

Rhode Island Energy Efficiency

First Quarter 2023 | Rhode Island Energy

May 11, 2023

Overview

Rhode Island Energy's energy-efficiency programs continued to deliver energy savings for Rhode Island customers through the first quarter of 2023 by achieving 51,616 net lifetime MWh of electric savings (7.7% of the net lifetime goal) and 420,429 net lifetime MMBtu of natural gas savings (11.9% of the net lifetime goal).

- Rhode Island Home Show: The Company and the EnergyWise lead vendor staffed a
 booth at the RI Home Show received 257 leads for Home Energy Assessments.
 Additionally, the HVAC team worked closely with the organizers of the Home Show to
 promote availability of booths to local HVAC contractors. The companies were then
 highlighted as Energy Exhibitors on the website and on visitor maps. The team also
 highlighted the Home Show in weekly newsletters and encouraged HVAC contractors to
 stop by the Rhode Island Energy and Office of Energy Resources booths in the Energy
 Expo.
- Residential New Construction: The Company continued its partnership with RI Housing
 and the Rhode Island Office of Energy Resources (OER) to offer funding for qualified
 teams to help design and construct affordable, energy-efficient Zero Energy Building
 (ZEB) housing units to serve low- and moderate-income residents in Rhode Island. An
 RFP offering up to \$500,000 for the development of these units was released in March.
- Income Eligible Services: The Income Eligible single-family program completed contract
 amendments focused on Equity Zones where customers have been underserved. The
 Equity Zones balanced the number of low-income customers with CAP resources and
 shifted CAP territories to adjacent agencies thereby providing additional support to low
 participation areas.
- Large Commercial Retrofit: A study on the energy saving benefits of refrigeration leak
 detection and repair concluded at a grocery store in Barrington, RI. This location was
 part of a larger study across state lines, with this being the only location in Rhode Island.
 The high-level results corroborate that the repair of refrigerant leaks is not only an
 effective method of saving kWh in grocery stores but also vital to reducing harmful
 GHGs emissions.

2023 Program & Initiative Updates – Q1

Residential New Construction (RNC)

The Residential New Construction (RNC) program achieved 189 net lifetime MWh of electric savings (1.4% of the lifetime goal) and 2,744 net lifetime MMBtu of gas savings (4.7% of the lifetime goal) through the first quarter of 2023.

Q1 RNC Program Enrollments and Completed Units

- 28 housing units were built to RNC Program standards.
 - o 18 units were new construction/full gut rehab (64%).
 - 10 were renovation/rehab (36%).
 - o 28 units were market rate (100%).
 - o 9 units had gas heat (32%).
 - o 4 units had all electric heat (heat pumps) (14%).
 - 6 units had hybrid electric/propane heat pumps (21%).
- 172 newly planned housing units enrolled in the RNC Program.

Q1 RNC Program Challenges

- Decrease in Completed Units
 - Previous Construction Delays
 - New construction projects in planning and design phases in 2020 and 2021 got off to late starts due to issues with permitting, labor, material shortages, delayed funding, etc.
 - These delays resulted in fewer completed units than anticipated in 2022 and into the first quarter of 2023.
 - Limited Rhode Island New Construction Opportunities
 - A report issued in January noted that Rhode Island had the fewest new houses built per capita than any other state in the country.
 - https://pbn.com/report-r-i-slowest-in-nation-for-newhousing-construction/
- 2023-2024 Pipeline of Completing Units
 - In 2022 and 2023 the RNC program team focused on enrolling new projects currently in early planning and design into the program, including 873 in 2022, and 172 in Q1 2023 alone.
 - The pipeline of projects to support in 2023 and 2024 is strong.
 - Many of these projects are multifamily affordable housing.

- Over 200 units are seeking Zero Energy or Passive House certification.
- The RNC Program has continued to provide training and perform inspections on projects currently under construction and is forecasted to achieve a similar number of completed units as 2022.

Q1 RNC Program Zero Energy Project Highlights

• Zero Energy Homes Pipeline

 The RNC Program Vendor continued to provide technical support for Zero Energy homes across the state, including 194 seeking Passive House certification and 7 seeking DOE Zero Energy Ready certification.

Bourne Mill Phase 3, Tiverton

- o Four story building with 59 units of affordable housing.
- All electric (fossil fuel-free), with solar photovoltaic array and electric vehicle charging.
- In Q1 this project was official designated PHIUS Design Certified
 - https://www.phius.org/certified-project-database/bourne-millphase-3
- This project is currently under construction and is expected to be completed in April 2024.
- In addition to participating in the RNC program, this project was awarded ZEOS funds in 2021 (see below).

Zero Energy for the Ocean State (ZEOS) Round III

- Rhode Island Energy continued their partnership with RI Housing and the Rhode Island Office of Energy Resources (OER) to offer funding for qualified teams to help design and construct affordable, energy-efficient Zero Energy Building (ZEB) housing units to serve low- and moderateincome residents in Rhode Island.
- An RFP offering up to \$500,000 for the development of these units was released in March.
- To qualify, housing units must meet ZEB standards and include solar photovoltaic (PV) and air-source heat pump (ASHP) technologies to achieve ZEB status.
- Eligible units may be new construction and/or renovation projects in 1-4unit properties or larger multifamily homes.
- This third round of grant funding is being made available following two previous rounds of ZEOS in 2019 and 2021 that resulted in the funding of projects in Tiverton, Providence, East Greenwich, Jamestown, Middletown, and North Kingstown with a variety of income requirements and innovative designs.

- Since the ZEOS program began in 2019, it has supported the development of 186 units of Net Zero housing.
- The RNC Program provides technical support, training, and incentives for all ZEOS awarded projects.

Income Eligible Services (IES)

The Rhode Island Energy Income Eligible Services program achieved 4,847 net lifetime MWh of electric savings (20.1% of the lifetime goal) and 12,540 net lifetime MMBtu of gas savings (7.4% of the lifetime goal) through the first quarter of 2023.

Field operations continued in the first quarter with all six CAP agencies providing home energy assessments, Weatherization, and Heating System Services. Virtual AMP program services are no longer being provided and there have been no requests from customers.

The first quarter IES Best Practice meeting was held virtually, on 28 March 2023. This meeting focused on Rhode Island Energy Marketing, a DOE WAP update including the Bipartisan Infrastructure Law (BIL) program, YTD program delivery performance, Equity Teams, Notes from the field featuring customer feedback, and a Home Show primer. Representatives from 6 CAP agencies, Rhode Island Department of Human Service, Division of Public Utilities & Carriers, the Energy Efficiency Resource Management Council, Rhode Island Energy and CLEAResult, attended.

The KPI process continued in the first quarter to improve communications between CAPs and the Lead Agency. KPI meetings were held with each CAP, the Company's Lead Vendor (LV) and at least one RI Department of Human Services (DHS) representative. These meetings ensure that the CAPs are aware of their KPI goals, their pace to meet the goals and provide a dedicated time for constructive dialog.

The LV has improved communication across the program with the assistance of the Appliance Vendor, SMOC, and the Local agencies. Over \$1,200,000 in Appliance invoices were processed in Q1.

Challenges and Responses

Providing services equitably to all Rhode Island Income Eligible Customer continues to be a challenge. The Income Eligible single family program completed contract amendments focused on Equity Zones where customers have been underserved. The Equity Zones balanced the number of low income customers with CAP resources and shifted CAP

territories to adjacent agencies thereby providing additional support to low participation areas. This was an iterative process with full agency cooperation and buy in.

Air Source Heat Pump installations will need to ramp up from 27 customer installations in 2022 to 60 customers served in 2023. To meet this goal, one agency, Comprehensive CAP, was selected to work with HVAC vendors and process all the projects. The selection criteria included outstanding relationships with qualified ASHP vendors, ability to rapidly inspect, process and pay contractors, and an historic reputation for outstanding customer service.

Staffing at some CAPs continues to be a challenge to IES Program implementation. IES is implementing several approaches to reducing the impact of these barriers:

- Contracting additional auditors and providing freelance audit services to the agencies. However, workforce is not the only issue. The CAP agencies most in need of additional audit staff also need assistance to streamline contractor management.
- RIBA Auditor & Installer program, RWCP (Residential Construction Weatherization Program) is building a class for 2023. This class will be sponsored by RI DHS and RIE IES.

Customer Highlight

Mellissa from Wakefield - The auditor you sent (Andrew) was great.

Jane from Middletown - I just wanted to say how professional the people were. I am very pleased that my heat isn't through the window anymore.

EnergyWise Single Family

The EnergyWise Single Family program achieved 1,234 net lifetime MWh of electric savings (7.3% of the lifetime goal) and 57,193 net lifetime MMBtu of gas savings (11.7% of the lifetime goal) through the first quarter of 2023.

The EnergyWise program conducted 1,190 home energy assessments and completed 478 weatherization projects in the first quarter.

Activities of interest include:

- The company and lead vendor staffed a booth at the RI Home Show (Thursday, March 30-Sunday, April 2) and received 257 leads for Home Energy Assessments.
- The lead vendor hired one new Energy Specialist in Q1.
- A Heat Pump Concierge Pilot home was completed in February updating their heating system with new heat pumps.

- IIC Meeting was conducted in January.
- Energy Specialists continue to have monthly sales training with Mark Jewell from "Selling Energy".
- Lead vendor began utilizing VHEAs to reduce wait times for customers requesting audits exclusively for Heat Pumps.

Challenges and Responses

Although the demand for Home Energy Assessments remains strong, the uptake of weatherization projects has been lagging. The downturn is likely due to broader economic headwinds that are making customers reluctant to take on costs associated with weatherization projects. In response, a targeted e-mail campaign was developed focusing on customers who have had Home Energy Assessments but have not moved forward with weatherization projects. The lead vendor also continues to focus on sales training for Energy Specialists. Planning is also in process for the introduction of an enhanced customer incentive early in the second quarter of 2023.

Customer Highlights

Customer feedback themes from the HEA included:

- Some customers expressed disappointment that some measures, including bulkheads, were not included in the program offer.
- Many customers commented on the professionalism and technical knowledge exhibited by the auditor who conducted their HEA and the responsiveness of the scheduling staff.

<u>Customer feedback themes from weatherization contractors included:</u>

- Many customers had strong praise for their contractors and Rise Engineering as well as the Energy Wise program as a whole.
- Several customers stated that they noticed the improved comfort in their homes after the completion of their weatherization project.

EnergyWise Multifamily, Income Eligible Multifamily, C&I Multifamily

The EnergyWise Multifamily program achieved 119 net lifetime MWh of electric savings (1.3% of the lifetime goal) and 4,636 net lifetime MMBtu of gas savings (4.2% of the lifetime goal) through the first quarter of 2023. The Income Eligible Multifamily program achieved 14 net lifetime MWh of electric savings (0.1% of the lifetime goal) and 1,536 net lifetime MMBtu of gas savings (0.9% of lifetime goal) through the first quarter of 2023. The C&I Multifamily program achieved 0 net lifetime MMBtu of gas savings (0% of the lifetime goal) through the first quarter of 2023.

Customer Highlights

Douglas Manor - North Providence RI

Income eligible gas DHW and boiler project. Installed a 500K BTU high efficiency, condensing domestic hot water boiler. The existing DHW circulator pumps were also replaced with new high efficiency circulator pumps, the project also included new control wiring. The gas incentives for this project were \$20,905 with an estimated 15,840 net lifetime therm savings. The electrical incentives were \$6,000 and have an estimated net lifetime kWh savings of 12,068.

<u>56 Tell Street Apartments - Providence RI</u>

Standard income air source heat pump project. Installed 6 slim duct air source heat pump systems in a 3-story apartment building consisting of 6, 2 bed apartments. The heat pumps replaced electric baseboard heat. The electric incentive for this project was \$78,750 and the estimated net lifetime savings is 428,150 net lifetime kWh.

Brook Farm Commons Condos - North Providence RI

Standard income weatherization project. Installed unit air sealing, duct sealing, attic insulation, overhang insulation, skylight wall insulation, and bathfan ventilation to participating condo units. The units also received domestic hot water measures of showerheads, and aerators, as well as pipe insulation. The gas incentives for this project were \$31,045 and have an estimated net lifetime therm savings of 18,392.

Challenges and Responses

Material lead times have improved slightly but some AHSPs and gas boiler equipment is still 8-10 weeks out.

Lead vendor staff report instances where customers are reluctant to take on large copayments for conservation work because of the instability in the current market.

Workforce Development

The Lead vendor heat pump team participated in the on-site Fujitsu VRF training at the Fujitsu headquarters in NY.

ENERGYSTAR® HVAC (Heating and Cooling)

The ENERGYSTAR® HVAC (Heating and Cooling) program achieved 4,089 net lifetime MWh of electric savings (5.8% of the lifetime annual goal) and 36,919 net

lifetime MMBtu of gas savings (7.1% of the lifetime goal) through the first quarter of 2023.

Q1 HVAC Contractor Trainings

- 10 half-day and quarter-day contractor trainings were held during the first quarter, providing both refresher courses and trainings for new HVAC technicians.
- The HVAC Program offers several types of live, virtual HVAC Check testing trainings and training modules:
 - o AC Check
 - MS Check (specifically for contractors who only install mini splits)
 - HVAC Check (which includes both MS Check and AC Check)
- The HVAC Program also launched in person, hands-on, on-site trainings in Q1
 - The team has a working 9,000 btu ductless mini split on a Quik Sling portable stand available for training purposes in their Providence office.
 - This has been particularly valuable as a follow up to the virtual HVAC Check trainings and as refresher trainings for techs already active within the program.
 - The portable training unit was also transported to HVAC company locations for trainings, when requested.
 - o Trainings began in March and will continue throughout the year.
- The HVAC Program also developed a new Heat Pump Overview presentation
 - This is aimed at a broader audience (not just HVAC contractors), with a goal to raise general awareness of heat pump technology, understand the importance of sizing, duct design and proper installation, and share best practices for operation.
 - This new presentation was given to the Plumbing & Mechanical Inspectors Association, in partnership with Rhode Island Energy's Codes & Standards Technical Support program.
 - It will be presented to other audiences and venues later in the year

Q1 HVAC Check Testing

The Program team actively reaches out to HVAC contractors to encourage them
to perform HVAC Check testing on both new systems and existing systems during
preventative maintenance visits to ensure proper operation.

- HVAC Check testing can only be performed in warmer weather months.
- Due to mild weather in the region HVAC contractors were able to perform 44 HVAC Check tests during the first quarter.

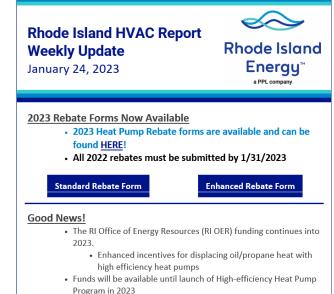
Q1 HVAC Enhanced Rebate Quality Control Inspections

- 115 Quality Control (QC) inspections were performed on recently installed heat pumps that qualified for Enhanced Rebates.
- These inspections verify equipment eligibility and provide an opportunity to connect with residents to determine how well their systems are operating, and to share best practices for successful operation.

Q1 Weekly HVAC Contractor Newsletter

The team prepares and distributes a weekly HVAC Program newsletter specifically for HVAC companies, contractors, technicians, distributors, and other trade allies.

- Topics for the newsletter during the first quarter included
 - Links to 2023 Rebate Forms
 - Information about new SEER2 and HSPF2 standards
 - Links to newly released Energy Star and 2023 federal tax credit standards
 - Links to upcoming HVAC Check trainings
 - Industry best practices for successful installation and operation
 - Reminders of requirements for qualifying for Enhanced Rebates
 - o Information about the RI Home Show
 - Availability of program support in Spanish
- The newsletter also contained information and links to programs such as EnergyWise and the HEAT Loan.
- There are 650+ recipients on the distribution list.



 Schedule EnergyWise HEA and WZ work, as that will remain a program requirement in 2023 for all Enhanced Rebates

Q1 High Efficiency Gas Program Support

- The HVAC Program team continued to promote Rhode Island Energy's high efficiency gas rebates to distributors, gas equipment factory representatives and contractors through the weekly newsletter.
- High efficiency equipment incentives were promoted via email marketing to approximately 131K recipients in February.



Q1 HVAC Program Highlights

The Granite Group Event

The HVAC Program Vendor gave a presentation at a dealer event sponsored by The

Granite Group in Providence, with 30+ attendees. The Granite Group is a wholesale distributor of plumbing, heating, cooling, and water supplies to contractors across New England. The HVAC Program Vendor was invited as a guest speaker as part of their scheduled factory-led heat pump training. The team shared information about the HVAC program, as well as other energy-efficiency programs and incentives offered by Rhode Island Energy. After the training, attendees gathered for dinner, during which



the Vendor had the opportunity to answer questions and network with HVAC contractors.

Program rebate applications, and materials such as ductulators and best practices for installation, were also made available to attendees. The event provided an important opportunity to have face-to-face conversations with industry colleagues about the challenges they face and how to use the rebates as a selling tool.

HVAC Program Donation to Providence Career & Technical Academy

The HVAC team donated a ducted air handler system that had been specifically modified for training purposes with removable supply and return plenums and air filter and filter grills, all easily disassembled and on a dolly for transport, to the HVAC & Plumbing Program at Providence Career and Technical Academy. Students will use this equipment as part of their training curriculum. The team plans to visit these students later in the year.

Rhode Island Home Show

The HVAC team worked closely with the organizers of the Home Show to promote availability of booths to local HVAC contractors. The companies were then highlighted as Energy Exhibitors on the website and on visitor maps.

The team highlighted the Home Show in weekly newsletters and encouraged HVAC contractors to stop by the Rhode Island Energy and Office of Energy Resources booths in the Energy Expo.

Q1 HVAC Program Challenges

- The program continued to field customer and contractor questions/concerns about new equipment SEER2 and HSPF2 standards
 - o DOE has released new standards for rating the efficiency of heat pumps.
 - Existing systems will need to recertify but can continue to be sold through 2024.
 - There is now a mix of SEER/HSPF and SEER2/HSPF2 rated equipment in the marketplace, with different AHRI numbers, which has created challenges for verifying rebate eligibility.
 - o To ease the transition the program is accepting both ratings in 2023.
 - SEER2/HSPF2 standards equivalent to the current SEER/HSPF standards have been incorporated into the current rebate offering.
 - It is anticipated that only SEER2/HSPF2 rated equipment will be eligible for rebates beginning in 2024.
- The program also fielded questions from contractors and customers about the new federal tax credits, and OER's High-efficiency Heat Pump Program (HHPP), which is expected to launch later in 2023.

- Information about the 2023 federal tax credits was included in weekly program newsletters, along with news that the RGGI funded enhanced incentives for oil/propane heat displacement would continue to be offered in 2023 until the HHPP launch.
- HVAC program rebate reporting had a slow start in Q1 due to several factors.
 - Planned rebate vendor system integration.
 - Challenges due to integration of SEER2/HSPF2, which caused delays with updating the AHRI and NEEP lists used for validation purposes.

Residential Consumer Products

The Residential Consumer Products program achieved 1,305 net lifetime MWh of electric savings (4.1% of the lifetime goal) through the first quarter of 2023.

Recycling:

The first dehumidifier recycling event of the year was held in collaboration with the City of Woonsocket at their Department of Public Works facility.

Despite the weather, forty-nine (49) Rhode Island Energy residential customers attended the event and were delighted to recycle their inefficient dehumidifier and receive their \$30 energy efficient incentive. The event was marketed to 29,502 electric customers by email. During the event customers were also informed of the many other residential products and incentives available to them through the programs.

This was the first of thirteen (13) events scheduled for the year, four (4) of which are scheduled to be held at city and town DPW facilities with our focus on underserved communities. The balance of the events will be held at our retail partner locations such as Home Depot, Lowe's, and ACE Hardware.

Rhode Island Energy

Turn old appliances into cash.



Appliance Recycling Program

Outdated appliances can increase your electricity bill. Did you know recycling them can put money in your pocket? We'll pick them up for free—and properly recycle the materials, too.

You'll get \$50 for each recycled refrigerator or freezer.

Why pay to have your old working appliances taken away? Just schedule a pickup, and we'll do the rest!

City of Woonsocket DPW Dehumidifier Turn in Event: 49 Dehumidifiers Recycled





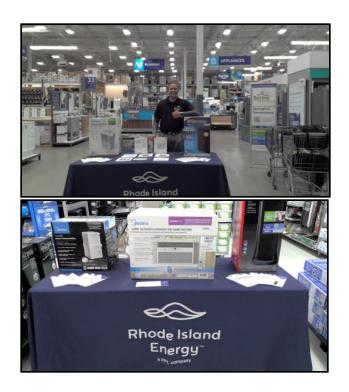
City of Woonsocket DPW Dehumidifier Turn in Event: 49 Dehumidifiers Recycled

Consumer Education and Retailer Outreach:

The Consumer Products Lead Vendor (LV) continues to promote the energy efficient products offered under the Rhode Island Energy program by staffing educational tables at Big Box Retailers such as Lowe's, Home Depot and Walmart. These informal events meet RIE customers at the time of purchase and provide customers an opportunity to ask questions and gain information on the programs.

Below, Educational tables at Lowe's in Johnston, RI and Walmart in Westerly, RI. In the first quarter of 2023, the Lead Vendor staffed six outreach events in total. The LV also provides retailer support and answers questions from sales staff, provides program training, and verifies that program information is displayed correctly. A total of 288 retailer visits were completed in quarter one.

In February, the LV surveyed thirteen (13) Home Depot and Lowes stores to check on Heat Pump Water Heater (HPWH) stocking practices. Only 9 of the 13 stores had HPWH's in stock. This information was relayed to Home Depot and Lowe's corporate offices which resulted in a commitment to increase the number of units being stocked in Rhode Island to ensure inventory is always on hand.



Promoting the Most Efficient Products:



Recycling Refrigerators and Appliance material



Variable Frequency Pool Pumps:

The Consumer Products program is busy preparing for the upcoming summer pool season. The Baystate Pool Supplies Annual Opportunity Day was held in Uncasville, CT on February 22nd. This show, sponsored by the largest New England based pool supplies distributor, is the unofficial kickoff to the pool season in the Northeast. Baystate generously supplied a booth space for the LV to highlight all the pool pump incentive programs. The LV was invited to speak at the new technology seminars for both Hayward and Pentair, the two largest pool supply manufacturers. Thousands of pool installers wandered through the trade show to



Fluidra (Jandy & Zodiac pumps) representatives highlighting their new VS pump

learn about new products, take advantage of special pricing, and stop by to discuss the pool pump incentive programs.

On March 8th, the LV was also invited to present at **Pentair's 2023 Annual Training Session** to discuss the Variable Frequency Pool pump program offered through Rhode Island Energy. To date, RI Energy has signed six (6) Memorandum of Understanding (MOU's) with pool pump distributors, ensuring active participation this year.

Additionally, Pentair announced that due to supply chain issues experienced during the COVID-19 shutdowns and lingering into

2022, they had introduced new products and pumps now manufactured and assembled in the United States to prevent such issues in the future.

RI Energy kicked off a new e-commerce Marketplace offering customers instant rebates as well as manufacturer discounts on a variety of products such as Air Purifiers, APS and Smart thermostats.

Home Energy Reports (HER)

The Home Energy Reports (HER) program achieved 6,857 net lifetime MWh of electric savings (28.2% of the lifetime annual goal) and 15,787 net lifetime MMBtu of gas savings (17.2% of the lifetime goal) through the first quarter of 2023.

In January, Home Energy Reports reported on overall program savings achieved through behavioral savings in 2022. February HER messaging focused on high-efficiency heating systems and March features electric heat pump water heating.

Making a difference together—you and your community

By taking steps to reduce energy consumption, you and other Home Energy Report recipients in Rhode Island saved more than 33 million units of energy over the last 12 months. That's equivalent to the CO₂ emissions of 2.6 million gallons of gasoline!

Learn more at rienergy.com/RI-Home/Energy-Saving-Programs.



Dial up the savings with new, highefficiency heating equipment



Want to bring a little more comfort, convenience, and savings into your home? New electric heat pumps, gas boilers, and gas furnaces keep your home nice and warm every winter, while helping you save money and energy, too. With up to thousands of dollars in rebates from Rhode Island Energy available, now is the perfect time to upgrade.

Is your water heater wasting energy?



If you're not using a heat pump water heater, chances are you're wasting energy. Upgrade to a high-efficiency, electric heat pump water heater and start saving today. Plus, get a \$600 rebate. Rhode Island Energy also offers rebates for energy-efficient gas water heaters.

Upgrade today

Code Compliance Enhancement Initiative (CCEI)

Overview of Trainings

Q1 Trainings

- > 12 training events with 207 attendees were held during the first quarter.
 - o 11 residential trainings, with 192 attendees.
 - 1 commercial training, with 15 attendees.

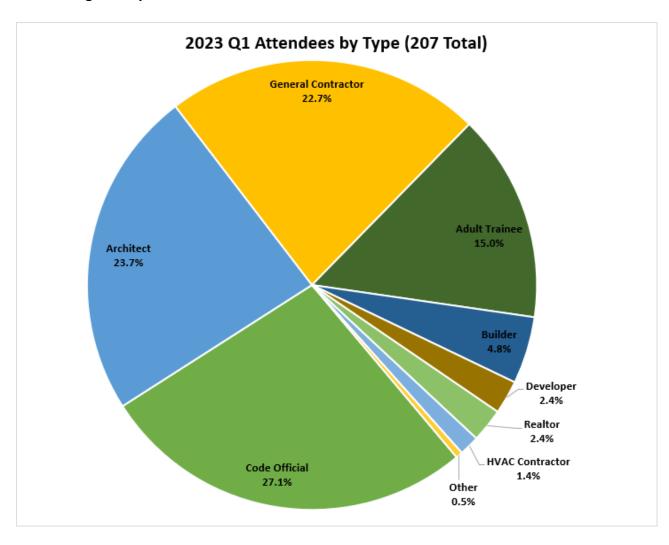
Q1 Training Topics

- Residential
 - Weatherization & Insulation
 - Healthy Homes & Indoor Air Quality
 - o Chapter 11 1 & 2 Family Dwelling Energy Code
 - Upcoming Changes to the Residential Energy Code
 - Overview of Heat Pumps
 - Blower Door Testing On-Site Training
 - Heating, Cooling & Ventilation
 - Mechanical Ventilation in the Energy Code
- Commercial
 - Advanced Commissioning

Q1 Training Locations

- Many trainings continue to be delivered virtually, particularly those in partnership with AIA-RI, RIBA, and the RI Association of Realtors, who integrate these trainings into their annual member education curriculum.
- ➤ In person training locations
 - o Rhode Island Building Officials Association Annual Expo in East Greenwich
 - Monthly Plumbing & Mechanical Inspectors Association Education Meetings in East Providence
 - Evening pre-apprentice training courses coordinated through the Residential Construction Workforce Partnership in Coventry

Q1 Training Participants



Q1 Industry Stakeholder Partnership Support, Engagement & Training Highlights

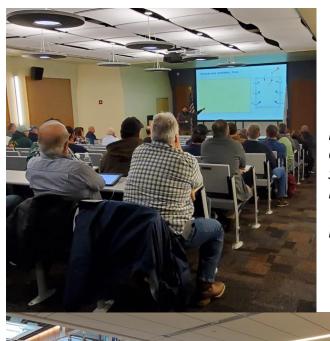
> Rhode Island Builders Association (RIBA)

- The CSTS team continued to partner with RIBA to deliver energy code trainings as part of their Contractor Training & Development Program.
- Q1 topics
 - January: Heating, Cooling & Ventilation.
 - February: Chapter 11 1 & 2 Family Dwelling Energy Code.
 - March: Upcoming Changes to the Residential Energy Code.
- Trainings were coordinated by RIBA and delivered via Zoom.
- These trainings are approved for RI Contractor Registration & Licensing Board CEUs.
- The CSTS team continued to submit articles for RIBA's monthly magazine during the quarter.

 Topics included an overview of the 2023 Residential New Construction Program; Westminster Street - a Passive House Case Study; and Performance versus Prescriptive Paths in the Energy Code.

> Rhode Island Building Officials Association (RIBOA)

- CSTS delivered a training on Mechanical Ventilation in the Energy Code for RIBOA at their annual Expo held at New England Tech in East Greenwich.
- This training was approved for Building Official CEUs.
- Over 50 building officials and contractors attended.
- The CSTS team also staffed a booth, sharing Rhode Island Energy program materials and responding to questions about code testing, upcoming code changes and Rhode Island Energy's energy-efficiency programs.



Pictured left: Jon Erickson, Residential New Construction Program & Energy Codes & Standards Trainer, presenting at the RIBOA Expo

Pictured below: RIBOA Expo Tradeshow Floor

American Institute of Architects - Rhode Island (AIA-RI)

- CSTS continued to partner with AIA-RI to offer AIA accredited trainings as part of their Continuing Education virtual Lunch and Learn series.
- o Q1 topics
 - January: Healthy Homes & Indoor Air Quality.
 - February: Advanced Commissioning.
 - March: Mechanical Ventilation in the Energy Code.

Rhode Island Association of Realtors (RIAR)

- CSTS continued to partner with RIAR to offer trainings as part of their membership's training curriculum.
- CSTS held a training on Weatherization & Insulation in Q1.

Rhode Island Plumbing & Mechanical Inspectors Association (RIPMIA)

- The CSTS team coordinated efforts with Rhode Island Energy's HVAC Program to bring additional knowledge about heat pumps to the Association.
 - The HVAC Program Trainer delivered an Overview of Heat Pumps training at their monthly meeting in February.
 - CSTS invited Mitsubishi to deliver presentations on residential and commercial heat pumps at their monthly meeting in March.

> Residential Construction Career Training

- This 26-week evening pre-apprentice training course, which is funded through the RI Department of Labor and Training and Rhode Island Builders Association, is being offered through the Residential Construction Workforce Partnership (RCWP) and incorporates and supports several of Rhode Island Energy's Programs.
- Income Eligible Services (IES)
 - CAP agencies participating in IES often struggle to attract and retain skilled energy auditors.
 - This course provides the skills and training necessary for this career including soft skills, introduction to building science, weatherization, and HVAC.
 - The goal is to provide employment opportunities for participants.
- Classes are held on weekdays from 5.30 pm to 8.30 pm.
- During Q1 the CSTS team held two energy code trainings as part of their curriculum, addressing building science, insulation, HVAC, and blower door testing.
- RESIDENTIAL CONSTRUCTION
 CAREER TRAINING

 15-Week Residential Construction Program a valued at \$5,000 per participant

 15-Week Residential Construction Pro-Appendice Energy Weatherization
 Auditor, Installer & Performance Evaluator Training Program

 Classes and Program a value of \$5,000 per participant

 Classes meet Mondays, Testdays, Wednesdays, and Therefore the Book of the \$20 pm.

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 Classes meet Mondays, Testdays, Wednesdays, and Therefore the Book of the

 "THANK YOU for another GREAT night with our students. The way you guys are able to grab their attention is amazing and so well appreciated!!!!!!! Looking forward to next week. THANKS again for ALL your help and support in our Programs. Together we are changing lives". - Team RCWP

CSTS Updates, Challenges & Solutions

- Code Update Current Code
 - The RI Building Code Commission officially approved the current energy code in late 2021 and it went into effect early 2022.
 - The current code is based upon 2018 IECC, but still contains several weakening amendments on the residential side.
 - The CSTS team updated training materials to reflect the changes.
- Code Update Next Code
 - The next code, based upon 2021 IECC, is currently under review.
 - It is anticipated that the weakening amendments, which have been in place since the state's adoption of 2012 IECC in 2013, will finally be removed.
 - The removal of these amendments will result in a steep learning curve for the industry.
 - CSTS is preparing curriculum and materials to increase understanding and knowledge of the new code in advance of its adoption and will provide support with compliance once it has been approved and adopted.

Large Commercial New Construction

The Large Commercial New Construction program achieved 6,589 net lifetime MWh of electric savings (4.2% of goal) and 204,533 net lifetime MMBtu of gas savings (28.5% of goal) through the first quarter of 2023.

There are currently 60 active projects in Q1. This is up from 40 in Q4 2022 for a 50% increase. There are about 10 additional leads that the Company is looking to obtain more information for project qualification.

Additional projects of note are:

- A proposed New High School in Middletown
- Bryant University Dining Hall and Convocation and Arena for Athletics
- Central Falls Elementary School and High School
- Fogarty Memorial Elementary in North Scituate
- Johnston Public Schools
- Roger Williams University

Leidos is working to finalize customer marketing materials to reflect the updates in the program for 2023.

Challenges and Responses

- The Small Business Tool currently reflects IECC 2015 and needs to be updated to IECC 2018 to reflect the RI Energy Code. The New Construction team is working with RI Energy and their partners to update the tool.
- For larger buildings we need to ensure the energy modeling reflects IECC 2018.
- Developing a formalized process flow to outline roles and responsibilities for all stakeholders involved in New Construction.

Large Commercial Retrofit

The Large Commercial Retrofit program achieved 21,708 net lifetime MWh of electric savings (8.9% of goal) and 73,458 net lifetime MMBtu of gas savings (7.2% of goal) through the first quarter of 2022.

Industrial Initiative

Leidos worked with an industrial customer to identify an energy conservation measure that would add 2 inches of fiberglass insulation to six uninsulated 10,000-gallon steel tanks. The tanks hold various plasticizers needed for process that are kept in a viscous state by an internal circular style heating coil. The ideal process temperature for each tank is 160 degrees Fahrenheit, whereas the actual tank surface temperatures measured between 149- and 161-degrees Fahrenheit. By adding insulation to the tanks, the customer is expected to realize gross annual savings of over 42,500 kWh, equal to roughly a 5% reduction of their total annual usage.

EnergySmart Grocer Initiative

A study on the energy saving benefits of refrigeration leak detection and repair concluded at a grocery store in Barrington, RI. This location was part of a larger study across state lines, with this being the only location in Rhode Island. It's well established that at any given time, all grocery stores have some refrigerant leak occurring across their refrigeration systems. From an energy consumption perspective, there is an opportunity for kWh savings, especially on systems that lack consistent and regular maintenance. Leaky systems lead to inefficiency and stress on equipment and can effectively shorten the life of a compressor, while demanding more energy to run. Tighter systems, or a system with few or no leaks, run efficiently and consume less

overall energy. Pre-and Post metering was done to help engineers measure the results. The high-level results corroborate that the repair of refrigerant leaks is not only an effective method of saving kWh in grocery stores but also vital to reducing harmful GHGs emissions. Overall, the store appeared to be relatively tight except for a leak found and repaired on Rack A and a very small leak on Rack B suction Header. This leak is at or under 10 PPM. The store was not able to allow us to shut the rack down to repair, but the leak was repaired by a store maintenance tech repaired the leak following morning. All cases and coolers associated with each Rack were found to be tight. Technicians added 100 lbs. of R-507 to Rack A which brought the receiver level over 15%. These repairs were found to have saved 5,785 kWh of energy.





An exterior lighting upgrade was performed at another national grocery chain (both prescriptive and custom projects) which resulted in the project saving a total 9,398 kWh and generated an incentive of \$1,185.





Strategic Energy Management Partnerships (SEMP)

On January 18 we held a joint workshop with Quonset Development Corporation. The presentation covered what's new with our Quonset, Rhode Island Energy partnership and small business energy efficiency. About ten Quonset businesses participated.

In the first quarter, we also began working on renewing SEMP MOUs that expire this year.

Community Solutions Initiative

During the first quarter of 2023, the Company began its small business coordination by working with the Office of Planning and Economic Development and the Chamber of Commerce to help promote the initiative and to help identify potential customer leads. The Company also worked with the Department of Public Works to prioritize buildings based on EUI and began performing energy assessments of high priority buildings. During the second quarter, the Company will hold a customer assistance expo and continue to perform energy assessments for prioritized buildings.

Challenges and Responses

The company's vendor for the Grocer initiative reported supply chain issues affecting project timelines. Some equipment is delayed 3-6 months. Examples include chips for dimming

controls (3 months), refrigerator cases (6 months), anti-sweat heating controls equipment (6 weeks), and some interior lighting fixtures commonly used in supermarkets are on backorder. Also, with many measures already installed, conversations with large chains have turned to Equipment & Systems Performance Optimization (ESPO). Some chains have been early adopters, but roadblocks like obtaining Preventive Maintenance schedules or invoices from grocers for work they have a PM contract covering are administrative hurdles that have inhibited some projects from getting started. MBCx or AI monitoring of BMS systems seems to have some initial interest and our account managers are discussing these measures with customers.

Heat Pumps are still a part of discussions, but grocers are reluctant to take that next step. We know the technology of heat pumps is improving and while not initially suited for the open space of a grocery store, some manufacturers are answering this as well. Still there is apprehension about heat pumps in general.

Small Business Direct Install

The Small Business Direct Install (SBDI) program achieved 4,665 net lifetime MWh of electric savings (8.1% of goal) and 11,084 lifetime MMBtu of gas savings (8.5% of goal) through the first quarter of 2023.

Enhanced reporting

To show progress on priority initiatives, the Company is reporting the number of weatherization projects and LED retrofit kits and luminaires (with and without controls).

There were 4 weatherization projects in Q1 2023, including 4 gas weatherization, leveraging RGGI funds provided by OER to supplement the system benefits charge (SBC) funds to enhance customer economics for these projects. The table below shows the number of luminaires and retrofit kits with controls for 2020, 2021, 2022 and Q1 2023.

Period	Luminaires	Luminaires	Retrofit kits	Retrofit kits
		with controls		with controls
2020	13,032	149	17,260	450
2021	12,804	246	15,932	908
2022	9,918	2,256	8,675	856
2023 Q1	1437	12	816	27

Project Highlights

A private non-profit agency in Kent County installed LED Flat Panel fixtures and Wi-Fi t-stats with temperature sensors that help them balance the temperature throughout the heating space were installed. The project cost \$48,903 with gross annual kWh savings of 70,035 kWh/year and 476 gross annual therms.

A private country club installed custom LED Flat Panels throughout the building allowing the customer the ability to change the light level with the built in integrated controls. The project cost \$39,418.48 with gross annual kWh savings of 56,040 kWh/year.

Challenges and Responses

Even in the face of higher energy rates during the period, demand for program services did not reach the level that was expected. As a result, additional marketing was required, and it is now starting to hit the street. We expect that Main Street events in the 2nd quarter will also help boost production.

The Lead Vendor brought on a new Director of Small Business Services, and his mission is to broaden the scope of installed improvements beyond the lighting technology that has been the backbone of the service for decades. Already, an impact is being seen in the generation of non-lighting projects, especially in the application of variable frequency drives (VFDS) on motor loads. The Lead Vendor successfully competed for an award of RI Commerce funds to serve as an intermediary to help small businesses (less than \$1 Million annual revenues) with HVAC and ventilation issues in their place of business. The funds will help complement SBDI funds in targeted applications for eligible improvements.

Evaluation, Measurement, and Verification

No new studies were completed in the first quarter of 2023.

Several studies were in progress at the end of the quarter:

- Residential New Construction and Code Compliance Study
- Small Business Process Evaluation
- C&I New Construction Baseline Study
- Automated RTU Optimization Demonstration Evaluation
- Impact Evaluation of Program Year (PY) 2021 Custom Gas Installations
- Impact Evaluation of PY2021 Custom Electric Installations
- Comprehensive Measure Life Review
- Participant Study Dashboard Update
- EnergyWise PY2021 Impact Evaluation Study
- Commercial and Industrial Free Ridership and Spillover Study
- Commercial Cooking Gas and Electric Impact Evaluation

The Company will provide further updates on these studies throughout 2023.

ConnectedSolutions

The 2022 ConnectedSolutions results are being finalized and will be reported in the 2022 year-end report.

Demonstrations, Pilots, Assessments

PDA Name		Q1 2023 Updates						
	Date	1/26/2023						
	Stage	Qualify						
<u>Final Gas Appliances -</u> <u>Assessment - Resi</u>	Recent Activity	Continue assessing opportunities for electric appliances at new homes						
	Next steps	Finalize assessment						
	Date	5/2/2023						
Car DD Dilat COI	Stage	Demonstrate						
Gas DR - Pilot - C&I	Recent Activity	Active for Winter 2022-23						
	Next steps	Analyze winter program performance						
	Date	5/9/2023						
	Stage	Demonstrate						
Gas Leak Survey - Demonstration - C&I	Recent Activity	Working with vendors to determine savings calculation assumptions and postverification procedures.						
	Next steps	Test post verification procedures at sites.						
	Date	5/5/2023						
	Stage	Plan						
Rightsizing RTUs - Assessment - C&I	Recent Activity	Completed assessment, which ID'd strategies for RTU right-sizing						
	Next steps	Integrate strategies into program design and implementation						
	Date	5/2/23						
Automated RTU	Stage	Demonstrate						
Optimization - Demonstration - C&I	Recent Activity	Recruited customers; installed product and monitoring equipment						
	Next steps	Measure winter performance						
	Date	5/5/2023						
	Stage	Demonstrate						

Commercial Weatherization - Assessment - C&I	Recent Activity Next steps	Completed Wx Training with Vendors, gathering feedback and research ongoing for offering development Develop Express Tool
	Date	1/26/2023
	Stage	Qualify
Air Curtains - Demonstration - C&I	Recent Activity	Opted to develop measure offering, in line with MA PA's.
	Next steps	Collaborate with MA develop program offering and develop go-to-market plan
	Date	5/5/2023
	Stage	Develop or Demonstrate
Smart Valves for Chilled Water Systems	Recent Activity	Completed monitoring of operating chillers. Analyzing data.
- Demonstration - C&I	Next steps	Finalize analysis of savings and cost effectiveness. Develop go-to-market strategy.

Equity Update

EWG Recommendation	RI Energy Commitment	Update
Hire multilingual staff and partner with trusted leaders who have the same ethnic background and that frequent popular community gathering places such as community centers and faith-based organizations. Continue to meet communities where they are at through enhancing promotion and education, which includes the translation of resources and trainings into other languages such as Spanish, Portuguese, Hmong, Creole,	Promote energy-efficiency programs at community gathering places and events Provide enhanced outreach, promotion, and education of all EE offerings in underserved communities. 2023 focus will be on English and Spanish with additional languages possible.	The Company promoted energy-efficiency programs at all customer assistance expos which support low-moderate income customers in Providence, Woonsocket, and Cumberland. A representative from our lead vendor for the IES program was also in attendance to answer questions and sign customers up for home energy assessments. Energy Efficiency information is provided in English, Spanish, and Portuguese at these events.
etc. Partner with other home visiting programs to expand the reach and impact of Rhode Island Energy's energy-efficiency programs. Increase cross-training of Customer Advocates, CAP agencies, and other homevisiting programs (WIC, lead, etc.) to better understand available programs and services for both energy efficiency and health/well-being	Partner with and cross train other home visiting programs and other community organizations/resource groups to expand the reach and impact of Rhode Island Energy's energy-efficiency programs.	Through our customer assistance expos, we have had the opportunity to connect with several other community organizations and are working with them to establish partnerships and training opportunities. Organizations include Neighborhood Health Plan, Ocean State Center for Independent learning, United Way 2-1-1.
Complete a Rhode Island Workforce Development Needs Assessment	Needs assessment will be completed by year end 2022. Assessment will be used to guide future investments in workforce development and will provide basis for a cohesive workforce development strategy	The Needs Assessment Survey has been completed. Initial findings have been reported and shared with the Energy Efficiency Technical Working Group and the company is expecting a full report within Q2.

Continue to support, collaborate and/or fund workforce/training programs like RIBA's Residential Construction Workforce Partnership, NEEP's TEP, URI Energy Fellows, etc. In addition, perform better outreach to trade schools

Create an internship program or build upon existing efforts to focus on residents (both high school/vocational students and adults) of Environmental Justice (EJ) communities and other underrepresented groups to join the energy workforce

Develop inclusive marketing tools and strategies about career pathways that have information on trainings, wages, and market opportunities

Allocate a portion of the Company's EE budget to assist in funding RIBA's Residential Construction Workforce Partnership. RCWP works to recruit applicants from CAP communities and have the trainees return to jobs within their community.

Complete- the company has committed \$40,000 to the Residential Construction Workforce Development Partnership for 2023.

Assess resource requirements needed to deliver on these recommendations

See RIE Tech and Trade school scholarships below. Will continue working with EWG to figure out how to communicate opportunities in the community.



Rhode Island Energy Efficiency Messaging in Rhode Island

RI Monthly summarized a conversation with the EE Consumer Advocate, Valerie Chase, on Energy Efficiency for Earth Day featured at https://www.rimonthly.com/rhode-island-energy-efficiency/

How to Achieve an Energy Efficient Home for Earth Day and Every Day

We chatted with Rhode Island Energy to learn more about energy efficiency and its many benefits for the environment and beyond.

April 20, 2023 Kaitlyn Murray



Via Getty Images

When it comes to Earth Day and ways in which we can pitch in to help the environment, many of us are apt to think of ride shares and community cleanups (psst: you can find a whole list of those here). But the truth is, you can make a large impact right from the comfort of your home by taking a look at

your energy habits. We chatted with Valerie Chase, an EE Consumer Advocate at Rhode Island Energy, to learn more about the benefits of energy efficiency and how Rhode Islanders can make their homes zero energy ready.

First things first, what is energy efficiency exactly and what does it mean to be energy efficient?

Energy efficiency is the use of less energy to achieve the same result or complete the same task. So, to be energy efficient is to eliminate energy waste — we must continually look for ways to do more with less and anywhere that energy is being used provides an opportunity for efficiency.

In what ways does energy efficiency benefit the earth/environment?

Energy efficiency protects the environment by reducing greenhouse gas emissions which are the largest contributors to global climate change. In the US, the largest source of greenhouse gas from human activity is produced by burning fossil fuels for electricity, heat and transportation. The less energy we use, the less harm we do to the environment. Other environmental impacts directly related to energy production and usage include air pollution, water pollution, thermal pollution and solid waste disposal, so improved efficiency also has positive impacts in these areas.

How else is energy efficiency beneficial?

There are many benefits of energy efficiency.

- Financially, energy efficiency reduces the energy user's utility costs as every kilowatt or therm that is not used translates into money saved.
- Operationally, energy efficiency lowers the demand on our power system making for better power quality and minimizing the need to build new infrastructure which also has the financial benefit of lowering energy system costs.
- Economically, investing in energy efficiency creates jobs more specifically jobs that pay higher than average wages. Clean energy is building a new American workforce: in a 2022 report, the Department of Energy found that energy jobs grew faster than the overall US employment in 2021. As employment increases and people have access to more well-paying jobs, the overall economy improves.

- From the perspective of health and wellness, there is a clear link between housing and health. Efficient buildings provide better air quality, leading to lower rates and reduced symptoms of respiratory and cardiovascular disease, while more controlled temperatures prevent heat- and coldrelated illnesses and improve comfort. Additionally, as physical health and financial situations improve, so can mental health.
- Finally, energy efficiency can help achieve social goals, improve community resilience and address energy equity for those in traditionally underserved communities.

How can Rhode Islanders be more energy efficient, whether on a small or large scale?

As mentioned, anywhere electricity is being used provides an opportunity for efficiency, so there are many opportunities both big and small to be more efficient and make smart energy choices. Some quick easy ways to be more efficient include switching to LED lights, unplugging devices when not in use and/or using advanced power strips, turning down the thermostat when you are not home and/or using programmable or smart thermostats. Going a bit bigger, you can look at replacing appliances with more efficient, energy star rated models. This includes smaller appliances such as dishwashers, washer/dryers and air conditioners, as well as larger heating and cooling equipment like central air conditioning, furnaces, boilers, etc. Finally, going even bigger, you can look at weatherizing your home — insulating and air sealing allowing you to keep the energy you are using in the home in the home and make the most out of other efficiency upgrades.

What services/programs does Rhode Island Energy offer that can help Rhode Islanders to be more energy efficient?

Rhode Island energy suggests customers follow the path to a zero-energy home:

- 1. Look at the outside of the home
- 2. Look inside the home
- 3. Look to power the future

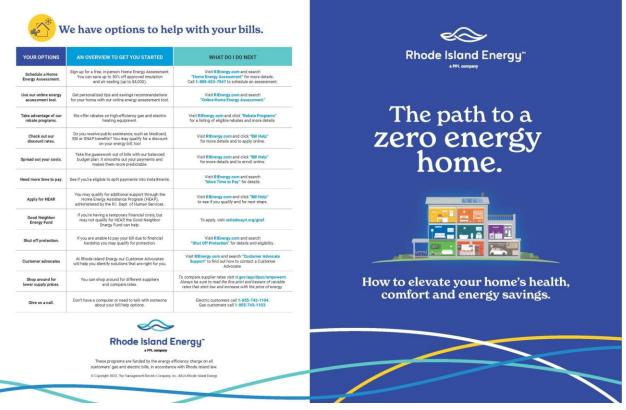


Courtesy of Rhode Island Energy

And we have solutions that can help customers at every step of that process.

- 1. Looking outside the home: we provide no cost home energy assessments for customers. This assessment includes a complete evaluation of the building's envelope (doors, windows, walls, roof, basement/foundation, etc.) that aims to identify where energy is escaping from the house. The assessment will conclude with recommendations for insulating and air sealing the home for which we offer incentives and financing. Customers can call 1-888-633-7947 to schedule their assessments or visit our website for more information: rienergy.com/ri-home/energy-saving-programs/home-energy-assessments.
- 2. Looking inside the home: the no cost home energy assessment will also include evaluation of the interior of the home including lighting, appliances, and heating and cooling equipment. Recommendations for efficiency in these areas will also be provided along with no cost energy saving products which may include programable thermostats, advanced power strips, faucet aerators and low flow shower heads. We also offer rebates on many appliances and equipment which customers can learn more about at rienergy.com/ri-home/energy-saving-programs/rebate-programs and customers can even shop our marketplace for instant rebates energy efficient products. We currently have an earth day sale running on thermostats here.

3. Looking to power the future: Our ConnectedSoultions program supports customers that are embracing clean energy with solar panels and battery storage and using advanced technology such as smart thermostats. Financial incentives are offered to these customers as they help us reduce demand on our system improve the reliability of the grid during periods of high demand. Learn more at richeme/connectedsolutions.



Courtesy of Rhode Island Energy

We also have the Greenup program which allows customers for whom we are their supplier to choose to have all or a portion of the electricity that we secure on their behalf to come from renewable energy sources such as wind, solar, etc. You can find more information on the Greenup program at <a href="mailto:rienergy.com/rienergy.

Sample Social Media Postings:

Thursday, March 9th

Fridge Recycling Program CTA: https://weare.rienergy.com/eehome/



It pays to recycle your old fridge or freezer with us. We'll pick it up at no cost, safely recycle it, and give you \$50. Learn more here: spr.tly/1580





Happy first day of Spring! Check out our latest blog post for tips on how

RIE Facebook

24 minutes ago · 🚱



The little things you do to save energy and help the planet can really add up. That's why we're helping Rhode Islanders upgrade to more energy efficient appliances and safely recycle their old ones at dehumidifier turn-in events throughout the Ocean State. We'll give you \$30 for your old dehumidifier—and \$30 off a new one...that's right! Read our latest blog post to find a drop off event near you! #DehumidifierRecycling #EnergyEfficiency



RHODE ISLAND ENERGY ENERGY-EFFICIENCY PROGRAMS IN RHODE ISLAND

Table 1: Summary of Electric 2023 Target and Preliminary 1st Quarter Results

ELECTRIC PROGRAMS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(18)	(13)	(14)	(15)	(19)	(16)	(17)
Sector and Program	Demand Re	eduction (An	nual kW)	Energy Savi	rings (Annual MWh) Customer Participation Expenses (\$ 000) Energy Savi		Expenses (\$ 000)		gy Savings (Lifetime MWh)			\$/Lifetime kwh							
		Year To	Pct		Year To	Pct		Year To	Pct		Year To	Pct	Year End		Year to		ear End	Target	Year to
Commercial and Industrial	Target	Date	Achieved	Target	Date	Achieved	Target	Date	Achieved	Budget	Date	Achieved	Forecast	Target	Date	Achieved F	Forecast	\$/kWh	Date
Large Commercial New Construction	1,306	44	3.4%	10,481	456	4.4%	45	2	5.0%	\$ 8,269.2	\$ 500.0	6.0%	50.0%	157,598	6,589	4.2%	64.0%	\$ 0.052	2 \$ 0.076
Large Commercial Retrofit	6,143	379	6.2%	35,260	2,941	8.3%	2,142	576	26.9%	\$ 22,176.2	\$ 120.1	0.5%	62.0%	244,962	21,708	8.9%	98.0%	\$ 0.09	1 \$ 0.006
Small Business Direct Install	708	108	15.3%	9,260	757	8.2%	339	59	17.4%	\$ 7,552.2	\$ 173.9	2.3%	91.0%	57,778	4,665	8.1%	101.0%	\$ 0.13	1 \$ 0.037
Commercial ConnectedSolutions										\$ 5,666.8	\$ 297.6	5.3%	100.0%						
Community Based Initiatives - C&I										\$ 93.5	\$ 0.4	0.4%	100.0%						
Financing										\$ 2,000.0	\$ -	0.0%	100.0%						
Commercial Workforce Development										\$ 157.5	\$ 4.5	2.9%	100.0%						
SUBTOTAL	8,157	531	6.5%	55,001	4,154	7.6%	2,526	638	25.2%	\$ 45,915.5	\$ 1,096.5	2.4%	71.2%	460,338	32,962	7.2%	86.7%	\$ 0.100	0.033
Income Eligible Residential	Ÿ			·			•							·	•	·			
Single Family - Income Eligible Services	367	67	18.3%	2,539	374	14.7%	3,111	875	28.1%	\$ 11,843.2	\$ 1,622.0	13.7%	100.0%	24,080	4,847	20.1%	100.0%	\$ 0.492	2 \$ 0.335
Income Eligible Multifamily	90	0	0.0%	1,298	1	0.1%	2,786	0	0.0%	\$ 3,335.8	\$ 44.7	1.3%	100.0%	17,632	14	0.1%	100.0%	\$ 0.189	9 \$ 3.194
SUBTOTAL	457	67	14.7%	3,837	375	9.8%	5,897	875	14.8%	\$ 15,179.0	\$ 1,666.7	11.0%	100.0%	41,712	4,861	11.7%	100.0%	\$ 0.364	\$ 0.343
Non-Income Eligible Residential														·					
Residential New Construction	16	3	18.8%	689	9	1.3%	410	28	6.8%	\$ 1,592.0	\$ 147.1	9.2%	100.0%	13,144	189	1.4%	100.0%	\$ 0.12	1 \$ 0.778
ENERGY STAR® HVAC	640	6	0.9%	4,175	230	5.5%	6,371	78	1.2%	\$ 5,340.8	\$ 460.0	8.6%	100.0%	71,055	4,089	5.8%	100.0%	\$ 0.075	5 \$ 0.112
Energy Wise	466	38	8.2%	3,147	215	6.8%	9,465	1,559	16.5%	\$ 15,585.3	\$ 1,488.2	9.5%	100.0%	16,940	1,234	7.3%	100.0%	\$ 0.920	1.206
EnergyWise Multifamily	108	6	5.6%	680	37	5.4%	1,744	11	0.6%	\$ 1,341.2	\$ 70.9	5.3%	100.0%	9,493	119	1.3%	100.0%	\$ 0.14	1 \$ 0.595
Residential Consumer Products	885	20	2.3%	4,473	152	3.4%	26,274	333	1.3%	\$ 2,489.1	\$ 149.6	6.0%	100.0%	31,684	1,305	4.1%	100.0%	\$ 0.079	9 \$ 0.115
Home Energy Reports	3,348	943	28.2%	24,350	6,857	28.2%	276,390	247,850	89.7%	\$ 2,145.8	\$ 489.9	22.8%	100.0%	24,350	6,857	28.2%	28.2%	\$ 0.088	3 \$ 0.071
Residential ConnectedSolutions										\$ 1,963.1	\$ 563.2	28.7%	100.0%						
Energy Efficiency Education Programs										\$ -	\$ -	0.0%	0.0%						
Community Based Initiatives - Residential										\$ 280.6	\$ -	0.0%	100.0%						
Comprehensive Marketing - Residential										\$ 310.5	\$ 56.8	18.3%	100.0%						
SUBTOTAL	5,463	1,016	18.6%	37,514	7,500	20.0%	320,654	249,859	77.9%	\$ 31,048.3	\$ 3,425.6	11.0%	100.0%	166,666	13,793	8.3%	89.5%	\$ 0.180	5 \$0.248
Regulatory												•		•					
EERMC										\$ 594.3	\$ 69.1	11.6%	100.0%						
OER										\$ 891.4	\$ 300.3	33.7%	100.0%						
RI Infrastructure Bank										\$ 3,737.5	\$ 933.8	25.0%	100.0%						
SUBTOTAL										\$ 5,223.2	\$ 1,303.2	24.9%	100.0%						
										•		'							
TOTAL	14,077	1,614	11.5%	96,352	12,029	12.5%	329,077	251,372	76.4%	\$ 97,365.9	\$ 7,492.0	7.7%	86.4%	668,716	51,616	7.7%	88.3%	\$ 0.140	\$0.145

- (1)(4)(7) Targets from Docket 22-33-EE Attachment 5, Table E-7, Refiled January 23, 2023.
- (3) Pct Achieved is Column (2)/ Column (1). (6) Pct Achieved is Column (5)/ Column (4).
- (7) 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 22-33-EE, Attachment 5 Table E-3 (electric), Refiled January 23, 2023.
- (11) Year To Date Expenses include Implementation expenses.
- (12) Pct Achieved is Column (11)/ Column (10).
- (16) Planned \$/lifetime MWh from Docket 22-33-EE- Attachment 5, Table E-5, Refiled January 23, 2023 adjusted to reflect format of quarterly report. Program Implementation Expenses/lifetime kWh.
- (17) \$/lifetime kWh = Column (11)/Column (14)
- (18) (19) Year End Spending and Energy Savings forecasts are best estimates based on the information available and may change throughout the year.
- Values in quarterly reports are preliminary and subject to change. Data is finalized in the Year-End Report.

RHODE ISLAND ENERGY ENERGY-EFFICIENCY PROGRAMS IN RHODE ISLAND Table 2: Summary of Gas 2023 Target and Preliminary 1st Quarter Results

GAS PROGRAMS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(16)	(10)	(11)	(12)	(17)	((13)	(14)	(15) Peak Hour Gas Demand Savings
Sector and Program	Energy Sa	avings (Ann	ual MMBtu)	Custor	ner Participatio	n	E	xpenses (\$ 000)			Energ	y Savings (L	ifetime MME	3tu)	\$	\$/Lifetime	MMBtu	(MMBtu)
		Year To	Pct			Pct			Pct	Year End		Year To	Pct	Year End			Year to	
Commercial and Industrial	Target	Date	Achieved	Target	Year To Date	Achieved	Budget	Year To Date	Achieved	Forecast	Planned	Date	Achieved	Forecast	Pla	lanned	Date	Year to Date
Large Commercial New Construction	48,823	17,086	35.0%	62	1	0.9%	\$ 2,818.7	\$ 821.7	29.2%	112.0%	716,705	204,533	28.5%	121.0%	\$	3.93	\$ 4.02	8.54
Large Commercial Retrofit	94,766	4,954	5.2%	59	5	9.2%	\$ 4,639.6	\$ (43.2)	-0.9%	71.0%	1,016,519	73,458	7.2%	118.0%	\$	4.56	\$ (0.59	2.48
Small Business Direct Install	9,723	488	5.0%	146	5	3.1%	\$ 689.8	\$ 12.1	1.7%	87.0%	130,193	11,084	8.5%	100.0%	\$	5.30	\$ 1.09	0.24
Commercial & Industrial Multifamily	4,249	0	0.0%	488	0	0.0%	\$ 891.3	\$ 15.4	1.7%	100.0%	64,645	0	0.0%	100.0%	\$	13.79	\$ -	-
Commercial Pilots							\$ -	\$ -	0.0%	0.0%								
Community Based Initiatives - C&I							\$ 31.2	\$ 0.0	0.0%	100.0%								
Commercial Workforce Development							\$ 67.5	\$ 1.5	2.3%	100.0%								
SUBTOTAL	157,561	22,528	14.3%	755	11	1.4%	\$ 9,138.0	\$ 807.4	8.8%	88.0%	1,928,063	289,074	15.0%	117.3%	\$	4.74 \$	2.79	11.26
Income Eligible Residential					•				•				•	•		•		
Single Family - Income Eligible Services	8,230	627	7.6%	797	78	9.8%	\$ 5,429.0	\$ 264.9	4.9%	100.0%	169,180	12,540	7.4%	100.0%	\$	32.09	\$ 21.13	0.31
Income Eligible Multifamily	11,075	102	0.9%	2,742	100	3.6%	\$ 3,215.4	\$ 36.3	1.1%	100.0%	172,464	1,536	0.9%	100.0%	\$	18.64	\$ 23.66	0.05
SUBTOTAL	19,305	729	3.8%	3,539	178	5.0%	\$ 8,644.4	\$ 301.3	3.5%	100.0%	341,644	14,076	4.1%	100.0%	\$	25.30 \$	21.40	0.36
Non-Income Eligible Residential													<u>.</u>					
Energy Wise	20,697	2,479	12.0%	1,716	482	28.1%	\$ 9,873.1	\$ 438.0	4.4%	100.0%	490,013	57,193	11.7%	100.0%	\$	20.15	\$ 7.66	1.24
Energy Star® HVAC	27,030	1,828	6.8%	2,904	206	7.1%	\$ 3,586.9	\$ 246.9	6.9%	100.0%	517,571	36,919	7.1%	100.0%	\$	6.93	\$ 6.69	0.91
EnergyWise Multifamily	5,358	201	3.7%	3,453	15	0.4%	\$ 1,485.4	\$ 71.1	4.8%	100.0%	110,428	4,636	4.2%	100.0%	\$	13.45	\$ 15.34	0.10
Home Energy Reports	91,640	44,555	48.6%	130,585	136,281	104.4%	\$ 360.5	\$ 82.4	22.9%	100.0%	91,640	15,787	17.2%	100.0%	\$	3.93	\$ 5.22	22.28
Residential New Construction	3,287	115	3.5%	460	9	2.0%	\$ 621.5	\$ 75.5	12.1%	100.0%	58,476	2,744	4.7%	100.0%	\$	10.63	\$ 27.50	0.06
Comprehensive Marketing - Residential							\$ 69.1	\$ 14.6	21.1%	100.0%								
Community Based Initiatives - Residential							\$ 93.5	\$ -	0.0%	100.0%								
SUBTOTAL	148,013	49,178	33.2%	139,118	136,994	98.5%	\$ 16,090.0	\$ 928.5	5.8%	100.0%	1,268,129	117,279	9.2%	100.0%	\$	12.69 \$	7.92	24.59
Regulatory																		
EERMC							\$ 396.9	\$ 69.1	17.4%	100.0%								
OER							\$ 595.3	\$ 147.2	24.7%	100.0%								
RI Infrastructure Bank							\$ 1,262.5	\$ 316.3	25.0%	100.0%								
SUBTOTAL							\$ 2,254.7	\$ 532.5	23.6%	100.0%								
TOTAL	324,879	72,436	22.3%	143,412	137,182	95.7%	\$ 36,127.1	\$ 2,569.7	7.1%	97.0%	3,537,835	420,429	11.9%	109.4%	\$	10.21 \$	6.11	36.22
NOTEC														-				

- (1)(4) Targets from Docket 22-33-EE- Attachment 6, Table G-7, Refiled January 23, 2023.
- (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). (7) Approved Implementation Budget from Docket 22-33-EE, Attachment 6 Table G-3, Refiled January 23, 2023.
- (8) Year To Date Expenses include Implementation expenses.
- (9) Pct Achieved is Column (8)/ Column (7).
- (13) Planned \$/lifetime MMBtu from Docket 22-33-EE- Attachment 6, Table G-5, Refiled January 23, 2023 adjusted to reflect format of quarterly report. Program Implementation Expenses/lifetime MMBtu.
- (14) \$/lifetime MMBtu = Column (8)*1000/Column (11)
- (15) Peak Hour Gas Demand Savings is a test metric in 2022 and represents a rough approximation of peak-hour gas demand impacts. Column(2) *0.01 *0.05
- (16) (17) Year End Spending and Energy Savings forecasts are best estimates based on the information available and may change throughout the year.
- Values in quarterly reports are preliminary and subject to change. Data is finalized in the Year-End Report.

RHODE ISLAND ENERGY ELECTRIC ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND Table 3: Rhode Island Energy 2023 Revolving Loan Funds

Large C&I Electric Revolving Loan Fund

Small Business Electric Revolving Loan Fund

	Income Statement			Income Statement	
(1)	2023 Funds Available	\$10,419,391	(1)	2023 Funds Available	\$2,494,977
(2)	2023 Loan budget	\$14,000,000	(2)	2023 Loan budget	\$1,500,000
(3)	Committed	\$7,119,096	(3)	Committed	\$124,986
. ,			. ,		
(4)	Paid	\$267,243	(4)	Paid	\$124,986
(5)	Repayments	\$2,521,205	(5)	Repayments	\$296,378
(6)	Available 3/31/23	\$5,554,257	(6)	Available 3/31/23	\$2,541,383
(7)	Outstanding loan volume	\$14,205,317	(7)	Outstanding loan volume	\$481,503
(8)	Loan defaults during period (\$)	\$0	(8)	Loan defaults during period (\$)	\$0
(9)	Arrears over 120 days at period end (\$)	\$93,141	(9)	Arrears over 120 days at period end (\$)	\$16,592
	Program Impact			Program Impact	
(10)	Number of loans	3	(10b)	Participants	83
` '			, ,	•	
(10b)	•	2	(11)	Annual Savings (Gross MWh)	851
(11)	Annual Savings (Gross MWh)	57	(12)	Annual Savings (Net MWh)	756
(12)	Annual Savings (Net MWh)	45	(13)	Lifetime Savings (Gross MWh)	5,222
(13)	Lifetime Savings (Gross MWh)	339	(14)	Lifetime Savings (Net MWh)	4,658
(14)	Lifetime Savings (Net MWh)	264	(15)	Annual Savings (Gross kW)	136
(15)	Annual Savings (Gross kW)	7	(16)	Annual Saving (Net kW)	108
(16)	Annual Saving (Net kW)	5	(17)	Total associated incentive volume (\$)	\$114,420
(17)	Total associated incentive volume (\$)	\$15,821	(18)	Total annual estimated energy cost savings (\$)	\$133,783
(18)	Total annual estimated energy cost savings (\$)	\$7,965			

Rhode Island Public Energy Partnership (RI PEP)

	Income Statement	
(1)	2023 Funds Available	\$54,162
(2)	2023 Loan budget	\$0
(3)	Committed	\$0
(4)	Paid	\$0
(4a)	Funds Returned to OER	\$0
(5)	Repayments	\$0
(6)	Available 3/31/23	\$54,162
(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	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

- 1 Amount available as of January 1, 2023. Includes line (6) "Available 12/31/22" plus line (3) "Committed" in Table E-6 and G-6 of the 2022 Year End Report.
- 2 Budget adopted by Sales Team for 2023 operations. Budget includes projections of repayments made during 2023.
- 3 As of March 31, 2023.

Income Statement

- 4 As of March 31, 2023. This includes all projects paid through March 31, 2023 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 March 31, 2023. This includes all projects paid through March 31, 2023 and the OBR associated with those projects. OBR payments are processed once the associated incentive has been p
- 6 Fund balance as of March 31, 2023. 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 March 31, 2023. 10 As of March 31, 2023
- 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 10b business (not adjusted for net-to-gross).
- 11 As of March 31, 2023
- 12 As of March 31, 2023 13 As of March 31, 2023
- 14 As of March 31, 2023 15 As of March 31, 2023
- 16 As of March 31, 2023
- 17 Incentives paid out with loans.
- 18 Estimated energy cost savings to loan fund participants.

Values in quarterly reports are preliminary and subject to change. Data is finalized in the Year-End Report.

RHODE ISLAND ENERGY GAS ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND Table 4: Rhode Island Energy 2023 Revolving Loan Funds

Large C&I Gas Revolving Loan Fund

	Income Statement	
(1)	2023 Funds Available	\$591,417
(2)	2023 Loan budget	\$2,500,000
(3)	Committed	\$315,052
(4)	Paid	\$181,810
(5)	Repayments	\$231,102
(6)	Available 3/31/23	\$325,657
(7)	Outstanding loan volume	\$1,503,806
(8)	Loan defaults during period (\$)	\$0
(9)	Arrears over 120 days at period end (\$)	\$808
	Program Impact	
(10)	Number of loans	10
(10b)	Participants	10
(11)	Annual Savings (Gross MMBtu)	4,954
(12)	Annual Savings (Net MMBtu)	4,668
(13)	Lifetime Savings (Gross MMBtu)	476,263
(14)	Lifetime Savings (Net MMBtu)	446,382
(15)	Total associated incentive volume (\$)	\$75,160
(16)	Total annual estimated energy cost savings (\$)	\$95,713

Notes

- Amount available as of January 1, 2023. Includes line (6) "Available 12/31/22" plus line (3) "Committed" in Table E-6 and G-6 of the 2022 Year End Report.
- 2 Budget adopted by Sales Team for 2023 operations. Budget includes projections of repayments made during 2023.
- 3 As of March 31, 2023. This includes all project paid through March 31, 2023 and the OBR associated with those projects. OBR payment are processed once the associated incentive I
- 4 As of March 31, 2023. This includes all project paid through March 31, 2023 and the OBR associated with those projects. OBR payment are processed once the associated incentive has been paid usually in batches.
- 5 As of March 31, 2023
- 6 Fund balance as of March 31, 2023. 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 March 31, 2023.
- 10 As of March 31, 2023
- 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 March 31, 2023
- 12 As of March 31, 2023
- 13 As of March 31, 2023
- 14 As of March 31, 2023
- 15 Incentives paid out with loans.
- 16 Estimated energy cost savings to loan fund participants.

Values in quarterly reports are preliminary and subject to change. Data is finalized in the Year-End Report.

Table 5 Rhode Island Energy 2023 Test Metrics

Carbon Reduction¹

	CO2 (Electricity)	CO2 (Natural Gas)	CO2 (Oil)	CO2 (Propane)	CO2 (Total)
Residential	2,865	2,877	211	12	5,965
Income Eligible	143	43	26	2	214
C&I	1,587	1,318	(78)	-	2,827
Total	4,595	4,237	159	15	9,006

NOTES

¹ Carbon emissions values are from AESC 2021, Appendix G Table 159.

Values in quarterly reports are preliminary and subject to change. Data is finalized in the Year-End Report.