

Rhode Island Energy Efficiency

Second Quarter 2022 | Rhode Island Energy

August 9, 2022

Overview

Rhode Island Energy's energy efficiency programs continued to deliver energy savings for Rhode Island customers by achieving 247,234 net lifetime MWh of electric savings (29.7% of the net lifetime goal) and 1,066,054 net lifetime MMBtu of natural gas savings (26.3% of the net lifetime goal) while continuing to address the challenges faced due to the supply chain issues and elevated levels of inflation.

- This quarterly report includes an update on the **equity commitments** made in the 2022 Annual Plan. Woven throughout the report is an update on equity issues relating to specific programs.
- **Residential New Construction** is still feeling the effects of the COVID-19 pandemic. Projects in planning, design, and groundbreaking phases in 2020 and 2021 have gotten off to late starts due to issues with permitting, labor, material shortages, delayed funding, etc. These delays have resulted in fewer completed units than anticipated during the first half of 2022. Most RNC Program projects originally slated to complete during the first half of 2022 have shifted towards completing in late 2022 and into 2023.
- **Income Eligible Services (IES)** is facing continued supply shortages that have increased costs and delayed implementation, particularly for appliances. An emergency replacement path has been developed to streamline appliance replacement with delivery of an available model.
- In the **Large Commercial Retrofit** program, the Company continued to observe significant delays in project timelines resulting from supply chain delays. In Q2, the Company's vendor conducted a study to quantify the impacts of these impacts, as well as inflation observed in the market. The vendor also sought to identify potential mitigation strategies, which the Company is currently evaluating.

2022 Program & Initiative Updates – Q2

Rhode Island Energy Efficiency Equity Working Group (EWG) Recommendations for Rhode Island Energy's Annual Energy Efficiency Plan for 2022		
1. Develop multilingual marketing and outreach materials. Use accessible language to target audiences in each publication.		
2022 Commitments and Status	1. All Residential and Income Eligible (IE) email and direct mail will more consistently be translated into both English and Spanish.	Ongoing. All IE direct mail includes Spanish. Moderate Income flyer renter/landlord also in Spanish.
	2. Additionally, using lessons learned from the 2020 multi-cultural focused refrigerator recycling outreach campaign, the Company will launch a new, larger multi-cultural energy efficiency education campaign with the goal of increasing energy efficiency awareness and program participation among multi-cultural customers. Beginning with Hispanic customers, the effort will support the entire customer journey using new linguistic and cultural elements for web pages, customer toolkits, call-center support, and third-party partners. If the campaign is successful, it will be expanded beyond Hispanic customers.	Scheduled for 2023, 2022 was not a good time to launch the campaign given the sale of the Company.
2. 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.		
2022 Commitments and Status	1. Provide additional energy efficiency program training to the Company's existing Customer Advocates so they can more effectively speak to the benefits of the programs.	In Progress- some training has been provided to the existing consumer advocates and will continue.
	2. Hire an additional Customer Advocate that will focus on promoting the energy efficiency programs. The new Customer Advocate will have community organizing experience and will be multi-lingual. The Advocate will deliver energy efficiency program information at community centers, faith-based organizations, multi-family housing, and other community gathering places. The Customer Advocate will leverage the expertise of existing community organizations that serve diverse households. The new hire will occur by mid-2022 before summer events begin.	Completed- new hire effective May 2022 currently being trained.
3. Include in messaging that Rhode Island Energy is not code enforcement so residents can feel more comfortable.		
2022 Commitments and Status	1. Provide vendor call centers with scripts to help answer any customer/landlord inquiries on this subject.	Completed
	2. Consider adding the language to landlord outreach, as appropriate.	Completed
4. Develop age-appropriate marketing strategies to connect with various age groups that live in a household such as utilizing social media, apps, and text messaging to reach new audiences and help engage customers with their energy usage.		

2022 Commitments and Status	Social media is one of the Company's primary outreach and communication methods, with advertisements and messages placed on Facebook, Instagram, Twitter, Snapchat, and NextDoor. Because of legal limitations and to ensure emergency communications are seen by customers, text messaging is currently only used to convey outage information.	Completed
5. Partner with other home visiting programs to expand the reach and impact of Rhode Island Energy's energy efficiency programs.		
2022 Commitments and Status	By March 2022, establish a working group to explore how to more comprehensively leverage other home visiting programs for energy efficiency outreach and education. The working group will be facilitated by the Company and will include home visiting program representatives. The working group will make related recommendations for the 2023 Annual Energy Efficiency Plan.	Completed- an outreach subgroup of the EWG has been created for this purpose.
6. Allocate a proportion of Energy Efficiency marketing budgets to municipalities for mailing energy efficiency materials; some municipalities use third parties for mailing.		
2022 Commitments and Status	1. Continue to support municipality efforts to promote energy efficiency through the Community Initiative.	Completed- working with the city of East Providence this year.
	2. Test the inclusion of energy efficiency program information in the water/sewer bills of one or more of the 2022 Community Initiative participants.	This year's EWG recommended not to proceed with this activity since many customers receive e-bills and do not read inserts.
7. Provide incentives to community groups that are serving vulnerable populations.		
2022 Commitments and Status	The Company will expand collateral for more community groups that serve vulnerable populations.	In Progress- EE consumer advocate has identified community groups that will be provided with collateral and multi-lingual collateral is being prepared.
8. Develop a mechanism that allows participation or action to occur immediately after the marketing step.		
2022 Commitments and Status	Expand follow-up outreach for customers who receive a recommendation from the on-line home energy assessment, in-home/virtual home energy assessment, and/or home energy reports.	Completed for in-home and virtual. On-line assessment is a manual process.
9. Benchmark Energy Efficiency Program participation data for race, geography, socioeconomic status, language, age of home, age of owner, age of renter, heating fuel type, type and age of heating /hot water/cooling systems.		

2022 Commitments and Status	1. Work with external stakeholders to determine if the data sets and each related report should be refreshed on a regular basis.	Complete- Participant, Nonparticipant and MF Census studies have been completed and reports have been shared with the EERMC. This data is being used to shape and direct outreach plans and will be used to assist with program design in the future.
	2. Using internal data, establish a separate, regular report by Q2 2022 that shows participation for the EnergyWise, Multifamily, and the Income Eligible Single-Family programs at the zip code level. Utilize the report to target outreach.	Using year end spend by zip code as metric.
	3. Continue gathering rental unit participation data and reporting on that information quarterly at the “sector level meetings” with the RI Office of Energy Resources, their Consultant Team, and the Division of Public Utilities and Carriers.	Completed
10. Track late payments and shut offs.		
2022 Commitments and Status	Rhode Island Energy currently tracks this information and submits it to the RI PUC. The report can be found at: http://www.ripuc.ri.gov/eventsactions/docket/4770page.html , under Other Compliance Reports, Rhode Island Energy's Low-Income Monthly pursuant to Article II, Section C.22.f. of the Amended Settlement Agreement.	Completed
11. Align energy efficiency programs with healthcare and partner to achieve healthcare goals, promote further engagement, and sharing health outcome and impact data.		
2022 Commitments and Status	See recommendation 5.	Completed
12. Perform a full review of all HR policies and remove outdated policies that restrict hiring such as background checks.		
2022 Commitments and Status	The Company believes it has reached the right balance to ensure the safety of customers and their property through its background check and exception process.	Completed
13. Reduce barriers to professional development, as well as entry into the energy efficiency workforce.		
2022 Commitments and Status	1. Complete a workforce development needs assessment modeled after, and building on, this report completed in MA: https://ma-eeac.org/wp-content/uploads/Massachusetts-Energy-Efficiency-Workforce-Development-FINAL-REPORT-CAREER-PROFILES.pdf . Data from the needs assessment can be used to target future workforce development strategies, with diversity and upskilling of a diverse workforce as major areas of focus.	Still pending. Will begin shortly.

	2. Continue the lead vendor collaboration with the RI Builders Association, and their affiliate Residential Construction Workforce Partnership, to complete at least two additional Energy Efficiency Program related trainings in 2022. RI Builders Association will report participant demographic information to the Company from the September 2021 training. If necessary, the Company will assist in the targeted recruitment of more diverse trainees for 2022. During 2022, the Company and/or its vendors will also collaborate with the RI Dept of Human Services (DHS) on workforce development efforts from U.S. Department of Energy training funds. RI DHS will also report participant demographic information to the Company, so the Company can assist in the targeted recruitment of more diverse trainees, if necessary.	Completed first cohort. 6 hires EE partners with 2 more hires pending. Funding needs to be secured for second cohort.
14. Collaborate with local diverse community organizations to train and certify potential workers (Progreso Latino, Hispanic chamber of commerce, Cape Verdean community development).		
2022 Enhancement(s)	See recommendation 13. The new workforce development needs assessment, as well as demographic reporting from the new trainings will help to determine whether new recruitment and upskilling efforts with a focus on diversity are necessary.	Still pending. Will hopefully start shortly.

Residential New Construction (RNC)

The Residential New Construction (RNC) program achieved 1,414 net lifetime MWh of electric savings (9.5% of the lifetime goal) and 10,343 net lifetime MMBtu of gas savings (15.9% of the lifetime goal) through the second quarter of 2022.

Program Enrollments and Completed Units

- 41 housing units were built to RNC Program standards
 - 31 were new construction/full gut rehab (76%)
 - 10 were renovation/rehab (24%)
 - 27 units were market rate (66%)
 - 14 units were income eligible (34%)
 - 19 units had gas heat (46%)
 - 3 units had all electric heat (heat pumps) (7%)
 - 16 units had hybrid electric/propane heat pumps (39%)
 - 717 LEDs were installed through the Program
 - 3 homes were Energy Star and DOE Zero Energy Ready Certified
- 76 newly planned housing units enrolled in the RNC Program

Program Challenges

Construction Schedule Delays: While much of the EE industry was instantly disrupted by COVID-19 beginning in early 2020, the effects are only now being seen in new construction. Construction that had broken ground and was already underway by early 2020 continued through to completion in 2020 and 2021, which enabled the RNC Program to achieve goals during these years. However, projects in planning, design, and groundbreaking phases in 2020 and 2021 have gotten off to late starts due to issues with permitting, labor, material shortages, delayed funding, etc. These delays have resulted in fewer completed units than anticipated during the first half of 2022. Most RNC Program projects originally slated to complete during the first half of 2022 have shifted towards completing in late 2022 and into 2023. The RNC Program has continued to enroll new projects currently in planning and design phases into the program (400+ units YTD), so the pipeline of projects is strong.

Program Highlights

DOE Zero Energy Ready Homes Tour: In June the RNC Program held tours of a DOE Zero Energy Ready (ZER) renovation on Boylston Ave in East Providence.

The owner/architect opened their single-family home to the public and shared their experience with meeting DOE ZER standards without increasing costs or using unconventional construction techniques.

Attendees were given a presentation featuring the owner/architect; the builder, who gave an overview of the construction, insulation, and air sealing details; and Jon Erickson from CLEAResult representing Rhode Island Energy's RNC Program, who discussed how the home will not only have reduced energy use and operating costs but will have optimal indoor air quality and improved comfort and resilience. The HVAC contractor for the project, was also in attendance and fielded questions on heat pumps.

More than 40 people attended, including local building code inspectors, architects, realtors, students, and professors from RISD and Brown, representatives from the International Code Council, Rhode Island Housing, the City of Providence Office of

The "Pretty Good House": Zero Energy Ready Renovation



Project Background

The objective of the project, from an energy perspective, was to achieve Net Zero energy performance, without adding significantly to the cost of construction or using unusual building practices and materials. Learn more about the Pretty Good House concept at: www.prettygoodhouse.org

Location: Providence, RI
Architect: Chris Royer
Website: www.royerarchitects.com
Contractor: Halmac Construction
Website: www.halmacri.com

Project Highlights

Simple Compact Design

- The home's design minimizes the area of thermal envelope in relation to interior living space

Reduced Carbon Inputs

- No structural steel was used, and the use of concrete was minimized
- Over 50% of the foundation is from the old structure
- 8" thick concrete foundation walls used instead of 10" thick
- No basement or crawlspace slabs

Tight Building Envelope

- Preliminary blower door test was 0.16 ACH50
- Minimized unnecessary holes and gaps in the thermal envelope and sealed all required penetrations

Pretty Good Insulation

- Roughly followed the 10-20-40-60 rule of thumb for cold climates
- Minimized thermal bridging of insulation
- Insulation is primarily dense pack cellulose in the cavity with 1" Zip R exterior sheathing

Electric HVAC and Domestic Hot Water

- 2.5 tons ducted Mitsubishi mini split heat pump
- Panasonic FV-10EV2 100 cfm ERV – to ensure fresh air while minimizing energy loss
- Electric heat-pump domestic hot water heater

Solar Ready

- The south roof is ready for the installation of photovoltaic solar panel

Questions?
Call: 855-343-0105

CLEAResult®

Sustainability, Rhode Island Energy, as well as neighbors curious to learn about the renovation project.



Pictured above: Presentation and tour of Boylston Ave

ONE Neighborhood Builders Panel Invitation: In May, ONE Neighborhood Builders, the developer of Sheridan Small Homes, RI's first DOE Zero Energy Ready certified affordable housing neighborhood, invited Jon Erickson from the RNC Program to speak at a panel.

The panel, which addressed Zero Energy Affordable Housing, was the first in a series of virtual gatherings for community development practitioners to learn about and share emerging topics and ideas.

Jon, the certified DOE ZER verifier for the project, spoke about some of the interesting and unusual aspects of the project, as well as some of the challenges:

- Frost protected shallow foundations, tilt and turn windows, the stringent air tightness requirements of PHIUS, mechanical ventilation and related issues

Recording of the panel presentation: <https://oneneighborhoodbuilders.org/first-fresh-fridays-session-focuses-on-sheridan-small-homes/>

Q2 RNC Program Zero Energy Project Highlights

Zero Energy Homes Pipeline:

- 150 units of Zero Energy homes are currently in the pipeline, including 144 seeking Passive House certification and 6 seeking DOE Zero Energy Ready certification

Zero Energy Projects - Pipeline	
In Process (Design Phase)	
Passive House Multifamily	89
Passive House 1-4	0
DOE ZER	4
In Process (Construction Phase)	
Passive House Multifamily	54
Passive House 1-4	1
DOE ZER	2

Income Eligible Services (IES)

The Rhode Island Energy Income Eligible Services program achieved 6,502 net lifetime MWh of electric savings (16.9% of the lifetime goal) and 55,662 net lifetime MMBtu of gas savings (25.4% of the lifetime goal) through the second quarter of 2022.

The second quarter IES Best Practice meeting was held at Westbay CAP, and was available with hybrid web participation, on June 30, 2022. This meeting focused on Heat safety, year-to-date program delivery performance, the Interagency Referral Program, and the Rhode Island Builders Association Residential Construction Workforce Program.

The KPI process was continued in the second quarter to improve communications between CAPs and the Lead Agency. KPI meetings were held with each CA, the Company's lead vendor 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 Lead Vendor (LV) assumed the Lead Appliance Agency role for Rhode Island. Along with coordinating with SMOC, the Local Appliance Agency, LV participated in an meeting with two new appliance deliver vendors. These two experienced appliance vendors are helping to resolve emergency installs and working to reduce backlogs. Over \$750,000 in Appliance invoices were processed in the second quarter.

The Interstate Renewable Energy Council (IREC) published an article¹ describing the Rhode Island Builder Association, Rhode Island Energy, CLEAResult, and CAP agency cooperation in developing and implementing the Residential Construction Weatherization Program (RCWP). Specifically, the article focused on the use of the IREC Green Buildings Career map². The goal of the RWCP is to provide equity-based training

¹ <https://irecusa.org/blog/workforce-development-training/how-career-maps-can-support-energy-efficiency-job-training-outcomes/>

² <https://greenbuildingscareemap.org>

& certification to local unemployed or underemployed people, providing skills to participate in all facets of the green energy economy.

The second quarter provided opportunities for AMP trainings for new agency staff, Interagency Referral process training for agency Executive Directors and staff, and began WIFI Thermostat training for all auditors.

Challenges and Responses

Providing equitable renter services continues to be a challenge. Rhode Island Energy tabled at the Rhode Island Housing Landlord event on June 7, 2022. The casual atmosphere promoted introductions and conversations about opportunities to work with RI Energy Efficiency programs and demonstrate that the efficiency services are provided to renters seamlessly.

Continued supply shortages have increased costs and delayed implementation, particularly for appliances. An emergency replacement path has been developed to streamline appliance replacement with delivery of an available model.

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

- Contracting for additional auditors providing freelance audit services to the agencies. In Q2 we had an experienced team start working with one of the CAPs to provide external Audit services.
- The Interagency Referral program was introduced where leads or completed audits are referred by one CAP agency to another CAP agency for implementation services.
- RIBA Auditor & Installer program, RWCP (Residential Construction Weatherization Program) has completed its first cohort at a newly constructed training center in Coventry RI. The goal of the RWCP is to provide equity-based training & certification to local unemployed or underemployed people, providing skills to participate in all facets of the green energy economy. The Rhode Island Builders Association, Comprehensive CAP, TriCounty CAP, along with CLEAResult, are leading this effort. CAP agencies have hired 4 graduates, two more are in the interview process.
- Virtual AMPs have slowed but continued with over 2,000 virtual AMPs completed since the program's inception.

Agency Audit Staffing:

- Blackstone Valley Community Action Agency – 4 Auditors
- CAP of Providence – 5 Auditors, up 2 since Q1

- Comprehensive Community Action Agency – 6 Auditors, up 1 since Q1
- East Bay Community Action Agency – 6 Auditors, up 2 since Q1
- TriCounty Community Action Agency – 8 Auditors, down 1 but interviewing
- Westbay Community Action Agency – 7 Auditors, remains the same
- Contract Auditors – 5 Auditors

Customer Highlight

A sampling of customer feedback from customer comment cards:

“We appreciate everything they (the agency & contractor) were able to do for us and I want to thank you for what you have done for our house getting it weather tight and insulated.

Thank you.”

Tim & Linda, Westerly RI

EnergyWise Single Family

The EnergyWise Single Family program achieved 5,496 net lifetime MWh of electric savings (40.8% of the lifetime goal) and 225,447 net lifetime MMBtu of gas savings (47.1% of the lifetime goal) through the second quarter of 2022.

The EnergyWise program conducted 3,595 home energy assessments and completed 1,867 weatherization projects in the second quarter. 340 customers financed their weatherization work with the HEAT loan. The RGGI Moderate Income offering is actively being promoted, and the program has served 58 RGGI moderate income customers.

Activities of interest include:

- Energy specialists enrolled in sales training
- The company and the lead vendor attended the following events: RI Home Show 4/7-4/10, Earth Day event at Ocean State Job lot 4/22, Foster Conservation Commission 4/30, RI Housing Landlord event 6/7.
- Developed a strategic plan for the Heat Pump Concierge initiative, customer outreach will begin in Q3.
- Through Q2, 13% of assessments and 10% of weatherization participants are renters/landlords.
- Spanish and English outreach for the moderate-income weatherization offering continues using RGGI moderate income funding

Income-Based Enhanced Incentives

Thank you for taking the first step toward saving energy with a Home Energy Assessment. During the assessment, your Energy Specialist recommended weatherization upgrades as your key energy-saving improvement. Weatherization includes sealing air leaks around your home and adding insulation. Insulation and air sealing can help you:

- Save energy and money
- Reduce allergens and outside noise
- Increase home comfort year-round

In partnership with the Rhode Island Office of Energy Resources, Rhode Island Energy wants to help you maximize your comfort and energy savings by offering an enhanced incentive of 100% of approved insulation to qualifying customers.

To take advantage of this limited time offer of a 100% incentive, up to \$15,000:

1. Review the income eligibility guidelines to make sure you qualify:

Household Size	Pre-Tax Annual Household Income	Household Size	Pre-Tax Annual Household Income
1 person	\$33,646 - \$44,860	7 people	\$87,549 - \$116,464
2 people	\$43,059 - \$58,043	8 people	\$89,290 - \$120,052
3 people	\$54,351 - \$72,467	9 people	\$91,231 - \$123,640
4 people	\$64,703 - \$86,269	10 people	\$93,172 - \$124,228
5 people	\$75,055 - \$100,072	11 people	\$95,113 - \$125,816
6 people	\$85,408 - \$113,876	12 people	\$97,054 - \$129,404

2. If you believe you meet the guidelines above, complete the self-attestation form provided by your Energy Specialist.
3. If approved, RISE Engineering (the vendor who performed your assessment) will provide you with an updated contract reflecting this limited time promotion.

We look forward to helping you save energy. If you have any questions or would like to check the status of your application, please contact RISE Engineering at 1-401-784-5700.

RISE ENGINEERING

Please note, this special offer is only valid for the property where the home energy assessment was conducted. RISE Engineering is an independent provider of energy efficiency services for Rhode Island Energy's Energy Wise Program. These programs are funded by the energy efficiency charge on all customers' gas and electric bills, in accordance with Rhode Island law.

OFFICE OF ENERGY RESOURCES

Incentivos mejorados según el nivel de ingresos

Gracias por dar el primer paso hacia la eficiencia energética con una Evaluación del consumo de la vivienda. Durante la evaluación, el especialista en energía le recomendó que implementara mejoras de climatización como la acción que más lo ayudará a ahorrar energía. Estas mejoras incluyen sellar las fugas de aire de su vivienda e instalar aislamiento. Usar aislamiento y sellar las fugas de aire pueden ayudarlo a lo siguiente:

- Ahorrar dinero y energía
- Reducir la presencia de alérgenos y el ruido exterior
- Aumentar la comodidad de la vivienda todo el año

En colaboración con la Rhode Island Office of Energy Resources (Secretaría de Recursos Energéticos de Rhode Island), Rhode Island Energy desea ayudarlo a maximizar la comodidad y el ahorro energético. Para ello, ofrece un incentivo mejorado del 100 % del aislamiento aprobado, a clientes que cumplen con los requisitos.

Para aprovechar esta oferta disponible por tiempo limitado del incentivo del 100 %, hasta \$15,000, deberá seguir los siguientes pasos:

1. Revise las pautas de elegibilidad en virtud de los ingresos para asegurarse de que cumple con los requisitos:

Tamaño del grupo	Ingresos familiares brutos anuales	Tamaño del grupo	Ingresos familiares brutos anuales
1 persona	De \$33,646 a \$44,860	7 personas	De \$87,549 a \$116,464
2 personas	De \$43,059 a \$58,043	8 personas	De \$89,290 a \$120,052
3 personas	De \$54,351 a \$72,467	9 personas	De \$91,231 a \$123,640
4 personas	De \$64,703 a \$86,269	10 personas	De \$93,172 a \$124,228
5 personas	De \$75,055 a \$100,072	11 personas	De \$95,113 a \$125,816
6 personas	De \$85,408 a \$113,876	12 personas	De \$97,054 a \$129,404

2. Si cree que cumple con las pautas mencionadas, complete el formulario de autoafirmación que le entregó su especialista en energía.
3. Si se aprueba su participación, RISE Engineering (el proveedor que realizó la evaluación) le brindará un acuerdo actualizado en el que se incluye esta promoción por tiempo limitado.

Esperamos ayudarlo a ahorrar energía. Si tiene alguna pregunta o le gustaría controlar el estado de su solicitud, comuníquese con RISE Engineering al 1-401-784-5700.

RISE ENGINEERING

Tenga en cuenta que esta oferta especial solo es válida para la propiedad donde se realizó la evaluación del consumo de la vivienda. RISE Engineering es un proveedor independiente de servicios de eficiencia energética para el programa Energy Wise de Rhode Island Energy. Entre programas se financian con el cargo para la eficiencia energética que se cobra en las facturas de gas y electricidad a todos los clientes conforme a la legislación de Rhode Island.

OFFICE OF ENERGY RESOURCES

Challenges and Responses

Pricing on materials and labor continue to increase. Independent insulation contractors have expressed a need to revisit pricing due to upward pressure on materials and more favorable pricing in Massachusetts. The program has leveraged the outcome of a recent pricing RFP for weatherization that was issued in MA to inform regional pricing. Updated pricing for the program will go into effect in August.

Customer Highlights

The average customer overall satisfaction ratings for the second quarter are:

- 8.57 out of 10 for in-person home energy assessments
- 10 out of 10 for virtual home energy assessments
- 9.1 out of 10 for weatherization

Customer feedback themes from weatherization contractors included:

- Many customers expressed appreciation of the representatives that they worked with from RISE Engineering and the installation contractors, stating that they were professional, efficient, and informative
- Some customers experienced confusion with scheduling installations

Contractor Demographic Update

Of the 37 independent insulation contractor companies providing weatherization services to this program, 9 are women or minority owned businesses.

EnergyWise Multifamily, Income Eligible Multifamily, C&I Multifamily

The EnergyWise Multifamily program achieved 843 net lifetime MWh of electric savings (4.1% of the lifetime goal) and 17,938 net lifetime MMBtu of gas savings (12.2% of the lifetime goal) through the second quarter of 2022. The Income Eligible Multifamily program achieved 245 net lifetime MWh of electric savings (1.0% of the lifetime goal) and 15,725 net lifetime MMBtu of gas savings (5.8% of lifetime goal) through the second quarter of 2022. The C&I Multifamily program achieved 12,385 net lifetime MMBtu of gas savings (9.4% of the lifetime goal) in the second quarter.

Customer Highlights

Income Eligible Project - Affordable housing apartments in Newport

There was a replacement of two existing heat boilers to two 500 MBH high efficiency condensing boilers, also included was the replacement to two 200 MBH high efficiency condensing DHW boilers. The existing circulator pumps were also replaced with new high efficiency circulator pumps. The electric incentive for this installation was \$2,07.50 and has an estimated 16,580 net lifetime kWh savings. The gas portion of the project was \$90,221.37 and has an estimated net lifetime therms savings of 81,542.50.

Standard Income Project - Condominiums in West Warwick

This project consisted of in-unit attic air sealing, insulation, bath venting, showerheads, thermostats, and screw in LED lamps. The condos are gas heated and have gas DHW. The gas incentive for this project was \$24,978 with an estimated 23,246 net lifetime therms savings. The electric incentive was \$1,331 with an estimated 3,170 Net Lifetime kWh in savings.

The average overall customer satisfaction ratings for the second quarter was 98%.

Challenges and Responses

Material lead times continue to cause significant project delays for heating and cooling retrofits. The lead time for most equipment is 10-18 weeks out from the initial order.

The Lead Vendor continues to follow up with customers and contractors regularly to keep projects moving forward and they are completing all other aspects of a project while awaiting necessary materials.

Workforce Development

The Lead Vendor's mechanical team completed electronically commutated motor and VFD pump training in this quarter.

ENERGYSTAR® HVAC (Heating and Cooling)

The ENERGYSTAR® HVAC (Heating and Cooling) program achieved 39,334 net lifetime MWh of electric savings (50.6% of the lifetime annual goal) and 147,715 net lifetime MMBtu of gas savings (33.6% of the lifetime goal) during the second quarter of 2022.

Q2 HVAC Contractor Trainings

- Eleven half-day and quarter-day contractor trainings were held during the second quarter, providing both refresher courses and new trainings for HVAC technicians.
- The HVAC Program now offers several types of HVAC Check trainings:
 - HVAC Check, which includes both AC Check and MS Check
 - MS Check, specifically for contractors who only install mini splits
 - AC Check & MS Check as separate modules, to make it easier for contractors to fit training into their schedules
- Trainings were modified for and delivered to sales staff and distributors.
- The Program team held a Manual J and Cool Calc training, which included an interactive live demo.
- The Program team offered on site training for several participating HVAC companies.

Q2 HVAC Check Testing

- HVAC Check testing is performed on heat pumps during warmer weather, which began in earnest in May.
- The HVAC Program team actively reached out to HVAC contractors during the second quarter to encourage them to perform this testing on both new systems and existing systems during preventative maintenance visits to ensure proper operation.
- 111 HVAC Check tests were performed by HVAC contractors during the second quarter.

Q2 HVAC Rebate Quality Control Inspections

- 38 Quality Control (QC) inspections were performed on recently installed heat pumps.

- These inspections verify equipment eligibility, can identify installation issues, and provides an opportunity to connect with residents to determine how well the systems are operating, and to share best practices for operation.

Q2 HVAC Program Participating Contractors

Rhode Island Energy provides customers with a list of Program Participating Contractors. To be listed (and stay listed) contractors must attend a Program Training, and perform a minimum number of HVAC Check tests each year. Only Participating Contractors can offer Enhanced Rebates. During the second quarter the HVAC Program team followed up with both new and existing contractors to offer training and technical support, and to ensure they met and continue to meet the requirements for being listed. There are currently 75 HVAC Program-approved contractors on the list.

Q2 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 second quarter included reminders for HVAC vendor staff, MS/AC Check testing tips, rebate submission requirements, reminders and deadlines, links to upcoming HVAC Check trainings, and the re-launch of the Enhanced Rebates for Oil/Propane Displacement. The newsletter also contained information and links to programs such as EnergyWise and the HEAT Loan. There are 650+ recipients on the distribution list.

Q2 Enhanced Heat Pump Rebates for Residential Oil and Propane Heating Customers

These enhanced rebates are offered through a partnership between Rhode Island Energy and the RI Office of Energy Resources (OER). OER secured additional RGGI funds that are then combined with Rhode Island Energy's Standard Heat Pump rebates, providing one-stop shopping for customers. The Program processed rebates for 75 customers, with a total of 95 systems during the second quarter.

Q2 HVAC Program Challenges and Responses

- Ongoing equipment supply issues have created delays in the purchase and installation of equipment.

**Rhode Island HVAC Report
Weekly Update**
June 14, 2022



The Rhode Island Energy and OER Oil and Propane
Displacement ASHP Rebates are Back!
Effective June 6, 2022!

- Efficiency requirements and rebate levels remain the same as 2021
 - All requirements are listed on the Rebate Form!
- Any Air Source Heat Pumps installed in 2022 that meet program requirements are eligible
- The installer must be a Participating Contractor (see current list and training opportunities below)
- Customers must complete an EnergyWise Home Energy Assessment and any suggested insulation/ventilation/air sealing upgrades
 - Please contact the EnergyWise Program at 888-633-7947 to get started.
- 0% Financing is available through the EnergyWise program
- Removal of the existing heating system is not required

All 2022 RI Energy Heat Pump Rebates are [HERE](#)

Rhode Island Heating & Cooling Program Trainings

- Only trained, active, participating contractors can offer the Enhanced rebates.
- Additional classes will be scheduled weekly all summer.
 - Additional training dates can be arranged if 4 or more techs register to attend.

- The HVAC Program team developed a new resource outlining the steps and requirements associated with applying for Enhanced Rebates for Oil/Propane Displacement.
 - The goal is to guide customers successfully through the process and reduce the number of incomplete or incorrect rebate applications
 - This resource was sent to HVAC contractors, posted on Rhode Island Energy's website, and shared with the EnergyWise program, who promote these rebates directly to customers.
- The HVAC Program continues to field questions from contractors and customers regarding proper installation and operation of heat pumps.
 - As a result, the team developed a resource for both contractors and customers identifying best practices and offering solutions for successful operation.

Enhanced Oil/Propane Heating Displacement Heat Pump Rebate: Steps and Requirements



The Rhode Island Office of Energy Resources (OER) is offering enhanced rebates for energy-efficient central and mini-split heat pumps installed in qualifying homes that heat primarily with oil or propane. The enhanced rebates are offered as a supplement to the Standard Rebates currently offered by Rhode Island Energy.

Step One: Schedule a no-cost Home Energy Assessment (HEA)

An Energy Specialist from the EnergyWise Program (888-633-7947) will identify ways to make your home more energy efficient and provide you with a "Home Energy Action Report". This is also the first step for gaining access to 0% financing for home energy improvements. These measures may include adding insulation, air sealing, ventilation, as well as recommendations for improving the efficiency of appliances such as your heating, air conditioning and hot water systems. You will be fast tracked for the HEA if you mention you are interested in the Enhanced Heat Pump rebate.

- If improvements are recommended by the EnergyWise program, they will connect you with a contractor to perform the work outlined in the "Home Energy Action Report".
- These improvements are required to qualify for the Enhanced Oil/Propane Heating Displacement Rebate and will improve the efficiency and comfort of your home, especially during the coldest days of the winter and the hottest days of the summer and will save you on the cost of heating and cooling. Depending on where your heat pump will be installed, insulation can be scheduled before or after the installation of your heat pump.
- Save a copy of your Home Energy Action Report and if you performed weatherization upgrades, your Certificate of Completion or Summary of Improvements. These will be needed when you submit your rebate.
- More information about the EnergyWise Program can be found at: rienergy.com/RI-Home/Energy-Saving-Programs/Home-Energy-Assessments

Step Two: Apply for 0% Financing (Optional)

Rhode Island Energy's HEAT Loan program is available to qualified customers participating in the EnergyWise Home Energy Assessment Program and is designed to promote the installation of high efficiency improvements including insulation and heating equipment upgrades. Customers are eligible to apply for a 0% loan and obtain applicable rebates for the measures installed

Air Source Heat Pumps (ASHPs): Installation and Operation Best Practices for Contractors and Customers



Best Practices for Installation

1. Condenser Mounting Pads and Stands

As ASHPs are a long-term investment, a best practice would be to install the outdoor equipment on a stand on poured concrete. This is especially true of the larger, double outdoor fan condensers.

There are many brands of durable fabricated pads, and they are best used on single fan condensers.

As ASHPs will drain water in the defrost cycle, all condensers must be elevated above expected snow level, to prevent ice damage to condenser due to defrost cycle water draining and freezing on the built-up snow. For the same reason units should not be installed on walkways or sidewalks.



2. Wall Mounted Condensers

When installing condensers on wall mounting brackets, be aware of vibration noise. Avoid installing on bedroom walls. Contractors should discuss with customers in advance.



3. Piping and Line Sets

Specify non-VOC (volatile organic compound) foam pipe insulation. This insulation will not degrade the copper tubing and is identified as ASTM C 534 Grade 3 compliant. There are multiple brands of non-VOC line sets on the market.



Pictured above and to the left: contractor & customer resources developed and distributed during the second quarter.

Residential Consumer Products

The Residential Consumer Products program achieved 3,812 net lifetime MWh of electric savings (8.0% of the lifetime goal) during the second quarter of 2022.

The Program team continues to perform regular HVAC Check trainings, presentation to contractors and stakeholders on Manual J and in-field technical support.

In June 337 dehumidifiers were collected for recycling, that brings the total to 517 YTD. The Company ran a record-breaking dehumidifier event that yielded 264 units recycled in North Kingston. During the dehumidifier events customers are also educated about \$40 incentive for the purchase of a new Energy Star dehumidifier as well as a wide variety of other energy efficiency products and HVAC equipment.

Rhode Island Energy kicked off the Most Efficient Refrigerator and Clothes Washer appliance initiative with Home Depot in late Q2. The goal is to influence retailers to stock most efficient appliances at an attempt to drive consumer behavior.

Pool pump distributors are reporting brisk business in pool installations for the 2022 season. The Company's outreach vendor TRC has emphasized to installers that only ENERGY STAR® specification 3.0 variable speed pumps on the ENERGY STAR list at time of installation are eligible for the incentive programs. Submissions to the Rhode Island Energy pool pump incentive program are at 128 variable speed (frequency) that have been submitted for incentive. The first submission was from Baystate Pool Supplies, a partner since the inception of the programs.

Home Energy Reports (HER)

The Home Energy Reports (HER) program achieved 15,316 net lifetime MWh of electric savings (57.0% of the lifetime annual goal) and 70,637 net lifetime MMBtu of gas savings (75.5% of the lifetime goal) during the second quarter of 2022.

In the second quarter, Home Energy Reports provided messaging on room air conditioners, fridge recycling, and heat pump water heaters.

Is your AC costing you?

How to save more

Inefficient air conditioners waste energy and money. Upgrade to an efficient model for a cool, savings-filled summer.

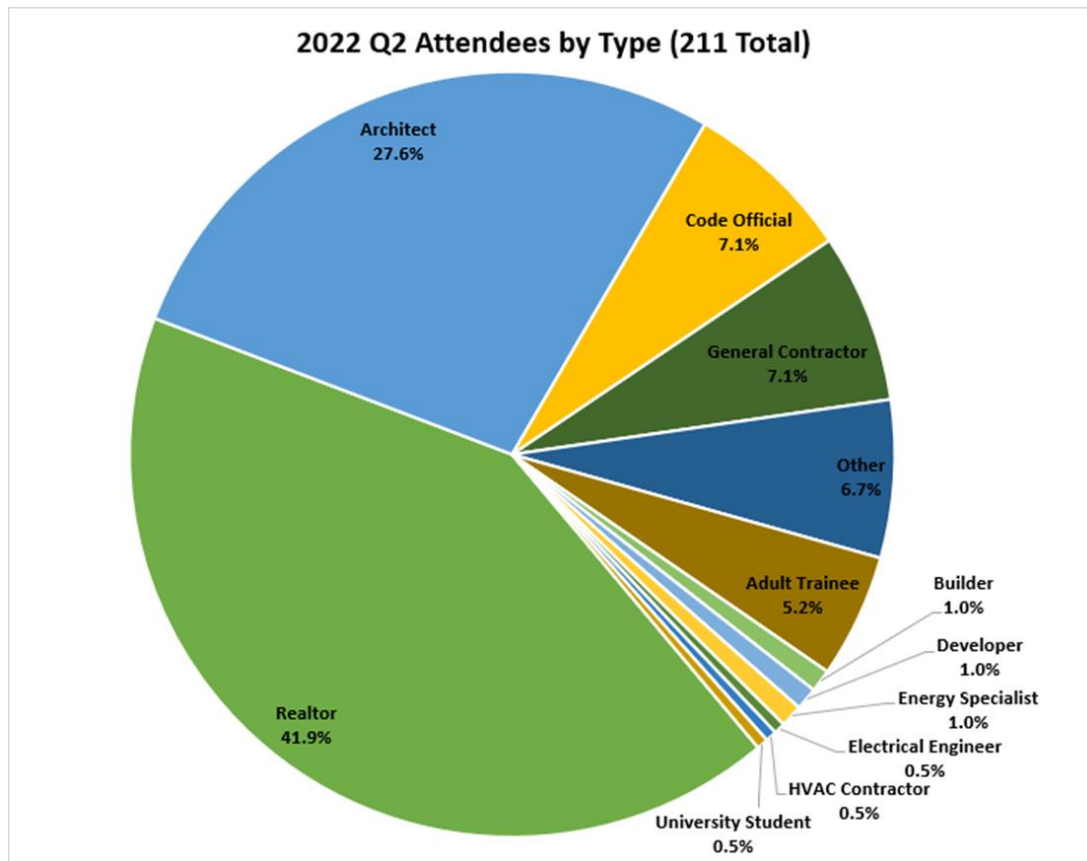
Get a \$40 rebate on an ENERGY STAR® certified room air conditioner, or up to a \$250 rebate for installing a new central air system.

To apply for your rebate, visit Rienrgy.com/cooling.



Code Compliance Enhancement Initiative (CCEI)

The Company sponsored 14 CCEI training events that engaged 211 industry participants during this quarter. This included 13 trainings focused on residential construction with 185 attendees and one commercial training with 26 attendees.



Q2 Training Participants – Attendees by Type

The Company and its vendor continued to partner with several organizations to sponsor and promote trainings in the second quarter. Organizations include Rhode Island Builders Association (RIBA), Rhode Island Building Officials Association (RIBOA), AIA-Rhode Island, Rhode Island Association of Realtors (RIAR), and Rhode Island Plumbing & Mechanical Inspectors Association (RIPMIA). Topics included:

- Weatherization, Insulation and Building Science
- Insulation and Wallboard
- Healthy Homes, Indoor Air Quality and Your Health
- Blower Door & Duct Leakage Testing (Hands-on)
- Home Comfort – Heating Cooling & Ventilation
- Advanced Building Science, Zero Energy Homes & the RI Stretch Code

- Green Building Fundamentals & Standards
- 2021 RI Residential Energy Code
- HVAC Design for Large Spaces with Low Energy Loads
- Introduction to Building Commissioning

These trainings are approved for RI Contractor Registration and Licensing Board continuing education units. Since the onset of COVID-19, most trainings have been held virtually, which typically increases attendance. In-person trainings included:

- Evening pre-apprentice training course coordinated through the Residential Construction Workforce Partnership
- Plumbing & Mechanical Inspectors Association Education Meeting in East Providence
- Zero Energy Home Renovation in Providence

Challenges and Responses

RI code still contains several weakening amendments relative to the 2018 International Energy Conservation Code (“IECC” or “model code”). The next Rhode Island Energy Conservation Code is expected to be based on IECC 2021. Through CCEI, Rhode Island Energy and its vendor are analyzing the likely costs and benefits of the weakening amendments to determine their impacts and whether they should be removed. The Company will share these analyses with partners and stakeholders who may opt to bring this information to the Building Code Commission during the next code adoption cycle, which has begun in 2022.

The Company is also involved in development of a stretch code through its work on the Rhode Island Green Building Commission.

Large Commercial New Construction

The Large Commercial New Construction program achieved 34,181 net lifetime MWh of electric savings (17.8% of goal) and 193,533 net lifetime MMBtu of gas savings (24.5% of goal) through the second quarter of 2022.

There are 35 active projects. In Q2, program staff connected with the design team for a large iconic downtown Providence building schedule for a major renovation.

A Zero Net Energy (ZNE) non-profit project is close to qualifying for the ZNE pathway. Program staff are working with the design team to meet the ZNE program criteria.

Program staff are working with the City of Providence and have engaged four new schools targeting the Path 1 ZNE program. The program team is also working with two universities on several new buildings currently under design.

Cross-Pollination with Communities Initiative

In Q2 program staff engaged a new customer at Quonset Industrial Park, an opportunity that came about as part of the Company's broader engagement with Quonset. Early engagement in the building design process has opened the opportunity to influence the design team to adopt high-efficiency practices.

Challenges and Responses

The recent energy code changes, adopted February 1, 2022, have reduced potential savings eligible within the New Construction Program. Lighting and gas measures were particularly hard hit, and even HVAC controls measures (such as demand controlled ventilation) are now considered baseline. The Company is updating savings calculations to account for these baseline changes.

Although these changes align with the goals of the energy efficiency programs (helping customers use less energy), it means less claimable program savings. The New Construction program team continues to research ways to maintain program savings as the energy code becomes more stringent.

In recent months, the team has observed a slowdown in project design and construction due to the increased price of construction materials and the long lead times for new equipment.

Large Commercial Retrofit

The Large Commercial Retrofit program achieved 96,876 net lifetime MWh of electric savings (31.0% of goal) and 268,461 net lifetime MMBtu of gas savings (20.1% of goal) through the second quarter of 2022.

Industrial Initiative

An industrial customer is replacing its old nitrogen (N₂) generator with a new system to be used in heat treat ovens and other processes. Operating the new N₂ system will require 895 cubic feet per minute (CFM) of compressed air load, plus a new 2,400 CFM cycling dryer to provide additional compressed air capacity. The new system includes two high-efficiency features, which will reduce electricity consumption by 279,018 kWh, with demand savings of 33.2 kW.

1. Auto Shut Down Control: The control system senses the generator operating pressures. When nitrogen usage is reduced beyond the control threshold, an increased pressure will close the generator valves, shutting off compressed air consumption. This puts the compressor into low energy mode. When compressed air pressure drops below a preset point, the generator automatically shuts down to prevent low purity N₂ from entering the system. When pressure drops to 95 PSIG, the system comes back online.
2. Energy Reduction Control: This integrated control system utilizes a programmable logic system to allow the generator to supply N₂ at constant purity during low flow conditions. This allows the compressor to operate in a reduced power consumption range.

EnergySmart Grocer Initiative

A national grocery store chain began pursuing energy efficiency improvements across its portfolio of Rhode Island stores under the Equipment Systems Performance Optimization (ESPO) initiative in mid-2021. In Q2 2022, at six locations across the state, the customer replaced gaskets on medium- and low- temperature refrigerator cases, resulting in an energy savings of 35,730 gross annual kWh and 2,011 gross annual therms, and \$21,672 in rebates for the customer.



A national grocery chain upgraded the rooftop condenser at a location in Providence to include a variable speed drive on the condenser motors. This project resulted in energy savings of 29,000 kWh, with a \$4,500 incentive.

Strategic Energy Management Partnership (SEMP)

Rhode Island Energy signed a new SEMF agreement with a private university in Q2. The customer is actively engaged in moving forward EE studies, projects, and sustainability measures. The customer will also join the Company's Fleet Advisory services program.

Building Analytics

The Building Analytics Program (BAP) will offer incentives to cover set-up costs associated with these systems provided by prequalified qualified service providers (QSPs). In Q2, Rhode Island Energy and its vendor released a request for qualifications (RFQ) from QSPs to offer software solutions and associated services. The BAP will offer incentives to help cover the cost of implementing systems that are installed by QSPs selected through the RFQ process.

Challenges and Responses

The Company continued to observe significant delays in project timelines resulting from supply chain delays. In Q2, the Company's vendor conducted a study to quantify the impacts of these impacts, as well as inflation observed in the market. The vendor also sought to identify potential mitigation strategies, which the Company is currently evaluating.

In the grocery sector, there is a severe shortage of refrigeration contractors and technicians. This may hinder the EnergySmart Grocer initiative's ability to execute. The implementation vendor also noted modest delays due to COVID-19.

Small Business Direct Install

The Small Business Direct Install (SBDI) program achieved 43,206 net lifetime MWh of electric savings (67.18% of goal) and 48,207 lifetime MMBtu of gas savings (52.6% of goal) through the second quarter of 2022.

Enhanced reporting

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

There have been 54 gas weatherization projects in the first two quarters of 2022, which are leveraging RGGI funds 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, and the first two quarters of 2022.

Period	Luminaires	Luminaires with controls	Retrofit kits	Retrofit kits with controls
2020	13,032	149	17,260	450
2021	12,804	246	15,932	908

Q1-Q2 2022	6,016	137	4,607	520
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Projects highlights

Brewery Project: The vendor completed a project at a local microbrewery anticipated to save 17,000 kWh per year. The customer's energy consumption is driven heavily using several large coolers. The customer installed updated, energy-efficient refrigeration thermostat controls, enabling the coolers to optimize scheduling and setpoints, and to ensure the evaporator fans cycle as needed rather than running continuously.

Pawtucket Promotes: The vendor hosted 60+ small business attendees, with a panel discussion about Small Business program offerings. Staff were on hand to answer questions and to sign up businesses for energy assessments. The event resulted in 16 leads.

Hispanic Chamber of Commerce: The vendor engaged with leadership to increase engagement with the Chamber's members and community. The chamber provided 7 members to canvass, 3 of which had projects completed.

Progreso Latino: The program vendor canvassed the Central Falls community in collaboration with Progreso Latino, meeting with local business owners to share information on the program. Follow-ups after led to two completed jobs. Marketing collateral was created along with dedicated web pages in English and Spanish to remove barriers and ensure comprehension. Links:

- <https://info.riseengineering.com/smbwz>
- <https://info.riseengineering.com/smbwzs>
- <https://info.riseengineering.com/smbd>
- <https://info.riseengineering.com/smbds>

Evaluation, Measurement, and Verification

Four studies were completed in the second quarter of 2022.

The *Rhode Island 2021 Energy Efficiency Workforce Analysis* quantifies the workforce involved in delivering the Company's programs in 2021. The study found that 1,011 full-time equivalent workers (FTEs) were associated with Rhode Island energy efficiency programs in 2021. The number of FTEs working on these programs increased by 22% relative to 2020. This increase was driven largely by reduced COVID-19 restrictions and increased EnergyWise participation over planned levels. The number of FTEs was determined by scaling 2020 FTEs by an indicator of change in program activity – the ratio of spending in 2021 relative to spending in 2020. Manual adjustments were made to these calculations based on interviews with Company staff and vendors.

The *Nonparticipant Market Barriers Study* was designed to better understand how to reach more difficult to serve customers' segments, particularly those that have not historically

participated in energy efficiency programs. The study characterized the customer segments that have historically participated less in National Grid's Rhode Island residential programs. Barriers identified included lack of awareness and understanding, insufficient trust, competing priorities, complex program requirements, and communication barriers. Ways to overcome these barriers through improved communication and education about the benefits of energy efficiency were identified.

The *Participation and Multifamily Census Study* analyzed historical participation in National Grid's Rhode Island residential energy efficiency program between 2016 and 2020 and created a comprehensive database of multifamily (MF) buildings in Rhode Island with 5+ units to support delivery of RI Energy's EnergyWise and Income Eligible Multifamily programs. The study identified two complementary, customer-specific metrics to characterize participation: the percent of total eligible accounts or buildings that have participated in each program and the percent of total account or building energy consumption saved due to program participation. To understand what customer and building features drive participation, the study also developed a logistic model that explains how each feature is associated with participation.

The *Solar Inverter Power Factor Correction Demonstration Evaluation Memorandum* was prepared jointly with Massachusetts. The study was designed to identify power factor correction device kVA savings for the utility and clarify the methodology to determine kVA savings. The study found that most feeders experienced minimal savings, with 92% experiencing kVAh savings ranging from -50 kVAh to 50 kVAh. There was a clear trend between feeder average reactive power, inverter reactive power, and feeder savings. Based on these results, the study recommended that the utility consider making significant design changes for the offering including modifications to program requirements, data collection, and incentives, or consider discontinuing the offering.

Community Initiatives

The Company continued its partnership with Quonset Development Corporation (QDC) under a three-year memorandum of understanding to provide EE services to businesses at the Quonset Business Park. Highlights from Q2 include:

- QDC received the Governor's Lead by Example Award in the quasi-government agency category for its efforts to engage Quonset Business Park tenants in energy programs.
- QDC and RI Energy jointly hosted a hybrid in-virtual/in-person workshop at QDC headquarters. Approximately 20 customers participated in this event at which vendor partners presented on fuel cells and battery storage, and RI Energy discussed EE and ConnectedSolutions incentives that support these technologies.
- The Company also attended Ocean State Job lot's Earth Day fair at its Quonset headquarters. Together with the Company's Residential lead vendor, RI Energy enrolled

employees for home energy assessments and answered their questions on EE and other utility issues.

Connected Solutions

Design of the new pool pump-based offering for Connected Solutions is still underway. The Company is continuing to work with one connected pool pump manufacturer, but it appears the earliest they will be able to complete an integration with the distributed energy resource management system will be in the fall of 2022. Customers will be encouraged to participate as soon as the integration process is completed. The Company is also completing a final study to determine savings for the Solar Inverter Demonstration to have a full program offering in 2023.

PDA Name		Q2 2022 Updates
<u>New Air Sealing & Insulation - Demonstration - Resi</u>	Date	7/8/2022
	Stage	Qualify
	Recent Activity	Identified target homes and working with vendor to install product.
	Next steps	Vendor to partner with RI contractor for test installations.
<u>Solar Inverter DLC - Demonstration - Resi</u>	Date	7/18/2022
	Stage	Launch
	Recent Activity	Successfully demonstrated the technology.
	Next steps	Launch full-scale program in 2023
<u>Final Gas Appliances - Assessment - Resi</u>	Date	7/8/2022
	Stage	Qualify
	Recent Activity	Continue assessing opportunities for electric appliances at new homes
	Next steps	Finalize assessment
<u>Gas HPs - Demonstration - Resi</u>	Date	7/8/2022
	Stage	Retire
	Recent Activity	Due to limited product interest and slow payback periods, this demonstration is ending.
	Next steps	Retire demonstration
<u>HVAC Lighting Controls Plus - Demonstration - C&I</u>	Date	7/8/2022
	Stage	Develop or demonstrate
	Recent Activity	Gave customer Aug deadline to complete installation or cancel project. No other customers successfully recruited.
	Next steps	Complete pre-installation monitoring
<u>Building Flexibility through DR - Assessment - C&I</u>	Date	7/20/2022
	Stage	Develop or demonstrate
	Recent Activity	Study with DNV ongoing

	Next steps	Complete study and evaluate results
<u>Refrigeration Leak Survey & Repair - Demonstration - C&I</u>	Date	7/8/2022
	Stage	Develop or demonstrate
	Recent Activity	Post-installation monitoring of refrigerant leakage and energy consumption at customer sites
	Next steps	Complete monitoring and analyze data and savings
<u>Gas DR - Pilot - C&I</u>	Date	7/8/2022
	Stage	Develop or Demonstrate
	Recent Activity	Finalized Q1 2022 customer payments
	Next steps	Start discussions with customers for next season
<u>Gas HPs - Demonstration - C&I</u>	Date	7/8/2022
	Stage	Retire demonstration
	Recent Activity	Attempted customer recruitment with little success.
	Next steps	n/a
<u>Rightsizing RTUs - Assessment - C&I</u>	Date	7/8/2022
	Stage	Plan
	Recent Activity	Contracted with vendor to complete assessment
	Next steps	Kick-off with vendor
<u>Automated RTU Optimization - Demonstration - C&I</u>	Date	7/8/2022
	Stage	Develop or demonstrate
	Recent Activity	Recruiting customers; installing product and monitoring equipment
	Next steps	Continue recruitment and installation
<u>SEM/CEI - Demonstration - C&I</u>	Date	7/8/2022
	Stage	Retire demonstration
	Recent Activity	Closed out final CEI projects
	Next steps	n/a
<u>Air Curtains - Demonstration - C&I</u>	Date	7/13/2022
	Stage	Qualify
	Recent Activity	Reviewed previous work done to develop this as a shared RI/MA measure. In MA, the CIMC has decided to forgo demonstration and proceed to measure development due to this technology and measure being relatively established and already offered in other regions.
	Next steps	Modify previous development work to create RI-specific measure analysis; provide analysis to Evaluation for review.
<u>Smart Valves for Chilled Water Systems - Demonstration - C&I</u>	Date	7/8/2022
	Stage	Develop or demonstrate
	Recent Activity	Chillers installed and operating at customer site
	Next steps	Monitor performance, analyze consumption and savings

RHODE ISLAND ENERGY ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND

Table 1: Summary of Electric 2022 Target and Preliminary 2nd Quarter Results

ELECTRIC PROGRAMS Sector and Program	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(18)	(13)	(14)	(15)	(19)	(16)	(17)
	Demand Reduction (Annual kW)			Energy Savings (Annual MWh)			Customer Participation			Expenses (\$ 000)				Energy Savings (Lifetime MWh)				\$ /Lifetime kWh	
	Target	Year To Date	Pct Achieved	Target	Year To Date	Pct Achieved	Target	Year To Date	Pct Achieved	Budget	Year To Date	Pct Achieved	Year End Forecast	Target	Year To Date	Pct Achieved	Year End Forecast	Target \$/kWh	Year to Date
Commercial and Industrial																			
Large Commercial New Construction	1,745	306	17.5%	12,589	2,242	17.8%	96	20	21.1%	\$ 9,034.1	1,518.3	16.8%	51.3%	192,343	34,181	17.8%	35.7%	\$ 0.047	\$ 0.044
Large Commercial Retrofit	8,490	2,125	25.0%	41,132	12,304	29.9%	2,239	1,455	65.0%	\$ 25,010.5	4,470.0	17.9%	89.2%	312,931	96,876	31.0%	98.7%	\$ 0.080	\$ 0.046
Small Business Direct Install	904	596	65.9%	9,976	3,514	35.2%	490	255	52.0%	\$ 8,883.3	2,715.9	30.6%	100.0%	64,394	43,206	67.1%	136.7%	\$ 0.138	\$ 0.063
Commercial Connected Solutions										\$ 4,393.6	258.5	5.9%	110.7%						
Community Based Initiatives - C&I										\$ 85.0	1.2	1.4%	100.0%						
Financing										\$ 2,000.0	0.0	0.0%	100.0%						
Commercial Workforce Development										\$ 157.5	0.0	0.0%	100.0%						
SUBTOTAL	11,139	3,026	27.2%	63,696	18,060	28.4%	2,825	1,730	61.3%	\$ 49,564.1	8,963.9	18.1%	85.7%	569,668	174,264	30.6%	81.7%	\$ 0.087	\$ 0.051
Income Eligible Residential																			
Single Family - Income Eligible Services	480	101	21.0%	3,314	676	20.4%	3,583	2,060	57.5%	\$ 13,275.3	3,807.2	28.7%	90.0%	38,506	6,502	16.9%	85.0%	\$ 0.345	\$ 0.586
Income Eligible Multifamily	49	20	40.7%	1,538	148	9.6%	3,600	1,077	29.9%	\$ 3,538.9	180.3	5.1%	95.0%	24,309	245	1.0%	93.0%	\$ 0.146	\$ 0.736
SUBTOTAL	529	121	22.8%	4,851	824	17.0%	7,183	3,137	43.7%	\$ 16,814.3	3,987.5	23.7%	91.1%	62,816	6,747	10.7%	88.1%	\$ 0.268	\$ 0.591
Non-Income Eligible Residential																			
Residential New Construction	74	17	23.4%	867	76	8.8%	462	118	25.5%	\$ 1,617.0	427.1	26.4%	101.5%	14,947	1,414	9.5%	100.0%	\$ 0.108	\$ 0.302
ENERGY STAR® HVAC	240	95	39.4%	4,620	2,232	48.3%	5,229	2,058	39.4%	\$ 4,684.4	1,455.1	31.1%	100.0%	77,717	39,344	50.6%	100.0%	\$ 0.060	\$ 0.037
EnergyWise	424	206	48.7%	2,789	1,247	44.7%	12,000	5,253	43.8%	\$ 15,557.0	5,528.8	35.5%	100.0%	13,472	5,496	40.8%	100.0%	\$ 1.155	\$ 1.006
EnergyWise Multifamily	143	30	21.1%	1,424	193	13.6%	3,600	802	22.3%	\$ 3,238.3	343.8	10.6%	78.0%	20,783	843	4.1%	75.0%	\$ 0.156	\$ 0.408
Residential Consumer Products	1,118	133	11.9%	6,885	498	7.2%	34,692	1,005	2.9%	\$ 2,796.0	608.6	21.8%	100.0%	47,554	3,812	8.0%	79.9%	\$ 0.059	\$ 0.160
Home Energy Reports	3,692	2,106	57.0%	26,852	15,316	57.0%	323,248	265,515	82.1%	\$ 2,639.1	1,141.2	43.2%	100.0%	26,852	15,316	57.0%	100.0%	\$ 0.098	\$ 0.075
Residential Connected Solutions										\$ 1,822.6	676.9	37.1%	89.5%						
Energy Efficiency Education Programs										\$ -	0.0	0.0%	0.0%						
Community Based Initiatives - Residential										\$ 255.1	0.0	0.0%	49.0%						
Comprehensive Marketing - Residential										\$ 247.9	17.3	7.0%	99.6%						
SUBTOTAL	5,691	2,588	45.5%	43,435	19,563	45.0%	379,231	274,751	72.4%	\$ 32,857.4	10,198.8	31.0%	96.9%	201,325	66,224	32.9%	92.7%	\$ 0.163	\$ 0.154
Regulatory																			
EERMC										\$ 766.2	156.3	20.4%	100.0%						
OER										\$ 1,541.7	810.5	52.6%	100.0%						
Rhode Island Infrastructure Bank										\$ 3,737.5	0.0	0.0%	100.0%						
SUBTOTAL										\$ 6,045.4	\$ 966.9	16.0%	100.0%						
TOTAL	17,359	5,734	33.0%	111,983	38,447	34.3%	389,239	279,619	71.8%	\$ 105,281.1	\$ 24,117.1	22.9%	90.8%	833,808	247,234	29.7%	84.8%	\$ 0.126	\$ 0.098
<i>Municipal LED Street Lights</i>										485.9	573.7	118.1%							

NOTES

(1)(4)(7) Targets from Docket 5189 - Attachment 5, Table E-7 (electric), Refiled January 27, 2022.

(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 5189, Attachment 5 Table E-3 (electric), Refiled January 27, 2022.

(11) Year To Date Expenses include Implementation expenses. -\$17 is currently allocated to Energy Star Lighting, which ended in 2021. This amount has been omitted from the total year to date expenses, and will be reallocated to the correct programs and updated in Q3 2022.

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

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

(16) Planned \$/lifetime MWh from Docket 5189 - Attachment 5, Table E-5 (electric), Refiled January 27, 2022 - adjusted to reflect format of quarterly report. Program Implementation Expenses/lifetime kWh.

(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 EFFICIENCY PROGRAMS IN RHODE ISLAND
Table 2: Summary of Gas 2022 Target and Preliminary 2nd Quarter Results

GAS PROGRAMS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(16)	(10)	(11)	(12)	(17)	(13)	(14)	(15)
Sector and Program	Energy Savings (Annual MMBtu)			Customer Participation			Expenses (\$ 000)				Energy Savings (Lifetime MMBtu)				\$ /Lifetime MMBtu		Peak Hour Gas Demand Savings (MMBtu)
	Target	Year To Date	Pct Achieved	Target	Year To Date	Pct Achieved	Budget	Year To Date	Pct Achieved	Year End Forecast	Planned	Year To Date	Pct Achieved	Year End Forecast	Planned	Year to Date	Year to Date
Commercial and Industrial																	
Large Commercial New Construction	52,956	13,914	26.3%	94	16	16.6%	\$ 3,140.9	\$ 1,004.5	32.0%	73.6%	788,763	193,533	24.5%	98.3%	\$ 3.98	\$ 5.19	6.96
Large Commercial Retrofit	142,888	26,811	18.8%	62	28	45.9%	\$ 4,672.1	\$ 1,346.8	28.8%	103.9%	1,332,508	268,461	20.1%	96.1%	\$ 3.51	\$ 5.02	13.41
Small Business Direct Install	6,113	2,506	41.0%	170	67	39.5%	\$ 354.1	\$ 237.6	67.1%	100.0%	91,700	48,207	52.6%	103.6%	\$ 3.86	\$ 4.93	1.25
Commercial & Industrial Multifamily	8,803	676	7.7%	729	7	1.0%	\$ 957.0	\$ 102.5	10.7%	80.0%	131,220	12,385	9.4%	80.0%	\$ 7.29	\$ 8.28	0.34
Commercial Pilots							\$ 215.8	\$ 67.2	31.1%	100.0%							
Community Based Initiatives - C&I							\$ 28.3	\$ 0.3	1.0%								
Commercial Workforce Development							\$ 67.5	\$ -	0.0%	100.0%							
SUBTOTAL	210,760	43,907	20.8%	1,056	118	11.2%	\$ 9,435.7	\$ 2,758.9	29.2%	91.1%	2,344,192	522,587	22.3%	96.3%	\$ 4.03	\$ 5.28	21.95
Income Eligible Residential																	
Single Family - Income Eligible Services	10,942	2,783	25.4%	1,098	254	23.1%	\$ 6,370.0	\$ 1,891.8	29.7%	90.0%	218,847	55,662	25.4%	85.0%	\$ 29.11	\$ 33.99	1.39
Income Eligible Multifamily	14,700	648	4.4%	3,150	744	23.6%	\$ 2,947.5	\$ 349.9	11.9%	100.0%	273,085	15,725	5.8%	100.0%	\$ 10.79	\$ 22.25	0.32
SUBTOTAL	25,642	3,431	13.4%	4,248	998	23.5%	\$ 9,317.6	\$ 2,242	24.1%	93.2%	491,932	71,387	14.5%	93.3%	\$ 18.94	\$ 31.40	1.72
Non-Income Eligible Residential																	
EnergyWise	20,850	9,511	45.6%	1,761	1,613	91.6%	\$ 8,575.0	\$ 3,707.7	43.2%	100.0%	478,550	225,447	47.1%	100.0%	\$ 17.92	\$ 16.45	4.76
Energy Star® HVAC	26,740	8,886	33.2%	3,062	1,178	38.5%	\$ 3,650.5	\$ 1,054.1	28.9%	94.8%	439,717	147,715	33.6%	80.0%	\$ 8.30	\$ 7.14	4.44
EnergyWise Multifamily	8,279	831	10.0%	4,000	99	2.5%	\$ 1,488.6	\$ 169.3	11.4%	80.0%	147,064	17,938	12.2%	80.0%	\$ 10.12	\$ 9.44	0.42
Home Energy Reports	93,548	70,637	75.5%	152,324	146,417	96.1%	\$ 441.5	\$ 174.4	39.5%	100.0%	93,548	70,637	75.5%	100.0%	\$ 4.72	\$ 2.47	35.32
Residential New Construction	3,610	414	11.5%	289	54	18.7%	\$ 566.4	\$ 181.3	32.0%	100.0%	64,899	10,343	15.9%	83.1%	\$ 8.73	\$ 17.53	0.21
Comprehensive Marketing - Residential							\$ 68.0	\$ 4.3	6.3%	100.0%							
Community Based Initiatives - Residential							\$ 85.0	\$ 0.0	0.0%	47.1%							
SUBTOTAL	153,027	90,280	59.0%	161,436	149,361	92.5%	\$ 14,875.0	\$ 5,291.1	35.6%	96.4%	1,223,778	472,081	38.6%	89.5%	\$ 12.16	\$ 11.21	45.14
Regulatory																	
EERMC							\$ 259.5	\$ 52.9	20.4%	100.0%							
OER							\$ 755.6	\$ 338.1	44.7%								
Rhode Island Infrastructure Bank							\$ 1,262.5	\$ -	0.0%	100.0%							
SUBTOTAL							\$ 2,277.6	\$ 391.1	17.2%	100.0%							
TOTAL	389,430	137,618	35.3%	166,740	150,478	90.2%	\$ 35,906.0	\$ 10,682.9	29.8%	94.4%	4,059,902	1,066,054	26.3%	93.9%	\$ 8.84	\$ 10.02	68.81

NOTES

(1)(4) Targets from Docket 5189 - Attachment 6, Table G-7 (gas), Refiled January 27, 2022.

(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 5189, Attachment 6 Table G-3 (gas), Refiled January 27, 2022.

(8) Year To Date Expenses include Implementation expenses.

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

(13) Planned \$/lifetime MMBtu from Docket 5189 - Attachment 6, Table G-5 (gas), Refiled January 27, 2022 - 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.

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RHODE ISLAND ENERGY ELECTRIC ENERGY EFFICIENCY PROGRAMS IN RHODE ISLAND
Table 3: Rhode Island Energy 2022 Revolving Loan Funds

Large C&I Electric Revolving Loan Fund

<u>Income Statement</u>		
(1)	2022 Funds Available	\$5,202,855
(2)	2022 Loan budget	\$12,000,000
(3)	Committed	\$6,274,192
(4)	Paid	\$2,330,246
(5)	Repayments	\$3,353,597
(6)	Available 6/30/22	\$47,986
(7)	Outstanding loan volume	\$16,291,549
(8)	Loan defaults during period (\$)	\$0
(9)	Arrears over 120 days at period end (\$)	\$41,760
<u>Program Impact</u>		
(10)	Number of loans	47
(10b)	Participants	25
(11)	Annual Savings (Gross MWh)	2,844
(12)	Annual Savings (Net MWh)	3,968
(13)	Lifetime Savings (Gross MWh)	34,334
(14)	Lifetime Savings (Net MWh)	27,192
(15)	Annual Savings (Gross kW)	1,049
(16)	Annual Saving (Net kW)	425
(17)	Total associated incentive volume (\$)	\$1,473,268
(18)	Total annual estimated energy cost savings (\$)	\$702,336

Small Business Electric Revolving Loan Fund

<u>Income Statement</u>		
(1)	2022 Funds Available	\$3,137,538
(2)	2022 Loan budget	\$1,500,000
(3)	Committed	\$0
(4)	Paid	\$291,887
(5)	Repayments	\$379,029
(6)	Available 6/30/22	\$3,224,680
(7)	Outstanding loan volume	\$576,673
(8)	Loan defaults during period (\$)	\$0
(9)	Arrears over 120 days at period end (\$)	\$21,370
<u>Program Impact</u>		
(10b)	Participants	313
(11)	Annual Savings (Gross MWh)	3,850
(12)	Annual Savings (Net MWh)	3,514
(13)	Lifetime Savings (Gross MWh)	47,025
(14)	Lifetime Savings (Net MWh)	43,206
(15)	Annual Savings (Gross kW)	729
(16)	Annual Saving (Net kW)	596
(17)	Total associated incentive volume (\$)	\$2,510,287
(18)	Total annual estimated energy cost savings (\$)	\$621,903

Rhode Island Public Energy Partnership (RI PEP)

<u>Income Statement</u>		
(1)	2022 Funds Available	\$46,895
(2)	2022 Loan budget	\$0
(3)	Committed	\$0
(4)	Paid	\$0
(4a)	Funds Returned to OER	\$0
(5)	Repayments	\$1,066
(6)	Available 6/30/22	\$47,961
(7)	Outstanding loan volume	\$1,879
(8)	Loan defaults during period (\$)	0
(9)	Arrears over 120 days at period end (\$)	406.27
<u>Program Impact</u>		
(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, 2022. Includes line (6) "Available 12/31/21" plus line (3) "Committed" in Table E-6 and G-6 of the 2021 Year End Report.
- 2 Budget adopted by Sales Team for 2022 operations. Budget includes projections of repayments made during 2022.
- 3 As of June 30, 2022
- 4 As of June 30, 2022. This includes all projects paid through June 30, 2022 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 June 30, 2022. This includes all projects paid through June 30, 2022 and the OBR associated with those projects. OBR payment are processed once the associated incentive has been paid, usually in batches.
- 6 Fund balance as of June 30, 2022. 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 June 30, 2022.
- 10 As of June 30, 2022
- 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
- 10b (not adjusted for net-to-gross).
- 11 As of June 30, 2022
- 12 As of June 30, 2022
- 13 As of June 30, 2022
- 14 As of June 30, 2022
- 15 As of June 30, 2022
- 16 As of June 30, 2022
- 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 2022 Revolving Loan Funds

Large C&I Gas Revolving Loan Fund

<u>Income Statement</u>		
(1)	2022 Funds Available	\$1,035,330
(2)	2022 Loan budget	\$2,000,000
(3)	Committed	\$902,820
(4)	Paid	\$253,788
(5)	Repayments	\$214,456
(6)	Available 6/30/22	\$93,178
(7)	Outstanding loan volume	\$1,131,021
(8)	Loan defaults during period (\$)	\$0
(9)	Arrears over 120 days at period end (\$)	\$29,304
<u>Program Impact</u>		
(10)	Number of loans	10
(10b)	Participants	9
(11)	Annual Savings (Gross MMBtu)	16,120
(12)	Annual Savings (Net MMBtu)	14,335
(13)	Lifetime Savings (Gross MMBtu)	200,436
(14)	Lifetime Savings (Net MMBtu)	184,941
(17)	Total associated incentive volume (\$)	\$555,715
(18)	Total annual estimated energy cost savings (\$)	\$293,933

Notes

- 1 Amount available as of January 1, 2022. Includes line (6) "Available 12/31/21" plus line (3) "Committed" in Table E-6 and G-6 of the 2021 Year End Report.
- 2 Budget adopted by Sales Team for 2022 operations. Budget includes projections of repayments made during 2022.
- 3 As of June 30, 2022
- 4 As of June 30, 2022. 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 June 30, 2022
- 6 Fund balance as of June 30, 2022. 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 June 30, 2022.
- 10 As of June 30, 2022
- 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 June 30, 2022
- 12 As of June 30, 2022
- 13 As of June 30, 2022
- 14 As of June 30, 2022
- 15 As of June 30, 2022
- 16 As of June 30, 2022
- 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.

Table 5
Rhode Island Energy
2022 Test Metrics

Carbon Reduction²

	CO2 (Electricity)	CO2 (Natural Gas)	CO2 (Oil)	CO2 (Propane)	CO2 (Total)
Residential	7,473	5,281	1,188	(38)	13,904
Income Eligible	315	201	196	7	719
C&I	6,899	2,569	(227)	-	9,240
Total	14,687	8,051	1,157	(31)	23,864

NOTES

² 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.