

# 2023 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**

The Connecticut Department of Energy & Environmental Protection (DEEP) 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 American Rescue Program Act (ARPA)-funded affordable housing programs. It also seeks to increase awareness of DEEP's broader affordable housing initiatives.

Energy improvements in affordable housing are critical to improving energy equity and affordability in Connecticut. Twenty-three percent of households seeking energy efficiency services through the Home Energy Solutions-Income Eligible program are turned away because of health and safety barriers—such as mold, asbestos, or vermiculite—that prevent energy efficiency contractors from being able to deliver efficiency measures. For the first time, the State of Connecticut has established a program called the Residential Energy Preparation Services (REPS) program that covers the costs of remediating these barriers, helping those households who are paying the highest percentage of monthly income for utility costs secure the benefits of energy efficiency services, while improving the safety and health of their homes. Since the program launched in 2023 with \$8,250,000 in funding, it has served 41 homes, with 78 in progress. DEEP expects that 623 more homes will be served within the available budget. DEEP is actively seeking additional funding sources to enable the program to be continued beyond current available budgets. In parallel, DEEP has also allocated \$7 million for energy efficiency improvements in low-income residences across the state. These funds are being deployed through the existing Conservation & Load Management (C&LM) programs and are giving priority to multifamily affordable housing energy 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 created to provide a policy development and program management team focused solely on addressing energy equity and affordability in the lived environment. AHER was originally focused on implementing two American Rescue Plan Act (ARPA) programs proposed by Governor Lamont and authorized by the legislature with \$7 million of funding each in the 2021 budget: a weatherization barrier remediation program and an affordable housing energy retrofit program, reflecting the priorities of Connecticut Public Act 21-48.<sup>1</sup>

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<sup>1</sup> 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...(s)uch 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

DEEP is directed in Connecticut Public Act 21-48 (PA 21-48) to submit an annual report to the General Assembly that details the standards of the affordable housing retrofit program developed in accordance with PA 21-48 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 serves to meet this statutory reporting requirement, but also provides 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, the scope of DEEP’s AHER office has continued to grow. The federal Infrastructure Investment and Jobs Act (IIJA) included the infusion of \$46 million into Connecticut’s federal-funded Weatherization Assistance Program (WAP), which was already being operated by DEEP and was subsequently moved to AHER given the program’s focus on low-income energy services. Then, the passage of the federal Inflation Reduction Act (IRA) provided further opportunities (e.g., the Home Electrification and Appliance Rebate (HEAR) program) for the AHER team to pursue federal funding to support energy bill reductions for low-income households. Given the partial overlap of these initiatives with the program requirements in PA 21-48 and DEEP’s efforts and intent to braid program funding and facilitate efficient implementation by leveraging existing programs, this report provides an update on the activities of DEEP’s AHER office from its formation in 2021 through the end of 2023.

## **RECENT ACHIEVEMENTS**

### ***Launch of the Residential Energy Preparation Services (REPS) Program***

PA 21-48 required that DEEP create an energy retrofit program that could include, but 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. 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’s AHER office worked to develop program rules and competitively procure a program operator to address weatherization barrier remediation, as contemplated in PA 21-48 and authorized in the 2021 budget. The Residential Energy Preparation Services (REPS) program officially launched in April of 2023 and now serves low-income customers in 1- 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 - Income Eligible (HES-IE) program, or the U.S. Department of

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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.

Energy-funded Weatherization Assistance Program (WAP).<sup>2</sup> REPS functions by remediating the health and safety barriers in these homes and then referring customers back to the respective weatherization program to complete the recommended energy efficiency measures.

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. A program operator, International Center for Appropriate and Sustainable Technology (ICAST), was selected in February of 2022.

Since selecting ICAST as the program operator, DEEP has worked closely with ICAST to build the program from the ground up. This includes identifying eligibility criteria, covered measures, a project timeline and milestones, and project deliverables. During this time, DEEP also 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. \$1,100,000 of LIHEAP funding was provided in 2023 and an additional \$415,000 of LIHEAP funds will be provided in 2024. By enabling low-income homes to receive energy efficiency upgrades, these LIHEAP dollars are helping to reduce energy bills for participating homes immediately and in the long-term.

Beginning in early October of 2022, DEEP and ICAST began meeting weekly with the two single-family Weatherization Assistance Program (WAP) program operators, and Eversource and Avangrid (the two electric and natural gas utilities which administer the Home Energy Solutions – income eligible (HES-IE) program). 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 homes through the initial pilot stage, DEEP officially launched a 1-4 unit program in April of 2023. While the program has been successfully running in its full capacity since this date, DEEP is treating the first full year of the program as a data-collecting stage; once the program has been active a full year, DEEP will utilize the data collected during this period to evaluate the program and determine what, if any, modifications should be made to how the program is run in order to maximize its efficiency and effectiveness.

To date, the program has served 41 homes, with an additional 78 homes with work actively in-progress. The most common barriers found in referred homes are vermiculite, mold & moisture, knob & tube wiring, and asbestos. As of November 30, 2023, each barrier represents the following percentage of overall barriers found in referred homes (where work has been completed):

- Vermiculite: 8.0%
- Mold & moisture: 43.8%

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<sup>2</sup> Weatherization focuses on improving the thermal envelop of a building and often includes insulation and air sealing

- Knob & tube wiring: 26.5%
- Asbestos: 21.6%

As of November 30, 2023, total program spending by barrier is:

- Vermiculite: 8.6%
- Mold & moisture: 48.3%
- Knob & tube wiring: 22.7%
- Asbestos: 20.0%

As of November 30, 2023, the average electric savings<sup>3</sup> achieved in homes that were able to receive energy efficiency measures as a result of being served by REPS are:

- Average total net annual kWh reductions per unit: 258.85 kWh
- Average total net lifetime kWh reductions per unit: 2,037.48 kWh

### *How to Participate*

Customers are eligible for REPS directly through participation in either [HES-IE](#) or [WAP](#). A customer therefore becomes eligible for REPS once they have applied for and have been accepted into either of these programs. In either case, an initial weatherization audit is performed. If a weatherization barrier that is covered by the REPS program is found during that audit, the customer is referred to the REPS program. Once referred, the REPS program operator performs a project scoring assessment, to verify project and household eligibility for REPS. The basic eligibility for REPS is the same as 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 the landlord must agree to certain tenant protections (such as not raising rent due to the home remediation improvements) for REPS to serve the home. 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 located in a Disadvantaged Community (DAC).

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

DEEP anticipates that the REPS program will serve an additional 623 units by 9/30/25, approximately 1% of the total low-income homes in the State. These estimates are based on the program's total available funding divided by the average cost per unit to serve REPS customers. As of 1/24/24, the average cost per unit of a home going through REPS is \$11,070.31. Although this is a small fraction of the need (as of November 2020, 23% of low-income homes are deferred from the HES-IE program each year due to health and safety barriers), the health and economic benefits to participating households are expected to last for years to come.

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<sup>3</sup> Other fuel savings are starting to be tracked and will be available for the next annual report.

DEEP is also actively seeking federal funding opportunities to continue this program and is hopeful that additional LIHEAP funding will be available in 2025 to enable more homes to experience long-term bill reductions.

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***

In 2022, \$7 million of 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 this program. DEEP’s AHER Office has been exploring how to efficiently deploy this funding in concert with existing programs, to reduce consumer confusion while expanding opportunity. As 2023 progressed, it became clear that demand for the state’s existing Conservation and Load Management (C&LM) programs would outstrip the available budget. From 2017 to 2022, demand for these programs has increased by 59% and the deficit in funding for 2023 was expected to reach about \$20.1 million. The C&LM programs are a critical component of energy retrofits, and also promote energy affordability. In 2021, the programs generated more than \$62 million in savings for Connecticut residents and businesses. The programs lower energy burdens by reducing energy waste through weatherization improvements and energy equipment upgrades. 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. For 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. DEEP’s Office of Buildings & Transportation Decarbonization which oversees the C&LM programs and DEEP’s AHER Office are collaborating 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.

The ARPA funds must be obligated by December 31, 2024 and spent by December 31, 2026.

### ***Weatherization Assistance Program (WAP) – Competitive Procurement for Service Providers and Expansion to Multifamily***

The U.S. Department of Energy’s Weatherization Assistance Program’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 persons who are particularly vulnerable, such as the elderly, disabled, and children. In Connecticut, WAP is administered by DEEP’s AHER office and utilizes two competitively procured non-profits to serve as boots on the ground service providers for low-income households living in 1-4 unit

buildings. Each service provider employs certified energy auditors and quality control inspectors as well as the administrative staff necessary to run the program. The weatherization work in the homes that are served is carried out by a network of local subcontractors. Connecticut's federally provided WAP budget for 1-4 unit homes averages about \$3.5 million per year, allowing for approximately 200-250 units to be weatherized annually.

#### *WAP 1-4 Unit Results & Process*

To receive WAP 1-4 unit funding, DEEP must submit an annual application to the federal Department of Energy (DOE). DEEP successfully submitted the annual formula award application in May (first submission) and August (Final Approval) 2023 which provided funding for Program Year 2023. Although permitted to start services on July 1, 2023 under federal rules, DEEP's competitive procurement process for service providers and necessary DOE approvals have resulted in contract execution delays. Contracts are currently expected to be signed in early March 2024, and Program Year 2023 1-4 unit services are expected to restart shortly thereafter. While this gap in WAP services occurred, low-income households interested in weatherization continued to be served under the utility-administered [Home Energy Solutions for Income Eligible](#) program. To mitigate WAP service gaps in the future, DEEP executed three-year contracts with the selected WAP service providers contingent upon their annual performance.

#### *WAP Multifamily Results & Process*

In addition to the annual formula award of approximately \$3.5 million per year, Connecticut will receive an additional \$46 million for WAP through the Bipartisan Infrastructure Law (BIL, or also referred to as the Infrastructure Investment and Jobs Act, IJA). The first application for BIL funds was submitted in May 2022, while a second, more detailed application was submitted in September 2022. Based on DEEP's successful application, approximately \$23 million of the \$46 million has been delivered to DEEP from DOE.

DEEP is using this funding to launch a WAP multifamily program in Connecticut. The multifamily program will serve buildings with 5 or more units that provide housing to low-income households. DEEP believes that serving multifamily buildings is critical to improving 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.

Like WAP for 1-4 unit homes, the multifamily WAP will use a competitively selected non-profit service provider selected through the RFP process completed in 2023. A contract with the selected service provider – the International Center for Appropriate & Sustainable Technology (ICAST) – was executed in January 2024. The multifamily WAP is expected to start providing full services in the second half of 2024. In total, DEEP expects to serve over 3,000 units by June 30, 2027.

### *How to Participate*

Low-income households or building owners in Connecticut interested in participating in WAP can contact DEEP directly by emailing [DEEP.Weatherization@ct.gov](mailto:DEEP.Weatherization@ct.gov).<sup>4</sup> Direct contact information for the multifamily service provider is listed below.

- WAP Multifamily Service Provider:  
ICAST (provides services statewide)  
Email: [CTWAP@icastusa.org](mailto:CTWAP@icastusa.org)  
Phone: (844) 843-4585  
Website: <https://www.icastusa.org/services/>

Lastly, if a low-income household is applying for heating assistance through the Department of Social Services' (DSS') Connecticut Energy Assistance Program (CEAP), the household can indicate their interest in weatherization services on the CEAP application. On a quarterly basis a list of WAP-interested households is shared by DSS with DEEP. WAP service providers then conduct outreach to households that indicated interest.

### ***Increased Coordination between 1-4 Unit WAP and CT's C&LM Low-Income Program***

In Connecticut, there are two programs that provide weatherization services specifically to 1-4 unit low-income households: the annual 1-4 unit WAP administered by DEEP, and the Home Energy Solutions for Income Eligible (HES-IE) program administered by the Conservation & Load Management (C&LM) utilities. Both of these 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

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<sup>4</sup> The AHER Office will connect interested 1-4 unit program participants with their respective service provider. CRT serves Region 1 and CET serves Region 2. The municipalities included in these regions are as follows:

Region 1: Hartford County (Avon, Berlin, Bloomfield, Bristol, Burlington, Canton, East Granby, East Hartford, East Windsor, Enfield, Farmington, Glastonbury, Granby, Hartford, Hartland, Manchester, Marlborough, New Britain, Newington, Plainville, Rocky Hill, Simsbury, South Windsor, Southington, Suffield, West Hartford, Wethersfield, Windsor, Windsor Locks), Litchfield County (Barkhamsted, Bethlehem, Bridgewater, Canaan, Colebrook, Cornwall, Goshen, Harwinton, Kent, Litchfield, Morris, New Hartford, New Milford, Norfolk, North Canaan, Plymouth, Roxbury, Salisbury, Sharon, Thomaston, Torrington, Warren, Washington, Watertown, Winchester, Woodbury), Middlesex County (Chester, Clinton, Cromwell, Deep River, Durham, East Haddam, East Hampton, Essex, Haddam, Killingworth, Middlefield, Middletown, Old Saybrook, Portland, Westbrook), New London County (Bozrah, Colchester, East Lyme, Franklin, Griswold, Groton, Lebanon, Ledyard, Lisbon, Lyme, Montville, New London, North Stonington, Norwich, Old Lyme, Preston, Salem, Sprague, Stonington, Voluntown, Waterford), Tolland County (Andover, Bolton, Columbia, Coventry, Ellington, Hebron, Mansfield, Somers, Stafford, Tolland, Union, Vernon, Willington), and Windham County (Ashford, Brooklyn, Canterbury, Chaplin, Eastford, Hampton, Killingly, Plainfield, Pomfret, Putnam, Scotland, Sterling, Thompson, Windham, Woodstock).

Region 2: Fairfield County (Bethel, Bridgeport, Brookfield, Danbury, Darien, Easton, Fairfield, Greenwich, Monroe, New Canaan, New Fairfield, Newtown, Redding, Ridgefield, Shelton, Sherman, Stamford, Stratford, Trumbull, Weston, Wilton) and New Haven County (Ansonia, Beacon Falls, Bethany, Branford, Cheshire, Derby, East Haven, Guilford, Hamden, Madison, Meriden, Middlebury, Milford, Naugatuck, New Haven, North Branford, North Haven, Orange, Oxford, Prospect, Seymour, Southbury, Wallingford, Waterbury, West Haven, Walcott, Woodbridge).



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's AHER Office began meeting with the C&LM utilities and the Energy Efficiency Board consultants, to develop a draft, written process for more consistently cost-sharing 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 received, DEEP will work to finalize the cost-sharing approach in early 2024. In parallel, DEEP will also begin discussions with the C&LM utilities 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 2024.

### ***Developing the Application for the Federally-Funded Home Electrification and Appliance Rebates (HEAR) Program***

In August 2022, the federal Inflation Reduction Act (IRA) was signed into law. The IRA allocated billions of dollars to clean energy across the country. 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 and another focused on deploying all electric appliances. DEEP is working to apply for these rebate funds based on guidance initially released by the U.S. Department of Energy (DOE) in July 2023, and updated in October 2023.

In June and July of 2023, DEEP applied for early administrative funds to support the development of full rebate program applications. In total, about \$2.5 million in early administrative funds were distributed to DEEP in September by DOE. Once these funds were received, DEEP requested proposals from prequalified consultants to help with the full application development process. Contract negotiations are currently underway with the selected consultant. Once a consultant is on board, a robust public engagement process will be used to develop the final applications to DOE.

In parallel to hiring a consultant, DEEP has been working with existing state energy program administrators and regulators including Eversource, United Illuminating, the Connecticut Municipal Electric Energy Cooperative, Wallingford Electric, the Connecticut Green Bank, staff from the Public Utilities Regulatory Authority, and the Energy Efficiency Board consultants, to amass relevant program data and to brainstorm potential rebate deployment options that could leverage existing state programs. All potential rebate deployment ideas will be presented publicly for feedback. By collaborating early with existing program administrators, DEEP hopes to identify funding deployment efficiencies that will allow Connecticut residents to access these funds in a streamlined manner.

### ***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. 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 are 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, DEEP is working to develop an online incentive tool. A beta version of this tool is expected to be developed in 2024 with the goal of helping residential homeowners and renters to find and learn how to combine available incentives. Currently, we envision an online site or portal that allows a user to enter a little bit of information about their needs or interests in order to receive a curated list of incentives that are most applicable to them. A draft RFP for building and maintaining this online incentive tool was released for public comment in September 2023. DEEP has updated the RFP based on the public comments received and continues to collaborate with the state IT department to finalize the RFP for posting in early 2024.

### ***Developing an Affordable Multifamily Energy Retrofit Revolving Loan Fund***

In 2023, the Connecticut Legislature allocated up to \$125 million in bond funds for a Housing Environmental Improvement Revolving Loan Fund. Under sections 90 a-h and 91 a-c of the Connecticut General Statutes, DEEP was charged with establishing this revolving loan fund to provide energy-related improvements to multifamily residences located in environmental justice communities or alliance districts. The properties served must not be owner-occupied and the revolving loan program must prioritize properties that benefit residents or prospective residents who are low-income.

After researching other financing options available for energy improvements in multifamily buildings, DEEP issued a [notice for written comments](#) on January 9, 2024. The notice solicits ideas and feedback on potential program designs. Public comments were due January 31, 2024. DEEP looks forward to collaborating with legislators and other stakeholders to launch a successful program.

### ***Increased Stakeholder Engagement***

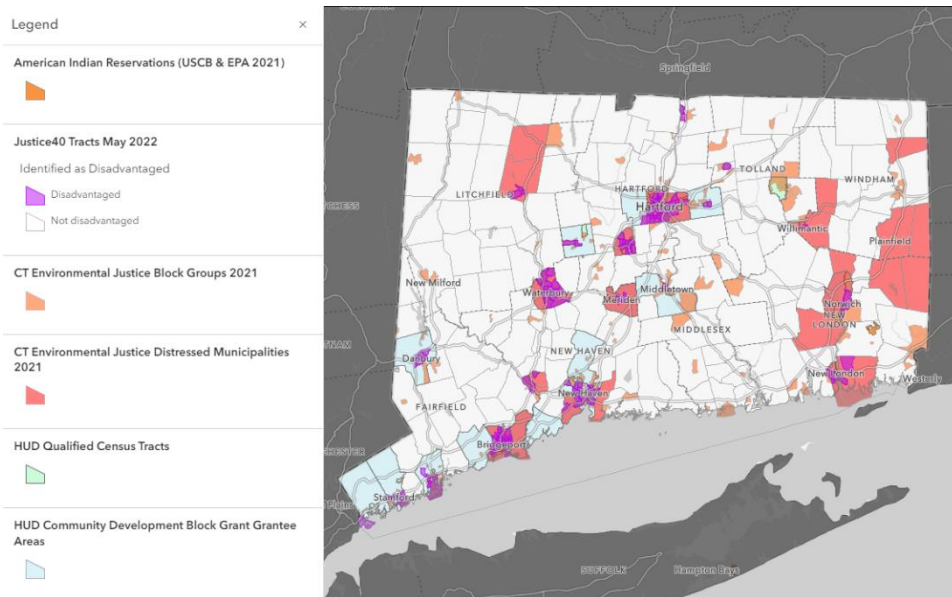
DEEP engaged key stakeholders in affordable housing to regularly share developments of the AHER Office and solicited their feedback on state plans and program design. Key affordable housing stakeholders engaged by DEEP's AHER Office include 1) the Energy Efficiency Board and the C&LM Contractor Technical 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).

Public presentations to stakeholders, including but not limited to attendees of the Connecticut Affordable Housing Conference, large landlords in Hartford, the Connecticut Equity and Environmental Justice Advisory Council’s Energy Subcommittee, the Partnership for Strong Communities, 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.

***Awarded & Now Implementing a DOE District Geothermal Design Grant***

DEEP joined the University of Connecticut (UConn) and Northeast Energy Efficiency Partnerships (NEEP) in forming a Coalition<sup>5</sup> to apply for a DOE geothermal grant opportunity (DE-FOA-0002632). With the goal of identifying an affordable housing site for the deployment of a district geothermal heating and cooling system, the Coalition identified a pipeline of potential affordable housing retrofit projects that were originally selected through a process led by DOH and CHFA. The Coalition then selected the most suitable candidate by conducting further analysis with geo-spatial software, overlaying the locations of potential affordable housing retrofit projects with a CT Disadvantaged Communities Map (see image below). The map combined multiple data sources, including Justice40 Tracts, 2021 Connecticut Environmental Justice Census Blocks, Connecticut Distressed Municipalities, Connecticut Tribal Reservations, U.S. Department of Housing and Urban Development (HUD) Qualified Census Tracts (QCTs), and Community Development Block Grant Areas, to better visualize the areas of Connecticut that can be described as disadvantaged communities.

*Connecticut Disadvantaged Communities Map*



<sup>5</sup> Coalition members include DEEP (prime recipient and principal investigator), UConn (technical lead), Wallingford Housing Authority, Wallingford Electric Division, and Northeast Energy Efficiency Partnerships (NEEP)

By combining these data sources into one map, the Coalition was able to quickly identify affordable housing retrofit projects in Connecticut disadvantaged communities that hold state and federal statutory designations.

Of the candidate sites reviewed, Ulbrich Heights in Wallingford, CT (owned and operated by the Wallingford Housing Authority), was selected. The Ulbrich Heights community has been actively seeking to undertake capital and energy improvements at its site for American with Disabilities Act (ADA) compliance and energy efficiency improvements. The affordable-housing development provides homes to 21 disabled persons, 19 elderly persons, and 100 female-headed households.

The 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 the official 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 will also explore the possible co-delivery of energy improvements including electric vehicle charging stations and renewable energy generation. Funding will also support a workforce transition, development, and training plan for Connecticut's geothermal sector, as well as an outreach and community engagement plan that includes the creation of case study materials for other affordable housing complexes interested in exploring geothermal.

The award period (Phase I) runs from October 1, 2023 to November 30, 2024. During the last two months of the award period, DOE will review the work of all awarded projects completed during Phase I to competitively select a smaller number of project(s) for Phase II, which will award additional funding for construction of the geothermal system and implementation of the workforce and community plans. DEEP is working very hard to ensure this project is as competitive as possible for Phase II funding.

To help ensure that the grant is implemented with environmental justice best practices and in a manner that will serve as a model for other affordable housing facilities, a grant advisory committee has been established. The Advisory Committee consists of DOH, 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, CT Department of Public Health, and a sustainability-focused Wallingford resident and meets at least quarterly. For more information on this project, please see our [project webpage](#).

## CONCLUSION

2021-2023 was a highly productive period for DEEP's AHER Office. Multiple programs were developed to make weatherization and electrification upgrades more accessible and affordable for residents with low incomes. The Office looks forward to continuing to grow Connecticut's affordable housing energy resources, services, and programs.