# The Narragansett Electric Company
# d/b/a Rhode Island Energy

# 2021 Energy Efficiency Year-End Report

# June 1, 2022

**Filing Letter**
**& Motion**

Andrew S. Marcaccio, Counsel
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Rhode Island Energy™
a PPL company

June 1, 2022

**VIA ELECTRONIC MAIL**

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

**RE: Docket No. 5076 – 2021 Energy Efficiency Plan**
**Year-End Report with Confidential Vendor Schedules and Gas Overspend Memo**

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (the "Company"), enclosed, please find an electronic version[1] of the Company's 2021 Energy Efficiency Year-End Report ("Year-End Report"). This Year-End Report is being filed in accordance with Section 16 of the Annual Energy Efficiency Plan for 2021.

The Year-End Report includes several attachments and schedules which are summarized herein. Please be advised that the vendor schedules contain confidential and privileged information. As such, the confidential vendor schedules have been omitted from the public version of this filing. The confidential vendor schedules (contained on an Excel file entitled "Confidential Vendor Schedules 2021") will be sent electronically to the Public Utilities Commission ("PUC") and the Division of Public Utilities and Carriers ("Division") via the Company's encryption software, Egress Switch.

Pursuant to 810-RICR-00-00-1.3(H)(3) and R.I. Gen. Laws § 38-2-2(4)(B), the Company respectfully requests that the PUC treat the vendor schedules as confidential. In support of this request, the Company has enclosed a Motion for Protective Treatment of Confidential Information. In accordance with 810-RICR-00-00-1.3(H)(2), the Company also respectfully requests that the PUC make a preliminary finding that the confidential vendor schedules be exempt from the mandatory public disclosure requirements of the Rhode Island Access to Public Records Act ("APRA").

The Year-End Report summarizes the gas and electric results, program highlights, and customer experiences during the 2021 Energy Efficiency Program Year. As indicated above, the Year-End Report includes several attachments and schedules which are as follows:

[1] The enclosed confidential vendor schedules (Excel files) are being delivered via a separate link..

- **Attachment 1 –** Electric Summary Table of Year-End Results
- **Attachment 1a –** Electric Costs Schedules
- **Attachment 2 –** Gas Summary Table of Year-End Results
- **Attachment 2a –** Gas Costs Schedules
- **Attachment 3 –** Case Studies and Evaluation Summaries
- **Attachment 4 –** Year-End Participation Memo
- **Attachment 5 –** Rhode Island 2021 Energy Efficiency Workforce Analysis Final Report
- **Confidential Vendor Schedule 1 - 2021 Year End Report - Table E-1 - Program Level Cost Breakdown into Subcategories:** A breakout of the electric energy efficiency programs by cost category and sub category, detailing vendor and external entity costs at a program level. (not included in public filing)
- **Confidential Vendor Schedule 2 - 2021 Year End Report - Table G-1 - Program Level Cost Breakdown into Subcategories:** A breakout of the gas energy efficiency programs by cost category and sub category, detailing vendor and external entity costs at a program level. (not included in public filing)
- **Confidential Vendor Schedule 3 - 2021 Rhode Island Energy Efficiency Vendor Costs (Electric and Natural Gas):** A listing of the vendor and external entity costs across both the electric and gas portfolios, broken out by cost category. (not included in public filing)
- **Confidential Vendor Schedule 4 - 2021 Rhode Island Energy Efficiency Vendor Costs >$1M (Electric and Natural Gas):** A listing of the vendor and external entity costs greater than $1M across both the electric and gas portfolios in 2021, broken out by cost category, with additional description added of vendor services rendered, and additional vendor details. (not included in public filing)
- **Confidential Vendor Schedule 4a - 2021 Rhode Island Energy Efficiency Vendor Costs >$1M (Electric):** A listing of the vendor and external entity costs greater than $1M for the electric portfolio in 2021, broken out by cost category. (not included in public filing)
- **Confidential Vendor Schedule 4b - 2021 Rhode Island Energy Efficiency Vendor Costs >$1M (Natural Gas):** A listing of the vendor and external entity costs greater than $1M for the gas portfolio in 2021, broken out by cost category. (not included in public filing)

In addition, the Company notes that at a January 25, 2022 Open Meeting for Docket No. 5189 (2022 Energy Efficiency Plan), the PUC voted "to allow recovery in rates of the requested $6.097M related to gas overspend subject to full review by the PUC when final numbers are filed and to direct the Company to file final numbers with the PUC by April 1, 2022 (due date was extended to June 1, 2022). In accordance with that directive, the Company is including a supplement to the 2021 Year End Report which describes the gas non-income eligible residential program overspend.

Thank you for your attention to this filing. If you have any questions, please do not hesitate to contact me at 401-784-4263.

Sincerely,

Andrew S. Marcaccio

cc: Docket 5076 Service List
Docket 5189 Service List
Margaret L. Hogan, Esq. (w/confidential Excel File)

STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISSION

| | | |
|---|---|---|
| **IN RE: 2021 ENERGY EFFICIENCY PROGRAM** | ) | **Docket No. 5076** |

**MOTION OF THE NARRAGANSETT ELECTRIC COMPANY D/B/A RHODE ISLAND ENERGY FOR PROTECTIVE TREATMENT OF CONFIDENTIAL INFORMATION**

The Narragansett Electric Company d/b/a Rhode Island Energy (the "Company") hereby respectfully requests that the Public Utilities Commission ("PUC") grant protection from public disclosure certain confidential information submitted by the Company in the above referenced docket. The reasons for the protective treatment are set forth herein. The Company also requests that, pending entry of that finding, the PUC preliminarily grant the Company's request for confidential treatment pursuant to 810-RICR-00-00-1.3(H)(2).

The record that is the subject of this Motion that requires protective treatment from public disclosure is an Excel file entitled "Confidential Vendor Schedules 2021" (referred to herein as the "Confidential File") that was filed by the Company on June 1, 2022, as part of the Company's 2021 Energy Efficiency Year-End Report ("Year-End Report"). The Confidential File contains the following information:

- **Confidential Vendor Schedule 1 - 2021 Year End Report - Table E-1 - Program Level Cost Breakdown into Subcategories:** A breakout of the electric energy efficiency programs by cost category and sub category, detailing vendor and external entity costs at a program level.

- **Confidential Vendor Schedule 2 - 2021 Year End Report - Table G-1 - Program Level Cost Breakdown into Subcategories:** A breakout of the gas energy efficiency programs by cost category and sub category, detailing vendor and external entity costs at a program level.

- **Confidential Vendor Schedule 3 - 2021 Rhode Island Energy Efficiency Vendor Costs (Electric and Natural Gas):** A listing of the vendor and external entity costs across both the electric and gas portfolios, broken out by cost category.

- **Confidential Vendor Schedule 4 - 2021 Rhode Island Energy Efficiency Vendor Costs >$1M (Electric and Natural Gas):** A listing of the vendor and external entity costs greater than $1M across both the electric and gas portfolios in 2021, broken out by cost category, with additional description added of vendor services rendered, and additional vendor details.

- **Confidential Vendor Schedule 4a - 2021 Rhode Island Energy Efficiency Vendor Costs >$1M (Electric):** A listing of the vendor and external entity costs greater than $1M for the electric portfolio in 2021, broken out by cost category.

- **Confidential Vendor Schedule 4b - 2021 Rhode Island Energy Efficiency Vendor Costs >$1M (Natural Gas):** A listing of the vendor and external entity costs greater than $1M for the gas portfolio in 2021, broken out by cost category.

The Company requests protective treatment of the Confidential File in accordance with 810-RICR-00-00-1.3(H) and R.I. Gen. Laws § 38-2-2-(4)(B).

## I. LEGAL STANDARD

For matters before the PUC, a claim for protective treatment of information is governed by the policy underlying the Access to Public Records Act (APRA), R.I. Gen. Laws § 38-2-1 et seq. See 810-RICR-00-00-1.3(H)(1). Under APRA, any record received or maintained by a state or local governmental agency in connection with the transaction of official business is considered public unless such record falls into one of the exemptions specifically identified by APRA. See R.I. Gen. Laws §§ 38-2-3(a) and 38-2-2(4). Therefore, if a record provided to the PUC falls within one of the designated APRA exemptions, the PUC is authorized to deem such record confidential and withhold it from public disclosure.

## II. BASIS FOR CONFIDENTIALITY

The Confidential File, which is the subject of this Motion, is exempt from public disclosure pursuant to R.I. Gen. Laws § 38-2-2(4)(B) as "[t]rade secrets and commercial or financial

information obtained from a person, firm, or corporation that is of a privileged or confidential nature." The Rhode Island Supreme Court has held that this confidential information exemption applies where the disclosure of information is likely either (1) to impair the government's ability to obtain necessary information in the future; or (2) to cause substantial harm to the competitive position of the person from whom the information was obtained. Providence Journal v. Convention Center Authority, 774 A.2d 40 (R.I. 2001). The first prong of the test is satisfied when information is provided to the governmental agency and that information is of a kind that would customarily not be released to the public by the person from whom it was obtained. Providence Journal, 774 A.2d at 47. In this case, the Company would not customarily release this information to the public.

In addition, the release of the Confidential File is likely to cause substantial harm to the competitive position of the Company. The Confidential File includes sensitive information and other commercial details regarding the Company's vendors. Disclosing this information to the public could harm the Company's ability to procure vendors in the most cost-effective manner and, ultimately, harm customers.

## III. CONCLUSION

For the foregoing reasons, the Company respectfully requests that the PUC grant this motion for protective treatment of the Confidential File.

[SIGNATURE PAGE FOLLOWING]

Respectfully submitted,

RHODE ISLAND ENERGY
By its attorney,

Andrew S. Marcaccio (#8168)
Rhode Island Energy
280 Melrose Street
Providence, RI 02907
(401) 784-4263

Dated: June 1, 2022

**CERTIFICATE OF SERVICE**

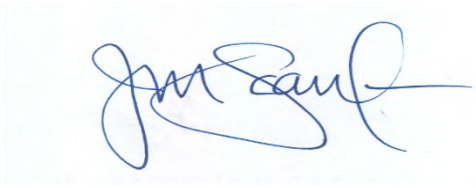
I hereby certify that on June 1, 2022, I delivered a true copy of the foregoing Motion via electronic mail to the parties on the Service List for Docket No. 5076.

Joanne M. Scanlon

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.



_____ June 1, 2022

Joanne M. Scanlon Date

**Docket No. 5076 – The Narragansett Electric Co. d/b/a Rhode Island Energy – 2021-2023 Energy Efficiency Program Plan & 2021 Annual Energy Efficiency Program Plan**
**Service list updated 6/1/2022**

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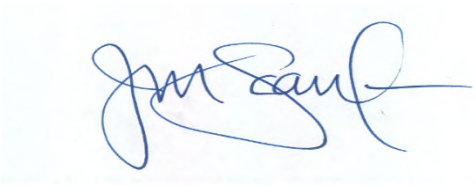
Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.



Joanne M. Scanlon — June 1, 2022
Date

**Docket No. 5189 - National Grid – 2022 Annual Energy Efficiency Program**
**Service list updated 6/1/2022**

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# 2021 Year-End Report

# The Narragansett Electric Company
# d/b/a Rhode Island Energy

# 2021 Energy Efficiency Year-End Report

# June 1, 2022

## Table of Contents

## Attachments:

# Overview

This year-end report summarizes the gas and electric results, program highlights, and customer experiences during the 2021 Program Year. The electric and gas programs are described more fully in the Settlement of the Parties, filed in Docket No. 5076 on October 15, 2021, and approved by the Rhode Island Public Utilities Commission (PUC) at its open meeting on 12/28/20. 2021 was an unusual year which saw the continuation of innovation and program enhancements that accommodate shifting rules associated with the COVID-19 pandemic.

The primary goal set forth in the 2021 Settlement of Parties was to "create energy and economic cost savings for Rhode Island consumers through energy efficiency."[1] The charts below summarize the electric and gas program benefit cost ratios, savings and expenditures compared to planned benefit cost ratios, savings goals, and budgets respectively. The benefit cost ratios are far greater than 1, indicating that the Company's[2] programs created positive value to Rhode Island for every dollar invested in 2021. In total, the 2021 programs will create electric cost savings of $442.4 million and gas cost savings of $120.3[3] million for Rhode Island customers over the life of the installed energy efficiency measures.

In addition to cost savings, the 2021 energy efficiency programs created significant economic benefits to Rhode Island. The programs supported 1,011 full-time equivalent (FTE) workers in 2021. Most of the jobs created by energy efficiency investments were local because they were tied to installation of equipment and other materials. In fact, of the 1,152 companies and agencies involved in the Company's 2021 energy efficiency programs, 59% were located in Rhode Island.[4] In addition, the 2021 energy efficiency programs will add $268 million to Rhode Island's Gross State Product (GSP).

Another goal of the 2021 Plan was to achieve electric and gas savings relative to targets established in the 2021 EE Program Plan, which were consistent with the goals established for 2021 in the 2021-2023 Three Year Least Cost Procurement Plan. The 2021 electric savings target was 1,290,462 net lifetime MWh. At the end of the year, the Company achieved 1,046,790 lifetime MWh energy savings, which represents 81.1% of that goal. The Company also had an annual kW savings goal of 22,621 kW and, at the end of the year, had achieved 18,800 kW savings, which represents 83.1% of that goal.

The 2021 gas savings target was 4,072,084 net lifetime MMBtu. At year's end, the Company achieved 3,454,006 lifetime MMBtu, which represents 84.8% of that goal. Detailed savings information can be found in Attachment 1, Tables E-1, E-2 and Attachment 2, Tables G-1 and G-2.

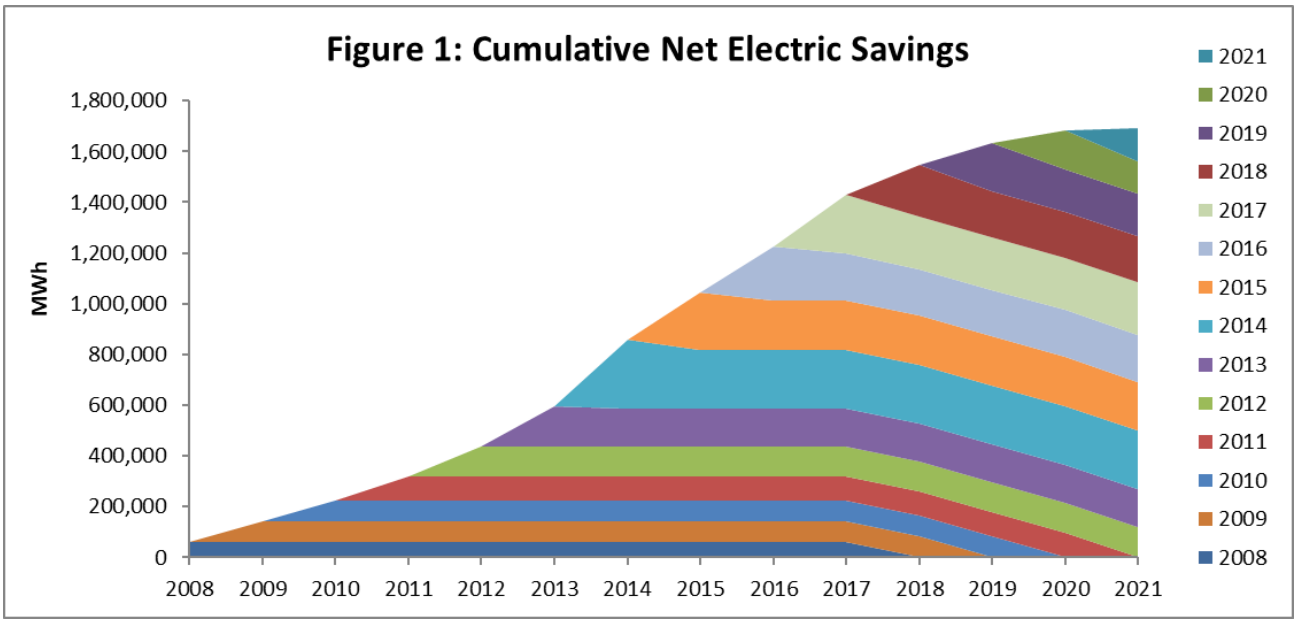
Additional cost and savings information can be found in Attachment 1, tables E-1 and E-3, and Attachment 2, tables G-1 and G-3.

[1] Energy Efficiency Program Plan (EEPP) for 2021, Settlement of the Parties, October 15, 2020, Docket 5076, page 5.
[2] Please note that the Company was controlled by National Grid through May 25, 2022.
[3] From Table G-2, Attachment 2, Natural Gas Benefits. Carbon value is embedded in Natural Gas Benefits.
[4] Guidehouse, Rhode Island 2021 Energy Efficiency Workforce Analysis Final Report, May 2022. Copy included in Attachment 5.

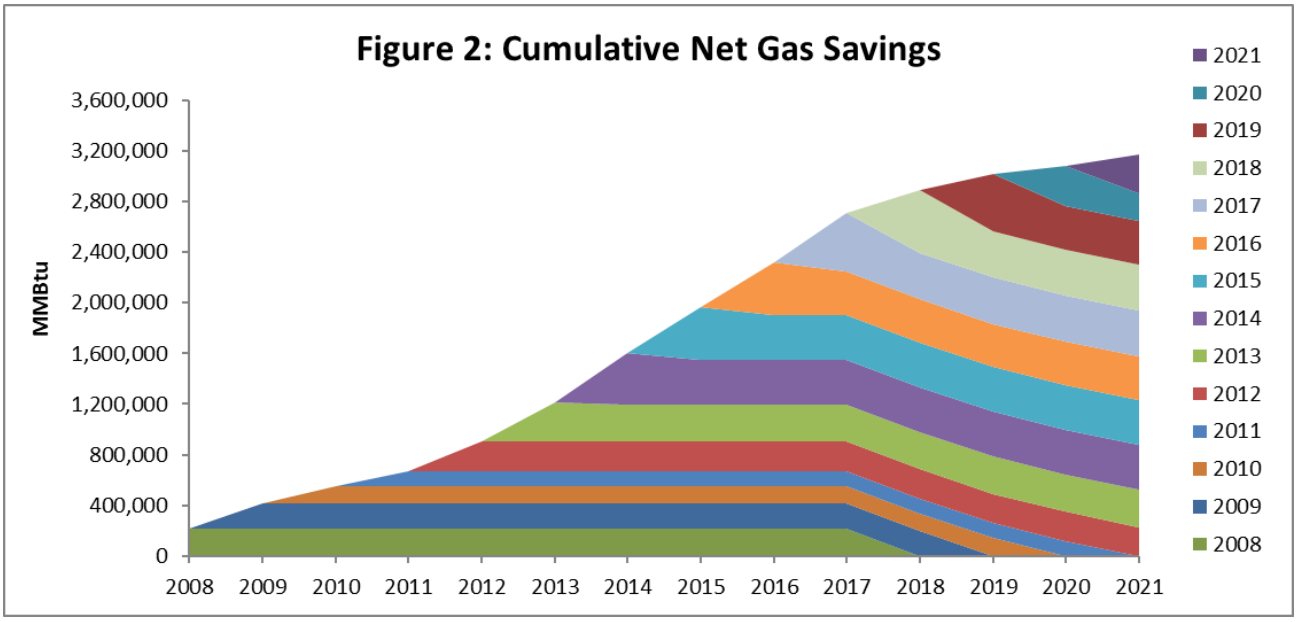
| | 2021 Goal/Benchmark[5] | 2021 Actual[6] | Percentage of Goal |
|---|---|---|---|
| **Electric** | | | |
| **Net Lifetime MWh** | 1,290,462 | 1,046,790 | 81.1% |
| **Net Annual MWh Savings** | 138,256 | 131,365 | 95.0% |
| **Net Annual kW Savings** | 22,621 | 18,800 | 83.1% |
| **Net Lifetime Benefits ($Mil)** | $595.7M | $477.4M | 80.2% |
| **RI Test Benefit/Cost Ratio** | 4.41 | 3.88 | 88.0% |
| **Gas** | | | |
| **Net Lifetime MMBtu** | 4,072,084 | 3,454,006 | 84.8% |
| **Net Annual MMBtu** | 165,840 | 162,011 | 97.7% |
| **Net Lifetime Benefits ($Mil)** | $137.8M | 120.3M | 87.3% |
| **RI Test Benefit/Cost Ratio** | 3.09 | 2.79 | 90.3% |
| | **2021 Budget ($Mil)[7]** | **2021 Actual ($Mil)[8]** | **% of Goal** |
| **Electric** | | | |
| **Total Expenditures[9]** | $135.3M | $122.9M | 90.9% |
| **Total Implementation Expenses[10]** | $111.3M | $94.6M | 85.0% |
| **Gas** | | | |
| **Total Expenditures** | $44.6M | $42.2M | 94.6% |
| **Total Implementation Expenses** | $33.3M | $35.7M | 107.2% |

The energy savings achieved as part of the 2021 Plan provided a meaningful contribution to Rhode Island's electricity needs. Since 2008, energy efficiency has saved over 14 million net MWh. As shown in Figure 1 below, these savings accumulate over the average ten-year lifetime of the installed measures.[11] At the end of 2021, the cumulative energy savings met 23.1% of Rhode Island's 2021 electric load.

[5] See 2021 EEPP Settlement of the Parties, Docket No. 5076.
[6] Actual savings in 2021.
[7] See 2021 EEPP Settlement of the Parties, Docket No. 5076.
[8] Actual spend in 2021.
[9] Includes implementation costs, EERMC and OER costs, and shareholder incentive.
[10] Includes all program-related expenses, i.e. incentives, administration and general expenses, marketing, sales, technical assistance, evaluation, and training. Also includes Finance Costs as detailed in Tables E-3 and G-3 in this report.
[11] The only exception is the savings from Home Energy Reports. This program only has a one-year measure life and is counted as such in Figure 1.




Since 2008, natural gas energy efficiency programs have also created significant cumulative savings. From 2008 to 2021, over 24 million net MMBTUs of natural gas were saved.




The following sections in this report outline the different programs and initiatives that comprised the 2021 Rhode Island Energy Efficiency Electric and Gas Portfolios and focuses on many of the highlights therein.

# Residential Programs

## Overview

In 2021, the residential sector was cost-effective with RI Test benefit cost (B/C) ratios of 2.74 for electric programs and 2.14 for gas programs. The Company spent 106.4% of the electric residential implementation budget, achieved 118.8% of electric targeted net lifetime energy savings, and achieved 118.5% of electric targeted net annual demand savings. The Company spent 147.0% of the gas residential implementation budget and achieved 108.0% of gas targeted net lifetime energy savings. Additional details on spending and savings by program can be found in Attachment 1, Tables E-1, E-2, E-3 and Attachment 2, Tables G-1, G-2 and G-3.

## EnergyWise Single Family

Energy*Wise* is a direct-to-customer in-home program that educates residents on how their home can become more energy efficient. In response to COVID-19, the Company fast tracked and implemented a Virtual Home Energy Assessment. The virtual assessment follows a similar education and information capture process as the in-home assessment with a "live" virtual energy specialist. In 2021 the in-person Home Energy Assessment was also offered with the customer choosing which approach meets their needs. Overall, fourteen percent of customers have preferred to have a virtual assessment.

This program works with single family customers of one-to-four-unit buildings in a two-pronged approach. During the initial visit, known as the home energy assessment, energy specialists spend one-to-three hours educating the customer about their home's performance. A comprehensive, whole-house approach is taken where the major energy components of a home are assessed for age and performance and the interactions between systems are explained. During the assessment an energy specialist works with the customer to learn about concerns such as high energy usage, drafty areas, or cold rooms. Instant savings opportunities such as installation of energy efficient lighting, pipe insulation, efficient water savings devices, and advanced power strips are also installed during this visit. The energy specialist and customer tour the home identifying opportunities to improve the systems (heating, water heating, and appliances) and building envelope, the exterior structure of the residence where air leakage can occur and educates them on how energy efficiency upgrades can improve household comfort while providing savings on energy bills. Information about the home's heating fuel source, age of systems, solar system feasibility, and central air conditioning with smart thermostat controls or opportunities for smart thermostat controls are captured to provide opportunities for other efficiency programs. At the completion of the assessment, the customer receives an Energy Action Plan that indicates additional energy savings opportunities and any incentives or financing that are available towards the energy efficiency upgrades.

Customers that proceed to the next phase of Energy*Wise* receive weatherization upgrades. These improvements seal areas where unconditioned air leaks into the home and conditioned air leaks out, and increase insulation in the walls, attic, and basement areas as needed. Weatherization brings a noticeable difference in the comfort level of a customer's home if the residence was previously drafty or lacking in insulation. This upgrade also provides efficiency savings for the next twenty years regardless of who occupies the residence or what fuel is consumed. Homeowners that complete weatherization upgrades improve comfort while saving money on energy costs.

**Overview of Performance**

In 2021, the EnergyWise Single Family program achieved 19,711 net lifetime MWh of electric savings (137.0% of the net lifetime goal) and 786,386 net lifetime MMBtu of gas savings (165.1% of the net lifetime goal).

The EnergyWise program faced increased participation in 2021 which resulted in an overspending situation. Customers that were not 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. Gas program spend was 199.9% of its planned budget, and electric spend was 142.6% of its planned budget. Savings were at 163.6% and 155.7% of target respectively. Overall over 12,550 assessments and nearly 6,300 weatherizations were completed.

The average customer overall satisfaction ratings in 2021 were:

- 8.84 out of 10 for in-person home energy assessments
- 8.75 out of 10 for virtual home energy assessments
- 9.19 out of 10 for weatherization

**Highlights**

EnergyWise won the 2021 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's also the sixth year that the Company 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.

Notable EnergyWise achievements in 2021:

- Working with Narragansett Indian Tribe to provide assessments and weatherization services.
- Served 15 customers on Prudence Island.
- Classic home mailer sent to customers cross-promoting weatherization, low-emissivity storm windows, and refrigerator recycling in July.
- Design of the Regional Greenhouse Gas Initiative Moderate Income offering began in conjunction with the Rhode Island Office of Energy Resources.
- 11.4% of customers receiving assessments were renters, while 7.5% of weatherization projects served renters.

## ENERGY STAR® Lighting

The successful transformation of the Rhode Island residential lighting market has been supported by the efforts of Rhode Island's ENERGY STAR® Lighting Program. Since 2017, when the program exclusively provided incentives to light emitting diode (LED) technology, Rhode Island customers have responded positively by purchasing these bulbs in high volume from retailers, via flash sale promotions, at a pop-up retailer, the Company's Marketplace, and through other specialized channels such as direct sales with

students in the School Fundraiser campaigns or through receiving free bulbs at local food banks. The program, in conjunction with the ENERGY STAR Appliances program, provides considerable retailer support with training of qualified products, in-store education events for customers, retailer verification of program signage, and online training of products and promotions. The majority of lighting products in 2021 were sold at Rhode Island retailers through upstream buydowns between lighting manufacturers and the retailer that lower shelf prices for customers. The Lighting Program's goal to provide affordable and accessible efficient lighting is paired with providing education so consumers select a lighting product that meets their needs and expectations. 2021 is the final year of the ENERGY STAR® lighting program. All in-store incentives concluded on September 30th to allow for adequate time for final invoice processing.

**Overview of Performance**

In 2021, the ENERGYSTAR® Lighting program achieved 26,542 net lifetime MWh of electric savings (99.0% of the lifetime goal).

**Highlights**

Rhode Island garnered the ENERGY STAR Excellence in Marketing award for its successful promotion of the ENERGY STAR® brand.

## Residential Consumer Products

In 2021, the electric-only Residential Consumer Products program focused on efficient dehumidifiers, dryers, room air cleaners, room air conditioners, pool pumps, advanced power strips, refrigerator and freezer recycling, dehumidifier recycling, low-E storm windows, and efficient shower heads. This program works in tandem with ENERGY STAR® Lighting by leveraging resources with in-store retailer visits and social media campaigns when appropriate. An online training platform is used within this program and ENERGY STAR Lighting to train retail sales staff about products and functions as a critical resource for retailers when there are numerous products and features associated with different appliances.

**Overview of Performance**

In 2021, the Residential Consumer Products program achieved 35,916 net lifetime MWh of electric savings (94.2% of the lifetime goal).

**Highlights**

Rhode Island garnered the ENERGY STAR Excellence in Marketing award for its successful promotion of the ENERGY STAR® brand.

Spanish promotion of fridge recycling began in February with an engaging video about the program. In June, a direct mail campaign promoted refrigerator and freezer recycling. In July, the classic homes campaign was jointly promoted with weatherization, low-E storm windows, and refrigerator and freezer recycling. Additional marketplace campaigns in July included promotion of window air conditioning and dehumidifiers. The Company marketplace promoted lighting and advanced power strips in August.

In the third quarter, there were dehumidifier turn-in events in Westerly, Warwick, and North Providence resulting in 226 dehumidifiers collected for recycling. The Lead Vendor began the retail store survey

documenting the prevalence of ENERGY STAR® and non-ENERGY STAR consumer products, retail price, smart product connectivity features, and number of models.

## Home Energy Reports

In its ninth year running, the Rhode Island Home Energy Reports (HER) program continues to encourage energy efficiency behavior through personalized print and email reports. Each of the communication channels displays energy consumption patterns and contains a normative comparison to similarly sized and similarly heated homes, as well as to an energy reduction goal for each customer. 280,677 Rhode Island customers received reports in 2021. At the beginning of the year, COVID messaging and billing options for customers were a point of focus. In mid-2021 the program pivoted back to more traditional messaging.

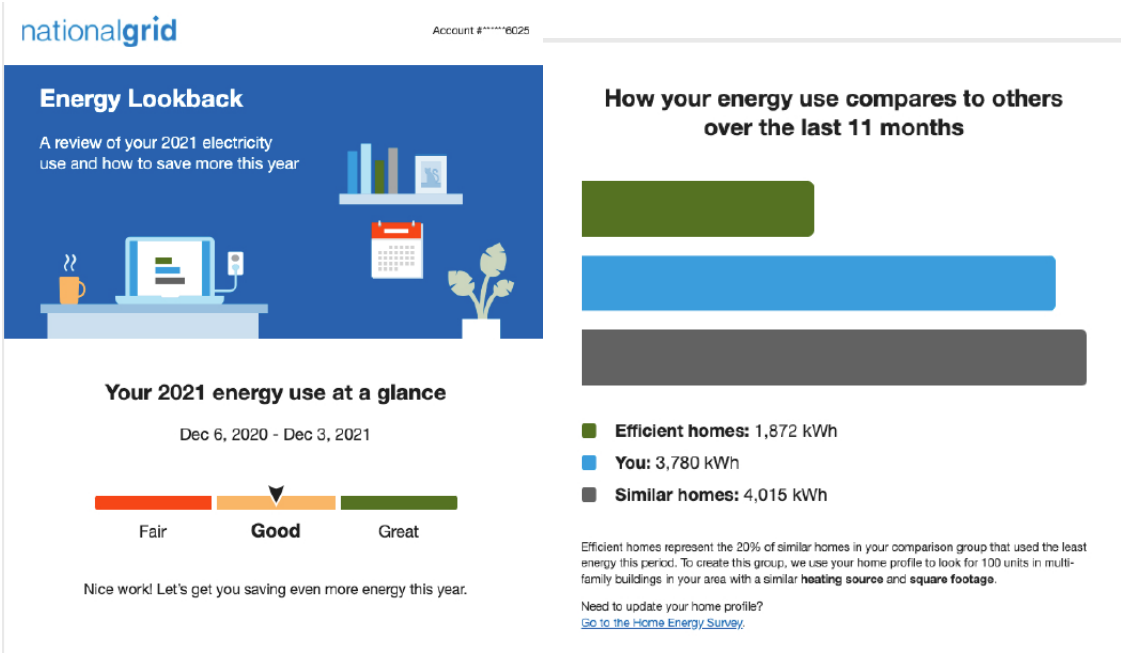
### Overview of Performance

In 2021, The Home Energy Reports program achieved 31,512 net lifetime MWh of electric savings (117.4% of the lifetime goal) and 88,173 net lifetime MMBtu of gas savings (94.3% of the lifetime goal).

### Highlights

An updated version of home energy reports was distributed to customer in print and by email in April. This update, called Home Energy Report 3.0, is designed to keep customers engaged in behavioral energy efficiency. Colors have been refreshed, and neighbor-to-neighbor comparisons have been re-worked.

Below is an example snippet from a Home Energy Reports presentation on year-end energy use.



## Residential New Construction

The Rhode Island Residential New Construction (RNC) program benefits new construction and major renovation of single-family and multi-family homes for market rate and income eligible customers. The program elements include a HERS (Home Energy Rating System) rating, energy modeling & design assistance, in-field technical assistance, insulation and air sealing inspections, building performance testing, educational outreach, energy performance-based incentives, complimentary ENERGY STAR® bulbs and WaterSense® showerheads, optional ENERGY STAR® Homes verification, and support for projects seeking additional certifications such as DOE Zero Energy Ready, Passive House/PHIUS, LEED-H, and Living Building Challenge.

### Overview of Performance

In 2021, the Residential New Construction (RNC) program achieved 16,495 net lifetime MWh of electric savings (91.2% of the lifetime goal) and 48,111 net lifetime MMBtu of gas savings (56.4% of the lifetime goal).

In 2021, 540 housing units were built to the RNC standards, and 512 newly planned units enrolled in the Program. Of the 540 units, 65% were market rate and 35% were affordable housing. Of the 540 customer residences completed, 335 (62%) used electric heat and 148 (27%) had gas heat. 515 (95%) of completed residences were new construction/gut rehabs while 25 (5%) were renovations/rehab. Five units were certified as meeting U.S. DOE's Zero Energy Ready Home standard and 54 units met Passive House standards and are pursuing official certification. 190 income eligible housing units were built to RNC Program Standards.

### Highlights

In 2021, the New Path to Zero Net Energy was added to the RNC program structure. The Company drew upon results and experience from the Zero Energy Pilot conducted from 2018-2020 to design this addition. Included are additional project-level financial performance incentives and technical support, as well as funding to promote certification for both projects and Rhode Island professionals. The redesigned RNC program will help the Company continue to accelerate market adoption of ultra-high efficiency and fossil fuel free zero energy homes.

Rhode Island's first U.S. DOE Zero Energy Ready Home development, four units of a nine-unit townhouse development in Warwick, was completed (see below).

Two, 24-unit Passive House affordable apartment buildings in East Greenwich were completed (see below). An additional two buildings (also twenty-four units each) are to be completed in 2022. This project brings affordable housing units to a municipality with few affordable homes. This is RI's first Passive House multifamily building.

## Residential High Efficiency Heating, Cooling and Hot Water (Electric and Gas)

The Residential High-Efficiency Gas and Electric Heating, Cooling, and Water Heating Programs promote the installation of high-efficiency equipment for gas and electric space heating and cooling, water heating, and controls via tiered customer rebates. The Programs provide contractor training and incentives to ensure best practices are established and followed for proper design of distribution system improvements, equipment sizing and quality installation.[12] Energy efficient heating, cooling and hot water equipment must be installed by a licensed heating contractor or plumber to allow a customer to be eligible for the incentive. Customers receive incentives for the installation of equipment that meets the high efficiency requirements.

### Overview of Performance

In 2021, The ENERGYSTAR® HVAC (Heating and Cooling) program achieved 87,424 net lifetime MWh of electric savings (170.4% of the lifetime goal) and 514,514 net lifetime MMBtu of gas savings (77.1% of the lifetime goal).

### Highlights

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.

[12] Residential programs do not promote or fund fuel switching. It is only after a customer decides to switch to natural gas that they are eligible for an energy efficiency rebate. At the time the customer switches from another fuel to natural gas, they become eligible for an energy efficiency incentive that covers part of the incremental cost of higher efficiency gas equipment.

A new weekly HVAC program newsletter was launched in July specifically for HVAC companies, contractors, technicians, distributors, and other trade allies. The goal of this newsletter is to engage industry stakeholders by sharing important information such as updates, deadlines, best practices, tips for technicians, helpful links, and technical support, as well as soliciting contractor feedback. The current distribution list is over 651.

The Program was invited by Lawrence Air Systems Inc. a Barrington-based HVAC contractor to provide training at MTTI, a technical career training school based in Seekonk MA and East Providence. The training was well received and garnered positive feedback.

> *Thank you so much for bringing your training into MTTI. This group of students are very excited to get out there and practice what they learned last night. I have shared your message with the other instructors. We have four classes going on at all times, and we are all at different stages in the curriculum. They will be reaching out soon. Thanks again, my students gained a lot from your session. This level of training will make a big impact on the quality and efficiency of installations for years to come!"*
> -- Jason T. Lawrence, Owner/General Manager

In October the Heating & Cooling Program team donated HVAC equipment to HVAC & Plumbing students at Providence Career & Technical Academy (see photo below). Equipment included digital gauges, duct thermometers, refrigerant scales, flaring tools, torque wrenches and digital multimeters.

## Multifamily

The Rhode Island Multifamily Retrofit program serves market rate and income eligible gas and electric customers as well as commercial gas customers (see the Income Eligible Multifamily section for specific details on this subset of the program).

**Overview of Performance**

In 2021, the EnergyWise Multifamily program conducted 266 assessments and achieved 10,271 net lifetime MWh of electric savings (63.0% of the lifetime goal) and 152,194 net lifetime MMBtu of gas savings (102.4% of the lifetime goal). The average customer satisfaction survey score (based on the survey administered by the program's lead vendor) was 93%.

**Highlights**

Much of the program's success 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.

The EnergyWise Multifamily program launched the new tiered incentive offer which provides increased incentives for participation in condo facilities and encourages uptake of deeper savings measures in apartment buildings.

The Company started updating the Multifamily Program Brochure, HEAT Loan Application, and website pages. These updates are geared to help customers navigate program information with convenience and ease.

In an effort to increase outreach and awareness to convey the benefits of the Multifamily program, Coddington Cove Apartments has agreed to be featured in an illustrative case study. Below are pictures documenting air-sealing (left) and insulation (right) work.


## Residential ConnectedSolutions

ConnectedSolutions is the Company's demand reduction program that uses electric active demand reduction strategies to reduce peak electrical demand periods throughout the year. Consumers with eligible controllable equipment can enroll to participate in active demand reduction.

**Overview of Performance**

Called events in the summer (June – September) of 2021:

- 12 thermostat events
- 28 battery events

2021 capacity commitments and customer counts:

- 5,949 customers registered for the thermostat measure
- 287 customers registered for the battery measure
- 897 customers registered for the solar inverter power quality demonstration

**Highlights**

The solar inverter power factor correction demonstration is now active. Initial results from the 2021 demonstration appear promising, and the number of registered customers is sufficient to complete the 2022 evaluation.

Enphase enrolled as a new participant within the ConnectedSolutions battery offerings.

## Rhode Island Energy Innovation Hub

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 Dunkin' Donuts Center, prior to the COVID-19 pandemic the Hub drew walk-in customers and groups of customers from local businesses and schools.

**Overview of Performance**

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.

**Highlights**

The Energy Innovation Hub closed at its current location in March 2022 due to lower than anticipated use by the public.

## Residential Energy Efficiency Education Programs

In 2021, the Company and the NEED (National Energy Education Development) Project offered virtual workshops for teachers covering topics such as energy justice and energy burden. Central High School (Providence) and Scituate High School both received awards for exceptional education programs as part of the NEED Project's National Youth Awards Program for Energy Achievement. Both of these schools have been active supporters of the workshops and have assisted with the trainings during the past two years.

nationalgrid

NEED Project

# 2021 Rhode Island Workshop Data

## IMPACT

At least **5,263** students expected to be reached

**47** total workshop attendees

Workshop attendees from **25** different schools across **11** cities and **12** school districts

## VIRTUAL WORKSHOP DATES

May 5, 2021
September 25, 2021
December 4, 2021
December 15, 2021

## WORKSHOP HIGHLIGHTS

Based on 46 evaluation responses across all 4 virtual workshops.

- Majority had attended a previous NEED workshop (70%) with 30% their first time attending an energy training program, virtual or otherwise.
- 93% agree the curriculum meets their classroom needs and are grade level appropriate.
- 98% agree the virtual workshop increased their energy knowledge.
- 100% agree the virtual workshop will allow them to increase their students' energy knowledge.
- 98% will recommend this workshop to other teachers.
- 100% will recommend NEED materials to others.
- Energy-themed posttest scores reflect a 49% increase in knowledge gain.

**I could attend every workshop and learn something new every time!! -6-8th grade teacher**

**I was very impressed with how the workshop was implemented virtually. – 9-12th grade teacher**

**Absolutely best PD. – 6-8th grade teacher**

**Thank you National Grid and NEED! – 9-12th grade teacher**

# Income Eligible Services

## Overview

In 2021, the income eligible sector was cost-effective with RI Test benefit cost (B/C) ratios of 2.07 for electric programs and 3.06 for gas programs. The Company spent 72.2% of the electric residential implementation budget, achieved 77.9% of electric targeted net lifetime energy savings, and achieved 92.1% of electric targeted net annual demand savings. The Company spent 75.0% of the gas residential implementation budget and achieved 64.1% of gas targeted net lifetime energy savings. Additional details on spending and savings by program can be found in Attachment 1, Tables E-1, E-2, E-3 and Attachment 2, Tables G-1, G-2 and G-3.

**Income Eligible Program/WAP Collaborative**

The Company's Income Eligible Services are administered along with related and complementary federal, state, and local programs in collaboration with Rhode Island Department of Human Services (DHS), the CAP agencies, and other local agencies. The alignment of IES with these programs allows a leveraging of funds to provide energy services to income eligible customers in Rhode Island. The leveraging of funds, and coordination between the programs listed below, allows more customers to receive comprehensive energy assessments of appliances, weatherization, and heating system replacements.

- Low Income Home Energy Assistance Program (LIHEAP). Federal LIHEAP funds assist income eligible households in meeting the increasing costs of home energy and reduce the severity of any energy-related crisis. Rhode Island's LIHEAP is administered by the Rhode Island Department of Human Services (DHS) Individual and Family Support/Community Services Division. LIHEAP intake and outreach is provided by the six local CAP agencies. Households are determined eligible for LIHEAP assistance according to income guidelines established by DHS. When customers inquire about, or apply for, LIHEAP assistance, the CAP agencies also provide information about the Income Eligible Energy Efficiency Services to help customers to reduce their energy consumption and energy costs. LIHEAP funds are leveraged with the IES program funds to provide weatherization and heating system replacements.
- Weatherization Assistance Program. The Weatherization Assistance Program (WAP) enables income eligible families to reduce their energy bills (and helps LIHEAP funds go farther) by making their homes more energy efficient, while addressing health and safety concerns. Funds are used to improve the energy performance of income eligible dwellings using the most advanced technologies and testing protocols available in the industry. WAP is funded through annual appropriations from the U.S. Department of Energy's Weatherization Assistance Program and the U.S. Department of Health and Human Services. The state allocates 15% of its annual LIHEAP funding to weatherization.

## Single Family

The Income Eligible Services (IES) program helps reduce electricity and heating costs for residential income eligible customers without any financial obligation from the customer. Income Eligible Services are delivered by Rhode Island's six local Community Action Program (CAPs) agencies. The IES Program serves the following customers: homeowners and renters who live in a 1 – 4 dwelling unit building that is heated

with electricity, natural gas, oil, propane, wood or coal; have a household income equal to, or less than, 60% of Rhode Island's State Area Median Income (AMI) levels which are set each program year or enrolled in the Company's fuel discount rate plans, Electric A-60 rate and/or Gas 11, 13 rates; and customers enrolled in the Low-Income Home Energy Assistance Program (LIHEAP) , also known as "fuel assistance." Services offered to Income Eligible Customers include (1) an energy assessment of their home including behavior, lighting and appliances to determine baseline energy consumption, and if deemed necessary, replacement of inefficient or unsafe appliances (2) an inspection of existing insulation to identify opportunities for weatherization, and (3) a safety and energy efficiency inspection of the customer's heating/cooling system and if deemed necessary, replacement of inefficient or unsafe heating systems. All customers receive all services and equipment upgrades at no cost.

**Overview of Performance**

In 2021, the Company Income Eligible Single Family program achieved 21,505 net lifetime MWh of electric savings (58.3% of the lifetime goal) and 132,704 net lifetime MMBtu of gas savings (66.0% of the lifetime goal).

**Highlights**

Field operations with COVID precautions continued in 2021 with all six CAP agencies providing in-home services. In the second quarter, 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. In the third quarter, the Company distributed the quarterly Welcome E-Mail and Welcome Direct Mail marketing strategy (with English on the front of the letter and Spanish on reverse). This strategy leveraged personalization to promote IES, displaying the regionally appropriate CAP agency based on the customer's service address.

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 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 Company'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. These meetings included most CAP Executive Directors, the Company, 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. The fourth quarter discussions reviewed recommended IES infrastructure changes to ensure successful outcomes for customers in 2022.

## Multifamily

For the program description, see the residential multifamily section.

**Overview of Performance**

In 2021, the Income Eligible Multifamily program conducted 86 assessments and achieved 24,838 net lifetime MWh of electric savings (110.2% of the lifetime goal) and 198,615 net lifetime MMBtu of gas savings (62.9% of lifetime goal).

**Highlights**

An achievement for the program has been the adoption of CHP technology for Income Eligible multifamily facilities. In 2021 the program facilitated the installation and interconnection of four 24kw 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.

In 2021, the company completed the first phase of a project for a 176-unit Housing Authority Project within the EnergyWise Multifamily Income Eligible electric program. Electric resistance ventilators inside customer units were replaced with VRF/ERV ventilators controlled by a new centralized EMS system.

The company also completed two 24 kW CHP installations for the Warwick Housing Authority (one of several Income Eligible Multifamily customers to install a micro-CHP system in 2021). Below are photos and customer feedback from the project.

*We have successfully worked with RISE on several energy saving projects, most recently the installation of a micro CHP. We are pleased with the liaison and more importantly-the savings."* - Stephen O'Rourke, Director of the West Warwick Housing Authority

# Commercial & Industrial Programs

## Overview

In 2021, the Commercial & Industrial (C&I) sector programs were cost-effective with RI Test B/C ratios of a 5.22 for electric programs and 4.40 for gas programs. The Company spent 74.5% of the electric C&I implementation budget, achieved 74.3% of electric targeted net lifetime energy savings and achieved 64.8% of electric targeted net annual demand savings. The Company spent 76.7% of the gas C&I implementation budget and achieved 73.6% of gas targeted net lifetime energy savings. Additional details on spending and savings by program can be found in Attachment 1, tables E-1, E-2, E-3 and Attachment 2, tables G-1, G-2 and G-3.

The electric commercial programs had over 3,600 participants and gas commercial programs had over 300 participants in 2021.

The Company offers four types of energy efficiency programs for commercial and industrial class customers: large commercial and industrial new construction, large commercial and industrial retrofit, small business / direct install, and active demand response. Depending on the customer's energy consumption and demand they could be eligible to participate in one or more of the four main energy efficiency programs.

In addition to the four main efficiency programs, the Company established a Market Sector Approach for commercial and industrial programs. The Market Sector approach allowed the Company to provide customized efficiency solutions that aligned with the customers' needs and therefore increased participation in energy efficiency. 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.).

The Company offers training and education to various entities that enable energy efficiency in the marketplace and communities in Rhode Island. These include architects, engineers, lighting and HVAC professionals. In 2021 gas related trainings were held for RI and MA technical staff, sales staff, vendors, and project expeditors. Seminars were also held on topics including ZNE, cannabis, energy efficiency programs, multifamily infiltration reduction, as well as strategic electrification and VRFs. These events are great educational and outreach opportunities for our regional stakeholders.

Ten commercial trainings were held as part of the Code Compliance Enhancement Initiative in 2021. A Level I Building Operator Certification (BOC) class was held as well as multiple webinars.

For C&I Finance, please see the section that speaks specifically to finance mechanisms and activities.

## Large Commercial and Industrial New Construction

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

**Overview of Performance**

In 2021, the Large Commercial New Construction program achieved 203,780 net lifetime MWh of electric savings (107.6% of goal) and 692,613 net lifetime MMBtu of gas savings (158.3% of goal).

**Highlights**

*Program Redesigned to Promote Zero Net Energy and Focus on Reducing Energy Use Intensity (EUI):* The company launched a new four-path structure informed by learnings from recent pilots and coordination with nearby states. Two new high-performance pathways (the more aggressive of which provides a pathway to Zero Net Energy) were added. These pathways center on setting, achieving, and maintaining an EUI target. An additional new path targeted to smaller projects employs a streamlined savings calculation approach that reduces the need for energy modeling, thereby reducing a cost barrier to program participation. This new program structure was developed in collaboration with other utility program administrators in New England, and these matching program models will provide a more consistent experience for firms working across states. This redesign will help the Company continue to accelerate market adoption of ultra-high efficiency and zero energy buildings.

*Schools Engage in New Program Pathways:* The Company continues to engage with RI school districts that are in the early design phase for new/renovated buildings. The City of Cranston is building a new elementary school and has signed an MOU to participate. The City of Newport is considering Zero Net Energy (ZNE) for a new high school and an addition to the Pell Elementary School. Brown University signed on to the program's ZNE path (Path #1) for two dormitories.

*Cross-Pollination with Communities Initiative:* Quonset Industrial Park in North Kingstown has three buildings that are pre-approved for participation in the New Construction program. Efforts to connect the local community with the Company have been highly successful. Early engagement in the building design process has opened the opportunity to influence the design team to adopt high-efficiency practices.

*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 Company 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.

*Telecommunications Initiative:* Two new local team members were hired to help service the Company's MA and RI territory. One is a RI resident and has direct experience with the Company's energy efficiency offerings. The initiative is working on three projects that may be completed with the assistance of On Bill Repayment (OBR).

*SEMP Initiative*: The Company successfully recruited an additional University to participate in the Strategic Energy Management Planning initiative. The University has agreed to a 3-year MOU with the Company that established specific and aggressive energy efficiency targets and strategies.

*EnergySmart Grocer Initiative:* A regional grocery chain opened a new grocery store in Warwick. This store installed a wide range of energy efficiency measures including night covers, hybrid condensers, destratification fans, VFDs, heat reclamation, kitchen equipment, and lighting. All measures resulted in total gross annual savings of 430 MWh and 1,465 gross annual MMBtus.

## Large Commercial and Industrial Retrofit

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

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

**Overview of Performance**

In 2021, the Large Commercial Retrofit program achieved 450,665 net lifetime MWh of electric savings (60.5% of goal) and 717,900 net lifetime MMBtu of gas savings (49.3% of goal).

Highlights

*Industrial Initiative:* An industrial customer installed a fume mitigation system to reduce energy use by 1,217 gross annual MWh. The project involved 83 primary fans and 38 assist fans to help meet the RIDEM indoor air quality requirement of removing at least 70% of air contaminants. A manufacturer participating in the Industrial Initiative completed a multi-year effort to construct a new process line. The project included installation of a 2,200-ton chilled water plant with free cooling. With assistance from the Industrial Initiative, the customer installed a process measure that reduced will reduce energy consumption by 1,047,219 kWh of gross annual savings and demand by 131 kW – a 55% reduction in energy use from the system.

*Telecommunications Initiative:* Six assessments have been completed and two have been delivered to internet/cable television providers. One of these reports was delivered to a nationwide company with

two locations. The vendor also developed marketing materials to educate customers about common measures (primarily HVAC) and associated incentives. The Company also worked with the vendor to clarify program processes and lay the groundwork for success in 2022.

*Strategic Energy Management Plan (SEMP) Initiative*: The Office of Energy Resources and the Rhode Island Department of Education have announced the School LED Lighting Accelerator Program, which will provide up to 100% of the project costs for LED lighting transformations projects for qualifying schools. The program is funded via Regional Greenhouse Gas Initiative (RGGI) proceeds, and the Company's existing energy efficiency incentives. The Company will also provide lighting audits, RFP assistance, and additional technical support for all of the schools in West Warwick, Woonsocket, and Pawtucket. As of the end of 2021, the Company has installed LED lighting and controls in over 200 Rhode Island schools.

*EnergySmart Grocer Initiative:* 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.

A regional grocery chain opened a new location in Johnston. This store installed a wide range of energy-efficient measures including night covers, destratification fans, VFDs, heat reclaim, lighting, and kitchen equipment. These measures are predicted to save 690 gross annual MWh and 2,300 gross annual MMBtu.

A local supermarket in Pawtucket participated in the Company'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.

## Commercial ConnectedSolutions

The Company implemented an active demand reduction program in 2021. Under the active demand reduction approach, customers agree to reduce their electric use during the system peak.

Called events in the summer (June – September) of 2021:

- 6 C&I Targeted Dispatch events
- 28 C&I Daily Dispatch events
- 12 thermostat events
- 28 battery events

2021 capacity commitments and customer counts:

- 25 gross MW of capacity commitments in C&I Targeted Dispatch
- 13 gross MW of capacity commitments in the C&I Daily Dispatch
- 5,949 customers registered for the thermostat measure
- 287 customers registered for the battery measure

897 customers registered for the solar inverter power quality demonstration

## Small Business Direct Install Program

The Company's Small Business Direct Install program is a retrofit program that provides turnkey services to customers that consume less than 1,000 MWh 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 Company then completes retrofit installations at the customer's convenience. In 2021, the program served small businesses of all types including restaurants, non-profits, and small offices.

**Overview of Performance**

In 2021, the Small Business Direct Install program achieved 118,133 net lifetime MWh of electric savings (112.4% of goal) and 64,537 net lifetime MMBtu of gas savings (132.1% of goal).

**Highlights**

Weatherization projects, LED retrofit kits and luminaires with controls were priority areas in 2021. There were four weatherization projects in Q4 2021. The table below shows the numbers of luminaires with controls and retrofit kits with controls.

| **# Luminaires** | | **# Luminaires with controls** | | **% Luminaires with controls** | |
|---|---|---|---|---|---|
| All 2020 | 13,032 | All 2020 | 149 | All 2020 | 1.1% |
| Q1 2021 | 3,425 | Q1 2021 | 25 | Q1 2021 | 0.7% |
| Q2 2021 | 2,537 | Q2 2021 | 94 | Q2 2021 | 3.7% |
| Q3 2021 | 1,735 | Q3 2021 | 29 | Q3 2021 | 1.7% |
| Q4 2021 | 5,107 | Q4 2021 | 98 | Q4 2021 | 1.9% |
| All 2021 | 12,804 | All 2021 | 246 | All 2021 | 1.9% |

| **# Retrofit kits** | | **# Retrofit kits with controls** | | **% Retrofit kits with controls** | |
|---|---|---|---|---|---|
| All 2020 | 17,260 | All 2020 | 450 | All 2020 | 2.6% |
| Q1 2021 | 4,372 | Q1 2021 | 125 | Q1 2021 | 2.8% |
| Q2 2021 | 2,357 | Q2 2021 | 118 | Q2 2021 | 5.0% |
| Q3 2021 | 2,154 | Q3 2021 | 95 | Q3 2021 | 4.4% |
| Q4 2021 | 7,049 | Q4 2021 | 570 | Q4 2021 | 8.1% |
| All 2021 | 15,932 | All 2021 | 908 | All 2021 | 5.7% |

*Outreach highlights*:

RISE, the SBS Lead Vendor, developed marketing collateral for Woman and Minority owned businesses. This collateral was sent by the Minority Business Compliance Office to 752 businesses. One project has been completed and RISE is following up on leads generated. The Company's vendor also gathered a list of women owned businesses from an article in RI Monthly. Many of these businesses have been contacted via email. Phone follow ups will begin soon. Our vendor has a landing page specifically for the Women and Minority Small Business efforts (also available in Spanish).

The Company's vendor is now a member of Rhode Island Black Business Association. They were featured in the September newsletter as a new member. At the Women in Hospitality (RIHA) event on October 7th, the company secured an audit with Woman-Owned Apponog Brewery for refrigeration controls. RISE sponsored the Hispanic Chamber of Commerce Cafe Con Leche & Business Expo on December 3rd and had

a booth in the expo center. The company provided English and Spanish flyers with information on the Small Business the Company program. At the RI Black Business Association (RIIBA) monthly general membership meeting on October 26th, Kevin Matta (Thielsch Diversity & Inclusion Manager) and Krystal Potenza (RISE Marketing Manager) presented at on the company's commitment to diversity, equity, and inclusion.

*Project highlights:*

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 also 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 pray 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.

# Cross Cutting Programs and Support Services

## Codes and Standards

The Codes and Standards initiative provides targeted stakeholder outreach and technical guidance to improve compliance with minimum energy efficiency policies currently in effect and accelerate the improvement of these minimum efficiency requirements. In 2021 the Company continued to expand its energy code compliance support services to a variety of stakeholder groups.

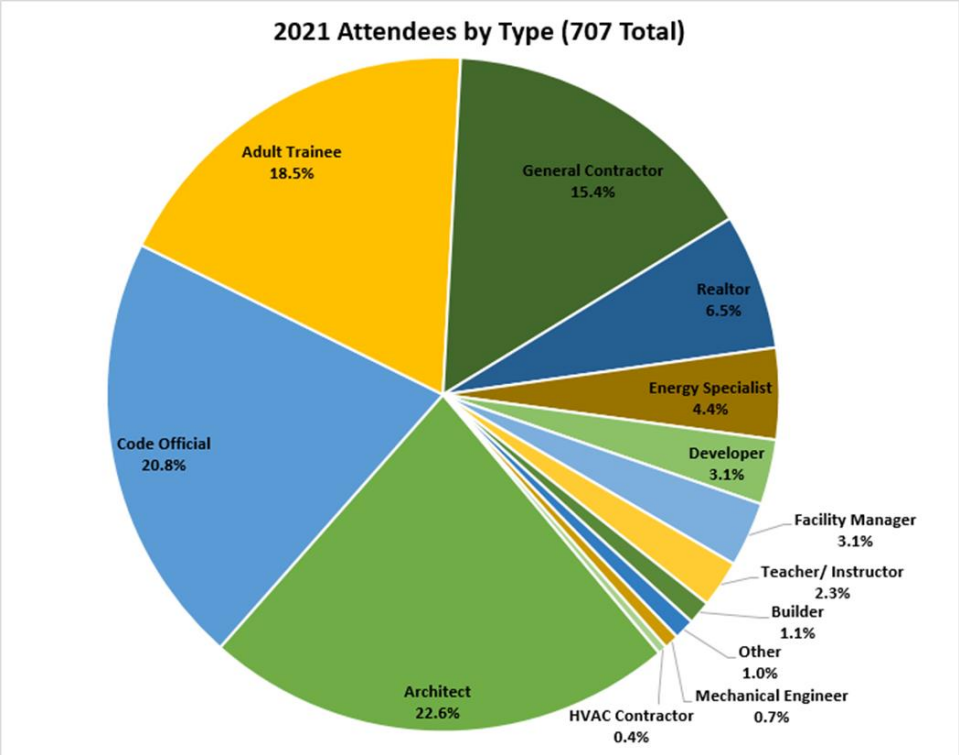
**Overview of Performance**

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 Company 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 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%.




In addition to classroom and on-site trainings, CCEI also provides project-specific technical assistance as well as development and dissemination of energy code documentation/compliance assistance tools. The Company also continues to support awareness and use of the RI Stretch Code through CCEI, including promotion at every training event and fundamental technical guidance.

## Community Based Initiative

The Rhode Island Community Initiative is the Company's energy efficiency awareness campaign that drives program participation by deep municipal engagement with residents and small businesses through the advocacy of local officials. At the start of the program, the Company works hand-in-hand with municipalities to set program goals for energy efficiency upgrades and energy efficiency measures installed. These municipalities, in turn, work to achieve the goals with the help of volunteers and promotions at local events. As Communities progress through the program, the Company provides a number of enabling services including sharing monthly progress reports, conducting monthly calls with municipalities to learn best

practices, developing and printing customized outreach materials, and providing support for local events. At the end of the year, municipalities earn grant monies based on achieving the agreed percentage increase in the identified goals. These funds are then utilized for energy savings projects on a municipal property, or on educational energy programs for community members.

**Highlights**

The Company continued its partnership with Quonset Development Corporation (QDC), under a three-year memorandum of understanding, to provide EE services to the Quonset Industrial Park. In 2021, 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.

## Pilots, Demonstrations and Assessments

In 2021, the Company continued or started fourteen Pilots, Demonstrations, or Assessments. The Company completed six projects and will continue the remaining eight into 2022 (see table below for specifics). 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 Company 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.

| Pilot, Demonstration, or Assessment | Objectives | Findings | Next Steps | Budget (Spend) |
|---|---|---|---|---|
| **Gas Demand Response Pilot** C&I Pilot | Target hourly peak reduction from Extended Demand Response (EDR) pilot offering, and Peak Period Gas Demand Response (PPDR) pilot offering | Limited C&I customer participation on Aquidneck Island. If needed, more hourly load reductions may need to come from residential thermostat programs. | Continue program operations for Q1 2022. Determine future need for program on Aquidneck. | *$215,780* ***$105,542*** |
| **Continuous Energy Improvement 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 | The Company encountered issues related to scalability, recruitment, savings distribution, and the composition of savings. Due to | The Company will look to claim CEI gas savings in spring of 2022. This will mark the end of the contracted CEI demonstration engagement. | *$380,800* ***$327,210*** |

| | | | | |
|---|---|---|---|---|
| | improvement in its energy performance over the long-term. | these shortcomings, the Company has determined not to extend this demonstration or include CEI in the C&I portfolio beyond 2022. | | |
| **Network Lighting + HVAC Control** 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 many reasons: high saturation of LEDs, delays due to COVID, and long project lead times. | Complete system installations and M&V for demonstration participants. | *$194,406* ***$48,015*** |
| **Kitchen Exhaust Controls** 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. | *$200,886* ***$15,606*** |
| **Gas Heat Pumps** 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. | *$434,732* ***$13,353*** |
| **Enzyme-based HVAC Coil Cleaning** 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, | The demonstration revealed that savings will vary significantly based on ventilation requirements; the offering should continue in a | *$85,538* ***$55,411*** |

| | | | | |
|---|---|---|---|---|
| | | as systems continued at full capacity due to under sizing and inefficient distribution. | custom framework. | |
| **HVAC Automation for Demand Response** 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. | *$25,921* ***$9,672*** |
| **Shared Laundry Facilities** 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. | *$25,921* ***$13,883*** |
| **Submetering to Support Energy Efficiency** C&I Assessment | Should the Company 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 Company will launch an updated Monitoring Based Commissioning offering in the ESPO offering. | *$51,841* ***$14,651*** |
| **Smart Valves for Chilled Water Systems** 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 | Continue customer recruitment and M&V activity | *$237,000* ***$81,425*** |

| | | | | |
|---|---|---|---|---|
| | | in good working order to realize full savings potential of the smart valves. | | |
| **Refrigerant Leak Detection Survey and Repair** 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 Company will include this measure as a demonstration in 2022. The demonstration will include one grocery store to participate in M&V activity in 2022. | *$25,921* ***$8,806*** |
| **Pre-Fab Whole House Energy Refurbishment** 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 Company will track progress in market development. | *$25,921* ***$20,907*** |
| **New Air Sealing and Insulation** 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 Company will identify customer sites in 2022 and implement the products. | *$103,683* ***$31,699*** |
| **Solar Inverter Direct Load Control** 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 3rd party evaluator in quantifying the savings and verifying the method of calculating savings. | Preliminary results from the evaluation show kVA and kVAh savings. | The Company will contract with an AESC vendor to translate the kVA and kVAh savings into equivalent AESC economic kW and kWh savings. | *$254,570* ***$70,050*** |

## Rhode Island Comprehensive Marketing

In 2021, the Company's robust, comprehensive marketing campaigns drove awareness, interest and participation in the Company's Energy Efficiency programs.

These omni-channel marketing efforts included messaging focused on affordability, safety and energy saving solutions for customers. Our communication efforts reinforced the financial and energy saving benefits of making upgrades with no-cost virtual and in-home assessments, low-cost energy efficient products, and rebates through our energy saving programs. Sentiment and tone were empathetic and helpful as our customers dealt with the ongoing effects of the COVID-19 pandemic.

The Company's communication plan encompassed two main elements: an overarching education campaign focused on driving awareness and interest and program specific campaigns focused on driving consideration and participation in our energy efficiency programs.

The education campaign highlighted ways for customers to save money and energy with our portfolio of products. Marketing outreach included video, bill inserts, email, digital audio ads, radio, OTT/CTV (connected TV), digital ads, and social media ads on Facebook, Instagram, and Twitter. The campaign highlighted energy-related "holidays" such as Earth Day in April and Energy Efficiency Day in October through email and social campaigns.

Program specific campaigns focused on messaging that would drive consideration and participation including program details, benefits of participation (energy saving, cost saving, comfort), and educational content. Marketing channels included email, direct mail, radio, out of home, social media, and digital and video ads. The Company's website www.ngrid.com/ri-ee continued to serve as a source for information on products and services as well as rebates available to customers.

In 2021, the Company introduced a new multicultural, in-language and in-culture campaign. The objective was to increase awareness of and participation in the Company's residential energy efficiency programs among Hispanic homeowners in Rhode Island. Spanish-language components included Facebook and Instagram ads; out of home posters at markets, convenience stores, hair salons, and other local businesses; transit shelters and bus kings; and digital banner ads on websites. The ads focused on refrigerator recycling and smart thermostat rebates.

## Financing

In 2021, the Company offered a variety of finance options to both commercial and residential customers. Since 2011, the Company has managed several revolving loan funds that allow customers to pay for their portion of an energy efficiency project through their monthly bills. The funds allowed most participants to remain cash-flow positive and helped relieve pressure on the Energy Efficiency Program (EEP) charge by reducing incentive budgets. In 2014, the Company began managing a revolving loan fund for state and municipal customers as part of the RI Public Energy Partnership (RI PEP). Those efforts and financial resources associated with them have been redirected into the Efficient Buildings Fund (EBF). In 2015, the Company extended opportunities for gas projects through the Large Commercial & Industrial (LC&I) gas revolving loan fund. In 2021, the Company had its most successful year in EBF, in terms of claimed electric savings, to date. (See tables E6, G6)

**Large C&I Revolving Loan Fund**

Through the electric LC&I revolving loan fund, the Company offered $8.19 million through 115 loans in on-bill financing to 58 Large Commercial customers that resulted in electric savings of 117,531 net lifetime MWh. At the end of 2021, the fund had a balance of -$2.60 million, including committed 2022 dollars. After accounting for the approved $2M injection with the 2022 plan and the "committed" 2022 dollars, the electric LC&I revolving loan fund begins 2022 with a balance of $5.20M, money that will be available for loans in 2022 and in the future.

Through the gas LC&I revolving loan fund, the Company offered $1.1 million in loans to 4 Large Commercial customers resulting in gas savings of 47,450 net lifetime MMBtus. At the end of 2021, the fund had a balance of -$0.13 million including committed dollars for 2022. After accounting for the "committed" 2022 dollars, the electric LC&I revolving loan fund begins 2022 with a balance of $1.03M, money that will be available for loans in 2022 and in the future.

The Company continues to wind down the revolving loan fund in support of the RI Public Energy Partnership (PEP). 0 customers participated in this offering in 2021. In Q2 2021, $462,477 was returned to RI OER. At the end of 2021, the fund had a balance of $46,895. The Company anticipates that the final loans will be repaid in 2022, allowing for the remaining funds to be returned to RI OER.

**Small Business Revolving Loan Fund:**

Of the 598 customers that participated in the Small Business Direct Install program, each received financing to cover 30% share of the project costs, either over 24 months at zero (0) percent interest or a lump sum payment with a 15% discount. Overall, the Small Business Revolving Loan fund was able to provide $1.04 million in loans that led to 118,133 net lifetime MWh in energy savings. At the end of 2021, the fund had a balance of $3.13 million.

**Efficient Buildings Fund (EBF**): Since 2015, the Company, the Rhode Island Office of Energy Resources (OER), and the Rhode Island Infrastructure Bank (RIIB) have worked together to leverage system benefit charge (SBC) funds and drive energy improvements in facilities in cities and towns across Rhode Island.

A $5 million transfer was planned for 2021 (Docket 5076). RIIB sent the Company a request for the transfer of these funds on December 30th, 2021. The request is being evaluated to ensure that it meets the criteria required by the Rhode Island Public Utilities Commission (RI PUC).

**Commercial Property Assessed Clean Energy (C-PACE):**

One C-PACE project was completed with a large hotel in Providence in 2021. Outreach by the Rhode Island Infrastructure Bank and the Company will continue in 2022.

**Ascentium**

In 2021 the Company continued working with Ascentium Capital, a specialty financing firm who is a leader in equipment and technology financing solutions, to offer customers another way to finance their projects. A simple, rapid approval loan process allows customers to use their incentive to buy down interest on loans (typically to zero percent depending on the term) for up to $250,000. The company saw some interest in this offering, but no projects were funded in 2021.

**HEAT Loan**

The HEAT loan provides zero-percent financing to qualified residential customers to address upfront, initial costs associated with energy efficiency upgrades in their homes and spreads the cost over multiple years. The EnergyWise, Multifamily, HVAC, and Connected Solutions programs pay the negotiated interest for the customer cost portion of the loan. The lender of last resort, the Capital Good Fund (CGF), provides financing to customers with less than perfect credit. There were over 730 loans processed in 2021 totaling approximately $6.9 million in project costs. In 2021 the HEAT Loan allowed for a portion of pre-weatherization barriers remediation to be financed and over three-dozen customers incorporated those upgrades to their loans.

# Evaluation, Measurement and Verification Studies

To verify the effects of the programs on energy savings, the Company hires third party, independent consulting firms to regularly conduct program evaluations as part of its measurement and verification process. These evaluations include engineering analysis, metering analysis, billing analysis, site visits, surveys, and market studies to calculate the actual energy savings resulting from particular measures. Final reports and one-page graphical summaries of completed evaluations can be found on the Energy Efficiency Resource Management Council's website (https://rieermc.ri.gov/plans-reports/evaluation-studies/)

In 2021, 23 evaluation studies were conducted and filed in the 2022 Annual Energy Efficiency Plan.

**C&I Evaluation Studies**

Impact Evaluation of PY2019 Rhode Island C&I Upstream Lighting Initiative

- DNV carried out the Impact Evaluation of the Project Year 2019 Rhode Island C&I Upstream Lighting Initiative for the Company from December 2020 to June 2021. The study's overall purpose was to build on prior research to understand the extent to which program performance is meeting program and policy goals and objectives.

Impact Evaluation of PY2018 and PY2019 Custom Electric Installations

- The objective of this impact evaluation was to provide verification or re-estimation of energy (kWh) savings for a sample of custom electric projects through site-specific inspections, end-use monitoring, and analysis. The site-specific results were aggregated to determine realization rates for the Company's custom electric installations in RI.

Impact Evaluation of PY2019 Custom Gas Installations

- The objective of this impact evaluation was to provide verification or re-estimation of energy (therms) savings for a sample of custom gas projects through site-specific inspections, end-use monitoring, and analysis. The site-specific results were aggregated to determine realization rates for the Company's custom gas installations in RI.

NRNC Market Characterization Study

- Assess and/or inform Industry Standard Practices (ISPs) where possible based on the data collection.
- Assess energy code compliance for select code measures.

Energy Management System ISP Study

- Identify Industry Standard Practices (ISPs) for Energy Management Systems (EMS) systems in existing buildings including: a) How end use customers use their systems; b) whether their systems are under-utilized or in need of repair; c) Whether their systems have failed
- Use this information from primary sources (both EMS vendor/RCx provider interviews and customer site visits) to recommend: a) Criteria for distinguishing a measure event type as either replace-on failure (ROF) or early replacement (ER) b) ISPs for EMS systems in ROF scenarios c) Areas for further EMS research
- Using this primary information to recommend evidentiary standards for defining EMS systems as having failed. If possible, such standards should account for differences in the compliance capabilities of C&I customers of different sizes.
- Determining whether current Mass Save eligibility guidelines for EMS incentives are reasonable based on current standard practices; and
- Allowing the evaluation team to test the feasibility of identifying the age, condition, and operating parameters of an EMS system through both virtual and in-person site visits.

Franchise Controls Deemed Savings Study

- The purpose of this study was to develop measure-level deemed savings estimates for a building automation system (BAS) measure offered for small franchise coffee and donut shops, which are often installed with multiple other efficiency measures such as lighting retrofits and refrigeration controls. The measure applies time switch-based scheduling of small individual food service appliances (e.g., toasters and coffee makers), and often HVAC setback and exterior lighting controls. The study leveraged three different recent evaluation studies, where results from those studies were used as a basis to determine the optimal deemed savings estimate for the BAS measure. The recent studies include billing analysis in study P71, and impact evaluation work for PY2017 small business (MA19C03-E-SBIMPCT) and PY2017/2018 custom electric (MA19C07-E-CUSTELEC). To narrow focus on the BAS measure, DNV isolated five sites that only installed BAS systems that controlled appliances and overlapped in both the M&V and billing analysis samples.

Ground Source Heat Pump eTRM Measure Review

- The purpose of this study was to determine the accuracy of the values in the Massachusetts Technical Reference Manual (eTRM) for estimating savings for ground source heat pumps (GSHP). The main objectives were to provide guidance to the PAs on possible adjustments to the eTRM

savings calculations as they are presented for this measure; the need for estimating whole system savings, as opposed to savings from the heat pump unit only; and measure life estimates, including unit lifetimes vs. whole system lifetime.

C&I HVAC NTG & Market Effects Measurement

- The goal of the study was to establish Net to Gross Ratios (NTGRs) for six technologies supported by the Upstream HVAC Initiative.

C&I Gas Peak Demand Savings

- What are the peak demand to annual usage ratios associated with the EE or DR measures previously identified for the Gas Potential for the Company's Rhode Island jurisdiction?
- What are the 8,760-hourly and 365-day load shape savings ratios to apply to each end use component and DSM potential measure?
- The load shape library developed for this study provides a solid basis for the Company to use in tracking peak gas demand and savings.

**Residential Evaluation Studies**

Residential Home Energy Monitoring (Sense) Demonstration

- The purpose of this study was to conduct a process evaluation of the Company's Sense pilot program that provided residential customers with a device for their homes. This device, the Sense Monitor, connected to the customer's circuit box, and was designed to help residential customers better control their energy consumption through knowledge of where their energy is being used on a real-time basis.

Appliance Recycling Impact Factor Update

- This study calculated gross and net savings estimates for refrigerators and freezers recently recycled through the Company's Rhode Island jurisdiction Recycling Programs. The savings are based on program tracking data from and participant survey results from prior and in-progress studies of a similar program in Massachusetts.

Residential Gas Peak Demand Savings

- The Evaluation Team derived natural gas end-use consumption estimates for the Company's customers in RI by applying adjustment factors to models originally developed using metered data in Massachusetts. This work produced average consumption estimates by time period (annual, monthly, coldest observed day) and day type (weekday vs. weekend/holiday) for boilers, furnaces, domestic hot water (DHW) and clothes dryers.

Net-to-Gross Research of RCD and Select Products Measures

- This study applied new from the net-to-gross (NTG) results of RCD and select Residential Retail measures in Massachusetts. This research included single-family and multifamily participant

surveys, and participating contractor interviews. The team provides a summary of the NTG scores calculated through this research effort, along with the scores that the PAs are currently using. For RI, the study applied new NTG results for the residential gas and electric HVAC programs.

RCD Virtual Assessment Study

- In response to COVID-19 social distancing requirements, the Massachusetts Program Administrators transitioned the Residential Coordinated Delivery (RCD) initiative's in-person home energy assessments (HEA) to virtual home energy assessments (VHEA). The study identified lessons learned from the transition to VHEAs so the PAs can apply them to future RCD cycles and maximize the value of this new delivery mechanism.

Low Income Multifamily Health NEI

- The objective of this study was to quantify and monetize the health- and safety-related NEIs attributable to improvements in the energy efficiency of multifamily buildings served through the Mass Save® income-eligible coordinated delivery initiative. Monetization entails valuing the impacts of weatherization services on program recipients by calculating money saved, or the dollar value of costs avoided, due to changes in health issues and household budgets resulting from weatherization.

Residential New Construction Quick Hit NEI Study

- The primary goal of this quick hit study was to use secondary data to identify and propose possible updates to the NEI values associated with the MA PAs' Residential New Homes and Renovations initiative where possible. A secondary goal of the study was to identify potential additional NEIs that are not currently claimed.

Low-rise Residential New Construction Net-to-Gross Study

- The first goal of the study was to estimate retrospective NTG ratios for single-family and low-rise multifamily homes permitted in 2017-2019. The second objective of the study was to determine annual prospective NTG ratios for single-family and low-rise multifamily homes permitted in 2022-2024. The evaluation provided estimated retrospective and prospective net savings for single-family and low-rise multifamily homes split by program participation and building code.

Renovations and Additions Net-to-Gross Study

- The purpose of this study was to establish retrospective Net-to-Gross ratios for 2019 and prospective NTG ratios to inform planning for the 2022-2024 program cycle for the Renovations and Additions Residential New Construction offering. The study sought to account for programmatic changes in the baseline when determining the prospective NTG ratio. The study also attempted to analyze results of survey questions to better understand topics such as program experience, NEIs, program satisfaction, COVID-19 impacts, and barriers to participation.

Residential Downstream/Upstream Products Net-to-Gross Study

- The study goals were to establish retrospective net-to-gross ratios (NTGRs) and in-service rates (ISRs) for 2019 and develop prospective NTGRs and ISRs for 2022 to 2024 for eight products that are supported through the Residential Retail and Residential Coordinated Delivery initiatives.

**Cross-Cutting Evaluation Study**

Rhode Island Strategic Electrification Study

- The Rhode Island Strategic Electrification Study assesses the cold-climate heat pump market, optimum pathways for heat pump adoption, and opportunities to facilitate market growth. Combining a detailed market assessment with modeling analysis, the study finds that there are significant opportunities for heat pump implementation in the Rhode Island market. In line with previous research, the study finds there to be generally low awareness of heat pump technology among both residential and commercial customers As found in prior research, the high cost of heat pump installation also presents a major barrier to adoption, with the average customer noting they were "not very likely" to install a heat pump without incentives. Providing sufficient incentives is therefore needed to encourage customers to consider the technology. Heat pump costs have been increasing over the last several years at an average of 0.6 – 1.7% per year. The study finds that this is partially attributable to increasing efficiency, new technologies, and the increased adoption of multi-zone ductless systems. Scenario modeling found that, across building typologies, heat pumps are cost-effective for both customers and program administrators when displacing oil, propane and electric resistance heating, even when new cooling loads are added to a building.

Comprehensive TRM Review

- This study reviewed the quality of assumptions and values in the Massachusetts Technical Reference Manual (TRM) to ensure that relevant data from the RES 1 Baseline Study and other recent studies are incorporated into the TRM. The study prioritized TRM parameters that were based on older data sources, data sources outside MA or New England, or those that contribute significantly in EE programs.

Impact Analysis of Residential Wi-Fi Thermostats

- The primary goal of this study is to estimate electric and gas savings from Wi-Fi and programmable thermostats delivered through direct install programs and retail channels.

Workforce Associated with Rhode Island Energy Efficiency Programs Analysis Study

- The Company engaged Guidehouse to estimate the workforce associated with implementation of the Company's Rhode Island's electric and gas energy efficiency programs delivered in 2020. This study addresses the requirements of General Law 39-2-1.2, enacted by the Rhode Island General Assembly in 2012. In 2020, the Company spent a combined $112,665,924 on the Rhode Island programs that saved 157,346 annual megawatt hours (MWh) of electricity and 318,845 million British thermal units (MMBtu) of natural gas.

- The focus of the Energy Efficiency Workforce Analysis Report is to quantify the workforce that was involved in delivering the Company's Rhode Island programs in 2021. The workforce analysis reports the number of jobs associated with the programs and compares them to past years. The study also provides narrative context for those findings and observations. 1,011.0 fulltime equivalent (FTE) workers associated with the Company's spending in 2021 for Rhode Island gas and electric energy efficiency programs.

# Indicators of Performance

## Cost Schedules

Attachments 1a and 2a provide an additional level of granularity for the spending occurring though the Company's energy efficiency programs.

In addition to the non-confidential Attachments 1a and 2a, the Company is also filing confidential vendor schedules, which detail costs to individual vendors and other external entities. These confidential schedules were developed in collaboration with the Division through a Non-Disclosure agreement. The Company is filing these confidential schedules with the PUC with a motion for protective treatment. Below is a list of the confidential schedules that the Company will confidentially provide to the PUC:

- **Confidential Vendor Schedule 1 - 2021 Year End Report - Table E-1 - Program Level Cost Breakdown into Subcategories:** A breakout of the electric energy efficiency programs by cost category and sub category, detailing vendor and external entity costs at a program level
- **Confidential Vendor Schedule 2 - 2021 Year End Report - Table G-1 - Program Level Cost Breakdown into Subcategories:** A breakout of the gas energy efficiency programs by cost category and sub category, detailing vendor and external entity costs at a program level
- **Confidential Vendor Schedule 3 - 2021 Rhode Island Energy Efficiency Vendor Costs (Electric and Natural Gas)**: A listing of the vendor and external entity costs across both the electric and gas portfolios, broken out by cost category
- **Confidential Vendor Schedule 4 - 2021 Rhode Island Energy Efficiency Vendor Costs >$1M (Electric and Natural Gas):** A listing of the vendor and external entity costs greater than $1M across both the electric and gas portfolios in 2021, broken out by cost category, with additional description added of vendor services rendered, and additional vendor details
- **Confidential Vendor Schedule 4a - 2021 Rhode Island Energy Efficiency Vendor Costs >$1M (Electric)**: A listing of the vendor and external entity costs greater than $1M for the electric portfolio in 2021, broken out by cost category
- **Confidential Vendor Schedule 4b - 2021 Rhode Island Energy Efficiency Vendor Costs >$1M (Natural Gas):** A listing of the vendor and external entity costs greater than $1M for the gas portfolio in 2021, broken out by cost category

## Test Performance Metrics

### Carbon Reductions

Beginning in the second quarter of 2021, the Company included a carbon reduction test metric in quarterly reporting. The test metric takes the sector-level annual electric, gas, oil, and propane savings and converts them to short tons of CO2 using emissions factors taken from AESC 2021[13]. Moving forward, the Company will update this test metric to include both annual and lifetime avoided carbon emissions.

### Lifetime MWh and MMBtu Savings

Beginning with the 2021 Annual Energy Efficiency Plan, the Company set its primary energy savings goals in lifetime units. The Company has reported lifetime energy savings units for several years and will continue to track annual energy savings alongside lifetime units. In both 2020 and 2021 the Company has tracked and reported all-fuels annual and lifetime MMBtu savings in 2021. For the electric savings measures, all fuels MMBtu savings can contain savings from electricity, oil, or propane depending on the measure. Moving forward the Company will continue to track this metric and will consider it a standard metric to report out on for program performance.

### Program costs per energy savings

The Company included the program cost per energy savings beginning in 2019. Moving forward the Company will continue to track this metric and will consider it a standard metric to report out on for program performance.

### Customer Satisfaction Metrics

Throughout 2021 the Company continued to track a Customer Satisfaction as detailed in the approved 2021 Annual Plan. Below is a summary of the quarterly results of this metric across the year.

| Customer Satisfaction Metric[1] - 2021 | | | |
|---|---|---|---|
| Q1 | Q2 | Q3 | Q4 |
| 94.8% | 95.3% | 94.2% | 94.3% |

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

Although this metric has some value relating to customer satisfaction, the Company plans to prioritize metrics that more closely align with those in line with the new PIM framework which prioritizes net benefits and costs. Although, customer satisfaction provides anecdotal evidence of customer

[13] Appendix G, Table 171. https://www.synapse-energy.com/sites/default/files/AESC%202021_20-068.pdf

satisfaction with a limited number of programs, it does not directly inform benefit achievement. As a result, in the approved 2022 Annual Plan the Company did not propose to report out on this in 2022 moving forward.

**Peak Hour Gas Demand Savings**

In 2020, the Company began tracking an estimate of peak-hour gas demand savings based on existing heuristics that assume fixed, but distinct, relationships between annual and peak day and peak hour gas consumption for heating and non-heating based customer usage of natural gas. The Company has been clear in all reporting that the Company considers this to be a rough approximation of peak-hour gas demand impacts. In 2021 the Company continued to report out an estimate of peak-hour gas demand savings in its quarterly reports. Beginning in 2022, results from the Company's Gas End Use Consumption Survey[14] will be used to update this metric.

## Jobs Impacts

The Company hired Guidehouse, Inc. to conduct a study of the workforce impacts from the Company'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 Company provided funding support in 2021. The FTE counts cover a wide range of energy efficiency services, including independent contractors and plumbers, rebate processers, engineers, and Company 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.

Guidehouse determined that 1,011.0 full-time equivalent (FTE) employees had work in 2021 supported by investments by the Company in energy efficiency programs provided to its Rhode Island electricity and natural gas customers. At a high level, spending for energy efficiency programs in Rhode Island increased from 2020 to 2021, leading to increased activity and therefore an increase in FTEs among the associated workforce. The study identified 1,152 companies and agencies involved in the Company'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 that assisted customers in securing equipment rebates, for example through the New Construction, Commercial Upstream Lighting, or High-Efficiency HVAC programs.

[14] http://rieermc.ri.gov/wp-content/uploads/2021/07/ri-gas-end-use-consumption-study-final-2021-06-18-final.pdf

**Full-Time Equivalent (FTE) Employment Supported by**

**Energy Efficiency Programs in Rhode Island in 2021**

| Programs | Total FTEs |
|---|---|
| **Electric Programs** | |
| Commercial and Industrial | 217.8 |
| Residential Income Eligible | 75.1 |
| Residential Non-Income Eligible | 351.5 |
| **Gas Programs** | |
| Commercial and Industrial | 20.9 |
| Residential Income Eligible | 41.3 |
| Residential Non-Income Eligible | 249.9 |
| **Other** | |
| The Company | 45.5 |
| Marketing | 9.0 |
| COVID-19 Training | 0.0 |
| **Total all 2021 Rhode Island FTEs** | **1,011.0** |

The study's findings were developed through interviews with energy services and equipment vendors and the Company's contractors, as well as through a detailed review of the Company'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.

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 Company is far larger than the total of FTEs. The study and a complete list of businesses are included as Attachment 5.

## Shareholder Incentive

### Performance Incentive Mechanism Design

Beginning in 2021 (following approval by the Rhode Island PUC in Docket 5076), the Company's shareholder incentive earnings are determined by a subset of total net benefits. This subset, referred to as PIM-eligible net benefits, consists of four categories:[15]

1. Utility system benefits[15]

[15] See tables G-8A, G-8B, E-8A, and E-8B for the specific breakdown of each benefit and cost category. Of note, societal benefits are not PIM-eligible.

2. Resource benefits[15]
    - Discounted by 50%.
3. Eligible spending budget[15]
4. Regulatory costs[15]

PIM-eligible net benefits are equal to utility system benefits plus resource benefits minus the eligible spending budget minus regulatory costs.

The identification of PIM-eligible net benefits is done for each of the three sectors in both electric and gas portfolios.

For each sector, incentive earnings are determined by:

1. Actual PIM-eligible net benefits / planned PIM-eligible net benefits
    - This ratio is referred to as the performance achievement
2. Actual PIM costs / planned PIM costs[16]
    - Referred to below as the spend ratio

When the performance achievement is 1, and the spend ratio is 1, the earned incentive will be the "design-level" performance incentive which is set by the PUC.

The incentive calculation is dictated by four rules which cover all possible scenarios of performance achievements and spending ratios. [17]

| **Rule #** | **Scenario Specifics** |
|---|---|
| Rule 1 | Spend ratio <= 1 |
| Rule 2 | Performance achievement > 1, spend ratio > 1, performance ratio > spend ratio |
| Rule 3 | Performance achievement > 1, spend ratio > 1, performance ratio > spend ratio |
| Rule 4 | Performance achievement < 1, spend ratio > 1 |

**Service Quality Adjustment Mechanism Design**

In addition to the earned performance incentive, the company is subject to potential service quality adjustments (SQAs) which are potential downward earnings adjustments meant to ensure the continued delivery of energy efficiency measures in sectors that are projected to earn zero incentive. The SQA for a particular sector is determined using the ratio of actual to planned PIM-eligible total benefits (referred to as the service adjustment) and the spend ratio (defined above).

The service adjustment and the spend ratio are used to calculate a metric called the adjusted service achievement.[18] This metric is then used to calculate a factor which is used to scale the maximum possible SQA (set by the PUC).[19] The factor increases with lower achievement and decreases with lower spending

**PIM Performance and Earnings in 2021**

[16] Note that PIM costs are a subset of PIM-eligible net benefits.
[17] See PUC Order 24225 for the formulas associated with each rule.
[18] See PUC Order 24225 for the adjusted service adjustment calculation
[19] See PUC Order 24225 for the formula used to calculate this factor

| Sector | Rule Applied | Design-Level Incentive | Received Incentive |
|---|---|---|---|
| Non-income eligible electric | #2 | $500,000 | $625,000 |
| Income-eligible electric | #1 | $500,000 | $0 |
| Commercial & industrial electric | #1 | $5,500,000 | $3,554,590 |
| Non-income eligible gas | #4 | $100,000 | $0 |
| Income-eligible gas | #1 | $500,000 | $0 |
| Commercial & industrial gas | #1 | $1,600,000 | $996,123 |

**Applied Service Quality Adjustments in 2021**

| Sector | Maximum SQA | Applied SQA |
|---|---|---|
| Non-income eligible electric | $1,251,250 | $0 |
| Income-eligible electric | $715,000 | $715,000 |
| Commercial & industrial electric | N/A | N/A |
| Non-income eligible gas | $386,750 | $386,750 |
| Income-eligible gas | $276,250 | $276,250 |
| Commercial & industrial gas | N/A | N/A |

**Total Sector Earnings in 2021** *(PIM minus SQA)*

| Sector | Total Sector Earnings |
|---|---|
| Non-income eligible electric | $625,000 |
| Income-eligible electric | -$715,000 |
| Commercial & industrial electric | $3,554,590 |
| Non-income eligible gas | -$386,750 |
| Income-eligible gas | -$276,250 |
| Commercial & industrial gas | $996,123 |

For the non-income eligible residential electric incentive, $124,135 is being deducted from the $625,000 amount earned above as stated in the Company's response to PUC 5-4 e) in Docket 5076. Therefore, the Company reduced its earnings to a total of $500,865 for the non-income eligible residential electric incentive for calendar year 2021.

**Attachment 1**

# Attachment 1

# Electric Summary Table of Year-End Results

## COMPANY ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table E-1: Summary of 2021 Target and Year End Results

| Sector and Program | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Demand Reduction (Annual kW) | | | Energy Savings (Annual MWh) | | | Customer Participation | | | Implementation Expenses ($ 000) | | | Energy Savings (Lifetime MWh) | | | $ / Lifetime kWh | |
| Commercial & Industrial | Target | Actual | Pct Achieved | Target | Actual | Pct Achieved | Approved Target | Actual | Pct Achieved | Budget | Actual | Pct Achieved | Planned | Actual | Pct Achieved | Planned | Actual |
| Large Commercial New Construction | 1,856 | 1,728 | 93.1% | 11,837 | 13,527 | 114.3% | 145 | 121 | 83.6% | $ 8,188.2 | $ 8,293.7 | 101.3% | 189,441 | 203,780 | 107.6% | $ 0.043 | $0.041 |
| Large Commercial Retrofit | 11,648 | 6,199 | 53.2% | 59,496 | 42,289 | 71.1% | 2,882 | 3,080 | 106.9% | $ 31,565.2 | $ 23,407.6 | 74.2% | 744,562 | 450,665 | 60.5% | $ 0.042 | $0.052 |
| Small Business Direct Install | 1,134 | 1,554 | 137.0% | 9,696 | 9,616 | 99.2% | 571 | 480 | 84.1% | $ 8,883.6 | $ 7,483.2 | 84.2% | 105,134 | 118,133 | 112.4% | $ 0.084 | $0.063 |
| Commercial ConnectedSolutions | | | | | | | | | | $ 2,990.1 | $ 3,086.3 | 103.2% | | | | | |
| Commercial Pilots | | | | | | | | | | $ - | $ - | 0.0% | | | | | |
| Community Based Initiatives - C&I | | | | | | | | | | $ 74.5 | $ - | 0.0% | | | | | |
| Financing | | | | | | | | | | $ 5,000.0 | $ - | 0.0% | | | | | |
| **SUBTOTAL** | **14,638** | **9,481** | **64.8%** | **81,029** | **65,433** | **80.8%** | **3,598** | **3,681** | **102.3%** | **$ 56,701.6** | **$ 42,270.7** | **74.5%** | **1,039,136** | **772,578** | **74.3%** | **$ 0.055** | **$0.055** |
| **Income Eligible Residential** | | | | | | | | | | | | | | | | | |
| Single Family - Income Eligible Services | 457 | 397 | 86.7% | 3,120 | 2,427 | 77.8% | 3,412 | 5,362 | 157.1% | $ 12,846.1 | $ 8,393.9 | 65.3% | 36,909 | 21,505 | 58.3% | $ 0.348 | $0.390 |
| Income Eligible Multifamily | 70 | 89 | 127.3% | 1,554 | 1,835 | 118.1% | 3,600 | 630 | 17.5% | $ 3,549.0 | $ 3,447.4 | 97.1% | 22,545 | 24,838 | 110.2% | $ 0.157 | $0.139 |
| **SUBTOTAL** | **527** | **486** | **92.1%** | **4,674** | **4,262** | **91.2%** | **7,012** | **5,992** | **85.5%** | **$ 16,395.1** | **$ 11,841.3** | **72.2%** | **59,454** | **46,342** | **77.9%** | **$ 0.276** | **$0.256** |
| **Non-Income Eligible Residential** | | | | | | | | | | | | | | | | | |
| Residential New Construction | 66 | 110 | 167.4% | 979 | 876 | 89.4% | 417 | 484 | 116.1% | $ 1,611.3 | $ 1,137.8 | 70.6% | 18,088 | 16,495 | 91.2% | $ 0.089 | $0.069 |
| ENERGY STAR® HVAC | 204 | 320 | 156.6% | 3,181 | 5,220 | 164.1% | 5,037 | 8,132 | 161.4% | $ 3,487.8 | $ 4,334.7 | 124.3% | 51,309 | 87,424 | 170.4% | $ 0.068 | $0.050 |
| EnergyWise | 445 | 707 | 159.2% | 2,841 | 4,425 | 155.7% | 11,223 | 14,640 | 130.4% | $ 15,692.2 | $ 22,381.3 | 142.6% | 14,385 | 19,711 | 137.0% | $ 1.091 | $1.135 |
| EnergyWise Multifamily | 158 | 232 | 146.9% | 1,240 | 1,494 | 120.5% | 3,600 | 924 | 25.7% | $ 2,804.3 | $ 1,335.5 | 47.6% | 16,307 | 10,271 | 63.0% | $ 0.172 | $0.130 |
| Home Energy Reports | 3,692 | 4,333 | 117.4% | 26,852 | 31,512 | 117.4% | 323,248 | 280,677 | 86.8% | $ 2,641.7 | $ 2,374.9 | 89.9% | 26,852 | 31,512 | 117.4% | $ 0.098 | $0.075 |
| ENERGY STAR® Lighting | 1,872 | 2,016 | 107.7% | 11,533 | 12,628 | 109.5% | 68,164 | 70,210 | 103.0% | $ 5,274.8 | $ 3,938.7 | 74.7% | 26,801 | 26,542 | 99.0% | $ 0.197 | $0.148 |
| Residential Consumer Products | 1,019 | 1,115 | 109.5% | 5,926 | 5,515 | 93.1% | 33,111 | 33,692 | 101.8% | $ 2,681.2 | $ 2,535.1 | 94.5% | 38,130 | 35,916 | 94.2% | $ 0.070 | $0.071 |
| Residential ConnectedSolutions | | | | | | | | | | $ 1,920.5 | $ 611.5 | 31.8% | | | | | |
| Energy Efficiency Education Programs | | | | | | | | | | $ 40.0 | $ 40.0 | 100.1% | | | | | |
| Residential Pilots | | | | | | | | | | $ - | $ 0.0 | 0.0% | | | | | |
| Community Based Initiatives - Residential | | | | | | | | | | $ 226.2 | $ 114.8 | 50.7% | | | | | |
| Comprehensive Marketing - Residential | | | | | | | | | | $ 332.7 | $ 264.1 | 79.4% | | | | | |
| **SUBTOTAL** | **7,455** | **8,834** | **118.5%** | **52,553** | **61,670** | **117.3%** | **444,801** | **408,759** | **91.9%** | **$ 36,712.7** | **$ 39,068.3** | **106.4%** | **191,872** | **227,870** | **118.8%** | **$ 0.191** | **$0.171** |
| **Regulatory** | | | | | | | | | | | | | | | | | |
| OER | | | | | | | | | | $ 738.5 | $ 738.5 | 100.0% | | | | | |
| EERMC | | | | | | | | | | $ 738.5 | $ 645.1 | 87.4% | | | | | |
| **SUBTOTAL** | | | | | | | | | | **$ 1,477.0** | **$ 1,383.6** | **93.7%** | | | | | |
| | | | | | | | | | | | | | | | | | |
| **TOTAL** | **22,621** | **18,800** | **83.1%** | **138,256** | **131,365** | **95.0%** | **455,411** | **418,432** | **91.9%** | **$ 111,286.3** | **$ 94,564.0** | **85.0%** | **1,290,462** | **1,046,790** | **81.1%** | **$ 0.086** | **$0.090** |

**NOTES**

(1)(4)(7) Targets from Docket 5076 - Attachment 5, Table E-7 (electric), Refiled December 22, 2020.

(3) Pct Achieved is Column (2)/ Column (1).

(6) Pct Achieved is Column (5)/ Column (4).

(8) Participation was planned and is reported in 'net' terms which takes into account free-ridership and spillover.

(9) Pct Achieved is Column (8)/ Column (7).

(10) Approved Implementation Budget from Docket 5076, Attachment 5 Table E-3 (electric), Refiled December 22, 2020.

(11) Year To Date Expenses includes implementation expenses.

(12) Pct Achieved is Column (11)/ Column (10).

(15) Pct Achieved is Column (14)/ Column (13).

(17) $/lifetime kWh = Column (11)/Column (14).

(16) Planned $/lifetime MWh from Docket 5076 - Attachment 5, Table E-5 (electric), Refiled December 22, 2020 - adjusted to reflect format of quarterly and year end report.. Program Implementation Expenses/lifetime kWh. = Column (10) / Column (13)

## COMPANY ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table E-2: Summary of 2021 EE Benefits ($000)

| | | Capacity | | | | | Energy | | | | | Utility NEIs | Non Electric | | | | Societal | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Winter | | Summer | | | | | | | | | | |
| | Total | Summer Generation | Capacity DRIPE | Trans | Dist | Reliability | Peak | Off Peak | Peak | Off Peak | Electric Energy DRIPE | Utility NEIs | Natural Gas and Natural Gas | Oil and Oil DRIPE | Other Resource (Propane, Water) | Non Resource | Carbon | NOx | Economic (1) |
| **Non-Income Eligible Residential** | | | | | | | | | | | | | | | | | | | |
| Residential New Construction | $5,796 | $220 | $3 | $257 | $223 | $1 | $377 | $415 | $64 | $49 | $228 | $0 | $0 | $1 | $1,701 | $128 | $334 | $18 | $1,775 |
| ENERGY STAR HVAC | $27,204 | $415 | $0 | $530 | $460 | $2 | $2,527 | $2,937 | $238 | $182 | $2,125 | $0 | $22 | $6,315 | -$5 | $437 | $3,840 | $330 | $6,849 |
| Energy Wise | $52,289 | $388 | $212 | $512 | $445 | $3 | $322 | $290 | $256 | $198 | $540 | $0 | $0 | $18,267 | $357 | $2,040 | $4,504 | $454 | $23,500 |
| EnergyWise Multifamily | $7,103 | $120 | $47 | $158 | $137 | $1 | $113 | $95 | $91 | $67 | $207 | $0 | $0 | $182 | $59 | $3,688 | $188 | $13 | $1,936 |
| Home Energy Reports | $9,547 | $295 | $1,511 | $476 | $413 | $12 | $812 | $657 | $372 | $249 | $1,080 | $0 | $0 | $0 | $0 | $0 | $989 | $44 | $2,636 |
| ENERGY STAR Lighting | $12,529 | $284 | $869 | $463 | $402 | $8 | $663 | $531 | $300 | $198 | $1,213 | $0 | -$244 | -$326 | -$126 | $903 | $606 | $10 | $6,774 |
| Residential Consumer Products | $11,206 | $530 | $13 | $795 | $690 | $5 | $649 | $632 | $483 | $417 | $1,689 | $0 | $0 | $0 | $2 | $0 | $1,069 | $49 | $4,183 |
| **Non-Income Eligible Residential SUBTOTAL** | **$125,673** | **$2,252** | **$2,655** | **$3,190** | **$2,771** | **$31** | **$5,463** | **$5,558** | **$1,805** | **$1,360** | **$7,083** | **$0** | **-$222** | **$24,439** | **$1,989** | **$7,195** | **$11,530** | **$919** | **$47,654** |
| | | | | | | | | | | | | | | | | | | | |
| **Income Eligible Residential** | | | | | | | | | | | | | | | | | | | |
| Single Family - Income Eligible Services | $19,605 | $305 | $61 | $400 | $347 | $2 | $437 | $423 | $258 | $234 | $615 | $166 | $60 | $2,369 | $409 | $4,410 | $971 | $80 | $8,058 |
| Income Eligible Multifamily | $5,011 | $40 | $18 | $55 | $48 | $0 | $32 | $27 | $15 | $11 | $62 | $14 | $0 | $0 | $0 | $165 | $41 | $2 | $4,482 |
| **Income Eligible Residential SUBTOTAL** | **$24,617** | **$344** | **$79** | **$455** | **$395** | **$2** | **$470** | **$450** | **$273** | **$245** | **$677** | **$181** | **$60** | **$2,369** | **$409** | **$4,575** | **$1,012** | **$82** | **$12,540** |
| | | | | | | | | | | | | | | | | | | | |
| **Commercial & Industrial** | | | | | | | | | | | | | | | | | | | |
| Large Commercial New Construction | $56,014 | $2,178 | $0 | $2,786 | $2,419 | $8 | $5,364 | $2,520 | $3,204 | $1,626 | $5,369 | $0 | -$157 | $0 | $35 | $2,228 | $5,452 | $256 | $22,725 |
| Large Commercial Retrofit | $203,067 | $5,212 | $80 | $7,053 | $6,125 | $30 | $8,755 | $8,107 | $6,339 | $4,451 | $15,282 | $0 | -$2,792 | $0 | $0 | $8,843 | $11,571 | $419 | $123,592 |
| Small Business Direct Install | $33,083 | $1,536 | $0 | $2,036 | $1,768 | $8 | $2,426 | $1,551 | $2,185 | $1,091 | $3,776 | $0 | -$806 | $0 | $0 | $2,960 | $3,000 | $102 | $11,449 |
| **Commercial & Industrial SUBTOTAL** | **$292,163** | **$8,927** | **$80** | **$11,874** | **$10,311** | **$46** | **$16,545** | **$12,179** | **$11,728** | **$7,168** | **$24,428** | **$0** | **-$3,755** | **$0** | **$35** | **$14,031** | **$20,024** | **$777** | **$157,766** |
| | | | | | | | | | | | | | | | | | | | |
| **Grand Total** | **$442,453** | **$11,523** | **$2,813** | **$15,519** | **$13,477** | **$80** | **$22,478** | **$18,186** | **$13,807** | **$8,772** | **$32,188** | **$181** | **-$3,917** | **$26,808** | **$2,433** | **$25,801** | **$32,566** | **$1,778** | **$217,960** |

(1) In preparing responses to the PUC's Sixth Set of Data Requests in Docket 5189, the Company identified an error in the economic multipliers used in the 2021 Annual Energy Efficiency Plan. The error was due to the way participant costs were entered in REMI. This Year End Report filing of actual economic benefits uses the corrected multipliers found in the "Economic Multipliers Update" memo to the PUC, filed on January 6, 2022.

# COMPANY ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table E-2A: Summary of 2021 EE Impacts

| | kW Saved | | MWh Saved | | MMBtu of Gas | | MMBtu of Oil | | MMBtu of Propane | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Summer | Winter | Annual | Lifetime | Annual | Lifetime | Annual | Lifetime | Annual | Lifetime |
| **Non-Income Eligible Residential** | | | | | | | | | | |
| Residential New Construction | 110 | 58 | 876 | 16,495 | - | - | 2 | 25 | 1,864 | 46,590 |
| ENERGY STAR HVAC | 320 | 1,262 | 5,220 | 87,424 | 158 | 2,407 | 17,051 | 255,923 | (11) | (144) |
| Energy Wise | 707 | 914 | 4,425 | 19,711 | 17 | 183 | 37,436 | 726,535 | 314 | 5,132 |
| EnergyWise Multifamily | 232 | 269 | 1,494 | 10,271 | - | - | 214 | 3,851 | 38 | 862 |
| Home Energy Reports | 4,333 | 6,696 | 31,512 | 31,512 | - | - | - | - | - | - |
| ENERGY STAR Lighting | 2,016 | 2,423 | 12,628 | 26,542 | (14,224) | (28,449) | (8,602) | (17,204) | (2,329) | (4,658) |
| Residential Consumer Products | 1,115 | 597 | 5,515 | 35,916 | - | - | - | - | - | - |
| **Non-Income Eligible Residential SUBTOTAL** | **8,834** | **12,219** | **61,670** | **227,870** | **(14,049)** | **(25,858)** | **46,101** | **969,130** | **(124)** | **47,782** |
| | | | | | | | | | | |
| **Income Eligible Residential** | | | | | | | | | | |
| Single Family - Income Eligible Services | 397 | 400 | 2,427 | 21,505 | 579 | 6,328 | 4,942 | 92,597 | 293 | 5,677 |
| Income Eligible Multifamily | 89 | 755 | 1,835 | 24,838 | - | - | - | - | - | - |
| **Income Eligible Residential SUBTOTAL** | **486** | **1,155** | **4,262** | **46,342** | **579** | **6,328** | **4,942** | **92,597** | **293** | **5,677** |
| | | | | | | | | | | |
| **Commercial & Industrial** | | | | | | | | | | |
| Large Commercial New Construction | 1,728 | 1,708 | 13,527 | 203,780 | (1,368) | (20,345) | - | - | - | - |
| Large Commercial Retrofit | 6,199 | 5,134 | 42,289 | 450,665 | (25,544) | (314,128) | - | - | - | - |
| Small Business Direct Install | 1,554 | 1,480 | 9,616 | 118,133 | (7,328) | (87,813) | - | - | - | - |
| **Commercial & Industrial SUBTOTAL** | **9,481** | **8,322** | **65,433** | **772,578** | **(34,240)** | **(422,286)** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | |
| **Grand Total** | **18,800** | **21,696** | **131,365** | **1,046,790** | **(47,710)** | **(441,816)** | **51,043** | **1,061,726** | **169** | **53,460** |

## COMPANY ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table E-2B: Summary of 2021 ADM Benefits ($000)

| | | Capacity | | | | | Energy | | | | Societal | | Load Reduction (MW) | MWh Saved | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Summer | | | | | | | | |
| | Total | Summer Generation | Capacity DRIPE | Trans | Dist | Reliability | Peak | Off Peak | Electric Energy DRIPE | Non Electric | Carbon | Economic | Summer | Annual | Lifetime |
| **Non-Income Eligible Residential** | | | | | | | | | | | | | | | |
| Residential ConnectedSolutions | $5,893 | $190 | $4,031 | $582 | $506 | $71 | $2 | $1 | $1 | $0 | $2 | $508 | 5.3 | 50.4 | 50.4 |
| **Non-Income Eligible Residential SUBTOTAL** | **$5,893** | **$190** | **$4,031** | **$582** | **$506** | **$71** | **$2** | **$1** | **$1** | **$0** | **$2** | **$508** | **5.3** | **50.4** | **50.4** |
| | | | | | | | | | | | | | | | |
| **Commercial & Industrial** | | | | | | | | | | | | | | | |
| Commercial ConnectedSolutions | $29,077 | $737 | $15,680 | $2,966 | $2,575 | $359 | $0 | $0 | $0 | $0 | $0 | $6,759 | 27.0 | 0.0 | 0.0 |
| **Commercial & Industrial SUBTOTAL** | **$29,077** | **$737** | **$15,680** | **$2,966** | **$2,575** | **$359** | **$0** | **$0** | **$0** | **$0** | **$0** | **$6,759** | **27.0** | **0.0** | **0.0** |
| | | | | | | | | | | | | | | | |
| **Grand Total** | **$34,969** | **$927** | **$19,711** | **$3,548** | **$3,081** | **$430** | **$2** | **$1** | **$1** | **$0** | **$2** | **$7,266** | **32.3** | **50.4** | **50.4** |

# COMPANY ELECTRIC ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table E-3: Summary of B/C Ratios, Value and Costs ($000's)
## 2021 Program Year

| Commercial & Industrial | (1) Benefit/ Cost | (2) Total Value | (3) Program Implementation Expenses | (4) Customer Contribution | (5) Shareholder Incentive |
|---|---|---|---|---|---|
| Large Commercial New Construction | 5.08 | $56,013.7 | $8,293.7 | $2,732.0 | |
| Large Commercial Retrofit | 5.97 | $203,066.8 | $23,407.6 | $10,620.0 | |
| Small Business Direct Install | 3.37 | $33,082.8 | $7,483.2 | $2,340.5 | |
| Commercial ConnectedSolutions | 9.42 | $29,076.6 | $3,086.3 | | |
| Commercial Pilots | | | $0.0 | | |
| Community Based Initiatives - C&I | | | $0.0 | | |
| Financing | | | $0.0 | | |
| **SUBTOTAL** | **5.22** | **$321,239.7** | **$42,270.7** | **$15,692.4** | **$3,554.6** |
| **Income Eligible Residential** | | | | | |
| Single Family - Income Eligible Services | 2.34 | $19,605.5 | $8,393.9 | $0.0 | |
| Income Eligible Multifamily | 1.43 | $5,011.5 | $3,447.4 | $47.5 | |
| **SUBTOTAL** | **2.07** | **$24,616.9** | **$11,841.3** | **$47.5** | **$0.0** |
| **Non-Income Eligible Residential** | | | | | |
| Residential New Construction | 3.03 | $5,795.9 | $1,137.8 | $774.2 | |
| ENERGY STAR® HVAC | 3.45 | $27,203.7 | $4,334.7 | $3,550.9 | |
| EnergyWise | 2.19 | $52,288.6 | $22,381.3 | $1,444.3 | |
| EnergyWise Multifamily | 4.61 | $7,102.6 | $1,335.5 | $206.3 | |
| Home Energy Reports | 4.02 | $9,547.3 | $2,374.9 | $0.0 | |
| ENERGY STAR® Lighting | 2.34 | $12,529.2 | $3,938.7 | $1,417.3 | |
| Residential Consumer Products | 3.07 | $11,205.9 | $2,535.1 | $1,119.3 | |
| Residential ConnectedSolutions | 9.64 | $5,892.6 | $611.5 | | |
| Energy Efficiency Education Programs | | | $40.0 | | |
| Residential Pilots | | | $0.0 | | |
| Community Based Initiatives - Residential | | | $114.8 | | |
| Comprehensive Marketing - Residential | | | $264.1 | | |
| **SUBTOTAL** | **2.73** | **$131,565.8** | **$39,068.3** | **$8,512.2** | **$625.0** |
| **Regulatory** | | | | | |
| OER | | | $738.5 | | |
| EERMC | | | $645.1 | | |
| **SUBTOTAL** | | | **$1,383.6** | | |
| **TOTAL** | **3.88** | **$477,422.5** | **$94,564.0** | **$24,252.0** | **$4,179.6** |

**Notes:**

(1) RI Test B/C Ratio = (Capacity + Energy + Utility NEIs + Non Electric + Societal + Economic Benefits) / (Program Implementation + Customer Contribution + Shareholder Incentive)

(2) Year-End Value Total from Table E-2.

(3) Year-End Implementation Expenses by Program from Table E-1 including Finance Costs.

(4) For the Income Eligible Multifamily program, there are some circumstances where a customer co-pay is charged. If the facility is owned by a for-profit company and there are custom measures being installed that cannot be supported by the program budget a co-pay will be negotiated with the customer.

(5) The C&I Shareholder incentive and residential incentive for this calculation are from Tbl 4c. For the non-income eligible residential incentive, $124,135 is being deducted as stated in the Company's response to PUC 5-4 e) in Docket 5076. For the calculation of B/C ratio purposes, the full amount of $625,000 is used above.

**Company Electric Energy Efficiency Programs in Rhode Island**
**Table 4A: Actual Electric PIM Benefits, Allocations, and Categorization**
**2021 Program Year**

| | Capacity | | | | | Energy | | | | | Utility NEIs | Non Electric | | | | Societal | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Winter | | Summer | | | | | | | | | | |
| **Sector** | **Summer Generation** | **Capacity DRIPE** | **Trans** | **Dist** | **Reliability** | **Peak** | **Off Peak** | **Peak** | **Off Peak** | **Electric Energy DRIPE** | **Utility NEIs** | **Natural Gas and Natural** | **Oil and Oil DRIPE** | **Other Resource (Propane, Water)** | **Non Resource** | **Carbon** | **NOx** | **Economic** |
| **Non-Income Eligible Residential** | $2,252,277 | $2,655,051 | $3,190,417 | $2,770,592 | $31,335 | $5,462,991 | $5,557,780 | $1,804,800 | $1,359,969 | $7,083,427 | $0 | -$221,606 | $24,438,561 | $1,989,110 | $7,195,354 | $11,529,668 | $919,359 | $47,654,073 |
| **Income Eligible Residential** | $344,334 | $78,585 | $455,121 | $395,232 | $2,173 | $469,512 | $449,920 | $273,468 | $244,565 | $676,907 | $180,653 | $59,510 | $2,368,959 | $409,455 | $4,575,000 | $1,012,038 | $81,718 | $12,539,784 |
| **Commercial & Industrial** | $8,926,831 | $79,716 | $11,873,875 | $10,311,400 | $46,139 | $16,545,083 | $12,178,731 | $11,728,245 | $7,167,730 | $24,427,732 | $0 | -$3,755,178 | $0 | $34,894 | $14,030,907 | $20,024,205 | $776,897 | $157,765,966 |
| **Included in PIM? (Y/N)** | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | N | N | N |
| **Percent Application in PIM** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 50% | 50% | 50% | 0% | 0% | 0% | 0% |
| **Category** | Electric Utility System Benefits | Electric Utility System Benefits | Electric Utility System Benefits | Electric Utility System Benefits | Electric Utility System Benefits | Electric Utility System Benefits | Electric Utility System Benefits | Electric Utility System Benefits | Electric Utility System Benefits | Electric Utility System Benefits | Electric Utility System Benefits | Resource Benefits | Resource Benefits | Resource Benefits | NA | NA | NA | NA |

**Company Electric Energy Efficiency Programs in Rhode Island**
**Table 4B: Actual Electric PIM Costs**
**2021 Program Year**

| Sector | Eligible Spending Budget | Pilot Costs | Assessment Costs | Regulatory Costs |
|---|---|---|---|---|
| **Non-Income Eligible Residential** | $38,456,846 | $0 | $5,089 | $594,636 |
| **Income Eligible Residential** | $11,841,316 | $0 | $0 | $183,095 |
| **Commercial & Industrial** | $39,184,426 | $0 | $34,427 | $605,886 |
| **Included in PIM? (Y/N)** | Y | N | N | Y |
| **Percent Application in PIM** | 100% | 0% | 0% | 100% |

**Company Electric Energy Efficiency Programs in Rhode Island**
**Table 4C: PIM and SQA Summary**
**2021 Program Year**

| Sector | Inputs ($) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Electric Utility System Benefits | Resource Benefits | Achieved Total Benefits | Achieved Costs | Achieved Net Benefits | Planned Total Benefits | Planned Total Costs | Planned Net Benefits |
| Non-Income Eligible Residential | $32,168,639 | $13,103,032 | $45,271,671 | $39,051,482 | $6,220,189 | $33,287,475 | $35,277,973 | -$1,990,498 |
| Income Eligible Residential | $3,570,469 | $1,418,962 | $4,989,431 | $12,024,412 | -$7,034,981 | $9,095,749 | $16,887,402 | -$7,791,653 |
| Commercial & Industrial | $103,285,481 | -$1,860,142 | $101,425,339 | $39,790,312 | $61,635,027 | $143,629,799 | $54,119,601 | $89,510,198 |

| Sector | PIM ($) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Design Performance Achievement | Achieved Net Benefits / Design Performance Achievement | Achieved / Planned Costs | Planned Performance Incentive | Planned Payout Rate | Payout Cap | Earned Performance Incentive |
| Non-Income Eligible Residential | $2,000,000 | 311.01% | 110.70% | $500,000 | 25.00% | $625,000 | $625,000 |
| Income Eligible Residential | $2,000,000 | -351.75% | 71.20% | $500,000 | 25.00% | $625,000 | $0 |
| Commercial & Industrial | $89,510,198 | 68.86% | 73.52% | $5,500,000 | 6.14% | $6,875,000 | $3,554,590 |

| Sector | SQA ($) | | | | |
|---|---|---|---|---|---|
| | Design Service Achievement | Service Achievement | Maximum Service Adjustment | Service Quality Adjustment Amount | % of Maximum Service Quality Adjustment Applied |
| Non-Income Eligible Residential | $33,287,475 | 136.00% | $1,251,250 | $0 | 0.00% |
| Income Eligible Residential | $9,095,749 | 54.85% | $715,000 | $715,000 | 100.00% |
| Commercial & Industrial | $143,629,799 | 70.62% | N/A | N/A | N/A |

(1) See Shareholder Incentive section (page 47) of the 2021 Year Report's Main Text for details on calculation of the Performance Incentive. Performance Incentive calculations are based on the PUC's Order from September 21, 2021 as detailed in Appendix A.

(2) For the non-income eligible residential incentive of $625,000 as stated above, $124,135 is being deducted as stated in the Company's response to PUC 5-4 e) in Docket 5076. The final amount claimed is $500,865

**The Company**

**TABLE E-5**

**OVERALL ANALYSIS OF ENERGY EFFICIENCY FUND BALANCE**

| | JANUARY | FEBRUARY | MARCH | APRIL | MAY | JUNE | TOTAL |
|---|---|---|---|---|---|---|---|
| 1. Start Of Period Balance | $22,821,366 | $30,843,784 | $35,486,710 | $33,489,576 | $33,052,708 | $33,046,883 | $22,821,366 |
| 2. Revenue | $8,311,184 | $7,640,556 | $7,745,097 | $6,885,828 | $7,095,154 | $8,762,738 | $46,440,557 |
| 3. Monthly EE Expenses | $336,575 | $3,056,722 | $9,767,800 | $7,347,363 | $7,125,482 | $6,727,146 | $34,361,088 |
| 4. Cash Flow Over/(Under) | $7,974,609 | $4,583,834 | ($2,022,703) | ($461,535) | ($30,327) | $2,035,592 | $12,079,469 |
| 5. End Of Period Balance Before Interest | $30,795,975 | $35,427,618 | $33,464,006 | $33,028,041 | $33,022,380 | $35,082,475 | $34,900,835 |
| 6. Interest | $47,809 | $59,092 | $25,569 | $24,667 | $24,503 | $25,265 | $206,904 |
| 7. End Of Period Balance After Interest | $30,843,784 | $35,486,710 | $33,489,576 | $33,052,708 | $33,046,883 | $35,107,740 | $35,107,740 |

| | JULY | AUGUST | SEPTEMBER | OCTOBER | NOVEMBER | DECEMBER | YEAR END TOTAL |
|---|---|---|---|---|---|---|---|
| 8. Start Of Period Balance | $35,107,740 | $37,723,052 | $41,139,870 | $44,158,189 | $46,302,760 | $45,460,583 | $22,821,366 |
| 9. Revenue 19 | $9,079,635 | $9,783,921 | $7,920,947 | $7,668,568 | $6,839,902 | $7,403,706 | $95,137,236 |
| 10. Monthly EE Expenses | $6,491,321 | $6,396,337 | $4,934,247 | $5,557,530 | $7,716,095 | $29,190,280 | $94,646,899 |
| 11. Cash Flow Over/(Under) | $2,588,314 | $3,387,584 | $2,986,699 | $2,111,037 | ($876,193) | ($21,786,574) | $490,337 |
| 12. End Of Period Balance Before Interest | $37,696,054 | $41,110,636 | $44,126,569 | $46,269,226 | $45,426,567 | $23,674,010 | $23,311,703 |
| 13. Interest | $26,998 | $29,234 | $31,620 | $33,533 | $34,016 | $25,637 | $387,944 |
| 14. End Of Period Balance After Interest | $37,723,052 | $41,139,870 | $44,158,189 | $46,302,760 | $45,460,583 | $23,699,647 | **$23,699,647** |
| 15. 2021 Incentive | | | | | | | **$3,340,455** |
| 16. Ending Balance after Incentive | | | | | | | **$20,359,192** |
| 17. Income Eligible Subsidization | | | | | | | **$0** |
| 18. Ending Balance after Subsidization | | | | | | | **$20,359,192** |

1. Previous year's ending balance
2. Business Objects queries for revenues
3. SAP queries for expenses
4. Line 2 minus Line 3
5. Line 1 plus Line 4
6. Interest applied
7. Line 5 plus Line 6
8. Previous month's ending balance
9. Business Objects queries for revenues
10. SAP queries for expenses
11. Line 9 minus Line 10
12. Line 8 plus Line 11
13. Interest applied
14. Line 12 plus Line 13
15. Estimated 2021 Incentive plus prior period true-ups
19. Revenues in July 2016 include $1.525 million received from RGGI for the RI-E Municipal L Expenses for this program are captured in WO 90000176341

# COMPANY ELECTRIC ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table E-6: Company 2021 Revolving Loan Funds

### Large C&I Electric Revolving Loan Fund

| | | |
|---|---|---|
| | Income Statement | |
| (1) | 2021 Funds Available | $7,010,036 |
| | | |
| (2) | 2021 Loan budget | $15,000,000 |
| (3) | Committed | $5,806,047 |
| (4) | Paid | $8,913,256 |
| (5) | Repayments | $5,106,076 |
| (6) | Available 12/31/21 | -$2,603,191 |
| (7) | Outstanding loan volume | $16,137,367 |
| (8) | Loan defaults during period ($) | $0 |
| (9) | Arrears over 120 days at period end ($) | $18,171 |
| | | |
| | Program Impact | |
| (10) | Number of loans | 115 |
| (10b) | Participants | 58 |
| (11) | Annual Savings (Gross MWh) | 14,354 |
| (12) | Annual Savings (Net MWh) | 10,447 |
| (13) | Lifetime Savings (Gross MWh) | 162,080 |
| (14) | Lifetime Savings (Net MWh) | 117,531 |
| (15) | Annual Savings (Gross kW) | 1,836 |
| (16) | Annual Saving (Net kW) | 1,559 |
| (17) | Total associated incentive volume ($) | $4,590,700 |
| (18) | Total annual estimated energy cost savings ($) | $1,849,204 |

### Small Business Electric Revolving Loan Fund

| | | |
|---|---|---|
| | Income Statement | |
| (1) | 2021 Funds Available | $3,144,530 |
| | | |
| (2) | 2021 Loan budget | $3,000,000 |
| (3) | Committed | $0 |
| (4) | Paid | $1,042,896 |
| (5) | Repayments | $1,035,904 |
| (6) | Available 12/31/21 | $3,137,538 |
| (7) | Outstanding loan volume | $603,706 |
| (8) | Loan defaults during period ($) | $0 |
| (9) | Arrears over 120 days at period end ($) | $30,615 |
| | | |
| | Program Impact | |
| (10b) | Participants | 598 |
| (11) | Annual Savings (Gross MWh) | 10,415 |
| (12) | Annual Savings (Net MWh) | 9,616 |
| (13) | Lifetime Savings (Gross MWh) | 127,054 |
| (14) | Lifetime Savings (Net MWh) | 118,133 |
| (15) | Annual Savings (Gross kW) | 1,818 |
| (16) | Annual Saving (Net kW) | 1,554 |
| (17) | Total associated incentive volume ($) | $6,875,040 |
| (18) | Total annual estimated energy cost savings ($) | $1,702,113 |

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

| | | |
|---|---|---|
| | Income Statement | |
| (1) | 2021 Funds Available | $462,477 |
| | | |
| (2) | 2021 Loan budget | $0 |
| (3) | Committed | $0 |
| (4) | Paid | $0 |
| (4a) | Funds Returned to OER | $462,477 |
| (5) | Repayments | $46,894 |
| (6) | Available 12/31/21 | $46,895 |
| (7) | Outstanding loan volume | $22,529 |
| (8) | Loan defaults during period ($) | 0 |
| (9) | Arrears over 120 days at period end ($) | 0 |
| | | |
| | Program Impact | |
| (10) | Number of loans | 0 |
| (10b) | Participants | 0 |
| (11) | Annual Savings (Gross MWh) | 0 |
| (12) | Annual Savings (Net MWh) | 0 |
| (13) | Lifetime Savings (Gross MWh) | 0 |
| (14) | Lifetime Savings (Net MWh) | 0 |
| (15) | Annual Savings (Gross kW) | 0 |
| (16) | Annual Saving (Net kW) | 0 |
| (17) | Total associated incentive volume ($) | $0 |
| (18) | Total annual estimated energy cost savings ($) | $0 |

Notes

1 Amount available as of January 1, 2021. Includes line (6) "Available 12/31/20" plus line (3) "Committed" in Table E-6 and G-6 of the 2020 Year End Report.
2 Budget adopted by Sales Team for 2021 operations. Budget includes projections of repayments made during 2021.
3 As of December 31, 2021
4 As of December 31, 2021. This includes all projects paid through December 31, 2021 and the OBR associated with those projects. OBR payment are processed once the associated incentive has been paid usually in batches.
4a Funds returned to RI OER.
5 As of December 31, 2021
6 Fund balance as of December 31, 2021. Committed funds are subtracted from this amount.
7 Total outstanding loan balance. Loans lent out that still need to be paid back. This includes loans from previous years.
8 Total loan value in default during period.
9 Total loan value in arrears for over 120 days as of December 31, 2021.
10 As of December 31, 2021
10b Unique customer names for large business (one customer name can have multiple sub accounts as is in the case of a franchise). Customer accounts used for small business (not adjusted for net-to-gross).
11 As of December 31, 2021
12 As of December 31, 2021
13 As of December 31, 2021
14 As of December 31, 2021
15 As of December 31, 2021
16 As of December 31, 2021
17 Incentives paid out with loans.
18 Estimated energy cost savings to loan fund participants.

## COMPANY ELECTRIC ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND

### Table E-7: 2021 Heat Loans

| | | Single Family EnergyWise | Multifamily | HVAC | Batteries |
|---|---|---|---|---|---|
| (1) | Number of loans | 593 | 11 | 84 | 49 |
| (2) | Loan amount | $4,908,870 | $109,818 | $1,057,067 | $830,898 |
| (3) | Measures | | | | |
| | Pre-Weatherization | 41 | | | |
| | Weatherization | 222 | | | |
| | Heatsystems | 397 | | | |
| | DHW | 52 | | | |
| (4) | Percentage of weatherization in loans | 37% | | | |

Notes

1 Equals the number of participants. As of December 31, 2021

2 Total amount of loans dispersed in 2021.

3 Measures financed through loans.

4 Percentage of Heat Loan recipients using their loan for weatherization.

**Attachment 1a**

# Attachment 1a

# Electric Costs Schedules

## Schedule 1 - Program and Sector Cost Summary

**DIRECT vs ALLOCATED**

| | | (a) | (b) | (c ) | (d) | (e ) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **TOTALS** | | | | **DETAILS** | | | | | | | | | | | |
| | | TOTAL SPLIT 1 | | TOTAL SPLIT 2 | | **DIRECT COSTS** | | | | | | **ALLOCATED COSTS** | | | | | |
| | | DIRECT vs ALLOCATED | | Cost of services and product rebates/incentives provided to customers vs. Other Costs (1) | | **NO INCENTIVE (2)** | | | **Cost of services and product rebates/incentives provided to customers** | | | **Other Costs** | | | **Cost of services and product rebates/incentives provided to customers** | | |
| | | **Total Costs** | DIRECT | ALLOCATED | Cost of services and product rebates/incentives provided to customers | Other Costs | Company Direct Labor & Employee Expense | Direct External | Direct "Not Labor, Expense, External" | Company Direct Labor & Employee Expense | Direct External | Direct "Not Labor, Expense, External" | Company Allocated Labor & Employee Expense | Allocated External | Allocated "Not Labor, Expense, External" | Company Allocated Labor & Employee Expense | Allocated External | Allocated "Not Labor, Expense, Vendor" |
| 1 | Residential New Construction (Electric) | $1,137,772 | $1,071,853 | $65,919 | $752,553 | $385,218 | $34,593 | $284,637 | $70 | $0 | $752,553 | $0 | $44,946 | $20,965 | $7 | $0 | $0 | $0 |
| 2 | ENERGY STAR HVAC (Electric) | $4,334,652 | $4,255,892 | $78,760 | $3,171,975 | $1,162,677 | $38,984 | $1,044,933 | $0 | $0 | $3,171,975 | $0 | $50,238 | $28,512 | $10 | $0 | $0 | $0 |
| 3 | EnergyWise (Electric) | $22,381,348 | $22,054,110 | $327,238 | $19,180,072 | $3,201,276 | $53,482 | $2,820,486 | $70 | $0 | $19,180,072 | $0 | $213,691 | $113,503 | $44 | $0 | $0 | $0 |
| 4 | EnergyWise Multi Family (Electric) | $1,335,480 | $1,259,875 | $75,604 | $987,866 | $347,614 | $23,045 | $248,965 | $0 | $0 | $987,866 | $0 | $49,665 | $25,929 | $10 | $0 | $0 | $0 |
| 5 | Home Energy Reports (Electric) | $2,374,944 | $2,318,485 | $56,459 | $0 | $2,374,944 | $2,131 | $2,316,354 | $0 | $0 | $0 | $0 | $40,466 | $15,988 | $5 | $0 | $0 | $0 |
| 6 | ENERGY STAR Lighting (Electric) | $3,938,661 | $3,726,365 | $212,296 | $3,092,614 | $846,046 | $28,110 | $605,641 | $0 | $0 | $3,092,614 | $0 | $135,729 | $76,539 | $28 | $0 | $0 | $0 |
| 7 | Residential Consumer Products (Electric) | $2,535,063 | $2,461,768 | $73,295 | $1,226,877 | $1,308,186 | $63,288 | $1,171,603 | $0 | $0 | $1,226,877 | $0 | $44,603 | $28,683 | $8 | $0 | $0 | $0 |
| 8 | Residential ConnectedSolutions (Electric) | $611,492 | $571,233 | $40,259 | $442,193 | $169,299 | $19,543 | $109,426 | $70 | $0 | $442,193 | $0 | $28,336 | $11,919 | $4 | $0 | $0 | $0 |
| 9 | Energy Efficiency Education Programs (Electric) | $40,027 | $40,027 | $0 | $0 | $40,027 | $27 | $40,000 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 10 | Residential Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 11 | Community Based Initiatives - Residential (Electric) | $114,765 | $114,765 | $0 | $0 | $114,765 | $1,567 | $113,198 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 12 | Comprehensive Marketing Residential (Electric) | $264,135 | $256,548 | $7,586 | $0 | $264,135 | $0 | $256,548 | $0 | $0 | $0 | $0 | $2,259 | $5,326 | $0 | $0 | $0 | $0 |
| 13 | **Subtotal Non-Income Eligible Residential** | **$39,068,337** | **$38,130,921** | **$937,417** | **$28,854,151** | **$10,214,186** | **$264,770** | **$9,011,790** | **$210** | **$0** | **$28,854,151** | **$0** | **$609,933** | **$327,367** | **$116** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | | | | | |
| 14 | Single Family - Income Eligible Services (Electric) | $8,393,903 | $8,115,542 | $278,361 | $6,728,914 | $1,664,988 | $13,888 | $1,372,740 | $0 | $0 | $6,728,914 | $0 | $184,367 | $93,957 | $37 | $0 | $0 | $0 |
| 15 | Income Eligible Multifamily (Electric) | $3,447,414 | $3,349,240 | $98,174 | $2,890,315 | $557,099 | $15,673 | $443,252 | $0 | $0 | $2,890,315 | $0 | $64,828 | $33,332 | $14 | $0 | $0 | $0 |
| 16 | **Subtotal Income Eligible Residential** | **$11,841,316** | **$11,464,782** | **$376,535** | **$9,619,229** | **$2,222,087** | **$29,561** | **$1,815,992** | **$0** | **$0** | **$9,619,229** | **$0** | **$249,195** | **$127,289** | **$51** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | | | | | |
| 17 | Large Commercial New Construction (Electric) | $8,293,665 | $7,783,643 | $510,022 | $6,303,680 | $1,989,985 | $153,714 | $1,326,109 | $140 | $0 | $6,303,680 | $0 | $362,569 | $147,428 | $25 | $0 | $0 | $0 |
| 18 | Large Commercial Retrofit (Electric) | $23,407,589 | $21,780,949 | $1,626,640 | $17,576,705 | $5,830,884 | $715,014 | $3,488,951 | $280 | $0 | $17,576,705 | $0 | $1,121,424 | $505,122 | $94 | $0 | $0 | $0 |
| 19 | Small Business Direct Install (Electric) | $7,483,172 | $7,150,239 | $332,933 | $6,875,040 | $608,132 | $46,535 | $228,664 | $0 | $0 | $6,875,040 | $0 | $200,833 | $132,067 | $32 | $0 | $0 | $0 |
| 20 | Commercial ConnectedSolutions (Electric) | $3,086,268 | $2,962,942 | $123,326 | $2,883,079 | $203,189 | $25,163 | $54,701 | $0 | $0 | $2,883,079 | $0 | $78,275 | $45,040 | $10 | $0 | $0 | $0 |
| 21 | Commercial Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | Community Based Initiatives - C&I (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | Finance Costs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 24 | **Subtotal Commercial & Industrial** | **$42,270,694** | **$39,677,774** | **$2,592,920** | **$33,638,504** | **$8,632,190** | **$940,425** | **$5,098,426** | **$420** | **$0** | **$33,638,504** | **$0** | **$1,763,102** | **$829,657** | **$162** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | | | | | |
| 25 | OER (Electric) | $738,504 | $738,504 | $0 | $0 | $738,504 | $0 | $738,504 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 26 | EERMC (Electric) | $645,113 | $645,113 | $0 | $0 | $645,113 | $0 | $645,113 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 27 | **Subtotal Regulatory** | **$1,383,618** | **$1,383,618** | **$0** | **$0** | **$1,383,618** | **$0** | **$1,383,618** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 28 | **TOTAL All Sectors** | **$94,563,965** | **$90,657,094** | **$3,906,871** | **$72,111,884** | **$22,452,081** | **$1,234,756** | **$17,309,825** | **$629** | **$0** | **$72,111,884** | **$0** | **$2,622,230** | **$1,284,312** | **$329** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | | | | | |
| | **SRP PROGRAMS (Electric)** | **$3,092** | **$3,092** | **$0** | **$0** | **$3,092** | **$592** | **$2,500** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| | **OTHER COSTS NOT LISTED ABOVE (Electric)** | **$79,840** | **$79,840** | **$0** | **$79,841** | **-$1** | **$0** | **-$1** | **$0** | **$0** | **$79,841** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

1 Prior to the 2021 Energy Efficiency Annual Plan filing, this cost category was referred to as "Rebates and Other Incentives"
2 These Costs do not include costs relating to the cost of services and product rebates/incentives provided to customers

## Schedule 1a - Program and Sector Cost Summary

**By Report Category**

| | | | (d) (Schedule 4) col a | (e ) (Schedule 5) col a | (f) (Schedule 6) col a | (g) (Schedule 7) col a | (h) (Schedule 8) col a |
|---|---|---|---|---|---|---|---|
| | | **Total Costs** | Program Planning & Admin. | Marketing | Cost of services and product rebates/incentives provided to customers (1) | STAT | Evaluation & Research |
| 1 | Residential New Construction (Electric) | $1,137,772 | $73,324 | $419 | $752,553 | $273,158 | $38,317 |
| 2 | ENERGY STAR HVAC (Electric) | $4,334,652 | $77,218 | $224,207 | $3,171,975 | $797,156 | $64,097 |
| 3 | EnergyWise (Electric) | $22,381,348 | $304,401 | $250,527 | $19,180,072 | $2,512,535 | $133,814 |
| 4 | EnergyWise Multi Family (Electric) | $1,335,480 | $82,758 | $12,964 | $987,866 | $200,486 | $51,405 |
| 5 | Home Energy Reports (Electric) | $2,374,944 | $37,393 | $183 | $0 | $2,332,389 | $4,979 |
| 6 | ENERGY STAR Lighting (Electric) | $3,938,661 | $248,249 | $478,625 | $3,092,614 | $97,483 | $21,689 |
| 7 | Residential Consumer Products (Electric) | $2,535,063 | $67,890 | $522,708 | $1,226,877 | $653,333 | $64,255 |
| 8 | Residential ConnectedSolutions (Electric) | $611,492 | $63,886 | $106 | $442,193 | $63,102 | $42,204 |
| 9 | Energy Efficiency Education Programs (Electric) | $40,027 | $0 | $40,027 | $0 | $0 | $0 |
| 10 | Residential Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 |
| 11 | Community Based Initiatives - Residential (Electric) | $114,765 | $1,567 | $113,198 | $0 | $0 | $0 |
| 12 | Comprehensive Marketing Residential (Electric) | $264,135 | $1,824 | $262,310 | $0 | $0 | $0 |
| 13 | **Subtotal Non-Income Eligible Residential** | **$39,068,337** | **$958,511** | **$1,905,274** | **$28,854,151** | **$6,929,643** | **$420,759** |
| | | | | | | | |
| 14 | Single Family - Income Eligible Services (Electric) | $8,393,903 | $259,516 | $86,299 | $6,728,914 | $1,227,014 | $92,159 |
| 15 | Income Eligible Multifamily (Electric) | $3,447,414 | $104,382 | -$1,110 | $2,890,315 | $387,285 | $66,541 |
| 16 | **Subtotal Income Eligible Residential** | **$11,841,316** | **$363,899** | **$85,189** | **$9,619,229** | **$1,614,299** | **$158,700** |
| | | | | | | | |
| 17 | Large Commercial New Construction (Electric) | $8,293,665 | $225,310 | $160,023 | $6,303,680 | $1,425,927 | $178,724 |
| 18 | Large Commercial Retrofit (Electric) | $23,407,589 | $929,659 | $228,738 | $17,576,705 | $3,981,101 | $691,387 |
| 19 | Small Business Direct Install (Electric) | $7,483,172 | $263,735 | $172,779 | $6,875,040 | $165,442 | $6,176 |
| 20 | Commercial ConnectedSolutions (Electric) | $3,086,268 | $162,906 | $30 | $2,883,079 | $40,253 | $0 |
| 21 | Commercial Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | Community Based Initiatives - C&I (Electric) | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | Finance Costs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 |
| 24 | **Subtotal Commercial & Industrial** | **$42,270,694** | **$1,581,611** | **$561,570** | **$33,638,504** | **$5,612,723** | **$876,286** |
| | | | | | | | |
| 25 | OER (Electric) | $738,504 | $738,504 | $0 | $0 | $0 | $0 |
| 26 | EERMC (Electric) | $645,113 | $645,113 | $0 | $0 | $0 | $0 |
| 27 | **Subtotal Regulatory** | **$1,383,618** | **$1,383,618** | **$0** | **$0** | **$0** | **$0** |
| 28 | **TOTAL All Sectors** | **$94,563,965** | **$4,287,638** | **$2,552,033** | **$72,111,884** | **$14,156,664** | **$1,455,746** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **SRP PROGRAMS (Electric)** | **$3,092** | **$2,964** | **$128** | **$0** | **$0** | **$0** |
| **OTHER COSTS NOT LISTED ABOVE (Electric)** | **$79,840** | **-$1** | **$0** | **$79,841** | **$0** | **$0** |

## Schedule 2 - Labor and Employee Expenses

| | | (a) (b)+(c ) | (b) (e )+(h) | (c ) (f)+(i) | (d) (e )+(f) | (e ) | (f) | (g) (h)+(i) | (h) | (i) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Company Labor + Expenses** | Company Direct Labor + Expenses | Company Allocated Labor + Expenses | **Total Company Labor** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses |
| 1 | Residential New Construction (Electric) | $79,539 | $34,593 | $44,946 | $78,601 | $34,593 | $44,008 | $937 | $0 | $937 |
| 2 | ENERGY STAR HVAC (Electric) | $89,222 | $38,984 | $50,238 | $88,065 | $38,984 | $49,081 | $1,157 | $0 | $1,157 |
| 3 | EnergyWise (Electric) | $267,173 | $53,482 | $213,691 | $262,304 | $53,458 | $208,846 | $4,868 | $24 | $4,845 |
| 4 | EnergyWise Multi Family (Electric) | $72,710 | $23,045 | $49,665 | $71,535 | $23,045 | $48,490 | $1,175 | $0 | $1,175 |
| 5 | Home Energy Reports (Electric) | $42,597 | $2,131 | $40,466 | $41,199 | $2,131 | $39,068 | $1,397 | $0 | $1,397 |
| 6 | ENERGY STAR Lighting (Electric) | $163,839 | $28,110 | $135,729 | $160,862 | $28,033 | $132,829 | $2,977 | $77 | $2,900 |
| 7 | Residential Consumer Products (Electric) | $107,891 | $63,288 | $44,603 | $106,787 | $63,219 | $43,568 | $1,104 | $69 | $1,035 |
| 8 | Residential ConnectedSolutions (Electric) | $47,880 | $19,543 | $28,336 | $47,381 | $19,527 | $27,854 | $499 | $17 | $482 |
| 9 | Energy Efficiency Education Programs (Electric) | $27 | $27 | $0 | $27 | $27 | $0 | $0 | $0 | $0 |
| 10 | Residential Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 11 | Community Based Initiatives - Residential (Electric) | $1,567 | $1,567 | $0 | $1,567 | $1,567 | $0 | $0 | $0 | $0 |
| 12 | Comprehensive Marketing Residential (Electric) | $2,259 | $0 | $2,259 | $2,232 | $0 | $2,232 | $27 | $0 | $27 |
| 13 | **Subtotal Non-Income Eligible Residential** | **$874,703** | **$264,770** | **$609,933** | **$860,561** | **$264,583** | **$595,977** | **$14,143** | **$186** | **$13,956** |
| | | | | | | | | | | |
| 14 | Single Family - Income Eligible Services (Electric) | $198,254 | $13,888 | $184,367 | $193,788 | $13,888 | $179,900 | $4,467 | $0 | $4,467 |
| 15 | Income Eligible Multifamily (Electric) | $80,502 | $15,673 | $64,828 | $79,009 | $15,673 | $63,336 | $1,492 | $0 | $1,492 |
| 16 | **Subtotal Income Eligible Residential** | **$278,756** | **$29,561** | **$249,195** | **$272,797** | **$29,561** | **$243,236** | **$5,959** | **$0** | **$5,959** |
| | | | | | | | | | | |
| 17 | Large Commercial New Construction (Electric) | $516,283 | $153,714 | $362,569 | $489,431 | $143,826 | $345,605 | $26,852 | $9,888 | $16,964 |
| 18 | Large Commercial Retrofit (Electric) | $1,836,438 | $715,014 | $1,121,424 | $1,776,696 | $701,281 | $1,075,415 | $59,742 | $13,733 | $46,009 |
| 19 | Small Business Direct Install (Electric) | $247,368 | $46,535 | $200,833 | $243,039 | $46,535 | $196,504 | $4,329 | $0 | $4,329 |
| 20 | Commercial ConnectedSolutions (Electric) | $103,438 | $25,163 | $78,275 | $100,750 | $24,947 | $75,802 | $2,689 | $215 | $2,473 |
| 21 | Commercial Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | Community Based Initiatives - C&I (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | Finance Costs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 24 | **Subtotal Commercial & Industrial** | **$2,703,527** | **$940,425** | **$1,763,102** | **$2,609,915** | **$916,589** | **$1,693,326** | **$93,612** | **$23,836** | **$69,775** |
| | | | | | | | | | | |
| 25 | OER (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 26 | EERMC (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 27 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 28 | **TOTAL All Sectors** | **$3,856,985** | **$1,234,756** | **$2,622,230** | **$3,743,272** | **$1,210,733** | **$2,532,539** | **$113,713** | **$24,023** | **$89,691** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **SRP PROGRAMS (Electric)** | **$592** | **$592** | **$0** | **$592** | **$592** | **$0** | **$0** | **$0** | **$0** |
| | **OTHER COSTS NOT LISTED ABOVE (Electric)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 3 - Expenses Categorized as Vendor Costs in Company's Systems[1]

Annual threshold > $100,000 for evaluation of allocation between Col. (b) vs. Col. (c )
Default Assumption, expenses allocated to Col. (c)

| | | (a) | (b) | (c ) (a) - (b) | (d) | (e ) | (f) (d) + (e) | | (g) (c) + (f) |
|---|---|---|---|---|---|---|---|---|---|
| | | Total Costs of Services, Products, and Rebates Provided to Customers.2 (also referred to as "Rebates and Other Customer Incentives") | Rebate Payments Made Directly to Customers by the Company and Rebates Paid to PEX's to Whom Customer Rebates were Assigned | Payments to Service Vendors for Costs Relating to Services, Products, and Processing Rebates (excluding costs included in col. b)3 | Direct "External Costs"4 from Vendor Services | "External Costs" from Vendors Originating from an Allocation | Total of Vendor Costs Categorized as "External Costs" from Service Vendors (excluding costs included in colums a, b & c) | | Total Costs from Service Vendors, Excluding Rebate Payments Made Directly to Customers by the Company |
| 1 | Residential New Construction (Electric) | $752,553 | $0 | $752,553 | $284,637 | $20,965 | $305,602 | | $1,058,155 |
| 2 | ENERGY STAR HVAC (Electric) | $3,171,975 | $0 | $3,171,975 | $1,044,933 | $28,512 | $1,073,445 | | $4,245,420 |
| 3 | EnergyWise (Electric) | $19,180,072 | $0 | $19,180,072 | $2,820,486 | $113,503 | $2,933,990 | | $22,114,062 |
| 4 | EnergyWise Multi Family (Electric) | $987,866 | $0 | $987,866 | $248,965 | $25,929 | $274,894 | | $1,262,760 |
| 5 | Home Energy Reports (Electric) | $0 | $0 | $0 | $2,316,354 | $15,988 | $2,332,342 | | $2,332,342 |
| 6 | ENERGY STAR Lighting (Electric) | $3,092,614 | $0 | $3,092,614 | $605,641 | $76,539 | $682,180 | | $3,774,794 |
| 7 | Residential Consumer Products (Electric) | $1,226,877 | $0 | $1,226,877 | $1,171,603 | $28,683 | $1,200,286 | | $2,427,163 |
| 8 | Residential ConnectedSolutions (Electric) | $442,193 | $0 | $442,193 | $109,426 | $11,919 | $121,345 | | $563,539 |
| 9 | Energy Efficiency Education Programs (Electric) | $0 | $0 | $0 | $40,000 | $0 | $40,000 | | $40,000 |
| 10 | Residential Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | | $0 |
| 11 | Community Based Initiatives - Residential (Electric) | $0 | $0 | $0 | $113,198 | $0 | $113,198 | | $113,198 |
| 12 | Comprehensive Marketing Residential (Electric) | $0 | $0 | $0 | $256,548 | $5,326 | $261,875 | | $261,875 |
| 13 | **Subtotal Non-Income Eligible Residential** | **$28,854,151** | **$0** | **$28,854,151** | **$9,011,790** | **$327,367** | **$9,339,157** | | **$38,193,308** |
| | | | | | | | | | |
| 14 | Single Family - Income Eligible Services (Electric) | $6,728,914 | $0 | $6,728,914 | $1,372,740 | $93,957 | $1,466,697 | | $8,195,612 |
| 15 | Income Eligible Multifamily (Electric) | $2,890,315 | $0 | $2,890,315 | $443,252 | $33,332 | $476,584 | | $3,366,899 |
| 16 | **Subtotal Income Eligible Residential** | **$9,619,229** | **$0** | **$9,619,229** | **$1,815,992** | **$127,289** | **$1,943,281** | | **$11,562,510** |
| | | | | | | | | | |
| 17 | Large Commercial New Construction (Electric) | $6,303,680 | $3,336,066 | $2,967,614 | $1,326,109 | $147,428 | $1,473,537 | | $4,441,151 |
| 18 | Large Commercial Retrofit (Electric) | $17,576,705 | $2,121,463 | $15,455,242 | $3,488,951 | $505,122 | $3,994,073 | | $19,449,315 |
| 19 | Small Business Direct Install (Electric) | $6,875,040 | $0 | $6,875,040 | $228,664 | $132,067 | $360,731 | | $7,235,771 |
| 20 | Commercial ConnectedSolutions (Electric) | $2,883,079 | $0 | $2,883,079 | $54,701 | $45,040 | $99,741 | | $2,982,820 |
| 21 | Commercial Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | | $0 |
| 22 | Community Based Initiatives - C&I (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | | $0 |
| 23 | Finance Costs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | | $0 |
| 24 | **Subtotal Commercial & Industrial** | **$33,638,504** | **$5,457,529** | **$28,180,975** | **$5,098,426** | **$829,657** | **$5,928,082** | | **$34,109,057** |
| | | | | | | | | | |
| 25 | OER (Electric) | $0 | $0 | $0 | $738,504 | $0 | $738,504 | | $738,504 |
| 26 | EERMC (Electric) | $0 | $0 | $0 | $645,113 | $0 | $645,113 | | $645,113 |
| 27 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$1,383,618** | **$0** | **$1,383,618** | | **$1,383,618** |
| 28 | **TOTAL All Sectors** | **$72,111,884** | **$5,457,529** | **$66,654,355** | **$17,309,825** | **$1,284,312** | **$18,594,137** | | **$85,248,493** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **SRP PROGRAMS (Electric)** | **$0** | **$0** | **$0** | **$2,500** | **$0** | **$2,500** | | **$2,500** |
| **OTHER COSTS NOT LISTED ABOVE (Electric)** | **$79,841** | **$0** | **$79,841** | **-$1** | **$0** | **-$1** | | **$79,840** |

[1] The Company's accounting system treats all payments made directly to customers and vendors as one category of vendor expenses.
Rebates paid to customers through service contracts with vendors are included in the service cost of the vendor.

[2] Prior to the 2021 Annual Plan, this column was labeled as "Rebates and Other Customer Incentives" in annual reports and plans.

[3] This cost category includes service costs for customers plus rebates/incentives processed and paid to customers by the vendor, but excludes rebates paid directly to customers by the Company in col (b).

[4] The term "External Costs" has been used in Company reports to identify a subset of vendor costs not included in "Rebates and Other Customer Incentives".

[5] In the 2020 Year End Report, Home Energy Reports were categorized under column (c) in this schedule. Starting with the 2021 Year End Report, Home Energy Reports costs categorized under column (c) are now categorized under column (d).

## Schedule 4 - Program Planning & Administration

| | | (a)<br>(b)+(e )+(h) | (b)<br>(c )+(d) | (c ) | (d) | (e )<br>(f)+(g) | (f) | (g) | (h)<br>(i)+(j) | (i) | (j) | (h)<br>(i)+(j) | (i) | (j) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Costs** | **Total Company Labor Costs** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses | **External Services Costs** | Direct External Services Costs | External Services Costs Originating from an Allocation | **Other Costs (if any)** | Other Direct Costs | Other Costs Originating from an Allocation |
| 1 | Residential New Construction (Electric) | $73,324 | $55,284 | $23,731 | $31,553 | $742 | $0 | $742 | $17,290 | $0 | $17,290 | $7 | $0 | $7 |
| 2 | ENERGY STAR HVAC (Electric) | $77,218 | $53,222 | $11,251 | $41,971 | $988 | $0 | $988 | $22,998 | $0 | $22,998 | $10 | $0 | $10 |
| 3 | EnergyWise (Electric) | $304,401 | $196,754 | $8,512 | $188,242 | $4,453 | $24 | $4,429 | $103,150 | $0 | $103,150 | $44 | $0 | $44 |
| 4 | EnergyWise Multi Family (Electric) | $82,758 | $57,348 | $12,904 | $44,444 | $1,046 | $0 | $1,046 | $24,354 | $0 | $24,354 | $10 | $0 | $10 |
| 5 | Home Energy Reports (Electric) | $37,393 | $24,566 | $2,131 | $22,436 | $528 | $0 | $528 | $12,294 | $0 | $12,294 | $5 | $0 | $5 |
| 6 | ENERGY STAR Lighting (Electric) | $248,249 | $132,915 | $13,906 | $119,009 | $2,878 | $77 | $2,800 | $112,429 | $47,216 | $65,213 | $28 | $0 | $28 |
| 7 | Residential Consumer Products (Electric) | $67,890 | $47,273 | $11,334 | $35,939 | $915 | $69 | $846 | $19,693 | $0 | $19,693 | $8 | $0 | $8 |
| 8 | Residential ConnectedSolutions (Electric) | $63,886 | $26,991 | $11,639 | $15,352 | $361 | $0 | $361 | $36,530 | $28,176 | $8,354 | $4 | $0 | $4 |
| 9 | Energy Efficiency Education Programs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 10 | Residential Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 11 | Community Based Initiatives - Residential (Electric) | $1,567 | $1,567 | $1,567 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 12 | Comprehensive Marketing Residential (Electric) | $1,824 | $1,161 | $0 | $1,161 | $27 | $0 | $27 | $636 | $0 | $636 | $0 | $0 | $0 |
| 13 | **Subtotal Non-Income Eligible Residential** | **$958,511** | **$597,083** | **$96,976** | **$500,107** | **$11,937** | **$170** | **$11,767** | **$349,375** | **$75,392** | **$273,983** | **$116** | **$0** | **$116** |
| | | | | | | | | | | | | | | |
| 14 | Single Family - Income Eligible Services (Electric) | $259,516 | $168,739 | $9,961 | $158,778 | $3,736 | $0 | $3,736 | $87,005 | $0 | $87,005 | $37 | $0 | $37 |
| 15 | Income Eligible Multifamily (Electric) | $104,382 | $71,106 | $12,904 | $58,202 | $1,369 | $0 | $1,369 | $31,893 | $0 | $31,893 | $14 | $0 | $14 |
| 16 | **Subtotal Income Eligible Residential** | **$363,899** | **$239,845** | **$22,865** | **$216,980** | **$5,105** | **$0** | **$5,105** | **$118,897** | **$0** | **$118,897** | **$51** | **$0** | **$51** |
| | | | | | | | | | | | | | | |
| 17 | Large Commercial New Construction (Electric) | $225,310 | $127,712 | $19,373 | $108,339 | $608 | $44 | $565 | $96,965 | $6,333 | $90,633 | $25 | $0 | $25 |
| 18 | Large Commercial Retrofit (Electric) | $929,659 | $434,988 | $19,782 | $415,206 | $2,173 | $10 | $2,164 | $492,404 | $145,058 | $347,346 | $94 | $0 | $94 |
| 19 | Small Business Direct Install (Electric) | $263,735 | $149,331 | $6,568 | $142,763 | $744 | $0 | $744 | $113,628 | -$5,802 | $119,430 | $32 | $0 | $32 |
| 20 | Commercial ConnectedSolutions (Electric) | $162,906 | $70,150 | $24,982 | $45,168 | $418 | $182 | $235 | $92,328 | $54,709 | $37,619 | $10 | $0 | $10 |
| 21 | Commercial Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | Community Based Initiatives - C&I (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | Finance Costs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 24 | **Subtotal Commercial & Industrial** | **$1,581,611** | **$782,181** | **$70,705** | **$711,476** | **$3,944** | **$236** | **$3,708** | **$795,325** | **$200,297** | **$595,027** | **$162** | **$0** | **$162** |
| | | | | | | | | | | | | | | |
| 25 | OER (Electric) | $738,504 | $0 | $0 | $0 | $0 | $0 | $0 | $738,504 | $738,504 | $0 | $0 | $0 | $0 |
| 26 | EERMC (Electric) | $645,113 | $0 | $0 | $0 | $0 | $0 | $0 | $645,113 | $645,113 | $0 | $0 | $0 | $0 |
| 27 | **Subtotal Regulatory** | **$1,383,618** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$1,383,618** | **$1,383,618** | **$0** | **$0** | **$0** | **$0** |
| 28 | **TOTAL All Sectors** | **$4,287,638** | **$1,619,109** | **$190,546** | **$1,428,563** | **$20,985** | **$406** | **$20,580** | **$2,647,215** | **$1,659,307** | **$987,908** | **$329** | **$0** | **$329** |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SRP PROGRAMS (Electric)** | **$2,964** | **$464** | **$464** | **$0** | **$0** | **$0** | **$0** | **$2,500** | **$2,500** | **$0** | **$0** | **$0** | **$0** |
| **OTHER COSTS NOT LISTED ABOVE (Electric)** | **-$1** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **-$1** | **-$1** | **$0** | **$0** | **$0** | **$0** |

## Schedule 5 - Marketing

| | | (a) (b)+(e )+(h)+(k) | (b) (c )+(d) | (c ) | (d) | (e ) (f)+(g) | (f) | (g) | (h) (i)+(j) | (i) | (j) | (k) (l)+(m) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Costs** | **Total Company Labor Costs** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses | **External Services Costs** | Direct External Services Costs | External Services Costs Originating from an Allocation | **Other Costs (if any)** | Other Direct Costs | Other Costs Originating from an Allocation |
| 1 | Residential New Construction (Electric) | $419 | $78 | $0 | $78 | $0 | $0 | $0 | $341 | $0 | $341 | $0 | $0 | $0 |
| 2 | ENERGY STAR HVAC (Electric) | $224,207 | $4,870 | $3,968 | $902 | $0 | $0 | $0 | $219,336 | $215,385 | $3,951 | $0 | $0 | $0 |
| 3 | EnergyWise (Electric) | $250,527 | $20,442 | $19,233 | $1,210 | $0 | $0 | $0 | $230,085 | $224,788 | $5,296 | $0 | $0 | $0 |
| 4 | EnergyWise Multi Family (Electric) | $12,964 | $6,579 | $6,436 | $143 | $0 | $0 | $0 | $6,385 | $5,758 | $627 | $0 | $0 | $0 |
| 5 | Home Energy Reports (Electric) | $183 | $34 | $0 | $34 | $0 | $0 | $0 | $149 | $0 | $149 | $0 | $0 | $0 |
| 6 | ENERGY STAR Lighting (Electric) | $478,625 | $8,057 | $6,240 | $1,817 | $0 | $0 | $0 | $470,568 | $462,612 | $7,956 | $0 | $0 | $0 |
| 7 | Residential Consumer Products (Electric) | $522,708 | $52,749 | $51,026 | $1,723 | $0 | $0 | $0 | $469,959 | $462,413 | $7,546 | $0 | $0 | $0 |
| 8 | Residential ConnectedSolutions (Electric) | $106 | $20 | $0 | $20 | $0 | $0 | $0 | $87 | $0 | $87 | $0 | $0 | $0 |
| 9 | Energy Efficiency Education Programs (Electric) | $40,027 | $27 | $27 | $0 | $0 | $0 | $0 | $40,000 | $40,000 | $0 | $0 | $0 | $0 |
| 10 | Residential Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 11 | Community Based Initiatives - Residential (Electric) | $113,198 | $0 | $0 | $0 | $0 | $0 | $0 | $113,198 | $113,198 | $0 | $0 | $0 | $0 |
| 12 | Comprehensive Marketing Residential (Electric) | $262,310 | $1,071 | $0 | $1,071 | $0 | $0 | $0 | $261,239 | $256,548 | $4,690 | $0 | $0 | $0 |
| 13 | **Subtotal Non-Income Eligible Residential** | **$1,905,274** | **$93,928** | **$86,930** | **$6,998** | **$0** | **$0** | **$0** | **$1,811,346** | **$1,780,703** | **$30,643** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 14 | Single Family - Income Eligible Services (Electric) | $86,299 | $4,384 | $3,926 | $457 | $0 | $0 | $0 | $81,916 | $79,913 | $2,002 | $0 | $0 | $0 |
| 15 | Income Eligible Multifamily (Electric) | -$1,110 | $29 | $0 | $29 | $0 | $0 | $0 | -$1,140 | -$1,268 | $129 | $0 | $0 | $0 |
| 16 | **Subtotal Income Eligible Residential** | **$85,189** | **$4,413** | **$3,926** | **$487** | **$0** | **$0** | **$0** | **$80,776** | **$78,645** | **$2,131** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 17 | Large Commercial New Construction (Electric) | $160,023 | $1,393 | $0 | $1,393 | $0 | $0 | $0 | $158,630 | $158,630 | $0 | $0 | $0 | $0 |
| 18 | Large Commercial Retrofit (Electric) | $228,738 | $8,763 | $7,710 | $1,053 | $242 | $242 | $0 | $219,733 | $219,733 | $0 | $0 | $0 | $0 |
| 19 | Small Business Direct Install (Electric) | $172,779 | $9,446 | $8,334 | $1,113 | $0 | $0 | $0 | $163,333 | $163,333 | $0 | $0 | $0 | $0 |
| 20 | Commercial ConnectedSolutions (Electric) | $30 | $30 | $0 | $30 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 21 | Commercial Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | Community Based Initiatives - C&I (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | Finance Costs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 24 | **Subtotal Commercial & Industrial** | **$561,570** | **$19,632** | **$16,043** | **$3,588** | **$242** | **$242** | **$0** | **$541,696** | **$541,696** | **$0** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 25 | OER (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 26 | EERMC (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 27 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 28 | **TOTAL All Sectors** | **$2,552,033** | **$117,973** | **$106,900** | **$11,073** | **$242** | **$242** | **$0** | **$2,433,818** | **$2,401,044** | **$32,774** | **$0** | **$0** | **$0** |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SRP PROGRAMS (Electric)** | **$128** | **$128** | **$128** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| | **OTHER COSTS NOT LISTED ABOVE (Electric)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 6 - Cost of services and product rebates/incentives provided to customers (1)

Annual threshold > $100,000 for evaluation of allocation between Col. (b) vs. Col. (c )
Default Assumption, expenses allocated to Col. (c)

| | | (a) (b)+(c ) | (b) | (c ) | (d) |
|---|---|---|---|---|---|
| | | **Total payments for services and product rebates/incentives for customers which are paid directly to a customer or provided to customer via a vendor** | **Rebate/Incentive Payments Directly Paid to Customers** | **Payments for Services and Product Rebates/Incentives for customers which are made to vendors and then provided to customers** | **Description of External Payments** |
| 1 | Residential New Construction (Electric) | $752,553 | $0 | $752,553 | Payments are made to external vendor(s) that are then used to provide rebates to customers for approved energy efficiency products that are installed in new customer dwellings. Payments also include a home performance testing service at no cost to the customer. |
| 2 | ENERGY STAR HVAC (Electric) | $3,171,975 | $0 | $3,171,975 | Payments are made to external vendor(s) that are then used to provide rebates to customers for approved energy efficiency HVAC products that are installed in rate payer customer dwellings. Payments are also made to external vendor(s) that are then used to provide zero interest loans to customers for approved energy efficiency HVAC products. |
| 3 | EnergyWise (Electric) | $19,180,072 | $0 | $19,180,072 | Payments are made to external vendor(s) that cover the program incentive for approved energy efficiency products that are installed in single family customer dwellings. Payments also include a service to customers in the form of no cost energy assessments. Payments are also made to external vendor(s) that are then used to provide zero interest loans to customers for weatherization. |
| 4 | EnergyWise Multi Family (Electric) | $987,866 | $0 | $987,866 | Payments are made to external vendors that are then used to discount approved energy efficiency products that are installed in multifamily customer dwellings. Payments also include a service to customers in the form of no cost energy assessments. Payments are also made to external vendor(s) that are then used to provide zero interest loans to customers for weatherization. |
| 5 | Home Energy Reports (Electric) | $0 | $0 | $0 | N/A |
| 6 | ENERGY STAR Lighting (Electric) | $3,092,614 | $0 | $3,092,614 | Payments are made to external vendors that are then used to discount approved EnergyStar Lighting Products. Customers then purchase these EnergyStar Lighting products at a discounted price. |
| 7 | Residential Consumer Products (Electric) | $1,226,877 | $0 | $1,226,877 | Payments are made to external vendors that are then used to discount approved EnergyStar Consumer products. Customers then purchase these EnergyStar Appliance products at a discounted price. Payments are also made to external vendor(s) that are then used to provide rebates to customers who purchase approved EnegyStar Appliance products. |
| 8 | Residential ConnectedSolutions (Electric) | $442,193 | $0 | $442,193 | Payments are made to external vendor(s) that are then used to pay customers an incentive for participation in the program. In some cases, customers have elected to receive their incentive payment directly from the Company, in these cases the Company directly pays the customer the incentive. |
| 9 | Energy Efficiency Education Programs (Electric) | $0 | $0 | $0 | N/A |
| 10 | Residential Pilots (Electric) | $0 | $0 | $0 | Payments can vary depending on the pilot. In 2021 there were not electric Residential pilots so no payments were made. |
| 11 | Community Based Initiatives - Residential (Electric) | $0 | $0 | $0 | Payments can either either be made directly to a community or to external vendor(s) to discount approved energy efficiency products for communities participating in the Community Based Initiative. |
| 12 | Comprehensive Marketing Residential (Electric) | $0 | $0 | $0 | N/A |
| 13 | **Subtotal Non-Income Eligible Residential** | **$28,854,151** | **$0** | **$28,854,151** | |
| | | | | | |
| 14 | Single Family - Income Eligible Services (Electric) | $6,728,914 | $0 | $6,728,914 | Payments are made to external vendors that are then used to cover 100% of the cost for approved energy efficiency products that are installed in single family income eligible customer dwellings. Payments also include a no cost service to customers in the form of no cost energy assessments. |
| 15 | Income Eligible Multifamily (Electric) | $2,890,315 | $0 | $2,890,315 | Payments are made to external vendors that are then used to cover 100% of the cost for approved energy efficiency products that are installed in income eligible multifamily customer dwellings. Payments also include a no cost service to customers in the form of no cost energy assessments. |
| 16 | **Subtotal Income Eligible Residential** | **$9,619,229** | **$0** | **$9,619,229** | |
| | | | | | |
| 17 | Large Commercial New Construction (Electric) | $6,303,680 | $3,336,066 | $2,967,614 | Payments are made to external vendor(s) that are then used to discount approved energy efficiency products that are installed in customer facilities. Payments are also made directly to customers for the installation of approved energy efficiency measures. Payments also include services to customers such as energy assessments and technical analysis. |
| 18 | Large Commercial Retrofit (Electric) | $17,576,705 | $2,121,463 | $15,455,242 | Payments are made to external vendor(s) that are then used to discount approved energy efficiency products that are installed in customer facilities. Payments are also made directly to customers for the installation of approved energy efficiency measures. Payments also include services to customers such as energy assessments and technical analysis. |
| 19 | Small Business Direct Install (Electric) | $6,875,040 | $0 | $6,875,040 | Payments are made to external vendor(s) that are then used to discount approved energy efficiency products that are installed in customer facilities. Payments are also made directly to customers for the installation of approved energy efficiency measures. Payments also include services to customers such as energy assessments and technical analysis. |
| 20 | Commercial ConnectedSolutions (Electric) | $2,883,079 | $0 | $2,883,079 | Payments are made to external vendor(s) that are then used to pay customers an incentive for participation in the program. The external vendor(s) retain a portion of of the incentive payments. |
| 21 | Commercial Pilots (Electric) | $0 | $0 | $0 | Payments can vary depending on the pilot. In 2021 there were no electric C&I pilots so no payments were made. |
| 22 | Community Based Initiatives - C&I (Electric) | $0 | $0 | $0 | Payments can be made directly to a participating community or to external vendor(s), which is then used to discount energy efficiency products or provide training and services for customers in participating communities. |
| 23 | Finance Costs (Electric) | $0 | $0 | $0 | Payments made to the Rhode Island Infrastructure Bank are leveraged and lent to municipalities to cover the muncipality's net costs of an energy efficiency project. Costs may include energy efficiency equipment, related services, and borrowing costs. |
| 24 | **Subtotal Commercial & Industrial** | **$33,638,504** | **$5,457,529** | **$28,180,975** | |
| | | | | | |
| 25 | OER (Electric) | $0 | $0 | $0 | |
| 26 | EERMC (Electric) | $0 | $0 | $0 | |
| 27 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | |
| 28 | **TOTAL All Sectors** | **$72,111,884** | **$5,457,529** | **$66,654,355** | |

| | | | |
|---|---|---|---|
| **SRP PROGRAMS (Electric)** | **$0** | | **$0** |
| **OTHER COSTS NOT LISTED ABOVE (Electric)** | **$79,841** | | **$79,841** |

(1) Prior to the 2021 Energy Efficiency Annual Plan filing, this cost category was referred to as "Rebates and Other Incentives"

## Schedule 7 - Sales, Technical Assistance & Training (STAT)

| | | (a) (b)+(e )+(h)+(k) | (b) (c )+(d) | (c ) | (d) | (e ) (f)+(g) | (f) | (g) | (h) (i)+(j) | (i) | (j) | (k) (l)+(m) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Costs** | **Total Company Labor Costs** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses | **External Services Costs** | Direct External Services Costs | External Services Costs Originating from an Allocation | **Other Costs (if any)** | Other Direct Costs | Other Costs Originating from an Allocation |
| 1 | Residential New Construction (Electric) | $273,158 | $7,993 | $5,019 | $2,975 | $177 | $0 | $177 | $264,918 | $264,315 | $604 | $70 | $70 | $0 |
| 2 | ENERGY STAR HVAC (Electric) | $797,156 | $2,744 | $0 | $2,744 | $163 | $0 | $163 | $794,249 | $793,692 | $557 | $0 | $0 | $0 |
| 3 | EnergyWise (Electric) | $2,512,535 | $32,293 | $25,714 | $6,579 | $391 | $0 | $391 | $2,479,781 | $2,478,446 | $1,335 | $70 | $70 | $0 |
| 4 | EnergyWise Multi Family (Electric) | $200,486 | $2,114 | $0 | $2,114 | $126 | $0 | $126 | $198,247 | $197,818 | $429 | $0 | $0 | $0 |
| 5 | Home Energy Reports (Electric) | $2,332,389 | $14,574 | $0 | $14,574 | $866 | $0 | $866 | $2,316,950 | $2,313,992 | $2,958 | $0 | $0 | $0 |
| 6 | ENERGY STAR Lighting (Electric) | $97,483 | $1,323 | $0 | $1,323 | $79 | $0 | $79 | $96,081 | $95,813 | $269 | $0 | $0 | $0 |
| 7 | Residential Consumer Products (Electric) | $653,333 | $3,100 | $0 | $3,100 | $184 | $0 | $184 | $650,049 | $649,420 | $629 | $0 | $0 | $0 |
| 8 | Residential ConnectedSolutions (Electric) | $63,102 | $9,568 | $7,888 | $1,680 | $116 | $17 | $100 | $53,348 | $53,007 | $341 | $70 | $70 | $0 |
| 9 | Energy Efficiency Education Programs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 10 | Residential Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 11 | Community Based Initiatives - Residential (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 12 | Comprehensive Marketing Residential (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 13 | **Subtotal Non-Income Eligible Residential** | **$6,929,643** | **$73,709** | **$38,620** | **$35,089** | **$2,101** | **$17** | **$2,084** | **$6,853,623** | **$6,846,502** | **$7,121** | **$210** | **$210** | **$0** |
| | | | | | | | | | | | | | | |
| 14 | Single Family - Income Eligible Services (Electric) | $1,227,014 | $12,018 | $0 | $12,018 | $714 | $0 | $714 | $1,214,282 | $1,211,843 | $2,439 | $0 | $0 | $0 |
| 15 | Income Eligible Multifamily (Electric) | $387,285 | $1,969 | $0 | $1,969 | $117 | $0 | $117 | $385,200 | $384,800 | $399 | $0 | $0 | $0 |
| 16 | **Subtotal Income Eligible Residential** | **$1,614,299** | **$13,987** | **$0** | **$13,987** | **$831** | **$0** | **$831** | **$1,599,482** | **$1,596,643** | **$2,838** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 17 | Large Commercial New Construction (Electric) | $1,425,927 | $346,554 | $124,453 | $222,101 | $26,083 | $9,844 | $16,239 | $1,053,150 | $999,293 | $53,857 | $140 | $140 | $0 |
| 18 | Large Commercial Retrofit (Electric) | $3,981,101 | $1,262,151 | $673,789 | $588,362 | $56,499 | $13,481 | $43,018 | $2,662,171 | $2,519,501 | $142,670 | $280 | $280 | $0 |
| 19 | Small Business Direct Install (Electric) | $165,442 | $79,984 | $31,634 | $48,350 | $3,535 | $0 | $3,535 | $81,923 | $70,199 | $11,724 | $0 | $0 | $0 |
| 20 | Commercial ConnectedSolutions (Electric) | $40,253 | $30,570 | -$35 | $30,605 | $2,271 | $33 | $2,238 | $7,413 | -$8 | $7,421 | $0 | $0 | $0 |
| 21 | Commercial Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | Community Based Initiatives - C&I (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | Finance Costs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 24 | **Subtotal Commercial & Industrial** | **$5,612,723** | **$1,719,259** | **$829,841** | **$889,418** | **$88,388** | **$23,358** | **$65,030** | **$3,804,656** | **$3,588,985** | **$215,672** | **$420** | **$420** | **$0** |
| | | | | | | | | | | | | | | |
| 25 | OER (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 26 | EERMC (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 27 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 28 | **TOTAL All Sectors** | **$14,156,664** | **$1,806,954** | **$868,461** | **$938,493** | **$91,320** | **$23,375** | **$67,945** | **$12,257,761** | **$12,032,130** | **$225,631** | **$629** | **$629** | **$0** |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SRP PROGRAMS (Electric)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| | **OTHER COSTS NOT LISTED ABOVE (Electric)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 8 - Evaluation & Market Research

| | | (a) (b)+(e )+(h)+(k) | (b) (c )+(d) | (c ) | (d) | (e ) (f)+(g) | (f) | (g) | (h) (i)+(j) | (i) | (j) | (k) (l)+(m) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Costs** | **Total Company Labor Costs** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses | **External Services Costs** | Direct External Services Costs | External Services Costs Originating from an Allocation | **Other Costs (if any)** | Other Direct Costs | Other Costs Originating from an Allocation |
| 1 | Residential New Construction (Electric) | $38,317 | $15,246 | $5,843 | $9,403 | $18 | $0 | $18 | $23,053 | $20,322 | $2,731 | $0 | $0 | $0 |
| 2 | ENERGY STAR HVAC (Electric) | $64,097 | $27,228 | $23,765 | $3,464 | $7 | $0 | $7 | $36,862 | $35,856 | $1,006 | $0 | $0 | $0 |
| 3 | EnergyWise (Electric) | $133,814 | $12,815 | $0 | $12,815 | $25 | $0 | $25 | $120,974 | $117,252 | $3,722 | $0 | $0 | $0 |
| 4 | EnergyWise Multi Family (Electric) | $51,405 | $5,494 | $3,705 | $1,789 | $4 | $0 | $4 | $45,908 | $45,389 | $520 | $0 | $0 | $0 |
| 5 | Home Energy Reports (Electric) | $4,979 | $2,025 | $0 | $2,025 | $4 | $0 | $4 | $2,950 | $2,362 | $588 | $0 | $0 | $0 |
| 6 | ENERGY STAR Lighting (Electric) | $21,689 | $18,566 | $7,886 | $10,680 | $21 | $0 | $21 | $3,102 | $0 | $3,102 | $0 | $0 | $0 |
| 7 | Residential Consumer Products (Electric) | $64,255 | $3,665 | $859 | $2,806 | $5 | $0 | $5 | $60,585 | $59,770 | $815 | $0 | $0 | $0 |
| 8 | Residential ConnectedSolutions (Electric) | $42,204 | $10,803 | $0 | $10,803 | $21 | $0 | $21 | $31,380 | $28,242 | $3,138 | $0 | $0 | $0 |
| 9 | Energy Efficiency Education Programs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 10 | Residential Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 11 | Community Based Initiatives - Residential (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 12 | Comprehensive Marketing Residential (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 13 | **Subtotal Non-Income Eligible Residential** | **$420,759** | **$95,841** | **$42,057** | **$53,783** | **$105** | **$0** | **$105** | **$324,813** | **$309,192** | **$15,621** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 14 | Single Family - Income Eligible Services (Electric) | $92,159 | $8,647 | $0 | $8,647 | $17 | $0 | $17 | $83,495 | $80,984 | $2,511 | $0 | $0 | $0 |
| 15 | Income Eligible Multifamily (Electric) | $66,541 | $5,905 | $2,769 | $3,136 | $6 | $0 | $6 | $60,630 | $59,720 | $911 | $0 | $0 | $0 |
| 16 | **Subtotal Income Eligible Residential** | **$158,700** | **$14,551** | **$2,769** | **$11,782** | **$23** | **$0** | **$23** | **$144,126** | **$140,704** | **$3,422** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 17 | Large Commercial New Construction (Electric) | $178,724 | $13,772 | $0 | $13,772 | $161 | $0 | $161 | $164,791 | $161,853 | $2,939 | $0 | $0 | $0 |
| 18 | Large Commercial Retrofit (Electric) | $691,387 | $70,794 | $0 | $70,794 | $827 | $0 | $827 | $619,765 | $604,659 | $15,106 | $0 | $0 | $0 |
| 19 | Small Business Direct Install (Electric) | $6,176 | $4,278 | $0 | $4,278 | $50 | $0 | $50 | $1,848 | $935 | $913 | $0 | $0 | $0 |
| 20 | Commercial ConnectedSolutions (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 21 | Commercial Pilots (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | Community Based Initiatives - C&I (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | Finance Costs (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 24 | **Subtotal Commercial & Industrial** | **$876,286** | **$88,844** | **$0** | **$88,844** | **$1,038** | **$0** | **$1,038** | **$786,405** | **$767,447** | **$18,957** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 25 | OER (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 26 | EERMC (Electric) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 27 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 28 | **TOTAL All Sectors** | **$1,455,746** | **$199,236** | **$44,826** | **$154,410** | **$1,166** | **$0** | **$1,166** | **$1,255,343** | **$1,217,343** | **$38,000** | **$0** | **$0** | **$0** |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SRP PROGRAMS (Electric)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| | **OTHER COSTS NOT LISTED ABOVE (Electric)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 9 - Shared Cross-Jurisdictional Costs (Non-Labor)

>$100,000 only for Rhode Island

(Non-Labor Services/Costs that are Shared with Other Jurisdictions and are Allocated to Rhode Island)

| | | (a) | (b) (c )x(a) | (b) (c )x(a) | (b) (c )x(a) | (c ) | (c ) | (c ) | (d) | (e ) | (f) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Description of Service/Cost | Total Cost Used as Basis for Allocation | Total Allocated to Rhode Island | Total Allocated to RI-ELEC | Total Allocated to RI-GAS | % to Rhode Island | % to RI-ELEC | % to RI-GAS | % to Mass. | % to New York | Description of Allocation Methodology |
| 1 | IS Vendor. charged to DSM - InDemand Support & Releases (Support for InDemand) | $2,670,562 | $499,105 | $361,081 | $138,023 | 19% | 14% | 5% | 66% | 15% | Based on Overall Jurisdictional 2021 EE Budgets - ALL RI; ALL UPSTATE NY; ALL MA; ALL DOWNSTATE NY |
| 2 | IS Vendor. charged to DSM - IS - (Support for multiple data sharing interfaces with EE partners) | $181,478 | $34,118 | $24,686 | $9,432 | 19% | 14% | 5% | 67% | 14% | Based on Overall Jurisdictional 2021 EE Budgets - ALL RI; ALL UPSTATE NY; ALL MA; ALL DOWNSTATE NY |

## Schedule 10 - Methods for Allocating Costs >$500,000 Across Rhode Island Programs/Sectors

| | | (a) | (b) | (c ) | (d) | (f) |
|---|---|---|---|---|---|---|
| | Description of Cost Allocated | Total Cost Allocated | Allocation to Non-Eligible Residential Programs | Allocation to Eligible Residential Programs | Allocation to C&I Programs | Description of Allocation Methodology |
| | | | | | | |
| 1 | IS Vendor Costs for General IT Work - RI-ELEC | $0 | $0 | $0 | $0 | Based on PP&A Budgets of Programs Designated To Receive Allocations |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | Labor Allocated to PP&A | $1,428,563 | $500,107 | $216,980 | $711,476 | Based on PP&A Budgets of Programs Designated To Receive Allocations |
| 6 | Labor Allocated to Marketing | $11,073 | $6,998 | $487 | $3,588 | Based on Marketing Budgets of Programs Designated To Receive Allocations |
| 7 | Labor Allocated to STAT | $938,493 | $35,089 | $13,987 | $889,418 | Based on STAT Budgets of Programs Designated To Receive Allocations |
| 8 | Labor Allocated to Evaluation & Market Research | $154,410 | $53,783 | $11,782 | $88,844 | Based on Evaluation & Market Research Budgets of Programs Designated to Receive Allocations |
| 9 | **ALLOCATED LABOR - RI-ELEC TOTAL** | **$2,532,539** | **$595,977** | **$243,236** | **$1,693,326** | |

**Attachment 2**

# Attachment 2

# Gas Summary Table of Year-End Results

## COMPANY ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table G-1: Summary of 2021 Target and Year End Results

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sector and Program** | **Energy Savings (Annual MMBtu)** | | | **Customer Participation** | | | **Implementation Expenses ($ 000)** | | | **Energy Savings (Lifetime MMBtu)** | | | **$/Lifetime MMBtu** | | **Peak Hour Gas Demand Savings (MMBtu)** |
| **Commercial & Industrial** | **Approved Target** | **Actual** | **Pct Achieved** | **Approved Target** | **Actual** | **Pct Achieved** | **Approved Budget** | **Actual** | **Pct Achieved** | **Planned** | **Actual** | **Pct Achieved** | **Planned** | **Actual** | **Year to Date** |
| Large Commercial New Construction | 27,631 | 50,025 | 181.0% | 61 | 47 | 76.8% | $ 2,634.2 | $ 2,569.7 | 97.6% | 437,398 | 692,613 | 158.3% | $ 6.02 | $ 3.71 | 25.01 |
| Large Commercial Retrofit | 187,283 | 76,159 | 40.7% | 98 | 66 | 67.5% | $ 5,054.1 | $ 3,278.1 | 64.9% | 1,455,776 | 717,900 | 49.3% | $ 3.47 | $ 4.57 | 38.08 |
| Small Business Direct Install | 4,886 | 5,949 | 121.7% | 183 | 106 | 58.0% | $ 332.7 | $ 158.7 | 47.7% | 48,861 | 64,537 | 132.1% | $ 6.81 | $ 2.46 | 2.97 |
| Commercial & Industrial Multifamily | 9,444 | 3,836 | 40.6% | 729 | 88 | 12.1% | $ 953.2 | $ 951.4 | 99.8% | 141,869 | 57,807 | 40.7% | $ 6.72 | $ 16.46 | 1.92 |
| Commercial Pilots | | | | | | | $ 215.8 | $ 105.5 | 48.9% | | | | | | |
| Finance Costs | | | | | | | $ - | $ - | 0.0% | | | | | | |
| Community Based Initiatives - C&I | | | | | | | $ 24.8 | $ - | 0.0% | | | | | | |
| **SUBTOTAL** | **229,243** | **135,968** | **59.3%** | **1,071** | **307** | **28.7%** | **$ 9,214.8** | **$ 7,063.4** | **76.7%** | **2,083,905** | **1,532,857** | **73.6%** | **$ 4.42** | **$ 4.61** | **67.98** |
| **Income Eligible Residential** | | | | | | | | | | | | | | | |
| Single Family - Income Eligible Services | 10,055 | 6,635 | 66.0% | 1,005 | 585 | 58.2% | $ 5,952.3 | $ 3,956.4 | 66.5% | 201,104 | 132,704 | 66.0% | $ 29.60 | $ 29.81 | 3.32 |
| Income Eligible Multifamily | 14,399 | 11,810 | 82.0% | 3,150 | 2,661 | 84.5% | $ 3,009.4 | $ 2,764.6 | 91.9% | 315,545 | 198,615 | 62.9% | $ 9.54 | $ 13.92 | 5.90 |
| **SUBTOTAL** | **24,454** | **18,445** | **75.4%** | **4,155** | **3,246** | **78.1%** | **$ 8,961.8** | **$ 6,721.0** | **75.0%** | **516,649** | **331,319** | **64.1%** | **$ 17.35** | **$ 20.29** | **9.22** |
| **Non-Income Eligible Residential** | | | | | | | | | | | | | | | |
| Energy Star® HVAC | 38,345 | 29,363 | 76.6% | 4,348 | 3,548 | 81.6% | $ 3,673.0 | $ 2,635.3 | 71.7% | 667,485 | 514,514 | 77.1% | $ 5.50 | $ 5.12 | 14.68 |
| Energy*Wise* | 20,869 | 34,139 | 163.6% | 1,694 | 5,381 | 317.7% | $ 8,117.6 | $ 16,227.2 | 199.9% | 476,550 | 786,836 | 165.1% | $ 17.03 | $ 20.62 | 17.07 |
| EnergyWise Multifamily | 8,633 | 7,567 | 87.7% | 4,000 | 420 | 10.5% | $ 1,491.6 | $ 1,608.2 | 107.8% | 148,675 | 152,194 | 102.4% | $ 10.03 | $ 10.57 | 3.78 |
| Home Energy Reports | 93,548 | 88,173 | 94.3% | 152,324 | 152,239 | 99.9% | $ 450.9 | $ 400.3 | 88.8% | 93,548 | 88,173 | 94.3% | $ 4.82 | $ 4.54 | 44.09 |
| Residential New Construction | 4,445 | 2,769 | 62.3% | 323 | 92 | 28.5% | $ 674.8 | $ 397.6 | 58.9% | 85,272 | 48,111 | 56.4% | $ 7.91 | $ 8.26 | 1.38 |
| Comprehensive Marketing - Residential | | | | | | | $ 64.8 | $ 73.7 | 113.8% | | | | | | |
| Community Based Initiatives - Residential | | | | | | | $ 75.8 | $ 38.2 | 50.3% | | | | | | |
| **SUBTOTAL** | **165,840** | **162,011** | **97.7%** | **162,689** | **161,680** | **99.4%** | **$ 14,548.5** | **$ 21,380.5** | **147.0%** | **1,471,530** | **1,589,829** | **108.0%** | **$ 9.89** | **$ 13.45** | **81.01** |
| **Regulatory** | | | | | | | | | | | | | | | |
| EERMC | | | | | | | $ 275.1 | $ 240.3 | 87.4% | | | | | | |
| OER | | | | | | | $ 275.1 | $ 275.1 | 100.0% | | | | | | |
| **SUBTOTAL** | | | | | | | **$ 550.1** | **$ 515.3** | **93.7%** | | | | | | |
| | | | | | | | | | | | | | | | |
| **TOTAL** | **419,537** | **316,424** | **75.4%** | **167,915** | **165,233** | **98.4%** | **$ 33,275.2** | **$ 35,680.2** | **107.2%** | **4,072,084** | **3,454,006** | **84.8%** | **$ 8.17** | **$ 10.33** | **158.21** |

NOTES
(1)(4) Targets from Docket 5076 - Attachment 6, Table G-7 (gas), Refiled December 22, 2020.
(3) Pct Achieved is Column (2)/ Column (1).
(4) Participation was planned and is reported in 'net' terms which takes into account free-ridership and spillover.
(6) Pct Achieved is Column (5)/ Column (4).
(9) Pct Achieved is Column (8)/ Column (7).
(13) Planned $/lifetime MMBtu from Docket 5076 - Attachment 6, Table G-5 (gas), Refiled December 22, 2020 - adjusted to reflect format of quarterly and year end report. Program Implementation Expenses/lifetime MMBtu.
(12) Pct Achieved is Column (11) / Column (10)
(14) Actual $/lifetime MMBtu = Column (8)*1000/Column (11)
(15) Peak Hour Gas Demand Savings is a test metric in 2021 and represents a rough approximation of peak-hour gas demand impacts. Column(2) *0.01 *0.05

## COMPANY ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table G-2: Summary of 2021 EE Benefits ($000)

| | | Natural Gas Benefits | | Utility NEIs | Electric Capacity | | | | | Electric Energy | | | | | | | | Non-Electric and Non-Gas | | | Societal | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Winter | | Summer | | Winter | | Summer | | | | | | | |
| | Total | Natural Gas | Natural Gas DRIPE | Utility NEIs | Summer Generation | Capacity DRIPE | Trans | Dist | Reliability | Winter Peak | Winter Off Peak | Summer Peak | Summer Off Peak | Winter Peak Energy DRIPE | Winter Off-Peak Energy DRIPE | Summer Peak Energy DRIPE | Summer Off-Peak Energy DRIPE | Oil | Other Resource | Non Resource | Carbon | NOx | Economic (1) |
| **Non-Income Eligible Residential** | | | | | | | | | | | | | | | | | | | | | | | |
| Energy*Wise* | $34,335.0 | $7,575.7 | $112.0 | $0.0 | $129.1 | $0.0 | $136.4 | $118.4 | $5.7 | $67.9 | $68.8 | $76.1 | $59.5 | $18.0 | $14.6 | $19.2 | $12.1 | $0.0 | $194.7 | $4,512.0 | $3,249.9 | $439.5 | $17,525.3 |
| Energy Star® HVAC | $10,421.1 | $4,921.3 | $93.3 | $0.0 | -$1.9 | -$0.1 | -$2.2 | -$1.9 | -$0.1 | -$8.4 | -$6.3 | -$2.3 | -$1.7 | -$3.1 | -$1.9 | -$0.8 | -$0.5 | $0.0 | $90.3 | $430.2 | $2,073.8 | $287.2 | $2,556.3 |
| EnergyWise Multifamily | $7,715.1 | $1,457.3 | $24.3 | $0.0 | $8.2 | $0.0 | $9.3 | $8.1 | $0.5 | $0.8 | $0.4 | $4.6 | $3.5 | $0.3 | $0.1 | $1.5 | $0.9 | $0.0 | $83.3 | $2,678.5 | $615.4 | $84.2 | $2,734.0 |
| Home Energy Reports | $1,624.6 | $726.1 | $35.7 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $368.8 | $45.7 | $448.3 |
| Residential New Construction | $829.8 | $464.9 | $9.2 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $193.7 | $26.8 | $135.2 |
| **Non-Income Eligible Residential SUBTOTAL** | **$54,925.5** | **$15,145.4** | **$274.4** | **$0.0** | **$135.4** | **-$0.1** | **$143.5** | **$124.6** | **$6.0** | **$60.3** | **$62.9** | **$78.4** | **$61.3** | **$15.2** | **$12.8** | **$20.0** | **$12.6** | **$0.0** | **$368.2** | **$7,620.6** | **$6,501.6** | **$883.4** | **$23,399.1** |
| | | | | | | | | | | | | | | | | | | | | | | | |
| **Income Eligible Residential** | | | | | | | | | | | | | | | | | | | | | | | |
| Single Family - Income Eligible Services | $11,757.0 | $1,287.9 | $22.3 | $59.3 | $17.3 | $0.0 | $19.3 | $16.7 | $0.9 | $15.6 | $16.6 | $10.0 | $8.0 | $5.2 | $4.4 | $3.1 | $2.0 | $0.0 | $0.0 | $5,484.2 | $555.0 | $74.9 | $4,154.2 |
| Income Eligible Multifamily | $9,936.3 | $1,907.6 | $38.7 | $28.3 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $1.4 | $0.8 | $8.7 | $6.6 | $0.5 | $0.2 | $2.9 | $1.8 | $0.0 | $24.6 | $2,513.1 | $812.1 | $110.3 | $4,478.7 |
| **Income Eligible Residential SUBTOTAL** | **$21,693.3** | **$3,195.6** | **$61.0** | **$87.7** | **$17.3** | **$0.0** | **$19.3** | **$16.7** | **$0.9** | **$17.0** | **$17.4** | **$18.7** | **$14.6** | **$5.8** | **$4.7** | **$6.0** | **$3.7** | **$0.0** | **$24.6** | **$7,997.3** | **$1,367.0** | **$185.2** | **$8,632.9** |
| | | | | | | | | | | | | | | | | | | | | | | | |
| **Commercial & Industrial** | | | | | | | | | | | | | | | | | | | | | | | |
| Large Commercial New Construction | $21,921.0 | $5,431.7 | $110.3 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $93.2 | $11,159.5 | $2,808.3 | $416.3 | $1,901.6 |
| Large Commercial Retrofit | $17,587.3 | $6,096.6 | $207.5 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $63.9 | $970.0 | $2,930.8 | $434.5 | $6,884.0 |
| Small Business Direct Install | $1,779.1 | $511.3 | $12.3 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $730.3 | $0.0 | $265.4 | $39.3 | $220.5 |
| Commercial & Industrial Multifamily | $2,418.3 | $504.1 | $12.2 | $0.0 | $4.9 | $0.0 | $5.5 | $4.8 | $0.3 | $0.5 | $0.2 | $2.7 | $2.1 | $0.2 | $0.1 | $0.9 | $0.6 | $0.0 | $25.3 | $107.5 | $237.4 | $34.4 | $1,474.6 |
| **Commercial & Industrial SUBTOTAL** | **$43,705.7** | **$12,543.8** | **$342.3** | **$0.0** | **$4.9** | **$0.0** | **$5.5** | **$4.8** | **$0.3** | **$0.5** | **$0.2** | **$2.7** | **$2.1** | **$0.2** | **$0.1** | **$0.9** | **$0.6** | **$0.0** | **$912.7** | **$12,237.0** | **$6,241.9** | **$924.6** | **$10,480.7** |
| | | | | | | | | | | | | | | | | | | | | | | | |
| **Grand Total** | **$120,324.5** | **$30,884.7** | **$677.7** | **$87.7** | **$157.7** | **-$0.1** | **$168.3** | **$146.2** | **$7.2** | **$77.7** | **$80.5** | **$99.9** | **$77.9** | **$21.1** | **$17.6** | **$26.8** | **$16.9** | **$0.0** | **$1,305.6** | **$27,854.9** | **$14,110.6** | **$1,993.1** | **$42,512.6** |

(1) In preparing responses to the PUC's Sixth Set of Data Requests in Docket 5189, the Company identified an error in the economic multipliers used in the 2021 Annual Energy Efficiency Plan. The error was due to the way participant costs were entered in REMI. This Year End Report filing of actual economic benefits uses the corrected multipliers found in the "Economic Multipliers Update" memo to the PUC, filed on January 6, 2022.

# COMPANY NATURAL GAS ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table G-2A: Summary of Value and MMBTU Saved by Program
## 2021 Program Year

| | Value ($000) | | | | | MMBTU Gas Saved | |
|---|---|---|---|---|---|---|---|
| | (1) **Total Value** | (2) **Natural Gas Benefits** | (3) **Non-Gas Benefits** | (4) **Economic Benefits** | (5) **NOx Benefits** | (6) **Annual** | (7) **Lifetime** |
| **Commercial & Industrial** | | | | | | | |
| Large Commercial New Construction | $21,921 | $5,542 | $14,061 | $1,902 | $416 | 50,025 | 692,613 |
| Large Commercial Retrofit | $17,587 | $6,304 | $3,965 | $6,884 | $434 | 76,159 | 717,900 |
| Commercial & Industrial Multifamily | $2,418 | $516 | $393 | $1,475 | $34 | 3,836 | 57,807 |
| Small Business Direct Install | $1,779 | $524 | $996 | $221 | $39 | 5,949 | 64,537 |
| **SUBTOTAL** | **$43,706** | **$12,886** | **$19,414** | **$10,481** | **$925** | **135,968** | **1,532,857** |
| **Income Eligible Residential** | | | | | | | |
| Single Family - Income Eligible Services | $11,757 | $1,310 | $6,218 | $4,154 | $75 | 6,635 | 132,704 |
| Income Eligible Multifamily | $9,936 | $1,946 | $3,401 | $4,479 | $110 | 11,810 | 198,615 |
| **SUBTOTAL** | **$21,693** | **$3,257** | **$9,619** | **$8,633** | **$185** | **18,445** | **331,319** |
| **Non-Income Eligible Residential** | | | | | | | |
| Energy Star® HVAC | $10,421 | $5,015 | $2,563 | $2,556 | $287 | 29,363 | 514,514 |
| Energy*Wise* | $34,335 | $7,688 | $8,682 | $17,525 | $439 | 34,139 | 786,836 |
| EnergyWise Multifamily | $7,715 | $1,482 | $3,415 | $2,734 | $84 | 7,567 | 152,194 |
| Home Energy Reports | $1,625 | $762 | $369 | $448 | $46 | 88,173 | 88,173 |
| Residential New Construction | $830 | $474 | $194 | $135 | $27 | 2,769 | 48,111 |
| **SUBTOTAL** | **$54,926** | **$15,420** | **$15,223** | **$23,399** | **$883** | **162,011** | **1,589,829** |
| | | | | | | | |
| **TOTAL** | **$120,325** | **$31,562** | **$44,256** | **$42,513** | **$1,993** | **316,424** | **3,454,006** |

## COMPANY NATURAL GAS ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table G-3: Summary of B/C Ratios, Value and Costs ($000's)
## 2021 Program Year

| | (1) Benefit/ Cost | (2) Total Value | (3) Program Implementation Expenses | (4) Customer Contribution | (5) Shareholder Incentive |
|---|---|---|---|---|---|
| **Commercial & Industrial** | | | | | |
| Large Commercial New Construction | 9.08 | $21,921.0 | $2,569.7 | -$154.5 | |
| Large Commercial Retrofit | 3.45 | $17,587.3 | $3,278.1 | $1,812.9 | |
| Small Business Direct Install | 7.49 | $1,779.1 | $158.7 | $79.0 | |
| Commercial & Industrial Multifamily | 2.23 | $2,418.3 | $951.4 | $132.0 | |
| Commercial Pilots | | | $105.5 | | |
| Finance Costs | | | $0.0 | | |
| Community Based Initiatives - C&I | | | $0.0 | | |
| **SUBTOTAL** | **4.40** | **$43,705.7** | **$7,063.4** | **$1,869.3** | **$996.1** |
| | | | | | |
| **Income Eligible Residential** | | | | | |
| Single Family - Income Eligible Services | 2.97 | $11,757.0 | $3,956.4 | $0.0 | |
| Income Eligible Multifamily | 3.18 | $9,936.3 | $2,764.6 | $359.3 | |
| **SUBTOTAL** | **3.06** | **$21,693.3** | **$6,721.0** | **$359.3** | **$0.0** |
| | | | | | |
| **Non-Income Eligible Residential** | | | | | |
| Energy Star® HVAC | 2.13 | $10,421.1 | $2,635.3 | $2,252.4 | |
| EnergyWise | 1.95 | $34,335.0 | $16,227.2 | $1,354.6 | |
| EnergyWise Multifamily | 3.97 | $7,715.1 | $1,608.2 | $336.1 | |
| Home Energy Reports | 4.06 | $1,624.6 | $400.3 | $0.0 | |
| Residential New Construction | 1.11 | $829.8 | $397.6 | $347.5 | |
| Community Based Initiatives - Residential | | | $38.2 | | |
| Comprehensive Marketing - Residential | | | $73.7 | | |
| **SUBTOTAL** | **2.14** | **$54,925.5** | **$21,380.5** | **$4,290.6** | **$0.0** |
| | | | | | |
| **Regulatory** | | | | | |
| EERMC | | | $240.3 | | |
| OER | | | $275.1 | | |
| **SUBTOTAL** | | | **$515.3** | | |
| | | | | | |
| **TOTAL** | **2.79** | **$120,324.5** | **$35,680.2** | **$6,519.2** | **$996.1** |

Notes:
(1) RI Test B/C Ratio = (Natural Gas + Capacity + Energy + Utility NEIs + Non Electric + Societal + Economic Benefits) / (Program Implementation + Customer Contribution + Shareholder Incentive)
(2) Year-End Value Total from Table G-2.
(3) Year-End Implementation Expenses by Program from Table G-1.
(4) For the Income Eligible Multifamily program, there are some circumstances where a customer co-pay is charged. If the facility is owned by a for-profit company and there are custom measures being installed that cannot be supported by the program budget a co-pay will be negotiated with the customer.
(5) The C&I Shareholder incentive for this calculation are from Tbl 4c.

**Company Electric Energy Efficiency Programs in Rhode Island**
**Table 4A: Actual Gas PIM Benefits, Allocations, and Categorization**
**2021 Program Year**

| | Natural Gas Benefits | | Utility NEIs | Electric Capacity | | | | | Electric Energy | | | | | | | | Non-Electric and Non-Gas | | | Societal | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Winter | | Summer | | Winter | | Summer | | | | | | | |
| Sector | Natural Gas | Natural Gas DRIPE | Utility NEIs | Summer Generation | Capacity DRIPE | Trans | Dist | Reliability | Winter Peak | Winter Off Peak | Summer Peak | Summer Off Peak | Winter Peak Energy DRIPE | Winter Off-Peak Energy DRIPE | Summer Peak Energy DRIPE | Summer Off-Peak Energy DRIPE | Oil | Other Resource | Non Resource | Carbon | NOx | Economic |
| Non-Income Eligible Residential | $15,145,373 | $274,432 | $0 | $135,417 | -$107 | $143,506 | $124,622 | $6,024 | $60,263 | $62,893 | $78,444 | $61,260 | $15,151 | $12,837 | $19,950 | $12,576 | $0 | $368,244 | $7,620,613 | $6,501,589 | $883,385 | |
| Income Eligible Residential | $3,195,563 | $60,983 | $87,671 | $17,345 | $0 | $19,264 | $16,729 | $900 | $16,999 | $17,387 | $18,743 | $14,612 | $5,758 | $4,657 | $5,951 | $3,733 | $0 | $24,634 | $7,997,291 | $1,367,044 | $185,154 | |
| Commercial & Industrial | $12,543,751 | $342,277 | $0 | $4,896 | $0 | $5,547 | $4,817 | $272 | $452 | $238 | $2,740 | $2,077 | $161 | $67 | $903 | $551 | $0 | $912,707 | $12,237,034 | $6,241,943 | $924,560 | |
| Included in PIM? (Y/N) | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | N | N | N | N |
| Percent Application in PIM | 100% | 100% | 100% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 50% | 0% | 0% | 0% | 0% |
| Category | Gas Utility System Benefits | Gas Utility System Benefits | Gas Utility System Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | Resource Benefits | NA | NA | NA | NA |

**Company Electric Energy Efficiency Programs in Rhode Island**
**Table 4B: Actual Gas PIM Costs**
**2021 Program Year**

| Sector | Eligible Spending Budget (from Table E-3) | Regulatory Costs |
|---|---|---|
| Non-Income Eligible Residential | $21,380,454 | $314,279 |
| Income Eligible Residential | $6,720,995 | $98,794 |
| Commercial & Industrial | $6,957,813 | $102,275 |
| Included in PIM? (Y/N) | Y | Y |
| Percent Application in PIM | 100% | 100% |

**Company Electric Energy Efficiency Programs in Rhode Island**
**Table 4C: PIM and SQA Summary**
**2021 Program Year**

| Sector | Inputs ($) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Gas Utility System Benefits | Resource Benefits | Achieved Total Benefits | Achieved Costs | Achieved Net Benefits | Planned Total Benefits | Planned Total Costs | Planned Net Benefits |
| Non-Income Eligible Residential | $15,419,805 | $550,540 | $15,970,345 | $21,694,733 | -$5,724,389 | $14,834,610 | $14,712,461 | $122,149 |
| Income Eligible Residential | $3,344,217 | $83,355 | $3,427,572 | $6,819,790 | -$3,392,217 | $5,396,343 | $9,145,150 | -$3,748,806 |
| Commercial & Industrial | $12,886,028 | $467,714 | $13,353,742 | $7,060,088 | $6,293,654 | $18,476,500 | $9,137,008 | $9,339,492 |
| | *$31,650,050* | *$1,101,609* | *$32,751,659* | *$35,574,611* | *-$2,822,952* | *$38,707,453* | *$32,994,619* | *$5,712,834* |

| Sector | PIM ($) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Design Performance Achievement | Achieved Net Benefits / Design Performance Achievement | Achieved / Planned Costs | Planned Performance Incentive | Planned Payout Rate | Payout Cap | Earned Performance Incentive |
| Non-Income Eligible Residential | $122,149 | -4686.41% | 147.46% | $100,000 | 81.87% | $125,000 | $0 |
| Income Eligible Residential | $2,000,000 | -169.61% | 74.57% | $500,000 | 25.00% | $625,000 | $0 |
| Commercial & Industrial | $9,339,492 | 67.39% | 77.27% | $1,600,000 | 17.13% | $2,000,000 | $996,123 |

| Sector | SQA ($) | | | | |
|---|---|---|---|---|---|
| | Design Service Achievement | Service Achievement | Maximum Service Adjustment | Service Quality Adjustment Amount | % of Maximum Service Quality Adjustment Applied |
| Non-Income Eligible Residential | $14,834,610 | 107.66% | $386,750 | $386,750 | 100.00% |
| Income Eligible Residential | $5,396,343 | 63.52% | $276,250 | $276,250 | 100.00% |
| Commercial & Industrial | $18,476,500 | 72.27% | N/A | N/A | N/A |

(1) See Shareholder Incentive section (page 47) of the 2021 Year Report's Main Text for details on calculation of the Performance Incentive. Performance Incentive calculations are based on the PUC's Order from September 21, 2021 as detailed in Appendix A.

**The Company** **TABLE G-5**

**OVERALL ANALYSIS OF ENERGY EFFICIENCY FUND BALANCE**

| | JANUARY | FEBRUARY | MARCH | APRIL | MAY | JUNE | TOTAL |
|---|---|---|---|---|---|---|---|
| 1. Start Of Peri | $6,724,466 | $11,890,550 | $14,637,422 | $14,093,181 | $12,860,460 | $11,496,507 | $6,724,466 |
| 2. Revenue | $5,172,066 | $3,945,520 | $3,673,496 | $2,191,153 | $1,597,978 | $985,684 | $17,565,897 |
| 3. Monthly EE | $15,672 | $1,212,458 | $4,232,692 | $3,437,905 | $2,974,611 | $2,856,431 | $14,729,770 |
| 4. Cash Flow ( | $5,156,394 | $2,733,062 | ($559,197) | ($1,246,752) | ($1,376,633) | ($1,870,747) | $2,836,127 |
| 5. End Of Peri( | $11,880,860 | $14,623,613 | $14,078,225 | $12,846,429 | $11,483,828 | $9,625,759 | $9,560,593 |
| 6. Interest | $9,690 | $13,809 | $14,956 | $14,031 | $12,679 | $11,001 | $76,167 |
| 7. End Of Peri( | $11,890,550 | $14,637,422 | $14,093,181 | $12,860,460 | $11,496,507 | $9,636,761 | $9,636,761 |

| | JULY | AUGUST | SEPTEMBER | OCTOBER | NOVEMBER | DECEMBER | YEAR END TOTAL |
|---|---|---|---|---|---|---|---|
| 8. Start Of Peri | $9,636,761 | $8,006,190 | $7,048,653 | $6,728,716 | $4,528,067 | $1,243,739 | $6,724,466 |
| 9. Revenue | $683,679 | $754,778 | $840,747 | $482,879 | $275,338 | $3,023,599 | $23,626,916 |
| 10. Monthly EE | $2,323,434 | $1,720,152 | $1,167,857 | $2,689,388 | $3,562,670 | $9,486,884 | $35,680,153 |
| 11. Cash Flow ( | ($1,639,755) | ($965,374) | ($327,109) | ($2,206,509) | ($3,287,332) | ($6,463,285) | ($12,053,237) |
| 12. End Of Peri( | $7,997,006 | $7,040,816 | $6,721,544 | $4,522,207 | $1,240,735 | ($5,219,546) | ($5,328,771) |
| 13. Interest | $9,184 | $7,837 | $7,172 | $5,860 | $3,005 | ($2,071) | $107,154 |
| 14. End Of Peri( | $8,006,190 | $7,048,653 | $6,728,716 | $4,528,067 | $1,243,739 | ($5,221,616) | **($5,221,616)** |
| 15. 2021 Incentive | | | | | | | **$333,123** |
| 16. Ending Balance after Incentive | | | | | | | **($5,554,739)** |
| 17. Income Eligible Subsidization | | | | | | | **$0** |
| 18. Ending Balance after Subsidization | | | | | | | **($5,554,739)** |

1. Previous year's ending balar
2. Business Objects queries fo
3. SAP queries for expenses
4. Line 2 minus Line 3
5. Line 1 plus Line 4
6. Interest applied
7. Line 5 plus Line 6
8. Previous month's ending balance
9. Business Objects queries for revenues
10. SAP queries for expenses
11. Line 9 minus Line 10
12. Line 8 plus Line 11
13. Interest applied
14. Line 12 plus Line 13
15. Estimated 2021 Incentive plus prior period true-ups

# COMPANY GAS ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
## Table G-6: Company 2021 Revolving Loan Funds

### Large C&I Gas Revolving Loan Fund

| | | |
|---|---|---|
| | Income Statement | |
| (1) | 2021 Funds Available | $1,532,113 |
| | | |
| (2) | 2021 Loan budget | $2,200,000 |
| (3) | Committed | $1,161,751 |
| (4) | Paid | $549,376 |
| (5) | Repayments | $443,222 |
| (6) | Available 12/31/21 | -$126,421 |
| (7) | Outstanding loan volume | $1,596,990 |
| (8) | Loan defaults during period ($) | $0 |
| (9) | Arrears over 120 days at period end ($) | $0 |
| | | |
| | Program Impact | |
| (10) | Number of loans | 13 |
| (10b) | Participants | 4 |
| (11) | Annual Savings (Gross MMBtu) | 7,346 |
| (12) | Annual Savings (Net MMBtu) | 5,639 |
| (13) | Lifetime Savings (Gross MMBtu) | 60,978 |
| (14) | Lifetime Savings (Net MMBtu) | 47,450 |
| (17) | Total associated incentive volume ($) | $194,569 |
| (18) | Total annual estimated energy cost savings ($) | $146,519 |

### Rhode Island Public Energy Partnership (RI PEP) Gas

| | | |
|---|---|---|
| | Income Statement | |
| (1) | 2021 Funds Available | $3,580 |
| | | |
| (4) | Paid | $0 |
| (4a) | Funds Returned to OER | $3,580 |
| (5) | Repayments | $964 |
| (6) | Available 12/31/20 | $964 |
| (7) | Outstanding loan volume | $0 |
| (8) | Loan defaults during period ($) | $0 |
| (9) | Arrears over 120 days at period end ($) | $0 |
| | | |
| | Program Impact | |
| (10) | Number of loans | |
| (10b) | Participants | 0 |
| (11) | Savings (MMBtu) | 0 |

Notes

1 Amount available as of January 1, 2021. Includes line (6) "Available 12/31/20" plus line (3) "Committed" in Table E-6 and G-6 of the 2020 Year End Report.
2 Budget adopted by Sales Team for 2021 operations. Budget includes projections of repayments made during 2021.
3 As of December 31, 2021 Committed in 2021 but to be paid in 2022. Savings not included in 2021.
4 As of December 31, 2021. This includes all project paid in 2021 and the OBR associated with those projects. OBR payment are processed once the associated incentive has been paid usually in batches.
5 As of December 31, 2021
6 Fund balance as of December 31, 2021. Committed funds are subtracted from this amount.
7 Total outstanding loan balance. Loans lent out that still need to be paid back. This includes loans from previous years.
8 Total loan value in default during period.
9 Total loan value in arrears for over 120 days as of December 31, 2021.
10 As of December 31, 2021
10b Unique customer names for large business (one customer name can have multiple sub accounts as is in the case of a franchise).
11 As of December 31, 2021
12 As of December 31, 2021
13 As of December 31, 2021
14 As of December 31, 2021
15 As of December 31, 2021
16 As of December 31, 2021
17 Incentives paid out with loans.
18 Estimated energy cost savings to loan fund participants.

**Attachment 2a**

# Attachment 2a

# Gas Costs Schedules

## Schedule 1 - Program and Sector Cost Summary

**DIRECT vs ALLOCATED**

| | | (a) | (b) | (c ) | (d) | (e ) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TOTALS | | | | DETAILS | | | | | | | | | | | |
| | | TOTAL SPLIT 1 | | TOTAL SPLIT 2 | | DIRECT COSTS | | | | | | ALLOCATED COSTS | | | | | |
| | | DIRECT vs ALLOCATED | | Cost of services and product rebates/incentives provided to customers vs. Other Costs (1) | | NO INCENTIVE (2) | | | Cost of services and product rebates/incentives provided to customers | | | Other Costs | | | Cost of services and product rebates/incentives provided to customers | | |
| | | Total Costs | DIRECT | ALLOCATED | Cost of services and product rebates/incentives provided to customers | Other Costs | Company Direct Labor & Employee Expense | Direct External | Direct "Not Labor, Expense, External" | Company Direct Labor & Employee Expense | Direct External | Direct "Not Labor, Expense, External" | Company Allocated Labor & Employee Expense | Allocated External | Allocated "Not Labor, Expense, External" | Company Allocated Labor & Employee Expense | Allocated External | Allocated "Not Labor, Expense, Vendor" |
| 1 | Residential New Construction (Gas) | $397,630 | $373,690 | $23,940 | $254,427 | $143,204 | $22,206 | $97,058 | $0 | $0 | $254,427 | $0 | $13,764 | $10,176 | $0 | $0 | $0 | $0 |
| 2 | ENERGY STAR HVAC (Gas) | $2,635,311 | $2,555,896 | $79,414 | $2,254,128 | $381,183 | $39,634 | $262,134 | $0 | $0 | $2,254,128 | $0 | $47,843 | $31,572 | $0 | $0 | $0 | $0 |
| 3 | EnergyWise (Gas) | $16,227,155 | $16,045,053 | $182,102 | $13,740,957 | $2,486,198 | $15,816 | $2,288,279 | $0 | $0 | $13,740,957 | $0 | $106,725 | $75,378 | $0 | $0 | $0 | $0 |
| 4 | EnergyWise Multi Family (Gas) | $1,608,210 | $1,567,688 | $40,522 | $1,300,606 | $307,604 | $20,553 | $246,528 | $0 | $0 | $1,300,606 | $0 | $23,406 | $17,116 | $0 | $0 | $0 | $0 |
| 5 | Home Energy Reports (Gas) | $400,308 | $387,831 | $12,478 | $0 | $400,308 | $868 | $386,963 | $0 | $0 | $0 | $0 | $8,252 | $4,226 | $0 | $0 | $0 | $0 |
| 6 | Residential Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 7 | Community Based Initiatives - Residential (Gas) | $38,161 | $38,161 | $0 | $0 | $38,161 | $429 | $37,733 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 8 | Comprehensive Marketing Residential (Gas) | $73,677 | $72,528 | $1,150 | $0 | $73,677 | $0 | $72,528 | $0 | $0 | $0 | $0 | $1,098 | $52 | $0 | $0 | $0 | $0 |
| 9 | **Subtotal Non-Income Eligible Residential** | **$21,380,454** | **$21,040,848** | **$339,606** | **$17,550,118** | **$3,830,336** | **$99,507** | **$3,391,223** | **$0** | **$0** | **$17,550,118** | **$0** | **$201,087** | **$138,519** | **$0** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | | | | | |
| 10 | Single Family - Income Eligible Services (gas) | $3,956,377 | $3,834,409 | $121,968 | $3,061,197 | $895,180 | $6,020 | $767,193 | $0 | $0 | $3,061,197 | $0 | $71,869 | $50,099 | $0 | $0 | $0 | $0 |
| 11 | Income Eligible Multifamily (Gas) | $2,764,618 | $2,697,911 | $66,707 | $2,291,113 | $473,506 | $8,001 | $398,797 | $0 | $0 | $2,291,113 | $0 | $38,939 | $27,768 | $0 | $0 | $0 | $0 |
| 12 | **Subtotal Income Eligible Residential** | **$6,720,995** | **$6,532,320** | **$188,675** | **$5,352,309** | **$1,368,686** | **$14,021** | **$1,165,990** | **$0** | **$0** | **$5,352,309** | **$0** | **$110,808** | **$77,867** | **$0** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | | | | | |
| 13 | Large Commercial New Construction (Gas) | $2,569,731 | $2,375,877 | $193,854 | $1,137,109 | $1,432,623 | $185,387 | $1,053,381 | $0 | $0 | $1,137,109 | $0 | $123,327 | $70,527 | $0 | $0 | $0 | $0 |
| 14 | Large Commercial Retrofit (Gas) | $3,278,080 | $2,905,449 | $372,631 | $1,559,609 | $1,718,471 | $512,369 | $833,472 | $0 | $0 | $1,559,609 | $0 | $227,465 | $145,166 | $0 | $0 | $0 | $0 |
| 15 | Small Business Direct Install (Gas) | $158,650 | $146,500 | $12,151 | $110,188 | $48,462 | $18,758 | $17,553 | $0 | $0 | $110,188 | $0 | $7,266 | $4,885 | $0 | $0 | $0 | $0 |
| 16 | Commercial Pilots (Gas) | $105,542 | $105,542 | $0 | $98,700 | $6,843 | $6,843 | $0 | $0 | $0 | $98,700 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 17 | Community Based Initiatives - C&I (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 18 | Commercial & Industrial Multifamily (Gas) | $951,351 | $901,239 | $50,112 | $753,844 | $197,506 | $7,705 | $139,690 | $0 | $0 | $753,844 | $0 | $29,769 | $20,343 | $0 | $0 | $0 | $0 |
| 19 | Finance Costs (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 20 | **Subtotal Commercial & Industrial** | **$7,063,355** | **$6,434,608** | **$628,748** | **$3,659,450** | **$3,403,905** | **$731,062** | **$2,044,096** | **$0** | **$0** | **$3,659,450** | **$0** | **$387,826** | **$240,921** | **$0** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | | | | | |
| 21 | OER (Gas) | $275,067 | $275,067 | $0 | $0 | $275,067 | $0 | $275,067 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | EERMC (Gas) | $240,282 | $240,282 | $0 | $0 | $240,282 | $0 | $240,282 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | **Subtotal Regulatory** | **$515,349** | **$515,349** | **$0** | **$0** | **$515,349** | **$0** | **$515,349** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 24 | **TOTAL All Sectors** | **$35,680,153** | **$34,523,125** | **$1,157,029** | **$26,561,877** | **$9,118,276** | **$844,589** | **$7,116,658** | **$0** | **$0** | **$26,561,877** | **$0** | **$699,721** | **$457,308** | **$0** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | | | | | |
| | **OTHER COSTS NOT LISTED ABOVE (Gas)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

1 Prior to the 2021 Energy Efficiency Annual Plan filing, this cost category was referred to as "Rebates and Other Incentives"

2 These Costs do not include costs relating to the cost of services and product rebates/incentives provided to customers

## Schedule 1a - Program and Sector Cost Summary

**By Report Category**

| | | | (d) (Schedule 4) col a | (e ) (Schedule 5) col a | (f) (Schedule 6) col a | (g) (Schedule 7) col a | (h) (Schedule 8) col a |
|---|---|---|---|---|---|---|---|
| | | **Total Costs** | Program Planning & Admin. | Marketing | Cost of services and product rebates/incentives provided to customers (1) | STAT | Evaluation & Research |
| 1 | Residential New Construction (Gas) | $397,630 | $35,377 | $38 | $254,427 | $102,222 | $5,567 |
| 2 | ENERGY STAR HVAC (Gas) | $2,635,311 | $81,653 | $157,970 | $2,254,128 | $100,608 | $40,952 |
| 3 | EnergyWise (Gas) | $16,227,155 | $157,739 | $55,880 | $13,740,957 | $2,178,053 | $94,526 |
| 4 | EnergyWise Multi Family (Gas) | $1,608,210 | $49,023 | $3,638 | $1,300,606 | $222,822 | $32,121 |
| 5 | Home Energy Reports (Gas) | $400,308 | $7,928 | $1 | $0 | $390,671 | $1,709 |
| 6 | Residential Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 |
| 7 | Community Based Initiatives - Residential (Gas) | $38,161 | $429 | $37,733 | $0 | $0 | $0 |
| 8 | Comprehensive Marketing Residential (Gas) | $73,677 | $114 | $73,563 | $0 | $0 | $0 |
| 9 | **Subtotal Non-Income Eligible Residential** | **$21,380,454** | **$332,264** | **$328,822** | **$17,550,118** | **$2,994,376** | **$174,875** |
| | | | | | | | |
| 10 | Single Family - Income Eligible Services (gas) | $3,956,377 | $104,775 | $17,223 | $3,061,197 | $730,672 | $42,510 |
| 11 | Income Eligible Multifamily (Gas) | $2,764,618 | $63,939 | -$465 | $2,291,113 | $339,441 | $70,591 |
| 12 | **Subtotal Income Eligible Residential** | **$6,720,995** | **$168,713** | **$16,758** | **$5,352,309** | **$1,070,113** | **$113,101** |
| | | | | | | | |
| 13 | Large Commercial New Construction (Gas) | $2,569,731 | $86,673 | $161,570 | $1,137,109 | $1,144,007 | $40,372 |
| 14 | Large Commercial Retrofit (Gas) | $3,278,080 | $271,807 | $133,337 | $1,559,609 | $1,227,860 | $85,467 |
| 15 | Small Business Direct Install (Gas) | $158,650 | $7,702 | $25,986 | $110,188 | $14,581 | $193 |
| 16 | Commercial Pilots (Gas) | $105,542 | $1 | $0 | $98,700 | $6,841 | $0 |
| 17 | Community Based Initiatives - C&I (Gas) | $0 | $0 | $0 | $0 | $0 | $0 |
| 18 | Commercial & Industrial Multifamily (Gas) | $951,351 | $31,472 | $6,986 | $753,844 | $140,260 | $18,789 |
| 19 | Finance Costs (Gas) | $0 | $0 | $0 | $0 | $0 | $0 |
| 20 | **Subtotal Commercial & Industrial** | **$7,063,355** | **$397,655** | **$327,879** | **$3,659,450** | **$2,533,549** | **$144,822** |
| | | | | | | | |
| 21 | OER (Gas) | $275,067 | $275,067 | $0 | $0 | $0 | $0 |
| 22 | EERMC (Gas) | $240,282 | $240,282 | $0 | $0 | $0 | $0 |
| 23 | **Subtotal Regulatory** | **$515,349** | **$515,349** | **$0** | **$0** | **$0** | **$0** |
| 24 | **TOTAL All Sectors** | **$35,680,153** | **$1,413,982** | **$673,459** | **$26,561,877** | **$6,598,038** | **$432,798** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **OTHER COSTS NOT LISTED ABOVE (Gas)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 2 - Labor and Employee Expenses

| | | (a) (b)+(c ) | (b) (e )+(h) | (c ) (f)+(i) | (d) (e )+(f) | (e ) | (f) | (g) (h)+(i) | (h) | (i) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Company Labor + Expenses** | Company Direct Labor + Expenses | Company Allocated Labor + Expenses | **Total Company Labor** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses |
| 1 | Residential New Construction (Gas) | $35,970 | $22,206 | $13,764 | $35,748 | $22,206 | $13,542 | $222 | $0 | $222 |
| 2 | ENERGY STAR HVAC (Gas) | $87,477 | $39,634 | $47,843 | $86,978 | $39,621 | $47,358 | $499 | $14 | $485 |
| 3 | EnergyWise (Gas) | $122,541 | $15,816 | $106,725 | $120,753 | $15,816 | $104,936 | $1,788 | $0 | $1,788 |
| 4 | EnergyWise Multi Family (Gas) | $43,959 | $20,553 | $23,406 | $43,620 | $20,553 | $23,066 | $339 | $0 | $339 |
| 5 | Home Energy Reports (Gas) | $9,120 | $868 | $8,252 | $8,602 | $868 | $7,734 | $518 | $0 | $518 |
| 6 | Residential Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 7 | Community Based Initiatives - Residential (Gas) | $429 | $429 | $0 | $429 | $429 | $0 | $0 | $0 | $0 |
| 8 | Comprehensive Marketing Residential (Gas) | $1,098 | $0 | $1,098 | $1,097 | $0 | $1,097 | $1 | $0 | $1 |
| 9 | **Subtotal Non-Income Eligible Residential** | **$300,593** | **$99,507** | **$201,087** | **$297,226** | **$99,493** | **$197,734** | **$3,367** | **$14** | **$3,353** |
| | | | | | | | | | | |
| 10 | Single Family - Income Eligible Services (gas) | $77,888 | $6,020 | $71,869 | $76,173 | $6,020 | $70,154 | $1,715 | $0 | $1,715 |
| 11 | Income Eligible Multifamily (Gas) | $46,940 | $8,001 | $38,939 | $46,269 | $8,001 | $38,268 | $672 | $0 | $672 |
| 12 | **Subtotal Income Eligible Residential** | **$124,829** | **$14,021** | **$110,808** | **$122,442** | **$14,021** | **$108,421** | **$2,387** | **$0** | **$2,387** |
| | | | | | | | | | | |
| 13 | Large Commercial New Construction (Gas) | $308,714 | $185,387 | $123,327 | $297,436 | $177,894 | $119,542 | $11,279 | $7,493 | $3,786 |
| 14 | Large Commercial Retrofit (Gas) | $739,833 | $512,369 | $227,465 | $715,149 | $492,983 | $222,166 | $24,684 | $19,385 | $5,299 |
| 15 | Small Business Direct Install (Gas) | $26,024 | $18,758 | $7,266 | $25,861 | $18,758 | $7,103 | $163 | $0 | $163 |
| 16 | Commercial Pilots (Gas) | $6,843 | $6,843 | $0 | $6,843 | $6,843 | $0 | $0 | $0 | $0 |
| 17 | Community Based Initiatives - C&I (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 18 | Commercial & Industrial Multifamily (Gas) | $37,474 | $7,705 | $29,769 | $36,765 | $7,705 | $29,060 | $709 | $0 | $709 |
| 19 | Finance Costs (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 20 | **Subtotal Commercial & Industrial** | **$1,118,888** | **$731,062** | **$387,826** | **$1,082,054** | **$704,184** | **$377,870** | **$36,835** | **$26,878** | **$9,956** |
| | | | | | | | | | | |
| 21 | OER (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | EERMC (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 24 | **TOTAL All Sectors** | **$1,544,310** | **$844,589** | **$699,721** | **$1,501,722** | **$817,697** | **$684,025** | **$42,588** | **$26,892** | **$15,696** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **OTHER COSTS NOT LISTED ABOVE (Gas)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 3 - Expenses Categorized as Vendor Costs in Company's Systems[1]

Annual threshold > $100,000 for evaluation of allocation between Col. (b) vs. Col. (c )

Default Assumption, expenses allocated to Col. (c)

| | | (a) | (b) | (c ) (a) - (b) | (d) | (e ) | (f) (d) + (e) | (g) (c) + (f) |
|---|---|---|---|---|---|---|---|---|
| | | **Total Costs of Services, Products, and Rebates Provided to Customers.2 (also referred to as "Rebates and Other Customer Incentives")** | **Rebate Payments Made Directly to Customers by the Company and Rebates Paid to PEX's to Whom Customer Rebates were Assigned** | **Payments to Service Vendors for Costs Relating to Services, Products, and Processing Rebates (excluding costs included in col. b)3** | **Direct "External Costs"4 from Vendor Services** | **"External Costs" from Vendors Originating from an Allocation** | **Total of Vendor Costs Categorized as "External Costs" from Service Vendors (excluding costs included in colums a, b & c)** | **Total Costs from Service Vendors, Excluding Rebate Payments Made Directly to Customers by the Company** |
| 1 | Residential New Construction (Gas) | $254,427 | $0 | $254,427 | $97,058 | $10,176 | $107,234 | $361,661 |
| 2 | ENERGY STAR HVAC (Gas) | $2,254,128 | $0 | $2,254,128 | $262,134 | $31,572 | $293,706 | $2,547,834 |
| 3 | EnergyWise (Gas) | $13,740,957 | $0 | $13,740,957 | $2,288,279 | $75,378 | $2,363,657 | $16,104,614 |
| 4 | EnergyWise Multi Family (Gas) | $1,300,606 | $0 | $1,300,606 | $246,528 | $17,116 | $263,645 | $1,564,251 |
| 5 | Home Energy Reports (Gas) | $0 | $0 | $0 | $386,963 | $4,226 | $391,189 | $391,189 |
| 6 | Residential Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 7 | Community Based Initiatives - Residential (Gas) | $0 | $0 | $0 | $37,733 | $0 | $37,733 | $37,733 |
| 8 | Comprehensive Marketing Residential (Gas) | $0 | $0 | $0 | $72,528 | $52 | $72,580 | $72,580 |
| 9 | **Subtotal Non-Income Eligible Residential** | **$17,550,118** | **$0** | **$17,550,118** | **$3,391,223** | **$138,519** | **$3,529,743** | **$21,079,861** |
| | | | | | | | | |
| 10 | Single Family - Income Eligible Services (gas) | $3,061,197 | $0 | $3,061,197 | $767,193 | $50,099 | $817,292 | $3,878,488 |
| 11 | Income Eligible Multifamily (Gas) | $2,291,113 | $0 | $2,291,113 | $398,797 | $27,768 | $426,565 | $2,717,678 |
| 12 | **Subtotal Income Eligible Residential** | **$5,352,309** | **$0** | **$5,352,309** | **$1,165,990** | **$77,867** | **$1,243,857** | **$6,596,167** |
| | | | | | | | | |
| 13 | Large Commercial New Construction (Gas) | $1,137,109 | $0 | $1,137,109 | $1,053,381 | $70,527 | $1,123,908 | $2,261,017 |
| 14 | Large Commercial Retrofit (Gas) | $1,559,609 | $505,972 | $1,053,637 | $833,472 | $145,166 | $978,638 | $2,032,275 |
| 15 | Small Business Direct Install (Gas) | $110,188 | $0 | $110,188 | $17,553 | $4,885 | $22,439 | $132,627 |
| 16 | Commercial Pilots (Gas) | $98,700 | $0 | $98,700 | $0 | $0 | $0 | $98,700 |
| 17 | Community Based Initiatives - C&I (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 18 | Commercial & Industrial Multifamily (Gas) | $753,844 | $0 | $753,844 | $139,690 | $20,343 | $160,032 | $913,877 |
| 19 | Finance Costs (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 20 | **Subtotal Commercial & Industrial** | **$3,659,450** | **$505,972** | **$3,153,478** | **$2,044,096** | **$240,921** | **$2,285,017** | **$5,438,495** |
| | | | | | | | | |
| 21 | OER (Gas) | $0 | $0 | $0 | $275,067 | $0 | $275,067 | $275,067 |
| 22 | EERMC (Gas) | $0 | $0 | $0 | $240,282 | $0 | $240,282 | $240,282 |
| 23 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$515,349** | **$0** | **$515,349** | **$515,349** |
| 24 | **TOTAL All Sectors** | **$26,561,877** | **$505,972** | **$26,055,905** | **$7,116,658** | **$457,308** | **$7,573,966** | **$33,629,871** |
| | | | | | | | | |
| | **OTHER COSTS NOT LISTED ABOVE (Gas)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

Prior to the 2021 Energy Efficiency Annual Plan filing, this cost category was referred to as "Rebates and Other Incentives"

[1] The Company's accounting system treats all payments made directly to customers and vendors as one category of vendor expenses.

Rebates paid to customers through service contracts with vendors are included in the service cost of the vendor.

[2] Prior to the 2021 Annual Plan, this column was labeled as "Rebates and Other Customer Incentives" in annual reports and plans.

[3] This cost category includes service costs for customers plus rebates/incentives processed and paid to customers by the vendor, but excludes rebates paid directly to customers by the Company in col (b).

[4] The term "External Costs" has been used in Company reports to identify a subset of vendor costs not included in "Rebates and Other Customer Incentives".

[5] In the 2020 Year End Report, Home Energy Reports were categorized under column (c) in this schedule. Starting with the 2021 Year End Report, Home Energy Reports costs categorized under column (c) are now categorized under column (d).

## Schedule 4 - Program Planning & Administration

| | | (a)<br>(b)+(e )+(h) | (b)<br>(c )+(d) | (c ) | (d) | (e )<br>(f)+(g) | (f) | (g) | (h)<br>(i)+(j) | (i) | (j) | (h)<br>(i)+(j) | (i) | (j) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Costs** | **Total Company Labor Costs** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses | **External Services Costs** | Direct External Services Costs | External Services Costs Originating from an Allocation | **Other Costs (if any)** | Other Direct Costs | Other Costs Originating from an Allocation |
| 1 | Residential New Construction (Gas) | $35,377 | $25,607 | $13,947 | $11,660 | $97 | $0 | $97 | $9,673 | $0 | $9,673 | $0 | $0 | $0 |
| 2 | ENERGY STAR HVAC (Gas) | $81,653 | $52,227 | $17,123 | $35,103 | $305 | $14 | $291 | $29,122 | $0 | $29,122 | $0 | $0 | $0 |
| 3 | EnergyWise (Gas) | $157,739 | $86,953 | $2,473 | $84,480 | $701 | $0 | $701 | $70,085 | $0 | $70,085 | $0 | $0 | $0 |
| 4 | EnergyWise Multi Family (Gas) | $49,023 | $32,503 | $12,786 | $19,716 | $164 | $0 | $164 | $16,357 | $0 | $16,357 | $0 | $0 | $0 |
| 5 | Home Energy Reports (Gas) | $7,928 | $4,709 | $868 | $3,842 | $32 | $0 | $32 | $3,187 | $0 | $3,187 | $0 | $0 | $0 |
| 6 | Residential Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 7 | Community Based Initiatives - Residential (Gas) | $429 | $429 | $429 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 8 | Comprehensive Marketing Residential (Gas) | $114 | $62 | $0 | $62 | $1 | $0 | $1 | $52 | $0 | $52 | $0 | $0 | $0 |
| 9 | **Subtotal Non-Income Eligible Residential** | **$332,264** | **$202,490** | **$47,626** | **$154,864** | **$1,299** | **$14** | **$1,286** | **$128,475** | **$0** | **$128,475** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 10 | Single Family - Income Eligible Services (gas) | $104,775 | $57,962 | $2,093 | $55,869 | $464 | $0 | $464 | $46,349 | $0 | $46,349 | $0 | $0 | $0 |
| 11 | Income Eligible Multifamily (Gas) | $63,939 | $37,831 | $6,673 | $31,158 | $259 | $0 | $259 | $25,849 | $0 | $25,849 | $0 | $0 | $0 |
| 12 | **Subtotal Income Eligible Residential** | **$168,713** | **$95,793** | **$8,766** | **$87,027** | **$722** | **$0** | **$722** | **$72,198** | **$0** | **$72,198** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 13 | Large Commercial New Construction (Gas) | $86,673 | $48,966 | $6,032 | $42,934 | $212 | $15 | $197 | $37,495 | $270 | $37,225 | $0 | $0 | $0 |
| 14 | Large Commercial Retrofit (Gas) | $271,807 | $125,029 | $9,003 | $116,027 | $533 | $0 | $533 | $146,245 | $45,645 | $100,600 | $0 | $0 | $0 |
| 15 | Small Business Direct Install (Gas) | $7,702 | $4,115 | $0 | $4,115 | $19 | $0 | $19 | $3,568 | $0 | $3,568 | $0 | $0 | $0 |
| 16 | Commercial Pilots (Gas) | $1 | $1 | $1 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 17 | Community Based Initiatives - C&I (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 18 | Commercial & Industrial Multifamily (Gas) | $31,472 | $16,815 | $0 | $16,815 | $77 | $0 | $77 | $14,579 | $0 | $14,579 | $0 | $0 | $0 |
| 19 | Finance Costs (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 20 | **Subtotal Commercial & Industrial** | **$397,655** | **$194,927** | **$15,036** | **$179,890** | **$840** | **$15** | **$826** | **$201,888** | **$45,915** | **$155,972** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 21 | OER (Gas) | $275,067 | $0 | $0 | $0 | $0 | $0 | $0 | $275,067 | $275,067 | $0 | $0 | $0 | $0 |
| 22 | EERMC (Gas) | $240,282 | $0 | $0 | $0 | $0 | $0 | $0 | $240,282 | $240,282 | $0 | $0 | $0 | $0 |
| 23 | **Subtotal Regulatory** | **$515,349** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$515,349** | **$515,349** | **$0** | **$0** | **$0** | **$0** |
| 24 | **TOTAL All Sectors** | **$1,413,982** | **$493,209** | **$71,429** | **$421,781** | **$2,862** | **$28** | **$2,834** | **$917,910** | **$561,265** | **$356,645** | **$0** | **$0** | **$0** |
| | **OTHER COSTS NOT LISTED ABOVE (Gas)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 5 - Marketing

| | | (a)<br>(b)+(e )+(h)+(k) | (b)<br>(c )+(d) | (c ) | (d) | (e )<br>(f)+(g) | (f) | (g) | (h)<br>(i)+(j) | (i) | (j) | (k)<br>(l)+(m) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Costs** | **Total Company Labor Costs** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses | **External Services Costs** | Direct External Services Costs | External Services Costs Originating from an Allocation | **Other Costs (if any)** | Other Direct Costs | Other Costs Originating from an Allocation |
| 1 | Residential New Construction (Gas) | $38 | $38 | $0 | $38 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 2 | ENERGY STAR HVAC (Gas) | $157,970 | $11,364 | $7,935 | $3,428 | $0 | $0 | $0 | $146,606 | $146,606 | $0 | $0 | $0 | $0 |
| 3 | EnergyWise (Gas) | $55,880 | $8,578 | $7,435 | $1,143 | $0 | $0 | $0 | $47,301 | $47,301 | $0 | $0 | $0 | $0 |
| 4 | EnergyWise Multi Family (Gas) | $3,638 | $7,007 | $6,436 | $570 | $0 | $0 | $0 | -$3,369 | -$3,369 | $0 | $0 | $0 | $0 |
| 5 | Home Energy Reports (Gas) | $1 | $1 | $0 | $1 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 6 | Residential Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 7 | Community Based Initiatives - Residential (Gas) | $37,733 | $0 | $0 | $0 | $0 | $0 | $0 | $37,733 | $37,733 | $0 | $0 | $0 | $0 |
| 8 | Comprehensive Marketing Residential (Gas) | $73,563 | $1,035 | $0 | $1,035 | $0 | $0 | $0 | $72,528 | $72,528 | $0 | $0 | $0 | $0 |
| 9 | **Subtotal Non-Income Eligible Residential** | **$328,822** | **$28,023** | **$21,807** | **$6,216** | **$0** | **$0** | **$0** | **$300,799** | **$300,799** | **$0** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 10 | Single Family - Income Eligible Services (gas) | $17,223 | $4,350 | $3,926 | $423 | $0 | $0 | $0 | $12,874 | $12,874 | $0 | $0 | $0 | $0 |
| 11 | Income Eligible Multifamily (Gas) | -$465 | $99 | $0 | $99 | $0 | $0 | $0 | -$564 | -$564 | $0 | $0 | $0 | $0 |
| 12 | **Subtotal Income Eligible Residential** | **$16,758** | **$4,448** | **$3,926** | **$522** | **$0** | **$0** | **$0** | **$12,310** | **$12,310** | **$0** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 13 | Large Commercial New Construction (Gas) | $161,570 | $950 | $0 | $950 | $0 | $0 | $0 | $160,621 | $160,621 | $0 | $0 | $0 | $0 |
| 14 | Large Commercial Retrofit (Gas) | $133,337 | $9,287 | $7,710 | $1,577 | $242 | $242 | $0 | $123,808 | $123,808 | $0 | $0 | $0 | $0 |
| 15 | Small Business Direct Install (Gas) | $25,986 | $8,535 | $8,334 | $202 | $0 | $0 | $0 | $17,451 | $17,451 | $0 | $0 | $0 | $0 |
| 16 | Commercial Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 17 | Community Based Initiatives - C&I (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 18 | Commercial & Industrial Multifamily (Gas) | $6,986 | $112 | $0 | $112 | $0 | $0 | $0 | $6,874 | $6,874 | $0 | $0 | $0 | $0 |
| 19 | Finance Costs (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 20 | **Subtotal Commercial & Industrial** | **$327,879** | **$18,884** | **$16,043** | **$2,841** | **$242** | **$242** | **$0** | **$308,753** | **$308,753** | **$0** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 21 | OER (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | EERMC (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 24 | **TOTAL All Sectors** | **$673,459** | **$51,355** | **$41,777** | **$9,579** | **$242** | **$242** | **$0** | **$621,862** | **$621,862** | **$0** | **$0** | **$0** | **$0** |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **OTHER COSTS NOT LISTED ABOVE (Gas)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 6 - Cost of services and product rebates/incentives provided to customers (1)

Annual threshold > $100,000 for evaluation of allocation between Col. (b) vs. Col. (c )

Default Assumption, expenses allocated to Col. (c)

| | | (a) (b)+(c ) | (b) | (c ) | (d) |
|---|---|---|---|---|---|
| | | **Total payments for services and product rebates/incentives for customers which are paid directly to a customer or provided to customer via a vendor** | **Rebate/Incentive Payments Directly Paid to Customers** | **Payments for Services and Product Rebates/Incentives for customers which are made to vendors and then provided to customers** | **Description of External Payments** |
| 1 | Residential New Construction (Gas) | $254,427 | $0 | $254,427 | Payments are made to external vendor(s) that are then used to provide rebates to customers for approved energy efficiency products that are installed in new customer dwellings. Payments also include a home performance testing service at no cost to the customer. |
| 2 | ENERGY STAR HVAC (Gas) | $2,254,128 | $0 | $2,254,128 | Payments are made to external vendor(s) that are then used to provide rebates to customers for approved energy efficiency HVAC products that are installed in rate payer customer dwellings. |
| 3 | EnergyWise (Gas) | $13,740,957 | $0 | $13,740,957 | Payments are made to external vendor(s)s that are then used to discount approved energy efficiency products that are installed in single family customer dwellings. Payments also include a service to customers in the form of no cost energy assessments. Payments are also made to external vendor(s) that are then used to provide zero interest loans to customers for weatherization. |
| 4 | EnergyWise Multi Family (Gas) | $1,300,606 | $0 | $1,300,606 | Payments are made to external vendors that are then used to discount approved energy efficiency products that are installed in multifamily customer dwellings. Payments also include a service to customers in the form of no cost energy assessments. Payments are also made to external vendor(s) that are then used to provide zero interest loans to customers for weatherization. |
| 5 | Home Energy Reports (Gas) | $0 | $0 | $0 | N/A |
| 6 | Residential Pilots (Gas) | $0 | $0 | $0 | N/A |
| 7 | Community Based Initiatives - Residential (Gas) | $0 | $0 | $0 | Payments can either either be made directly to a community or to external vendor(s) to discount approved energy efficiency products for communities participating in the Community Based Initiative. |
| 8 | Comprehensive Marketing Residential (Gas) | $0 | $0 | $0 | N/A |
| 9 | **Subtotal Non-Income Eligible Residential** | **$17,550,118** | **$0** | **$17,550,118** | |
| | | | | | |
| 10 | Single Family - Income Eligible Services (gas) | $3,061,197 | $0 | $3,061,197 | Payments are made to external vendors that are then used to cover 100% of the cost for approved energy efficiency products that are installed in single family income eligible customer dwellings. Payments also include a no cost service to customers in the form of no cost energy assessments. |
| 11 | Income Eligible Multifamily (Gas) | $2,291,113 | $0 | $2,291,113 | Payments are made to external vendors that are then used to cover 100% of the cost for approved energy efficiency products that are installed in income eligible multifamily customer dwellings. Payments also include a no cost service to customers in the form of no cost energy assessments. |
| 12 | **Subtotal Income Eligible Residential** | **$5,352,309** | **$0** | **$5,352,309** | |
| | | | | | |
| 13 | Large Commercial New Construction (Gas) | $1,137,109 | $0 | $1,137,109 | Payments are made to external vendor(s) that are then used to discount approved energy efficiency products that are installed in customer facilities. Payments are also made directly to customers for the installation of approved energy efficiency measures. Payments also include services to customers such as energy assessments and technical analysis. |
| 14 | Large Commercial Retrofit (Gas) | $1,559,609 | $505,972 | $1,053,637 | Payments are made to external vendor(s) that are then used to discount approved energy efficiency products that are installed in customer facilities. Payments are also made directly to customers for the installation of approved energy efficiency measures. Payments also include services to customers such as energy assessments and technical analysis. |
| 15 | Small Business Direct Install (Gas) | $110,188 | $0 | $110,188 | Payments are made to external vendor(s) that are then used to discount approved energy efficiency products that are installed in customer facilities. Payments are also made directly to customers for the installation of approved energy efficiency measures. Payments also include services to customers such as energy assessments and technical analysis. |
| 16 | Commercial Pilots (Gas) | $98,700 | $0 | $98,700 | Incentive payments are made directly to customers for participation in this program. |
| 17 | Community Based Initiatives - C&I (Gas) | $0 | $0 | $0 | Payments can be made directly to a participating community or to external vendor(s), which is then used to discount energy efficiency products or provide training and services for customers in participating communities. |
| 18 | Commercial & Industrial Multifamily (Gas) | $753,844 | $0 | $753,844 | Payments are made to external vendors that are then used to discount approved energy efficiency products that are installed in multifamily customer buildings. Payments also include a service to customers in the form of no cost energy assessments. |
| 19 | Finance Costs (Gas) | $0 | $0 | $0 | N/A |
| 20 | **Subtotal Commercial & Industrial** | **$3,659,450** | **$505,972** | **$3,153,478** | |
| | | | | | |
| 21 | OER (Gas) | $0 | $0 | $0 | N/A |
| 22 | EERMC (Gas) | $0 | $0 | $0 | N/A |
| 23 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | |
| 24 | **TOTAL All Sectors** | **$26,561,877** | **$505,972** | **$26,055,905** | |

| | | | | |
|---|---|---|---|---|
| **OTHER COSTS NOT LISTED ABOVE (Gas)** | **$0** | **$0** | **$0** | |

(1) Prior to the 2021 Energy Efficiency Annual Plan filing, this cost categ Prior to the 2021 Energy Efficiency Annual Plan filing, this cost category was referred to as "Rebates and Other Incentives"

## Schedule 7 - Sales, Technical Assistance & Training (STAT)

| | | (a)<br>(b)+(e )+(h)+(k) | (b)<br>(c )+(d) | (c ) | (d) | (e )<br>(f)+(g) | (f) | (g) | (h)<br>(i)+(j) | (i) | (j) | (k)<br>(l)+(m) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Costs** | **Total Company Labor Costs** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses | **External Services Costs** | Direct External Services Costs | External Services Costs Originating from an Allocation | **Other Costs (if any)** | Other Direct Costs | Other Costs Originating from an Allocation |
| 1 | Residential New Construction (Gas) | $102,222 | $6,748 | $5,907 | $840 | $125 | $0 | $125 | $95,349 | $95,127 | $222 | $0 | $0 | $0 |
| 2 | ENERGY STAR HVAC (Gas) | $100,608 | $7,951 | $6,675 | $1,276 | $190 | $0 | $190 | $92,467 | $92,130 | $337 | $0 | $0 | $0 |
| 3 | EnergyWise (Gas) | $2,178,053 | $13,183 | $5,908 | $7,275 | $1,081 | $0 | $1,081 | $2,163,789 | $2,161,865 | $1,924 | $0 | $0 | $0 |
| 4 | EnergyWise Multi Family (Gas) | $222,822 | $1,177 | $0 | $1,177 | $175 | $0 | $175 | $221,469 | $221,158 | $311 | $0 | $0 | $0 |
| 5 | Home Energy Reports (Gas) | $390,671 | $3,268 | $0 | $3,268 | $486 | $0 | $486 | $386,917 | $386,053 | $864 | $0 | $0 | $0 |
| 6 | Residential Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 7 | Community Based Initiatives - Residential (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 8 | Comprehensive Marketing Residential (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 9 | **Subtotal Non-Income Eligible Residential** | **$2,994,376** | **$32,327** | **$18,490** | **$13,837** | **$2,056** | **$0** | **$2,056** | **$2,959,992** | **$2,956,333** | **$3,659** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 10 | Single Family - Income Eligible Services (gas) | $730,672 | $8,402 | $0 | $8,402 | $1,248 | $0 | $1,248 | $721,022 | $718,800 | $2,222 | $0 | $0 | $0 |
| 11 | Income Eligible Multifamily (Gas) | $339,441 | $2,764 | $0 | $2,764 | $411 | $0 | $411 | $336,266 | $335,535 | $731 | $0 | $0 | $0 |
| 12 | **Subtotal Income Eligible Residential** | **$1,070,113** | **$11,166** | **$0** | **$11,166** | **$1,659** | **$0** | **$1,659** | **$1,057,288** | **$1,054,335** | **$2,953** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 13 | Large Commercial New Construction (Gas) | $1,144,007 | $237,495 | $171,862 | $65,633 | $10,951 | $7,479 | $3,473 | $895,561 | $863,959 | $31,602 | $0 | $0 | $0 |
| 14 | Large Commercial Retrofit (Gas) | $1,227,860 | $562,302 | $476,271 | $86,032 | $23,695 | $19,143 | $4,552 | $641,862 | $600,439 | $41,423 | $0 | $0 | $0 |
| 15 | Small Business Direct Install (Gas) | $14,581 | $13,134 | $10,425 | $2,709 | $143 | $0 | $143 | $1,304 | $0 | $1,304 | $0 | $0 | $0 |
| 16 | Commercial Pilots (Gas) | $6,841 | $6,841 | $6,841 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 17 | Community Based Initiatives - C&I (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 18 | Commercial & Industrial Multifamily (Gas) | $140,260 | $18,569 | $6,688 | $11,882 | $629 | $0 | $629 | $121,062 | $115,341 | $5,721 | $0 | $0 | $0 |
| 19 | Finance Costs (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 20 | **Subtotal Commercial & Industrial** | **$2,533,549** | **$838,341** | **$672,086** | **$166,255** | **$35,418** | **$26,622** | **$8,797** | **$1,659,789** | **$1,579,739** | **$80,050** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 21 | OER (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | EERMC (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 24 | **TOTAL All Sectors** | **$6,598,038** | **$881,835** | **$690,577** | **$191,258** | **$39,134** | **$26,622** | **$12,513** | **$5,677,069** | **$5,590,407** | **$86,662** | **$0** | **$0** | **$0** |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **OTHER COSTS NOT LISTED ABOVE (Gas)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 8 - Evaluation & Market Research

| | | (a)<br>(b)+(e )+(h)+(k) | (b)<br>(c )+(d) | (c ) | (d) | (e )<br>(f)+(g) | (f) | (g) | (h)<br>(i)+(j) | (i) | (j) | (k)<br>(l)+(m) | (l) | (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total Costs** | **Total Company Labor Costs** | Company Direct Labor | Company Allocated Labor | **Total Company Employee Expenses** | Company Direct Employee Expenses | Company Allocated Employee Expenses | **External Services Costs** | Direct External Services Costs | External Services Costs Originating from an Allocation | **Other Costs (if any)** | Other Direct Costs | Other Costs Originating from an Allocation |
| 1 | Residential New Construction (Gas) | $5,567 | $3,355 | $2,352 | $1,003 | $1 | $0 | $1 | $2,212 | $1,931 | $281 | $0 | $0 | $0 |
| 2 | ENERGY STAR HVAC (Gas) | $40,952 | $15,436 | $7,886 | $7,550 | $4 | $0 | $4 | $25,511 | $23,398 | $2,113 | $0 | $0 | $0 |
| 3 | EnergyWise (Gas) | $94,526 | $12,039 | $0 | $12,039 | $6 | $0 | $6 | $82,482 | $79,113 | $3,369 | $0 | $0 | $0 |
| 4 | EnergyWise Multi Family (Gas) | $32,121 | $2,933 | $1,331 | $1,602 | $1 | $0 | $1 | $29,187 | $28,739 | $448 | $0 | $0 | $0 |
| 5 | Home Energy Reports (Gas) | $1,709 | $624 | $0 | $624 | $0 | $0 | $0 | $1,085 | $910 | $174 | $0 | $0 | $0 |
| 6 | Residential Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 7 | Community Based Initiatives - Residential (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 8 | Comprehensive Marketing Residential (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 9 | **Subtotal Non-Income Eligible Residential** | **$174,875** | **$34,386** | **$11,569** | **$22,817** | **$12** | **$0** | **$12** | **$140,477** | **$134,091** | **$6,385** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 10 | Single Family - Income Eligible Services (gas) | $42,510 | $5,460 | $0 | $5,460 | $3 | $0 | $3 | $37,047 | $35,519 | $1,528 | $0 | $0 | $0 |
| 11 | Income Eligible Multifamily (Gas) | $70,591 | $5,574 | $1,328 | $4,246 | $2 | $0 | $2 | $65,014 | $63,826 | $1,188 | $0 | $0 | $0 |
| 12 | **Subtotal Income Eligible Residential** | **$113,101** | **$11,034** | **$1,328** | **$9,706** | **$5** | **$0** | **$5** | **$102,062** | **$99,345** | **$2,716** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 13 | Large Commercial New Construction (Gas) | $40,372 | $10,025 | $0 | $10,025 | $116 | $0 | $116 | $30,231 | $28,531 | $1,700 | $0 | $0 | $0 |
| 14 | Large Commercial Retrofit (Gas) | $85,467 | $18,530 | $0 | $18,530 | $214 | $0 | $214 | $66,723 | $63,580 | $3,143 | $0 | $0 | $0 |
| 15 | Small Business Direct Install (Gas) | $193 | $77 | $0 | $77 | $1 | $0 | $1 | $116 | $102 | $13 | $0 | $0 | $0 |
| 16 | Commercial Pilots (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 17 | Community Based Initiatives - C&I (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 18 | Commercial & Industrial Multifamily (Gas) | $18,789 | $1,269 | $1,017 | $251 | $3 | $0 | $3 | $17,517 | $17,474 | $43 | $0 | $0 | $0 |
| 19 | Finance Costs (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 20 | **Subtotal Commercial & Industrial** | **$144,822** | **$29,902** | **$1,017** | **$28,884** | **$334** | **$0** | **$334** | **$114,587** | **$109,688** | **$4,899** | **$0** | **$0** | **$0** |
| | | | | | | | | | | | | | | |
| 21 | OER (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 22 | EERMC (Gas) | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| 23 | **Subtotal Regulatory** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| 24 | **TOTAL All Sectors** | **$432,798** | **$75,322** | **$13,915** | **$61,408** | **$350** | **$0** | **$350** | **$357,125** | **$343,125** | **$14,000** | **$0** | **$0** | **$0** |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **OTHER COSTS NOT LISTED ABOVE (Gas)** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |

## Schedule 9 - Shared Cross-Jurisdictional Costs (Non-Labor)

>$100,000 only for Rhode Island

(Non-Labor Services/Costs that are Shared with Other Jurisdictions and are Allocated to Rhode Island)

| | | (a) | (b) (c )x(a) | (b) (c )x(a) | (b) (c )x(a) | (c ) | (c ) | (c ) | (d) | (e ) | (f) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Description of Service/Cost | Total Cost Used as Basis for Allocation | Total Allocated to Rhode Island | Total Allocated to RI-ELEC | Total Allocated to RI-GAS | % to Rhode Island | % to RI-ELEC | % to RI-GAS | % to Mass. | % to New York | Description of Allocation Methodology |
| 1 | IS Vendor. charged to DSM - InDemand Support & Releases (Support for InDemand) | $2,670,562 | $499,105 | $361,081 | $138,023 | 19% | 14% | 5% | 66% | 15% | Based on Overall Jurisdictional 2021 EE Budgets - ALL RI; ALL UPSTATE NY; ALL MA; ALL DOWNSTATE NY |
| 2 | IS Vendor. charged to DSM - IS - (Support for multiple data sharing interfaces with EE partners) | $181,478 | $34,118 | $24,686 | $9,432 | 19% | 14% | 5% | 67% | 14% | Based on Overall Jurisdictional 2021 EE Budgets - ALL RI; ALL UPSTATE NY; ALL MA; ALL DOWNSTATE NY |

## Schedule 10 - Methods for Allocating Costs >$500,000 Across Rhode Island Programs/Sectors

| | | (a) | (b) | (c ) | (d) | (f) |
|---|---|---|---|---|---|---|
| | Description of Cost Allocated | Total Cost Allocated | Allocation to Non-Eligible Residential Programs | Allocation to Eligible Residential Programs | Allocation to C&I Programs | Description of Allocation Methodology |
| | | | | | | |
| 1 | IS Vendor Costs for General IT Work - RI-GAS | $0 | $0 | $0 | $0 | Based on PP&A Budgets of Programs Designated to Receive Allocations |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | Labor Allocated to PP&A | $421,781 | $154,864 | $87,027 | $179,890 | Based on PP&A Budgets of Programs Designated to Receive Allocations |
| 6 | Labor Allocated to Marketing | $9,579 | $6,216 | $522 | $2,841 | Based on Marketing Budgets of Programs Designated to Receive Allocations |
| 7 | Labor Allocated to STAT | $191,258 | $13,837 | $11,166 | $166,255 | Based on STAT Budgets of Programs Designated To Receive Allocations |
| 8 | Labor Allocated to Evaluation & Market Research | $61,408 | $22,817 | $9,706 | $28,884 | Based on Evaluation & Market Research Budgets of Programs Designated to Receive Allocations |
| 9 | **ALLOCATED LABOR - RI-GAS TOTAL** | **$684,025** | **$197,734** | **$108,421** | **$377,870** | |

**Attachment 3**

# Attachment 3

# Case Studies and Evaluation Summaries

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

COMPRESSED AIR

LED LIGHTING

MOTORS

PROCESS

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

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*"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.

| $2.2m | $1.8m | 9.7m | 129k |
|---|---|---|---|
| National Grid incentives | Energy cost savings | kWh electricity saved | Therms natural gas saved |

**Become a part of this success story too.**
**Email Andrea.Moshier@nationalgrid.com to get started.**

DNV·GL

# 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**

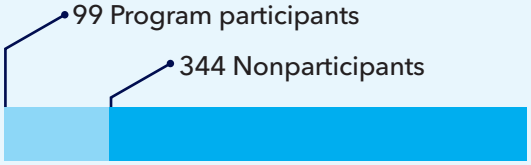
**Compared participant and nonparticipant survey results**

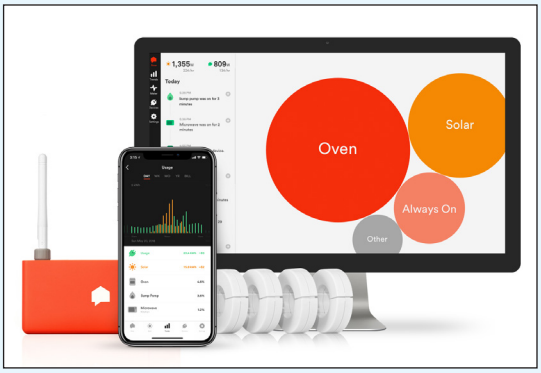
**Developed key findings and recommendations**

## 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 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

Refrigerators

| | Current | Recommended |
|---|---|---|
| Gross Savings | 1,004 | 983 |
| Realization Rate | 0.88 | 0.90 |
| NTG Ratio | 0.44 | 0.46 |

Freezers

| | Current | Recommended |
|---|---|---|
| Gross Savings | 724 | 754 |
| Realization Rate | 0.68 | 0.83 |
| NTG Ratio | 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)

| Incentive | Ease of pick-up | Trust in utility | Environmental benefits | Electric bill savings |
|---|---|---|---|---|
| 42% | 20% | 16% | 15% | 8% |

# 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 (ΔW).** Change in wattage from pre-existing to program installed measures.

**Realization rate (RR).** Ratio between evaluated savings and tracking savings. Ideal=100%.

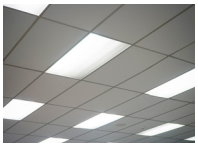
**Evaluated savings.** Verified savings using site information and/or data collection techniques.

**Tracking savings.** Applicant savings entered in National Grid's Tracking System.

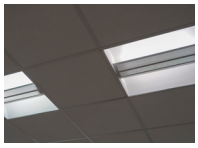
## TECHNOLOGIES

**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 | ΔW | 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.

DNV·GL

# 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.

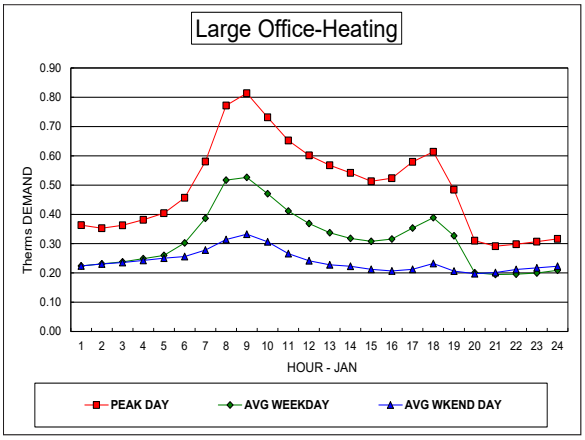
## Research questions

**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 factors) 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

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

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

## 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

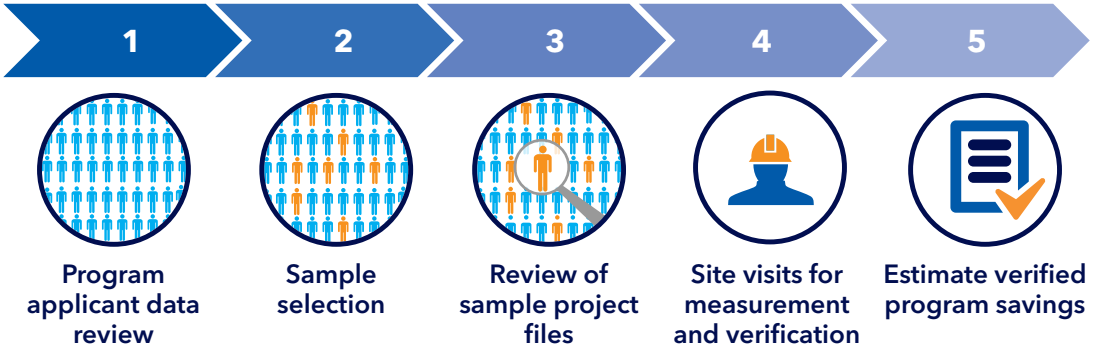
| LOAD SHAPE # | DESCRIPTION/ SEGMENT | MONTHLY BREAKDOWN | WEEKEND/ WEEKDAY RATIO | PEAK DAY FACTOR | HOURLY PROFILE |
|---|---|---|---|---|---|
| 2001 | Space heating: Large office | 9-year average monthly HDD60 | NG RI January interval data | 9-year seasonal average HDD | RTF87: Large office heating |
| 2002 | Space heating: Small office | 9-year average monthly HDD60 | NG RI January interval data | 9-year seasonal average HDD | RTF165: Small office heating |

# Impact Evaluation of PY2019 Custom Gas Installations in Rhode Island

DNV quantified natural gas savings for custom gas projects completed during the 2019 program year (PY). This year's three-year rolling average realization rate is calculated using results from PY2017, PY2018, & PY2019.

## APPROACH

**Annual sample evaluations:** In this approach, the measurement and verification (M&V) is repeated annually as the previous year's tracking data becomes available. The overall program RR combines the latest 3-year results.




### Key terms

**Evaluated savings.** Verified savings using post installation site information and/or data collection techniques.

**Tracking savings.** National Grid's reported savings for the approved natural gas savings projects.

**Realization rate (RR).** Ratio between evaluated and tracking savings. If RR = 100%, then tracking estimated savings were verified and consistent with onsite findings.

## KEY FINDINGS

6.24 million therms savings from the total 3-year rolling program

**87% combined program realization rate**

| PY2017 | PY2018 | PY2019 |
|---|---|---|
| RR 93% | RR 83% | RR 85% |

**276** Program participants from 2017-2019

**25** Participants evaluated from 2017-2019


**3 year** Rolling realization rate average

## RECOMMENDATIONS

- Project savings calculators should have an accompanying memo that documents changes when savings deviate from submitted calculators or there are changes made to savings during the final stages of compiling project documentation.
- HVAC EMS project applicants should submit EMS screenshots, schedules, or trend data at the time of completion for comparing installed conditions versus original design documents.

### Installed measures

- Energy Management Systems (EMS)
- HVAC Controls
- Heating Equipment
- Process Equipment
- Steam Traps
- Pipe Insulation
- Dehumidification
- and More

**Attachment 4**

# Attachment 4

# Year-End Participation Memo

# 2021 Year-End Participation Memo

## I. Participation Overview

The Company recognizes the importance of program participation in designing efficiency services, reaching diverse markets, meeting customer demand, and finding areas to increase efficiencies. Complementary to the gas and electric savings that the Company seeks to achieve each year, participation contextualizes the impact of efficiency through revealing who is benefiting from the programs and how. The objective of this memo is to measure unique participants, participation over time, and quantify total customers reached.

The Company enables customers to participate through a variety of service streams which makes quantifying participation difficult. Programs and initiatives such as *EnergyWise* and *EnergySmart Grocer* (ESG) retrofit a home or business through technical assessments and installed measures. The Company also delivers efficiency to customers through broad channels to increase accessibility for all customers. These broad efforts tend to focus on one measure at a time and are intended to transform the market so that customers make energy efficient choices. Examples include the ENERGY STAR® Lighting program and the Commercial and Industrial (C&I) Upstream Lighting initiative. Within these broad offerings, it is difficult to precisely measure participation levels cumulatively and compare to participation in other deeper programs. Therefore, this memo focuses on participation levels in deep services that offer customers the most benefits.

Programs and initiatives are designed and delivered in very specific ways to maximize potential energy savings. Therefore, specific data differs among programs and what is defined as a 'participant' may differ as well. A breakdown of participation units used for reporting gas and electric programs in 2021 is found below. The participation numbers found in Tables E-1 and G-1 in Attachments 5 and 6, respectively, of Docket 5076 - Annual Energy Efficiency Plan for 2021, filed with the Commission on October 15, 2020, are in these units.

## Participation Reporting Units

| Fuel | Sector | Program | Participation Unit |
|---|---|---|---|
| Gas | Commercial & Industrial | Large Commercial New Construction | Unique Account |
| | | Large Commercial Retrofit | Unique Account |
| | | Small Business Direct Install | Unique Account |
| | | C&I Multifamily | Housing Units |
| | Income Eligible Residential | Single Family – Income Eligible Services | Unique Account |
| | | Income Eligible Multifamily | Housing Units |
| | Residential | Energy Star® HVAC | Unique Account |
| | | EnergyWise | Unique Account |
| | | EnergyWise Multifamily | Housing Units |
| | | Home Energy Reports | Unique Account |
| | | Residential New Construction | Housing Units |
| Electric | Commercial & Industrial | Large Commercial New Construction | Unique Account |
| | | Large Commercial Retrofit | Unique Account + Unique Customer names from Upstream Lighting |
| | | Small Business Direct Install | Unique Account |
| | Income Eligible Residential | Single Family – Income Eligible Services | Unique Account |
| | | Income Eligible Multifamily | Housing Units |
| | Residential | Energy Star® HVAC | Unique Account |
| | | EnergyWise | Unique Account |
| | | EnergyWise Multifamily | Housing Units |
| | | Home Energy Reports | Unique Account |
| | | Residential New Construction | Housing Units |
| | | ENERGY STAR® Lighting | Estimated Housing Units |
| | | ENERGY STAR® Products | Number of Rebates |

As the table shows, participation is counted in different ways depending on the program.

1. **Unique billing accounts**: The predominate means for tracking participants. This is defined as one electric or gas account number.

2. **Housing units**: This method is used in the electric and gas Residential New Construction program and multifamily programs. For New Construction programs, buildings are typically under construction, so accounts do not yet exist. The Company, therefore, tracks the number of housing units for participation. This method is also applied to all multifamily programs, where complexes and not individual apartments tend to have accounts. These programs are focused on the impact to the apartment dwellers, so from a program design perspective, understanding the number of housing units affected, is of greater interest. Please note that for the gas programs only gas-heated units are counted as participants. In the case that an electric or delivered-fuel-heated dwelling is part of the impacted complex, it would not be counted as a participant.

3. **Rebates**: In the ENERGY STAR® Products program, the Company reports the number of rebates processed because not every rebate contains account information.

4. **Estimated bulbs per home**: Within the ENERGY STAR® Lighting program, retailers do not disclose information identifying their customers, thereby precluding the connection of bulb purchases to utility accounts. The number of bulbs, therefore, is translated into an estimate of participants based on purchasing pattern research[1].

5. **Unique customer names**: This method is used in the C&I Upstream Lighting Initiative. Customer account information is not collected at the point of sale as it would delay the process and can be a potential barrier to the success of the program. Therefore, the Company must analyze unique customer names and addresses to determine unique participants.

## II. Unique Cumulative Participation

Background

The integration of efficiency services, from the identification of HVAC opportunities during home audits to product offerings through the Home Energy Reports web portal, means that a single customer may be counted as a participant in multiple programs. Continued interest in efficiency, moreover, may lead that customer to participate in consecutive years. Such overlap in participation, both over time and across programs, has become important to the Company and its stakeholders as it is important in understanding the progress that energy efficiency programs have made in benefitting Rhode Island electric and gas customers.

Methodology

The tables and graphs below show the unique annual and cumulative customer accounts associated with certain efficiency programs, sector, and fuel for the period 2012-2021. 2012 was chosen as the baseline year because it represents the first year of 2012-2014 Three Year Plan. The tables are organized using the following:

- Annual Program Counts - Represents the unique accounts associated with an individual program in a given year. It removes all double counting within a given program within a given year. For example, if a customer participated in the HVAC program twice in 2016, they would only be counted once.
    - Please note that some overlap exists within the home audit programs, but not because of repeat audits. Program policy requires customers wait three years before receiving another audit. However, follow-up work to an audit in 2013, such as weatherization, could occur in 2014. One account, therefore, would appear as a unique participant in two different years.

[1] 2016-2018 Massachusetts Joint Statewide Three-Year Electric and Gas Energy Efficiency Plan. Appendix J. Participant Definitions: Residential Lighting Assumptions

    - For the Company's 2012- and 2013-Year End Reports, the program participation counts did not remove this double counting. The program participation counts for 2012 and 2013 below, therefore, may differ from how they were reported in the 2012- and 2013-Year End Reports.

- Additive - The sum of Annual Program Counts.

- Cumulative - Eliminates all double counting within a program across multiple years. For example, if a customer participated in the HVAC program in 2013 and then again in 2016, they would only be counted once. Therefore, the cumulative count may be less than the additive count since it removes customers that participate in the same program more than once.

- Sector (Residential, Income Eligible, and Commercial) Subtotals - Eliminates all double counting across programs for a given year. For example, if a customer participated in the HVAC program and the EnergyWise program in 2021, they would only be counted once. Therefore, the sector subtotal may be less than the sum of all the annual program counts in a given year.

- Portfolio Total - Eliminates all double counting across sectors for a given year. For example, if a customer participated in the Income Eligible Single-Family Program and the ENERGY STAR® Products program in 2021, they would only be counted once. Therefore, the portfolio total may be less than the sum of all annual participant counts.

- Percent Unique Accounts - This represents the ratio of cumulative to additive program participation counts. The result is the percentage of customers that only participated in a given program one time from 2012-2021.

- Percent Unique Program Participants - This represents the ratio of the sector subtotal (unique counts) to the sum of annual participant counts in a given year. The result is the percentage of customers that only participated in one program during a given year.

- Portfolio Cumulative - The set of unique accounts across all programs and years, with all overlap removed. For example, if an account is found in EnergyWise for 2013 and ENERGY STAR® Products for 2014, it would only appear once in the Portfolio Cumulative Count.

<u>Important Notes about Participation Counts</u>

The counts shown below do not include participants in Home Energy Reports, ENERGY STAR® Lighting, and C&I Upstream Lighting (an initiative tracked under Commercial New Construction before 2016 and under Commercial Retrofit starting in 2016). While Home Energy Reports is an important program that reaches broad participation and savings while driving customers to other program opportunities, it was excluded because its hundreds of thousands of participants would

overwhelm the cumulative counts, thereby obscuring any trends that could otherwise be observed. Neither ENERGY STAR® Lighting nor Commercial Upstream Lighting collects account information so neither could be included in this analysis. The number of electric and gas participants for these programs, however, are included in tables E-1 and G-1 in Attachments 1 and 2 respectively.

Not all rebates processed through the ENERGY STAR® Products contain account information. Therefore, rebates without account information are not included in this analysis. For this reason, annual program counts below are lower than the total number of customers that participated in this program. For example, in 2016, 25,171 rebates were processed through the program compared to 2,622 participants shown below. Likewise, the number of rebates in the ENERGY STAR® Products program reported in E-1 will be higher than the number of accounts detailed below because not all rebates include account information.

In the year-end report, the Company counts EnergyWise Multifamily and EnergyWise Multifamily Income Eligible participation by units in treated buildings. When units are used, if 51% of the building is income-eligible, the whole building and all units within are treated and counted as income eligible. However, since this analysis uses account numbers, and account numbers track with a rate class, the results below will show a higher split of market rate to income eligible multifamily participants. Multifamily programs are included in this unique account analysis to remove overlaps with other programs to the best extent possible.

Trends in EE Program Participation

The tables and figures below provide insight into participation trends across programs and years. Overall, 2021 program participation at the portfolio level saw increases compared to 2020 participation, with the electric portfolio showing an 12% increase and the gas portfolio showing a 27% increase. The program-specific observations on participation trends from 2020 and 2021 are highlighted below.

Residential electric HVAC and Energy Wise participation saw an increase from 2020 to 2021 with electric participation growing by 24% for HVAC and by 19% for EnergyWise. Gas participation grew for residential HVAC by 22%, 14% for Multifamily EnergyWise, and by 39% for EnergyWise. Growth from 2020 to 2021 in the gas sector was primarily driven by the overspend in the residential gas programs. This overspend contributed to a significant increase in participation and savings compared to what was planned[2].

- Compared to 2020, for single family programs, EnergyWise participation increased by 23% for electric and 63% for gas. Income Eligible Services participation increased by 39% for electric and 110% for gas. The main driver of this growth for the gas sector originates from the program overspend.
- For multifamily programs, EnergyWise participation decreased by approximately 9% for electric and decreased by 17% for the gas program. Income eligible multifamily participation increased by 6% for electric and decreased by 46% for gas. This was a

[2] A more detailed discussion of the gas overspend is presented in a supplement to the 2021 Year End Report on Gas Residential Program Overspend.

significant change in participation compared to the 26% decrease for electric in income eligible multifamily that occurred from 2019-2020.

- For C&I programs, new construction participation increased by approximately 56% for electric and by 36% for gas, while participation for the retrofit program increased by 10% for electric and decreased by 10% for gas. The C&I retrofit gas participation also includes the C&I multifamily program. The increase in the large new construction gas program over the past year has been driven by increased upstream participation.
- Overall, the Company reached approximately 230,389 electric customers and 86,017 gas customers from 2012 to 2021. This figure is reflective of the "Important Notes about Participation Counts" section above.

With regards to pre-pandemic participation compared to 2021, since 2019 the Company saw a 21% increase in electric customers reached and a 21% increase in gas customers reached. However, this increase in participation was not evenly distributed across programs.

- For electric programs, the most significant increase was within Residential HVAC which saw a 42% increase from 2019-2021 followed by Income Eligible AMP with a 31% increase. On the other hand, EnergyWise Multifamily saw a 27% decrease in participation which was followed by a 21% decrease in Income Eligible Multifamily programs.
- For gas programs, the only growth was within New Construction which saw a 44% increase followed by a 9% increase in Residential HVAC and a 3% increase in EnergyWise. Income Eligible Multifamily programs saw a 81% decrease in participation, followed by a 65% decrease in Commercial Retrofit programs, and 31% decrease in EnergyWise Multifamily programs.

Examining the percentage of unique program participants in a single year, it is evident that there is little overlap between programs. This trend is seen across all three sectors (C&I, Income Eligible, Residential). These results are not surprising in the Income-Eligible Sector where customers would either participate in the single family or multifamily program, nor are they in the C&I sector where programs are more segmented. However, in the residential sector, customers are encouraged to participate in multiple programs in any given year. These results indicate there may be more the Company can do in terms of cross-program promotion to drive more participation in the same year.

In 2021, the Company continued to launch marketing campaigns that drove awareness, interest, and participation in the Company's Energy Efficiency programs. These efforts focused on affordability, safety, and energy saving solutions and were carried out through education and program specific campaigns. The education campaign highlighted ways for customers to save money and energy through the Company's portfolio products, while program specific campaigns focused on messaging that would drive consideration and participation. Additionally, the Company launched a new multicultural, in-language and in-culture campaign to increase awareness of and participation in the Company's residential energy efficiency programs among Hispanic homeowners in Rhode Island.

The multifamily program-level trends are not likely representative due to the fact that the Company generally counts all units in a participating facility. In Spring 2016, the Company

started tracking participating units in addition to counting all units in a multi-family facility. Section III of this memo provides details on units served through the multifamily programs.[3]

[3] The Company continues to examine multifamily program-level trends, participation and methodology to determine if any adjustments to multifamily program counts are necessary.

**Table 1. Electric Cumulative Participation 2015-2021[4]**

Participation by Accounts

| | | Annual Counts | | | | | | | Additive | Cumulative | % Unique Accounts |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sector** | **Program** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2012-2021** | **2012-2021** | |
| **Residential** | **HVAC** | 2,091 | 1,978 | 3,023 | 3,269 | 6,298 | 6,745 | 8,915 | 39,227 | 35,620 | 91% |
| | **Products** | 4,461 | 2,622 | 6,630 | 6,249 | 7,283 | 6,843 | 5,905 | 62,689 | 55,567 | 89% |
| | **EW** | 11,665 | 9,567 | 10,159 | 11,961 | 13,839 | 11,926 | 14,640 | 109,060 | 89,904 | 82% |
| | **EW MF** | 8,014 | 11,408 | 7,472 | 10,014 | 7,455 | 5,986 | 5,454 | 67,237 | 39,637 | 59% |
| | **Residential Subtotal** | 25,561 | 25,103 | 26,368 | 30,551 | 33,077 | 29,883 | 32,921 | 267,743 | 188,431 | 70% |
| | **% Unique Program Participants** | 97% | 98% | 97% | 97% | 95% | 95% | 94% | | | |
| **Income Eligible** | **AMP** | 2,851 | 3,016 | 3,074 | 3,850 | 4,089 | 3,863 | 5,362 | 34,459 | 24,904 | 72% |
| | **IE MF** | 1,383 | 1,999 | 2,289 | 1,256 | 1,433 | 1,065 | 1,128 | 17,077 | 10,787 | 63% |
| | **Income Eligible Subtotal** | 4,234 | 5,015 | 5,359 | 5,103 | 5,520 | 4,928 | 6,489 | 51,524 | 35,598 | 69% |
| | **% Unique Program Participants** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | | | |
| **Commercial** | **New Construction** | 236 | 251 | 195 | 173 | 155 | 105 | 164 | 1,777 | 1,361 | 77% |
| | **Retrofit** | 459 | 400 | 593 | 579 | 545 | 519 | 603 | 4,885 | 2,920 | 60% |
| | **SBS** | 1,049 | 797 | 807 | 760 | 724 | 615 | 598 | 8,767 | 7,276 | 83% |
| | **Commercial Subtotal** | 1,682 | 1,380 | 1,554 | 1,492 | 1,424 | 1,239 | 1,365 | 15,108 | 10,767 | 71% |
| | **% Unique Program Participants** | 96% | 95% | 97% | 99% | 100% | 100% | 100% | | | |
| **Portfolio Total** | | 31,448 | 31,449 | 33,177 | 36,995 | 39,825 | 35,939 | 40,602 | 292,717 | 230,389 | 79% |

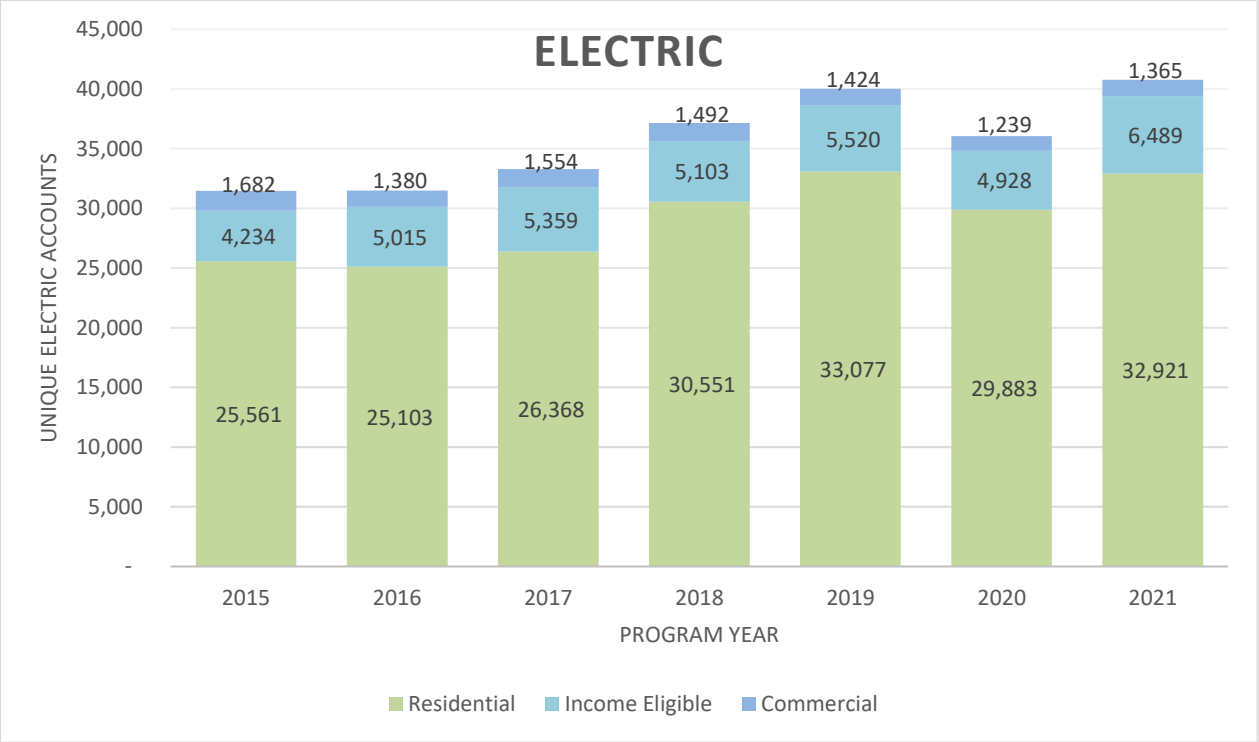
[4] For display purposes, years 2012-2014 are not displayed in Table 1, but are accounted for in the Additive and Cumulative columns. Please see the participation memo from 2020 for the 2012-2014 inputs.

**Table 2. Gas Cumulative Participation 2015-2021[5]**
Participation by Accounts

| | | Annual Counts | | | | | | | Additive | Cumulative | % Unique Accounts |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sector** | **Program** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2012-2021** | **2012-2021** | |
| **Residential** | **HVAC** | 1,980 | 1,652 | 2,949 | 3,113 | 3,846 | 3,282 | 4,201 | 35,308 | 32,466 | 92% |
| | **EW** | 2,830 | 3,252 | 3,387 | 4,329 | 5,209 | 3,304 | 5,381 | 33,788 | 30,033 | 89% |
| | **EW MF** | 4,291 | 5,394 | 4,332 | 4,394 | 4,391 | 2,578 | 3,008 | 34,088 | 18,277 | 54% |
| | **Residential Subtotal** | 8,909 | 10,112 | 10,413 | 11,594 | 13,138 | 8,971 | 12,328 | 100,817 | 74,371 | 74% |
| | **% Unique Program Participants** | 98% | 98% | 98% | 98% | 98% | 98% | 98% | | | |
| **Income Eligible** | **AMP** | 529 | 722 | 700 | 615 | 596 | 279 | 585 | 5,351 | 4,986 | 93% |
| | **IE MF** | 532 | 1,121 | 282 | 486 | 324 | 114 | 61 | 3,760 | 2,869 | 76% |
| | **Income Eligible Subtotal** | 1,061 | 1,841 | 982 | 1,101 | 920 | 393 | 646 | 9,109 | 7,852 | 86% |
| | **% Unique Program Participants** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | | | |
| **Commercial** | **New Construction** | 134 | 206 | 268 | 309 | 321 | 341 | 463 | 2,430 | 1,139 | 47% |
| | **Retrofit** | 656 | 611 | 240 | 206 | 311 | 120 | 108 | 3,318 | 2,811 | 85% |
| | **SBS** | 121 | 50 | 122 | 82 | 109 | 85 | 109 | 1,246 | 1,192 | 96% |
| | **Commercial Subtotal** | 892 | 852 | 614 | 575 | 719 | 536 | 613 | 6,753 | 5,450 | 81% |
| | **% Unique Program Participants** | 98% | 98% | 97% | 96% | 97% | 98% | 90% | | | |
| **Portfolio Total** | | 10,462 | 12,406 | 11,950 | 13,274 | 14,582 | 9,889 | 13,571 | 115,570 | 86,017 | 74% |

[5] For display purposes, years 2012-2014 are not displayed in Table 2, but are accounted for in the Additive and Cumulative columns. Please see the participation memo from 2020 for the 2012-2014 inputs.

**Figure 1. Electric and Gas Participation by Sector, 2015-2021**



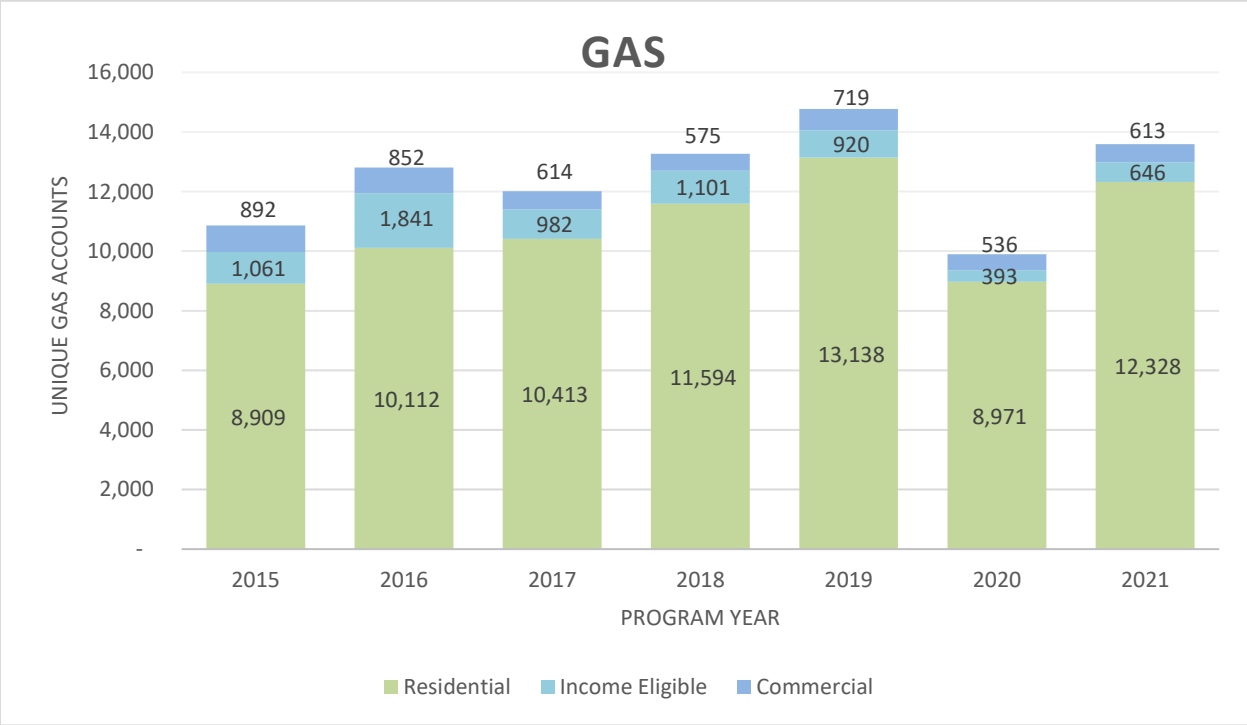
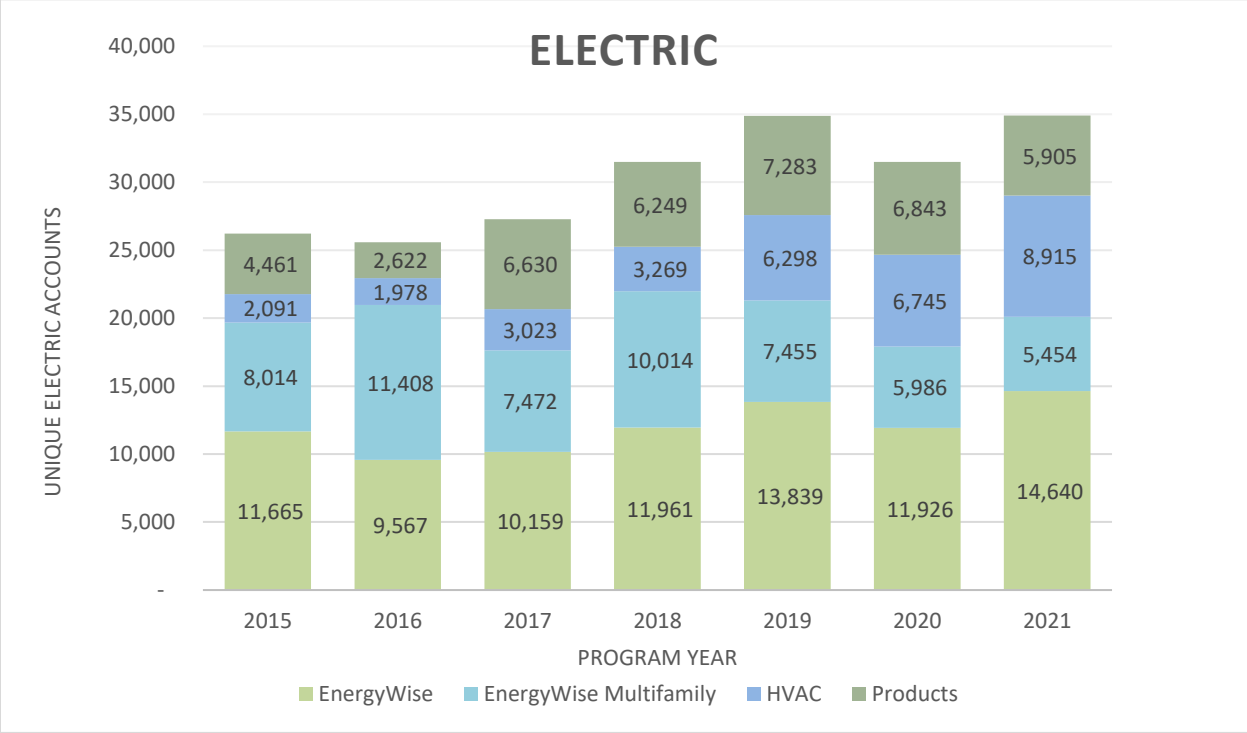



**Figure 2. Electric and Gas Participation, Residential Sector by Program, 2015-2021**



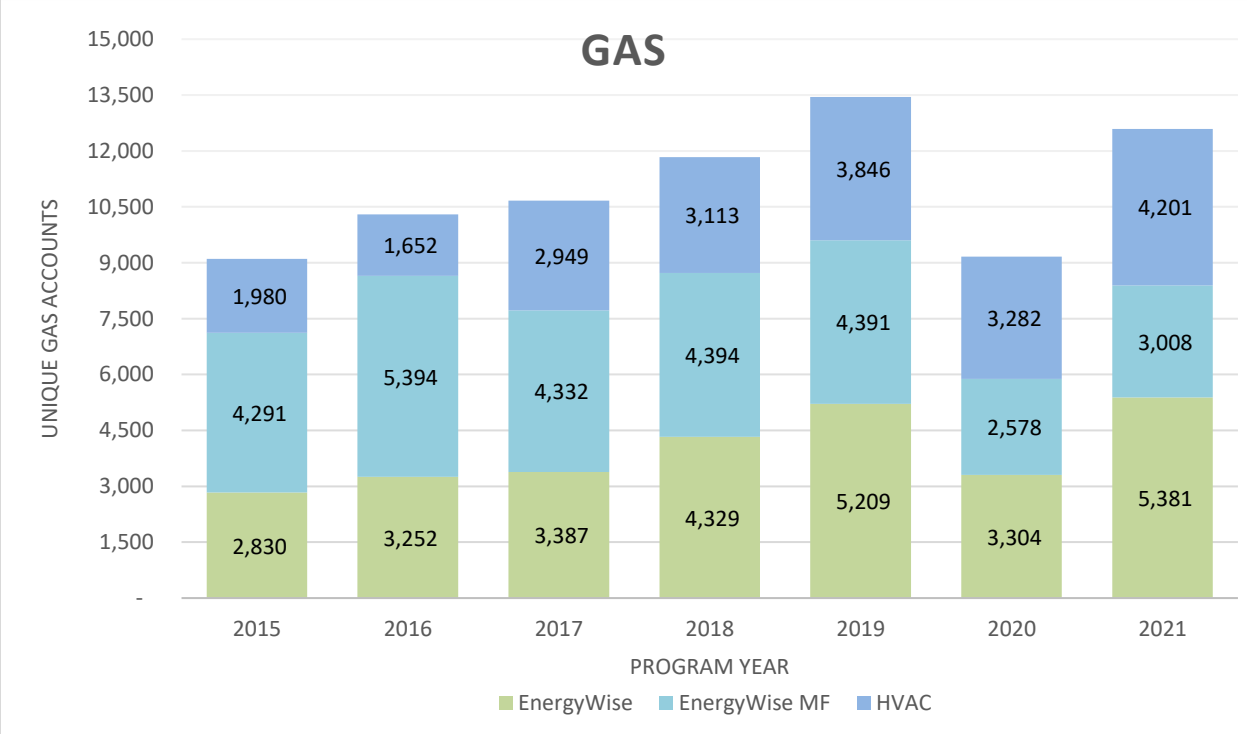
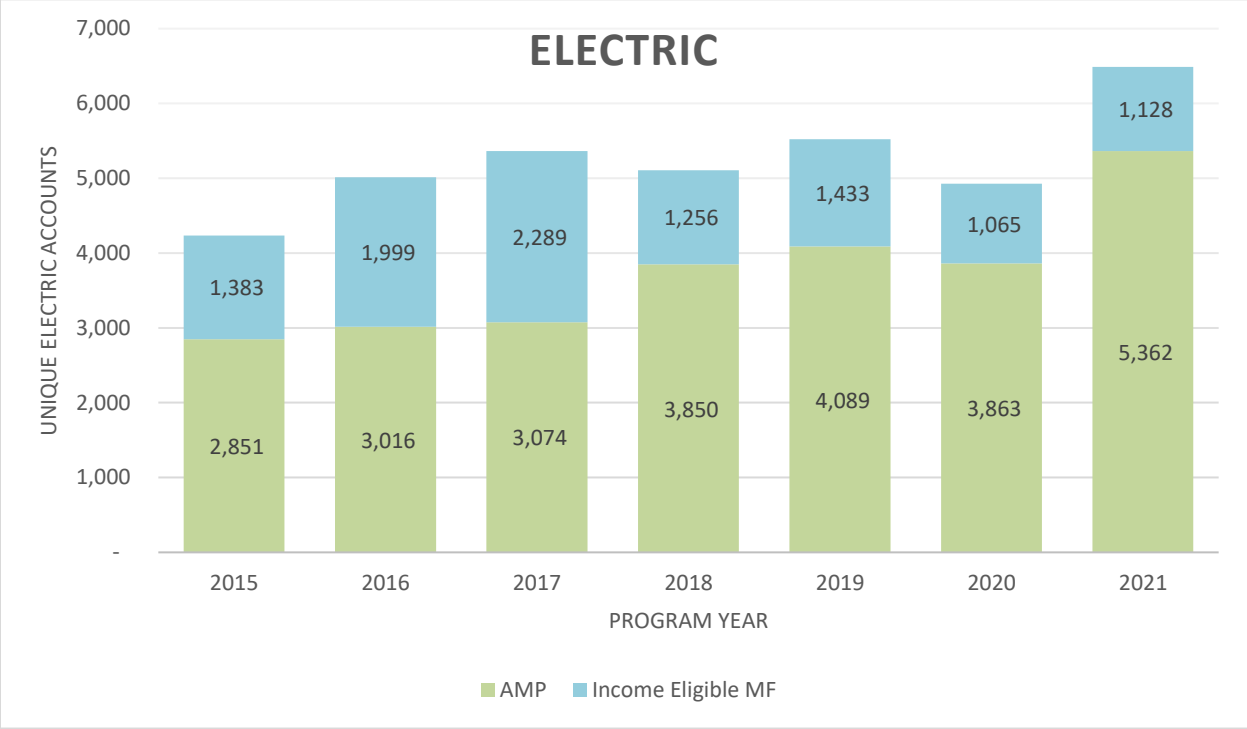



**Figure 3. Electric and Gas Participation, Income-Eligible Sector by Program, 2015-2021**



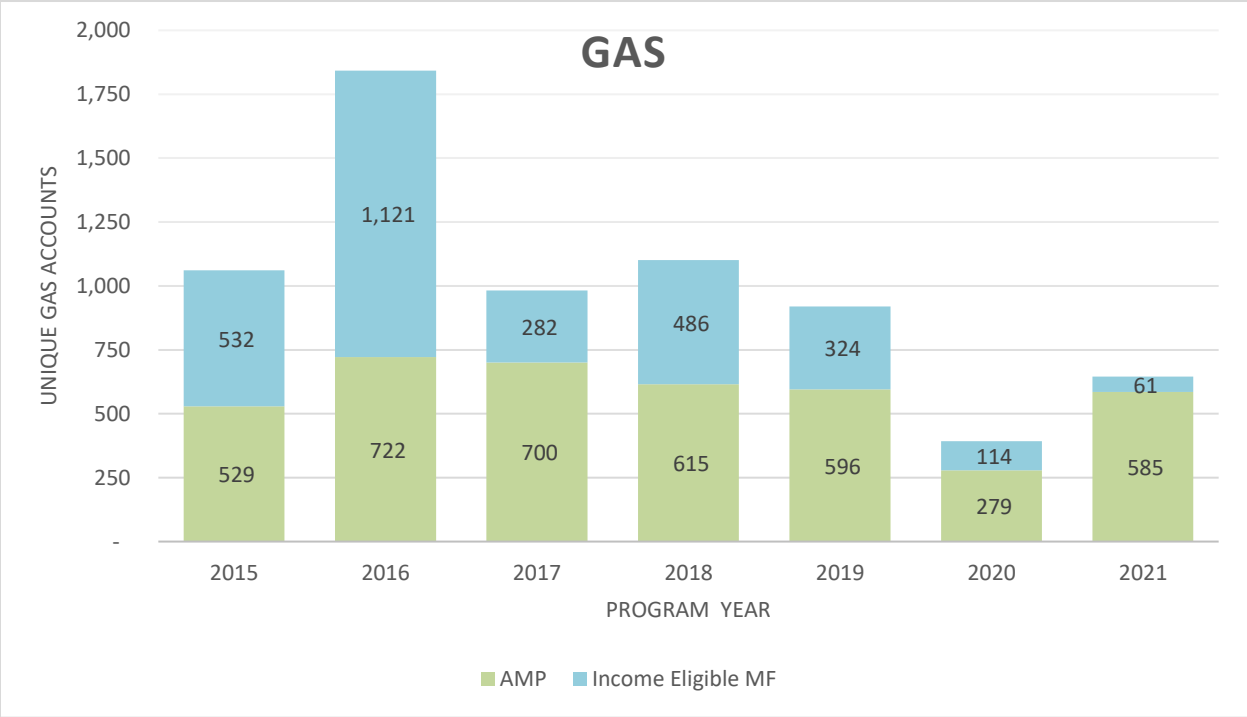
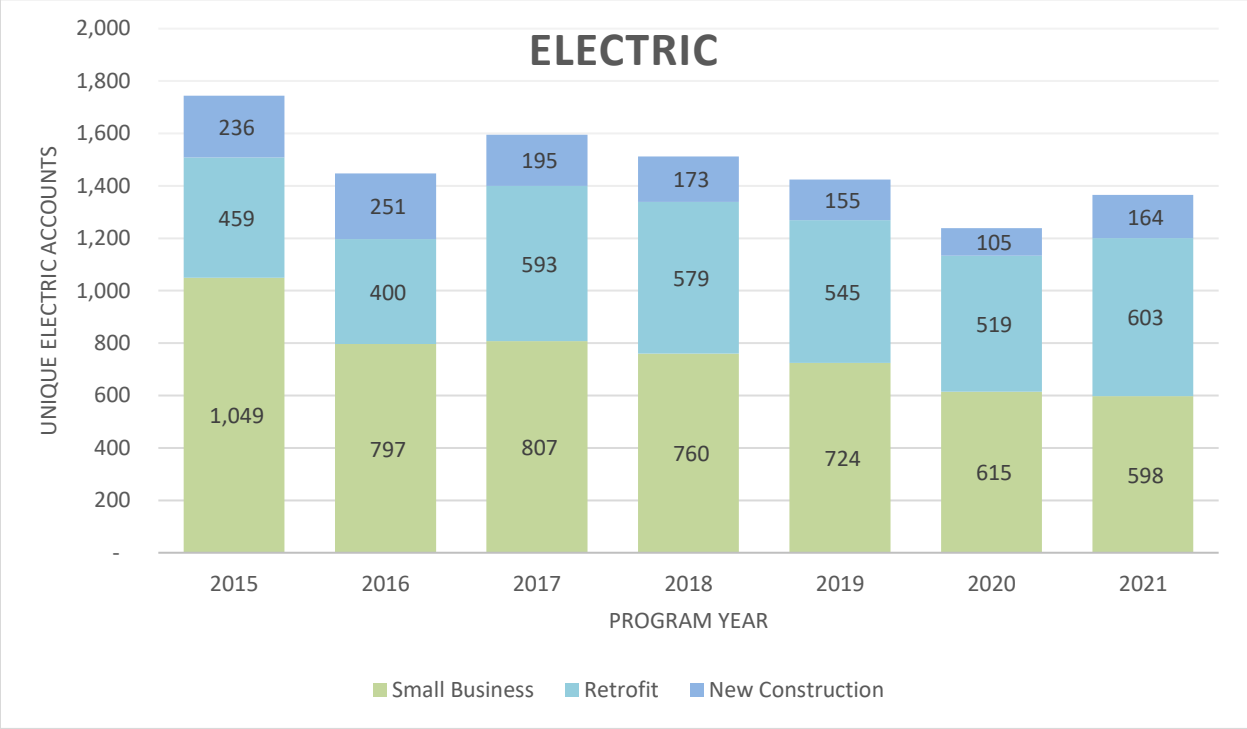
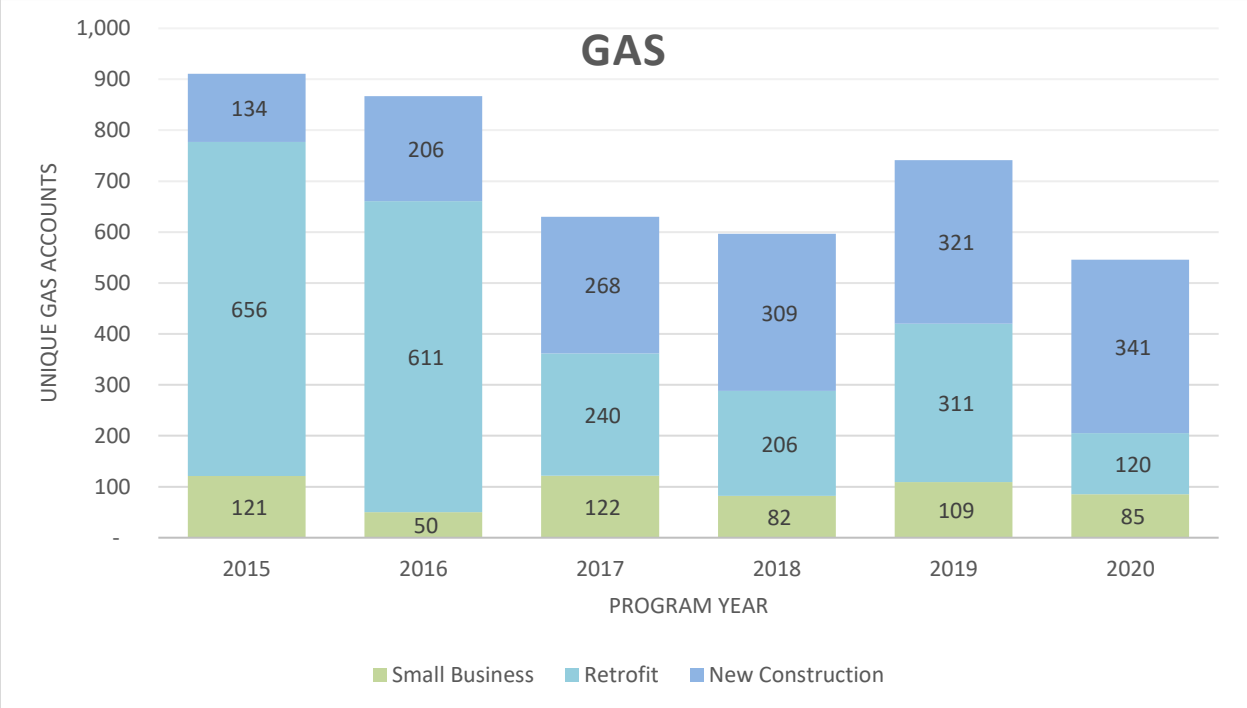



**Figure 4. Electric and Gas Participation, Commercial Sector by Program, 2015-2021**



## III. Housing Units

The annual housing units are defined as unique in the same sense as billing accounts. Housing units are presented below for the Electric and Gas EnergyWise Multifamily program, Electric and Gas Income Eligible Multifamily program, the Commercial and Industrial (C&I) Multifamily Gas program, and the Electric and Gas Residential New Construction Program.

In multifamily programs, the unique number of accounts shown in the previous section (Tables 1 and 2) do not fully represent the participation trend for these programs. That is because not all individual units have separate accounts as a building might be master metered. Therefore, in Table E-1 and G-1 of the year-end report, the Company counts all housing units in treated buildings for participation, which is also shown below. Please note that multifamily housing units cannot be shown as cumulative because the Company does not have specific unit data within a treated facility and therefore cannot remove overlap between years.

Participation in the Residential New Construction program is also defined by housing units since accounts do not yet exist. In this program, housing units are only reported once, at the time of completion, so there is no overlap between units across multiple years. Therefore, the Company can show this program in terms of cumulative unique participation.

### Table 3. Electric Participation by Housing Units

| | Annual Housing Units | | | | | | | Additive |
|---|---|---|---|---|---|---|---|---|
| **Program** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2012-2021** |
| **EnergyWise MF** | 7,710 | 7,783 | 3,557 | 2,415 | 2,971 | 3,270 | 924 | 33,952 |
| **Income Eligible MF** | 4,610 | 5,366 | 5,162 | 3,875 | 2,140 | 972 | 630 | 22,755 |
| **RNC** | 442 | 526 | 680 | 458 | 639 | 482 | 484 | 5,163 |
| **Portfolio** | 12,762 | 13,675 | 9,399 | 6,748 | 5,750 | 4,724 | 2,038 | 61,870 |

*For multifamily programs, 2016 - 2021 counted only participating housing units in participating facilities while 2012-2015 counted all housing units in a participating facility.

* For display purposes, years 2012-2014 are not displayed in Table 3, but are accounted for in the Additive and Cumulative columns. Please see the participation memo from 2020 for the 2012-2014 inputs.

## Table 4. Gas Participation by Housing Units

| | Annual Housing Units | | | | | | | Additive* |
|---|---|---|---|---|---|---|---|---|
| **Program** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2012-2021** |
| **C&I MF** | 2,345 | 2,982 | 1,997 | 954 | 1,530 | 44 | 88 | 11,945 |
| **EnergyWise MF** | 3,147 | 2,232 | 3,984 | 1,811 | 1,008 | 308 | 420 | 15,406 |
| **Income Eligible MF** | 3,956 | 4,701 | 3,840 | 3,010 | 2,089 | 1,716 | 2,661 | 25,063 |
| **RNC** | 366 | 341 | 353 | 249 | 240 | 131 | 92 | 2,949 |
| **Portfolio Total** | 9,814 | 10,256 | 10,174 | 6,024 | 4,867 | 2,199 | 3,261 | 55,363 |

* For multifamily programs, 2016 - 2021 counted only participating housing units in participating facilities while 2012-2015 counted all housing units in a participating facility.

* For display purposes, years 2012-2014 are not displayed in Table 3, but are accounted for in the Additive and Cumulative columns. Please see the participation memo from 2020 for the 2012-2014 inputs.

# IV. Estimate of Customers Reached 2012-2021

This section estimates the portion of each customer class that has participated in an energy efficiency program from 2012-2021. Figures 5 to 8 represent a visual estimate of the combination of unique participant counts from 2012-2021, plus residential new construction units, Home Energy Reports, and C&I upstream lighting. ENERGY STAR® Lighting participants are excluded from the counts because the program's broad participation among a large number of customers would overwhelm the data, making it difficult to analyze participation in other programs. Purchasing pattern research indicates that an estimated 70,210 participants purchased efficient bulbs through the program in 2021 alone, and this was the last year for Residential Lighting. Similarly, C&I upstream lighting is also excluded from the unique participation count since the Company does not have detailed information and cannot remove overlap with other C&I programs. The Company does have customer information to remove overlap across years and includes an estimate of unique C&I upstream lighting participants in the graphs below.

The graphs show that from 2012 through 2021, 69% of electric customers and 46% of gas customers participated in the Company's energy efficiency programs at least once. This is significant when one considers this analysis does not include data back to 2009, when energy efficiency programs under the construct of Least Cost Procurement began and does not include ENERGY STAR® Lighting or Home Energy Reports. Had this data been included, the penetration rates would undoubtedly be higher.

When Home Energy Reports and C&I upstream lighting participation is added to these counts, a total of 97% of electric customers and 93% of gas customers participated over this period. Home Energy Reports are included here because the program offers significant savings and benefits to customers as well as drives customers to participate in other energy efficiency programs.

**Figure 5. Cumulative Electric Participation by Program**

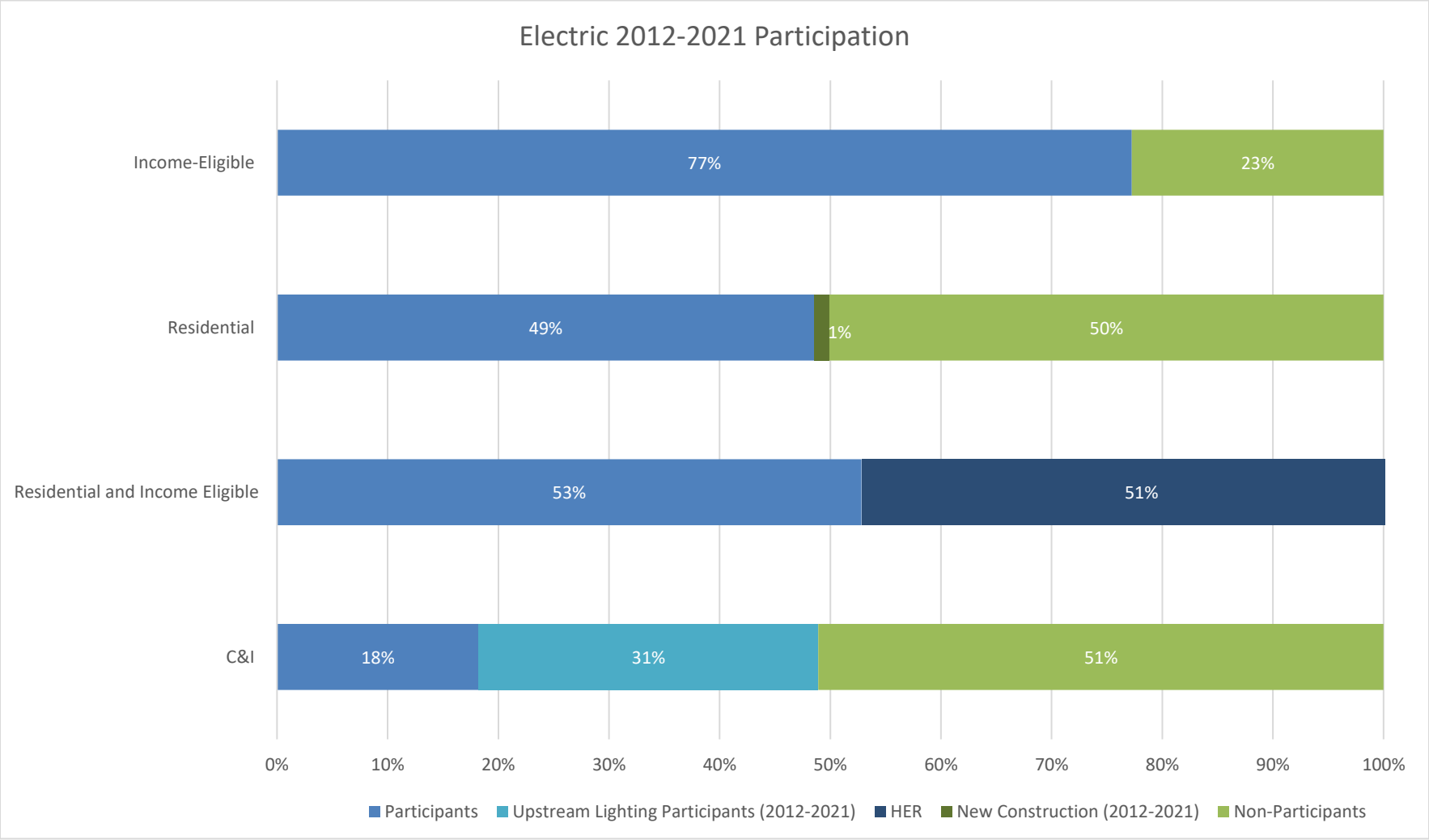
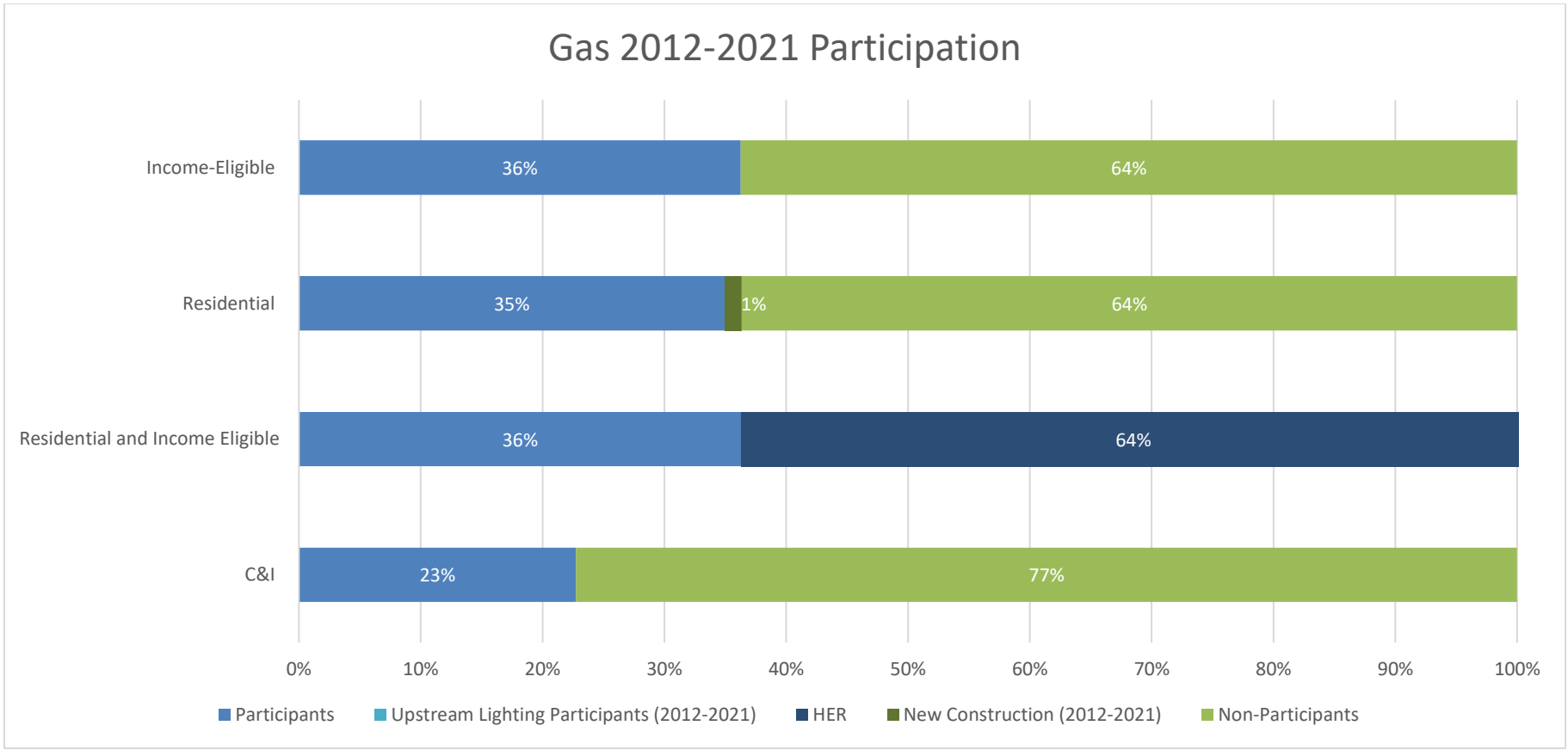


**Figure 6. Cumulative 2012-2021 Gas Participation by Program**



**Attachment 5**

# Attachment 5

# Rhode Island 2021 Energy Efficiency Workforce Analysis Final Report

Guidehouse

# Rhode Island 2021 Energy Efficiency Workforce Analysis – Final Report

**Prepared for:**

**The Narragansett Electric Company**

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Reference No.: 220601-060
May 31, 2022

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# 1. List of Tables



# 2. List of Figures

# Disclaimer

This report was prepared by Guidehouse Inc ("Guidehouse") for The Narragansett Electric Company. The work presented in this report represents Guidehouse's professional judgment based on the information available at the time this report was prepared. Guidehouse is not responsible for the reader's use of, or reliance upon, the report, nor any decisions based on the report. GUIDEHOUSE MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED. Readers of the report are advised that they assume all liabilities incurred by them, or third parties, as a result of their reliance on the report, or the data, information, findings, and opinions contained in the report.

# Acknowledgement

For the six years prior to 2019 (i.e., 2013 – 2018), Peregrine Energy Group ("Peregrine") had performed the FTE analysis and composed the reports associated. Sections of this report have been adapted from the 2018 study, "Analysis and Recommendations regarding the Current and Future Workforce Associated with 2018 Rhode Island Energy Efficiency Programs"[1] completed by Peregrine. The use of text is done with permission from Peregrine and The Narragansett Electric Company. Specifically, portions of the Executive Summary, Introduction, The Energy Efficiency Workforce, Providers and Employees Analysis sections were adapted from the 2018 study for this report. Additionally, as described in more detail throughout the report, some of the 2021 vendors' FTEs were calculated by scaling the 2020 FTE count, which itself was scaled based on the 2019 and 2018 FTE counts. Thus, the FTE estimates are, in part, derivative of the Peregrine analysis. The detailed description of Peregrine's 2018 methodology in Attachment A was reproduced from the 2018 report. When describing this embedded methodology, wording from the 2018 report was used. Where sections from the 2018 study have been adapted, a footnote after the header makes this explicit.

[1] 2018 Study: "Analysis and Recommendations regarding the Current and Future Workforce Associated with 2018 Rhode Island Energy Efficiency Programs," accessed at http://rieermc.ri.gov/wp-content/uploads/2020/07/2018-attachment-5-workforce-report-final.pdf.

# Executive Summary

The Narragansett Electric Company engaged Guidehouse to estimate the workforce associated with implementation of The Narragansett Electric Company's electric and gas energy efficiency programs delivered in 2021. This study addresses the requirements of General Law 39-2-1.2, enacted by the Rhode Island General Assembly in 2012. In 2021, The Narragansett Electric Company spent a combined $130,244,119[2] on the Rhode Island programs that saved 131,365 annual megawatt hours (MWh) of electricity[3] and 316,424 million British thermal units (MMBtu) of natural gas. These programs also led to a reduction in 19 MW in 2021.The measures installed during 2021 will save Rhode Island customers 1,046,790 MWh and 3,454,006 MMBtu over the lifetime of the measures.

The focus of this study is to quantify the workforce that was involved in delivering The Narragansett Electric Company's Rhode Island programs in 2021. The workforce analysis reports the number of jobs associated with the programs and compares them to past years. Guidehouse calculated 1,011 full-time equivalent (FTE) workers associated with The Narragansett Electric Company spending in 2021 for Rhode Island programs.[4] Since an FTE employee often represents the combined labors of more than one person over the course of a year, the number of individual workers exceeds the number of FTEs by a significant amount. At a high level, the increase in FTEs in 2021 relative to 2020 is associated with the recovery of energy efficiency program activity from the COVID pandemic-affected activity in 2020. Spending for energy efficiency programs in Rhode Island increased by 16% from 2020 to 2021, leading to increased activity and therefore an increase in FTEs among the associated workforce. A significant portion of this increase in spending is attributed to increased demand due to reduced restrictions regarding COVID-19.

Guidehouse's basic approach for determining 2021 FTEs was to scale 2020 FTEs by program spending in 2021 relative to 2020. However, in several instances, Guidehouse replaced the calculation when vendors had a good estimate for the whole program or in situations where Guidehouse determined the scaler may be less robust. For example, the EnergyWise program vendor provided an FTE estimate for all aspects of the program. The program also had several significant program changes that led to different cost structures in 2021 than in 2020. The changing cost structure would make the scaler – which implicitly assumes cost structures remain constant – less robust. Guidehouse identified programs where this type of concern presented itself and addressed it by using a estimates from vendors.

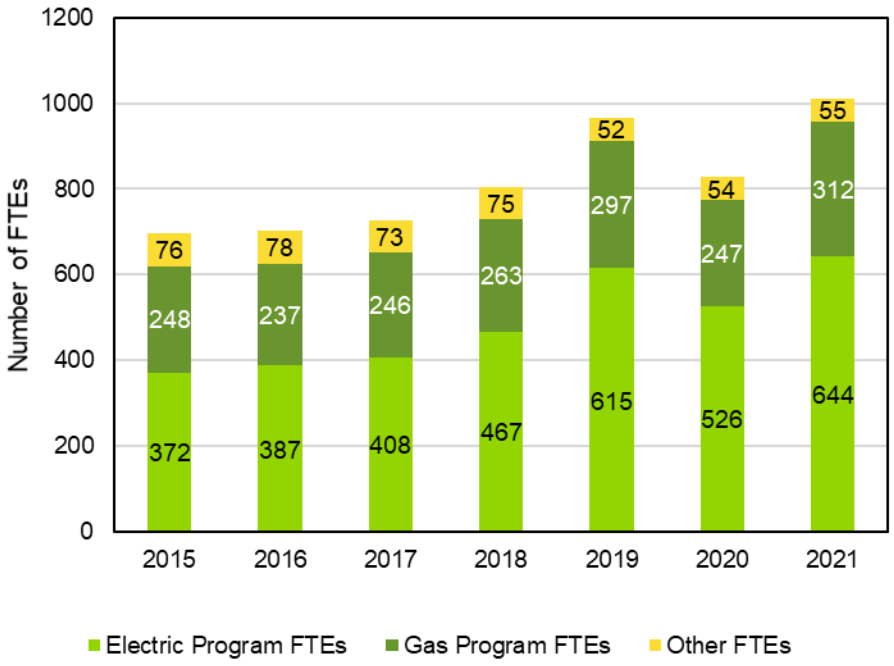
An overview of the quantitative FTE findings of this report are shown by sector in Figure 1-1 and Table 1-1. Figure 1-1 and Figure 1-2 show the trends of FTE jobs by market sector (residential, residential income-eligible, and commercial and industrial) from 2015 to 2021 for electric and natural gas, respectively.

[2] Spend figures reported in section 6 will not sum to this total for multiple reasons: (1) spend figures reported in section 6 are deflated to 2018$ so that we can compare figures from previous years and (2) certain expenses such as "regulatory expenses" are not included in charts below because they are not used to estimate FTEs.

[3] Note that although the savings are not quantified here, the electric portfolio also includes delivery of energy efficiency services to customers that heat with delivered fuels.

[4] As indicated in Appendix C, most vendors are either headquartered or have a physical presence in Rhode Island. The number of FTEs reported do not include customer employees who assist in various ways with project implementation in their own facilities.

**Figure 1-1. Summary of FTEs (2015-2021)[5]**




*Source: Guidehouse analysis and 2018 study*

[5] "Other" refers to FTEs that are associated with multiple different programs across both the gas and electric sectors, such as marketing, The Narragansett Electric Company workforce and, for 2020 only, COVID-19 training.

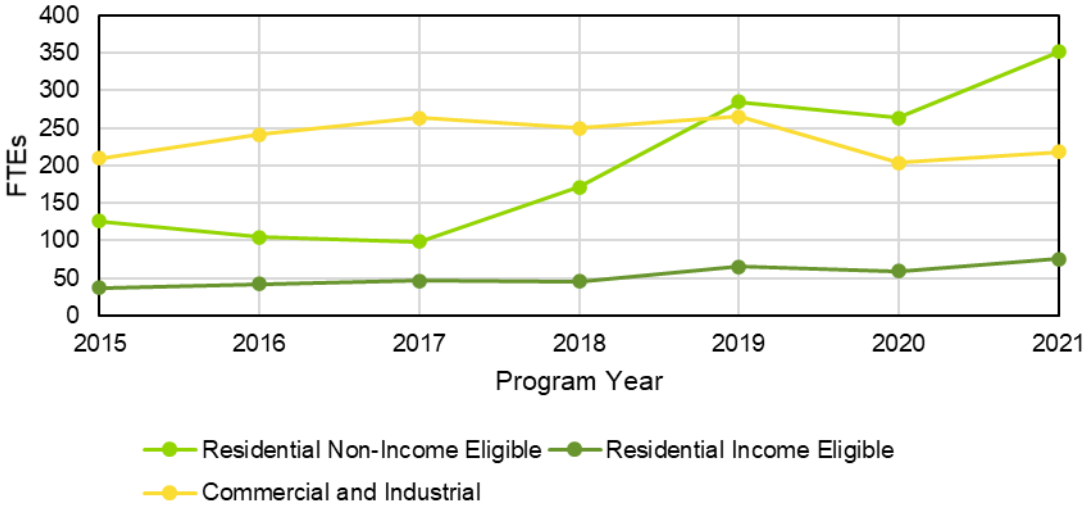
**Table 1-1 Summary of FTEs (2015-2021)**

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| **Electric Programs** | | | | | | | |
| Commercial and Industrial | 210.0 | 241.1 | 263.5 | 250.0 | 265.0 | 203.7 | 217.9 |
| Residential Income Eligible | 37.0 | 42.3 | 46.0 | 45.8 | 65.1 | 59.1 | 75.1 |
| Residential Non-Income Eligible | 125.4 | 104.0 | 98.1 | 168.9 | 284.8 | 263.7 | 351.3 |
| **Gas Programs** | | | | | | | |
| Commercial and Industrial | 32.0 | 36.1 | 34.4 | 31.9 | 28.7 | 19.8 | 20.9 |
| Residential Income Eligible | 43.8 | 41.4 | 36.5 | 39.4 | 56.2 | 38.5 | 41.3 |
| Residential Non-Income Eligible | 172.1 | 159.3 | 174.9 | 191.6 | 212.6 | 189.2 | 249.9 |
| **Other** | | | | | | | |
| CAP Agencies[6] | 34.0 | 38.0 | 35.0 | 35.0 | | | |
| The Narragansett Electric Company[7] | 41.6 | 39.9 | 38.2 | 39.5 | 43.3 | 44.4 | 45.5 |
| Marketing[8] | | | | | 9.0 | 9.0 | 9.0 |
| COVID-19 Training[9] | | | | | | 0.3 | 0.0 |
| **Total** | **695.8** | **702.2** | **726.5** | **802.1** | **964.6** | **827.5** | **1,011.0** |

*Source: Guidehouse analysis and 2018 study*

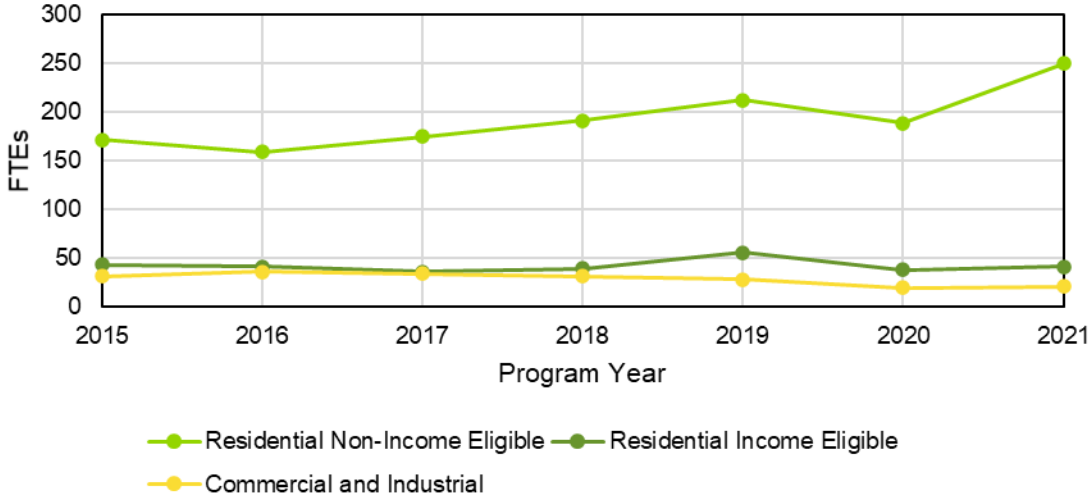
[6] Note that for the 2019 and 2020 analysis, CAP Agency staff were included within the Residential Income Eligible program under both Electric and Gas.
[7] In years prior to 2019, a 2,016-hour work year was assumed when calculating FTEs. The Narragansett Electric Company changed this assumption in recent years to a 1,768-hour work year. This new assumption was implemented beginning in 2019 and resulted in a slight increase in FTEs.
[8] Beginning in 2019, marketing was contracted to a new vendor, resulting in an increase in jobs; these are therefore shown separately.
[9] In 2020, Environmental Health and Engineering had performed COVID-19 training and compliance testing. In 2021, this program was discontinued.

**Figure 1-2 Electric Program FTEs (2015-2021)**




*Source: Guidehouse analyses for 2019, 2020, 2021, and 2018 study*

**Figure 1-3 Gas Program FTEs (2015-2021)**




*Source: Guidehouse analyses for 2019, 2020, 2021, and 2018 study*

The success of the delivery of The Narragansett Electric Company programs is dependent on the efforts of many workers in different roles. Two main types of service providers are identified in the report: support service providers and direct service providers. Support service providers include program design and planning consultants, marketers, rebate processors, and evaluators. These FTEs are usually embedded within the broader reported number for the program. Direct service providers are workers who are contracted by The Narragansett Electric Company to execute a given program. The report provides a description of every The Narragansett Electric Company program, as well as the company responsible for the delivery of the program.

The Narragansett Electric Company programs and delivery strategies (i.e., program offerings, incentive levels) were substantively the same in 2021 as they had been in 2020. However, several vendors reported increased difficulty with worker retention. COVID-19 was likely responsible for some of this difficulty. Specifically, some employees quit their jobs because they did not want to regularly enter customers' homes, whereas other employees quit because they did not feel comfortable getting vaccinated, which was a requirement for installers. In addition to COVID-19-related concerns, it was reported that employees were more likely, relative to previous years, to seek employment at other firms – both in the same industry and in adjacent industries. Furthermore, nearly all vendors experienced significant product shipment delays from wholesalers.

Despite worker retention concerns and product shipment delays, there was a significant rise in FTEs – particularly for the single-family income eligible and the EnergyWise programs. A portion of this increase in FTEs was a likely result of the EnergyWise program going roughly 60% overbudget. EnergyWise going 60% overbudget implies the addition of roughly 80 FTEs. In addition to the EnergyWise program running overbudget, this increase in FTEs was also likely attributable to reduced COVID-19 impacts on the workforce and delivery of energy efficiency programs. In other words, residents and businesses were more comfortable with vendors entering their homes and buildings to perform upgrades. Supporting this claim, multiple vendors reported that customers explicitly stated an increased comfort with vendors entering their homes relative to 2020. All else equal, worker retention concerns and product shipment delays likely led to fewer jobs, but EnergyWise running overbudget and increased demand for energy efficiency services were more than enough to offset these issues.

Vendors also noted an up-tick in heat pump installation work. These programs remain fairly small due to limitations on eligibility for energy efficiency program incentives through The Narragansett Electric Company[10] and to available funding from other sources. If heat pump programs expand – either as part of the programs analyzed in this report or programs with separate funding sources – as they have in other states, vendors noted the need for additional work force training. As one vendor put it, "heat pumps are the new light bulbs." In other words, some vendors anticipate a significant increase in heat pump installations and a corresponding need for heat pump installation training programs.

[10] Customers are only able to take advantage of The Narragansett Electric Company program incentives if the heat pump installation displaces an electric resistance heater. Since most buildings use fossil fuel heat, this incentive does not apply to most homes.

# 1. Introduction

As mandated by state law and with regulatory approval and oversight, The Narragansett Electric Company delivers a portfolio of energy efficiency programs and services referred to in state enabling legislation as "demand-side management programs"[11] (the programs) to all market sectors it serves in Rhode Island, funded by ratepayers primarily through electric and gas utility rate surcharges and supplemented by other funding sources, including Forward Capacity Market revenue. The Rhode Island programs focus on both new construction and retrofit of existing buildings. Programs deliver cost-effective services and energy savings to building owners and tenants, to residential customers residing in single-family and multifamily buildings, to government and non-profit institutions, to small and large commercial businesses, and to manufacturers.

Overall, the 2021 program offerings were similar to those in 2020. Spending in 2021 increased when compared to 2020. In 2021, The Narragansett Electric Company spent a total of $130,244,119on electric and gas energy efficiency programs in Rhode Island, a 16% increase when compared to 2020. Seventy-three percent of 2021 Program expenditures, $94,563,965 was for electric programs, while 27%, $35,680,153 was for gas programs.[12] These programs created 316,424 million British thermal units (MMBtu) of natural gas savings and 131,365 megawatt hours (MWh) of electricity savings). Additionally, these programs led to a reduction in 19 MW in 2021.[13]

Rhode Island General Law 39-2-1.2(k), enacted by the Rhode Island General Assembly in 2012, requires that

> Each year, the office [RI Office of Energy Resources] and the council [EERMC] shall submit to the governor, the president of the senate, and the speaker of the house of representatives, separate financial and performance reports regarding the demand-side management programs, including the specific level of funds that were contributed by the residential, municipal, and commercial and industrial sectors to the overall programs; the businesses, vendors, and institutions that received funding from demand-side management gas and electric funds used for the purposes in this section; and the businesses, vendors, and institutions that received the administrative funds.

In fulfillment of this requirement, The Narragansett Electric Company has prepared for submission several financial and performance reports on the programs and has developed a list of businesses, vendors, and institutions that received funding from program funds, as well as businesses, vendors, and institutions that received administrative funds. In addition to fulfilling the specific financial and performance reporting requirements, The Narragansett Electric Company has undertaken and is submitting this "Rhode Island 2021 Energy Efficiency Workforce Analysis Report". This is the eighth consecutive year that The Narragansett Electric

[11] Rhode Island General Laws § 39-2-1.2(b).
[12] The Narragansett Electric Company d/b/a The Narragansett Electric Company, 2021 Energy Efficiency Year End Report.
[13] The Narragansett Electric Company d/b/a The Narragansett Electric Company, 2021 Energy Efficiency Year End Report.

Company has provided a narrative report describing the jobs associated with these expenditures and the workforce that delivers the energy efficiency programs offered.

Although employment directly associated with The Narragansett Electric Company programs is not a formal program goal, it is a significant additional economic benefit that investments in energy efficiency contribute to Rhode Island and to participating businesses. Furthermore, without the availability and contributions of a workforce to deliver programs, identify opportunities for energy efficiency, and install energy efficiency improvements, the demand-side savings that R.I. General Law 39-2-1.2 is intended to create would largely not occur. The report describes the work and workforce associated with program development, design, marketing, management, delivery, and evaluation and attempts to estimate the number of jobs directly associated with The Narragansett Electric Company's 2021 expenditures for programs that originate from energy efficiency funding sources. Accurately calculating the numbers of these jobs is challenging since it depends on the number and types of employees engaged, be they full-time or part-time, and numbers of hours worked to deliver programs, which may be captured by employers for payroll and business planning but is not typically reported to The Narragansett Electric Company unless for billing purposes.

This report builds on Rhode Island workforce studies performed by Peregrine Energy Group for 2013 to 2018, as well as the 2019 and 2020 workforce studies performed by Guidehouse. Please see section 6.1, "Overview of Methodology," for more details on how the FTEs for the 2021 workforce study were calculated. As in prior years, Guidehouse is presenting workforce counts as "full-time equivalent" (FTE) employees. It is assumed for the purpose of this study, as in past years, that one FTE equals 1,768 actual work hours regardless of job responsibility (in addition to vacation, sick, holidays or other leave time), or the equivalent of one person working eight hours a day for 220 workdays in an average year. In many instances, each FTE counted as associated with a The Narragansett Electric Company program represents the actual part-time labors of multiple individuals who are associated with delivery of programs in Rhode Island, but also may be engaged in other work-related endeavors.

For the purpose of this study, the workforce engaged in program delivery does not "result from" the programs, but rather is "associated with" the energy efficiency programs. While Guidehouse can confirm that program budgets have funded employers with whom The Narragansett Electric Company has contracted to support 2021 programs, no information regarding participants' motivation for replacing older inefficient equipment with new efficient equipment was provided. Therefore, to eliminate the question of causality, FTE counts are shown as employment "associated with" the programs, rather than "resulting from."

Several pieces of information were required to produce the findings presented in this report. Guidehouse used the following methodology to determine the 2021 FTEs:

1. Guidehouse scaled the 2020 FTEs developed by Guidehouse to 2021 FTEs by using the ratio of each program's spending for 2020 and 2021,[14] with 2021 spending adjusted downward for inflation. Specifically, the ratio of 2021 spending to 2020 spending for each program was multiplied by the 2020 FTEs for that program to get an initial 2021 FTE value. This is the first year of a new three-year plan; however, since the programs

[14] Spending information from The Narragansett Electric Company d/b/a The Narragansett Electric Company, 2021 Energy Efficiency Year End Report.

offered in 2021 are relatively similar to those offered in 2020 and nothing reported by the vendors interviewed altered the fundamental relationship between spending and the size of the workforce, this scaling approach is still considered to be valid. See the methodology section for more details regarding the scaler.

2. Guidehouse conducted several interviews with vendors contracted by The Narragansett Electric Company as well as several The Narragansett Electric Company employees. A total of 17 vendor interviews and 6 The Narragansett Electric Company interviews were conducted. The information gathered in these interviews was used to either confirm or adjust the values calculated through scaling, as well as understand other factors impacting the workforce in 2021.
3. Vendor spending provided by The Narragansett Electric Company was used to ensure FTEs reported by specific vendors were reasonable.

The sections that follow describe the Energy Efficiency Workforce, details about Support Services and Direct Service Providers, Analysis of Workforce FTEs, and Qualitative Findings and Observations.

COVID-19 had a much smaller impact on the operations of the Energy Efficiency programs in Rhode Island in 2021 relative to 2020. The impact the pandemic had on the workforce is discussed throughout the report. Overall, the programs displayed significant resilience and adaptability when it came to their program operations in 2021. As discussed earlier, COVID-19 likely led to increased turnover, minor customer reluctance, supply chain issues, and rising prices. Furthermore, it resulted in some call-center representatives and program administrators working from home.

# 2. The Energy Efficiency Workforce[15]

Guidehouse found that in 2021 an estimated 1011.0 full-time equivalent jobs or "FTEs" were associated with The Narragansett Electric Company's programs in Rhode Island. A full-time equivalent employee often represents the combined labors of more than one person over the course of a year. The actual numbers of individual workers associated with program expenditures is far greater than the total number of FTEs.

Guidehouse recognizes two main categories of employers/employees that participate in delivery of The Narragansett Electric Company's programs. They are characterized as "Support Services Providers" and "Direct Services Providers." The following section describes these two segments in more detail, followed by a description of how the analysis of FTEs associated with each type of provider was performed.

## 2.1. Support Services Providers

Support services providers are employers and employees involved in Program planning, administration, marketing, rebate processing, evaluation, and market research. Support services providers include:

- The Narragansett Electric Company employees directly involved in energy efficiency program design and delivery, including regulatory matters, administrative management of contractors, marketing, some elements of customer education, and evaluation;
- Entities under contract to The Narragansett Electric Company who provide marketing, outreach, public information, and other related services, including media placement and design of collateral marketing materials;
- Specialized firms that process rebate or incentive applications and make payments to contractors, distributors, and manufacturers that promote, provide, purchase, or install targeted high efficiency equipment;
- Independent program design consultants who assist The Narragansett Electric Company with creation of annual program strategies, plans, and goals; and
- Evaluators of The Narragansett Electric Company Program performance against those annual goals.

## 2.2. Direct Services Providers

The Direct Services Providers are specialized firms, sometimes contracted directly to The Narragansett Electric Company, that may provide some or all of the following program services: promoting, managing, and delivering individual Rhode Island energy efficiency programs; contributing engineering and other technical support to energy efficiency project development;

[15] This section is adapted from the 2018 study "Analysis and Recommendations regarding the Current and Future Workforce Associated with 2018 Rhode Island Energy Efficiency Programs", accessed at http://rieermc.ri.gov/wp-content/uploads/2020/07/2018-attachment-5-workforce-report-final.pdf. The use of text is done with the permission of Peregrine Energy Group and The Narragansett Electric Company.

supplying and/or installing energy saving material and equipment, and providing quality assurance inspections. This category includes, but is not limited to:

- The Narragansett Electric Company account managers who provide outreach and direct technical assistance to customers, particularly for large commercial and industrial retrofits and new construction.[16]
- Energy services companies specializing in providing field services and installation program management - The Narragansett Electric Company has contracts with such firms to deliver individual programs to particular market sectors. In this capacity, they will often provide a “turnkey” service that includes the following: outreach and intake of customer requests; scheduling site visits; technical assistance; engineering; material and equipment installations; referrals to and engagements with trades people; administration, management and supervision; warehouse materials purchasing and handling; quality assurance inspections; bookkeeping; and data entry and tracking.
- Companies specializing in logistical management and support - These firms engage, manage, and coordinate product suppliers and distributors, retail store offerings, and service networks. These firms often manage similar programs in both Rhode Island and Massachusetts to achieve acceptable economies of scale. They may work out of a Massachusetts office but will spend significant time in Rhode Island working with local businesses.
- Electrical and mechanical engineers employed by contracted consulting firms - The Narragansett Electric Company assigns and dispatches technical specialists to identify potential projects in customer facilities, quantify potential costs and savings, recommend actions that customers should take, and perform post-installation inspections to ensure that installed measures are performing as intended. The larger firms with the greatest capacity to provide these services are often based in Massachusetts, where there is a higher volume of business opportunity and activity.
- Equipment suppliers and retailers - The Narragansett Electric Company encourages and provides incentives to equipment distributors, suppliers, and retailers throughout the Rhode Island service territory to market and sell targeted energy efficient equipment and materials directly to The Narragansett Electric Company customers and installation contractors. An increasing number of suppliers and installation contractors participate in The Narragansett Electric Company-sponsored “upstream” point-of-sale programs offering instant rebates. These equipment suppliers and retailers typically have Rhode Island storefronts, though they may be part of a regional or national business entity.
- Project expediters - These are businesses that support The Narragansett Electric Company Rhode Island initiatives that target both small and large commercial/industrial, institutional, and municipal customers. Many of these firms operate in Massachusetts as well as Rhode Island and, over time, some of the largest have extended their business activities regionally and nationally. They are primarily sales and project management organizations that rely heavily on independent subcontractors and tradespersons to perform installations. Generally, the more comprehensive their technology capabilities are, the more attractive they are to The Narragansett Electric Company since they can

[16]The Narragansett Electric Company is included as both a Support Services Provider and a Direct Services Provider because of the many different roles it has in the programs. Therefore, all The Narragansett Electric Company FTEs are segregated and presented in a separate category, rather than integrated into FTE counts for markets and programs.

provide a more comprehensive service to The Narragansett Electric Company customers.

- Independent installation contractors - These are contractors in the field installing energy efficient equipment and approved materials for The Narragansett Electric Company customers. They are typically based in Rhode Island, though some may operate out of offices in neighboring Massachusetts and Connecticut. They include Rhode Island-licensed electricians, plumbers, pipe fitters, and refrigeration experts, as well as other specialists such as weatherization contractors. Many of these installation contractors are active in more than one market sector, sometimes as subcontractors to The Narragansett Electric Company-designated program leads or to Project Expeditors ("PEX"), but also increasingly as self-directed installation vendors.
- Quality assurance inspectors - The Narragansett Electric Company also contracts with inspectors that are independent of service delivery contractors who are responsible for installing equipment. The inspectors check a sample of completed installations or a sample of energy efficient equipment acquired by point-of-sale purchasers to ensure that program standards are being met, equipment is installed properly, and projected savings will likely be realized. Again, because of the similarities across state lines and cost efficiencies, The Narragansett Electric Company will typically award Rhode Island inspections to the same firm providing this service for Massachusetts.

# 3. Support Services Providers Analysis[17]

The following section describes different support services and the entity responsible for its delivery.

## 3.1. EERMC Program Design and Planning Consultants

The Rhode Island Energy Efficiency and Resource Management Council (EERMC) has statutory oversight responsibilities for The Narragansett Electric Company's energy efficiency programs including planning, program design, and evaluation. To help them with these responsibilities, the EERMC hires consultants to assist it in the performance of its responsibilities.

***Delivery***

Optimal Energy (Optimal), with the support of multiple specialized subcontractors, served as the primary consultants to Rhode Island's EERMC in 2021 and collaborated with The Narragansett Electric Company on program design and development. Optimal, though headquartered in Hinesburg, Vermont, primarily serves Rhode Island from a Providence office where employees working on this program are based. The firm also provides like services for other state energy efficiency initiatives nation-wide.

## 3.2. Marketers

Marketers' primary role is promoting The Narragansett Electric Company Rhode Island's energy efficiency programs. Marketers' role generally includes media buying and planning, creative concepting, campaign development and strategy, and facilitating planning sessions for program years.

***Delivery***

Eric Mower and Associates (Mower) is the primary marketing consultant for The Narragansett Electric Company. Mower is the main agency of record servicing marketing for The Narragansett Electric Company, handling programs across residential and commercial sectors. In 2020, Mower took on communications responsibilities, in addition to their regular marketing roles. This was a result of an internal change in Mower and how they manage their teams where the communications teams were integrated into the marketing segment of the company. This allowed Mower to provide a more holistic story to the energy efficiency customers in Rhode Island.[18]

[17] This section is adapted from the 2018 study "Analysis and Recommendations regarding the Current and Future Workforce Associated with 2018 Rhode Island Energy Efficiency Programs", accessed at http://rieermc.ri.gov/wp-content/uploads/2020/07/2018-attachment-5-workforce-report-final.pdf. The use of text is done with the permission of Peregrine Energy Group and The Narragansett Electric Company.
[18] Interview with Mower, March 12, 2021.

## 3.3. Rebate Processing Company

Rebate processors receive and process applications from participants for different rebates. They generally receive the applications by mail or online submission and proceed to validate whether the customers and equipment are eligible for the rebate. If a customer is found to be eligible, they can approve instant payment to them. All data related to this process is collected by the rebate processors and sent to The Narragansett Electric Company. Rebate processors will also provide customers with support throughout the process using call centers, notification emails, or letters.

***Delivery***

In 2021, the rebate processing continued to be done solely by Energy Federation, Inc. (EFI). EFI is based in Westborough, Massachusetts, and processes rebates and incentives offered to program participants. Program participants include both consumers, i.e., The Narragansett Electric Company customers who purchase targeted products and then apply for rebates, and equipment installers who promote and encourage The Narragansett Electric Company customers to choose higher efficiency products.

Initiatives supported by EFI included Rhode Island Pool Pump and Upstream Circulator Pump Distributor programs, as well as the ENERGY STAR® Appliances, Lighting, and HVAC programs. They also provided call center support for the Rhode Island appliance program that focuses on high efficiency clothes dryers and dehumidifiers.

In 2021, EFI continued to work on the heating and cooling program by performing inspections in order to ensure the rebate was valid. EFI subcontracted to CLEAResult to perform equipment inspections on-site as well as handle the related phone calls from customers.

Starting in 2021, EFI began processing the incentives for the ENERGY STAR® Gas and Electric HVAC programs. The Narragansett Electric Company made this change in 2020 to streamline its processes across the various programs.[19]

## 3.4. Evaluators

To measure the performance of Rhode Island Program offerings against annual goals, The Narragansett Electric Company contracts with independent consulting firms specializing in utility program evaluation. Many of these firms support The Narragansett Electric Company evaluation needs in other states as well.

***Delivery***

DNV, based in Burlington, MA, served as the primary evaluator for commercial and industrial programs, whereas Cadeo served as the primary evaluator for residential programs.

[19] Interview with CLEAResult, March 3, 2021

# 4. Direct Services Providers Analysis[20]

Based on its 2021 Energy Efficiency Year End Report, The Narragansett Electric Company achieved 95.0% of its annual MWh savings targets and 75.4% of its annual MMBtu savings through its electric and gas energy efficiency programs. The Narragansett Electric Company achieved 83.1% of its annual MW savings targets and 84.8% of its annual MMBtu savings through its electric and gas energy efficiency programs. Achievement towards these energy efficiency goals in 2021 was the result of the aggregate efforts of the many Direct Services Providers who delivered The Narragansett Electric Company programs. This section describes each electric and gas program offered as well as the entity responsible for each program's delivery.

In 2021, The Narragansett Electric Company employed multiple, targeted energy efficiency delivery strategies in Rhode Island. Energy efficiency programs described below were each designed for individual markets and reflect differences in the buying habits, drivers, and technical and financial resources of each market sector (residential, residential income-eligible, commercial and industrial) and their sub-sectors. Program delivery strategies varied with fuel type (i.e., electric vs. natural gas customers), characteristics of different customer rate classes, cost and benefits of different end-use technologies to classes of customers, and whether a program's objective was to affect energy efficiency in current operations or future energy use in new construction.

## 4.1. Commercial and Industrial Programs

In 2021, Commercial and Industrial (C&I) gas and electric programs continued to encourage installation contractors, both technology specialists and tradespeople, to take the lead in achieving The Narragansett Electric Company's energy efficiency goals for large and small businesses. These C&I programs also target municipal facilities and large non-profit institutions (e.g., colleges and universities and healthcare facilities). At the same time, The Narragansett Electric Company has increasingly made use of "upstream" or "point-of sale" strategies, particularly for LED lighting, that discounted the purchase price of preferred, more energy efficient equipment to accelerate market transformation and replacement of older technology.

C&I programs differentiate between "prescriptive" and "custom" energy efficiency measures. Prescriptive measures, often lighting, qualify for pre-determined incentives or discounts from The Narragansett Electric Company based on cost-effectiveness guidelines (e.g., hours of operation or equipment life). Custom and comprehensive measures are often more complex and are evaluated and approved for incentives based on actual total savings they projected to produce. In particular, the Large Commercial and Industrial Retrofit program encourages customers and their installation contractors to incorporate or bundle a mix of shorter payback, more certain, energy savings measures and longer payback, more complex, energy savings

[20] This section is reproduced from the 2018 study "Analysis and Recommendations regarding the Current and Future Workforce Associated with 2018 Rhode Island Energy Efficiency Programs", accessed at http://rieermc.ri.gov/wp-content/uploads/2020/07/2018-attachment-5-workforce-report-final.pdf. The use of the text is done with the permission of Peregrine Energy Group and The Narragansett Electric Company.

measures into projects, providing enhanced incentives for more comprehensive and deeper efficiency improvement.

### 4.1.1. Large Commercial New Construction (Electric)

The Large Commercial New Construction program encouraged energy efficient design and construction practices in new and renovated commercial, industrial, and institutional buildings. The program also promoted the installation of high efficiency equipment in existing facilities during building remodeling and at the time of equipment failure and replacement. The program offered incentives to eliminate or significantly reduce the incremental cost of high efficiency equipment over standard efficiency equipment and provided technical support to assist customers to identify opportunities for incremental efficiency improvement in eligible buildings.

***Delivery***

The New Construction program was administered and promoted internally by The Narragansett Electric Company staff. As noted above, it offered both technical and design assistance to customers to identify opportunities for incremental efficiency improvement in new building designs and to help customers and their architects/engineers to refine their designs to capture these opportunities. Outside consultants were assigned to assist customers to identify and incorporate energy efficiency solutions into new construction designs and to complete detailed studies that model and quantify energy savings. Commissioning or quality assurance was also offered to ensure that the equipment and systems operate as intended.

To further support large commercial customers, The Narragansett Electric Company contracted with consulting engineers who could be deployed by an account manager to assist a customer. Engineers identified potential custom projects, evaluated or modeled the potential energy savings, and helped the customer complete incentive applications. Some of these consultants brought expertise in specialties like data center energy efficiency improvement or laboratories and clean room technology. In other situations, the customer could propose a scope of work with their own engineer that The Narragansett Electric Company could elect to support. Support from contracted consulting engineers was available through The Narragansett Electric Company to witness project commissioning, to confirm that the installed measures were operating and performing as anticipated, and to ensure that predicted savings would be achieved. Consulting engineers are used for both new construction and retrofit projects.[21]

### 4.1.2. Large Commercial Retrofit (Electric)

The Large Commercial Retrofit program replaces older, but still operating, less efficient energy equipment and systems with more energy efficient equipment. Energy efficiency improvements installed through the program include but are not limited to interior and exterior lighting and lighting controls; drives; heating, ventilation and air conditioning (HVAC) systems; building controls; combined heat and power systems; and street lighting. The goal is achieving persistent, measurable energy savings.

[21] Interview with The Narragansett Electric Company on February 10, 2021

All existing commercial, industrial, and institutional customer facilities are eligible to participate. Customers in the program tend to be larger (i.e., have a monthly usage greater than 1,000,000 kWh) or are pursuing custom electricity saving measures not available through the prescriptive Direct Install Program. The Narragansett Electric Company pays incentives to assist with defraying a portion of the costs associated with installing equipment. The Narragansett Electric Company also can choose to provide engineering assistance to customers to assist with identification of cost-effective opportunities.

***Delivery***

The Large Commercial Retrofit program is a market-based initiative with no contracted program administrator or designated preferred suppliers. The Narragansett Electric Company has established performance standards for qualifying energy efficiency measures and allows customers to choose the suppliers and installation vendors they want to work with. Customers submit applications to The Narragansett Electric Company for incentives that are based on projected savings that will be achieved and receive payments from The Narragansett Electric Company that help defray costs associated with installed equipment. Installers of record for these projects are identified by The Narragansett Electric Company as either “customers,” “installation contractors,” or PEX.

In addition to the main program described above, several initiatives exist within the Large Commercial Retrofit program, described below.

***Subprograms***

The Narragansett Electric Company has many sub-programs within the Large Commercial Retrofit program including the following:

4.1.2.1 Market segment initiatives – telecommunications, grocery, industrial, farm/agriculture, lodging, and laundry initiatives

4.1.2.2 Upstream lighting

4.1.2.3 Other initiatives – strategic energy management planning program, equipment and systems performance optimization program, combined heat and power, and lighting design incentive initiatives

***Market Segment Initiatives***

The Narragansett Electric Company runs initiatives for several market sectors including telecommunications, grocery, industrial, farm/agriculture, lodging, and laundry. This enables the specific segment to get focused and specialized attention in the interest of promoting greater participation.

***Delivery***

The Narragansett Electric Company typically, selects a lead vendor (e.g., CLEAResult) and gives them responsibility for one market segment (e.g., lodging). These vendors then use

several different methods to promote energy efficiency upgrades including providing incentives, financing, technical assistance, information, and implementation. For example, the telecom program provides incentives, technical assistance, and project management, whereas the grocery program provides favorable financing and technical assistance. Many of the programs perform audits and follow up with customers, following installation, for quality assurance.

***Upstream Lighting (Electric)***

The Narragansett Electric Company's Commercial and Industrial Upstream Lighting program encourages customers and electrical contractors to choose higher efficiency lighting products at the point of purchase. This program was launched due to a recognition that commercial customers were going to large lighting distributors to purchase stocks of replacement lighting to have should lights fail or to undertake large-scale change-outs. At that point in time, fluorescent lighting predominated the commercial market. The Narragansett Electric Company reasoned that if a customer again purchased and installed the same "old technology" fluorescent product as was being replaced, this would be a major lost opportunity for efficiency improvement; but if the customer could be influenced to purchase and install a more efficient LED product, both The Narragansett Electric Company and the customer would realize the benefits and savings of energy use reduction. The Narragansett Electric Company contracted with CLEAResult to administer, support, and promote Upstream Lighting. The same team manages the Upstream Lighting program in Massachusetts. CLEAResult has engaged manufacturers and enlisted lighting distributors throughout Rhode Island, offering incentives from The Narragansett Electric Company to reduce list prices of specified energy efficient products to electrical contractors and businesses, with the goal of transitioning and transforming stocking practices and customer purchasing behavior.

CLEAResult processed reimbursements to suppliers for discounts provided and managed a quality assurance process to ensure that recorded sales were legitimate. Larger distributors were audited to verify that product sold through the program were indeed going to the customers of record.

***Other Subprograms***

The Narragansett Electric Company runs several other retrofit subprograms or initiatives including strategic energy management planning program, equipment and systems performance optimization program, combined heat and power, and lighting design incentives. These programs provide project management support and incentives to customers. Small Business Direct Install (Electric and Gas)

In 2021, the Small Business Direct Install program continued to provide direct installation of prescriptive energy efficient lighting, non-lighting retrofit measures, and gas efficiency measures.

***Delivery***

The Direct Install program's lighting measures were delivered by RISE Engineering of Cranston, Rhode Island and sourced from a product vendor. RISE provided turnkey installation services to this market. According to The Narragansett Electric Company, RISE continued to handle 70% of the applications serviced in 2021, similar to 2020. The 30% of remaining applications not

serviced by RISE were serviced through the Customer Directed Option (CDO). RISE employees engaged in the Small Business program were responsible for marketing and lead generation as well as staffing an intake center that was responsible for pre-qualifying potential customers. RISE energy specialists performed field audits of customers' facilities, and data entry staff used completed audits to generate proposals for customers. Audits also resulted in referrals to the Commercial and Industrial Gas Program. When a customer accepted a RISE proposal, a RISE project manager ensured that sufficient product was available for the installation, issued that product to the installer/electricians, and closed out the work order when the installation was completed. RISE maintained a supervised warehouse for material distribution and materials handlers. RISE also employed back office and accounting staff to service this program. Active electricians included both RISE employees and employees of sub-contractors.

### 4.1.3. Large Commercial New Construction and Retrofit (Gas)

Large Commercial and Industrial Gas programs supported installation of energy efficient gas heating and water heating systems, certain thermal envelope measures, and custom gas systems in existing buildings and in new construction. The program guidelines for measure eligibility were the same as for the Large Commercial Retrofit program and the New Construction program. All commercial, industrial, and institutional customers were eligible to participate.

The C&I gas programs offered technical assistance to customers to help them identify cost-effective conservation opportunities and paid incentives to assist in defraying part of the material and labor costs associated with the energy efficient equipment. A retrofit measure must demonstrate that it will increase energy efficiency above the performance of the still-functional equipment it will replace. For new construction or in the case of failed equipment, "lost opportunity" rules apply. New equipment, to be eligible for incremental incentives, must exceed the efficiency of what applicable codes require.

***Delivery***

The Narragansett Electric Company handles the roles of program manager, project coordinator, customer engagement, and data management internally. RISE is engaged in the program in a technical support role. RISE technical staff included multiple engineers, field staff performing audits, an installer doing minor installations for the Small Business Direct Install program, and a quality assurance specialist who validated engineering work. Project energy measures included weatherization, controls, process automation, combustion efficiency, heat recovery, combined heat and power, steam traps, and hot water upgrades. RISE performed post-installation inspections of completed projects. Leidos Inc. continued to handle retrofits and new construction for industrial customers. Leidos completes in field assessments of facilities to identify measures, and then develops a workplan to turn those measures into projects. Leidos completes all energy savings calculations and coordinates with the contractors to execute the project.

### 4.1.4. Commercial ConnectedSolutions

The Commercial ConnectedSolutions program is a technology-agnostic demand-response program and provides an incentive to participating C&I customers for verifiable shedding of load in response to a signal or communication from The Narragansett Electric Company during

curtailment events. A new Daily Dispatch option was added to the Targeted Dispatch option in 2020.

***Delivery***

Five curtailment service providers (CSPs) were certified and contracted for the Commercial ConnectedSolutions program in 2021. They market to and recruit customers under the terms of the program. The most active of these is CPower Energy Management, which provided about half of the contracted demand reduction, including many customers in the municipal sector. The program employed EnergyHub to provide the Demand Response Management System (DRMS) platform for the program.

## 4.2. Income Eligible Residential Programs

The Narragansett Electric Company offers Income Eligible programs to its electric and gas customers residing in single family (1-4 unit) dwellings and multifamily (5 or more unit) buildings or developments who are eligible for the Low-Income Heating Assistance Program (LIHEAP). This target audience is eligible to receive energy-related assistance through federal and state programs. The Narragansett Electric Company's program strategy in this market is to support, complement, and leverage the resources and services provided by these other programs.

### 4.2.1. Single Family – Income Eligible Services (Gas and Electric)

The Narragansett Electric Company's Income Eligible Single-Family program provides low-income customers in 1-4 unit buildings with home energy assessments, installation of energy efficient LED lighting, appliances, heating systems, domestic hot water equipment, and weatherization measures. For many decades, energy services have been, and continue to be, provided to this market sector through local non-profit Community Action Program (CAP) agencies under contract to the Rhode Island Department of Human Services (DHS). These agencies deliver the federally funded Weatherization Assistance Program (WAP) and LIHEAP. These services are fuel-blind and available to income-qualified gas, oil, propane, and electric heat customers as budgets allow. Six CAP agencies provide statewide coverage to Rhode Island residents.

Under the Income Eligible Single-Family program, CAP agencies provide three types of building audits: audits focused on lighting and appliances only that install lighting products; audits providing detailed recommendations and work orders for insulation contractors, heating system and ventilation fan installers; and comprehensive audits that do both. Building Performance Institute (BPI)-certified auditors complete building assessments and work orders.

***Delivery***

CLEAResult, working out of offices in Providence, Rhode Island, has been managing the Income Eligible Single-Family program since 2013. CLEAResult serves as the conduit for The Narragansett Electric Company payments to the CAP agencies and works closely with the Rhode Island DHS staff to coordinate and optimize delivery of ratepayer-funded services and traditional weatherization assistance.

Under CLEAResult's management, productivity and quality of service delivery to low-income residents have continuously improved. CLEAResult has expanded training for current auditors, increased quality control, and improved oversight of The Narragansett Electric Company-funded services and installations delivered through CAP agencies.

Several independent contractors are active in income-eligible weatherization, installing insulation and completed air sealing for the CAP agencies. Many of these contractors also are active in the EnergyWise Single Family program. Contractors are selected off a state-approved list and offer fixed pricing statewide for installed measures. Each agency has a handful of insulation contractors they typically work with. The CAP auditing staff inspects completed insulation work post-installation to ensure it was properly installed.

Additionally, several heating system repair and replacement contractors are active in this market. Heating system upgrades are put out to bid to contractors, and heating contractors also are used for post-installation inspections. There are also electrical contractors that are approved to repair and install bathroom fans to address humidity issues and to replace or disable antiquated knob and tube wiring (a code requirement that must be done for safety purposes before insulation can be installed in walls and ceilings.

The South Middlesex Opportunity Council, based in Massachusetts, oversaw the refrigerator replacement service provided to income eligible residential customers. This included product procurement, ordering, delivery, removal and disposing of old appliances, and conducting quality assurance surveys.

### 4.2.2. Income Eligible Multifamily (Gas and Electric)

Since 2013, The Narragansett Electric Company has provided energy efficiency offerings for income-eligible multifamily properties with five or more units through the EnergyWise Multifamily program. This suite of programs addresses both gas and electric opportunities. Comprehensive energy services available to these customers included energy assessments, incentives for heating and domestic hot water systems, cooling equipment, lighting and appliances. Services provided to income-eligible and market rate units and buildings through EnergyWise Multifamily program are tracked separately.

Additionally, and in parallel, the Income-Eligible Residential New Construction program works with Rhode Island Housing, local housing authorities, and developers of income-eligible housing to encourage construction of energy efficient properties.

***Delivery***

In conjunction with its delivery of EnergyWise Multifamily services, RISE Engineering, based in Cranston, Rhode Island, had primary responsibility for delivery and coordination of Income Eligible Multifamily services. RISE staff serve as project managers for retrofit projects, meeting with building facility managers and writing work orders and scopes of work (e.g., for air sealing, attic insulation, lighting fixtures, and even replacement refrigerators from retailers) for low-income residents. Independent contractors installed weatherization materials (insulation and air sealing) and heating equipment components. CMC Energy Services, Inc. provided quality assurance (QA) inspections to a sample of income eligible MF residential customers served.

CLEAResult provided support for energy efficient construction of new income-eligible units through the Residential New Construction program.

## 4.3. Residential (Non-Income Eligible) Programs

In 2021, The Narragansett Electric Company's residential programs continued to offer a range of services and incentives to encourage residential electric and natural gas customers, be they owners or tenants, to install energy efficient equipment and materials and to operate their homes with energy efficiency in mind. Programs promoted conversion of residential lighting to LED technology, purchase of more energy efficient appliances, building weatherization, HVAC system replacement, and energy efficient new construction.

Large energy services companies who specialize in supporting utility energy efficiency initiatives are under contract to manage and deliver individual programs. The energy service company's role is, typically, to engage a wide range of market actors, including both buyers and sellers of energy efficiency products and services, who are needed to make a residential sector sub-market work. The company then brings these stakeholders together, provides education, training, and technical support, and facilitates investments that result in energy use reduction. Delivery information on each program is detailed below.

### 4.3.1. EnergyWise (Gas and Electric)

In 2021, EnergyWise provided residential customers living in single-family homes (defined as 1- to 4-unit buildings) with a comprehensive energy assessment of energy use and building-specific recommendations for actions to take to increase home energy efficiency. These included:

- Technical assistance to identify how and where to improve building insulation and whether to replace appliances, heating systems, and thermostats with high efficiency models.
- Upgrading to LED lighting, low-flow showerheads, low-flow faucet aerators and smart power strips.
- Work orders for weatherization services (insulation and air sealing), for which The Narragansett Electric Company would provide financial incentives. If upgrades were made, quality assurance inspections were also provided.
- Rhode Island Heat Loan, which provides 0% interest financing to eligible single-family customers to support the adoption of recommendations made during the assessment.

***Delivery***

For 2021, The Narragansett Electric Company again contracted with RISE Engineering, based in Cranston, Rhode Island, to manage and deliver the EnergyWise Single Family program. Staff had a wide range of program roles: program managers, office and field staff supervisors, field auditors, field installers and technicians, field inspectors, intake staff and schedulers, warehouse and material management staff, electricians, quality assurance/quality control inspectors, database management, and accounting and contract oversight personnel. In general, RISE

delivered their program the way they had in 2019, pre-COVID-19. However, in some instances they performed virtual audits.

The EnergyWise program ran roughly 60% overbudget. This implies the addition of roughly 80 FTEs relative to a counterfactual scenario in which EnergyWise stayed on budget.

CMC Energy Services, Inc. provided quality assurance (QA) inspections to a sample of EnergyWise Single Family residential customers served. QA addressed all phases of service delivery and included review of field auditors' performance, post-audit counts of installed measures, and post-weatherization site visits to confirm proper installation technique and customer satisfaction with results.

### 4.3.2. Residential Consumer Products

In 2021, the Residential Consumer Products program was again coordinated with other regional utilities to promote the purchase of high efficiency household appliances and electronics. These appliances carry an ENERGY STAR® label. The program also offered refrigerator and freezer recycling, which helped address a significant barrier to purchasing a more efficient appliance. This appliance disposal program also has helped remove non-efficient units from the market (eliminating additional, older units in customer basements and garages and preventing them from entering the used appliance market), recycled appliance components, and captured and properly disposed of refrigerants. Additional consumer products like Wi-Fi thermostats, Tier 2 advanced power strips, energy efficient dehumidifiers, room air conditioners, and pool pumps have proven to be applicable to this point-of-purchase strategy and are similarly available from retailers.

***Delivery***

TRC Companies manages the ENERGY STAR® Appliances in Rhode Island and Massachusetts. As is the case with ENERGY STAR® Lighting, ENERGY STAR® Appliances is primarily a retail-store based initiative. TRC Companies engaged major retail outlets, providing the same support as for ENERGY STAR® Lighting. TRC also subcontracted for disposal and recycling of replaced air conditioners and dehumidifiers.

The Narragansett Electric Company and the other regional utilities contract with ARCA Recycling Inc. to recycle older refrigerators and freezers as part of the holistic strategy to encourage the purchase of energy efficient products. ARCA, operating in Franklin, Massachusetts, is responsible for refrigerator collection, dismemberment, and material recycling. The ARCA workforce consists of employees that work at the Franklin recycling facility, transportation employees who travel into the field to pick up the appliances from customer's homes, administrative employees, account managers and call center agents to field customer questions.[22] Uplight began providing an online marketplace for residential consumer products late in 2019 to promote and provide a platform for the purchase of energy efficient appliances for residential consumers. The Uplight team consists of customer care representatives, program

[22] Interview with ARCA, March 1, 2021

managers, e-commerce operators, reporting, product supply and analytics teams, as well as marketing and engineering employees.

### 4.3.3. EnergyWise Multifamily (Gas and Electric)

In 2021, EnergyWise Multifamily continued to provide comprehensive energy services to multifamily customers in buildings with five or more units, including energy assessments, incentives for heating and domestic hot water systems, cooling equipment, lighting, and appliances. These same services were available to both market rate and income-eligible multifamily properties. Some multifamily homes go through the Commercial and Industrial Multifamily program due to the way their buildings are metered, but the programs are similar.

***Delivery***

RISE Engineering managed and coordinated the services offered across a portfolio of The Narragansett Electric Company programs, including EnergyWise Multifamily, Commercial Multi-family, and Income Eligible Services (i.e., Low Income) Multi-family. RISE employees delivering multifamily programs included the Multi-family Operations Manager, a technical services director, field coordinators, field auditors and installers, warehouse materials handlers, and project intake and coordination staff. RISE staff also served as project managers for retrofit projects, meeting with building facility managers, making presentations to condominium boards and owners, and writing work orders and scopes of work (e.g., for air sealing, attic insulation, lighting fixtures, hot water systems and boiler resets, and even replacement refrigerators from retailers for low-income residents).CMC Energy Services, Inc. (CMC) provided quality assurance (QA) inspections to a sample of EnergyWise Multi Family residential customers served. In addition to its regular PPE inspections, CMC Energy Services, Inc. also completed three to five PPE inspections for The Narragansett Electric Company in Rhode Island. This included ensuring that the workforce in the field was adhering properly to the PPE and social distancing requirements.

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

The Narragansett Electric Company began offering Home Energy Reports (HER) to all residential customers in April 2013 as the first statewide behavioral program in the country and has continued the program through 2021. The Rhode Island HER program uses historical energy usage benchmarking and social comparisons to encourage energy efficient behaviors by residential customers.

The program provides emailed or mailed reports to customers containing customer-personalized energy usage information, recommendations, and links to The Narragansett Electric Company's other residential energy efficiency programs and services. The goal of reports has been to generate actual energy savings by providing "tips" for reducing energy use as well as to increase demand for and participation in other residential programs offered by The Narragansett Electric Company.

***Delivery***

Oracle Utilities, with offices in Arlington, Virginia, delivers the HER program using proprietary behavioral analysis and energy audit software. A Northeast team manages accounts and optimizes delivery services to clients in Rhode Island, Massachusetts, and New York. Oracle's HER service group continues to be staffed with behavioral scientists, marketing experts, engineers, and software product developers, with support staff, operating in cross-functional teams to develop and deliver Home Energy Reports across the U.S.

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

The Residential New Construction program promoted the construction of high-performing energy efficient single family, multifamily, and low-income homes in both 1-to 4-unit buildings and multifamily buildings up to five stories. To that end, it educated builders, developers, housing agencies, tradesmen, designers, and code officials regarding the construction requirements, performance benefits, and costs for such buildings. Changes driven by the Residential New Construction program improve lifecycle energy performance. This is primarily attributable to better materials selection and improved construction methods.

***Delivery***

The Narragansett Electric Company continued to contract with CLEAResult to deliver the Residential New Construction program in 2021. CLEAResult provided program management, data management, and administrative support to this program out of CLEAResult's Westborough, MA, office. Staff included a program manager, senior field managers, and project managers. Field personnel provided trainings and reviewed plans submitted by builders and developers. Field staff also modeled proposed buildings and completed inspections that verified and certified that construction practices for participating buildings receiving performance ratings.

### 4.3.6. Residential Codes and Standards Initiative (Gas and Electric)

The Codes and Standards Initiative has been the complement to the New Construction program, providing information, training, and technical support to the design and construction communities and to code officials in municipalities to increase code compliance.

***Delivery***

The Narragansett Electric Company contracted with CLEAResult in 2021 to lead this initiative in parallel with the Commercial New Construction program it also manages. CLEAResult coordinated and conducted residential trainings targeting HVAC contractors, architects, builders, and code enforcement officials. In addition, trainers delivered commercial classroom trainings. CLEAResult also fielded circuit riders to provide on-site technical assistance to developers and municipalities as needed.

### 4.3.7. ENERGY STAR® HVAC (Gas and Electric)

The ENERGY STAR® HVAC program promotes the installation of high efficiency gas heating and electric cooling systems to replace or displace existing, relatively inefficient equipment. The program also provided in-depth contractor training for design, installation, and testing of high efficiency systems, as well as quality installation verification training to ensure that all equipment is properly sized, installed, sealed, and performing.

***Delivery***

Westborough, Massachusetts-based CLEAResult delivers this program, providing training, technical support, and marketing assistance to trade allies to promote electric mini-splits and higher efficiency water heating systems. Equipment distributors are the market channel used to provide outreach to installation contractors about program objectives, requirements, and opportunities. Independent HVAC contractors installed high efficiency heating and cooling system components. The program has an open market for installation contractors, and there is a list of 70 approved contractors on The Narragansett Electric Company website that customers can reference.

Measures installed in this program are central HVAC units, boilers, furnaces, water heaters, and smart thermostats. Installers were plumbers, pipe fitters, electricians, and refrigeration technicians, primarily Rhode Island-based. This program also provides incentives for air source and ductless mini-split heat pumps and for converting electric resistance heating to air source

mini split heat pumps. These incentives are largely downstream to customers and contractors, rather than up- or mid-stream to distributors or manufacturers. Several HVAC contractors received training to qualify to perform these installations through the HVAC program.[23] EFI handles the processing of incentive payments for HVAC incentive payments as they did start in 2019.[24]

### 4.3.8. ENERGY STAR® Lighting (Electric)

ENERGY STAR® Lighting is a "point-of-purchase" initiative in coordination with other regional utilities. The program's strategy is to facilitate retailer discounts on lighting products that The Narragansett Electric Company would like residential customers to purchase, resulting in instant rebates and special promotions at retail stores. A mail-order catalog and online store are also available to customers for lighting purchasing. This year, 2021, was the last year that this program will be run.

***Delivery***

TRC Companies, with an office in Marlborough, Massachusetts, supported the residential consumer lighting initiative, providing direct outreach and education to both product retailers and manufacturers. Lockheed Martin works with corporate decision makers to enlist new retailers into the program. They have monthly calls with corporate trade allies and manufacturers to facilitate getting new products to retailers and assist retailers with design and set up of displays and signage in stores. The Lockheed Martin staff serves utility programs in both Massachusetts and Rhode Island. Field staff worked with retailers statewide, providing product information, training them to upsell to more efficient products, offering staff events, conducting in-store surveys and point-of-sale promotions, and helping organize school-based lighting product and power strip purchasing and distribution.

In late 2019, Boulder, CO-based Uplight took over from EFI to provide an online marketplace for The Narragansett Electric Company to promote and supply efficient lighting and other qualified products, but EFI still conducts incentive management for the program. As the online marketplace matured in 2020, an increase in the number of FTEs associated with Uplight's workforce for The Narragansett Electric Company energy efficiency programs in Rhode Island increased significantly. This increase was spread across the ENERGY STAR® Lighting program, as well as the Residential Consumer Products program and the ENERGY STAR® HVAC Electric and Gas program.

[25] This section is adapted from the 2018 study "Analysis and Recommendations regarding the Current and Future Workforce Associated with 2018 Rhode Island Energy Efficiency Programs", accessed at http://rieermc.ri.gov/wp-content/uploads/2020/07/2018-attachment-5-workforce-report-final.pdf. The use of text is done with the permission of Peregrine Energy Group and The Narragansett Electric Company.

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### 4.3.9. Residential ConnectedSolutions

The Residential ConnectedSolutions reduces peak load through the use of Wi-Fi thermostats and other eligible technologies which may include batteries, lighting, water heaters, pool pumps, electric vehicles, and other devices.

***Delivery***

The Residential ConnectedSolutions program employed the Demand Response Management System (DRMS) EnergyHub for the program. Customers were assumed to bring their own devices to the program; therefore, there is no incremental labor assumed for program marketing or device installation.

# 5. The Narragansett Electric Company Employees Analysis[25]

The Narragansett Electric Company employees touch all aspects of energy efficiency programs and services provided to gas and electric customers in Rhode Island including program design, delivery, evaluation, and reporting to regulators. Some of these The Narragansett Electric Company employees are dedicated to only Rhode Island's energy efficiency programs, and others are dedicated to energy efficiency program matters in multiple states. Still other employees are involved part-time in energy efficiency-related efforts in the context of their other The Narragansett Electric Company responsibilities. Since The Narragansett Electric Company employees touch many different aspects of programs, their jobs have been presented as a separate category in the analysis in Section 6.

[25] This section is adapted from the 2018 study "Analysis and Recommendations regarding the Current and Future Workforce Associated with 2018 Rhode Island Energy Efficiency Programs", accessed at http://rieermc.ri.gov/wp-content/uploads/2020/07/2018-attachment-5-workforce-report-final.pdf. The use of text is done with the permission of Peregrine Energy Group and The Narragansett Electric Company.

# 6. Analysis of Workforce FTEs for 2021

The following sections describe the methodology and results for the analysis of the workforce FTEs for 2021.

## 6.1. Overview of Methodology[26]

As in prior years, Guidehouse counts the workforce involved in delivering energy efficiency in full time equivalents (FTEs). This approach to measuring job impacts supports creation of benchmarks for level of effort expended and, by extension, for meaningful comparisons of counts year-to-year and program-to-program. It is also the most cost-effective way to measure and report workforce participation since alternative methods would require far more effort, such as in-depth interviews with all vendors.

Also, as in prior years, and building off of Peregrine's analytical framework, this study only counts labor as being associated with the programs if that labor meets a "but for" test, meaning that "but for" The Narragansett Electric Company's programs, this labor would likely not have occurred. This is not a rigorous rule, nor is it intended to imply causality, but it is a helpful framework for considering the counting of employment associated with certain program activities. The following basic assumptions are made about classes of programs using the "but for" test:

- Retrofit programs, including C&I retrofit, and Single and Multifamily Energy Wise, and Income Eligible programs. All labor associated with these programs is counted, because these programs incentivize customers to install new, more energy efficient equipment to replace still functioning equipment. But for the energy efficiency program, the old equipment would still be in place until they failed.
- New construction programs or replace on burnout programs, including Commercial and Residential New Construction, and ENERGY STAR® Products. In these programs, the customer was planning to or needed to install new equipment and the program incentivized them to install more efficient equipment. There is an incremental cost for the equipment, but there is likely not a significant incremental impact on the labor to install the equipment.[27] For these programs, we counted costs and services associated with program management and engineering support to customers. But for the energy efficiency programs, the measure would still have been installed and the program support and management costs would not have been incurred.
- ENERGY STAR® Lighting. Peregrine only counted the time associated with program management. But for the energy efficiency programs, the retailers' staff and customer's installation costs would still be incurred. The program management effort is the only incremental labor expense.

[26] When referencing the 2018 methodology, the text is adapted from the 2018 study "Analysis and Recommendations regarding the Current and Future Workforce Associated with 2018 Rhode Island Energy Efficiency Programs", accessed at http://rieermc.ri.gov/wp-content/uploads/2020/07/2018-attachment-5-workforce-report-final.pdf. The use of text is done with the permission of Peregrine Energy Group and The Narragansett Electric Company.

[27] No contractors within the Residential New Construction program were interviewed, there may in fact be some incremental effort required in order to meet air sealing and duct leakage standards that has not been captured. The FTEs within this category may be slightly higher than reported.

Guidehouse leveraged the same fundamental approach that it used in the 2019 and 2020 studies, where it used spending in 2021 as a proxy for program activity and labor expended. Underlying this approach is the similarity between program offerings from year to year. Savings and the reported change in volume of projects installed were also considered to get a deeper understanding of 2021 program activity relative to 2020, but spending continued to be the most straightforward indicator. Other parameters, such as the change in number of projects, have stronger associations with measure mix which could vary from year to year.

Therefore, Guidehouse developed the FTE counts for 2021 by scaling the 2020 FTE counts based on the ratio between the program spending in 2020 and the program spending in 2021.[28] This method provided consistency with the analyses that have been done over the past several years.

Multiplying the 2020 FTEs by a ratio of 2021 spending to 2020 spending was the initial step of the calculation. Guidehouse made some adjustments to 2020 spending before calculating this ratio.

- First, 2021 spending was adjusted to account for inflation and, thus, avoid increasing FTEs because of increased labor and material costs. In previous years, we assumed the annual inflation rate was exactly 2% since this is roughly the average annual inflation rate and the target rate of the Federal Reserve.[29, 30] However, since inflation significantly exceeded 2% in 2021, we chose to use the CPI inflation rate of 4.69%.[31] By adjusting for inflation, the spending values we list are roughly in 2018 dollars, allowing us to apply the spending-based scaler to calculate FTEs.
- Second, we removed costs associated with allocations to the Rhode Island Infrastructure Bank (RIIB) and Office of Energy Resources (OER) that had also been removed from the 2020 FTE analysis.

In years past, the total spend for each program was considered. This year, however, spending was disaggregated by category – project planning and administration ("PP&A"), evaluation and market research, marketing and advertising, sales, technical assistance and training (STAT) spend, and participant incentive. The full marketing spend for each program was excluded from the spend calculation sum since marketing FTEs are already accounted for via the Mower interview. Furthermore, the PP&A was multiplied by a factor of 0.60 since, as reported by The Narragansett Electric Company, approximately 60% of PP&A spend is associated with vendors with the rest being The Narragansett Electric Company staff. Similarly, evaluation and market research spend was multiplied by a factor of 0.85 since, as calculated using spending data, approximately 85% of Evaluation spend is associated with vendors with the rest being The Narragansett Electric Company staff. STAT spend and participant incentive spend are counted

[28] The 2019 FTE counts were calculated by adjusting, where necessary and supported by data, the FTE values developed by Peregrine in 2018. Attachment A from the 2018 report is reproduced in this report to describe, in detail, Peregrine's methodological approach.

[29] The Federal Reserve System targets a 2% annual inflation rate in the long-run. <https://www.federalreserve.gov/faqs/economy_14400.htm>

[30] According to the Federal Reserve Bank of St. Louis, the inflation rates in 2019 and 2020 were 1.81% and 1.25%, respectively. <https://fred.stlouisfed.org/series/CPIAUCSL#0> Our analysis assumed 2% for each of these years.

[31] According to the Federal Reserve Bank of St. Louis, the inflation rate in 2021 was 4.69%. <https://fred.stlouisfed.org/series/CPIAUCSL#0>

in their entirety. This leads to a roughly 3% reduction in spend relative to the methodology used in previous years.

While the ratio of spending adjusted as noted in 2020 to 2021 was the foundation of Guidehouse's FTE analysis, there is not a strict linear relationship between energy efficiency spending and employment associated with the programs.

- Some program expenses are less labor intensive than others (e.g., marketing and advertising vs. weatherization services)
- Some program designs are more cost intensive than others (e.g., installing LED products for businesses through the Small Business programs vs. selling discounted LED products through distributors via the Upstream Lighting program).
- Certain energy savings measures are more complicated and laborious than others (e.g., one electrician working alone may install 15 LED ceiling fixtures in a day vs. a team of two may convert 20 streetlights to LED in a day).
- Some measure costs are more labor driven than equipment/material driven. For example, the cost of weatherization measures (e.g., cellulose for installed insulation, and caulking and foam for air sealing) is primarily labor while the cost of HVAC equipment installation is largely in the equipment cost. While these measures often require design engineering as well as field labor to install, the considerable manufacturing labor hours is not represented in program FTE counts, so the FTEs associated with each dollar spent is lower.
- Many vendors will look for ways to improve efficiency of their operations to increase productivity rather than adding staff. This is especially the case where program budget management considerations are communicated to vendors and contracts are increasingly oriented to goals achieved or installations completed.

Because of these factors, Guidehouse adjusted the scaled numbers where necessary. The adjustments were informed by the interviews Guidehouse conducted with key vendors[32] and The Narragansett Electric Company staff and supported by a review of savings installed in 2021. The FTE results are presented below, followed by a description of the adjustments made for each program.

Vendors and The Narragansett Electric Company staff that were interviewed provided valuable insight to the analysis and context.

## 6.2. Summary of 2015-2021 FTEs

Table 6-1 outlines a summary of 2015 to 2021 FTEs by market sector.[33] These results are an aggregate presentation of FTEs by program, which are presented in the following section. Overall, 2021 saw a 22% increase in FTEs when compared to 2020 from 827.5 to 1,011.0.

[32] Programs which required additional adjustments were: Single Family Income Eligible Services, Income Eligible Multifamily, EnergyWise Single Family, EnergyWise Multifamily, Home Energy Reports, Small Business Direct Install, Commercial ConnectedSolutions, Large Commercial New Construction, Commercial and Industrial Multifamily, Community Action Agency Staff, and Community Based Initiatives.
[33] 2018 to 2015 values are taken from the 2018 report with no adjustments made.

**Table 6-1 Summary of FTEs (2015-2021)**

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| **Electric Programs** | | | | | | | |
| Commercial and Industrial | 210.0 | 241.1 | 263.5 | 250.0 | 265.0 | 203.7 | 217.8 |
| Residential Income Eligible | 37.0 | 42.3 | 46.0 | 45.8 | 65.1 | 59.1 | 75.1 |
| Residential Non-Income Eligible | 125.4 | 104.0 | 98.1 | 168.9 | 284.8 | 263.7 | 351.5 |
| **Gas Programs** | | | | | | | |
| Commercial and Industrial | 32.0 | 36.1 | 34.4 | 31.9 | 28.7 | 19.8 | 20.9 |
| Residential Income Eligible | 43.8 | 41.4 | 36.5 | 39.4 | 56.2 | 38.5 | 41.3 |
| Residential Non-Income Eligible | 172.1 | 159.3 | 174.9 | 191.6 | 212.6 | 189.2 | 249.9 |
| **Other** | | | | | | | |
| CAP Agencies[34] | 34.0 | 38.0 | 35.0 | 35.0 | | | |
| The Narragansett Electric Company[35] | 41.6 | 39.9 | 38.2 | 39.5 | 43.3 | 44.4 | 45.5 |
| Marketing[36] | | | | | 9.0 | 9.0 | 9.0 |
| COVID-19 Training | | | | | | 0.3 | |
| **Total** | **695.8** | **702.2** | **726.5** | **802.1** | **964.6** | **827.5** | **1,011.0** |

*Source: Guidehouse analysis and 2018 study*

## 6.3. FTEs and Adjustments by Program

The following section outlines FTEs by specific program. For each program, a description of any adjustments made to the FTE count, if applicable, is presented. Note that the 2021 spending

[34] Note that for the 2019 and 2020 analysis, CAP Agency staff were included within the Residential Income Eligible program under both Electric and Gas.
[35] In years prior to 2019 a 2,016-hour work year was assumed when calculating FTEs. The Narragansett Electric Company changed this assumption in recent years to a 1,768-hour work year. This new assumption was implemented beginning in 2019 and resulted in a slight increase in FTEs.
[36] Beginning in 2019, marketing was contracted to a new vendor, resulting in an increase in jobs, these are therefore shown separately.

has been adjusted for inflation. Table 6-3 below outlines the percentage changes from 2020 to 2021 for spending and FTEs.

Table 6-2 outlines FTEs for both 2020 and 2021. Since spending was heavily relied upon to derive 2021 counts, the spending by program for both years is also presented. Note that the 2021 spending has been adjusted for inflation. Table 6-3 below outlines the percentage changes from 2020 to 2021 for spending and FTEs.

As seen in Table 6-3, some programs, especially those with at-home visits, had greater spending increases relative to FTE increases compared to 2020. This trend is partially explained by the fact that the FTEs identified in the 2020 workforce analysis study were year-end 2020 FTEs. They were counted as full FTEs in last year's analysis despite reduced program activity during the year and perhaps periods of furlough or inactivity during 2020. On the other hand, reduced program activity in 2020 directly resulted in decreased program spending. A subsequent rebound in activity in 2021 directly resulted in increased program spending in 2021. As a result, for some programs, FTEs remained relatively constant, whereas spending increased in 2021 relative to 2020.

**Table 6-2 FTEs and Spend by Program (2020-2021)[37]**

| | 2020 Spend (2018$) | 2020 FTEs | 2021 Spend (2018$) | 2021 FTEs |
|---|---|---|---|---|
| **Electric Programs** | | | | |
| **Commercial & Industrial (C&I)** | | **203.7** | | **217.8** |
| Large Commercial New Construction | $6,092,151 | 1.0 | $7,366,752 | 1.0 |
| Large Commercial Retrofit | $21,058,081 | 171.3 | $20,871,106 | 174.2 |
| Small Business Direct Install | $7,214,273 | 22.5 | $6,612,820 | 33.7 |
| Commercial ConnectedSolutions | $2,235,798 | 8.9 | $2,773,050 | 8.9 |
| Other | $577 | 0.0 | $0 | 0.0 |
| **Low-Income** | | **59.1** | | **75.1** |
| Single Family Income Eligible Services | $5,737,161 | 34.2 | $7,521,818 | 58.0 |
| Income Eligible Multifamily | $1,191,810 | 5.5 | $3,120,972 | 17.1 |
| CAP Agencies Staff | | 19.4 | $0 | 0.0 |
| **Residential** | | **263.7** | | **351.5** |
| EnergyWise | $14,829,676 | 147.2 | $20,189,868 | 219.9 |
| Residential Consumer Products | $2,151,302 | 10.4 | $1,816,319 | 10.8 |
| EnergyWise Multifamily | $1,488,781 | 14.0 | $1,178,835 | 6.5 |
| Home Energy Reports | $2,110,791 | 2.5 | $2,165,611 | 2.5 |
| Residential New Construction | $910,885 | 3.0 | $1,013,539 | 3.4 |
| ENERGY STAR® HVAC | $3,231,652 | 84.4 | $3,738,749 | 107.4 |
| ENERGY STAR® Lighting | $8,706,886 | 2.0 | $3,082,834 | 0.8 |
| Residential ConnectedSolutions | $547,700 | 0.3 | $533,861 | 0.3 |
| Other | $127,911 | 0.0 | $863 | 0.0 |
| **Natural Gas Programs** | | | $0 | 0.0 |
| **Commercial & Industrial (C&I)** | | **19.8** | | **20.9** |
| Large Commercial New Construction | $2,620,106 | 0.8 | $2,174,926 | 0.7 |
| Small Business Direct Install | $128,906 | 0.4 | $118,927 | 0.6 |
| Large Commercial Retrofit | $2,912,996 | 13.6 | $2,778,922 | 14.8 |
| Commercial & Industrial Multifamily | $320,512 | 5.0 | $853,554 | 4.7 |
| Other | | 0.0 | $0 | 0.0 |
| **Low-Income** | | **38.5** | | **41.3** |
| Single Family Income Eligible Services | $2,139,996 | 12.8 | $3,573,384 | 27.5 |
| Income Eligible Multifamily | $1,736,671 | 9.0 | $2,508,119 | 13.8 |
| CAP Agency Staff | | 16.6 | $0 | 0.0 |
| **Residential** | | **189.2** | | **249.9** |
| ENERGY STAR® HVAC | $2,418,905 | 82.7 | $2,240,216 | 84.1 |
| EnergyWise | $8,576,679 | 97.4 | $14,777,046 | 155.1 |
| EnergyWise Multifamily | $634,124 | 6.0 | $1,451,892 | 8.0 |
| Home Energy Reports | $352,253 | 0.5 | $364,375 | 0.5 |
| Residential New Construction | $419,675 | 2.6 | $351,451 | 2.3 |
| Other | | 0.0 | $0 | 0.0 |
| **Other** | | | | **54.5** |
| The Narragansett Electric Company Staff | | 44.4 | | 45.5 |
| Marketing | | 9.0 | | 9.0 |
| COVID-19 Training | | 0.3 | | 0.0 |
| **Total** | | **827.5** | | **1,011.0** |

*Source: Guidehouse analysis*

**Table 6-3 Percentage Increase from 2020 to 2021 by Program**

| | Percentage Change in Spending | Percentage Change in FTEs[38] |
|---|---|---|
| **Electric Programs** | | |
| **Commercial & Industrial (C&I)** | | |
| Large Commercial New Construction | 28% | 0% |
| Large Commercial Retrofit | 2% | 2% |
| Small Business Direct Install | -4% | 50% |
| Commercial ConnectedSolutions | 26% | 0% |
| Other | N/A | N/A |
| **Low-Income** | | |
| Single Family Income Eligible Services | 37% | 69% |
| Income Eligible Multifamily | 171% | 212% |
| CAP Agencies Staff | N/A | N/A[39] |
| **Residential** | | |
| EnergyWise | 40% | 49% |
| Residential Consumer Products | 4% | 4% |
| EnergyWise Multifamily | -17% | -54% |
| Home Energy Reports | 4% | 0% |
| Residential New Construction | 15% | 15% |
| ENERGY STAR® HVAC | 27% | 27% |
| ENERGY STAR® Lighting | -62% | -62% |
| Residential ConnectedSolutions | 2% | 2% |
| **Natural Gas Programs** | | |
| **Commercial & Industrial (C&I)** | | |
| Large Commercial New Construction | -11% | -11% |
| Small Business Direct Install | 22% | 51% |
| Large Commercial Retrofit | 9% | 9% |
| Commercial & Industrial Multifamily | 189% | -6% |
| Other | | |
| **Low-Income** | | |
| Single Family Income Eligible Services | 74% | 116% |
| Income Eligible Multifamily | 47% | 52% |
| CAP Agency Staff | | N/A[40]% |
| **Residential** | | |
| ENERGY STAR® HVAC | 2% | 2% |
| EnergyWise | 75% | 59% |
| EnergyWise Multifamily | 150% | 33% |
| Home Energy Reports | 5% | 0% |
| Residential New Construction | -13% | -13% |
| Other | | |

*Source: Guidehouse analysis*

[37] Spending totals are adjusted for inflation and, thus, listed in 2018$. See the methodology section for more details.

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[39] In previous years, CAP Agencies Staff's spending was incorporated into Single Family Income Eligible Services spending, but their FTEs were listed on its own line item. This year, Guidehouse is adding CAP Agencies Staff's FTEs to Single Family Income Eligible Services FTEs in order to be consistent with how spending is tracked and listed. This leads to the disproportionately large increase in FTEs for Single Family Income Eligible Services and explains why "N/A" is listed in the CAP Agency row.

### 6.3.1. Small Business Direct Install

RISE indicated that there were 24 FTEs associated the Small Business Direct Install Program (Gas and Electric) in Rhode Island.

### 6.3.2. Single Family Income Eligible Services

CLEAResult indicated there were 3 CLEAResult FTEs associated with the Single-Family Income Eligible Services program in Rhode Island in 2021, in addition to 28.5 FTEs from CAP agencies and 54 FTEs from CAP agency contractors. Guidehouse split the 85.5 FTEs across the gas and electric sides of the program based on the 2021 spending ratio.

### 6.3.3. EnergyWise

In 2021, customers received a rebate of 100% of the cost of an insulation project early in the year. Eventually this rebate was reduced to 75% and later 50%. This was done because the program had originally increased the rebate to 100% to compensate for demand reduction associated with COVID-19. However, this year, The Narragansett Electric Company decided program engagement was sufficient to reduce the rebate. This, in part, led to a roughly 60% overspend of the budget.

Since Guidehouse manually adjusted the FTEs associated with the EnergyWise program based on information from an interview with RISE, there was no need to make any adjustments to the program spending due to the varying incentive amounts.

RISE indicated there were 47 RISE FTEs associated with the EnergyWise program in Rhode Island in 2021. The trade allies associated with the program in 2020 totaled 320 FTEs. Guidehouse allocated all audit/inspection FTEs to the EnergyWise electric program and then allocated the remaining FTEs proportionate to total program spend.

### 6.3.4. Residential Consumer Products

Guidehouse scaled 2020's FTEs proportionate to 2021's spend increase given that this program's incentive structure remained similar. Uplight and ARCA both had staff working on this program.

### 6.3.5. EnergyWise Multifamily

Since Guidehouse manually adjusted the FTEs associated with the EnergyWise Multifamily program based on information from an interview with RISE, there was no need to make any adjustments to the program spending due to this increased incentive.

RISE indicated there were 10 RISE FTEs associated with the EnergyWise Multifamily, Income Eligible Multifamily, and Commercial & Industrial Multifamily programs in Rhode Island in 2021. The weatherization contractors associated with these programs in 2021 totaled 40 FTEs. Guidehouse allocated all audit/inspection FTEs to the EnergyWise electric program and then allocated the remaining FTEs proportionate to total program spend.

### 6.3.6. Home Energy Reports

The Home Energy Reports program is not dependent on spending the way other programs are. It is based on volume. The volume of home energy reports in 2021 was relatively consistent with the volume of reports in 2020; therefore, Guidehouse held the 2021 FTEs constant at the 2020 value.

### 6.3.7. Residential ConnectedSolutions

Guidehouse scaled 2020's FTEs proportionate to 2021's spend increase given that this program's incentive structure remained similar.

### 6.3.8. Commercial and Industrial Multifamily

RISE indicated there were 10 RISE FTEs associated with the EnergyWise Multifamily, Income Eligible Multifamily, and Commercial & Industrial Multifamily programs in Rhode Island in 2021. The weatherization contractors associated with these programs in 2020 totaled 40 FTEs. Guidehouse allocated all audit/inspection FTEs to the EnergyWise electric program and then allocated the remaining FTEs proportionate to total program spend.

### 6.3.9. Income Eligible Multifamily

RISE indicated there were 10 RISE FTEs associated with the EnergyWise Multifamily, Income Eligible Multifamily, and Commercial & Industrial Multifamily programs in Rhode Island in 2021. The weatherization contractors associated with these programs in 2021 totaled 40 FTEs. Guidehouse allocated all audit/inspection FTEs to the EnergyWise electric program and then allocated the remaining FTEs proportionate to total program spend.

### 6.3.10. Commercial ConnectedSolutions

Guidehouse kept the number of FTEs associated with this program constant relative to the previous year, 2020.

### 6.3.11. Large Commercial New Construction

CLEAResult noted that there was no difference in the number of FTEs working on this program in 2021 relative to 2020. As a result, even though there was slightly more spend for the program, Guidehouse chose to keep the number of FTEs the same as last year.

### 6.3.12. The Narragansett Electric Company Employees

In 2021, The Narragansett Electric Company FTEs were reported using data provided by The Narragansett Electric Company. The Narragansett Electric Company report 80,493 employee hours relating to Rhode Island Energy Efficiency work. This amounted to 45.5 FTEs. This an increase of 2,026 hours compared to 2020 The Narragansett Electric Company employee hours relating to Rhode Island Energy Efficiency work, which amounted to about a 1 FTE increase. This assumed a 1,768-hour work year to be consistent with the hours used in calculating FTEs for other workforce members. Note that this assumption differs from years prior to 2019 reporting, where a 2,016-hour work year was assumed.

### 6.3.13. Marketing and Customer Outreach

Guidehouse chose to leave marketing at 9 FTEs given that Mower confirmed that FTEs did not change relative to 2020.

### 6.3.14. Rebate Processing, EERMC Consultants and Evaluation

Additional FTEs are associated with rebate processing, EERMC consultants, and evaluation contractors.

- Based on discussion in interviews, the rebate processing FTEs were assumed to be the same as last year.
- The EERMC Consultant FTEs were scaled using the same methodology used for other programs – i.e., we calculated the percentage increase in spending for the EERMC Consultant and applied this to the FTEs calculated for EERMC Consultants for 2020.
- The Evaluation Contractors FTE figure was calculated using the standard scaling methodology. We calculated the ratio of 2021 spending to 2020 spending and multiplied this by the FTEs figure we reported last year.

## 6.4. Summary of Indirect / Direct FTEs

Table 6-4 summarizes the FTEs associated with support services as defined in Section 2.1. The total FTEs associated with support services is 63.6, or 6.3% of the total number of FTEs associated with the energy efficiency programs in 2021. The overwhelming majority of FTEs are associated with direct service providers.

**Table 6-4 Support Service FTEs in 2021**

| Markets and Programs | Final 2021 FTEs |
|---|---|
| The Narragansett Electric Company Staff | 45.5 |
| Marketing Contractors | 9.0 |
| Rebate Processing | 4.0 |
| EERMC Consultants | 2.9 |
| Evaluation Contractors | 2.2 |
| **Total** | **63.6** |

*Source: Guidehouse analysis*
*Note that these are not official programs but are initiatives. They are included separately for added details and to stay consistent with previous report

# 7. Qualitative Findings and Observations

Through the interview process, several qualitative findings and observations were made, these are summarized in this section. Guidehouse notes that our interviews confirmed our basic approach of scaling 2021 FTEs by spending and making adjustments based on interview findings.

The following observations are ones that were brought up in several interviews and have been aggregated here; some of these are comments about the status of the program delivery effort and do not necessarily impact FTEs. Some of the observations that were stated in the 2020 report re-occurred as themes in the 2021 interviews, so they are re-stated in this report.

- Many vendors stressed the importance of job training programs given the increase in program participation by customers. Due to COVID-19 restrictions, many employers utilized virtual trainings rather than in-person trainings. Most employers viewed virtual training as inferior to in-person training since it makes it more difficult to build relationships. However, several vendors believed that the shift to virtual trainings may have led more individuals to attend the trainings.
- Furthermore, COVID-19 and its downstream affects continued to present problems for many programs. Several vendors reported that their employees had exposure to COVID-19 and, thus, had to take time off work. However, no vendors reported that exposures were due to work. Other employees left the industry because they did not want to get vaccinated, which was a requirement for installers. Broadly, many vendors experienced above average turnover and difficulty finding replacement employees. Vendors commented that these labor constraints made job training programs more important.
- Additionally, almost all vendors experienced significant product shipment delays from wholesalers. Normally, these delays would have resulted in idleness for employees; however, given that there were increases in the number of customers and, in some cases, a backlog from 2020, most vendors reported that product delays did not result in idleness.
- The standard practice, as it has been in the past, is to perform home energy assessments in person with one or two person crews. However, this year virtual audits were performed at the request of the customers. Vendors prefer in-home audits because in-home audits provide more precise information to shape recommendations to customers.
- As the workforce gets older, there is an opportunity to develop a new skill set. Vendors noted a shift away from non-network lighting measures and a need for more mechanical contractors. For example, it was noted that there is a lack of refrigeration contractors who can execute The Narragansett Electric Company programs.**Error! Bookmark not defined.**
- Several vendors reported focusing more on diversity, equity, and inclusion (“DEI”) in hiring as well as hiring local contractors.

The following observations are ones that were specific to the vendor interviewee’s program. Please see section 4 for further discussion on the impacts that COVID-19 had on the programs. Note that interviews were not conducted with vendors in every program, so the observations below are not comprehensive.

## 7.1. Industrial Initiative[40]

- Leidos noted that, in 2021, products were mailed resulting in reduced time Leidos' employees spent on the program.

## 7.2. Income Eligible Single-Family Program[41]

- CLEAResult noted that they hired many more people. However, CLEAResult also noted that they would have liked to have hired more than they did, but there were not enough people to hire. To help increase the number of skilled installers, CLEAResult is partnering with the Rhode Island Builder's Association and other organizations to help run a large job training program.
- CLEAResult identified particularly long wait times for products (i.e., sometimes over one year). This was a major hurdle given that many low-income customers move regularly, making it difficult to work on long timelines.
- CLEAResult noted that mailing products saved their firm time and did not result in additional work.
- CLEAResult noted that virtual trainings had the effect of reducing engagement during sessions. They emphasized the importance of having cameras turned on during training sessions.

## 7.3. ENERGY STAR® HVAC[42]

- CLEAResult noted that there was a loss of staff at some of the agencies. This meant that experienced auditors were replaced with new staff who required training. This additional training effort slowed down their progress.
- CLEAResult noted inflation as a cause of concern.

## 7.4. EnergyWise[43]

- RISE reported a significant increase in FTEs associated with the EnergyWise programs. A portion of this increase in FTEs is the result of an overspend of the 2021 budget. Thus, the EnergyWise FTEs' increase is likely to be temporary.
- RISE reported that inflation presented problems to their business.

## 7.5. EnergyWise Multifamily[44]

- RISE reported a significant increase in FTEs associated with the EnergyWise Multifamily programs.

[40] Interview with Leidos, February 24, 2022
[41] Interview with CLEAResult, February 28, 2022
[42] Interview with CLEAResult, March 2, 2022
[43] Interview with RISE Engineering, March 4, 2022
[44] Interview with RISE Engineering, March 3, 2022

- RISE noted that appointment cancellations – especially towards the end of the year – presented a problem to installers.

## 7.6. Appliance Recycling Initiative[45]

- ARCA utilized contactless pick-up, which was preferred by some customers given COVID-19 precautions and, additionally, helped save time for the individuals picking up the refrigerator.

[45] Interview with ARCA, March 18, 2022

# Appendix A. Methodologies Used for Assessing Employment[46]

Peregrine has used a consistent calculation of FTE employees in this study to provide a definable and comparable measure of job impacts. The number of individual employees associated with The Narragansett Electric Company Programs in Rhode Island well exceeds total FTEs reported. This was confirmed by interviews with companies who provide support services or manage programs for The Narragansett Electric Company and by our analysis of field installation of individual program measures. Individuals who perform this work may be full-time or part-time employees, may work solely in Rhode Island or divide their time between Rhode Island utility programs and utility programs in other states, or may be engaged both in energy efficiency activity and other work for which their trade licenses qualify them. FTE counts are determined based on the following: reports from employers of actual Rhode Island hours tracked; from allocations of total labor hours to Rhode Island using relative numbers of Rhode Island customers served by a team vs. customers in other states, primarily Massachusetts; or using unit counts of installed materials (e.g., a particular lighting fixture) or number of projects completed (e.g., a residential home weatherization) installed to calculate total labor hours.

For non-installation roles, many companies interviewed told Peregrine that they employed multiple individuals with specialized skills or in discrete roles that were necessary and important to delivering a comprehensive, high-quality product or service. However, only a portion of each employee's total annual hours might be attributable to Rhode Island energy activity.

For unit installed-based calculations, totals for individual items installed are converted into hours or days by applying the average per unit installation labor time and then converted total hours into FTEs by dividing by 1,760[47] hours or 220 days per FTE year. Similarly, specific types of work completed, such a weatherization job or heating system installation, are assigned an average labor time for an installation crew, and counts are multiplied by the time for each to generate total days or hours and an FTE number.

Some examples:

- Engineers providing technical support to customers. The Narragansett Electric Company's Large Commercial and Industrial customer base in Rhode Island is relatively small, the call for engineering support is very intermittent, the engineering expertise that different customers need varies. Rather than retaining engineers with a variety of skills to be available to assist Rhode Island customers, The Narragansett Electric Company has entered into master services agreements with multiple consulting engineering firms from whom expert engineering can be purchased as needed. However, since business economics necessitate that these consulting engineering firms' keep their staff utilized and billable most of the time, the majority of preferred engineering firms do other work. Some, like RISE Engineering, provide similar energy engineering services to multiple

[46] This section is reproduced from pages 53-55 and Attachment A of the 2018 report, except for updating the name of the utility company serving Rhode Island.
[47] Guidehouse used 1,768 hours in its analysis, consistent with information provided by The Narragansett Electric Company.

utility programs, in multiple states, to utility and non-utility clients, or to a combination of these.

- Firms that manage programs targeting specific customer sub-sectors and offer market-specialized technical services in multiple utility jurisdictions. The Energy Smart Grocer program delivered by CLEAResult and the Industrial program delivered by Leidos, Inc. exemplify this dynamic in the commercial market. Both companies are headquartered outside of New England, but they have local offices in Westborough and Framingham, Massachusetts, respectively. Both have field staff that spent a portion of their time helping The Narragansett Electric Company customers in Rhode Island but supported many more such projects for utility customers in Massachusetts. The firms dispatch staff, as required, to advance individual projects in Rhode Island, but they could not cost effectively deliver this program to Rhode Island alone, given the size of the target market in the state. For both programs, the customers select the contractors they prefer to do the installations.
- Programs targeting regional retailers. The contractors delivering the residential ENERGY STAR® Lighting and Appliance programs (TRC Companies) or the commercial Upstream Lighting program (CLEAResult) and Upstream HVAC program (Energy Solutions) work with and mobilize regional distributors and retailers to stock and promote energy efficient products preferred by utilities. The Narragansett Electric Company and other utilities, covering both Rhode Island and Massachusetts, have recognized that using a single contractor to manage this effort across multiple territories creates programmatic benefits and economies of scale. Time spent supporting Rhode Island programs is allocated out of the total staff deployed, which may include individuals dedicated wholly or in part to Rhode Island.
- The Narragansett Electric Company's Rhode Island team. The Narragansett Electric Company itself reported 79,566 employee hours billed against Rhode Island energy efficiency program-related accounts, equal to 39.5FTE employees. Those hours and that FTE count represent not only the aggregate contributions of Rhode Island-dedicated employees, but also employees with system-wide or similar other-state responsibilities who contributed fractionally to the Rhode Island FTE total.
- RISE Engineering, based in Cranston, Rhode Island. RISE has been a partner to The Narragansett Electric Company in Rhode Island since the inception of energy efficiency programs over 30 years ago. Today, RISE is the lead vendor for or a major participant in many of the largest programs offered in Rhode Island by The Narragansett Electric Company, including EnergyWise Single Family, EnergyWise Multifamily, Small Business Direct Install, Large Commercial and Industrial Retrofit, and the Commercial and Industrial Gas programs. For the complex, labor intensive, high volume, EnergyWise Single Family program, RISE's total FTE counts and the number of individual personnel contributing to the program are nearly equal. The large customer volume of EnergyWise Single Family enables RISE to employ full-time staff to serve in specific program roles, such as auditors, installers, and inspectors. This creates stability and consistency that benefits customers, The Narragansett Electric Company as well. Further, similarities between staffing needs across multiple programs, e.g., for engineering, materials handling, or accounting, have allowed RISE to pool staff to provide higher levels of utilization and improved staffing economies. Additionally, similarities in technical needs between programs, e.g., for electricians, allowed RISE to employ a baseline number of full-time technical specialists, but then supplement them on an as needed basis with sub-contracted assistance. Having this capacity has, in turn, enabled RISE to be a major player as a Project Expediter supporting The Narragansett Electric Company's Large

Commercial Retrofit program, generating business opportunities, managing more complex installations, securing equipment and materials, and providing or contracting for installation labor. And, at the same time, as new business opportunities have emerged and been secured in neighboring states, RISE has been able to grow further, shifting specialized staff back and forth between states as demand for services dictates, while maintaining or increasing the efficiency of staff utilization and improving labor economics.

Peregrine has made a conscious effort to use consistent methodologies to count jobs year-to-year as it has undertaken studies for The Narragansett Electric Company of the workforce associated with energy efficiency programs. Our goal has been to maximize the potential for apples-to-apples comparisons of total jobs and program specific workforce jobs. Further, we believe the methodologies we have used are conservative in their counting and generally understate the employment impacts of The Narragansett Electric Company programs.

## A.1 Program Support Service Providers

### The Narragansett Electric Company

The Narragansett Electric Company provided to Peregrine a summary of billed hours for employees involved with individual energy efficiency programs in Rhode Island in 2018. Responsibilities of these employees included program planning and development, program administration, regulatory affairs, marketing, evaluation, and market research. Peregrine is reporting The Narragansett Electric Company FTEs as a separate category for purposes of this study and not allocating them to specific programs or groups of programs.

### Support Services Contractors

Peregrine interviewed most of the larger contractors who supported The Narragansett Electric Company in these activities, and they described their roles and responsibilities and provided counts and hours for employees supporting The Narragansett Electric Company in Rhode Island. The FTEs Peregrine is reporting often represent the aggregation of small numbers of hours worked by many employees. Often, this was because the contractor's role required contributions from many members of a multi-disciplinary team. Depending on the nature of the services provided and whether the support role could be associated with specific programs, time of these contractors is assigned to programs according to the overall allocation of gas and electric spend by program sector (Residential, Residential Income Eligible, Commercial and Industrial), or allocated to a specific program sector.

### Direct Service Providers

Employee numbers reported by Direct Service Providers was a primary input to FTE counts. Peregrine Interviewed the major contractors directly engaged by The Narragansett Electric Company to support or deliver Rhode Island programs to get information about type, number, and responsibilities of personnel employed. Some of these contractors provided the same services in 2018 to The Narragansett Electric Company customers in multiple states and in some cases to multiple utilities, often using the same team of employees. Peregrine relied on

their informal calculations of allocations of time to Rhode Island when formally reported hours from timecards were not available.

Where employer-sourced information on employment was not available, Peregrine relied on program records and statistics for 2018 installations to calculate person-hours, person-days, and ultimately annual full-time equivalent field staff. Peregrine used totals for individual energy efficiency measures installed or, in some cases, total dollar value of categories of projects completed in 2018 to calculate FTEs. Depending on the information available, Peregrine would multiply the average time required (in person-hours or person-days) for each installation by the number of installations and converting the result to FTEs based on an assumed 1,760 work hours per year or 220 workdays per year. These unit-based installation times were secured from representative installation companies that performed this work or from organizations that supervised installation activity. In other cases where the only information available was total project cost, Peregrine would estimate the labor cost component of projects and determine total hours required for installations using average hourly billing rates, again converting those total hours into annual FTEs. Finally, in cases where major employers could provide actual installer hours of work to Peregrine, those actual hours or days of work were used instead of calculated FTEs.

Again, central to these calculation methodologies is an effort to use the same approach year-on-year for individual programs.

## A.2 Residential Programs

### EnergyWise 1 – 4 Unit Residential Program

For the EnergyWise Residential program, RISE Engineering's program manager provided to Peregrine an overview of how the program functions and any changes from 2016, as well as updated FTE counts of RISE employees in various roles based on payroll tracking. Peregrine then allocated this total number of FTEs to gas and electric programs, using the relative size of The Narragansett Electric Company electric and gas budgets as the basis for these allocations.

In 2014, RISE had shared general rules of thumb with Peregrine concerning how weatherization contractor crews and heating contractors perform site work. These typical installation scenarios were borne out by direct interviews with installation companies, as well as by interviews with Community Action Program supervisors with similar responsibilities for low-income residential services. Peregrine has continued to use these rules of thumb for 2018 to estimate numbers of FTE insulation and heating system contractor personnel that installed major energy efficiency measures.

Peregrine assumes it takes a weatherization crew made up of three insulation specialists an average of two days to complete an insulation and air sealing job. The Narragansett Electric Company provided counts of numbers of weatherization jobs completed in 2018. Peregrine then used the total numbers of insulation jobs and the average number of man-days required for each installation to calculate a total number of FTEs (again, assuming work 220 days per person per year) providing insulation services in 1-4 unit buildings. FTEs were marked up by 20% to account for a contractor's support and management staff.

For heating system installations, we assume that it takes a two-person team four days on average to remove and replace a hydronic heating system. Peregrine secured counts of high efficiency heating systems and related equipment installed in 2018 from Hawk Incentives, which processes the incentives paid out for these installations. Since Peregrine had received differentiated counts for replacements furnaces and boilers, Peregrine assigned less installation time to replacement furnaces (due to less piping work) and adjusted time estimates accordingly. Replacement residential gas equipment was allocated to the gas program and any replacement residential oil or propane heating equipment or electric heat pump installations were treated as an expense of the electric program. We multiplied average total hours required for an installation by the total number of items installed. The total number of calculated hours was then divided by 1,760 hours to convert it to FTEs, and the FTEs were marked up by 20% to account for a contractor's support and management staff.

**EnergyWise Multifamily Residential Program**

As with the EnergyWise 1-4 Unit Residential Program, Peregrine interviewed RISE's program manager and was provided with staffing counts. In addition to general program supervision, responsibilities included technical leadership, auditing, field coordination and inspections, and electrical installation work. Again, RISE was able to convert staff counts to FTEs associated with this particular program. Peregrine relied on installation counts from The Narragansett Electric Company to determine numbers of individual measures that had been installed by independent weatherization contractors and heating contractors in these buildings. As was the case for contractors installing measures in 1-to-4-unit buildings, these counts were multiplied by average times for installations in hours or portions or hours, and the resulting total hour counts were divided by 1,760 hours per FTE to arrive at annual FTE counts.

**Rhode Island Heating and Cooling Program**

The Heating and Cooling Program serves as the umbrella for high efficiency heating, cooling, and water heating. In some respects, it is a distributor and contractor installation program that encourages these market channel participants to promote high efficiency heating and cooling equipment (e.g., condensing gas boilers and furnaces, ductless and ducted heat pumps for air conditioning, high efficiency central air conditioners, smart thermostats) to their respective customers, and passes on The Narragansett Electric Company rebates to customers for installation of approved equipment. Installation contractors submitted rebate applications on behalf of their customers to rebate processers Blackhawk and Energy Federation who processed reimbursement checks.

FTE counts for program management were developed from staff counts and allocations provided by the program manager to Peregrine. Total FTEs were then allocated to gas or electric based on the ratio of spending gas and electric programs.

Counts of installation FTEs were generated using installed equipment counts provided by The Narragansett Electric Company based on rebates provided. These counts were then used to calculate total hours or days of installation time required and converted to FTEs.

**Residential New Construction, Residential Codes and Standards, Residential Home Energy Report Program**

For each of these programs, there was no significant incremental labor impact associated with product installed or purchased because the program did not so much affect whether product was installed as it did which product was installed. Peregrine generated FTE counts through interviews with contractors that facilitated these programs and provided support services (e.g., marketing assistance, informational mailings, technical assistance, trade ally training, quality assurance inspections). These businesses provided staffing counts from their accounting records. Total FTEs were then allocated to gas or electric based on the ratio of spending in each residential gas and electric program.

**ENERGY STAR® Lighting, ENERGY STAR® Products**

Both programs were funded solely through the residential electric budget. For both programs, there was no significant incremental labor impact associated with amount of product installed or purchased. Further, retailers' staff engaged at the point-of-sale were not counted as incremental FTEs. Peregrine generated FTE counts through interviews with individual contractors engaged by The Narragansett Electric Company to supply services in support of the programs. These businesses provided staffing counts for 2018 from their accounting records. Total FTEs were then allocated to the residential electric spend.

## A.3 Low Income Residential Programs

**Income Eligible 1-4 Unit Residential**

FTE counts for this program for 2018 include program management staff by the program vendor CLEAResult, Community Action Program (CAP) agency staff counts, and calculated labor required to complete installations. CLEAResult staff FTE counts came from direct interviews with CLEAResult's program manager. We determined CAP agency energy staffing for each of the six agencies operating in Rhode Island with the assistance of CLEAResult and then aggregated them to establish the statewide CAP Agency staff count. CLEAResult also provided counts of weatherization and heating system installations completed in 2018. Peregrine used CAP agencies guidance on contractor crew sizes and installation practices to calculate the numbers of FTE installers who performed this work.

**Income Eligible Multifamily Residential**

Peregrine used the same approach to calculating FTEs for the Income Eligible Multifamily program as for the EnergyWise Multifamily Residential Program since both programs were administered by RISE Engineering and used the same delivery strategy.

## A.4 Commercial and Industrial Programs

### Small Business Direct Install Program

Peregrine used counts of employees provided by RISE Engineering, the regional program administrator, to generate FTEs for RISE staff involved in program management and measure installations and for their sub-contractors as well. No actual measure counts and calculated FTEs were used to compile job counts attributable to the work of RISE and its subcontractors, as all workers were accounted for without a piecework analysis. Peregrine also calculated additional FTEs associated with the "customer-directed option" (or "CDO") that allowed customers to use an electrician they had an existing relationship with to install program measures and receive the same incentives as were available through RISE. These numbers were based on information from RISE about numbers of electrical contractors that were active through CDO and the numbers of customers they work with and then cross-tabulated installation time that would be required for actual items installed.

### Large Commercial Retrofit Program (Electric)

Installations

As described in the section on energy program delivery, the Large Commercial Retrofit program was the most market-based of all electric programs offered. Customers initiated projects, as did businesses that had products or services they were trying to sell. Installations included prescriptive lighting, motors and drives, compressors, and HVAC control measures. FTEs for installation work was calculated in a number of ways, depending on which information and how much information was available to Peregrine in the data sets supplied by The Narragansett Electric Company. For prescriptive Large Commercial Retrofit installations that were part of a specific technology group (e.g., lighting, drives), Peregrine used installed item counts to generate total installation times or total project cost to generate labor cost estimates and converted this information to FTEs. For larger, more complex custom projects, The Narragansett Electric Company helped disaggregate total project costs into costs for sub-categories by technology. Installation labor ratios of FTEs associated with non-custom installations of specific equipment and total project costs were applied to total costs of custom measure sub-categories. Once the total dollar value of the project was determined, we could apply assumptions about the ratios of labor cost to material cost for different technologies, calculate the type and number of labor hours this represented, aggregate the total hours, and convert them to FTEs.

Sales and project management

As in past years, Peregrine interviewed the larger Project Expeditors to get counts of sales and project management staff they were employing in 2018 to secure and oversee projects. Similarly, Peregrine estimated the number of sales and project management personnel that were employed by other installation contractors active in Large Commercial Retrofits. We extrapolated the sales and project management staffing identified for Project Expediters to calculate numbers of like staff employed by other installation contractors. This extrapolation used the total dollar value of Large Commercial retrofit projects installed by PEX and by other

contractors under to estimate the additional sales and project management staff employed by these other installation contractors.

Engineering support

For engineering support services provided to commercial customers, Peregrine used the recorded payouts for technical assistance services provided in 2018 to calculate workforce FTEs. The Narragansett Electric Company provided engineering services to customers through retained contractors, in particular where energy efficiency solutions required technical support to determine what could be done, what should be done, what energy savings would result, and what incentive levels were appropriate. To calculate the FTEs associated with technical assistance support provided by engineers under contract to The Narragansett Electric Company, Peregrine took the total dollars paid out for this work and calculated how many hours of labor it represented at an assumed $120 per hour. Total hours were then converted to FTEs. Finally, for the Smart Grocer and Industrial initiatives, Peregrine interviewed and secured staff counts from CLEAResult and Leidos Engineering.

**Upstream Lighting, Upstream HVAC**

As in other programs where The Narragansett Electric Company and other utilities had engaged a shared contractor to promote and manage like programs in multiple states, Peregrine secured counts of contractor staff from program managers, calculated FTEs, and allocated a portion of them to Rhode Island.

Upstream Lighting-related sales counts were rolled into the Large Commercial Retrofit counts. Peregrine calculated the FTEs required for installation of equipment that required an electrical contractor to wire it by code, taking counts of product, applying per unit labor times, and then calculating the total FTEs for installations. Peregrine did not include any stand-alone lamps sold by Upstream lighting in its FTE calculations because Peregrine could not determine with certainty if they had been installed by the customer or an installation contractor. Upstream HVAC sales counts were reviewed and considered but ultimately not included in total counts. Numbers were relatively small and were in many cases attributed to equipment failures where no incremental labor was needed.

**Commercial and Industrial Gas Programs**

For Commercial and Industrial Gas programs Peregrine interviewed RISE to secure counts of RISE employees and FTEs. RISE management time attributed to the program was reduced for 2018 because The Narragansett Electric Company internalized much of this role leaving RISE to do engineering and Small Business gas installations.

A variety of contractors installed energy efficiency measures under the Large Custom Retrofit program. Due to a lack of specific details about the cost of these projects, Peregrine relied on statistics about incentives levels paid to develop order of magnitude estimates of total project costs for labor and equipment and then conservatively calculated hours of installation labor and total FTEs assuming an average labor rate of $100/hour.

# Appendix B. Interview Guides

## B.1 Vendor Interview Guide

| | If New Program Interviewee | If Interviewed Last Year |
|---|---|---|
| | **1. Introduction** | |
| **1.1** | Tell us a little bit about your company's role in The Narragansett Electric Company Energy Efficiency programs. | Has anything changed about your company's role in The Narragansett Electric Company Energy Efficiency programs since **2020**? |
| | **2. FTE** | |
| **2.1** | What is your estimate of the number of FTEs who worked on **[*insert applicable RI EE program*]** from your company in **2021**? *Note that the number of FTEs may be less than the number of employees – an FTE is the number of full-time equivalent employees (i.e., 2 part time would make 1 FTE).* **[This should be a count of actual FTEs not their estimate without COVID – make sure to clarify]** | What is your estimate of the number of FTEs who worked on **[*insert applicable RI EE program*]** from your company in **2021**? *Note that the number of FTEs may be less than the number of employees – an FTE is the number of full-time equivalent employees (i.e., 2 part time would make 1 FTE).* **[This should be a count of actual FTEs not their estimate without COVID – make sure to clarify]** |
| **2.2** | What is the breakdown of the FTEs working on the programs from your company in **2021**? For example, the number of FTEs working on administrative activities, number of FTEs working as project managers, etc. | What is the breakdown of the FTEs working on the programs from your company in **2021**? For example, the number of FTEs working on administrative activities, number of FTEs working as project managers, etc. |
| **2.3** | How do the number of FTEs for **[*insert applicable RI EE program]*** from your company compared to **2020**? An estimated % change is sufficient. | How do the number of FTEs for **[*insert applicable RI EE program]*** from your company compared to **2020**? An estimated % change is sufficient |
| **2.4** | Were subcontractors/installation contractors used by your company for this program in **2021**? If yes, what was the number of FTEs of subcontractors/installation contractors? | **[If subcontractors/installation contractors used last year]** Was there a change in the number of FTEs of subcontractors/installation contractors from **2020**? An estimated % change is sufficient. |
| **2.5** | **[If answer to previous question was yes]** How do the number of FTEs for subcontractors/installation contractors compare to **2020**? An estimated % change is sufficient. | **[If subcontractors/installation contractors not used last year]** In last year's study you indicated there was no use of subcontractors/installation contractors in **2020**. Did this change in 2021? If yes, what was the number of FTEs for subcontractors/installation contractors? |
| **2.6** | What impact, if any, did COVID have on the ***[insert applicable RI EE program]*** workforce | What impact, if any, did COVID have on the ***[insert applicable RI EE program]*** workforce |

| | | |
|---|---|---|
| | in **2021** (with specific regards to your company)? **[Looking for a qualitative answer.]**<br><br>Follow up prompts:<br>a. Did your company encounter worker shortages in **2021**?<br>b. Did your company encounter product shortages in **2021**? If so, how did this affect your workforce?<br>c. Did your company perform virtual assessments in **2021**? If so, how did this affect your workforce?<br>d. Did your company mail products for at-home installations? If so, did this create the need for remote technical support and/or additional in-person follow ups? | in **2021** (with specific regards to your company)? **[Looking for a qualitative answer.]**<br><br>Follow up prompts:<br>a. Did your company encounter worker shortages in **2021**?<br>b. Did your company encounter product shortages in **2021**? If so, how did this affect your workforce?<br>c. Did your company perform virtual assessments in **2021**? If so, how did this affect your workforce?<br>d. Did your company mail products for at-home installations? If so, did this create the need for remote technical support and/or additional in-person follow ups? |
| | **3. Customer Engagement** | |
| **3.1** | How does the number of customers served through **[*insert applicable RI EE program*]** by your company in **2021** compared to **2020**? An estimated % change is sufficient. | How does the number of customers served through **[*insert applicable RI EE program*]** by your company in **2021** compared to **2020**? An estimated % change is sufficient. |
| **3.2** | How does your company acquire EE customers in RI? | Have there been any changes to how your company acquires EE customers in RI since **2020**? |
| **3.3** | How did COVID and associated impacts affect the **[*insert "increase" or "decrease"*]** in customers served in **2021** compared to **2020**? **[Looking for a qualitative answer.]**<br><br>Are there any other COVID and associated impacts that you'd like to mention that you didn't mention earlier (during the FTE section)? | How did COVID and associated impacts affect **[*insert "increase" or "decrease"*]** in customers served in **2021** compared to **2020**? **[Looking for a qualitative answer.]** |
| **3.4** | Were there any non-COVID related program changes in **2021** relative to **2020** that affected your workforce's engagement with customers?<br>If so, what were those changes and how did they affect your workforce's engagement with customers? | Were there any non-COVID related program changes in **2021** relative to **2020** that affected your workforce's engagement with customers?<br>If so, what were those changes and how did they affect your workforce's engagement with customers? |

| | | |
|---|---|---|
| | **4. Workforce: Hiring, Training, and Retention** | |
| **4.1** | How do you attract and retain workforce to support programs? | Have there been any changes to how your company attracts and retains workforce to support programs since **2020**? |
| **4.2** | Does your company provide training to the workforce? If so, how do you provide necessary training to the workforce? (Question focuses on identification of needs, training process and frequency) | ***[If provided training in 2020]*** Have there been any changes to how your company provides training to the workforce since **2020**? ***[If did not provide training in 2020]*** In **2021**, did your company provide training to the workforce? If so, how do you provide necessary training to the workforce? (Question focuses on identification of needs, training process and frequency) |
| **4.3** | Are there any changes related to the way The Narragansett Electric Company manages your workforce that you would recommend to The Narragansett Electric Company? If so, what are those recommendations and what impact do you think they would have **[Looking for a qualitative answer.]**? | Are there any changes related to the way The Narragansett Electric Company manages your workforce that you would recommend to The Narragansett Electric Company? If so, what are those recommendations and what impact do you think they would have? |
| | **5. Additional Comments** | |
| **5.1** | Does The Narragansett Electric Company communicate relevant programmatic, policy, or strategy changes to your company? What, if anything, can the company do to improve its communication? | Does The Narragansett Electric Company communicate relevant programmatic, policy, or strategy changes to your company? What, if anything, can the company do to improve its communication? |
| **5.2** | Any other comments related to these questions? | Any other comments related to these questions? |

## B.2 The Narragansett Electric Company Staff Interview Guide

**Question 1: Program Confirmation**

At the outset, I'd like to confirm the programs that we are going to be discussing.

| Name | Area |
|---|---|
| Angela Li | All residential programs |
| Ben Rivers | Small Business program |
| Laura Rodormer | Residential Income Eligible, New Construction |
| Mike Rossacci | Income Eligible Single Family; Market Rate SF (Pgm. Mgr.) |
| Paul Wassink | Demand Response Programs |
| Josh Kessler | Large C&I programs |

**Question 2: Program Changes**

A. What significant program changes have occurred from the 2020 to the 2021 energy efficiency programs in Rhode Island that may have had a significant impact on the jobs associated with these programs?

B. Could you tell me if any of the programs you are associated with featured a significant incentive change from 2020 to 2021 or in the middle of 2021?

*Prompt if needed:* We are looking specifically for programmatic changes that have had significant impacts on jobs beyond those that might be reflected in scaling the number of FTE jobs.

**Question 3: COVID**

What feedback or information have you received from vendors or program managers regarding the continuing impact of COVID on the employment/workforce environment in Rhode Island in 2021? (For example, maybe the number of FTEs is steady, but does it take 50% longer to do insulation work because of all the precautions that they need to take.)

*Added prompt: For the vendors you work with or are aware of, are there specific COVID-related impacts that we should be sensitive to as we interview them?*

**Question 4: Other Feedback**

What other feedback or information have you received from vendors or program managers regarding the employment/way of doing work in Rhode Island in 2021, either in general or as a result of programmatic changes?

**Question 4: Other Workforce Drivers**

Other than what vendors have told you, have you become independently aware of any changes in 2020 in the employment/workforce environment in Rhode Island compared to previous years?

**Question 5: Programs in Transition**

What are emerging areas of growth in the energy efficiency programs and what impact, if any, has this had on the jobs associated with energy efficiency programs?

*Prompt: New measures, new delivery techniques, new market segments*

What other measure mix changes have the programs experienced in 2021 going into 2022?

Do you think any of these transitional areas cause areas of uncertainty for those in the workforce, whether it's related to uncertainty in programs, workforce compensation/development, program goals, etc.

**Question 6: Vendors to Interview**

Other than vendors you have already mentioned, are there any other vendors that you suggest we interview about 2021?

# Appendix C. Participating Companies

The following list includes contractors and subcontractors performing work directly for The Narragansett Electric Company 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 Narragansett Electric Company 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, and 3% of companies are Connecticut firms. The remaining firms have offices in the other New England states or outside of New England. The list is organized with Rhode Island first, then other states in alphabetical order. Within each state, the firms are listed alphabetically.

**Table C-1. List of 2021 Companies, Agencies, Contractors and Sub-Contractors that Worked on The Narragansett Electric Company Energy Efficiency Programs**

| Vendor | City | State |
|---|---|---|
| 210 Plumbing | Newport | RI |
| 5A Builders LLC | Narragansett | RI |
| A & K Safety | Warwick | RI |
| A E Costa Electrical Contractor LLC | Warwick | RI |
| A Perry Plg & Htg | Coventry | RI |
| A Santurri Electric | East Greenwich | RI |
| A Westerfield Plmg | Wakefield | RI |
| A&I Electric | Pawtucket | RI |
| A-1 Plumbing & Drain Clg | Pawtucket | RI |
| Aaa Plumbing | Wakefield | RI |
| Accu Electric | Providence | RI |
| Adam Waldeck Plumbing & Heating LLC | Warwick | RI |
| Advance Electrical Corporation | Providence | RI |
| Advanced Plumbing RI LLC | Exeter | RI |
| Aero Mechanical Inc | Johnston | RI |
| Affordable Plumbing Solutions | Coventry | RI |
| Air Conditioning Services Of New England | Cranston | RI |
| Air Flow Inc | Coventry | RI |
| Air Quality LLC | Warwick | RI |
| Air Synergy LLC | Norwood | RI |
| Air Tech Pro HVAC | Warwick | RI |
| Airhart Electric Inc. | Coventry | RI |
| Ak Mechanical | W Warwick | RI |

| Vendor | City | State |
|---|---|---|
| Al Jerauld | N Providence | RI |
| Ala And Sons Construction | Warwick | RI |
| Alan Paul Electric | Warwick | RI |
| Albert Trombetti Electrician | Cranston | RI |
| Alex Rubio Plumbing | Providence | RI |
| All In Service | Providence | RI |
| All Phase Heating & Cooling | Hope | RI |
| All Seasons Htg & Air Inc | Johnston | RI |
| All Star Insulation LLC | Providence | RI |
| Alliance HVAC | Cumberland | RI |
| All-State Plumbing & Heating | Tiverton | RI |
| Almada Jr. Dba; Rudolph | Providence | RI |
| Alpha Electrical Contractors Inc. | East Providence | RI |
| Alpha Mechanical | E Providence | RI |
| Al's Electric | North Providence | RI |
| AM Electric LLC | Warwick | RI |
| Amaral, Paul | Tiverton | RI |
| American Home Heating And Ac | Cranston | RI |
| American Htg Plg & Sprinkler | Worcester | RI |
| Anchor Plumbing & Htg-Providen | Providence | RI |
| Andy's Overhead Electric LLC | Exeter | RI |
| Anibal J. Cante | Central Falls | RI |
| Anne The Plumber | Woonsocket | RI |
| Anthony Januario Heating Co | Bristol | RI |
| Anthony Marotti Electrician | Albion | RI |
| Anthony's Quick Plumbing And Heating | Cranston | RI |
| Antonio Grillo | Westerly | RI |
| Anything Plg & Htg Service | Walpole | RI |
| Apb Plumbing & Heating | Cumberland | RI |
| Apple Valley Alarms | North Scituate | RI |
| Apuzzo Plumbing & Heating | N Scituate | RI |
| Aquidneck Fastn Inc *3 | Tivertown | RI |
| Aquidneck Services LLC | Taunton | RI |
| Ar Heating & Cooling | Central Falls | RI |
| Arden Engineering Constructors, LLC | Pawtucket | RI |
| Ardente Supply Co Inc | Provdience | RI |
| Armor Insulation | Pawtucket | RI |
| Arther Lettieri | Providence | RI |
| Arthur W. Adler | Bristol | RI |
| Asp Electric | Cumberland | RI |
| Aten Energy | Pawtucket | RI |
| Atlantic Property Solutions Inc | Pawtucket | RI |
| Atms Electrical Services | East Providence | RI |

| Vendor | City | State |
|---|---|---|
| Auburn Electric | Cranston | RI |
| Audet, E.W. & Sons Inc. | Providence | RI |
| Aussant Electric | Cumberland | RI |
| Autiello Plumbing & Heating | Cranston | RI |
| Automated Temperature Controls | Winchester | RI |
| Automatic Heating Equipment | Providence | RI |
| Automatic Temperature Controls | Cranston | RI |
| AZ Corporation | Hopkinton | RI |
| Azverde Electric Co | Valley Falls | RI |
| B & B Consumers Nat Gas Serv | Woonsocket | RI |
| B & K Electric, LLC | Warwick | RI |
| B & M Plumbing | Warwick | RI |
| B Baptista Electric, Inc | Cumberland | RI |
| B Martel Plumbing & Heating | Central Falls | RI |
| B Z Electric | West Warwick | RI |
| B&W Building Maintenance Electrical Contractors | Providence | RI |
| B.T. Electric Compnay Inc. | Providence | RI |
| Balme, Ryan Electric | Chapachet | RI |
| Baptista Enterprise | Cumberland | RI |
| Bard Plumbing & Heating | Warwick | RI |
| Barlow Heating LLC | Warwick | RI |
| Barrett Plumbing & Heating Inc | West Greenwich | RI |
| Barrington Plg & Htg | Barrington | RI |
| Bashaw Electric | East Greenwich | RI |
| Baum Energy | Warren | RI |
| Belcher Electric LLC | Warwick | RI |
| Beneficial Energy | Pawtucket | RI |
| Benjamin Jenkins Dba | Middletown | RI |
| Berard Heating & HVAC | Warwick | RI |
| Bertrand Plumbing Inc | Pascoag | RI |
| Big Dog Plumbing & Heating LLC | Ashaway | RI |
| Bileau HVAC Inc | Woonsocket | RI |
| Bill Castellone | Cranston | RI |
| Bill's Direct Plumbing & Heating | Bristol | RI |
| Blackstone Smithfield Co | North Smithfield | RI |
| Blanco, Owen | Warwick | RI |
| Blyden Electric | Bristol | RI |
| Bmac Plumbing Htg & Gas Works LLC | Harrisville | RI |
| Bmb Services LLC | E Greenwich | RI |
| Bob Hopkins Electrician | Exeter | RI |
| Bobby Hopkins | Exeter | RI |
| Bob's Mechanical | Warwick | RI |
| Bodell Plumbing & Heating | South Kingstown | RI |

| Vendor | City | State |
|---|---|---|
| Boss Heat | Charlestown | RI |
| Boss Heating & Cooling Inc | Charlestown | RI |
| Boulevard Plumbing & Heating | Portsmouth | RI |
| Brandon Schiano | Cranston | RI |
| Brassard Plumbing | North Providence | RI |
| Brien Godin | Cumberland | RI |
| Brilliant Technologies | Cranston | RI |
| Brittain Electric Inc. | Jamestown | RI |
| Brock's Electric | Johnston | RI |
| Broway Electric, LLC | Cranston | RI |
| Bruno & Son Electric Inc. | North Providence | RI |
| Bryant Donovan | Portsmouth | RI |
| Buckley Htg & Cooling | Peacedale | RI |
| Building Systems Technologies LLC | North Providence | RI |
| Buono Electric | Johnston | RI |
| Burnscold Heating And Air Conditioning | West Warwick | RI |
| Butler And Sons Plumbing And Heating | Cranston | RI |
| C Carr Electric LLC | Cumberland | RI |
| C&K Electric | Providence | RI |
| C. Caswell Plumbing | Jamestown | RI |
| Cacicia Electric Inc | Johnston | RI |
| Calyx Retrofit | Lincoln | RI |
| Cap Of Providence | Providence | RI |
| Capaldi Electric | Providence | RI |
| Capitol Plumbing Heating & Construction | Cumberland | RI |
| Capozzoli Construction LLC | Coventry | RI |
| Carbone Plumbing Heating & Air | Johnston | RI |
| Carjon A/C & Heating | Smithfield | RI |
| Carlino Electric | Coventry | RI |
| Carlo Fossati Plumbing | Greenville | RI |
| Carter Bros Inc | Oakland | RI |
| Cassana HVAC | Johnston | RI |
| Cd Heating Inc | Cranston | RI |
| Century Electric | Westerly | RI |
| Century Heating | Smithfield | RI |
| Charette Plumbing LLC | West Kingston | RI |
| Charland Enterprises Inc | Pawtucket | RI |
| Charles Doherty And Steve Girard | Warwick | RI |
| Charles Nichols Plumbing | Warwick | RI |
| Chilabato, Peter | Portsmouth | RI |
| Chris Cardillo Electrician | Providence | RI |
| Chris Electric, Ltd. | Newport | RI |
| Chris Rooney Electrician | Smithfield | RI |

| Vendor | City | State |
|---|---|---|
| Cj's Plumbing & Heating Specialist | Smithfield | RI |
| Cjs/State Wide Appliance Repair | Rumford | RI |
| Ck Plumbing And Heating | Pawtucket | RI |
| Classical Builders - Marshall Williams | Warren | RI |
| Clearesult | Providence | RI |
| Clearly Led LLC | Wakefield | RI |
| Clermont Mechanical Plumbing | Glendale | RI |
| Cmags HVAC | Warwick | RI |
| Coastal HVAC | Wakefield | RI |
| Coastal Plumbing Service Inc | Wakefield | RI |
| Coldmasters Temperature Cont | Providence | RI |
| Collard Enterprises | Coventry | RI |
| Competition Burner Service | Newport | RI |
| Comprehensive Community Action | Cranston | RI |
| Consolidated Maintenance | Johnston | RI |
| Continental Engineering Inc | Johnston | RI |
| Control Systems | Cranston | RI |
| Costa, Dave | East Providence | RI |
| Cotioa Electric | Johnston | RI |
| Cox Electric LLC | Narragansett | RI |
| Cozzo Electrical Services Cod Acct | Johnston | RI |
| Crew Remodeling & Construction | Newport | RI |
| Cross Insulation | Smithfield | RI |
| Crystal Plumbing & Heating | Providence | RI |
| Csv Mechanical | South Kingstown | RI |
| Cubo Construction LLC | Central Falls | RI |
| Custom Comfort HVAC | Woonsocket | RI |
| Custom Plumbing & Heating Co | Newport | RI |
| Cutler H. Besser & Sons | Scituate | RI |
| Cw Cummings Plumbing Co | Coventry | RI |
| D & D Metal Works | N Providence | RI |
| D & E Electric, Inc. | Warwick | RI |
| D & J Plumbing & Heating Inc | Carolina | RI |
| D And Z Electric Inc | Woonsocket | RI |
| D Gomes Electric LLC | Pawtucket | RI |
| D&D Electric | Cranston | RI |
| D&V Mechanical Inc | Westerly | RI |
| D.F.S. Plumbing Services | Cranston | RI |
| D.S. Plumbing | Coventry | RI |
| Danico LLC | North Providence | RI |
| Dauphinais Electrical Services LLC | Woonsocket | RI |
| David Phillips Plg & Htg | Riverside | RI |
| David R. Gince Electrician | Woonsocket | RI |

| Vendor | City | State |
|---|---|---|
| David Seddon Electrician | Rumford | RI |
| David W Bradley Plg & Htg | E Providence | RI |
| Deal Electric | Cranston | RI |
| Delmonico Enterprises Plg | Cranston | RI |
| Dennis Decorpo Electric | Scituate | RI |
| Dennis Parillo | Johnston | RI |
| Dennis Vallee | Harrisville | RI |
| Department 84 | Greenville | RI |
| Derek Germain | Cumberland | RI |
| Desmarais Plumbing & Heating Inc | Johnston | RI |
| Dessaint Electric Co. | Warwick | RI |
| Di Gregorio & Son Inc Plumbing And Heating | N Kingstown | RI |
| Dimery, Robert W. Dba | Barrington | RI |
| Diorio, Joseph | Pawtucket | RI |
| Dirocco Plumbing Services LLC | North Providence | RI |
| Divona Enterpries | Cranston | RI |
| DJL Electric | Warren | RI |
| Donald D Gravel | North Smithfield | RI |
| Donaldson Electric | Cumberland | RI |
| Done Right | North Providence | RI |
| Donovan & Sons | Middletown | RI |
| Dp's Plumbing And Heating | Scituate | RI |
| Driver's Plumbing & Heating | Providence | RI |
| Dsc Heating & Ac | North Kingstown | RI |
| Dual Voltage Electric | Johnston | RI |
| Dumais Plumbing & Remodeling Inc | Slatersville | RI |
| Dupuis Oil Co | Pawtucket | RI |
| Duran Electric | Lincoln | RI |
| DWI Electrical Group | Johnston | RI |
| Dynamic Air Systems Inc | E Providence | RI |
| Eagle Construction | Bristol | RI |
| Eastern Biomass | Pascoag | RI |
| Eastern Plumbing & Heating | Providence | RI |
| Easy Flow Plumbing | W Warwick | RI |
| Ecologic Spray Foam Ins. Rebat | Charlestown | RI |
| Econ Electric Contractors | Bristol | RI |
| Ecos Supply & Design | Providence | RI |
| Ed Sylvia Plumbing | Narragansett | RI |
| Eddy's Weatherization | Providence | RI |
| Edward Camara Plumbing Svc | Lincoln | RI |
| Edward Martino | Johnston | RI |
| Ef Odonnell | Providence | RI |
| Electrical Wholesaler Inc. | Cranston | RI |

| Vendor | City | State |
|---|---|---|
| Electrician's "R" Us RI Inc. | Pawtucket | RI |
| Electronic Alarm Systems | Warwick | RI |
| Electro-Tec Systems Inc | Lincoln | RI |
| Emerald Services | Foster | RI |
| Emergency Response Plumbing Heating And Air Conditioning Inc | Warwick | RI |
| Emergency Response Service | Providence | RI |
| Emmett Electric | E Providence | RI |
| Energy Conservation Inc. | South Kingstown | RI |
| Energy Efficient Exteriors | Pawtucket | RI |
| Energy Electric, Inc. | Woonsocket | RI |
| Energy Geeks | Woonsocket | RI |
| Energy Monster Rebate | Riverside | RI |
| Energy One | West Warwick | RI |
| Energy Source LLC | Providence | RI |
| Enos Home Improvements | West Warwick | RI |
| Eoh Fix All | North Providence | RI |
| Ep Electric | East Providence | RI |
| Eurotech Climate Systems LLC | Pawtucket | RI |
| Evergreen Plg & Htg - Warwick | Warwick | RI |
| Ewma Jeffrey J Electric LLC | Cumberland | RI |
| Exceptional Heating Co | Providence | RI |
| Expo Development | North Providence | RI |
| F & S Electric Inc. | Bristol | RI |
| Falcone, Arthur P | Hope Valley | RI |
| Ferreira Electric | Bristol | RI |
| Ferreira, Ryan | Cranston | RI |
| Feula Plumbing & Heating | Johnston | RI |
| Figlozzi Plg & Htg | Peace Dale | RI |
| Fiore And Sons LLC | Warwick | RI |
| First Response Plumbing | Newport | RI |
| Fitts, Matt | Greenville | RI |
| Five Star Mech | Richmond | RI |
| Five Star Plg & Htg Johnston | Johnston | RI |
| Flou HVAC | Charlestown | RI |
| Fm Bodington Plbg & Htg Inc | Little Compton | RI |
| Francis Heating & Hydronics | E Providence | RI |
| Francisco Mechanical | North Providence | RI |
| Freeport General Contracting | North Providence | RI |
| Freeway Enterprises | Pawtucket | RI |
| Fressilli Plumbing Inc | Riverside | RI |
| Frontier Mechanical Contractor LLC | Pawtucket | RI |
| Furnace & Duct | Providence | RI |
| Gambit Electric | Johnston | RI |

| Vendor | City | State |
|---|---|---|
| Garner Morgan | Tiverton | RI |
| Gary Coyne | Chepachet | RI |
| Gary Ficca Electrician | North Smithfield | RI |
| Gatta Electric | Cranston | RI |
| Gem Plumbing | Lincoln | RI |
| Gerald M Lepore Jr. | Cranston | RI |
| Gino's Plumbing And Heating | Warwick | RI |
| Giorno Plmbg & Htng | Cranston | RI |
| Glenn Martinelli | West Greenwich | RI |
| Global Plumbing & Heating | Darlington | RI |
| God's Hands Appliance Service | West Warwick | RI |
| Gomes Heating & Cooling | N Kingston | RI |
| Gordon Building & Excavating Inc. | Hope Valley | RI |
| Grasso Management | Providence | RI |
| Gravel Electric Inc. | Harrisville | RI |
| Greenside Energy, LLC | Middletown | RI |
| Greenwich Insulation | West Greenwich | RI |
| Greg Blanchette | N Smithfield | RI |
| Greg Brown | Smithfield | RI |
| Grenier & Sons Plumbing & HVAC LLC | Foster | RI |
| Griff Electric LLC | Portsmouth | RI |
| Gronski Plumbing & Heating | Cranston | RI |
| Gross, Carl | Providence | RI |
| Guarino Power Systems LLC | Smithfield | RI |
| Gunn, Inc | Westerly | RI |
| Guy Clemont Plumbing & Heating | Cranston | RI |
| H&R Electric Contractors Inc. | Greenville | RI |
| Hawkes Plg & Htg Co Inc. | Fiskdale | RI |
| Herrington Construction | Providence | RI |
| Hilario A. Quezada Electrician | Providence | RI |
| Hodges Electric | Scituate | RI |
| Holgate Plumbing And Heating | Tiverton | RI |
| Holland Electric | Peace Dale | RI |
| Homans Associates | Warwick | RI |
| Home Depot | Smithfield | RI |
| Houle Plumbing & Heating | Greene | RI |
| Howard Saucier | Cranston | RI |
| Hsp Construction LLC | West Greenwich | RI |
| Hughes Inc. | North Kingstown | RI |
| Hutchins Electric | East Greenwich | RI |
| HVAC Excellence | Central Falls | RI |
| HVAC Inc | Cumberland | RI |
| Hydro Earth Inc | North Providence | RI |

| Vendor | City | State |
|---|---|---|
| Hynson Electrical Services (A Dba) | Bristol | RI |
| Ianniello Plumbing And Heating | Cranston | RI |
| Iasimone Plumbing & Heating | N Providence | RI |
| Installed Measures | Coventry | RI |
| Integrated Consulting Group | Warwick | RI |
| Interstate Electric | East Providence | RI |
| Ipa Electric LLC | Cranston | RI |
| Irb Solutions Inc | Greenville | RI |
| Iroquoian Plumbing & Heating S | Providence | RI |
| Island Solar Plumbing And Heating | Jamestown | RI |
| It's Shocking Electric Corp. | Cranston | RI |
| Izzo & Sons Electric | Warwick | RI |
| J & A Electric | Providence | RI |
| J & K Supplemental Plumbing Inc | East Greenwich | RI |
| J And B Construction | Providence | RI |
| J And J Electric | Warwick | RI |
| J Giorgi Plumbing | Cranston | RI |
| J Joyce Plumbing & Heating | Warwick | RI |
| J&L Heating And Air Conditioning | Pawtucket | RI |
| J&M Plumbing | Coventry | RI |
| J. Costa Electric Inc. | Cumberland | RI |
| J.D. Mello Plg & Htg Inc | Westford | RI |
| J.N. Jordan Plumbing LLC | Shannock | RI |
| Jack's Plumbing | Lincoln | RI |
| Jacobson Energy Researc | Providence | RI |
| Jake Lavoie Plumbing And Heating LLC | S Kingstown | RI |
| Jaquez General Contractor | Providence | RI |
| Jason Galvin | North Kingstown | RI |
| Jason Truppi Plumbing | N Providence | RI |
| Jb Construction | Providence | RI |
| JC Electric Inc. | Wakefield | RI |
| JED Electric Inc. | Greene | RI |
| Jeffrey Berard Plumbing & Mechanical | Warwick | RI |
| Jeremy Garcia | Middleton | RI |
| Jerry's Paint & Hardware | Narragansett | RI |
| Jg Home Remodeling | Riverside | RI |
| Jid Heating LLC | Cranston | RI |
| Jim Amaral | Riverside | RI |
| Jim Silvia | Warwick | RI |
| JL Electric Inc. | Middletown | RI |
| Jmac Plumbing And Heating Inc | Warwick | RI |
| JMB Mechanical | Stoneham | RI |
| JMB Plumbing LLC | West Warwick | RI |

| Vendor | City | State |
|---|---|---|
| Jmhvac | Pawtucket | RI |
| Jo Plumbing | Warwick | RI |
| Joaquin Refrigeration | Portsmouth | RI |
| Joe Vigneault Electrician | Riverside | RI |
| Joe's Plumbing & Heating | Warwick | RI |
| John Ekdahl | Chepachet | RI |
| John Fletcher | Ashaway | RI |
| John Giguere Electrician Dba | North Smithfield | RI |
| John Nicholson Mech Contractor | N Scituate | RI |
| John P Heogh | West Warwick | RI |
| John Scampoli | Providence | RI |
| John Schweglewis Plumbing Solutions LLC | N Smithfield | RI |
| Johnny Mack Electric | Narragansett | RI |
| Johnnys Home Solutions LLC | Central Falls | RI |
| John's Home Service & More | Portsmouth | RI |
| Johnson Brother Heating | Providence | RI |
| Jonathan Svitil | Lincoln | RI |
| Joseph Janton | West Warwick | RI |
| Joseph Mcdermott Pipeworks | Bristol | RI |
| Joseph Soave | North Providence | RI |
| Josh's Plumbing Services | Foster | RI |
| Joshua Pincince Electrician | Woonsocket | RI |
| Jps | Middleton | RI |
| Jrb Services Inc | North Scituate | RI |
| Jr's Industrial Electric | North Kingstown | RI |
| Juan Villanueva | Cumberland | RI |
| Judd Brown Design Inc | Packtucket | RI |
| Just Heat | Portsmouth | RI |
| K Electric | Warwick | RI |
| K&R Heating And Cooling | Lincoln | RI |
| Kamco Contracting LLC | Warwick | RI |
| Kazounis Plumbing And Heating | Hope Valley | RI |
| Kelco Electric Inc. | Johnston | RI |
| Kelley, James | Scituate | RI |
| Ken Adams | Cranston | RI |
| Kenny Pierce | Ashaway | RI |
| Kent County Electrical Service | Warwick | RI |
| Kevin Masse | Johnston | RI |
| Kevin Messier Electrical | Cumberland | RI |
| Kirk Rerick | Hope | RI |
| Kme Electric | Woonsocket | RI |
| Knight Plumbing & Heating | Cranston | RI |
| Kwik Plumbing & Heating Inc | Johnston | RI |

| Vendor | City | State |
|---|---|---|
| L & F Plumbing LLC | Cranston | RI |
| L&B Remodeling | North Providence | RI |
| Lad Electric | Cranston | RI |
| Lamplighter, In | Little Compton | RI |
| Lance Plumbing And Heating | N Scituate | RI |
| Landy, Ross | Portsmouth | RI |
| Lang Plumbing & Heating | N Scituate | RI |
| Leak Free Lifestyles | Coventry | RI |
| Leidos Engineering | Newport | RI |
| Lemay, Donald | Bristol | RI |
| Leveille Electric | Smithfield | RI |
| Liberty Plumbing & Heating | Jamestown | RI |
| Lj Giorgi Plumbing & Heating I | N Providence | RI |
| Lombardo Electric Co | Warren | RI |
| Lounas Inc | Providence | RI |
| Lowe's Home Improvement | Warwick | RI |
| Loxley Electrical Svc. LLC | Foster | RI |
| Lui Plumbing Inc | Newport | RI |
| Luke Beaudreault | Harrisville | RI |
| Luso Plumbing & Heating Inc | Cumberland | RI |
| M D'Andrea Electric LLC | Portsmouth | RI |
| M P Samsky Corp. | North Smithfield | RI |
| M&M Construction | N Providence | RI |
| M.T. Glorgi Plumbing & Heating | N Bergston | RI |
| Madden Electric | Little Compton | RI |
| Maggiacomo Plumbing Inc | Cranston | RI |
| Magnetic Electric Inc | Warwick | RI |
| Main Street Plumbing LLC | Pawtucket | RI |
| Malone Plg & Htg Inc | Cranston | RI |
| Maloney's Oil Company | Pawtucket | RI |
| Manfredo Electric | Warwick | RI |
| Manning Plumbing Company | Warwick | RI |
| Manuel Teixeira | Pawtucket | RI |
| Marcaccio Electric | North Providence | RI |
| Marcel Ms LLC | Pawtucket | RI |
| Marchetti, Matthew A. | Cranston | RI |
| Marciano Electric | Barrington | RI |
| Mark Cunha | Cranston | RI |
| Mark Dandrea Electric | Portsmouth | RI |
| Mark Haines | Richmond | RI |
| Maron Construction Co Inc | Providence | RI |
| Mastro Electric Supply | Providence | RI |
| Mastrocinque & Sons Plmb & Htg | Portsmouth | RI |

| Vendor | City | State |
|---|---|---|
| Matt Flush LLC | Greenville | RI |
| Matt Salzano Home Improvement | Bristol | RI |
| Matt's Mechanical | Smithfield | RI |
| McCormick Electrical | North Kingstown | RI |
| Mcm Corp | Smithfield | RI |
| Md Freitas Plumbing And Heating | Pascoag | RI |
| Md Heating & Air Conditioning LLC | N Providence | RI |
| Mechanical Republic LLC | Providence | RI |
| Meticulous Construction | Warwick | RI |
| Metro Electric | Woonsocket | RI |
| Michael Freitas Plg & Mech | N Providence | RI |
| Michael Glorgi | Pascoag | RI |
| Michael Hodson | Harrisville | RI |
| Michael Martin Cod Acct | Smithfield | RI |
| Michael Pariseau HVAC | Chepatchet | RI |
| Midstate Heating & Cooling | Hope Valley | RI |
| Mike Hamel | Warwick | RI |
| Mike Lafleur *3 | Smithfield | RI |
| Millenial HVAC Plumbing | Westerly | RI |
| Miller Mechanical Inc | Wayland | RI |
| Mister Freeze | Providence | RI |
| Mj Electric & Refrigeration | Central Falls | RI |
| Mj Heating & Air Conditioning | Tiverton | RI |
| Mjf Plumbing And Heating | Bristol | RI |
| Moises Chevalier Electrician | Cranston | RI |
| Morra Electric Inc. | Johnston | RI |
| Morrair HVAC LLC | Warwick | RI |
| Mother Earth Creations In | Pawtucket | RI |
| Mpg Mechanical | Charlestown | RI |
| Mr Plumber | East Providence | RI |
| Mr. Rooter | Warwick | RI |
| Mts Mechanical | East Providence | RI |
| Mussulli Electric | Harrisville | RI |
| Mutual Engineering | Warwick | RI |
| Mya Electric | Lincoln | RI |
| N Atlantic Htg Inc -Conventry | Coventry | RI |
| Nathan Guilbault | Pawtucket | RI |
| National Service Co | Warwick | RI |
| Nds Plumbing & Heating | Warren | RI |
| Nec Home Services LLC | Bristol | RI |
| Nestor Padilla After Hours Plumbing | Providence | RI |
| Netzero Insulation Tech | Warwick | RI |
| Netzero Insulation Technologies, Inc. | Warwick | RI |

| Vendor | City | State |
|---|---|---|
| New England Boiler Works LLC | Coventry | RI |
| New England Plumbing-Heating | Foster | RI |
| Newbury Insulation | Woonsocket | RI |
| Nexgen Mechanical Inc | Cranston | RI |
| Ngb Electric | Smithfield | RI |
| Nicholas Electric & | Johnston | RI |
| Nicolas Bermudez | Pawtucket | RI |
| Nolin Electric | North Scituate | RI |
| North Scituate Electric | Scituate | RI |
| Northeast Temperature Control | Westerly | RI |
| Northern Energy Services Inc. | Providence | RI |
| Ocean State Air Solutions | Portsmouth | RI |
| Ocean State Electric LLC | Johnston | RI |
| Ocean State Mechanical Inc | Coventry | RI |
| Ocean State Plumbing & Htg Inc | Cranston | RI |
| Ocean State Weatherization | North Smithfield | RI |
| Oil Central Inc | Pawtucket | RI |
| Old Tyme Electric, Inc. | Pawtucket | RI |
| Oliveira Plumbing & Heating LLC | Smithfield | RI |
| Omni Electric | Wakefield | RI |
| O'Neil Electric Company | Warwick | RI |
| Osvaldo Diana Jr | Woonsocket | RI |
| P & S Electric Inc. | Cranston | RI |
| Packard Builders | Kingston | RI |
| Pagnozzi Plumbing LLC | Smithfield | RI |
| Pajan Services, Inc | Foster | RI |
| Pal Electric | Exeter | RI |
| Papas Plumbing | Johnston | RI |
| Parrella Electric | Providence | RI |
| Pav Electric | Wakefield | RI |
| Peak Plumbing And Heating LLC | Cumberland | RI |
| Percivalle Electric Inc | Warwick | RI |
| Peregrine Prop Management | Rumford | RI |
| Perez Plumbing Heating & Air Conditioning | Cranston | RI |
| Perfect Touch Electrical Contractors Corp. | Cranston | RI |
| Peter Shadoian Electrician | North Providence | RI |
| Petro Heating & Ac Services | Warwick | RI |
| Petro Home Services | East Greenwich | RI |
| Petronelli Plumbing & Heating | Johnston | RI |
| Petterson Electric | Warwick | RI |
| Pezzullo & Sons Electric Inc. | East Providence | RI |
| Phillip J. Forcier Electric | Cumberland | RI |
| Phillips Plumbing & Mechanical | Cranston | RI |

| Vendor | City | State |
|---|---|---|
| Phil's Heating & Ac | Westerly | RI |
| Pickles Plumbing And Heating LLC | Mapleville | RI |
| Pinnacle Plg & Htg-Greenville | Greenville | RI |
| Pinnacle Plumbing & Heating | Smithfield | RI |
| Plumb Perfection | Johnston | RI |
| Plumb Pro LLC | Cranston | RI |
| Plumbing & Heating Solutions LLC | East Greenwich | RI |
| Plumbworks | N Smithfield | RI |
| Polar Air | Charlestown | RI |
| Polaris Plumbing And Heating Inc | North Kingstown | RI |
| Ponagansett LLC | Providence | RI |
| Positive Energy Electric | Saunderstown | RI |
| Potvin Electric Inc. | North Providence | RI |
| Potvin Plumbing & Heating | Warwick | RI |
| Power by Design Electrical Contracting LLC | Richmond | RI |
| Precise Plumbing | Warwick | RI |
| Precision Construction | Providence | RI |
| Preferred Heat Inc | Providence | RI |
| Premair HVAC | Warwick | RI |
| Pride HVAC Services | Portsmouth | RI |
| Prince Noah HVAC | Central Falls | RI |
| Priority Plg & Htg Inc | Providence | RI |
| Priority Plumbing & Heating | Warwick | RI |
| Prism Streetlights Inc | Warwick | RI |
| Pro Maintenance LLC | Cranston | RI |
| Professional Heating Service | N Providence | RI |
| Progress Construction & Management Group | Providence | RI |
| Providence Innovation Dis | Providence | RI |
| Providence Installer | Providence | RI |
| Providence Mech Serv-Smithfiel | Smithfield | RI |
| Providence Mechanical Serv. Ll | Smithfield | RI |
| R & M Electric Inc. | Coventry | RI |
| R E Coogan Heating Inc | Warwick | RI |
| R.B. Queern & Co Inc | Portsmouth | RI |
| R.C Plumbing And Heating | Smithfield | RI |
| R.E.M. Mechanical LLC | North Kingstown | RI |
| R.F. Heating & Cooling Inc | Exeter | RI |
| R.K. Plourd & Son Construction LLC | Warwick | RI |
| Rama Electric | Wakefield | RI |
| Raymond Degnan | N Providence | RI |
| Raz Heating And Plumbing Services | Foster | RI |
| Rc Smith Electric Co Inc | Warwick | RI |
| Reardon Plumbing And Heating | Warren | RI |

| Vendor | City | State |
|---|---|---|
| Reddy Piping Concepts | Cranston | RI |
| Regan Heating & Ac | Providence | RI |
| Regent Electric Co. Inc | Coventry | RI |
| Reilly Electrical Contractor Inc. | Cranston | RI |
| Rel Services Inc | Johnston | RI |
| Reliant Electric | Cranston | RI |
| Renaissance Sheet Metal LLC | Cranston | RI |
| Renewable Energy Solutions LLC C | Warwick | RI |
| Resendes Heating Service LLC | Coventry | RI |
| Restivos Heating & A/C | Johnston | RI |
| Rf Plumbing & Heating | Johnston | RI |
| Rhode Island Electric Contractors, LLC | North Kingstown | RI |
| Rhode Island Insulation | Hope | RI |
| Rhode Island Water Heaters | Cranston | RI |
| Rholen Central | Bristol | RI |
| RI Insulation | Hope | RI |
| RI Pipe Guys | Warwick | RI |
| RI Sheet Metal LLC | East Providence | RI |
| Ricci Electric | Coventry | RI |
| Richard Ditusa | Johnston | RI |
| Richburns Plumbing | Portsmouth | RI |
| Rise Engineering | Cranston | RI |
| Ritacco Electric LLC | Westerly | RI |
| Rj Sheridan Co | Cranston | RI |
| Robert Larisa | Barrington | RI |
| Roberts Electric | Pawtucket | RI |
| Rod Electric | Pawtucket | RI |
| Rodriguez Plumbing & Heating | Provincetown | RI |
| Roger Cozzo | Johnston | RI |
| Roger O Joyal Refrigeration | North Smithfield | RI |
| Rolland M Belanger Plg & Htg | Pascoag | RI |
| Ron Davis | Johnston | RI |
| Rooter Man Plumbers | Johnston | RI |
| Rossi Electric Co Inc | Warwick | RI |
| Rowlett & Son's HVAC | Cranston | RI |
| RPM Electrical Services | Providence | RI |
| Rsc Plumbing LLC | Exeter | RI |
| Rsm Electric | North Providence | RI |
| Rst Mechanical HVAC | Coventry | RI |
| Rudy Almada Electrician | East Providence | RI |
| Rudy Branca Electrician | Cranston | RI |
| Rumford Mechanical | Rumford | RI |
| Rusco Enterprises Inc./TA | Warwick | RI |

| Vendor | City | State |
|---|---|---|
| Russ Lembo Electrician | Johnston | RI |
| Ryan Coffey Certified Pm Tech | Cranston | RI |
| Ryan Fitzgerald *3 | Central Falls | RI |
| Ryan Heating Cooling | Charlestown | RI |
| S & K Electric Inc. | Charlestown | RI |
| S & S Electric | Chepachet | RI |
| Sakonnet Electric | Bristol | RI |
| Sakonnet Plumbing & Heating | Little Compton | RI |
| Sal Manzi & Son Plumbing & Heating Inc | Cranston | RI |
| Sam Bliven Jr Plumbing & Heating Inc | Westerly | RI |
| Santoro Electric | Warwick | RI |
| Sargent Plumbing Inc | West Kingston | RI |
| Sarra Corporation | Cranston | RI |
| Sauvageau, Roy | South Kingstown | RI |
| Savard Oil Co Inc | E Providence | RI |
| Scituate HVAC LLC | North Scituate | RI |
| Scotto Electric | Portsmouth | RI |
| Seaview Plumbing | Narragansett | RI |
| Seddon Electric | Rumford | RI |
| Servpro Of Cranston | Providence | RI |
| Shamrock Electric | Middletown | RI |
| Shawn Duguay | Johnston | RI |
| Shawn Ventura | Coventry | RI |
| Shepard Services | Cumberland | RI |
| Sheridan Electric Inc. | Warwick | RI |
| Shoreline Building & Design | East Greenwich | RI |
| Sine Plumbing & Heating | E Providence | RI |
| Site Specific | Providence | RI |
| Skawski Heating & Cooling | Providence | RI |
| Small's Plumbing Inc | Woonsocket | RI |
| Smithco Oil Service | Wakefield | RI |
| Smithfield Plbg & Htng Supply | Greenville | RI |
| Soares, William | Bristol | RI |
| Sol Power Solar LLC | Charlestown | RI |
| Some Construction Co | Providence | RI |
| Sonner Plumbing, Heating & Construction Inc | Cranston | RI |
| Sosa & Son Corp A/C Heating, Plumbing Refrigeration | Woonsocket | RI |
| South County Energy | Westerly | RI |
| South County Gas Service | Narragansett | RI |
| South County Mechanical Services Inc | Wyoming | RI |
| Spencer's Plumbing | East Greenwich | RI |
| Spl Electrical Corporation | North Smithfield | RI |
| Stable, HVAC Mechanical Contractor | Pawtucket | RI |

| Vendor | City | State |
|---|---|---|
| Stanley Delima | Middletown | RI |
| Stanton Electric, Inc | Cumberland | RI |
| Statewide Insulation | North Smithfield | RI |
| Statewide Plbg & Htg | Cranston | RI |
| Stc Boiler | West Warwick | RI |
| Stedman & Kazounis -Charlestow | Charlestown | RI |
| Stem Electrical | Warwick | RI |
| Sterling Mechanical Services LLC | Greene | RI |
| Steve Capozzoli | Coventry | RI |
| Steve Gamache | North Smithfield | RI |
| Steve Maymon Plumbing & Heating | Warwick | RI |
| Stonylane Electric | Exeter | RI |
| Sunshine Fuels & Energy Serv | Bristol | RI |
| Superior Comfort Inc | Bristol | RI |
| Superior Electric | Warwick | RI |
| Superior Fire & Electrical Services | North Providence | RI |
| Superior Insulation | Narragansett | RI |
| Superior LED Lighting LLC | Warwick | RI |
| Supply Ne Middletown 15 | Middletown | RI |
| Supply Ne Peacedale | Peacedale | RI |
| Supply New England-Pawtucket | Pawtucket | RI |
| Sw & Sons Plumbing & Heating LLC | N Providence | RI |
| Sylvester Sheet Metal Inc | West Warwick | RI |
| T&T Plumbing & Heating | Wakefield | RI |
| T. Gomes Heating & Cooling | Warwick | RI |
| Ta Gardiner Plbg & Htg | Bristol | RI |
| Tebano Electric | Bristol | RI |
| Tebo Electric Inc | Woonsocket | RI |
| Tech 1 Plumbing & Heating | Cranston | RI |
| The Affordable Plumber LLC | Pawtucket | RI |
| The Paradigm Group | Warwick | RI |
| The Plumber Company | Johnston | RI |
| Thermal Energy Inc. | Cranston | RI |
| Therrien Mechanical Systems Li | Lincoln | RI |
| Thibault Plumbing & Heating Inc | Cranston | RI |
| Thielsch Engineering | Cranston | RI |
| Thompson Properties LLC | Barrington | RI |
| Thumbs Up Plumbing | Tiverton | RI |
| Timothy Fontaine | North Providence | RI |
| Todd A Desarro | Hope Valley | RI |
| Todd Chatell Electrician | West Kingston | RI |
| Tom Jenkins Jr. | Middletown | RI |
| Tom Peters Plumbing & Heating | Portsmouth | RI |

| Vendor | City | State |
|---|---|---|
| Tom Whitaker | Newport | RI |
| Tomas HVAC | Smithfield | RI |
| Tom's Plumbing LLC | Manville | RI |
| Toner Electric Co | Middletown | RI |
| Tony Gouveia Electrician | Coventry | RI |
| Townsend, Kenneth | Exeter | RI |
| TPF Electrical Service | Pawtucket | RI |
| Travers Plumbing & Heating Inc | Portsmouth | RI |
| Tri-County Community Action | Johnston | RI |
| Troy Zane | West Greenwich | RI |
| Tuma Insulation Equipment LLC | Warwick | RI |
| U.G. Nason's Inc | Middletown | RI |
| Ultimate Plumbing | Warwick | RI |
| Universal HVAC LLC | North Providence | RI |
| Valcourt Heating Inc | Tiverton | RI |
| Valley Htg & Cooling | Hope Valley | RI |
| Valley Plumbing & Heating | Cumberland | RI |
| Valley Repair Inc | Wyoming | RI |
| Vicmir And Sons Inc | Riverside | RI |
| Victor M Neves | Johnston | RI |
| Viking Electric Inc. | Riverside | RI |
| Vision Energy Solutions, Inc | Providence | RI |
| Vivona Plumbing & Heating Inc | Portsmouth | RI |
| Wagner Plumbing Services | E Providence | RI |
| Wakefield Heating Service | Wakefield | RI |
| Wakefield Plumbing LLC | Middletown | RI |
| Waldo Plg & Htg LLC | Lincoln | RI |
| Walsh Electric | Bristol | RI |
| Warwick Plumbing & Heating | Johnston | RI |
| Watermark Plumbing LLC | Cranston | RI |
| Wayne Electric, Inc. | Bristol | RI |
| Weathertek Insulation | Coventry | RI |
| Westerly Hi Tech Solutions | Hope Valley | RI |
| Westview Plumbing & Heating Inc | Middletown | RI |
| Wickford App & Lghtng | Pawtucket | RI |
| Wide Park LLC | Kingston | RI |
| William J Riley Plumbing & Htg | Warwick | RI |
| William N Harris | Barrington | RI |
| Winsupply Warwick RI Co | Warwick | RI |
| Wojcik Electric Inc | Narragansett | RI |
| Wood's Heating Service | East Providence | RI |
| Woonsocket Neighborhood Development | Woonsocket | RI |
| Wright Comfort Solutions Inc | Coventry | RI |

| Vendor | City | State |
|---|---|---|
| Wyman & Son Electric | Providence | RI |
| Yoakum Septic Services LLC | Smithfield | RI |
| Zambarano Home Improvement | North Providence | RI |
| Zanella Plumbing & Heating | Westerly | RI |
| Zawadski Plumbing | Warwick | RI |
| Zompa Plumbing & Heating | Warren | RI |
| Association of Energy Services Professionals | Phoenix | AZ |
| Moving Forward LLC | Scottsdale | AZ |
| Vargas Electric | Tucson | AZ |
| Alternative Energy Systems | Chico | CA |
| Cohen Ventures | Oakland | CA |
| Cprime Inc | San Mateo | CA |
| CRM Orbit | San Francisco | CA |
| Nest Labs Inc | Mountain View | CA |
| Pires Electric | Freemont | CA |
| Simple Energy Inc. | Miraloma | CA |
| Source Refrigeration And | Anaheim | CA |
| Tetra Tech Inc. | Pasadena | CA |
| Voltus Inc | San Francisco | CA |
| E Source Companies LLC | Boulder | CO |
| Best Energy - Pawcatuck | Pawcatuck | CT |
| Bill Aitken Heating LLC | North Stonington | CT |
| Branco Electric | Trumbull | CT |
| Budderfly Inc | Shelton | CT |
| Cameron Hanna | Somers | CT |
| Capitol Light | Hartford | CT |
| Ceil Plbg & Htg | Pawcatuck | CT |
| Cerreto Associates LLC | Danielson | CT |
| Condon Electrical Services LLC | Waterford | CT |
| Cowan Htg&Clg | Voluntown | CT |
| Craig C. Porter | Dayville | CT |
| Densmore Oil Company | Mystic | CT |
| Duncklee Inc | Stonington | CT |
| Dynamic Building & Energy | North Stonington | CT |
| Dynamic Electric LLC | Meriden | CT |
| Eagle Industries Inc. | Colchester | CT |
| Energy Resources | Thomaston | CT |
| Gt Electric | Norwalk | CT |
| Harrington Plumbing & Heating | Pawcatuck | CT |
| Jack Kenny | W Greenwich | CT |
| John Bosma | North Stonington | CT |
| Kelly Electric | Jewett City | CT |
| Michael Giuffre | Moosup | CT |

| Vendor | City | State |
|---|---|---|
| Middlebury Mechanical | Middlebury | CT |
| Mystic Plbg & Htg | Mystic | CT |
| Nick Zaharie | Pawcatuck | CT |
| Ok Industries | New Britain | CT |
| Pater Z Contracting | Waterford | CT |
| Prime Electric | Norwich | CT |
| Prism Consulting Inc. | Stamford | CT |
| Shannon Nrg Resource | Waterbury | CT |
| Sharpco Inc | North Grosvenordale | CT |
| Simmons HVAC | Pawcatuck | CT |
| South Shore Heating & Cooling, Inc | Pawcatuck | CT |
| Steven Deangelis Electrician | Durham | CT |
| The Hdl Co LLC | Lisbon | CT |
| Tri Phase Contractors, LLC | North Haven | CT |
| Tyler J Steiner | Danielson | CT |
| US Electrical Services In | Middletown | CT |
| Valley Heating & Cooling Inc | Jewett City | CT |
| Violette Mechanical | Ellington | CT |
| Wjr Plumbing And Heating LLC | Voluntown | CT |
| ACEEE | Washington | DC |
| Cadeo Group LLC | Washington | DC |
| Energy Solutions Center | Washington | DC |
| ICF Resources LLC | Wilmington | DE |
| Noramco Us Holdings Inc | Wilmington | DE |
| City Facilities Management | Jacksonville | FL |
| Express Lighting | Pompano Beach | FL |
| Osc Solutions Inc | West Palm Beach | FL |
| Burton Energy Group LLC | Alpharetta | GA |
| Coolsys Energy Solutions | Savannah | GA |
| National Energy Educational Development Need | Manassas | GA |
| Siemens Industry Inc | Munich | Germany |
| Ace Hardware | Oak Brook | IL |
| Ecomfort.Com | Bolingbrook | IL |
| Frontier Energy Inc. | Chicago | IL |
| Innerworkings Inc | Chicago | IL |
| Zeno Controls LLC | Chicago | IL |
| 5C Energy | Attleboro | MA |
| A & M Compressed Air | Uxbridge | MA |
| A & M Electrical Mechanical, Inc. | Fall River | MA |
| Abel Vasquez | Methuen | MA |
| Advance Air & Heat Company Inc | East Freetown | MA |
| Advanced Energy Services LLC | Hopedale | MA |
| Ags HVAC Services LLC | Westport | MA |

| Vendor | City | State |
|---|---|---|
| Ahold Usa | Quincy | MA |
| AI3 Architects | Wayland | MA |
| Air Energy LLC | South Easton | MA |
| Air Masters HVAC Serv Of Ne | Fall River | MA |
| Air Tight Insulators | New Bedford | MA |
| Aks Electric Cod Acct | Rehoboth | MA |
| Alex Kabli Electrician | Rehoboth | MA |
| Alternative Building Corp | Sutton | MA |
| Alternative Weatherization | Fall River | MA |
| American Electric | Malden | MA |
| American Plant Maintenance | Woburn | MA |
| Andelman and Lelek Engineering Inc. | Norwood | MA |
| Anthony Vieira Heating And Air | North Attleboro | MA |
| Ap Sevices | Waltham | MA |
| ARCA Recycling Inc. | Franklin | MA |
| Attention To Detail Plumbing And Heating LLC | Westport | MA |
| B & L Ductless | Swansea | MA |
| B&L Ductless LLC | Dighton | MA |
| B2Q Associates Inc. | Andover | MA |
| Badgers Cooling And Heating | Plainville | MA |
| Baraby Electric | Fall River | MA |
| Bayside Electric Co Ins | Burlington | MA |
| Baystate Energy Reduction LLC | Norwood | MA |
| Bec Services Limited | Uxbridge | MA |
| Belmont Marketplace Inc | Wakefield | MA |
| Biello Electric | Fall River | MA |
| Bob Costa Plumbing & Heating | Seekonk | MA |
| Boston E Lab, Inc | Canton | MA |
| Botelho Electric | Rehoboth | MA |
| Briggs Mechanical | N Attleboro | MA |
| Bruin Corp Of Attleboro | North Attleboro | MA |
| C L Fisk And Sons | Seekonk | MA |
| C2S Energy LLC | New Bedford | MA |
| Ca Senecal Electrical S | Boston | MA |
| Cabral, Lyle *3 | Swansea | MA |
| Camara's Heating & Air | Westport | MA |
| Campbell Electric Inc | Braintree | MA |
| Can Do It Electric | Braintree | MA |
| Cannata Electric Cod Acct | Sandwich | MA |
| CENTER FOR ECOLOGICAL TEChnology | Pittsfield | MA |
| Central Cooling & Heating | Falmouth | MA |
| Champion Resources | Ipswich | MA |
| Chris Mello Plumbing And Heating | Seekonk | MA |

| Vendor | City | State |
|---|---|---|
| Classic Sheet Metal Htg & Ac | Swansea | MA |
| Cma Heating & Air | North Dartmouth | MA |
| Coastal Electric Inc. | Hanover | MA |
| Coastal Energy Services | Swansea | MA |
| Commercial Electric | Pocasset | MA |
| Commonwealth Electrical Tech | Worcester | MA |
| Competitive Plumbing & Heating | Fall River | MA |
| Complete Recycling Solutions LLC | Fall River | MA |
| Conservation Services Gro | Westborough | MA |
| Consortium For Energy Eff | Middleton | MA |
| Control Point Mechanical, Inc | Shrewsbury | MA |
| Correia Electric | Attleboro | MA |
| Cotti-Johnson HVAC Inc | Taunton | MA |
| Coughlin & Associates Ene | Stow | MA |
| Craig R Casavant Inc *3 Cod | Blackstone | MA |
| D Cabral Plumbing | Swansea | MA |
| Dalkia Energy Solutions L | Beverly | MA |
| David J. Dionne Electric | Blackstone | MA |
| David Obrien Electric | Plymouth | MA |
| Diamond HVAC | Westport | MA |
| Douglas Machado | N Dartmouth | MA |
| Dpg Corp | Rehoboth | MA |
| Dube's Plumbing | Blackstone | MA |
| Ducom Electric Inc | Tewksbury | MA |
| E & V Oil Co Inc/Iron Man Htng | Swansea | MA |
| Efficient Buildings LLC | North Dartmouth | MA |
| Electrical Technologies | Medford | MA |
| Elite Construction Corp | Seekonk | MA |
| Elite Energy Services LLC | Fall River | MA |
| Elite Heating & Air Conditioning | Swansea | MA |
| Elkus Manfredi Architects | Boston | MA |
| Emc Corporation | Franklin | MA |
| Emcor Services | Stoughton | MA |
| Emond Plumbing & Heating Inc | Taunton | MA |
| Energy And Resource Solu | North Andover | MA |
| Energy Efficiency Advisers Inc. | Mendon | MA |
| Energy Federation Inc. | Westborough | MA |
| Energyiwise Inc. | Sutton | MA |
| Environmental Systems Inc | Attleboro | MA |
| Expandable Sound | East Freetown | MA |
| Faille Electric | Plainville | MA |
| Farias Home Services | Mansfield | MA |
| Flavio S. Lubrano Electrician | Rehoboth | MA |

| Vendor | City | State |
|---|---|---|
| Flm Plumbing & Heating (2) | Seekonk | MA |
| Forte Electric Inc. | Attleboro | MA |
| Fortin Electric | New Bedford | MA |
| Furman Electric | North Attleborough | MA |
| Fuseideas | Winchester | MA |
| G & L Electric Inc. | Bellingham | MA |
| Germain Plumbing & Heating | Seekonk | MA |
| GH Electrical Service | Attleboro | MA |
| Glynn Electric Inc. | Plymouth | MA |
| Gone Green Electric Co., Inc. | Rockland | MA |
| Graybar Electric Co. Inc. | South Boston | MA |
| Greene Construction Inc. | Newburyport | MA |
| Grillo Plumbing Inc | Franklin | MA |
| Hallmark Electrical Systems, Inc | Taunton | MA |
| Hardwire LLC | Worcester | MA |
| Heat Watch LLC | Medfield | MA |
| Homeserve | Woburn | MA |
| HVAC Experts Htg & Ac | Oxford | MA |
| Indresano Energy Company | Wellesley Hills | MA |
| Inovis Energy Inc | Kingston | MA |
| Insulate 2 Save | Fall River | MA |
| Insulation R Us | Fall River | MA |
| Ironman Heating & Cooling | Swansea | MA |
| Jason Cabral | Fall River | MA |
| Jay Comeau Electrician | Attleboro | MA |
| Jay Sheldons Heating | Seekonk | MA |
| Jdp Contracting Inc | Brockton | MA |
| Jerry Alvarado | Roxbury | MA |
| Jf Electric | Quincy | MA |
| Jim Kelley Electrician | Reading | MA |
| Jmac Development Corp | Natick | MA |
| John A. Moniz Electrical | Swansea | MA |
| John Mcdonough Electrician | Boston | MA |
| Jr's HVAC Design | Belmont | MA |
| Js Construction LLC | Malden | MA |
| Justin Nardolillo | Somerset | MA |
| Kp Sullivan Heating LLC | Blackstone | MA |
| Lafayette & Cross Co. Inc | Seekonk | MA |
| Lafleur Plumbing And Heating | Rehoboth | MA |
| Larry Kissell | Rehoboth | MA |
| Larry's Heating | Rehoboth | MA |
| Lawrence Air Systems Inc | Seekonk | MA |
| Ledoux Electric | Seekonk | MA |

| Vendor | City | State |
|---|---|---|
| Lexicon Energy Consulting | Condord | MA |
| Litemor | Norwood | MA |
| Lussier, Joseph - Lussier Electric Services | Worcester | MA |
| M&S Elman Plumbing Company | East Bridgewater | MA |
| Machs Mechanical | Attleboro | MA |
| Magina, Carlos Elect Inc | Seekonk | MA |
| Mam Plumbing -Rehobeth | Rehoboth | MA |
| Marc Corbeil Plumbing | Millville | MA |
| Mark J Cadorette Plumbing And Heating | North Smithfield | MA |
| Martins Electric LLC | Seekonk | MA |
| Mason Plumbing And Heating | Taunton | MA |
| Mass Electric Company | Everett | MA |
| Mass Power And Light | Uxbridge | MA |
| Mazzarella Mechanical | Seabrook | MA |
| Mcdonough Electric LLC Cod Acct | Bedford | MA |
| Mcmanus Plumbing And Heating | Millville | MA |
| Medas Electric | Taunton | MA |
| Michael Lacroix, Electrician | Belchertown | MA |
| Michael Melino Electrician | Westford | MA |
| Mike Bell Electric | Seekonk | MA |
| Moldanado Construction, Inc. | Saugus | MA |
| Moniz Electrical Services LLC | Somerset | MA |
| Motus LLC | Boston | MA |
| Moura Mechanical Services | Hudson | MA |
| Murphy Electric & Industry Control LLC | Pembroke | MA |
| National Light Bulb Company | North Easton | MA |
| New England Energy Conpt | North Dighton | MA |
| New England Safety Systems | Taunton | MA |
| Ngusa Service Company | Waltham | MA |
| Nicks HVAC | Lowell | MA |
| Norm Svendsen | Attleboro | MA |
| Northeast Energy Efficiency | Lexington | MA |
| O.H. Burg Corporation | Stoughton | MA |
| Oberon Initiatives Inc | Stoughton | MA |
| O'Neill Mechanical Services | Seekonk | MA |
| Oracle America | Cambridge | MA |
| P&D Management Group Three LLC | New Bedford | MA |
| Patriot Sheet Metal HVAC | Seekonk | MA |
| Paul Heery Plumbing & Heating | Whitman | MA |
| Pb & J Mechanical Services | E Wareham | MA |
| Platinum Home Services Inc | Fall River | MA |
| Plumbers Supply Co - New Bdfrd | New Bedford | MA |
| Propane Plus | Rehoboth | MA |

| Vendor | City | State |
|---|---|---|
| R.J. Laperle Plumbing & Heating | Attleboro | MA |
| Ralco Elect/Service Division | Westport | MA |
| Ramos Electric | Holyoke | MA |
| Rapid HVAC & Refrigeration | Seekonk | MA |
| Raposo, Kevin | Westport | MA |
| Raymond D. Melanson Electric | Swansea | MA |
| Rem Electric | Attleboro | MA |
| Resendes Electric | Swansea | MA |
| Resource Lighting And Ene | Fall River | MA |
| Rethinking Power Management | Boston | MA |
| Retrofit Insulation | Seekonk | MA |
| Revise Energy Iic | Bradford | MA |
| Reynolds, Jeffrey Dba | Westport | MA |
| Rich May PC | Boston | MA |
| Richard Daigle | Fall River | MA |
| River Energy Consultants | Fall River | MA |
| Rob Molloy | Norwell | MA |
| Robert Bain | Rehoboth | MA |
| Robinson & Cole LLP | Boston | MA |
| Roi Energy Investments Ll | East Walpole | MA |
| Roia, Jason Electrical | Fall River | MA |
| Safe Electric | Georgetown | MA |
| Sam Quindley | Middleboro | MA |
| Sarnie Electrical | Walpole | MA |
| Schecter Electric | Swansea | MA |
| Schneider Electric Smart | Andover | MA |
| Seekonk Oil | Seekonk | MA |
| Simoes Electric | Beverly | MA |
| Simon's Supply Company | Fall River | MA |
| South Coast Alternative Power Solutions | Acushnet | MA |
| Southcoast Ele & Ref Ser | Westport | MA |
| Steam Trap Systems | Amesbury | MA |
| Steven D Haskel | Attleboro | MA |
| Stp Plumbing & Heating | Blackstone | MA |
| Sullivan & Mclaughlin | Boston | MA |
| Superior Energy Solutions, Inc. | Swansea | MA |
| Supply New England - Attleboro | Attleboro | MA |
| Supply New England - Uxbridge | Uxbridge | MA |
| Synapse Energy Econ. Inc. | Cambridge | MA |
| T & J Heating & Ac | Bellingham | MA |
| T&T Light Co | Millbury | MA |
| The Cadmus Group LLC | Boston | MA |
| The Crew | Somerset | MA |

| Vendor | City | State |
|---|---|---|
| The Energy Efficiency Group | Norwood | MA |
| Theroux Mechanical | S Attleboro | MA |
| Thomas P Cleary | Weymouth | MA |
| TNZ Energy Consulting Inc. | Stoughton | MA |
| Tom Fricker Heating & Ac | Franklin | MA |
| Tony Refrigeration LLC | Fall River | MA |
| Total Comfort Heating & Coolin | Norton | MA |
| Total Fire Services | Bellingham | MA |
| TRC Environmental Corp. | Boston | MA |
| Triangle Refridgeration | Fall River | MA |
| Trust Energy Solutions LLC | Marlborough | MA |
| Uplight Inc | Lexington | MA |
| Utility Energy Inc. | Fall River | MA |
| Veolia North America | Boston | MA |
| Victory Heating & Ac Co | Bellingham | MA |
| Wade Haudons | Taunton | MA |
| Wicked Plumbing LLC | Somerset | MA |
| Wipro Ltd | Quincy | MA |
| Wnuk Plumbing LLC | E Longmeadow | MA |
| World Energy Efficiency S | Worcester | MA |
| Young Electrical Service | Taunton | MA |
| Your Plumber Inc | Norton | MA |
| Enerwise Global Technologies Inc. | Baltimore | MD |
| Green & Healthy Homes Ini | Baltimore | MD |
| Housing Opportunities Co | Kensington | MD |
| Mez Electric | Owings Mills | MD |
| Boyko Engineering Inc. | Gorham | ME |
| Naomi Mermin Consulting | Portland | ME |
| Al Durand Electric | Wixom | MI |
| Energy Design Service Sys | Whitmore Lake | MI |
| Northern Power Elect Sv | Mancelona | MI |
| Energy Management Collabo | Plymouth | MN |
| 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 |

| Vendor | City | State |
|---|---|---|
| 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 |
| Resource Innovation Institute | Portland | OR |
| Bidenergy | Philadelphia | PA |
| Darlington Electric | Dowington | PA |
| Direct Energy Business Ma | Pittsburgh | PA |
| Jdv Electric | Lansdowne | PA |
| Mammoth Incorporated | Pleasant Gap | PA |
| Ontech.Com | Online | PA |
| Pontoon Solutions Inc. | Pittsburgh | PA |
| US Energy Solutions Inc | Philadelphia | PA |
| Wesco Energy Solutions | Pittsburgh | PA |
| William Stegall*3 | Easley | SC |
| Hightower Electric | Houston | TX |
| Lopez Negrete Communication | Houston | TX |
| Maintenance Plus | Plano | TX |
| Miguel Dominguez Electrician | Fort Worth | TX |
| NexRev Inc. | Plano | TX |

| Vendor | City | State |
|---|---|---|
| Smith System Driver Improvement | Arlington | TX |
| Compressed Air Challenge | Alexandria | VA |
| Guidehouse Inc | Mclean | VA |
| Optimal Energy Inc. | Hinesburg | VT |
| Vermont Energy Investment Corp | Winooski | VT |
| Compass Electric Cod Acct | Vancouver | WA |
| Flowenergy LLC | Woodinville | WA |
| New Buildings Institute Inc. | White Salmon | WA |
| Northwest Energy Efficiency Council | Seattle | WA |
| Franklin Energy Services | Port Washington | WI |
| Slipstream Group Inc. | Madison | WI |

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