serve all State agencies
- Management of a centralized utility payment system for State agencies that delivers administrative and financial efficiencies



## 2021 COMMERCIAL, INDUSTRIAL & PUBLIC FINANCE

### Large C&I Revolving Loan Fund

Through the electric Large C&I revolving loan fund, the Utility offered \$8.19 million in on-bill financing to 58 large C&I customers through 115 loans resulting in electric savings of 117,531 net lifetime MWh. At the beginning of 2022, the fund had a balance of \$5.20 million, money that will be available for more loans in 2022 and in the future.

Through the gas LC&I revolving loan fund, the Utility offered \$1.1 million in loans to four large commercial customers, resulting in gas savings of 47,450 net lifetime MMBtu. At the end of 2021, the fund had a balance of \$1.03 million, money that will be available for more loans in 2022 and in the future.

The Utility continues to wind down a revolving loan fund in support of the Rhode Island Public Energy Partnership. No customers participated

in this offering in 2021. At the end of 2021, the fund had a balance of \$46,865. The Utility anticipates that the final loans will be repaid in 2022, allowing for the remaining funds to be returned to the RI Office of Energy Resources.

### Small Business Revolving Loan Fund

The Small Business Revolving Loan fund was able to provide \$1.04 million in loans that led to more than 118,113 MWh in energy savings. At the beginning of 2022, the fund had a balance of \$3.13 million.

### Efficient Buildings Fund

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

In 2021, the Efficient Buildings Fund (EBF) helped support streetlight conversion from legacy technologies to LEDs across two fire districts in Coventry. The EBF also helped support energy efficiency projects across a handful of facilities owned and operated by the Providence Water Supply Board, that will greatly improve their efficiency and operations.

Since inception, the EBF has supported projects across 14 municipalities, loaning out \$60.9 million dollars to support a variety of energy efficiency projects. These investments have resulted in energy reductions of 212,500 MWh and will deliver \$82.6 million in cash savings over the lifetime of the installed measures.

With the update to Least Cost Procurement law in 2021, a Clean Energy Fund was established at RIIB to support the implementation of a variety of clean energy projects supported by an annual transfer of \$5.0 million dollars beginning in 2022.

### **Commercial Property Assessed Clean Energy**

The Utility has one Commercial Property Assessed Clean Energy (C-PACE) project in progress with the City of Providence. However, no gas or electric savings were claimed related to this project in 2021. Outreach by the Rhode Island Infrastructure Bank and the Utility will continue in 2022.

## INCENTIVES BY TOWN

**Table 1.** the Utility Gas and Electric Energy Efficiency Incentives Provided to Residential, Commercial and Industrial Customers in 2021

CITY / TOWN	2022	2021	CITY / TOWN	2022	2021
Barrington	\$1,466,386	\$1,397,624	New Shoreham	\$16,957	\$5,683
Bristol	\$1,392,368	\$1,841,043	Newport	\$1,694,671	\$5,048,264
Burrillville	\$816,559	\$434,584	North Kingstown	\$5,392,545	\$4,724,340
Central Falls	\$688,528	\$485,880	North Providence	\$1,229,493	\$1,350,793
Charlestown	\$598,561	\$558,370	North Smithfield	\$1,063,672	\$1,292,115
Coventry	\$2,109,036	\$2,276,976	Pawtucket	\$5,971,279	\$4,142,352
Cranston	\$7,562,266	\$7,798,302	Portsmouth	\$1,151,848	\$1,530,578
Cumberland	\$3,078,212	\$2,493,738	Providence	\$20,537,815	\$26,806,775
East Greenwich	\$1,901,598	\$1,486,839	Richmond	\$521,109	\$472,342
East Providence	\$6,093,821	\$4,211,258	Scituate	\$1,282,980	\$1,143,611
Exeter	\$327,727	\$556,004	Smithfield	\$2,458,367	\$2,350,751
Foster	\$262,436	\$224,051	South Kingstown	\$464,512	\$2,512,664
Glocester	\$657,807	\$552,456	Tiverton	\$848,274	\$1,050,491
Hopkinton	\$409,680	\$398,392	Warren	\$745,644	\$1,045,506
Jamestown	\$461,530	\$372,893	Warwick	\$9,140,948	\$7,645,382
Johnston	\$3,818,132	\$2,685,268	West Greenwich	\$661,300	\$1,116,009
Lincoln	\$2,314,841	\$2,373,987	West Warwick	\$2,254,910	\$2,301,756
Little Compton	\$236,207	\$213,453	Westerly	\$2,146,344	\$1,638,996
Middletown	\$2,038,161	\$1,049,934	Woonsocket	\$1,675,794	\$2,837,517
Narragansett	\$3,181,443	\$2,671,304	<b>Grand Total</b>	<b>\$98,673,762</b>	<b>\$103,098,284</b>





## PILOTS, DEMONSTRATIONS AND ASSESSMENTS

### 2021 Pilots, Demonstrations and Assessments (Residential and Commercial & Industrial)

In 2021, the Utility continued or started fourteen Pilots, Demonstrations, or Assessments. The Utility completed six projects and will continue the remaining eight into 2022. The efforts continuing into 2022 will be detailed in the 2022 Look Forward section below.

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

These research and development efforts ranged from multiyear efforts to pilot Demand Response to smaller research projects assessing the feasibility of HVAC Automation for Demand Response. The Utility updated the EERMC and PUC of the progress, findings, and next steps of all Pilots, Demonstrations, and Assessments over the course of 2021 in the subsequent Quarterly Reports.

The following table outlines the objectives, brief findings, and next steps of the 14 Pilots, Demonstrations, or Assessments active in 2021.



## 2021 Pilots, Demonstrations and Assessments

**Table 2. 2021 Pilots, Demonstrations and Assessments– Residential and Commercial & Industrial**

Pilot, Demonstration, or Assessment	Objectives	Findings	Next Steps
<b>Gas Demand Response Pilot</b> C&I Pilot	Target hourly peak reduction from Extended Demand Response (EDR) pilot offering, and Peak Period Gas Demand Response (PPDR) pilot offering	Limited C&I customer participation on Aquidneck Island. If needed, more hourly load reductions may need to come from Resi thermostat programs.	Continue program operations for Q1 2022. Determine future need for program on Aquidneck.
<b>Continuous Energy Improvement</b> C&I Demonstration	The primary objective of the Continuous Energy Improvement (CEI) demonstration is to activate industrial and manufacturing customers through a multiplicity of interventions, to address operation and maintenance measures in the short-term, to pursue capital measures in the medium-term, and establish a culture of continuous improvement in its energy performance over the long-term.	The Utility encountered issues related to scalability, recruitment, savings distribution, and the composition of savings. Due to these shortcomings, the Utility has determined not to extend this demonstration or include CEI in the C&I portfolio beyond 2022.	The Utility will look to claim CEI gas savings in spring of 2022. This will mark the end of the contracted CEI demonstration engagement.
<b>Network Lighting + HVAC Control</b> C&I Demonstration	Recruit up to four customers for system installation and integration. What are the energy and non-energy benefits of projects, pain points in commissioning the projects, and knowledge gaps that may hinder fully realizing expected HVAC savings?	Customer recruitment has taken longer than anticipated for a number of reasons- high saturation of LEDs, delays due to covid, and long project lead times.	Complete system installations and M&V for demonstration participants.
<b>Kitchen Exhaust Controls</b> C&I Demonstration	Recruit up to five customers to install electrostatic filtration and energy recovery. What are the realized energy savings for each technology? What barriers exist for measure adoption?	Electrostatic filtration is only a good option for customers with existing requirements for pollution control, which are not widely required in Rhode Island. The energy recovery product became unavailable during the demonstration.	This demonstration has concluded due to lack of product availability and eligible customers.
<b>Gas Heat Pumps</b> C&I and Residential Demonstration	Validate performance of newer absorption gas HPs for C&I & Residential	Residential products have limited commercial availability; commercial products exist but are not typically cost-effective.	Pivot residential demonstration to test gas heat pump hot water heaters, recommended to close out commercial demonstration due to custom fit.
<b>Enzyme-based HVAC Coil Cleaning</b> C&I Demonstration	Recruit several sites across hospital and education for an enzyme coil cleaning, and measure cooling savings, comparing to conventional pressure washing, and investigating a possible higher tier to our coil cleaning offering.	The demonstration only was able to recruit hospital sites, which had significant ventilation requirements, resulting in negligible savings even after cleaning, as systems continued at full capacity due to under sizing and inefficient distribution.	The demonstration revealed that savings will vary significantly based on ventilation requirements; the offering should continue in a custom framework.

## 2021 Pilots, Demonstrations and Assessments

**Table 2 (continued). 2021 Pilots, Demonstrations and Assessments—Residential and Commercial & Industrial**

Pilot, Demonstration, or Assessment	Objectives	Findings	Next Steps
<b>HVAC Automation for Demand Response</b> C&I Assessment	Investigate opportunities and roadblocks to seeding an improved and expanded HVAC asset DR portfolio through EE incentivization of controls.	Prescriptive adherence to a specific automation standard such as OpenADR is not recommended, incentivizing HVAC DR through controls is most effective at the new construction stage, and sector -by-sector priorities means that DR incentivization must also consider loads outside of HVAC.	The assessment is concluded; further work for investigating whole building DR (not just HVAC) has been included in the 2022 plan as the “Building Flexibility through Demand Response” assessment.
<b>Shared Laundry Facilities</b> C&I Assessment	What is the feasibility, potential, and possible measure offering for commercial laundry equipment in multifamily and laundromats?	Commercial clothes washers are a cost-effective measure. The offering is complicated by the equipment leasing structure, revenue model, and lack of building owner insight into utility costs.	Add measure to Multifamily offerings, directing program activity to building owner and operators.
<b>Submetering to Support Energy Efficiency</b> C&I Assessment	Should the Utility reassess its policy of not paying for submetering? When is submetering effective in reducing energy consumption?	Monitoring based commissioning software can reliably result in energy reductions for customers who can commit action and work with a knowledgeable service provider.	The Utility will launch an updated Monitoring Based Commissioning offering in the ESPO offering.
<b>Smart Valves for Chilled Water Systems</b> C&I Demonstration	What is the savings potential of Smart Valves on chilled water systems? What are best practices for installation and commissioning of these products?	Smart valves may be a good option for customers with chilled water systems and air handlers. Existing systems should be in good working order to realize full savings potential of the smart valves.	Continue customer recruitment and M&V activity
<b>Refrigerant Leak Detection Survey and Repair</b> C&I Assessment	What are the regulatory and standard practice behaviors around refrigerant management in grocery stores? Are GHG reductions related to refrigerants a viable benefit for the RI programs? What is the overall potential for energy and GHG reductions in RI?	Grocery stores can have significant refrigerant leaks, often around 25% on an annual basis. The leaks are themselves a source of GHG, but also reduce energy efficiency. Frequent refrigerant leak detection surveys and repairs are not required for most locations.	The Utility will include this measure as a demonstration in 2022. The demonstration will include one grocery store to participate in M&V activity in 2022.

## 2021 Pilots, Demonstrations and Assessments

**Table 2 (continued). 2021 Pilots, Demonstrations and Assessments—Residential and Commercial & Industrial**

Pilot, Demonstration, or Assessment	Objectives	Findings	Next Steps
<b>Pre-Fab Whole House Energy Refurbishment</b> Residential Assessment	Is there a market and supply chain in Rhode Island to support these projects at scale? Assess industry capability to design and deliver pre-fabricated exterior improvements while residents continue to live in the home.	The market cannot currently support this approach at scale, but pilot programs are underway in other territories to develop the capabilities.	The Utility will track progress in market development.
<b>New Air Sealing and Insulation</b> Residential Demonstration	Evaluate effectiveness of novel air sealing (sprayed acrylic for new construction) and insulation (injection foam for wall cavities) products for single family homes.	The approaches are potentially viable for new construction and existing buildings, respectively, but demonstration must continue.	The Utility will identify customer sites in 2022 and implement the products.
<b>Solar Inverter Direct Load Control</b> Residential Demonstration	Successfully implemented new power factor correction settings on customer-owned solar inverter and collected data from the solar inverters and Company operated substations to assist the 3 <sup>rd</sup> party evaluator in quantifying the savings and verifying the method of calculating savings.	Preliminary results from the evaluation show kVA and kVAh savings.	The Utility will contract with an AESC vendor to translate the kVA and kVAh savings into equivalent AESC economic kW and kWh savings.



## 2021 CROSS-SECTOR PROGRAMS

### Community Initiative

The Rhode Island Community Initiative is the Utility's energy efficiency awareness campaign that drives program participation by engagement with communities ranging from residents and small businesses to business parks or other types of communities and local officials. In 2021, the Utility continued its partnership with Quonset Development Corporation (QDC), under a three-year memorandum of understanding, to provide EE services to the Quonset Industrial Park. QDC achieved 215% of its electric savings target for the year, with projects totaling 7.5 million kWh of savings versus a 3.5 million kWh target. Roughly \$1.8 million in incentives was approved to fund these energy efficiency projects and associated technical assistance / education. The Utility continued to partner with QDC to promote energy efficiency and other clean energy alternatives to customers at the Park.

### 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 2021 the Utility continued to expand its energy code compliance support services to a variety of stakeholder groups.

In 2021, the Code Compliance Enhancement Initiative (CCEI) conducted 54 training events across the state with 707 total attendees, a 38% increase in both number of trainings and participation levels compared to 2020.

The Utility partnered with several local organizations to promote and deliver trainings, including:

- Rhode Island Builders Association

- Rhode Island Building Officials Association
- American Institute of Architects – Rhode Island

CCEI also launched a new 15-week Residential Construction pre-apprentice training course. Trainings sponsored through this initiative engaged a diverse range of participants. While code officials have historically been CCEI’s most targeted audience, reaching design professionals was a major focus in 2021, with architects constituting 23% of attendees. Code officials accounted for 21%.

commercial products, including gas fireplaces, restaurant equipment, water coolers, and showerheads. These new requirements should reduce greenhouse gas emissions by 256,000 metric tons between 2023 and 2035, an amount equivalent to taking 56,000 cars off the road for a year. Consumers and businesses will save \$10 million on utility bills annually beginning in 2025, growing to \$44 million per year in 2035.

### 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). As a result of this RGGI investment, BIUD partnered with OER to develop a full-scale energy efficiency program. The initial energy efficiency program plan was approved by the Utility District’s Board and filed with the Public Utilities Commission (PUC), ultimately receiving approval in May of 2020. 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 program provides no-cost energy assessments and direct install measures and provides rebates to 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.

The second program plan was approved by the PUC in May of 2021 and continues the offerings made available in the initial program year with a focus on increasing awareness and uptake of audit services for both residential and business customers to build a pipeline of projects. The current program plan seeks to leverage partnership with on-island resources, such as local businesses and other energy outreach and communication efforts to cross-promote programs, build interest and uptake of

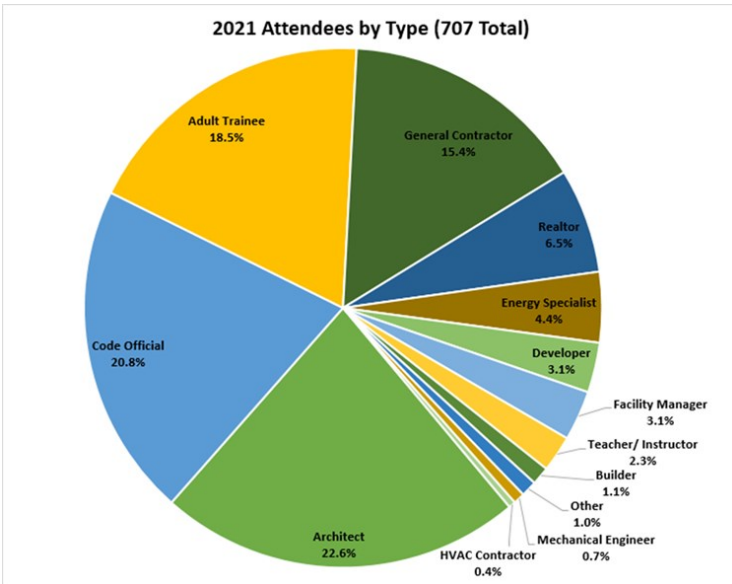


Figure 6. 2021 Code Compliance Enhancement Initiative (CCEI) Training Attendees by Type.

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 Utility also continues to support awareness and use of the RI Stretch Code through CCEI, including promotion at training events and through fundamental technical guidance.

The state’s Building Code Commission approved adoption of the 2018 International Energy Conservation Code (IECC) in 2021 and received legislative approval for adoption February 1, 2022. CCEI plans developing trainings on the updated code cycle to be delivered during 2022.

On the policy front, 2021 saw the long-awaited adoption of appliance efficiency legislation by the Rhode Island General Assembly. The legislation set minimum efficiency standards for 15 household and



efficiency services, and ultimately attract contractors to the island to serve the growing efficiency project pipeline. Creative partnerships, leveraging existing networks, and strong communication will be critical to support the growing efficiency plan and overcome geographic barriers the island community can face. Details about the energy efficiency program can be found on Block Island Utility District's website.

### **Initiative 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. These adaptive strategies and lessons learned were incorporated in their 2021 DSM plan as well to ensure they can continue to provide important efficiency services safely and accessibly to their customers. PUD also introduced a pilot program focused on providing home energy assessments and weatherization services specifically to rental units in their territory, as they felt this customer segment had been underserved historically by their existing programs and wanted to

try to better reach and serve these customers.

The growth and success of Pascoag's efficiency program led the Office of Energy Resources to make an additional multi-year investment of RGGI funds in 2021. This additional investment will continue to support the robust and critically important efficiency work taking place in Pascoag across the 2022-2024 program years. This investment will allow the efficiency programs to maintain and build on their current offerings and service levels while transitioning to being fully sustainable and ratepayer supported by the end of the engagement.

### **Zero Energy Buildings Task Force and Working Group**

In 2021, 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, 11 trainings, were held in 2021 with over 186 attendees (9 residential trainings with 123 attendees and 2 commercial trainings with 63 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.

**3) Building Operator Certification** — In 2021, the Utility continued its long-standing sponsorship of Building Operator Certification (BOC) training that is discounted or free for building operators in Rhode Island. One course was run in the summer. Those that completed the course are expected to benefit by learning to better communicate with occupants about maximizing facility efficiency, identify low-cost energy conservation opportunities, and implement best practices in preventative maintenance.





## 2021 COUNCIL PUBLIC EDUCATION EFFORTS

### EERMC Energy Lecture Series

In 2021, the EERMC was proud to host its first EERMC Energy Lecture Series. The three virtual lectures were designed to promote public understanding and stakeholder dialog around key energy efficiency issues relevant to Rhode Islanders today. This series featured local leaders and covers an array of topics – from tips on how to lower your energy bills at home, to innovative solutions from the Rhode Island business community, to training our workforce amidst a rapidly changing energy landscape.

The first lecture, held on October 28, 2021, was titled Show Me the Money: How to Save on Your Utility Bills through Energy Efficiency and featured Brian Kearney from RISE Engineering and Council member Karen Verrengia. The second lecture was held on December 20, 2021 and was titled Innovative Energy Solutions: A Rhode Island Business Round Table. Speakers

included Laurie White, president of the Greater Providence Chamber of Commerce, Julian Dash, founder and CEO of Copacity, and Tom Giordano, executive director of the Partnership for Rhode Island. The final lecture was held on January 25, 2022 and was themed Ready to Apply: Preparing Rhode Island's Workforce for Clean Energy Jobs. Speakers included Nina Pande, executive director of Skills for Rhode Island, and Mark Kravatz, executive director of Habitat for Humanity of Greater Providence.

There were over 100 virtual attendees between to the three events, including professionals in energy, workforce, business, state and local government, and members of the public. Another 95 viewers have watched the recorded lectures on YouTube. More information, including lecture recordings, can be found at <https://rieermc.ri.gov/energy-lecture-series/>.

## Energy Training for K-12 Educators

The National Energy Education Development (NEED) Project 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 the RI Office of Energy Resources (OER) and the Utility. In 2020 and 2021, the EERMC supported the expansion and enhancement of the NEED energy efficiency and conservation curriculum and training with content on energy justice and climate science. Building on NEED's portfolio of energy curriculum resources and training processes, this new 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. Workshops to train educators on the new module were held in March and October of 2021. Over 2,000 Rhode Island students are expected to be taught this curriculum as a result of these training efforts.

## Farm Energy Outreach

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 the Utility suggest low participation is due, in part, to a lack of knowledge of available programs. The Farm Energy Efficiency Program offers Rhode Island agribusinesses incentives for prescriptive energy efficiency measures.

In 2021, the EERMC and the OER co-funded an Energy Fellow (University of Rhode Island student) from February through December to assist with outreach to the farm community

regarding energy management. The Energy Fellow conducted outreach virtually through online webinars, email, attendance at farmer's markets, and one-on-one phone calls. A video profile of Verde Vineyards was written, filmed, and produced describing the benefits of several clean energy projects on the farm's operations and the programs utilized to implement that work. This is the second video profile completed and helps supplement written energy profiles to share the success stories of agribusinesses tackling clean energy projects. Presentations were also given at several workshops and further outreach was conducted through the program's growing social media presence: Facebook and Instagram (@RIFarmEnergyResources).

## Combined Heat and Power Stakeholder Meeting

On Wednesday, June 2, 2021, the EERMC hosted the Annual Rhode Island Combined Heat and Power (CHP) Stakeholder Meeting. For the second consecutive year, meeting was held virtually. As a legislative mandate, this meeting gives stakeholders the opportunity to provide feedback on the state's CHP programs and policies. The meeting also serves to inform CHP developers and potential customers about program details and updates for the upcoming year. The meetings are timed to allow for any recommendations to be incorporated, as appropriate, into the Three-Year and Annual Energy Efficiency Program Plans.

Invitations were distributed to the Utility's database of CHP vendors as well as past and potential program participants. The Rhode Island Office of Energy Resources also sent the invitation to a variety of contacts, including potential Efficient Buildings Fund borrowers as well as legislative, municipal, quasi, and school contacts. There were 40 participants, the majority of which were CHP developers or vendors that provide related technical assistance or financing. Representatives of the Division of Public Utilities and Carriers (DPUC), the Utility, the EERMC and its Consultant Team, and the Rhode Island Infrastructure Bank (RIIB) were also present.

EERMC member Tom Magliocchetti welcomed attendees and framed the conversation, referencing his experience with CHP in the healthcare industry. Daniel Tukey and John Karlin discussed the details of the Utility's CHP program in Rhode Island. The current program direction includes increased focus on leveraging renewable natural gas and small/micro-CHP systems. Toby Ast from the RI Infrastructure Bank presented on financing opportunities available through RIIB, which include the Efficient Buildings Fund, the Clean Water State Revolving Fund and C-PACE. To close the meeting, Rachel Sholly of the Consultant Team reminded attendees of the Council's purpose and invited ongoing stakeholder participation in the energy efficiency conversation through monthly Council meetings. The complete slide deck from the CHP meeting can be found on the EERMC's website at [www.riermc.ri.gov](http://www.riermc.ri.gov).

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## 2021 ENERGY JUSTICE & EQUITY EFFORTS

In 2021 the EERMC took steps to increase awareness of energy justice and improve the understanding of equity as it relates to energy efficiency.

### **Energy Efficiency Equity Working Group**

As a part of the Utility's 2021 Annual Energy Efficiency Program, it committed to working with the Rhode Island Office of Energy Resources (OER) to co-host an Equity Working Group. The goal of this working group was to provide the Utility with written recommendations to advance equity in the planning, design, and delivery of its Energy Efficiency Programs. The Equity Working Group was comprised of representatives from state agencies, community-based organizations, advocacy organizations, and local subject matter experts in equity. The Equity Working Group met

six times in 2021 and provided a space where voices and concerns of impacted communities could inform discussions on equity issues and to help identify areas of importance and focus around issues of equity for the energy efficiency programs. The key topic areas that were discussed during the Equity Working Group meetings included defining equity, marketing and outreach, metrics and data collection, workforce development and training, and program budgets. Following the series of working group meetings, members aligned on a series of recommendations for the Utility to consider in the development of its 2022 Annual Energy Efficiency Plan. In its 2022 Annual Energy Efficiency Plan, the Utility highlighted each of the Equity Working Group's recommendations, described their current activity related to the recommendation and provided commitments to enhancements related to each recommendation that are planned for

2022<sup>3</sup>.

### **Advancing Equity in Efficiency Programs Presentation to the EERMC**

In the May 28th Council Retreat meeting, the EERMC received a presentation from its technical consultants on advancing equity in Rhode Island's energy efficiency programs. The presentation included an overview of equity in energy efficiency, lessons learned from similar and recent equity in energy efficiency efforts in Massachusetts, and a preview of the Equity Working Group's planned activities<sup>4</sup>. Councilors then engaged in an open conversation around equity and its importance in future energy efficiency planning considerations. 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 2022.

### **Equity in EERMC Priorities and Policy Recommendations**

This year the Council has once again included equity considerations in its stated priorities for the 2023 Energy Efficiency Program Plan, as well as in its 2022 Policy Recommendations (pages 17 and 18 of this report). Emphasizing and embedding equity considerations in the design and delivery of all state energy programs is critical to ensuring that all Rhode Islanders receive the maximum possible benefits.

In 2021, the Utility conducted two relevant studies – the “Nonparticipant Market Barriers Study” and the “Participation and Multifamily Census Study”, the results of which were recently completed and are available on the Council's website<sup>5</sup>. The Council will hold the utility

accountable for sufficiently applying the results of these studies, as well as demonstrating progress on – and building upon – recommendations from the Equity Working Group. The barriers and recommendations identified through these efforts should be utilized to develop detailed remediation strategies to assure corrective action on underperforming programs, including the income-eligible and multifamily programs.

<sup>3</sup> For more information on the Utility's planned enhancements related to the Equity Working Group recommendations, please see Section 2.5.1 – Cross-Cutting Programs – Equity of the 2022 Annual Energy Efficiency Plan, available at: <http://rieermc.ri.gov/wp-content/uploads/2022/02/5189-ngrid-energy-efficiency-plan-2022-puc-10-1-21.pdf>.

<sup>4</sup> The presentation is available on the Council's website at: <http://rieermc.ri.gov/wp-content/uploads/2022/03/202021-eermc-retreat-session-1-advancing-equity-in-ri-ee-programs-final-5-28-21.pdf>.

<sup>5</sup> See the EM&V Studies section of the Council's Resources page at: <https://rieermc.ri.gov/resources/>.



# 2021 ENERGY EFFICIENCY WORKFORCE STUDY

The Utility hired Guidehouse, Inc. (formerly Navigant) to conduct a study of the job impacts from the Utility’s energy efficiency programs in 2021. The study estimates the number of full-time equivalent (FTE) employees engaged in all aspects of energy efficiency programs where the Utility provided funding support in 2021.

The FTE counts cover a wide range of energy efficiency services, including independent contractors and plumbers, rebate processors, engineers, and Utility 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 2021 Rhode Island energy efficiency programs is included in Appendix C of this report.

The study’s findings were developed through interviews with energy services and equipment vendors and Utility contractors, as well as through a detailed review of the Utility’s records of all energy efficiency measures installed in homes, apartment buildings, businesses, and industries throughout the state in 2021. Guidehouse calculated the labor hours required for each installation based on industry standards and discussions with contractor experts.

Guidehouse determined that 1,011 full-time equivalent (FTE) employees had work in 2021 supported by investments by the Utility 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 the Utility is far larger than the total of FTEs. Most of the jobs supported by energy efficiency

*Table 3. Full-Time Equivalent Employment Associated with Energy Efficiency Programs in Rhode Island in 2021*

<b>PROGRAMS</b>	<b>TOTAL FTEs</b>
Electric Programs	
Commercial and Industrial	265.0
Residential Income Eligible	65.1
Residential Non-Income Eligible	189.1
Gas Programs	
Commercial and Industrial	28.7
Residential Income Eligible	56.2
Residential Non-Income Eligible	218.1
the Utility EE Staffing	43.3
<b>Total 2021 Rhode Island FTEs</b>	<b>877.6</b>

investments were local because they were tied to installation of equipment and other materials.

The study also identified 1,152 companies and agencies involved in the Utility’s 2021 energy efficiency programs, 59% 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.



## 2021 PLANNING INITIATIVES

### State Goals: State Energy Plan & Greenhouse Gas 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 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, the findings of which can be viewed in the Heating Sector Transformation Report (<http://www.energy.ri.gov/HST/>). In 2020, Executive Order 20-01 also committed the state to 100% renewable electricity by 2030, and a roadmap to achieve this goal is contained in the 100% Renewable by 2030 report (<http://www.energy.ri.gov/100percent/>).

With the passage of the landmark Act on Climate legislation in 2021, the Executive Climate Change Coordinating Council (EC4) will also play a large role in moving Rhode Island forward to these new mandatory GHG reduction targets and energy efficiency will continue to be a foundational resource in meeting these goals.

To achieve the objectives of these Executive Orders and the Act on Climate, the Energy Efficiency and Resource Management Council is working closely with the Office of Energy Resources and the EC4 to ensure that Rhode Island's energy efficiency programs continue to provide a strong foundation for the necessary energy demand

reduction.

### **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 the Utility, 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. The Utility filed the Three-Year Plan with the Public Utilities Commission on October 15, 2020. The purpose of this Three-Year Plan was to establish an overarching strategy for the next three years that will enable the Utility 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. The Public Utilities Commission formally adopted the Three-Year plan in a written Order that was issued on September 21, 2021.

### **Annual Energy Efficiency Program Plan**

In addition to the Three-Year plan, Annual Energy Efficiency Program Plans (Annual Plans) are developed by the Utility 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 2023 Annual Plan will commence in summer 2022.

### **System Reliability Procurement**

Through System Reliability Procurement (SRP), the Utility 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 the Utility to keep all seven 2021-2023 SRP commitments on track.

As part of meeting this purpose, the Utility 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”. NWAs 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. NWAs 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. NWAs can also provide clean renewable energy, which may reduce net greenhouse gas emissions.

In 2021, the Utility continued to analyze its screening criteria and development processes for NWAs generally, including specific discussion of uncertainty and expected valuation, and beginning the development of a formal methodology for assessing internally sourced EE, DR, and solar solutions to identified NWA opportunities. Continuing to evaluate and improve the process for implementing an NWA is ongoing into 2022.

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

SRP activities are cross-functional in nature. Through 2021, the Utility continued synchronization and coordination with other programs and initiatives, including Power Sector Transformation; the Utility’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 the Utility’s SRP Technical Working Group throughout 2021 to monitor program implementation and inform 2022 program development.

The Utility further enhanced the Rhode Island System Data Portal<sup>6</sup> (“Portal”) in 2021. The Portal is an



interactive, publicly accessible, online mapping tool developed by the Utility. 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, the Utility 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 2021, the Utility configured the Portal to display nodal analysis for the Hosting Capacity Map. Hosting Capacity is an estimate of the amount of DER that may be accommodated without adversely impacting power quality or reliability under current configurations and without requiring infrastructure upgrades. Nodalization of hosting capacity information allows for data of specific sections of each feeder to be analyzed instead of the more general feeder-level view and which provides a significantly more refined assessment of hosting capacity. The Utility also uploaded the most recent relevant filings to the Reports tab and performed general maintenance on the Portal throughout the calendar year.

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

Additional details on 2021 SRP activities can be found in the Utility’s 2021 System Reliability Procurement Year-End Report filed in Commission Docket 5080<sup>7</sup> on June 1, 2022. Additional details on planned activities for 2021-2023 can be found in the Utility’s 2021-2023 Three-Year SRP Plan filed in Docket 5080 on November 20, 2020. Both reports are also available on the Utility’s System Data Portal.

## Power Sector Transformation

In March of 2017, Former 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, the Utility filed an electric distribution rate case with the PUC, which addressed several topics identified in the PST report. In May 2018, the Utility, the DPUC, OER, and several other parties submitted a settlement agreement relative to the Utility’s rate case at the PUC.

Among other items, the approved multiyear rate plan settlement includes Power Sector Transportation related initiatives related to electric transportation, energy storage, grid modernization and advanced metering functionality. Through the Electric Transportation Initiative, the Utility is currently 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, and providing incentives for customers to install electric vehicle charging stations. Through the Energy Storage Initiative, the Utility 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, the Utility developed and filed a longer-term proposal for grid modernization and a business case for advanced metering functionality (AMF) in January 2021. The Public Utilities Commission stayed the review these filings throughout 2021 due to the pending sale of Narragansett Electric to PPL.

For more information on PST: [www.ripuc.ri.gov/utilityinfo/electric/PST\\_home.html](http://www.ripuc.ri.gov/utilityinfo/electric/PST_home.html).

<sup>6</sup> “Rhode Island System Data Portal.” Business Partners | the Utility, the Utility, 2018, [www.nationalgridus.com/Business-Partners/RI-System-Portal](http://www.nationalgridus.com/Business-Partners/RI-System-Portal).

<sup>7</sup> “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 the Utility, 2020, [www.ripuc.ri.gov/eventsactions/docket/5080page.html](http://www.ripuc.ri.gov/eventsactions/docket/5080page.html).



## LOOKING FORWARD: 2022 ENERGY EFFICIENCY PROGRAM PLAN HIGHLIGHTS

### **2022 Residential Programs**

#### ***Residential New Construction***

In 2022, the Utility will provide a new HVAC consulting support service (in coordination with ENERGY STAR HVAC) that targets high performance projects. Additionally, program content related to codes and standards will be refreshed to reflect the State of Rhode Island's expected code update.

#### ***The High-Efficiency Heating, Cooling, and Hot Water Programs***

For 2022, the Utility has added the heat loan to the HVAC Program budget (electric and gas). In the gas HVAC program, the lower efficiency boiler and combo condensing measures were removed to increase participation in the higher efficiency boiler and combo condensing measures. The electric HVAC program will work to develop and implement an HVAC contractor training that guides the design and installation of

heating, cooling, and ventilation systems in projects striving to meet Zero Net Energy and Passive House.

#### ***Income Eligible Enhancements***

In 2022, the Utility will expand the Community Action Program (CAP) to include the completion of weatherization jobs. Additionally, the number of qualified Appliance Management Program (AMP) / weatherization and heating assessors will be reassessed and stabilized. The Income Eligible Services (IES) Program will prioritize assisting CAPs to train, hire and retain new assessors. The Utility will also implement a workforce development program with a clear pathway to IES workforce opportunities. Through focused communication and engagement with landlords on behalf of interested tenants, the Utility aims to increase renter participation, thereby improving the equitable share of program resources.

#### ***Home Energy Reports***

The Utility will continue 1-click promotion



opportunities that were started in 2021. This enables the collection of additional customer data that will help inform future marketing strategies.

### ***Multifamily Program***

In 2022, the Utility will re-launch a tiered incentive approach that encourages building owners and facility managers to include more residential unit owners in multifamily projects. Additionally, the Utility will provide greater choice in the condominium market by enabling customers to choose their own air source heat pump (ASHP) contractor. Results from the 2021 Multifamily Census and the Nonparticipant Study will be used to implement targeted marketing to newly identified 5 to 20-unit multifamily owners not currently served. The multifamily program will utilize customer research to further explore new motivators that increase customer participation, such as Non-Energy Impacts (NEIs). The program will also explore financing opportunities for property managers and landlords that will help reduce upfront co-payment burdens. The Utility plans to explore different tactics that provide customers with more personalized feedback through updated website pages, community events, and content hubs. Furthermore, professional development opportunities for multifamily energy auditors and sub-contractors will be continued. The Utility will also examine new technologies, such as monitoring-based commissioning, that will address the unique needs of multifamily buildings. For the income eligible portion of the program, the Utility will launch a specific marketing/outreach campaign and leverage the Multifamily Census to identify new prospective income eligible properties.

### **2022 Commercial and Industrial Programs**

Given the high level of saturation in the lighting market, in 2022, the Commercial and Industrial sector will focus on program enhancements that drive progress toward greater adoption of non-lighting opportunities and deeper, more comprehensive measure adoption, while continuing to harvest remaining lighting opportunities. The specific priority measures vary by customer, but in general the priority measures are reflective of the opportunities highlighted in the Market Potential Study.

#### ***Commercial and Industrial New Construction***

The Commercial and Industrial New Construction program will continue to build a pipeline from the four-path program structure launched in 2022. 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 has been rolled out in neighboring states.

#### ***Large Commercial Retrofit Program***

The Large Commercial Retrofit Program will offer a new Monitoring-Based Commissioning pathway that will provide customers with an opportunity to use fault detection and diagnostics systems to achieve continuous building performance improvements and persistent savings. There will also be an increased focus on improving and expanding offerings related to HVAC controls and energy management systems.

#### ***Small Business Direct Install Program***

The Small Business Direct Install Program is available to commercial customers 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 2022, the Utility will be working on the following enhancements:

- The Utility and its vendor will be actively working towards the goal of increased controls on lighting projects which includes a doubling of luminaires and retrofits kits with one or more control strategies.
- The Utility has budgeted and planned for increased HVAC savings in 2022. Rooftop units and kitchen exhaust control are two areas that the Utility feels have potential in the small business space.
- The Utility has increased outreach and marketing to the women and minority owned business communities.
- The Utility will be increasing efforts to weatherize

small businesses of all fuel types with a combination of SBC and RGGI funds. This not only allows a customer to save money now but prepares them for the coming era of more efficient electric heating through heat pumps. (Only RGGI funds will be used for delivered fuel weatherization.)

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

For 2022, the Utility intends to continue or start twelve Pilots, Demonstrations, or Assessments. The Utility 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 2022 in the Quarterly Reports.

The following tables outlines the objectives, planned activity, and next steps of the 12 Pilots, Demonstrations, or Assessments underway in 2022.

**New and Continued in 2022**

2018-2020	2021	2022
		<ul style="list-style-type: none"> <li>Pilot – Gas Demand Response</li> <li>Demo – Continuous Energy Improvement</li> <li>Demo – Network Lighting Controls +</li> <li>Demo – Gas Heat Pumps</li> </ul>
	<ul style="list-style-type: none"> <li>Demo – Smart Valves for CW Systems</li> <li>Demo – New Air Sealing and Insulation</li> <li>Demo – Refrigerant Leak Survey and Repair</li> </ul>	<ul style="list-style-type: none"> <li>Demo – Air Curtain</li> <li>Demo – RTU Optimization</li> <li>Assessment – Building Flex. through DR</li> <li>Assessment – Software and Hardware solutions for rightsizing RTUs</li> <li>Assessment – Closing the gap for all electric homes</li> </ul>

**2022 Pilots, Demonstrations and Assessments**

**Table 4. 2022 Pilots, Demonstrations and Assessments—Residential and Commercial & Industrial**

Pilot, Demonstration, or Assessment	Objectives	Planned 2022 Activity	Next Steps
<b>Gas Demand Response Pilot</b> C&I Pilot	Target hourly peak reduction from Extended Demand Response (EDR) pilot offering, and Peak Period Gas Demand Response (PPDR) pilot offering	Determine future need for program on Aquidneck.	Continue program operations for Q1 2022.
<b>Continuous Energy Improvement</b> C&I Demonstration	The primary objective of the Continuous Energy Improvement (CEI) demonstration is to activate industrial and manufacturing customers through a multiplicity of interventions, to address operation and maintenance measures in the short-term, to pursue capital measures in the medium-term, and establish a culture of continuous improvement in its energy performance over the long-term.	The demonstration will end early 2022	the Utility will look to claim CEI gas savings in March of 2022.
<b>Network Lighting + HVAC Control</b> C&I Demonstration	Recruit up to four customers for system installation and integration. What are the energy and non-energy benefits of projects, pain points in commissioning the projects, and knowledge gaps that may hinder fully realizing expected HVAC savings?	Begin M&V and integration activity at selected customer facilities.	Finalize M&V plan, begin pre-metering period.
<b>Kitchen Exhaust Controls</b> C&I Demonstration	Recruit up to five customers to install electrostatic filtration and energy recovery. What are the realized energy savings for each technology? What barriers exist for measure adoption?	Although included in the plan, this demonstration has concluded due to lack of product availability and eligible customers.	N/A
<b>Gas Heat Pumps</b> C&I and Residential Demonstration	Validate performance of newer absorption gas HPs for C&I &	Will close out commercial demonstration due to custom fit. Due to cut of M&V budget for residential demonstration, will also close residential	N/A

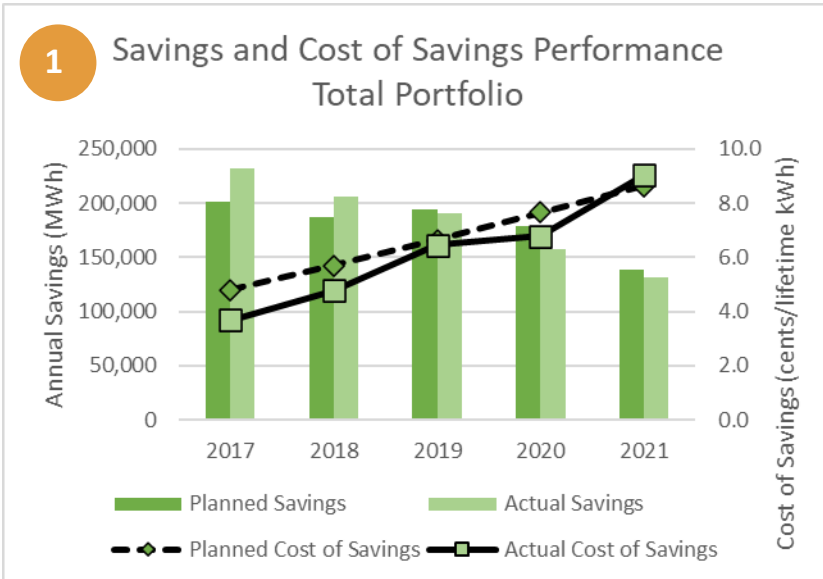
## 2022 Pilots, Demonstrations and Assessments

**Table 4 (continued). 2022 Pilots, Demonstrations and Assessments—Residential and Commercial & Industrial**

Pilot, Demonstration, or Assessment	Objectives	Planned 2022 Activity	Next Steps
<b>Smart Valves for Chilled Water Systems</b> C&I Demonstration	What is the savings potential of Smart Valves on chilled water systems? What are best practices for installation and commissioning of these products?	Complete metering period and analysis for participating buildings.	Complete the post-installation metering period.
<b>Refrigerant Leak Detection Survey and Repair</b> C&I Assessment	What are the regulatory and standard practice behaviors around refrigerant management in grocery stores? Are GHG reductions related to refrigerants a viable benefit for the RI programs? What is the overall potential for energy and GHG reductions in RI?	The demonstration will include one grocery store to participate in M&V activity in 2022.	Perform on site work after completion of pre-metering period.
<b>New Air Sealing and Insulation</b> Residential Demonstration	Evaluate effectiveness of novel air sealing (sprayed acrylic for new construction) and insulation (injection foam for wall cavities) products for single family homes.	the Utility will identify customer sites in 2022 and implement the products.	Customer recruitment and vendor contracting.
<b>Air Curtains</b> C&I Demonstration	After internal review with MTAC and other PAs, we are confident in proceeding to measure creation based on the analysis that has been completed and current understanding of the technology	Create new measure	Implement new measure
<b>Building Flexibility through Demand Response</b> C&I Assessment	The assessment will investigate the incentive-based approaches that can create DR capacity across a building's various loads. This assessment will consider building DR outside of conventional HVAC and lighting loads. Questions include: What are the load types (i.e. refrigeration, process, appliance, etc.) in RI with both the highest potential and under-represented current participation in DR programs? What are the barriers to participation for these load types (i.e. systems integration, downtime concerns, low financial return)?	Interview and secondary research to investigate the stated objectives.	Contract with vendor to begin research.
<b>Software and Hardware Solutions for Rightsizing Rooftop Units (RTUs)</b> C&I Assessment	The purpose of this assessment is to develop an understanding of the available market for a commercial RTU rightsizing measure in Rhode Island. How many current commercial RTUs are oversized? When RTUs are replaced, what is the methodology used to determine the replacement or replacements?	Conduct assessment of RTU market by early fall to include any appropriate next steps in the 2023 EE plan.	If the assessment proves that there is a market appetite for RTU rightsizing and there are available savings to claim, a demonstration will be considered
<b>Closing the Gap for All Electric Homes</b> Residential Assessment	What types of program enhancements can encourage all electric new construction homes, considering the value and draw of gas appliances like fireplaces and cooktops. The research may point to measure specific rebates, such as an incentive for electric fireplaces and/or induction cooktops, or it may point to incentives for all-electric homes regardless of the appliances installed, or an all-electric home without a gas line to the home.	Complete research by end of the summer to consider any recommendations in the RI 2023 EE Plan.	Work with Residential New Construction vendor to perform research.

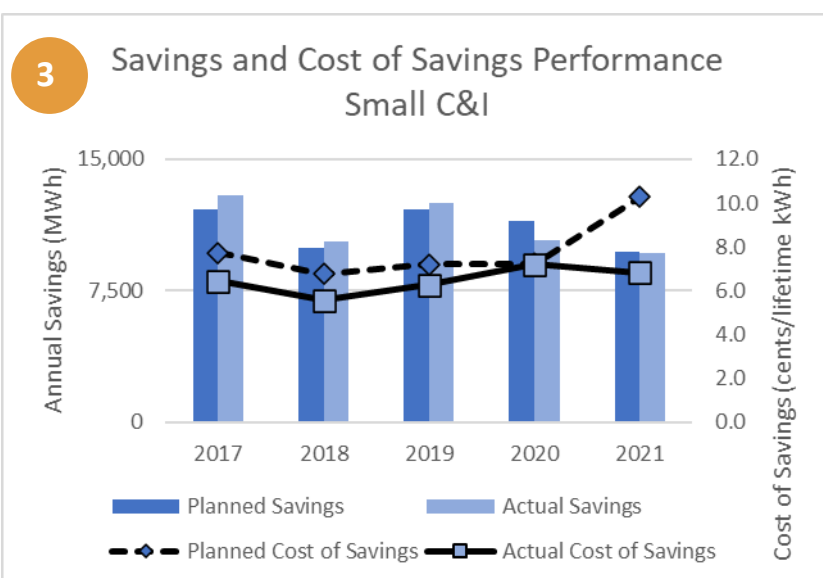
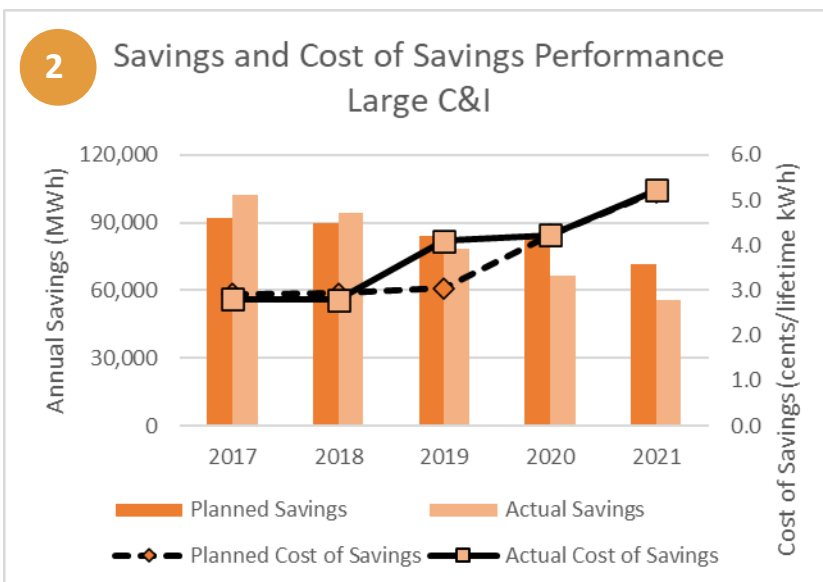
**Appendix A:**  
***Electric Program Trends Over Time***  
***2017-2021***

# ELECTRIC PROGRAM TRENDS OVER TIME: 2017-2021



Graphs 1-5 show the cost per lifetime savings (cents/lifetime kWh) achieved by the electric energy efficiency programs each year over the past five years. They also depict planned versus achieved net annual electric savings. Graph 1 shows trends for the total portfolio of electric programs while graphs 2-5 highlight specific market sectors: Large Commercial & Industrial (C&I), Small C&I, Residential, and Income Eligible.

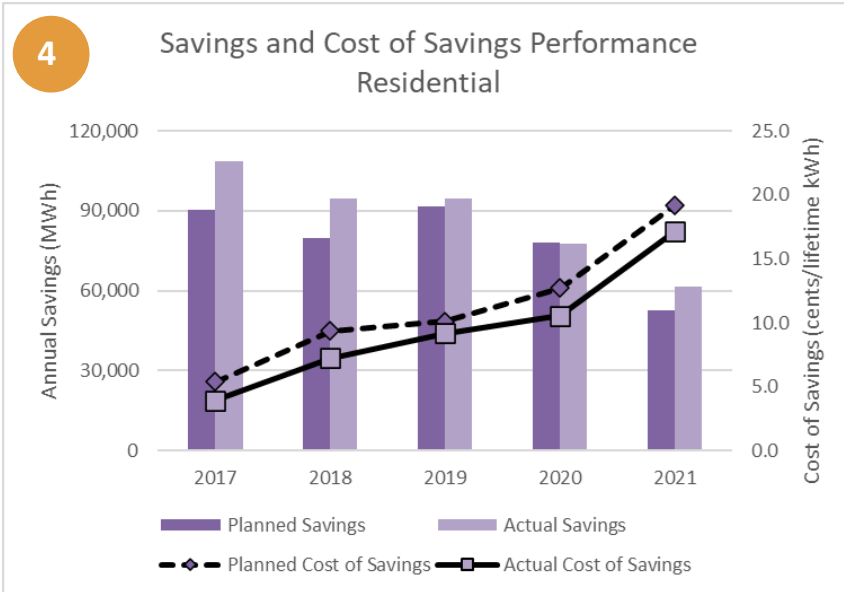
There are three main trends that the Council feels is important to highlight in this section. First, there has been a trend over the past three years of not achieving the portfolios electric savings goals. Part of this is attributable to the impacts of COVID-19 over the past couple of years. In particular, the Income-Eligible programs have struggled to meet its annual savings goal in each of the past four years. Second, there has been a downward trend in planned and achieved annual electric savings across the portfolio. This is in part due to recent evaluation studies which have found that the saving attributable to the program offerings are lower than they have been in the past. Finally, there has been a noticeable trend of increased costs across the programs. The two main drivers of the increased costs are increases in material and labor costs, as well as the fact that much of the savings that used to be inexpensive lighting is in the process of being replaced with more costly (though still cost-effective) measures that achieve deeper energy savings.



Each year, the EERMC works in coordination with the Utility to continue to enhance program delivery strategies and optimize energy efficiency benefits for all ratepayers. Maximizing the cost-efficiency of the programs is a top priority for the Council.

Through the programs, lighting upgrades have historically provided significant amounts of lower-cost energy efficiency savings. Both in RI and across the nation energy efficiency programs have played a critical role in



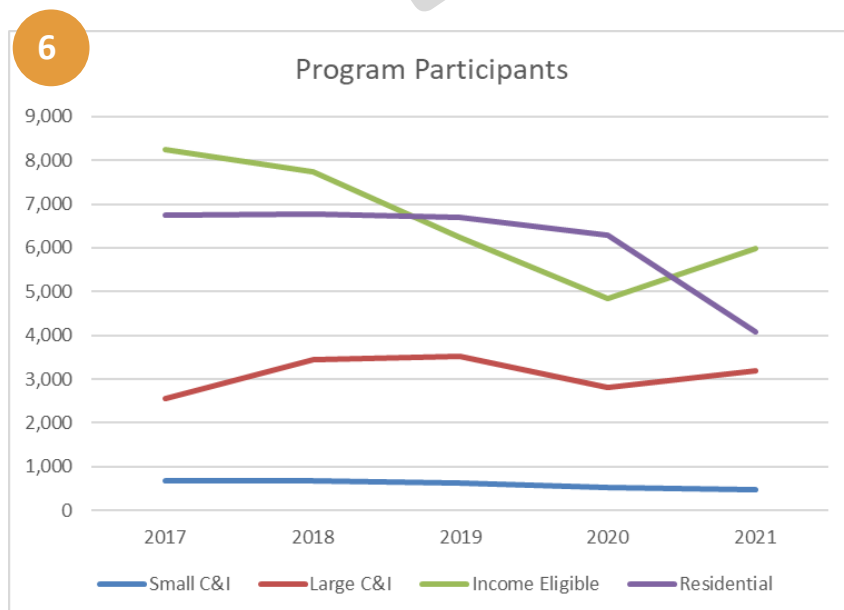
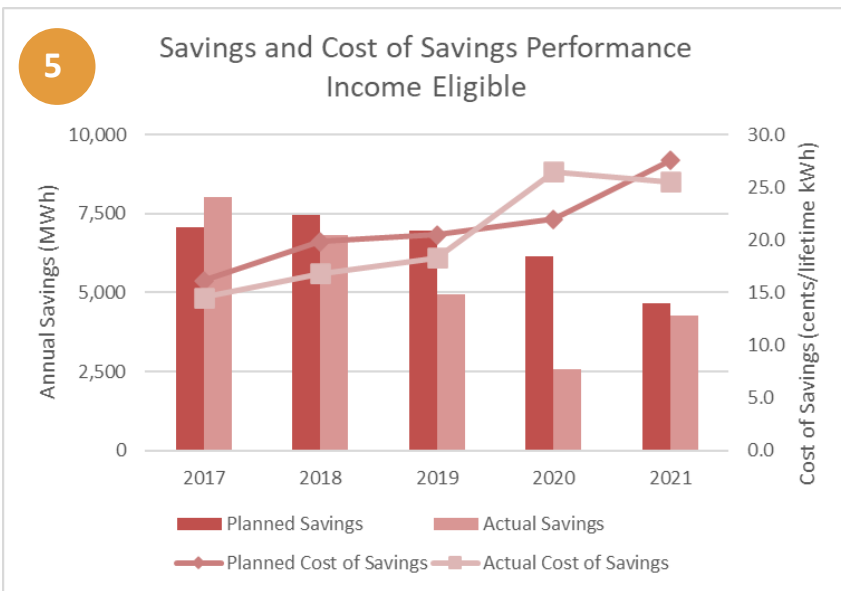


transforming the lighting market from incandescent bulbs and other inefficient lighting to energy-efficient LEDs. With the lighting market transforming to LED technologies, it means homeowners will be able to choose from energy efficient lighting options without need for program funding. This represents a great success story for energy efficiency.

However, because lighting savings currently make up a large portion of the electric energy efficiency portfolio and these lighting savings will not be claimable by the programs once the lighting market is fully transformed, it is essential that new technologies and program offerings be explored in the upcoming 2021-2023 Three Year Plan. The EERMC looks forward to working with program administrators to continue innovating and evolving the programs.

Graph 6 shows program participation over time from 2017 through 2021. Please note that Residential program participation numbers are shown in hundreds. The residential electric programs have the largest participation numbers of all the market sectors.

Over the past five years participation levels have increased for large C&I customers, remained relatively consistent for small C&I customers, and has decreased for all residential customers. It remains a priority of the EERMC and the Utility to continue expanding access to energy efficiency programs for all ratepayers.



**Appendix B:**

***Efficiency Program Case Studies and Evaluation,  
Measurement & Verification (EM&V) Studies***



COMPRESSED  
AIR



LED  
LIGHTING



MOTORS



PROCESS

## Creating an Energy-Efficient Business Community that Works for Everyone.

Overlooking Narragansett Bay is one of the premier business parks in New England – Quonset Business Park. Home to over 12,000 jobs at more than 200 companies across a variety of industries, this important industrial hub is quickly becoming a model for energy efficiency. And, it's doing this by partnering with National Grid to help its business community save energy, reduce costs and become more sustainable.

### Supporting Energy Efficiency Every Step of the Way

Businesses at Quonset Business Park have access to enhanced incentives and technical services to identify and implement energy-savings projects. To help identify opportunities for reducing energy use and costs, the business park hosts quarterly workshops on energy issues and technologies.

These businesses also have access to a National Grid program manager who will guide them through all of National Grid's energy-efficiency programs and incentives.

*"We appreciate the opportunity to work with National Grid and Quonset to find ways to save energy, improve efficiency and the sustainability of our operations at Quonset Business Park."*

Dr. Bill Weedon, President and CEO  
of Applied Radar

*"I look forward to strengthening our partnership with National Grid on energy savings, electric vehicles and new technologies to improve the overall sustainability of Ocean State Job Lot at our Quonset Business Park facility."*

Harry Oakley, Senior Manager of Energy  
& Sustainability for Ocean State Job Lot

**nationalgrid**

## Small Businesses are Seeing Big Results

More than 30 businesses at Quonset Business Park have already taken advantage of this partnership to help lower their energy. One of these businesses is Supfina Machine Company. Having previously participated in National Grid's Small Business Program, the company recognized that there could be additional industrial processes and equipment energy savings. Working with National Grid's energy partner, Loureiro Engineering, they received a site energy assessment at no cost. This revealed several energy-saving opportunities, including low-cost options and maintenance changes.

By taking advantage of the enhanced incentives and partnership between National Grid and Quonset Business Park, the payback period for many of the recommended energy-efficiency improvements was reduced to one year or less. After working together to quickly implement the recommendations of the assessment, Supfina Machine Company is predicted to save up to \$10,000 per year, which represented about 15% of its total annual utility bill. With a significant return on investment, they are now looking toward additional low-cost improvements as well as evaluating more comprehensive energy-efficiency programs.

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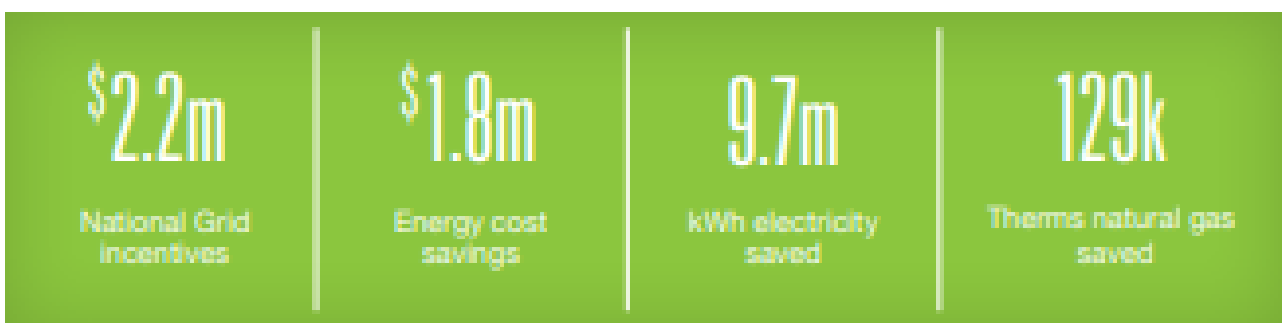
*"We go to great lengths to help our businesses succeed, create more jobs and bring more economic success to Rhode Island. By participating in National Grid's energy-efficiency programs, our business community is cutting energy costs and energy use, which is a win-win for everyone. I hope more Quonset companies will take advantage of them."*

Steven King, Managing Director of the Quonset Development Corporation, Owner of Quonset Business Park

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## The Numbers Add Up

From small businesses to large industrial corporations, the energy savings across the park are making a big difference in annual operating budgets. Quonset Business Park is quickly becoming a beacon for efficiency and sustainability with a vibrant community that is more competitive than ever.



Become a part of this success story too.  
Email [Andrea.Moshier@nationalgrid.com](mailto:Andrea.Moshier@nationalgrid.com) to get started.

# Rhode Island Appliance Recycling



National Grid Rhode Island sponsors the Appliance Recycling Program (“the program”) to help its customers get rid of unwanted refrigerators and freezers. Piggybacking on research in Massachusetts and working with the Appliance Recycling Program in Connecticut, this study estimates the gross and net energy savings achieved by the program in 2019 and 2020. The study also explores optimal incentive levels and the importance of incentives relative to other program benefits. While the incentive proved to be the most important program driver for participants, nearly one-half of respondents would have participated without one. The study recommends updating gross and net savings, continuing to offer the \$50 incentive, holding higher incentive promotions, and exploring scenarios without an incentive.

## Main Takeaways

### Recommendation 1

Use the values in the tables below for program planning and updating the Rhode Island Technical Reference Manual.

### Recommendation 2

Keep the incentive at \$50 and continue to offer promotions at higher incentive levels.

### Consideration

Explore the possibility of offering no incentive, replacing them with only special promotions that pay out incentives.

## Key Findings

### Current and Recommended Rhode Island TRM Values

Appliance Type	Current		Recommended	
	Gross Savings	Realization Rate	NTG Ratio	NTG Ratio
Refrigerators	1,004	0.88	0.44	0.45
Freezers	724	0.68	0.56	0.50

### Incentives Exploration

- A statistical model predicted that respondents would accept an \$84 incentive reduction. Most respondents had received a \$125 incentive rather than the current \$50 one.
- Approximately 50% of the respondents asked said that they would have participated even without an incentive.
- Most respondents were not willing to pay to have their refrigerator or freezer picked up.

### Most Important Reason for Program Participation (Percent of respondents, n=194)





# PROCESS EVALUATION OF THE RESIDENTIAL HOME ENERGY MONITORING PILOT

DNV GL completed a process evaluation of a National Grid pilot program that provided residential customers with the Sense Monitor. This device, which connects to the customer’s circuit box, is designed to help residential customers better control their energy consumption through knowledge of where their energy is being used on a real-time basis.

## APPROACH

Sense monitors a home’s electric use



Developed participant & nonparticipant sample frames



Fielded web surveys



Compared participant and nonparticipant survey results

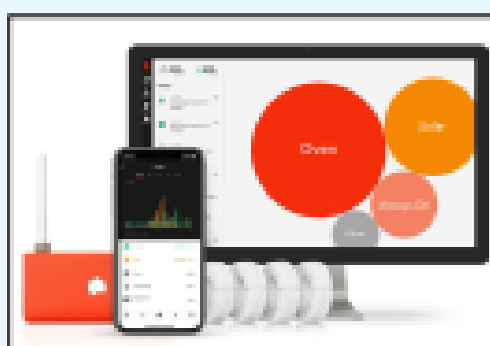
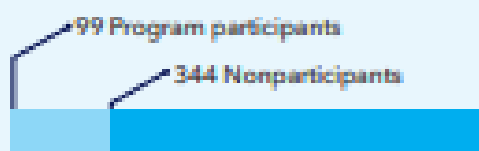


Developed key findings and recommendations

## KEY FINDINGS

- There was mixed evidence whether the Sense Monitor may be encouraging energy-saving behaviors in the use of non-lighting and non-HVAC energy-using equipment.
- The nonparticipants reported energy-saving lighting behaviors more frequently than the participants.
- There was very limited evidence that the Monitor is encouraging energy-saving behaviors in the use of HVAC equipment.
- 74% of participants were satisfied with the pilot program and 67% were satisfied with the Sense Monitor.
- While interest in using the Monitor has declined over time, most participants still check the Monitor daily or weekly.
- Some participants found other benefits from the Monitor such as home security and power outage detection.
- 90% of nonparticipants said they would be interested in participating in a pilot with a free Monitor or similar device.

## SURVEYS COMPLETED



Sense System

## RECOMMENDATIONS



If the Sense pilot program is going to expand to a full-scale program, more customer education, engagement, and support is needed.



If National Grid decides to provide the Sense Monitor to customers with a high bill complaint, it should consider a temporary loan of the monitors instead of incentives.

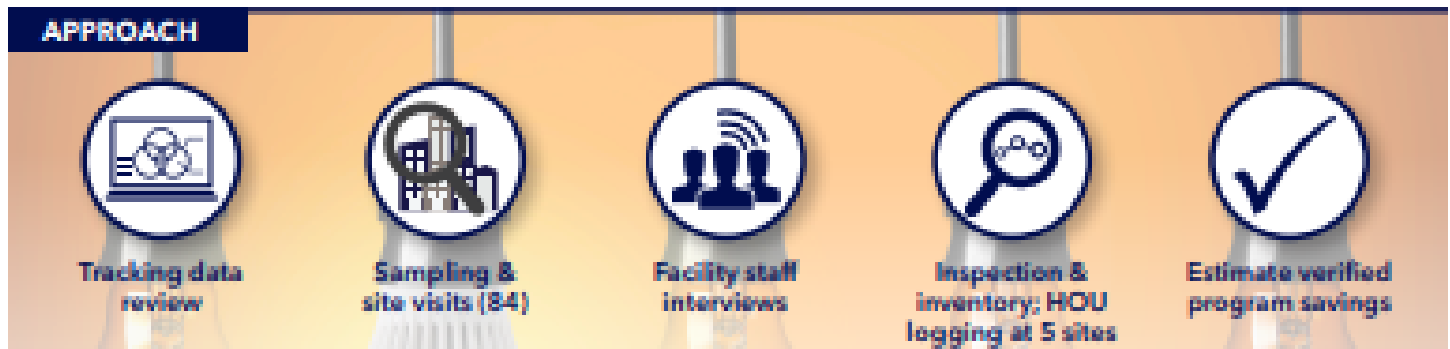


If the Sense pilot program is going to expand to a full-scale program, some subsidies of the Monitor costs will be needed.

# RHODE ISLAND UPSTREAM LIGHTING IMPACT EVALUATION 2019 PROGRAM YEAR (PY)

DNV conducted an evaluation of the 2019 C&I Upstream Lighting Program by combining results from 84 site visits (49 in-person and 35 virtual); including 59 in MA and 25 in RI. This study calculates annual savings realized by various technologies and other factors that impact program savings. HOU metering was performed at five sites that received integrated controls through the program.

### APPROACH









- Tracking data review
- Sampling & site visits (84)
- Facility staff interviews
- Inspection & inventory; HOU logging at 5 sites
- Estimate verified program savings

### KEY TERMS

- In-service rate (ISR).** Percent of measures installed and in use.
- Hours-of-use (HOU).** Annual operating hours of equipment.
- Delta Watts ( $\Delta W$ ).** Change in wattage from pre-existing to program installed measures.
- Realization rate (RR).** Ratio between evaluated savings and tracking savings. Ideal=100%.
- Evaluated savings.** Verified savings using site information and/or data collection techniques.
- Tracking savings.** Applicant savings entered in National Grid's Tracking System.

### TECHNOLOGIES

- Linear LEDs** 
- LED Fixtures** 
- LEDs with Controls** 
- Screw-In LEDs** 
- High bay/Low Bay LEDs** 
- Exterior LEDs** 

### KEY FINDINGS

- HOU RRs set to 100% since National Grid adopted the updated HOU from this report for the 2021 PY.

**Largest Drivers**

- Low (48%) ISR for screw-in LEDs.
- Low (58%) delta watts RR for high/low bay fixtures.

### 23,651 MWh Program Savings

Technology	Key Savings Drivers			Overall RR
	ISR	$\Delta W$	HOU	
Linear LEDs	96%	101%	100%	97%
LED Fixtures	97%	119%	100%	116%
LEDs w/Controls	97%	115%	100%	111%
Screw-In LEDs	48%	149%	100%	72%
Exterior LEDs	95%	183%	100%	173%
High/Low Bay LEDs	91%	58%	100%	53%

### RECOMMENDATIONS

-  Prospectively apply the RRs provided in this study, which exclude the impact of HOU updates since National Grid adopted these value for the 2021 PY.
-  If a building type is unknown, use the "Overall Building Type HOU" result, which represents the average operating hours of all building types combined.

# NATIONAL GRID RHODE ISLAND GAS LOAD SHAPES

January 2021

The study's purpose was to develop an end use load shape library corresponding to Natural Gas Demand-Side Management (DSM) measures for energy efficiency (EE) and demand response (DR) for Rhode Island. In this context, a load shape is defined as a usage pattern by interval, typically hourly, with end uses defined as appliances or devices that use energy (e.g., heating). Customer segments included Commercial and Industrial gas heating and non-heating end uses for major business types (Office, Retail, Grocery, Warehouse, Education, Health, Lodging, Restaurant, and Other/Industrial), with significant subsets for Office (Large/Small), Education (Secondary, High School, University) and Restaurant (Fast-food, Full-service).

The end use load shape library is sufficient to support National Grid's tracking of peak gas demand usage and savings, with contributions to defined "peaks" (e.g., coldest or design day at 8 am) by customer segments and end use measures identified for various planning applications, including studies of both potential and current DSM program usage and peak impacts.

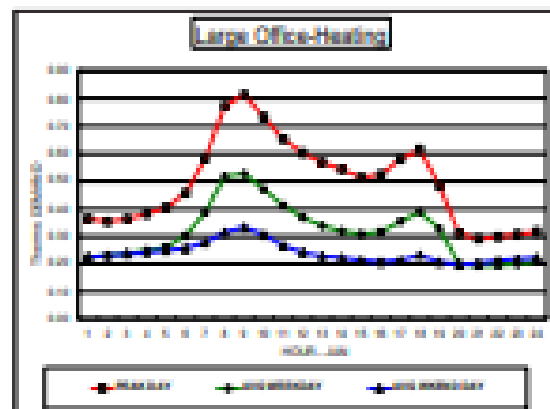
## Research questions

What are the peak demand to annual usage ratios associated with the EE or DR measures?


What are the seasonal, monthly, daily, and hourly load shape savings patterns that are applicable to each customer segment end use component and DSM potential measure?

## METHODS


The development of load shape factors was based on an established process by DNV GL, in which we developed a description of annual load shape patterns using set of four component ratios consisting of 1) monthly usage allocation, 2) weekend/weekday ratio by month, 3) peak day to weekday ratio by month, and 4) hourly per-unit factors by day type by month. To generate the weather-related ratios (1, monthly breakdown, and 3, peak day factor) for heating load shapes specific to Rhode Island Service, daily weather data for Providence Airport was used to calculate heating degree days and peak-to-average day ratios over a 9-year history. Weekend/weekday factors by customer segment were developed from 251 identifiable sites with hourly interval data and Ratio 4 hourly per-unit factors were developed from the business type/end use-specific load shape library from metered data compiled by the Regional Technical Forum (RTF). The resulting load shape factors were then stored and linked to a delivered Excel application that generates tables, graphs, and 8,760 outputs in several formats with user-input usage level and calendar year, applicable for National Grid planning applications.




### Primary Data Sources




**Whole building load studies**  
2019 interval data for 628 customers




**National Grid billing records**  
to identify business type and usage levels



**MA DOER load study**  
of a college campus in Massachusetts



**9 years** of local weather to develop weather-sensitivity factors



**End use studies** from Northwest Power Council RTF

## CONCLUSIONS

- The load shape ratio method used to build the end use load shape library provides a flexible structure for incorporating weather and load sources to facilitate development of end use load shape patterns using current and future modeled, metered, or borrowed end use load metered data.
- The load shape library provides a solid basis for National Grid - Rhode Island to use in tracking peak gas and demand savings, specifically the relationship between annual usage and various peak definitions and hourly loads overall.

### Load shape ratio component data source table extract

LOAD SHAPE #	DESCRIPTION/ SEGMENT	MONTHLY BREAKDOWN	WEEKEND/ WEDDIDAY RATIO	PEAK DAY FACTOR	HOURLY PROFILE
2001	Space heating: Large office	9-year average monthly HDD60	NG RI January interval data	9-year seasonal average HDD	RTF7: Large office heating
2002	Space heating: Small office	9-year average monthly HDD60	NG RI January interval data	9-year seasonal average HDD	RTF165: Small office heating

**Appendix C:**  
***2021 Energy Efficiency Vendors***



## 2021 ENERGY EFFICIENCY VENDORS

The following list includes contractors and subcontractors performing work directly for the Utility Energy Efficiency programs in 2021 that were counted in the FTE analysis and additional companies who assisted customers to secure equipment rebates, for example through the New Construction, High Efficiency HVAC programs, and upstream lighting. The list also includes the Community Action Program agencies and their subcontractors involved with the delivery of the low-income program, whether under the Utility funding or WAP/LIHEAP/ARRA funding.

The list is organized by state, with companies then listed alphabetically. Rhode Island firms are listed first. Of the 1,152 companies, agencies, contractors and sub-contractors listed here, 59% are either headquartered in Rhode Island or have a physical presence in Rhode Island. 19% are Massachusetts-based companies with no physical presence in Rhode Island. 3% of companies are Connecticut firms. The remaining firms have offices in the other New England states or outside of New England.

Vendor	City	State	Vendor	City	State
210 Plumbing	Newport	RI	Anne The Plumber	Woonsocket	RI
5A Builders LLC	Narragansett	RI	Anthony Januario Heating Co	Bristol	RI
A & K Safety	Warwick	RI	Anthony Marotti Electrician	Albion	RI
A E Costa Electrical Contractor LLC	Warwick	RI	Anthony's Quick Plumbing And Heating	Cranston	RI
A Perry Plg & Htg	Coventry	RI	Antonio Grillo	Westerly	RI
A Santurri Electric	East Greenwich	RI	Anything Plg & Htg Service	Walpole	RI
A Westerfield Plmg	Wakefield	RI	Apb Plumbing & Heating	Cumberland	RI
A&I Electric	Pawtucket	RI	Apple Valley Alarms	North Scituate	RI
A-1 Plumbing & Drain Clg	Pawtucket	RI	Apuzzo Plumbing & Heating	N Scituate	RI
Aaa Plumbing	Wakefield	RI	Aquidneck Fastn Inc *3	Tivertown	RI
Accu Electric	Providence	RI	Aquidneck Services LLC	Taunton	RI
Adam Waldeck Plumbing & Heating LLC	Warwick	RI	Ar Heating & Cooling	Central Falls	RI
Advance Electrical Corporation	Providence	RI	Arden Engineering Constructors, LLC	Pawtucket	RI
Advanced Plumbing RI LLC	Exeter	RI	Ardente Supply Co Inc	Providence	RI
Aero Mechanical Inc	Johnston	RI	Armor Insulation	Pawtucket	RI
Affordable Plumbing Solutions	Coventry	RI	Arther Lettieri	Providence	RI
Air Conditioning Services Of New England	Cranston	RI	Arthur W. Adler	Bristol	RI
Air Flow Inc	Coventry	RI	Asp Electric	Cumberland	RI
Air Quality LLC	Warwick	RI	Aten Energy	Pawtucket	RI
Air Synergy LLC	Norwood	RI	Atlantic Property Solutions Inc	Pawtucket	RI
Air Tech Pro HVAC	Warwick	RI	Atms Electrical Services	East Providence	RI
Airhart Electric Inc.	Coventry	RI	Auburn Electric	Cranston	RI
Ak Mechanical	W Warwick	RI	Audet, E.W. & Sons Inc.	Providence	RI
Al Jerauld	N Providence	RI	Aussant Electric	Cumberland	RI
Ala And Sons Construction	Warwick	RI	Autiello Plumbing & Heating	Cranston	RI
Alan Paul Electric	Warwick	RI	Automated Temperature Controls	Winchester	RI
Albert Trombetti Electrician	Cranston	RI	Automatic Heating Equipment	Providence	RI
Alex Rubio Plumbing	Providence	RI	Automatic Temperature Controls	Cranston	RI
All In Service	Providence	RI	AZ Corporation	Hopkinton	RI
All Phase Heating & Cooling	Hope	RI	Azverde Electric Co	Valley Falls	RI
All Seasons Htg & Air Inc	Johnston	RI	B & B Consumers Nat Gas Serv	Woonsocket	RI
All Star Insulation LLC	Providence	RI	B & K Electric, LLC	Warwick	RI
Alliance HVAC	Cumberland	RI	B & M Plumbing	Warwick	RI
All-State Plumbing & Heating	Tiverton	RI	B Baptista Electric, Inc	Cumberland	RI
Almada Jr. Dbaj Rudolph	Providence	RI	B Martel Plumbing & Heating	Central Falls	RI
Alpha Electrical Contractors Inc.	East Providence	RI	B Z Electric	West Warwick	RI
Alpha Mechanical	E Providence	RI	B&W Building Maintenance Electrical Contractors	Providence	RI
Al's Electric	North Providence	RI	B.T. Electric Compnay Inc.	Providence	RI
AM Electric LLC	Warwick	RI	Balme, Ryan Electric	Chapachet	RI
Amaral, Paul	Tiverton	RI	Baptista Enterprise	Cumberland	RI
American Home Heating And Ac	Cranston	RI	Bard Plumbing & Heating	Warwick	RI
American Htg Plg & Sprinkler	Worcester	RI	Barlow Heating LLC	Warwick	RI
Anchor Plumbing & Htg-Providen	Providence	RI	Barrett Plumbing & Heating Inc	West Greenwich	RI
Andy's Overhead Electric LLC	Exeter	RI	Barrington Plg & Htg	Barrington	RI
Anibal J. Cante	Central Falls	RI			

Bashaw Electric	East Greenwich	RI	Ck Plumbing And Heating	Pawtucket	RI
Baum Energy	Warren	RI	Classical Builders - Marshall Williams	Warren	RI
Belcher Electric LLC	Warwick	RI	Clearesult	Providence	RI
Beneficial Energy	Pawtucket	RI	Clearly Led LLC	Wakefield	RI
Benjamin Jenkins Db	Middletown	RI	Clermont Mechanical Plumbing	Glendale	RI
Berard Heating & HVAC	Warwick	RI	Cmags HVAC	Warwick	RI
Bertrand Plumbing Inc	Pascoag	RI	Coastal HVAC	Wakefield	RI
Big Dog Plumbing & Heating LLC	Ashaway	RI	Coastal Plumbing Service Inc	Wakefield	RI
Bileau HVAC Inc	Woonsocket	RI	Coldmasters Temperature Cont	Providence	RI
Bill Castellone	Cranston	RI	Collard Enterprises	Coventry	RI
Bill's Direct Plumbing & Heating	Bristol	RI	Competition Burner Service	Newport	RI
Blackstone Smithfield Co	North Smithfield	RI	Comprehensive Community Action	Cranston	RI
Blanco, Owen	Warwick	RI	Consolidated Maintenance	Johnston	RI
Blyden Electric	Bristol	RI	Continental Engineering Inc	Johnston	RI
Bmac Plumbing Htg & Gas Works LLC	Harrisville	RI	Control Systems	Cranston	RI
Bmb Services LLC	E Greenwich	RI	Costa, Dave	East Providence	RI
Bob Hopkins Electrician	Exeter	RI	Cotioa Electric	Johnston	RI
Bobby Hopkins	Exeter	RI	Cox Electric LLC	Narragansett	RI
Bob's Mechanical	Warwick	RI	Cozzo Electrical Services Cod Acct	Johnston	RI
Bodell Plumbing & Heating	South Kingstown	RI	Crew Remodeling & Construction	Newport	RI
Boss Heat	Charlestown	RI	Cross Insulation	Smithfield	RI
Boss Heating & Cooling Inc	Charlestown	RI	Crystal Plumbing & Heating	Providence	RI
Boulevard Plumbing & Heating	Portsmouth	RI	Csv Mechanical	South Kingstown	RI
Brandon Schiano	Cranston	RI	Cubo Construction LLC	Central Falls	RI
Brassard Plumbing	North Providence	RI	Custom Comfort HVAC	Woonsocket	RI
Brien Godin	Cumberland	RI	Custom Plumbing & Heating Co	Newport	RI
Brilliant Technologies	Cranston	RI	Cutler H. Besser & Sons	Scituate	RI
Brittain Electric Inc.	Jamestown	RI	Cw Cummings Plumbing Co	Coventry	RI
Brock's Electric	Johnston	RI	D & D Metal Works	N Providence	RI
Broway Electric, LLC	Cranston	RI	D & E Electric, Inc.	Warwick	RI
Bruno & Son Electric Inc.	North Providence	RI	D & J Plumbing & Heating Inc	Carolina	RI
Bryant Donovan	Portsmouth	RI	D And Z Electric Inc	Woonsocket	RI
Buckley Htg & Cooling	Peacedale	RI	D Gomes Electric LLC	Pawtucket	RI
Building Systems Technologies LLC	North Providence	RI	D&D Electric	Cranston	RI
Buono Electric	Johnston	RI	D&V Mechanical Inc	Westerly	RI
Burnscold Heating And Air Conditioning	West Warwick	RI	D.F.S. Plumbing Services	Cranston	RI
Butler And Sons Plumbing And Heating	Cranston	RI	D.S. Plumbing	Coventry	RI
C Carr Electric LLC	Cumberland	RI	Danico LLC	North Providence	RI
C&K Electric	Providence	RI	Dauphinais Electrical Services LLC	Woonsocket	RI
C. Caswell Plumbing	Jamestown	RI	David Phillips Plg & Htg	Riverside	RI
Cacicia Electric Inc	Johnston	RI	David R. Gince Electrician	Woonsocket	RI
Calyx Retrofit	Lincoln	RI	David Seddon Electrician	Rumford	RI
Cap Of Providence	Providence	RI	David W Bradley Plg & Htg	E Providence	RI
Capaldi Electric	Providence	RI	Deal Electric	Cranston	RI
Capitol Plumbing Heating & Construction	Cumberland	RI	Delmonico Enterprises Plg	Cranston	RI
Capozzoli Construction LLC	Coventry	RI	Dennis Decorpo Electric	Scituate	RI
Carbone Plumbing Heating & Air	Johnston	RI	Dennis Parillo	Johnston	RI
Carjon A/C & Heating	Smithfield	RI	Dennis Vallee	Harrisville	RI
Carlino Electric	Coventry	RI	Department 84	Greenville	RI
Carlo Fossati Plumbing	Greenville	RI	Derek Germain	Cumberland	RI
Carter Bros Inc	Oakland	RI	Desmarais Plumbing & Heating Inc	Johnston	RI
Cassana HVAC	Johnston	RI	Dessaint Electric Co.	Warwick	RI
Cd Heating Inc	Cranston	RI	Di Gregorio & Son Inc Plumbing And Heating	N Kingstown	RI
Century Electric	Westerly	RI	Dimery, Robert W. Db	Barrington	RI
Century Heating	Smithfield	RI	Diorio, Joseph	Pawtucket	RI
Charette Plumbing LLC	West Kingston	RI	Dirocco Plumbing Services LLC	North Providence	RI
Charland Enterprises Inc	Pawtucket	RI	Divona Enterpries	Cranston	RI
Charles Doherty And Steve Girard	Warwick	RI	DJL Electric	Warren	RI
Charles Nichols Plumbing	Warwick	RI	Donald D Gravel	North Smithfield	RI
Chilabato, Peter	Portsmouth	RI	Donaldson Electric	Cumberland	RI
Chris Cardillo Electrician	Providence	RI	Done Right	North Providence	RI
Chris Electric, Ltd.	Newport	RI	Donovan & Sons	Middletown	RI
Chris Rooney Electrician	Smithfield	RI	Dp's Plumbing And Heating	Scituate	RI
Cj's Plumbing & Heating Specialist	Smithfield	RI	Driver's Plumbing & Heating	Providence	RI
Cjs/State Wide Appliance Repair	Rumford	RI	Dsc Heating & Ac	North Kingstown	RI

Dual Voltage Electric	Johnston	RI	Gatta Electric	Cranston	RI
Dumais Plumbing & Remodeling Inc	Slatersville	RI	Gem Plumbing	Lincoln	RI
Dupuis Oil Co	Pawtucket	RI	Gerald M Lepore Jr.	Cranston	RI
Duran Electric	Lincoln	RI	Gino's Plumbing And Heating	Warwick	RI
DWI Electrical Group	Johnston	RI	Giorno Plmbg & Htng	Cranston	RI
Dynamic Air Systems Inc	E Providence	RI	Glenn Martinelli	West Greenwich	RI
Eagle Construction	Bristol	RI	Global Plumbing & Heating	Darlington	RI
Eastern Biomass	Pascoag	RI	God's Hands Appliance Service	West Warwick	RI
Eastern Plumbing & Heating	Providence	RI	Gomes Heating & Cooling	N Kingston	RI
Easy Flow Plumbing	W Warwick	RI	Gordon Building & Excavating Inc.	Hope Valley	RI
Ecologic Spray Foam Ins. Rebat	Charlestown	RI	Grasso Management	Providence	RI
Econ Electric Contractors	Bristol	RI	Gravel Electric Inc.	Harrisville	RI
Ecos Supply & Design	Providence	RI	Greenside Energy, LLC	Middletown	RI
Ed Sylvia Plumbing	Narragansett	RI	Greenwich Insulation	West Greenwich	RI
Eddy's Weatherization	Providence	RI	Greg Blanchette	N Smithfield	RI
Edward Camara Plumbing Svc	Lincoln	RI	Greg Brown	Smithfield	RI
Edward Martino	Johnston	RI	Grenier & Sons Plumbing & HVAC LLC	Foster	RI
Ef Odonnell	Providence	RI	Griff Electric LLC	Portsmouth	RI
Electrical Wholesaler Inc.	Cranston	RI	Gronski Plumbing & Heating	Cranston	RI
Electrician's "R" Us RI Inc.	Pawtucket	RI	Gross, Carl	Providence	RI
Electronic Alarm Systems	Warwick	RI	Guarino Power Systems LLC	Smithfield	RI
Electro-Tec Systems Inc	Lincoln	RI	Gunn, Inc	Westerly	RI
Emerald Services	Foster	RI	Guy Clemont Plumbing & Heating	Cranston	RI
Emergency Response Plumbing Heating And Air Conditioning Inc	Warwick	RI	H&R Electric Contractors Inc.	Greenville	RI
Emergency Response Service	Providence	RI	Hawkes Plg & Htg Co Inc.	Fiskdale	RI
Emmett Electric	E Providence	RI	Herrington Construction	Providence	RI
Energy Conservation Inc.	South Kingstown	RI	Hilario A. Quezada Electrician	Providence	RI
Energy Efficient Exteriors	Pawtucket	RI	Hodges Electric	Scituate	RI
Energy Electric, Inc.	Woonsocket	RI	Holgate Plumbing And Heating	Tiverton	RI
Energy Geeks	Woonsocket	RI	Holland Electric	Peace Dale	RI
Energy Monster Rebate	Riverside	RI	Homans Associates	Warwick	RI
Energy One	West Warwick	RI	Home Depot	Smithfield	RI
Energy Source LLC	Providence	RI	Houle Plumbing & Heating	Greene	RI
Enos Home Improvements	West Warwick	RI	Howard Saucier	Cranston	RI
Eoh Fix All	North Providence	RI	Hsp Construction LLC	West Greenwich	RI
Ep Electric	East Providence	RI	Hughes Inc.	North Kingstown	RI
Eurotech Climate Systems LLC	Pawtucket	RI	Hutchins Electric	East Greenwich	RI
Evergreen Plg & Htg - Warwick	Warwick	RI	HVAC Excellence	Central Falls	RI
Ewma Jeffrey J Electric LLC	Cumberland	RI	HVAC Inc	Cumberland	RI
Exceptional Heating Co	Providence	RI	Hydro Earth Inc	North Providence	RI
Expo Development	North Providence	RI	Hynson Electrical Services (A Db)	Bristol	RI
F & S Electric Inc.	Bristol	RI	Ianniello Plumbing And Heating	Cranston	RI
Falcone, Arthur P	Hope Valley	RI	Iasimone Plumbing & Heating	N Providence	RI
Ferreira Electric	Bristol	RI	Installed Measures	Coventry	RI
Ferreira, Ryan	Cranston	RI	Integrated Consulting Group	Warwick	RI
Feula Plumbing & Heating	Johnston	RI	Interstate Electric	East Providence	RI
Figlozzi Plg & Htg	Peace Dale	RI	Ipa Electric LLC	Cranston	RI
Fiore And Sons LLC	Warwick	RI	Irb Solutions Inc	Greenville	RI
First Response Plumbing	Newport	RI	Iroquoian Plumbing & Heating S	Providence	RI
Fitts, Matt	Greenville	RI	Island Solar Plumbing And Heating	Jamestown	RI
Five Star Mech	Richmond	RI	It's Shocking Electric Corp.	Cranston	RI
Five Star Plg & Htg Johnston	Johnston	RI	Izzo & Sons Electric	Warwick	RI
Flou HVAC	Charlestown	RI	J & A Electric	Providence	RI
Fm Bodington Plbg & Htg Inc	Little Compton	RI	J & K Supplemental Plumbing Inc	East Greenwich	RI
Francis Heating & Hydronics	E Providence	RI	J And B Construction	Providence	RI
Francisco Mechanical	North Providence	RI	J And J Electric	Warwick	RI
Freeport General Contracting	North Providence	RI	J Giorgi Plumbing	Cranston	RI
Freeway Enterprises	Pawtucket	RI	J Joyce Plumbing & Heating	Warwick	RI
Fressilli Plumbing Inc	Riverside	RI	J&L Heating And Air Conditioning	Pawtucket	RI
Frontier Mechanical Contractor LLC	Pawtucket	RI	J&M Plumbing	Coventry	RI
Furnace & Duct	Providence	RI	J. Costa Electric Inc.	Cumberland	RI
Gambit Electric	Johnston	RI	J.D. Mello Plg & Htg Inc	Westford	RI
Garner Morgan	Tiverton	RI	J.N. Jordan Plumbing LLC	Shannock	RI
Gary Coyne	Chepachet	RI	Jack's Plumbing	Lincoln	RI
Gary Ficca Electrician	North Smithfield	RI			

Jacobson Energy Research	Providence	RI	Lamplighter, In	Little Compton	RI
Jake Lavoie Plumbing And Heating LLC	S Kingstown	RI	Lance Plumbing And Heating	N Scituate	RI
Jaquez General Contractor	Providence	RI	Landy, Ross	Portsmouth	RI
Jason Galvin	North Kingstown	RI	Lang Plumbing & Heating	N Scituate	RI
Jason Truppi Plumbing	N Providence	RI	Leak Free Lifestyles	Coventry	RI
Jb Construction	Providence	RI	Leidos Engineering	Newport	RI
JC Electric Inc.	Wakefield	RI	Lemay, Donald	Bristol	RI
JED Electric Inc.	Greene	RI	Leveille Electric	Smithfield	RI
Jeffrey Berard Plumbing & Mechanical	Warwick	RI	Liberty Plumbing & Heating	Jamestown	RI
Jeremy Garcia	Middleton	RI	Lj Giorgi Plumbing & Heating I	N Providence	RI
Jerry's Paint & Hardware	Narragansett	RI	Lombardo Electric Co	Warren	RI
Jg Home Remodeling	Riverside	RI	Lounas Inc	Providence	RI
Jid Heating LLC	Cranston	RI	Lowe's Home Improvement	Warwick	RI
Jim Amaral	Riverside	RI	Loxley Electrical Svc. LLC	Foster	RI
Jim Silvia	Warwick	RI	Lui Plumbing Inc	Newport	RI
JL Electric Inc.	Middletown	RI	Luke Beaudreault	Harrisville	RI
Jmac Plumbing And Heating Inc	Warwick	RI	Luso Plumbing & Heating Inc	Cumberland	RI
JMB Mechanical	Stoneham	RI	M D'Andrea Electric LLC	Portsmouth	RI
JMB Plumbing LLC	West Warwick	RI	M P Samsky Corp.	North Smithfield	RI
Jmhvac	Pawtucket	RI	M&M Construction	N Providence	RI
Jo Plumbing	Warwick	RI	M.T. Glorgi Plumbing & Heating	N Bergston	RI
Joaquin Refrigeration	Portsmouth	RI	Madden Electric	Little Compton	RI
Joe Vigneault Electrician	Riverside	RI	Maggiacomo Plumbing Inc	Cranston	RI
Joe's Plumbing & Heating	Warwick	RI	Magnetic Electric Inc	Warwick	RI
John Ekdahl	Chepachet	RI	Main Street Plumbing LLC	Pawtucket	RI
John Fletcher	Ashaway	RI	Malone Plg & Htg Inc	Cranston	RI
John Giguere Electrician Db	North Smithfield	RI	Maloney's Oil Company	Pawtucket	RI
John Nicholson Mech Contractor	N Scituate	RI	Manfredo Electric	Warwick	RI
John P Heogh	West Warwick	RI	Manning Plumbing Company	Warwick	RI
John Scampoli	Providence	RI	Manuel Teixeira	Pawtucket	RI
John Schweglewis Plumbing Solutions LLC	N Smithfield	RI	Marcaccio Electric	North Providence	RI
Johnny Mack Electric	Narragansett	RI	Marcel Ms LLC	Pawtucket	RI
Johnnys Home Solutions LLC	Central Falls	RI	Marchetti, Matthew A.	Cranston	RI
John's Home Service & More	Portsmouth	RI	Marciano Electric	Barrington	RI
Johnson Brother Heating	Providence	RI	Mark Cunha	Cranston	RI
Jonathan Svitil	Lincoln	RI	Mark Dandrea Electric	Portsmouth	RI
Joseph Janton	West Warwick	RI	Mark Haines	Richmond	RI
Joseph Mcdermott Pipeworks	Bristol	RI	Maron Construction Co Inc	Providence	RI
Joseph Soave	North Providence	RI	Mastro Electric Supply	Providence	RI
Josh's Plumbing Services	Foster	RI	Mastrocinque & Sons Plmb & Htg	Portsmouth	RI
Joshua Pincince Electrician	Woonsocket	RI	Matt Flush LLC	Greenville	RI
Jps	Middleton	RI	Matt Salzano Home Improvement	Bristol	RI
Jrb Services Inc	North Scituate	RI	Matt's Mechanical	Smithfield	RI
Jr's Industrial Electric	North Kingstown	RI	McCormick Electrical	North Kingstown	RI
Juan Villanueva	Cumberland	RI	Mcm Corp	Smithfield	RI
Judd Brown Design Inc	Packtucket	RI	Md Freitas Plumbing And Heating	Pascoag	RI
Just Heat	Portsmouth	RI	Md Heating & Air Conditioning LLC	N Providence	RI
K Electric	Warwick	RI	Mechanical Republic LLC	Providence	RI
K&R Heating And Cooling	Lincoln	RI	Meticulous Construction	Warwick	RI
Kamco Contracting LLC	Warwick	RI	Metro Electric	Woonsocket	RI
Kazounis Plumbing And Heating	Hope Valley	RI	Michael Freitas Plg & Mech	N Providence	RI
Kelco Electric Inc.	Johnston	RI	Michael Giorgi	Pascoag	RI
Kelley, James	Scituate	RI	Michael Hodson	Harrisville	RI
Ken Adams	Cranston	RI	Michael Martin Cod Acct	Smithfield	RI
Kenny Pierce	Ashaway	RI	Michael Pariseau HVAC	Chepachet	RI
Kent County Electrical Service	Warwick	RI	Midstate Heating & Cooling	Hope Valley	RI
Kevin Masse	Johnston	RI	Mike Hamel	Warwick	RI
Kevin Messier Electrical	Cumberland	RI	Mike Lafleur *3	Smithfield	RI
Kirk Rerick	Hope	RI	Millenial HVAC Plumbing	Westerly	RI
Kme Electric	Woonsocket	RI	Miller Mechanical Inc	Wayland	RI
Knight Plumbing & Heating	Cranston	RI	Mister Freeze	Providence	RI
Kwik Plumbing & Heating Inc	Johnston	RI	Mj Electric & Refrigeration	Central Falls	RI
L & F Plumbing LLC	Cranston	RI	Mj Heating & Air Conditioning	Tiverton	RI
L&B Remodeling	North Providence	RI	Mjf Plumbing And Heating	Bristol	RI
Lad Electric	Cranston	RI	Moises Chevalier Electrician	Cranston	RI

Morra Electric Inc.	Johnston	RI	Plumb Perfection	Johnston	RI
Morrai HVAC LLC	Warwick	RI	Plumb Pro LLC	Cranston	RI
Mother Earth Creations In	Pawtucket	RI	Plumbing & Heating Solutions LLC	East Greenwich	RI
Mpg Mechanical	Charlestown	RI	Plumbworks	N Smithfield	RI
Mr Plumber	East Providence	RI	Polar Air	Charlestown	RI
Mr. Rooter	Warwick	RI	Polaris Plumbing And Heating Inc	North Kingstown	RI
Mts Mechanical	East Providence	RI	Ponagansett LLC	Providence	RI
Mussulli Electric	Harrisville	RI	Positive Energy Electric	Saunderstown	RI
Mutual Engineering	Warwick	RI	Potvin Electric Inc.	North Providence	RI
Mya Electric	Lincoln	RI	Potvin Plumbing & Heating	Warwick	RI
N Atlantic Htg Inc -Conventry	Coventry	RI	Power by Design Electrical Contracting LLC	Richmond	RI
Nathan Guilbault	Pawtucket	RI	Precise Plumbing	Warwick	RI
National Service Co	Warwick	RI	Precision Construction	Providence	RI
Nds Plumbing & Heating	Warren	RI	Preferred Heat Inc	Providence	RI
Nec Home Services LLC	Bristol	RI	Premair HVAC	Warwick	RI
Nestor Padilla After Hours Plumbing	Providence	RI	Pride HVAC Services	Portsmouth	RI
Netzero Insulation Tech	Warwick	RI	Prince Noah HVAC	Central Falls	RI
Netzero Insulation Technologies, Inc.	Warwick	RI	Priority Plg & Htg Inc	Providence	RI
New England Boiler Works LLC	Coventry	RI	Priority Plumbing & Heating	Warwick	RI
New England Plumbing-Heating	Foster	RI	Prism Streetlights Inc	Warwick	RI
Newbury Insulation	Woonsocket	RI	Pro Maintenance LLC	Cranston	RI
Nexgen Mechanical Inc	Cranston	RI	Professional Heating Service	N Providence	RI
Ngb Electric	Smithfield	RI	Progress Construction & Management Group	Providence	RI
Nicholas Electric &	Johnston	RI	Providence Innovation Dis	Providence	RI
Nicolas Bermudez	Pawtucket	RI	Providence Installer	Providence	RI
Nolin Electric	North Scituate	RI	Providence Mech Serv-Smithfiel	Smithfield	RI
North Scituate Electric	Scituate	RI	Providence Mechanical Serv. LI	Smithfield	RI
Northeast Temperature Control	Westerly	RI	R & M Electric Inc.	Coventry	RI
Northern Energy Services Inc.	Providence	RI	R E Coogan Heating Inc	Warwick	RI
Ocean State Air Solutions	Portsmouth	RI	R.B. Queern & Co Inc	Portsmouth	RI
Ocean State Electric LLC	Johnston	RI	R.C Plumbing And Heating	Smithfield	RI
Ocean State Mechanical Inc	Coventry	RI	R.E.M. Mechanical LLC	North Kingstown	RI
Ocean State Plumbing & Htg Inc	Cranston	RI	R.F. Heating & Cooling Inc	Exeter	RI
Ocean State Weatherization	North Smithfield	RI	R.K. Plourd & Son Construction LLC	Warwick	RI
Oil Central Inc	Pawtucket	RI	Rama Electric	Wakefield	RI
Old Tyme Electric, Inc.	Pawtucket	RI	Raymond Degnan	N Providence	RI
Oliveira Plumbing & Heating LLC	Smithfield	RI	Raz Heating And Plumbing Services	Foster	RI
Omni Electric	Wakefield	RI	Rc Smith Electric Co Inc	Warwick	RI
O'Neil Electric Company	Warwick	RI	Reardon Plumbing And Heating	Warren	RI
Osvaldo Diana Jr	Woonsocket	RI	Reddy Piping Concepts	Cranston	RI
P & S Electric Inc.	Cranston	RI	Regan Heating & Ac	Providence	RI
Packard Builders	Kingston	RI	Regent Electric Co. Inc	Coventry	RI
Pagnozzi Plumbing LLC	Smithfield	RI	Reilly Electrical Contractor Inc.	Cranston	RI
Pajan Services, Inc	Foster	RI	Rel Services Inc	Johnston	RI
Pal Electric	Exeter	RI	Reliant Electric	Cranston	RI
Papas Plumbing	Johnston	RI	Renaissance Sheet Metal LLC	Cranston	RI
Parrella Electric	Providence	RI	Renewable Energy Solutions LLC C	Warwick	RI
Pav Electric	Wakefield	RI	Resendes Heating Service LLC	Coventry	RI
Peak Plumbing And Heating LLC	Cumberland	RI	Restivos Heating & A/C	Johnston	RI
Percivalle Electric Inc	Warwick	RI	Rf Plumbing & Heating	Johnston	RI
Peregrine Prop Management	Rumford	RI	Rhode Island Electric Contractors, LLC	North Kingstown	RI
Perez Plumbing Heating & Air Conditioning	Cranston	RI	Rhode Island Insulation	Hope	RI
Perfect Touch Electrical Contractors Corp.	Cranston	RI	Rhode Island Water Heaters	Cranston	RI
Peter Shadoian Electrician	North Providence	RI	Rholen Central	Bristol	RI
Petro Heating & Ac Services	Warwick	RI	RI Insulation	Hope	RI
Petro Home Services	East Greenwich	RI	RI Pipe Guys	Warwick	RI
Petronelli Plumbing & Heating	Johnston	RI	RI Sheet Metal LLC	East Providence	RI
Petterson Electric	Warwick	RI	Ricci Electric	Coventry	RI
Pezzullo & Sons Electric Inc.	East Providence	RI	Richard Ditusa	Johnston	RI
Phillip J. Forcier Electric	Cumberland	RI	Richburns Plumbing	Portsmouth	RI
Phillips Plumbing & Mechanical	Cranston	RI	Rise Engineering	Cranston	RI
Phil's Heating & Ac	Westerly	RI	Ritacco Electric LLC	Westerly	RI
Pickles Plumbing And Heating LLC	Mapleville	RI	Rj Sheridan Co	Cranston	RI
Pinnacle Plg & Htg-Greenville	Greenville	RI	Robert Larisa	Barrington	RI
Pinnacle Plumbing & Heating	Smithfield	RI	Roberts Electric	Pawtucket	RI



Rod Electric	Pawtucket	RI	Stedman & Kazounis -Charlestown	Charlestown	RI
Rodriguez Plumbing & Heating	Provincetown	RI	Stem Electrical	Warwick	RI
Roger Cozzo	Johnston	RI	Sterling Mechanical Services LLC	Greene	RI
Roger O Joyal Refrigeration	North Smithfield	RI	Steve Capozzoli	Coventry	RI
Rolland M Belanger Plg & Htg	Pascoag	RI	Steve Gamache	North Smithfield	RI
Ron Davis	Johnston	RI	Steve Maymon Plumbing & Heating	Warwick	RI
Rooter Man Plumbers	Johnston	RI	Stonylane Electric	Exeter	RI
Rossi Electric Co Inc	Warwick	RI	Sunshine Fuels & Energy Serv	Bristol	RI
Rowlett & Son's HVAC	Cranston	RI	Superior Comfort Inc	Bristol	RI
RPM Electrical Services	Providence	RI	Superior Electric	Warwick	RI
Rsc Plumbing LLC	Exeter	RI	Superior Fire & Electrical Services	North Providence	RI
Rsm Electric	North Providence	RI	Superior Insulation	Narragansett	RI
Rst Mechanical HVAC	Coventry	RI	Superior LED Lighting LLC	Warwick	RI
Rudy Almada Electrician	East Providence	RI	Supply Ne Middletown 15	Middletown	RI
Rudy Branca Electrician	Cranston	RI	Supply Ne Peacedale	Peacedale	RI
Rumford Mechanical	Rumford	RI	Supply New England-Pawtucket	Pawtucket	RI
Rusco Enterprises Inc./TA	Warwick	RI	Sw & Sons Plumbing & Heating LLC	N Providence	RI
Russ Lembo Electrician	Johnston	RI	Sylvester Sheet Metal Inc	West Warwick	RI
Ryan Coffey Certified Pm Tech	Cranston	RI	T&T Plumbing & Heating	Wakefield	RI
Ryan Fitzgerald *3	Central Falls	RI	T. Gomes Heating & Cooling	Warwick	RI
Ryan Heating Cooling	Charlestown	RI	Ta Gardiner Plbg & Htg	Bristol	RI
S & K Electric Inc.	Charlestown	RI	Tebano Electric	Bristol	RI
S & S Electric	Chepachet	RI	Tebo Electric Inc	Woonsocket	RI
Sakonnet Electric	Bristol	RI	Tech 1 Plumbing & Heating	Cranston	RI
Sakonnet Plumbing & Heating	Little Compton	RI	The Affordable Plumber LLC	Pawtucket	RI
Sal Manzi & Son Plumbing & Heating Inc	Cranston	RI	The Paradigm Group	Warwick	RI
Sam Bliven Jr Plumbing & Heating Inc	Westerly	RI	The Plumber Company	Johnston	RI
Santoro Electric	Warwick	RI	Thermal Energy Inc.	Cranston	RI
Sargent Plumbing Inc	West Kingston	RI	Therrien Mechanical Systems Li	Lincoln	RI
Sarra Corporation	Cranston	RI	Thibault Plumbing & Heating Inc	Cranston	RI
Sauvageau, Roy	South Kingstown	RI	Thielsch Engineering	Cranston	RI
Savard Oil Co Inc	E Providence	RI	Thompson Properties LLC	Barrington	RI
Scituate HVAC LLC	North Scituate	RI	Thumbs Up Plumbing	Tiverton	RI
Scotto Electric	Portsmouth	RI	Timothy Fontaine	North Providence	RI
Seaview Plumbing	Narragansett	RI	Todd A Desarro	Hope Valley	RI
Seddon Electric	Rumford	RI	Todd Chatell Electrician	West Kingston	RI
Servpro Of Cranston	Providence	RI	Tom Jenkins Jr.	Middletown	RI
Shamrock Electric	Middletown	RI	Tom Peters Plumbing & Heating	Portsmouth	RI
Shawn Duguay	Johnston	RI	Tom Whitaker	Newport	RI
Shawn Ventura	Coventry	RI	Tomas HVAC	Smithfield	RI
Shepard Services	Cumberland	RI	Tom's Plumbing LLC	Manville	RI
Sheridan Electric Inc.	Warwick	RI	Toner Electric Co	Middletown	RI
Shoreline Building & Design	East Greenwich	RI	Tony Gouveia Electrician	Coventry	RI
Sine Plumbing & Heating	E Providence	RI	Townsend, Kenneth	Exeter	RI
Site Specific	Providence	RI	TPF Electrical Service	Pawtucket	RI
Skawski Heating & Cooling	Providence	RI	Travers Plumbing & Heating Inc	Portsmouth	RI
Small's Plumbing Inc	Woonsocket	RI	Tri-County Community Action	Johnston	RI
Smithco Oil Service	Wakefield	RI	Troy Zane	West Greenwich	RI
Smithfield Plbg & Htng Supply	Greenville	RI	Tuma Insulation Equipment LLC	Warwick	RI
Soares, William	Bristol	RI	U.G. Nason's Inc	Middletown	RI
Sol Power Solar LLC	Charlestown	RI	Ultimate Plumbing	Warwick	RI
Some Construction Co	Providence	RI	Universal HVAC LLC	North Providence	RI
Sonner Plumbing, Heating & Construction Inc	Cranston	RI	Valcourt Heating Inc	Tiverton	RI
Sosa & Son Corp A/C Heating, Plumbing Refrigeration	Woonsocket	RI	Valley Htg & Cooling	Hope Valley	RI
South County Energy	Westerly	RI	Valley Plumbing & Heating	Cumberland	RI
South County Gas Service	Narragansett	RI	Valley Repair Inc	Wyoming	RI
South County Mechanical Services Inc	Wyoming	RI	Vicmir And Sons Inc	Riverside	RI
Spencer's Plumbing	East Greenwich	RI	Victor M Neves	Johnston	RI
Spl Electrical Corporation	North Smithfield	RI	Viking Electric Inc.	Riverside	RI
Stable, HVAC Mechanical Contractor	Pawtucket	RI	Vision Energy Solutions, Inc	Providence	RI
Stanley Delima	Middletown	RI	Vivona Plumbing & Heating Inc	Portsmouth	RI
Stanton Electric, Inc	Cumberland	RI	Wagner Plumbing Services	E Providence	RI
Statewide Insulation	North Smithfield	RI	Wakefield Heating Service	Wakefield	RI
Statewide Plbg & Htg	Cranston	RI	Wakefield Plumbing LLC	Middletown	RI
Stc Boiler	West Warwick	RI			

Waldo Plg & Htg LLC	Lincoln	RI	Pater Z Contracting	Waterford	CT
Walsh Electric	Bristol	RI	Prime Electric	Norwich	CT
Warwick Plumbing & Heating	Johnston	RI	Prism Consulting Inc.	Stamford	CT
Watermark Plumbing LLC	Cranston	RI	Shannon Nrg Resource	Waterbury	CT
Wayne Electric, Inc.	Bristol	RI	Sharpco Inc	North Grosvenordale	CT
Weathertek Insulation	Coventry	RI	Simmons HVAC	Pawcatuck	CT
Westerly Hi Tech Solutions	Hope Valley	RI	South Shore Heating & Cooling, Inc	Pawcatuck	CT
Westview Plumbing & Heating Inc	Middletown	RI	Steven Deangelis Electrician	Durham	CT
Wickford App & Lghtng	Pawtucket	RI	The Hdl Co LLC	Lisbon	CT
Wide Park LLC	Kingston	RI	Tri Phase Contractors, LLC	North Haven	CT
William J Riley Plumbing & Htg	Warwick	RI	Tyler J Steiner	Danielson	CT
William N Harris	Barrington	RI	US Electrical Services In	Middletown	CT
Winsupply Warwick RI Co	Warwick	RI	Valley Heating & Cooling Inc	Jewett City	CT
Wojcik Electric Inc	Narragansett	RI	Violette Mechanical	Ellington	CT
Wood's Heating Service	East Providence	RI	Wjr Plumbing And Heating LLC	Voluntown	CT
Woonsocket Neighborhood Development	Woonsocket	RI	ACEEE	Washington	DC
Wright Comfort Solutions Inc	Coventry	RI	Cadeo Group LLC	Washington	DC
Wyman & Son Electric	Providence	RI	Energy Solutions Center	Washington	DC
Yoakum Septic Services LLC	Smithfield	RI	ICF Resources LLC	Wilmington	DE
Zambarano Home Improvement	North Providence	RI	Noramco Us Holdings Inc	Wilmington	DE
Zanella Plumbing & Heating	Westerly	RI	City Facilities Management	Jacksonville	FL
Zawadski Plumbing	Warwick	RI	Express Lighting	Pompano Beach	FL
Zompa Plumbing & Heating	Warren	RI	Osc Solutions Inc	West Palm Beach	FL
Association of Energy Services Professionals	Phoenix	AZ	Burton Energy Group LLC	Alpharetta	GA
Moving Forward LLC	Scottsdale	AZ	Coolsys Energy Solutions	Savannah	GA
Vargas Electric	Tucson	AZ	National Energy Educational Development	Manassas	GA
Alternative Energy Systems	Chico	CA	Siemens Industry Inc	Munich, Germany	
Cohen Ventures	Oakland	CA	Ace Hardware	Oak Brook	IL
Cprime Inc	San Mateo	CA	Ecomfort.Com	Bolingbrook	IL
CRM Orbit	San Francisco	CA	Frontier Energy Inc.	Chicago	IL
Nest Labs Inc	Mountain View	CA	Innerworkings Inc	Chicago	IL
Pires Electric	Freemont	CA	Zeno Controls LLC	Chicago	IL
Simple Energy Inc.	Miraloma	CA	5C Energy	Attleboro	MA
Source Refrigeration And	Anaheim	CA	A & M Compressed Air	Uxbridge	MA
Tetra Tech Inc.	Pasadena	CA	A & M Electrical Mechanical, Inc.	Fall River	MA
Voltus Inc	San Francisco	CA	Abel Vasquez	Methuen	MA
E Source Companies LLC	Boulder	CO	Advance Air & Heat Company Inc	East Freetown	MA
Best Energy - Pawcatuck	Pawcatuck	CT	Advanced Energy Services LLC	Hopedale	MA
Bill Aitken Heating LLC	North Stonington	CT	Ags HVAC Services LLC	Westport	MA
Branco Electric	Trumbull	CT	Ahold Usa	Quincy	MA
Budderfly Inc	Shelton	CT	A13 Architects	Wayland	MA
Cameron Hanna	Somers	CT	Air Energy LLC	South Easton	MA
Capitol Light	Hartford	CT	Air Masters HVAC Serv Of Ne	Fall River	MA
Ceil Plbg & Htg	Pawcatuck	CT	Air Tight Insulators	New Bedford	MA
Cerreto Associates LLC	Danielson	CT	Aks Electric Cod Acct	Rehoboth	MA
Condon Electrical Services LLC	Waterford	CT	Alex Kabli Electrician	Rehoboth	MA
Cowan Htg&Clg	Voluntown	CT	Alternative Building Corp	Sutton	MA
Craig C. Porter	Dayville	CT	Alternative Weatherization	Fall River	MA
Densmore Oil Company	Mystic	CT	American Electric	Malden	MA
Duncklee Inc	Stonington	CT	American Plant Maintenance	Woburn	MA
Dynamic Building & Energy	North Stonington	CT	Andelman and Lelek Engineering Inc.	Norwood	MA
Dynamic Electric LLC	Meriden	CT	Anthony Vieira Heating And Air	North Attleboro	MA
Eagle Industries Inc.	Colchester	CT	Ap Sevices	Waltham	MA
Energy Resources	Thomaston	CT	ARCA Recycling Inc.	Franklin	MA
Gt Electric	Norwalk	CT	Attention To Detail Plumbing & Heating LLC	Westport	MA
Harrington Plumbing & Heating	Pawcatuck	CT	B & L Ductless	Swansea	MA
Jack Kenny	W Greenwich	CT	B&L Ductless LLC	Dighton	MA
John Bosma	North Stonington	CT	B2Q Associates Inc.	Andover	MA
Kelly Electric	Jewett City	CT	Badgers Cooling And Heating	Plainville	MA
Michael Giuffre	Moosup	CT	Baraby Electric	Fall River	MA
Middlebury Mechanical	Middlebury	CT	Bayside Electric Co Ins	Burlington	MA
Mystic Plbg & Htg	Mystic	CT	Baystate Energy Reduction LLC	Norwood	MA
Nick Zaharie	Pawcatuck	CT	Bec Services Limited	Uxbridge	MA
Ok Industries	New Britain	CT	Belmont Marketplace Inc	Wakefield	MA
			Biello Electric	Fall River	MA

G & L Electric Inc.	Bellingham	MA	New England Safety Systems	Taunton	MA
Germain Plumbing & Heating	Seekonk	MA	Ngusa Service Company	Waltham	MA
GH Electrical Service	Attleboro	MA	Nicks HVAC	Lowell	MA
Glynn Electric Inc.	Plymouth	MA	Norm Svendsen	Attleboro	MA
Gone Green Electric Co., Inc.	Rockland	MA	Northeast Energy Efficiency	Lexington	MA
Graybar Electric Co. Inc.	South Boston	MA	O.H. Burg Corporation	Stoughton	MA
Greene Construction Inc.	Newburyport	MA	Oberon Initiatives Inc	Stoughton	MA
Grillo Plumbing Inc	Franklin	MA	O'Neill Mechanical Services	Seekonk	MA
Hallmark Electrical Systems, Inc	Taunton	MA	Oracle America	Cambridge	MA
Hardwire LLC	Worcester	MA	P&D Management Group Three LLC	New Bedford	MA
Heat Watch LLC	Medfield	MA	Patriot Sheet Metal HVAC	Seekonk	MA
Homeserve	Woburn	MA	Paul Heery Plumbing & Heating	Whitman	MA
HVAC Experts Htg & Ac	Oxford	MA	Pb & J Mechanical Services	E Wareham	MA
Indresano Energy Company	Wellesley Hills	MA	Platinum Home Services Inc	Fall River	MA
Inovis Energy Inc	Kingston	MA	Plumbers Supply Co - New Bdfrd	New Bedford	MA
Insulate 2 Save	Fall River	MA	Propane Plus	Rehoboth	MA
Insulation R Us	Fall River	MA	R.J. Laperle Plumbing & Heating	Attleboro	MA
Ironman Heating & Cooling	Swansea	MA	Ralco Elect/Service Division	Westport	MA
Jason Cabral	Fall River	MA	Ramos Electric	Holyoke	MA
Jay Comeau Electrician	Attleboro	MA	Rapid HVAC & Refrigeration	Seekonk	MA
Jay Sheldons Heating	Seekonk	MA	Raposo, Kevin	Westport	MA
Jdp Contracting Inc	Brockton	MA	Raymond D. Melanson Electric	Swansea	MA
Jerry Alvarado	Roxbury	MA	Rem Electric	Attleboro	MA
Jf Electric	Quincy	MA	Resendes Electric	Swansea	MA
Jim Kelley Electrician	Reading	MA	Resource Lighting And Ene	Fall River	MA
Jmac Development Corp	Natick	MA	Rethinking Power Management	Boston	MA
John A. Moniz Electrical	Swansea	MA	Retrofit Insulation	Seekonk	MA
John Mcdonough Electrician	Boston	MA	Revise Energy lic	Bradford	MA
Jr's HVAC Design	Belmont	MA	Reynolds, Jeffrey Db	Westport	MA
Js Construction LLC	Malden	MA	Rich May PC	Boston	MA
Justin Nardolillo	Somerset	MA	Richard Daigle	Fall River	MA
Kp Sullivan Heating LLC	Blackstone	MA	River Energy Consultants	Fall River	MA
Lafayette & Cross Co. Inc	Seekonk	MA	Rob Molloy	Norwell	MA
Lafleur Plumbing And Heating	Rehoboth	MA	Robert Bain	Rehoboth	MA
Larry Kissell	Rehoboth	MA	Robinson & Cole LLP	Boston	MA
Larry's Heating	Rehoboth	MA	Roi Energy Investments LI	East Walpole	MA
Lawrence Air Systems Inc	Seekonk	MA	Roia, Jason Electrical	Fall River	MA
Ledoux Electric	Seekonk	MA	Safe Electric	Georgetown	MA
Lexicon Energy Consulting	Concord	MA	Sam Quindley	Middleboro	MA
Litemor	Norwood	MA	Sarnie Electrical	Walpole	MA
Lussier, Joseph - Lussier Electric Services	Worcester	MA	Schecter Electric	Swansea	MA
M&S Elman Plumbing Company	East Bridgewater	MA	Schneider Electric Smart	Andover	MA
Machs Mechanical	Attleboro	MA	Seekonk Oil	Seekonk	MA
Magina, Carlos Elect Inc	Seekonk	MA	Simoes Electric	Beverly	MA
Mam Plumbing -Rehobeth	Rehoboth	MA	Simon's Supply Company	Fall River	MA
Marc Corbeil Plumbing	Millville	MA	South Coast Alternative Power Solutions	Acushnet	MA
Mark J Cadorette Plumbing And Heating	North Smithfield	MA	Southcoast Ele & Ref Ser	Westport	MA
Martins Electric LLC	Seekonk	MA	Steam Trap Systems	Amesbury	MA
Mason Plumbing And Heating	Taunton	MA	Steven D Haskel	Attleboro	MA
Mass Electric Company	Everett	MA	Stp Plumbing & Heating	Blackstone	MA
Mass Power And Light	Uxbridge	MA	Sullivan & Mclaughlin	Boston	MA
Mazzarella Mechanical	Seabrook	MA	Superior Energy Solutions, Inc.	Swansea	MA
Mcdonough Electric LLC Cod Acct	Bedford	MA	Supply New England - Attleboro	Attleboro	MA
Mcmamus Plumbing And Heating	Millville	MA	Supply New England - Uxbridge	Uxbridge	MA
Medas Electric	Taunton	MA	Synapse Energy Econ. Inc.	Cambridge	MA
Michael Lacroix, Electrician	Belchertown	MA	T & J Heating & Ac	Bellingham	MA
Michael Melino Electrician	Westford	MA	T&T Light Co	Millbury	MA
Mike Bell Electric	Seekonk	MA	The Cadmus Group LLC	Boston	MA
Moldanado Construction, Inc.	Saugus	MA	The Crew	Somerset	MA
Moniz Electrical Services LLC	Somerset	MA	The Energy Efficiency Group	Norwood	MA
Motus LLC	Boston	MA	Theroux Mechanical	S Attleboro	MA
Moura Mechanical Services	Hudson	MA	Thomas P Cleary	Weymouth	MA
Murphy Electric & Industry Control LLC	Pembroke	MA	TNZ Energy Consulting Inc.	Stoughton	MA
National Light Bulb Company	North Easton	MA	Tom Fricker Heating & Ac	Franklin	MA
New England Energy Conpt	North Dighton	MA			

Tony Refrigeration LLC	Fall River	MA	Resource Innovation Institute	Portland	OR
Total Comfort Heating & Coolin	Norton	MA	Bidenergy	Philadelphia	PA
Total Fire Services	Bellingham	MA	Darlington Electric	Dowington	PA
TRC Environmental Corp.	Boston	MA	Direct Energy Business Ma	Pittsburgh	PA
Triangle Refridgeration	Fall River	MA	Jdv Electric	Lansdowne	PA
Trust Energy Solutions LLC	Marlborough	MA	Mammoth Incorporated	Pleasant Gap	PA
Uplight Inc	Lexington	MA	Ontech.Com	Online	PA
Utility Energy Inc.	Fall River	MA	Pontoon Solutions Inc.	Pittsburgh	PA
Veolia North America	Boston	MA	US Energy Solutions Inc	Philadelphia	PA
Victory Heating & Ac Co	Bellingham	MA	Wesco Energy Solutions	Pittsburgh	PA
Wade Haudons	Taunton	MA	William Stegall*3	Easley	SC
Wicked Plumbing LLC	Somerset	MA	Hightower Electric	Houston	TX
Wipro Ltd	Quincy	MA	Lopez Negrete Communication	Houston	TX
Wnuk Plumbing LLC	E Longmeadow	MA	Maintenance Plus	Plano	TX
World Energy Efficiency S	Worcester	MA	Miguel Dominguez Electrician	Fort Worth	TX
Young Electrical Service	Taunton	MA	NexRev Inc.	Plano	TX
Your Plumber Inc	Norton	MA	Smith System Driver Improvement	Arlington	TX
Enerwise Global Technologies Inc.	Baltimore	MD	Compressed Air Challenge	Alexandria	VA
Green & Healthy Homes Ini	Baltimore	MD	Guidehouse Inc	Mclean	VA
Housing Opportunities Co	Kensington	MD	Optimal Energy Inc.	Hinesburg	VT
Mez Electric	Owings Mills	MD	Vermont Energy Investment Corp	Winooski	VT
Boyko Engineering Inc.	Gorham	ME	Compass Electric Cod Acct	Vancouver	WA
Naomi Mermin Consulting	Portland	ME	Flowenergy LLC	Woodinville	WA
Al Durand Electric	Wixom	MI	New Buildings Institute Inc.	White Salmon	WA
Energy Design Service Sys	Whitmore Lake	MI	Northwest Energy Efficiency Council	Seattle	WA
Northern Power Elect Sv	Mancelona	MI	Franklin Energy Services	Port Washington	WI
Energy Management Collabo	Plymouth	MN	Slipstream Group Inc.	Madison	WI
Award Headquarters	Fenton	MO			
Hussmann Corporation	Bridgeton	MO			
Build.Com	Online	NA			
Ontechsmartservices.Com	Online	NA			
Supplyhouse.Com	Online	NA			
Theexchange.Com	Online	NA			
APEX Analytics	Greensboro	NC			
Coastal Lighting LLC	Wilmington	NC			
Enernet LLC	Summerfield	NC			
Advanced Concrete Cutting	Pelham	NH			
Daniels Equipment Co	Auburn	NH			
E2S LLC	Windham	NH			
Progressive Energy Inc.	Bedford	NH			
Tbd Lighting LLC	Bedford	NH			
Apex Electrical Contractors	Roselle	NJ			
Dodge Data & Analytics LLC	Hamilton	NJ			
Ideas Agency Inc	Blairstown	NJ			
Precision Power	Hopatcong	NJ			
SHI International Corp.	Somerset	NJ			
A Eletrical	New York	NY			
CHA Consulting Inc.	Albany	NY			
Customertimes	New York	NY			
Dnv Energy Insights Usa I	New York	NY			
EnergyHub Inc.	Brooklyn	NY			
Eric Mower & Associates	Syracuse	NY			
Jsc New England Operating	Lydonville	NY			
L&S Energy Services Inc	Clifton Park	NY			
Lightning Electric	West Nyack	NY			
Mhk Development	New York	NY			
Ram Marketing	Saint James	NY			
Remis/Marco Company	Ronkonkoma	NY			
The Levy Partnership Inc	New York	NY			
Trane Inc.	Plainview	NY			
Etech Inc	Columbus	OH			
Questline Inc	Columbus	OH			
His Electric	Edmond	OK			
Energyx Solutions Inc	Toronto	ON			
Cascade Energy Inc.	Portland	OR			

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