

2024 Annual Report

Department of Energy & Environmental Protection (DEEP),
Office of Affordable Housing Energy Retrofits (AHER)
in Compliance with Public Act 21-48(d) and C.G.S. §11-4a

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EXECUTIVE SUMMARY

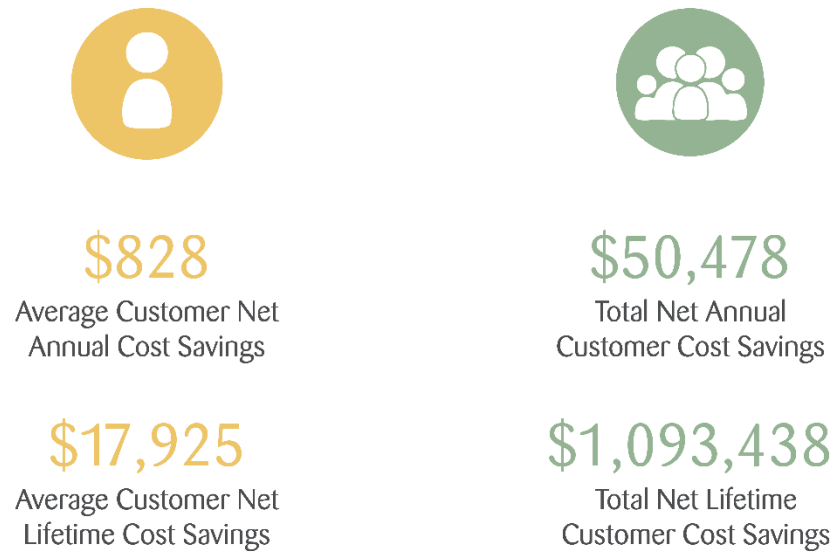
At the direction of Governor Lamont and with support from the General Assembly, the Connecticut Department of Energy & Environmental Protection (DEEP), through the Bureau of Energy and Technology Policy's (BETP) Office of Affordable Housing Energy Retrofits (AHER), has developed policies and programs to support affordable housing energy retrofits across the state. In compliance with Connecticut Public Act 21-48, this report provides information on the two American Rescue Plan Act (ARPA) (Pub. L. 177-2) - funded affordable housing programs allocated to DEEP and also seeks to increase awareness of DEEP AHER's broader affordable housing initiatives.

Energy improvements in affordable housing are essential to advancing energy affordability and equity as well as public health in Connecticut. By participating in energy retrofit programs, building residents and owners can enjoy lower energy bills, more control over their energy usage, resilience to power outages, better indoor and outdoor air quality, and more comfortable homes, among other benefits. Between 2017-2019, 23% of households seeking energy efficiency services through the electric utility ratepayer-funded Home Energy Solutions-Income Eligible (HES-IE) program were turned away due to health and safety barriers, such as mold, asbestos, or vermiculite, that prevented contractors from implementing efficiency measures.¹ To address this barrier, pursuant to Public Acts 21-2 and 21-48, the State of Connecticut established the REPS program, which covers the cost of remediating these barriers. Since its launch in 2023, REPS has been appropriated \$8.824 million in ARPA and Low-Income Home Energy Assistance Program funding. Based on the 61 homes that have progressed through the post-REPS weatherization process to date, the REPS program is helping households with the highest energy burden to make their homes healthier and safer while helping them significantly reduce their energy bills.

This report details DEEP's recently implemented ARPA-funded program, the Residential Energy Preparation Services (REPS) program, as well as an ARPA-funded allocation to the electric distribution utilities to support affordable housing efficiency retrofits. Information is also provided on DEEP's other energy programs and activities for affordable housing, such as the Weatherization Assistance Programs (WAP); the design of a district geothermal heating and cooling system funded through DOE's Community Geothermal Grant; the two federally-funded home energy rebate programs, the Home Energy Rebate Program (HER) and the Home Electrification and Appliance Rebate (HEAR); the development of an Online Incentive Tool; and the development of a new Revolving Loan Fund funded pursuant to Public Act 23-205 and modified pursuant to Public Act 24-143. Finally, the report concludes with information about DEEP's continuing commitment to engage community members and other stakeholders in the housing efficiency field.

¹ Connecticut Energy Efficiency Board, Weatherization Barriers Workshop, slide 18, November 18, 2020. Available at: <https://portal.ct.gov/-/media/deep/energy/conserloadmgmt/weatherization-barriers-workshop-1-slides.pdf>

Figure 1: REPS Program Reported Savings



An additional barrier to participation in energy efficiency programs exists for those who rent in multifamily affordable housing and, therefore, do not have decision-making authority regarding building retrofits. To address this barrier, also pursuant to Public Acts 21-2 and 21-48, DEEP has been allocated \$7 million of ARPA funding for energy efficiency improvements in low-income residences across the state, focusing on multifamily affordable housing projects. These funds are being implemented through existing Conservation & Load Management (C&LM) programs and will prioritize projects that pay the prevailing wage.

INTRODUCTION

The Connecticut Department of Energy & Environmental Protection's (DEEP's) Office of Affordable Housing Energy Retrofits (AHER or the Office) was established to provide a policy development and program management team dedicated to addressing energy affordability and equity in residents' home. AHER was originally focused on implementing two American Rescue Plan Act (ARPA) (Pub. L. 117-2) programs proposed by Governor Lamont and authorized by the legislature with \$7 million of funding each in the 2021 budget (Public Act 21-2): a weatherization barrier remediation program and an affordable housing energy retrofit program, reflecting the priorities of Connecticut Public Act 21-48².

DEEP is directed in PA 21-48 to submit an annual report³ to the General Assembly that details the standards of the affordable housing retrofit program developed in accordance with its guidelines and provide "an analysis of the scope of residences able to be served by the grant program and proposed goals for the annual percentage of affordable housing units that can be served by the program." This report meets this statutory reporting requirement while also providing a broad update on DEEP's efforts to advance energy retrofits in affordable housing through the newly established DEEP Office of Affordable Housing Energy Retrofits. The information is provided to support increased awareness of the initiatives and programs delivered by DEEP through this Office.

Since the passage of PA 21-48, DEEP's responsibilities have expanded substantially. The federal Bipartisan Infrastructure Law (BIL) provided \$46 million to Connecticut's Weatherization Assistance Program (WAP), which is already managed by DEEP. Similarly, the federal Inflation Reduction Act (IRA) introduced new opportunities through the Home Energy Rebate Program (HER) and the Home Electrification and Appliance Rebate (HEAR) programs, allowing DEEP to access additional federal funding to improve energy efficiency for low-income households.

To streamline stakeholder access to a wide range of available incentives and enhance usability, DEEP is also developing an online incentive tool. This customer-focused, one-stop platform will consolidate information on financial incentives offered by state, federal, and municipal programs to support clean and affordable energy, internet connectivity, and sustainability-related physical asset improvements in Connecticut buildings. A beta version is anticipated by 2025. Additionally, pursuant to Public Act 23-205 and modified pursuant to Public Act 24-143, DEEP is developing

² P.A. 21-48 Section 1. (a) Not later than September 1, 2021, the Department of Energy and Environmental Protection shall, using available federal or other funds, establish an energy efficiency retrofit grant program. Such program shall award grants to fund the installation of energy efficient upgrades to (1) affordable Housing, as defined in section 8-39a of the general statutes, including, but not limited to, property of a housing authority, as defined in section 8-39 of the general statutes, or (2) other dwelling units owned by a landlord, as defined in section 47a-1 of the general statutes, at the discretion of the commissioner. Such upgrades shall include energy efficiency and weatherization measures and may include, but need not be limited to, the installation of rooftop solar photovoltaic panels, energy storage systems located on the customer's premises, electric vehicle charging infrastructure, heat pumps and balanced ventilation, and the mitigation of health and safety hazards including, but not limited to, gas leaks, mold, vermiculite and asbestos, lead and radon, to the extent such hazards impede the installation of energy efficiency and weatherization measures.

³ 2023 DEEP Annual Report can be found on the following link: [deep-affordable-housing-energy-retrofits-2023-legislative-report.pdf](#)

the Housing Environmental Improvement Revolving Loan Fund, which aims to support energy upgrades in multifamily properties located in environmental justice communities and alliance districts, focusing on low-income residents. The program, supported by a \$125 million authorization from the Connecticut Legislature in 2023, is expected to launch in 2025.

To address the overlap between these initiatives and the requirements of PA 21-48, DEEP is working to align funding streams and streamline implementation by leveraging existing programs. Previous annual reports can be found on DEEP's website: <https://portal.ct.gov/deep/energy/office-of-affordable-housing-energy-retrofits>.

RECENT ACHIEVEMENTS

Residential Energy Preparation Services (REPS) Program

Public Act 21-48 required that DEEP create an energy retrofit program that may include but need not be limited to the mitigation of health and safety hazards to the extent such hazards impede the installation of energy efficiency upgrades and weatherization measures, with funds allocated in Public Act 21-2. Recognizing that many Connecticut homes could not participate in weatherization services without first having certain health and safety concerns remediated, over the course of 2022, DEEP worked to develop program rules and competitively procure a program operator to address weatherization barrier remediation, as contemplated in the Public Act and authorized in the 2021 budget.

The Residential Energy Preparation Services (REPS) program was created and officially launched in April 2023. REPS serves low-income customers in 1- to 4-unit homes who have been deferred for health and safety barriers from one of Connecticut's two existing weatherization programs – the utility-funded Home Energy Solutions – the HES-IE program, or the U.S. Department of Energy-funded Weatherization Assistance Program (WAP). REPS functions by remediating these homes' health and safety barriers and then referring customers back to the respective weatherization program to complete the recommended energy efficiency measures. This successful program is now enrolling interested customers on a waitlist due to a lack of continued available funding.

DEEP began the planning phase of developing a weatherization health and safety barrier removal program in mid-2021. DEEP led a public process to inform program design and to develop a Request for Proposals (RFP) for a program operator. During this process, DEEP convened two stakeholder workshops to discuss the most pressing issues, drafted an RFP for a program operator based on the feedback from workshops and individual stakeholder meetings, and released the draft RFP for public comment. In November 2021, DEEP released the final RFP for program operators, which was open until January 2022. International Center for Appropriate and Sustainable Technology (ICAST) was selected as a program operator in February 2022.

Since the selection, DEEP has worked closely with ICAST to build the program from the ground up, including identifying eligibility criteria, covered measures, a project timeline and milestones, and project deliverables.

Concomitantly, DEEP worked with CT's Department of Social Services (DSS) to secure additional supplemental funding for the REPS program from the federal Health and Human Services (HHS)-funded Low-Income Home Energy Assistance Program (LIHEAP), allowing for ARPA funds to be extended further. DSS provided \$1.1 million in LIHEAP funding in Fiscal Year (FY) 2022-2023, an additional \$224,000 in FY 2023 - 2024, and an additional \$500,000 in FY 2024-2025. By enabling low-income units to receive energy efficiency upgrades, these LIHEAP dollars are helping to reduce energy bills for participating units immediately and in the long term.

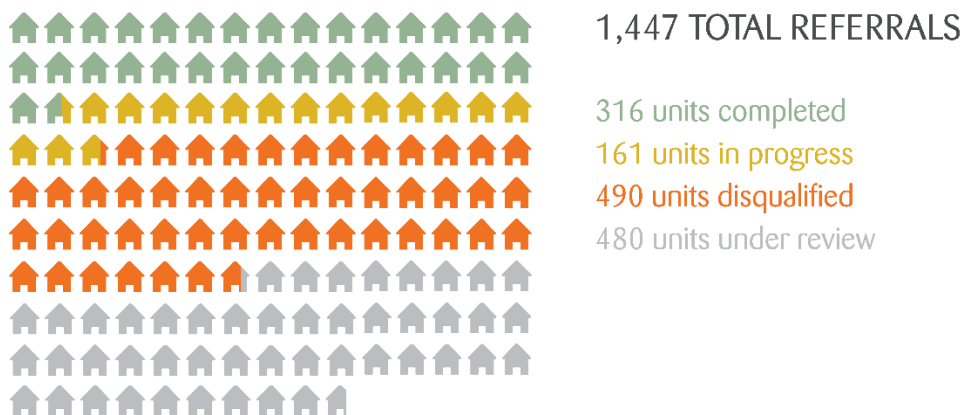
Beginning in early October 2022, DEEP and ICAST met weekly with the two single-family WAP program operators, and the two electric and natural gas utilities that administer the HES-IE program, Eversource and Avangrid. These meetings were used to solidify and streamline program processes, data sharing between organizations, customer prioritization, and marketing materials. The REPS program then entered a pilot phase between late 2022 and early 2023. Upon successfully serving a handful of units through the initial pilot stage, DEEP officially launched a 1–4-unit program in April 2023.

Over the past year, DEEP evaluated REPS program processes to determine actions for improvement. Such improvements included:

- Expanding the REPS remediation contractor pool to meet the increase in referrals, allowing for greater flexibility and timeliness in scheduling work;
- Improving project documentation methods, such as adding more detail to customer disqualification letters to enhance clarity, which resulted in better customer experience;
- Working with the referring agencies to improve information provided in referral packages, allowing ICAST to make more appropriate and informed decisions when determining project scopes of work;
- Working with ICAST to allow DEEP access to a live data portal;
- Creating a process with the referring agencies to receive weatherization data on REPS units that have completed weatherization. Such data points include energy efficiency measures installed, energy savings, customer financial savings, and greenhouse gas emission savings enabled as a result of remediation.

To date REPS has received 1,447 total referrals, serving 316 units, 161 in progress, 490 disqualified, and 480 units under review in the pipeline. Additionally, approximately 75 new referrals are added each month.

Figure 2: REPS Program Referrals Breakdown



Out of the total referrals, 490 units were disqualified for various reasons, such as:

- Exceeding budget: In several cases, project scopes surpassed the maximum allowable cost per unit or included scope not covered by the program guidelines. These often involved extensive home repairs and mold-related issues that required costly roof replacements.
- Inability to contact customers: Services could not be scheduled due to challenges in reaching the customers.
- Customer refusal: Some customers declined the services offered.

Figure 3: REPS Program Disqualification Breakdown

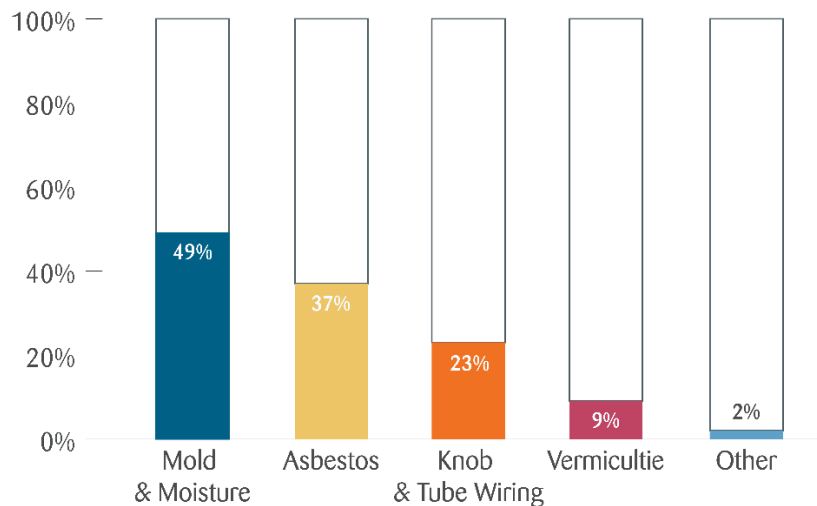
490 UNITS DISQUALIFIED



The most common barriers found in referred units are mold & moisture, asbestos, knob & tube wiring, and vermiculite. The chart below displays the percentage of completed units associated with each type of barrier. Note that some units may have multiple barriers, causing the total percentage to exceed 100%.

- Mold & moisture: 49%
- Asbestos: 37%
- Knob & tube wiring: 23%
- Vermiculite: 9%
- Other: 2%

Figure 4: REPS Program - Barriers Remediated



It is important to note that 148 of the 316 completed units were located in Designated Environmental Justice Communities. Additionally, 222 of the completed units were single-family, while the remaining 94 were multi-family units ranging from 2 to 4 units.

Figure 5: REPS Program – Metrics for Completed Units

316 COMPLETED UNITS



148 Units Located in Designated Environmental Justice Communities



222 Single Family
94 Multi-Family

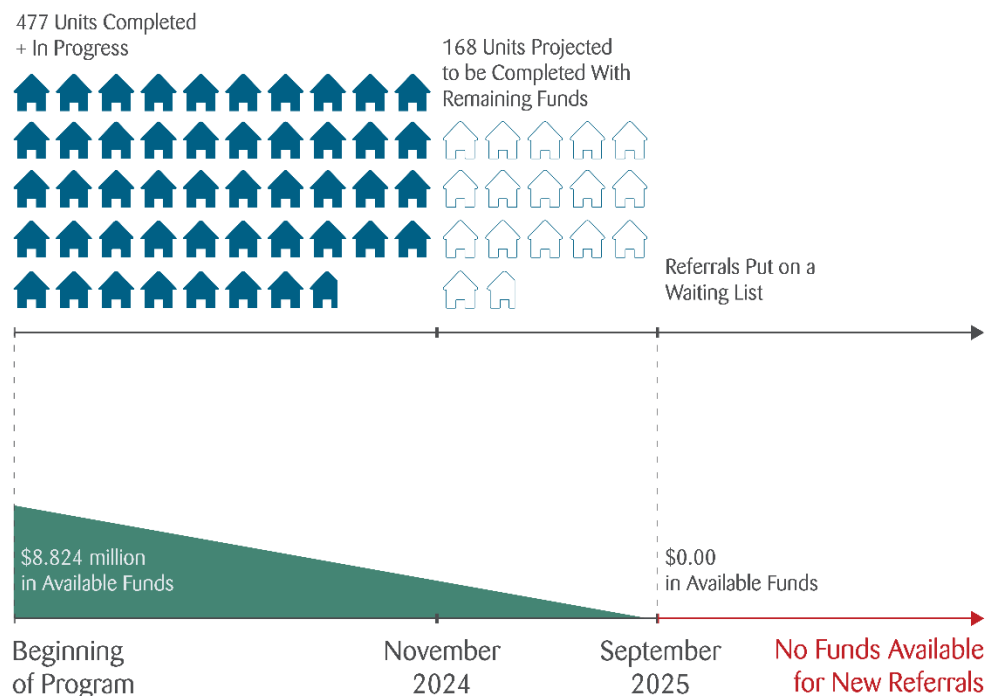
DEEP has received data for 61 units that have completed weatherization after receiving remediation services through REPS. These units have achieved the following savings:

- Average customer net annual cost savings: \$828
- Average customer net lifetime cost savings: \$17,925
- Average project net annual energy savings: 31.02 MMBtus
- Average project net lifetime energy savings: 681.25 MMBtus
- Average project net lifetime greenhouse gas (GHG) emissions reduction: 70.98 metric tons of CO₂e
- Total net annual energy savings: 1,892.15 MMBtus
- Total net lifetime energy savings: 41,556.51 MMBtus
- Total net lifetime GHG emissions reduction: 4,330.08 metric tons of CO₂e
- Total net annual customer cost savings: \$50,478
- Total net lifetime customer cost savings: \$1,093,438

DEEP projects that the program will serve an additional 168 units by September 30, 2025, with remaining existing funds totaling 645 completed units. This estimate is derived by dividing the program's total available remaining programmatic funding of \$2,876,61.53 by the average cost per unit to assist REPS customers. As of November 30, 2024, the average cost per unit for a home served through REPS was \$17,099.29.

Based on the REPS completion rate, the number of units in the pipeline, and the programmatic funding remaining, DEEP calculated that existing funds do not allow for the program to keep accepting new referrals and is therefore instructed the REPS program operator to put all new incoming referrals onto a waitlist until further funding is available.

Figure 6: REPS Program Funding + Output



While REPS has to-date successfully met significant demand for its services, there are opportunities for continued growth and improvement with additional funding. DEEP anticipates that ARPA funds may be fully expended by the end of 2025, and LIHEAP funding remains uncertain from year to year. Additional funding would be necessary to continue implementing the program beyond 2025. As such, the future of the program after 2025 presents a chance to explore new, sustainable funding solutions to ensure its continuation.

Additionally, while REPS has been able to assist many customers, some are unable to be served due to cost limitations as detailed above. Expanding the program's funding could open up new possibilities for addressing these critical needs, allowing for roof replacements and increasing the maximum allowable cost per unit. This would help ensure more units can be served and make a lasting impact on the community long into the future.

Program Structure

Customers are eligible for REPS directly through participation in either [HES-IE](#) or [WAP](#). As such, a customer becomes eligible for REPS once they have applied for and have been accepted into one of these programs. Initially, a weatherization audit is performed, and if a weatherization barrier covered by the REPS program is found, the customer is referred to the REPS program. Once referred, the REPS program operator performs a project assessment to verify project and household eligibility for REPS.

The basic eligibility for REPS aligns with those for WAP and HES-IE: a family's combined gross annual income must be below 60% of the State Median Income (SMI). In a rental property, eligibility is based on the income of the tenant's household, but landlords must agree to specific tenant protections—such as not increasing rent due to home remediation improvements—for the property to qualify. Should demand for REPS begin to outstrip available resources, prioritization criteria may be implemented, including parameters such as energy burden, the expected Savings to Investment Ratio (SIR) of the project, and whether the customer is in a Disadvantaged Community (DAC).

DEEP decided to structure the program this way to maximize the use of existing programs and the pipeline of referrals. Additionally, structuring REPS as an extension of WAP and HES-IE allows the program to take advantage of existing processes, reduce inefficiencies, and utilize ongoing partnerships and relationships with WAP and HES-IE program operators.

For the latest information on REPS visit <https://portal.ct.gov/DEEP/Energy/Conservation-and-Load-Management/Weatherization-Barrier-Mitigation> or join a public Energy Efficiency Board [Residential Committee](#) meeting – DEEP provides at least quarterly updates and takes public questions on REPS during these meetings.

Increasing Energy Retrofits in Affordable Housing Through C&LM Programs

In 2022, \$7 million of the American Rescue Plan Act (ARPA) (Pub. L. 117-2) funding was allocated to DEEP for efficient energy retrofits in affordable housing. Public Act 21-48 provides further authority for these initiatives. DEEP explored the most efficient and impactful ways to deploy this funding and determined that coordination with existing efficiency programs offered the best opportunity to expand customer access, consistent with Public Act 21-48.

From 2017 to 2022, demand for the state's existing Conservation and Load Management (C&LM) programs increased by 59%. The C&LM programs are a critical component of energy retrofits and promote energy affordability, lowering energy burdens by reducing energy waste through weatherization improvements and energy equipment upgrades. In 2023, the programs generated more than \$61 million in savings for Connecticut residents and businesses.

Figure 7: C&LM Programs Demand and Savings



In 2023, demand for HVAC upgrades (primarily heat pumps) and weatherization in the residential sector significantly outpaced available program budgets, resulting in an overspend in Eversource Energy's service territory. On December 19, 2023, Governor Lamont announced that all \$7 million in ARPA plus an additional \$3.7 in Regional Greenhouse Gas Initiative (RGGI) funds would be utilized in coordination with the C&LM programs to leverage the success reflected by the increasing demand for those programs and optimize deployment of state and federal funds. These funds, along with other funding sources, were deployed immediately to help close the budgetary gap created by unprecedented program demand in 2023, thereby mitigating negative program impacts being faced in 2024.

While using the ARPA funding, the utilities have been directed to prioritize projects in multi-unit dwellings paying the prevailing wage in compliance with PA 21-48. As of September 30, 2024, ARPA dollars have been successfully deployed to serve 140 income-eligible multifamily housing units with weatherization services and, in some cases, HVAC upgrades. The Utilities are expected to expend all ARPA funding by the end of 2025.

DEEP's Office of Buildings & Transportation Decarbonization (OBTD), which oversees the C&LM programs, and the DEEP's DEEP Office will continue to collaborate on this "braided funding" approach to ensure that the ARPA funds are efficiently deployed in compliance with the relevant statutory construct and in coordination with existing federal and state programs.

Weatherization Assistance Program (WAP) – Single Family & Multifamily Programs

The U.S. Department of Energy's Weatherization Assistance Program (WAP)'s primary purpose is to increase the energy efficiency of dwellings owned or occupied by low-income persons, reduce total residential energy expenditures, and improve their health and safety, especially for particularly vulnerable persons, such as the elderly, disabled, and children. In Connecticut, two WAP programs are administered by DEEP's AHER office by utilizing competitively procured non-profits to operate as boots-on-the-ground service providers. Each employs certified energy auditors, quality control inspectors, and the administrative staff necessary to run the program. A network of local subcontractors carries out the weatherization work in the served homes.

Connecticut currently runs two WAP programs: the Single-Family WAP for 1–4-unit homes, and the Multifamily WAP, serving 5+ unit homes. Connecticut's federally provided WAP budget for the single-family program averages about \$3.5 million per year, allowing for approximately 200-250 units to be weatherized annually. Connecticut's federal funding for the recently launched multifamily program is approximately \$46 million for a 5-year period (previously 3 years, but recently extended). With this funding, the program is expected to serve approximately 3,500 units by June 30, 2029.

Figure 8: WAP Funding + Output



Single-Family (1-4-Unit) WAP Process and Results

To receive WAP funding, DEEP must submit an annual application to the US Department of Energy (DOE). DEEP successfully submitted the application in May 2023 and received the award in August 2023 for Program Year 2024 (July 1, 2023, through June 30, 2024) of the 2022-2024 Grant Cycle. This process has been streamlined to ensure continuous service delivery.

Upon receiving federal funding, DEEP updated existing contracts with its nonprofit service providers that had previously been selected through a request for proposals process, the Community Renewal Team (CRT) and the Center for EcoTechnology (CET). DEEP collaborates closely with these providers to ensure that low-income communities have easy access to enrollment and support services.

The intake process for WAP follows a similar procedure to that of the Connecticut Energy Assistance Program (CEAP), which is administered by the Connecticut Department of Social Services (DSS) through the federal LIHEAP. When an income-eligible individual applies for CEAP, they are also offered services through WAP, provided their home has not been previously weatherized by the program.

A network of local contractors delivers weatherization services, including the installation of energy-saving measures and health and safety improvements. DEEP contracts with True View Consultants (TVC), the Association for Energy Affordability (AEA), and several training providers to ensure that high-quality services are offered to the communities served.

DEEP is continuously seeking opportunities to maximize resources and better serve income-eligible households. Specifically, the department is working with utility partners to ensure that WAP clients can fully benefit from existing ratepayer-funded programs, such as the HES-IE program. This collaboration ensures that WAP funds can be used to support as many households as possible.

Multifamily (5+ Unit) WAP Process and Results

In addition to the annual formula award of approximately \$3.5 million per year for the single-family program, Connecticut will receive an additional \$46 million for WAP through the Bipartisan Infrastructure Law (BIL, also referred to as the Infrastructure Investment and Jobs Act, IIJA). The first application for BIL funds was submitted in May 2022, while a second, more detailed application was submitted in September 2022. Due to DEEP's successful application, approximately \$23 million of the \$46 million has been delivered to DEEP from DOE. The WAP team is applying to have the remainder of the funds obligated by the end of the year. Once obligated, DOE will release the funds as the milestones defined by the department (WPN BIL-1) are completed.

DEEP is using the BIL funds to launch a multifamily WAP program in Connecticut. The program will serve buildings with 5 or more units that provide housing to low-income households. Serving multifamily buildings is critical to DEEP's mission to improve the energy burden of Connecticut's

low-income residents, as renters often experience high energy bills while having little ability to directly influence their building's efficiency.

Similarly to the single-family WAP, the multifamily program selected a non-profit service provider through a RFP process, which was completed in 2023. A contract with the selected service provider – ICAST – was executed in January 2024. Since contract execution, ICAST and DEEP have been working to develop necessary program operation procedures and get them approved by DOE. The multifamily WAP is expected to start providing services to selected pilot projects in the first half of 2025. DEEP expects to serve about 3,500 units by June 30, 2029.

Increased Coordination Between Single-Family WAP and C&LM Low-Income Program

As previously mentioned, there are two programs in Connecticut that provide weatherization services specifically to 1–4-unit low-income households: the single-family WAP administered by DEEP, and the HES-IE program administered by the Conservation & Load Management (C&LM) utilities. Both programs primarily provide insulation and air sealing services, but they also provide slightly different supplemental measures such as low-flow showerheads, heating system cleaning/tuning/testing, water heater upgrades, advanced duct sealing, and Home Energy Scores, depending on what program is providing services to the home. Therefore, by combining funding from both programs, low-income 1–4-unit households can benefit from receiving more comprehensive supplemental measures.

Starting in the first quarter of 2023, DEEP began meeting with the C&LM utilities and the Energy Efficiency Board consultants to develop a draft written process for more consistent cost-sharing for WAP and HES-IE jobs. The proposed cost-sharing process for 1-4-unit WAP and HES-IE was [posted for public comment](#) on December 7, 2023. Based on public comments, DEEP has modified this cost-sharing approach and is preparing the finalized plan to be published in early 2025.

In parallel, DEEP has also begun discussions with the C&LM utility administrators and the Energy Efficiency Board consultants to draft a proposed cost-sharing process for multifamily WAP and the C&LM Multifamily Initiative. This proposal will also be presented and noticed for public comment in 2025.

District Geothermal Design Grant

DEEP joined the University of Connecticut (UConn) and Northeast Energy Efficiency Partnerships (NEEP) in forming a Coalition⁴ to apply for a DOE community-geothermal grant (DE-FOA-0002632). With the goal of identifying an affordable-housing site for deployment of a district geothermal heating and cooling system, the Coalition identified a pipeline of potential

⁴ Coalition members include DEEP (prime recipient and principal investigator), UConn (technical lead), Wallingford Housing Authority, Wallingford Electric Division, and Northeast Energy Efficiency Partnerships (NEEP)

affordable housing retrofit projects in facilities that hold state and federal statutory designations as disadvantaged communities.

From the candidate sites, the Coalition selected the Ulbrich Heights facility in Wallingford, which is owned and operated by the Wallingford Housing Authority. The Authority has been actively seeking to undertake capital and energy improvements at Ulbrich Heights, in part to bring it into compliance with the American with Disabilities Act. The facility provides homes to 21 disabled persons, 19 elderly persons, and 100 female-headed households.

A proposal to design a district geothermal heating and cooling system for Ulbrich Heights was submitted to DOE on October 11, 2022. DOE notified DEEP of award selection on April 25, 2023, and a contract with DOE was executed on September 7, 2023. In addition to providing \$897,536 (federal funding and cost share combined) to design a district geothermal heating and cooling system at Ulbrich Heights, the grant supported a workforce transition, development, and training plan for Connecticut's geothermal sector as well as an outreach and community-engagement plan that included the creation of case study materials for affordable housing complexes interested in exploring geothermal.

The Phase I award period began October 1, 2023, and concluded November 30, 2024. During the last two months of the award period, DOE reviewed the work of all awarded projects to competitively select a smaller number of project(s) for Phase II funding that will support the construction of geothermal systems and the implementation of workforce and community plans.

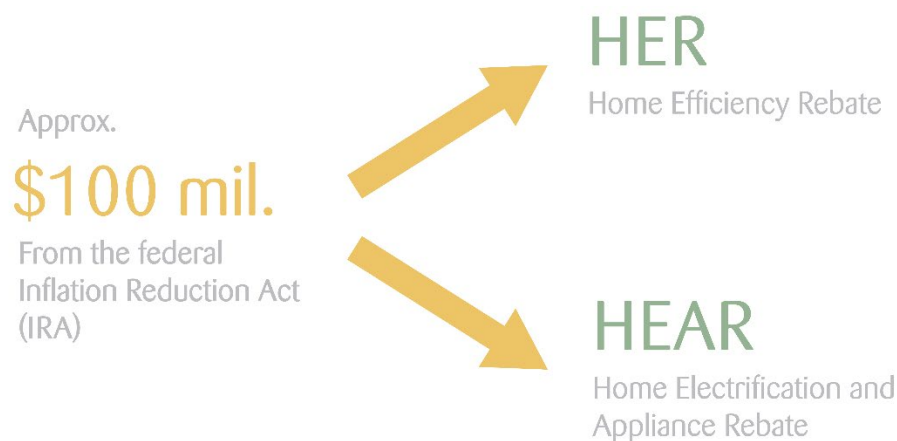
To help ensure that the Connecticut grant for Phase I was implemented with environmental justice best practices and in a manner that would serve as a model for other affordable-housing facilities, DEEP established a grant advisory committee. The committee has consisted of representatives of: Department of Housing (DOH); Connecticut Housing Finance Authority (CHFA); Eversource; DEEP Office of Legal, Planning and Regulatory Affairs; DEEP Environmental Justice Office; Oak Ridge National Laboratory; Office of Workforce Strategy; Emergent Urban Concepts; Meriden Housing Authority; and CT Department of Public Health, along with a sustainability-focused Wallingford resident. The Advisory Committee met at least quarterly.

All major components of the Phase 1 work have now been completed. The workforce needs assessment, [workforce development recommendations](#), [case study](#), and an [assessment of the technical, economic, and environmental aspects of the project](#), along with other project materials, are available on the [project web page](#). The project team decided not to pursue DOE Phase 2 funding for the implementation of the Ulbrich Heights geothermal design. There were two basic reasons for this decision: first, the project's capital costs were higher than anticipated due largely to the specific characteristics of the Ulbrich Heights facility; and second, the project team was unable to identify a viable ownership model for a geothermal system serving this facility. The rationale is outlined in the case study and will be more fully described in a forthcoming Budget Period 1 report that likewise will be posted on the web page. Despite not applying for Phase 2 funding, significant learning has resulted from the work of the Coalition, the grant advisory committee, and others, which will inform policy development for networked geothermal systems and future implementation of similar projects.

Application for the Federally Funded Home Energy Rebate Programs

In August 2022, the federal Inflation Reduction Act (IRA) was signed into law, allocating billions of dollars to clean energy nationwide. As part of the IRA, approximately \$100 million in formula funding was allocated to Connecticut to support two separate residential home energy rebate programs: one focused on deploying energy efficiency measures (Home Efficiency Rebate (HER) Program) and another focused on deploying all electric appliances (Home Electrification and Appliance Rebate (HEAR) Program). DEEP is working with DEEP's Office of Buildings and Transportation Decarbonization (OBTD) to apply for these rebate funds based on the latest guidance released by the U.S. Department of Energy (DOE).

Figure 9: HER and HEAR Funding



In June 2023, DEEP applied to DOE for early administrative funds to support the development of full rebate program applications. In August 2023, DEEP sought proposals from prequalified consultants to assist in this process. By September 2023, DOE allocated approximately \$2.5 million in early administrative funds to DEEP. Approximately \$500,000 of that was used for a contract with Vermont Energy Investment Corporation (VEIC) in February 2024. A kick-off meeting between DEEP and VEIC took place in March 2024.

In May 2024, DEEP hosted a [public technical meeting](#) to discuss programmatic approaches for HER and HEAR and issued a [Request for Information \(RFI\)](#) for community input. The RFI's written responses were collected by June 2024 from various stakeholders, including program administrators, local governments, contractors, labor groups, and others. [Feedback from these stakeholders](#), which was published on DEEP's IRA rebates webpage, influenced the program design. It indicated strong support for targeting low-income households both single and

multifamily. However, no consensus emerged on which specific technologies should be included in the rebate programs.

To optimize administrative efficiency, DEEP determined the best approach was to run the IRA rebate programs through existing energy efficiency programs, such as HES-IE and the Multifamily Initiative, administered by Eversource and Avangrid, the major electric distribution companies (EDCs). Therefore, Eversource and Avangrid would also administer HER and HEAR. In late June 2024, DEEP began working with the EDCs to finalize the HEAR and HER applications.

By July 2024, weekly meetings began with multiple stakeholders, including the EDCs, VEIC, the Energy Efficiency Board Consultants, PURA, Green Bank, and the Office of Consumer Counsel, to address outstanding application questions. To ensure reach to customers in municipal electric territories, DEEP allocated 5% of HER and HEAR funding, with implementation plans to be informed by a public process in early 2025.

The HEAR application was submitted on July 19, 2024, and after three review rounds with DOE, received programmatic approval on October 18, 2024. This program will target low-income households (<80% Area Median Income (AMI)) in both single-family and multifamily buildings through HES-IE and the Multifamily Initiative. It will allow rebates for all allowable upgrades (heat pumps, heat pump hot water heaters, electric stoves and ranges, heat pump clothes dryers, electric panels and wiring, and insulation, air sealing, and ventilation).

The HER application, submitted on September 18, 2024, also underwent three rounds of reviews with DOE and was programmatically approved on November 1, 2024. It will focus on low-income multifamily buildings (at least 50% of units under 80% AMI) through the Multifamily Initiative, offering rebates based on predicted energy savings from home upgrades.

DEEP received the HEAR award on December 17, 2024, and the HER award on January 13, 2025, fully obligating the total funding for both awards. Currently, DEEP is drafting Implementation Blueprints for the HEAR and HER programs, which require approval from the DOE before the rebate programs can launch. The HEAR blueprint is expected to be submitted by January 2025, with the HER blueprint to follow shortly thereafter. Both programs are anticipated to launch in mid-2025.

Developing an Online Incentive Tool

As the number of state and federal energy and internet connectivity programs continues to grow, DEEP has heard from stakeholders how difficult it is to find and stack together the variety of available incentives. Information on and access to these incentives is distributed in largely uncoordinated fashion by various agencies using a variety of vehicles, making it challenging for the public to locate, assess, and take advantage of these offerings. For example, a household seeking to install insulation could potentially benefit from a state-funded C&LM incentive, a federal HER rebate (not yet available), a federal tax credit, and/or low-cost financing. Similarly,

there is a large variety of incentives, including rebates, tax credits, and financing options for energy upgrades like solar, battery storage, and electric vehicles.

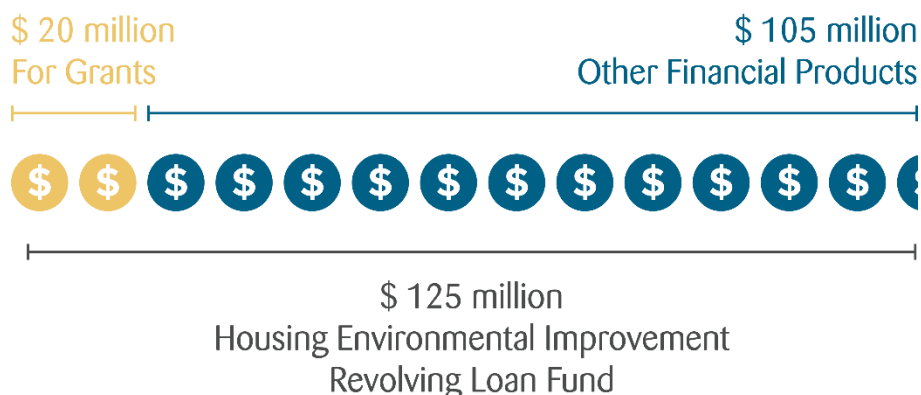
Therefore, to help improve the experience of Connecticut residents, building owners, developers, and other stakeholders, DEEP is working to develop an online incentive tool. The purpose of this tool is to provide a customer-centric, one-stop-shop, online access point for information on financial incentives available through state, federal, and municipal programs that support physical asset improvements in Connecticut.

A draft Request for Proposals (RFP) was posted for public comment, and DEEP is working to post the final RFP before the end of 2024. A beta version of this tool is expected to be developed in 2025 to help homeowners, renters, and landlords find and learn how to combine available incentives. DEEP envisions an online site or portal that allows users to enter some information about their needs or interests to receive a curated list of incentives that are most applicable to them.

Developing an Affordable Multifamily Energy Retrofit Revolving Loan Fund

In 2023, under Public Act 23-205 and amended by Public Act 24-143, the Connecticut Legislature authorized up to \$125 million in bond funds to create a Housing Environmental Improvement Revolving Loan Fund, with up to \$20 million designated for grants. The Department of Energy and Environmental Protection (DEEP) was tasked with establishing this fund to support retrofitting projects in multifamily residences located in environmental justice communities or alliance districts. These projects must focus on improving energy efficiency, addressing health and safety concerns that hinder retrofitting, and providing services to help residents and building owners access and implement these programs. The fund will prioritize properties benefiting low-income residents or prospective residents.

Figure 10: RLF Budget Distribution



Following research on available financing options for energy improvements in multifamily buildings, DEEP issued a [notice for written comments](#) on January 9, 2024. Responses received by January 31, 2024, highlighted significant barriers, including high predevelopment costs for

inspections and energy efficiency planning, which can delay or halt projects. Additionally, decarbonization efforts face challenges such as high upfront and lifecycle costs, along with financing issues for developers with poor credit or those operating on a smaller scale. DEEP is actively developing this program and looks forward to working with legislators and stakeholders to ensure its success.

Stakeholder Engagement

Stakeholder engagement is critical to DEEP's work and is an ongoing part of its programs' development. DEEP engaged key affordable housing stakeholders to regularly share its developments and solicit their feedback on state plans and program design, including: 1) the Energy Efficiency Board and the C&LM Contractor Technical Advisory Council, 2) the Connecticut Department of Housing and Urban Development (HUD), 3) the Connecticut Department of Housing (DOH), 4) the Connecticut Housing Finance Authority (CHFA), 5) the Connecticut Green Bank, and 6) the Low-Income Energy Advisory Board (LIEAB), among others.

The REPS program team routinely presented to the Contractor Technical Advisory Committee (CTAC) and the Residential Energy Efficiency Board (EEB), providing program data updates on items such as units served, customer journey timelines, barriers identified, and average costs to remediate each barrier type. Presentations and reports provided to the Residential EEB can be found on the [EnergizeCT Residential EEB webpage](#) under Meeting Materials.

Public presentations to stakeholders, including but not limited to attendees of the Connecticut Affordable Housing Conference, landlords in Hartford, the Connecticut Equity and Environmental Justice Advisory Council's Energy Subcommittee, Project SunBridge stakeholders, the Windham/Willimantic National Association for the Advancement of Colored People, the 2024 Convention & Exhibition of the Connecticut Chapter of the National Association of Housing and Redevelopment Officials, and the Building Performance Association 2023 New England Home Performance Conference & Trade Show, also helped to increase awareness of available state and federal affordable housing programs.

CONCLUSION

The year 2024 was highly productive for DEEP. Ongoing programs were streamlined and expanded to provide greater assistance to CT low-income residents. New processes were established for the single-family WAP, and new and braided funding allowed for implementing the multifamily WAP and expanding C&LM programs.

Federal funding through ARPA was also utilized to launch the new REPS program, which provides household remediation measures and allows a larger share of low-income residents to take advantage of the state's weatherization programs.

Furthermore, a federal grant, the District Geothermal Design Grant, supported research on newer energy sources and their implementation in the state. Extensive work and strengthened partnerships were also employed to apply for the federally funded Home Energy Rebate Programs HER and HEAR.

Finally, to further the department's mission of growing Connecticut's affordable housing energy resources, services, and programs, DEEP's team is working on two future endeavors that will evolve in 2025. First, the team is designing a new online incentive tool to give customers a centralized access point for information on available programs and incentives. Secondly, DEEP is developing the Affordable Multifamily Energy Retrofit Revolving Loan Fund through an intentional and thoughtful stakeholder engagement process to make weatherization and electrification upgrades more accessible and affordable.