



NEEP 2024 Mid-Year Report



Building Energy Codes and Appliance Standards

In 2023, the U.S. Department of Energy (US DOE) issued two funding opportunity announcements (FOAs) for states and territories under Section 50131 of the Inflation Reduction Act (IRA): one for formula funding, and the other for competitive grants. Both FOAs were updated this quarter.

- The US DOE published four modifications to the formula funding under [Assistance for Latest and Zero Building Energy Code Adoption \(Sec. 50131\) for States and Territories](#). Highlights of the modifications include 1) the unamended 2024 International Energy Conservation Code (IECC) Residential and the unamended 2024 IECC Commercial, and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2022 were added to the list of qualifying building energy codes; and 2) states that submitted a Letter of Intent by the deadline “can expect generally to see a 65-75% increase in allocated funds.”
- The US DOE [announced a second round of concept papers](#) for the competitive grants, which were due June 28, 2024. Full applications for the second round are due on September 13, 2024.

Base Code Adoption

The Connecticut Code Amendment Subcommittee is reviewing the [redline version of the 2024 IECC](#), and is waiting for publication of the final version. After that, Connecticut will set public comment timelines. The new building code based on the 2024 International Code Council (ICC) codes, including IECC, is expected to take effect in fall 2025. effect in fall 2025.

In New Jersey, review of the 2024 ICC Codes has begun. The 2024 IECC will be reviewed at a future date.

The New York State (NYS) Code Council has posted a [Notice of Rule in Development](#). The proposed updates to the NYS Uniform Code and Energy Code are primarily based on the 2024 International Code Council (ICC) model codes. The Notice includes a ban on the installation and use of fossil fuel equipment and building systems in new buildings not more than seven stories above grade plane in height that submit permit applications on or after December 31, 2025, or any building that submits permit applications on or after December 31, 2028. Public written comments will be accepted until September 24, 2024.

Vermont’s Residential and Commercial Building Energy Standards became effective July 1. The Standards incorporated 2021 IECC with strengthening amendments.



Pennsylvania's Review and Advisory Council (RAC) reconfirmed the unopposed sections of the 2021 IRC Chapter 11, Energy Efficiency in June. The RAC elected not to adopt sections of the IRC including additional energy efficiency, duct testing, duct leakage, building cavities, lighting equipment, exterior lighting, compliance reports for permit applications, building thermal envelope, and energy rating index. A draft report is due to be presented to the RAC by July 25, 2024. The final report is expected to be approved by the RAC September 12, 2024. The final report will be submitted to the Department of Labor & Industry by October 1, 2024.

In New Hampshire, [HB1059](#) has passed both the state House and Senate and is on the way to the Governor's office. This bill supports the decision of New Hampshire's Building Code Review Board to maintain the 2018 IECC while moving forward with adopting the remainder of the 2021 I-Codes. If this bill goes into effect, the state may be ineligible for IRA Section 50131's latest building code funding. NEEP continues to educate states on the consequences of weakening amendments, both in terms of energy efficiency and eligibility for federal funding.

States currently moving forward to adopt the 2021 IECC and/or ASHRAE 90.1-2019 likely without weakening amendments include the District of Columbia, Delaware, and Maine.

- The District of Columbia continues to actively discuss the adoption of the 2021 IECC and is proceeding with the development process of the 2021 IECC base code update.
- Delaware is expected to issue a Start Action Notice for the 2021 IECC soon.
- The Maine Uniform Building and Energy Code (MUBEC) board reconvened the Stretch Energy Technical Advisory Group (TAG) in Q2 and as before, NEEP staff served on this TAG. The final stretch energy code is based on a "percent better than base" model and it was later approved by the MUBEC board. The next step will be publication of the entire code for a public comment period.
- In Massachusetts, the 10th edition of the State Building Code, based on the 2021 IECC, is pending approval from the Administration and Finance Department, and Secretary of State offices. The Massachusetts Board of Building Regulations and Standards (BBRS) is starting up subcommittees for the 11th edition state building code, including an Energy Advisory subcommittee and Manufactured Building subcommittee. The 11th edition subcommittees will draft recommendations on the next steps to present to the BBRS for discussion.

Stretch Code Development and Adoption, Energy Code Collaboratives, Technical Assistance

Convening regional and state code collaboratives is an important part of NEEP's stakeholder engagement. These include the Maine Energy Code Collaborative and the Massachusetts Net Zero Building Coalition, and the soon-to-be-convened New Jersey Energy Code Collaborative. NEEP continues to provide direct technical assistance to



NEEP-region states and attends code board meetings. NEEP staff also serve on the Maine Energy Technical Advisory Group (TAG).

NEEP has been working with the Massachusetts Net Zero Building (MA NZB) Coalition to collect data on case study projects that have successfully implemented the updated Stretch and Specialized Opt-In Codes. NEEP is preparing to release a resource comparing the new Base energy code to the Stretch code to clarify areas of confusion and encourage Stretch code adoption.

Delaware's Senate Bill 289, which amends Title 16, Chapter 76 of the Delaware Code, passed in the General Assembly on June 30. This Act clarifies ambiguous language in the Delaware Code and makes clear that counties and municipalities must meet the threshold of the state-based code as adopted by the Delaware Energy Office. More importantly, it also authorizes counties and municipalities to exceed the threshold, specifically stating that counties and municipalities in Delaware may adopt stretch energy codes. This Act was sponsored by State Senator Stephanie Hansen and developed by consensus among varied stakeholders such as environmental non-profits, utilities, home builders, and others. NEEP provided technical assistance by request.

NEEP is advising New Castle County, Delaware on becoming net zero ready by 2025 for residential buildings and 2030 for commercial buildings, and on other technical provisions using new building codes or ordinances. NEEP is providing technical assistance to Councilperson Durham and the Counsel to County Council on the language for the ordinance.

NEEP continues to co-coordinate the New Jersey Zero Energy Buildings Roadmap initiative with the NJ Board of Public Utilities and Rutgers University. The Roadmap initiative report is currently being reviewed by the Office of Climate Action and the Green Economy. NEEP and Rutgers will co-convene the New Jersey Energy Code Collaborative in the coming months to begin developing a timeline to complete the actions listed in the Roadmap. NEEP is working with the [National Energy Codes Collaborative](#) to define priorities for an Energy Code Implementation Fellow who will be embedded within the NJ Board of Public Utilities.

Compliance

NEEP has started a three-year project on energy code compliance in Pennsylvania and Delaware. The project was selected by US DOE as one of 27 projects covered by the BIL's Resilient and Efficient Codes Implementation (RECI) funding. In Phase One, NEEP will work with Performance Systems Development (PSD) to collect data for baseline energy efficiency assessment and for equity studies. Field Study Data will be collected on single-family, multifamily, and commercial buildings in Pennsylvania and single-family buildings in Delaware. In Phase Two, NEEP and PSD will work with Delaware's Department of Natural Resources and Environmental Control (DNREC) and the Pennsylvania Department of Environmental Protection (DEP) to identify barriers to study compliance, conduct data analysis, complete equity studies, and create and implement cross-state outreach and a targeted training roadmap to increase energy efficiency implementation and code compliance.

Building Performance Standards (BPS)



This year, NEEP has focused on advancing building performance standards in smaller communities. To accomplish this, NEEP partnered with ClearlyEnergy on their Resilient and Efficient Codes Initiative (RECI) grant which is creating regional BPS cohorts across the country. NEEP is leading a cohort of communities in Massachusetts and Rhode Island and co-leading a cohort of Maryland counties. This quarter, the team focused on outreach and engagement to identify participants. This culminated in two virtual information sessions, one for each region. The MA/RI information session led to a confirmed list of 12 members. The first cohort meeting will take place in early Q3. The team is working with ClearlyEnergy, the Maryland Department of Environment, and the Maryland Energy Administration to host an in-person kick-off meeting in Baltimore. This event will take place early in Q3.

During NEEP's annual Summit, we held a small interactive session on software solutions for building performance standards.

Appliance Standards

NEEP's [State Appliance Standard Database \(SASD\)](#) is the most comprehensive appliance standards database worldwide. Massachusetts, New Jersey, New York, Rhode Island, and Washington D.C. are fully utilizing SASD as of August, 2024, and Maryland will follow this year. Colorado adopted [HB23-1161](#), which references the use of SASD as an enforcement tool for their standards. NEEP is working with partners the Appliance Standards Awareness Project (ASAP) and the Environmental Protection Agency (US EPA) to develop a methodology to inform manufacturers about standards updates. Additionally, NEEP will continue to build out the SASD toolbox.

Resources

NEEP completed the following resources in the second quarter:

- Flyer for code official recruitment: [A Career in Building Code Enforcement. April 2024.](#)
- NEEP and the Midwest Energy Efficiency Alliance completed "*Benefits and Opportunities of Off-Site Construction: Analysis of Indiana and Pennsylvania*," which will be presented at a poster session of the [2024 ACEEE Summer Study on Energy Efficiency in Buildings Summer Study](#) and published afterwards.
- NEEP released the [11th edition of the Code Word](#) newsletter in May
- Blog post – [2024 IECC: A Call to Action for States and Local Governments](#)

NEEP maintains and updates our [online state code adoptions tracker](#) as well as the [building codes and standards](#) webpages providing interested stakeholders with more information and resources.

NEEP facilitates monthly calls with all Regional Energy Efficiency Organizations (REEOs) to share information, trends, and lessons learned across regions.

NEEP staff also participate in and contribute to monthly calls with the Responsible Energy Codes Alliance (RECA) and the National Association of State Energy Officials (NASEO), providing code updates from the NEEP region.



Progress Toward 2024 Outcomes

1. Significant adoption and implementation of beyond-base codes (NEEP supports jurisdictions in achieving this goal)

Progress Toward Outcome:

Delaware's Senate Bill 289, passed in the General Assembly on June 30. This Act specifically authorizes counties and municipalities to adopt stretch energy codes.

NEEP continues to work with New Castle County, Delaware to develop a stretch code ordinance.

This year, NEEP will be working with the District of Columbia and New Buildings Institute on a 2026 net-zero energy code.

In New York, NYSERDA is currently working on developing the NYStretch Energy Code 2023 for both [residential](#) and [commercial](#) buildings.

2. Improved code compliance in the region through workforce development strategies including code official training, retention, and diversification.

Progress Toward Outcome:

NEEP launched a project conducting building energy code compliance studies in Pennsylvania and Delaware. The project will include outreach into diverse communities to provide paid internships and job awareness. Data collection and analysis will include equity components. After data evaluation, NEEP will implement a workforce training program in both states through in-person and online trainings, and a hotline connected to a "circuit rider" (codes expert spanning multiple jurisdictions).

NEEP published a [digital flyer](#) to recruit more people into careers in code enforcement. The flyer provides insight into necessary skills, qualifications, and preparatory steps. NEEP developed a [Code Enforcement Workforce Field Study questionnaire](#) focused on training, diversity, and attracting new code enforcement professionals within the NEEP region. NEEP will use the data generated from these surveys to develop a gap analysis in late Q3 or early Q4.



Progress Toward 2024 Outcomes

3. Seven states adopt appliance standards or implement appliance efficiency standards, and two states adopt air regulations for NOx appliance standards.

Progress Toward Outcome:

Maryland continues to move toward implementing their new appliance standards, though the effective date has been pushed back. The draft standards can be found [here](#). In Pennsylvania, HB 1615, was voted out of the House and is waiting to be heard by the Senate Energy Committee as of August 1, 2024.



Grid-Interactive Homes and Buildings

Grid interactive homes and buildings are key to the region’s decarbonization efforts, enabling broad building electrification as well as helping to manage intermittent renewable power supply. In the near term, these homes and buildings reduce the need for expensive grid/pipeline infrastructure investments and prevent expensive spikes on the grid. In the long term, these resources will be tapped like power plants, dispersing excess energy and providing it back as needed.

GIHB Training Programs

NEEP is working with the Association of Energy Services Professionals (AESP) on a BENEFIT Grant project to develop a series of accredited online courses focusing on new grid-interactive energy technologies, also commonly referred to as demand flexible loads. NEEP’s tasks for this past quarter included advertising the availability of the courses. NEEP also collected data for the Regional Energy Efficiency Database (REED), made it available on the [REED website](#), and responded to requests for the REED Data Master Workbook.

Working Groups

NEEP launched two working groups to help implement GIHBs programs throughout the region, a state energy office working group and an evaluation, measurement, and verification (EM&V) working group. For the EM&V working group, in first quarter NEEP focused on attribution and IRA programs. We are hoping to identify a topic that will help move the landscape toward more grid-interactive homes and buildings.

Progress Toward 2024 Outcomes
<p>1. Two state regulatory agencies modify cost-benefit analysis for energy efficiency and/or grid planning to measure the value of real-time energy generation and use, such as adopting a Total Systems Benefit metric or similar measurement.</p> <p>Progress Toward Outcome:</p> <p>We did not see any additional movement on this outcome, but have heard more states in our region discuss the need for a metric for real time energy generation and hope to see these discussions continue in 2024.</p>
<p>2. Two utilities or program administrators design incentive programs for grid-interactive appliances and equipment with specific consideration for overcoming equity barriers.</p> <p>Progress Toward Outcome:</p>



Progress Toward 2024 Outcomes

New Jersey has released the framework for program implementation for its next round of energy efficiency programs, which includes a demand response program and roadmap for the state to incorporate it into its existing energy landscape. NEEP submitted comments on the program that highlighted ways to center equity in the design and implementation. NEEP will continue to monitor the process to set up the demand response programs and provide technical assistance when possible.

3. Two state regulatory agencies create statewide frameworks to accelerate adoption of GIHBs technologies.

Progress Toward Outcome:

The Maryland Public Service Commission is convening the Maryland Unified Benefit Cost Analysis Test Working Group to help in the development of a Maryland-specific Unified Benefit Cost Analysis (UBCA). The Order Establishing the working group and instructions on how to join can be found [here](#). The working group will create a unified benefit cost analysis for all distributed energy resources in the state, including energy efficiency programs and electric vehicles. NEEP will continue to monitor the process and will provide technical assistance through the working group.

4. One state adopts a first-of-its-kind regulatory framework to prioritize energy efficiency and other demand side resources over the expansion of pipes and wires infrastructure.

Progress Toward Outcome:

New Jersey Board of Public Utilities [Triennium 2 Order](#) mandates that the state adopt a Demand Response Framework and directs the utilities to implement new demand response programs consistent with this framework. The utilities have proposed demand response programs as part of their filings for Triennium 2. NEEP is monitoring the progress of this framework and the utility programs.



Heating Electrification Market Transformation

The first half of 2024 kicked off another year of regional collaboration toward accelerated heating electrification across the Northeast and Mid-Atlantic. Early this year, the signatories to the [Multistate Memorandum of Understanding](#) to accelerate the transition to zero-emission residential buildings recognized NEEP's Residential Heating Electrification Working Group as a “national forum for state coordination, collaboration, and information-sharing on policy and program design, market transformation, research, and technology advancement.” This MOU sets ambitious science-based targets for reducing emissions and increasing adoption of heat pump technologies. In Q2, NEEP convened our second Residential Heating Electrification Working Group in-person ahead of the Summit, and our second Commercial Heating Electrification Working Group online.

In January, NEEP launched the ‘Accelerating the Market for Residential Heat Pumps in Cold Climate – Northeast Initiative’ in partnership with PNNL. NEEP presented the Initiative to stakeholders before launching research and convening advisory committees to inform several deliverables. Focus topics include Regional Heat Pump Market Assessment, HVAC Workforce Development, Designing & Sizing Heat Pumps in Cold Climates, Income-Eligible Program Implementation, the Future of Key Heat Pump Performance Data, Mid-stream Program Best Practices, and Co-promotion of Heat Pumps and Weatherization. Research and drafting are underway, with reports expected in fall 2024. NEEP will also release a report on the ASHP Rating Representativeness Project in the coming months.

The team continued research progress on other key regional and national projects. NEEP presented findings from its VRF In-Field Validation Project at ASHRAE and the ACEEE Hot Air Forum to shed light on how VRF technology performs in buildings. We expect to release a final report on the study in fall 2024. NEEP also presented on the [Equitable Access to HPWHs white paper](#) at the ACEEE Hot Water Forum as a co-lead on the Advanced Water Heating Initiative (AWHI) Equity Working Group.

NEEP continues to provide thought leadership on the latest in heat pump technologies, programs, and best practices. The [Emerging Heat Pump Technologies Brief](#), published in February, explores heat pump technologies that are well suited and available for applications in the Northeast and Mid-Atlantic region. “[What’s on the Horizon for Heat Pumps?](#)” provides a shorter resource covering these multifamily and commercial building heat pump solutions. NEEP published a [blog post](#) exploring the importance of sizing air source heat pumps in cold climates as well as tools and strategies for programs to support best practices. The team also published a [blog post](#) that introduces our partnership with US DOE and PNNL that aims to focus on market development of ASHPs in residential single-family and multi-family applications in the Northeast.



With a daily average of over 400 users, NEEP’s Cold Climate Air Source Heat Pump list and sizing support tools continued to serve as a resource for programs, installers, and market actors seeking to improve system sizing and selection practices. To help users navigate the new and improved tool features, NEEP published an updated [User Guide](#). The team is raising awareness through [educational webinars](#), [tutorials](#) and supporting our partners in using the tools for contractor training.

Planning has also begun for our annual regional [Heating Electrification Workshop](#), which will be held in Syracuse, New York in November. The team, with the help of an advisory committee, has developed a thoughtful agenda relevant to many stakeholders and has begun inviting speakers.

Progress Toward 2024 Outcomes
<p>1. Government, program administrators and industry work together to align around a single specification for cold climate heat pump promotion, both federally and in the Northeast, to reduce market confusion and facilitate adoption of heat pump technologies for consumers in the Northeast.</p> <p>Progress Toward Outcome:</p> <p>The majority of the region’s programs are using ENERGY STAR’s Cold Climate specification (CT, MA, NH, NJ) or NEEP’s Cold Climate ASHP Listing (NY, VT, RI) as the means to qualify for cold climate heat pump program incentives. While EPA’s ENERGY STAR cold climate specification (federal rebates) and CEE’s specification (federal tax credits) are working to align, NEEP is focusing on the extended performance data as the list’s complementary value to programs and the market. We are halfway through a research project, with the help of program administrators and industry members, to provide recommendations to the market on the future of key heat pump performance data.</p>
<p>2. EPA/ENERGY STAR develops national performance specifications for at least 2 emerging cold climate heat pump categories (e.g. window heat pumps, large ATW heat pumps, small ATW heat pumps, heat pump RTUs, central HPWHs).</p> <p>Progress Toward Outcome:</p> <p>ENERGY STAR Specification development is active for small air-to-water heat pumps (“Residential Boilers”). ENERGY STAR also published a Final Draft Heating Mode Test Procedure that will allow CEE to establish a national performance specification for window heat pumps (“Room Air Conditioners”).</p> <p>https://www.energystar.gov/products/residential_boilers_specification</p> <p>https://www.energystar.gov/products/room_air_conditioner_specification_version_5_2</p> <p>We expect EPA to complete these development processes by the end of 2024.</p>



Progress Toward 2024 Outcomes

3. Five programs introduce new incentives/promotions to support emerging heat pump categories in applications that benefit low- and moderate-income consumers.

Progress Toward Outcome:

New York's [Clean Heat for All Challenge](#) program is field testing new window heat pumps in apartments in New York City. It is expected that the two participating manufacturers will bring commercial products to market later in 2024 and that new programs will launch in the beginning of 2025.

Domestic hot water can be the source of significant emissions in multi-family housing. Central HPWHs Specifications for Central HPWH's are emerging in the Northwest and are expected to help jump start Northeast promotional program activity by the end of the year.

New Jersey's Board of Public Utilities is creating a rebate/incentive program to support increased incentive levels for LMI customers and to guard against adverse energy burdens for LMI customers. Emerging heat pump tech is considered eligible if it otherwise meets program criteria.

4. Five states use IRA funding to work with industry to retrain/reskill existing workers to install efficient electric heat pump technologies and to have the necessary "kitchen table conversations" to convince end users to select them.

Progress Toward Outcome:

EPA selected a New England coalition of states of (CT, MA, ME, NH, and RI) to create a \$450 million "New England Heat Pump Accelerator." One key pillar of the plan for the accelerator is the market hub, which includes contractor training on cold climate heat pumps and whole-home installations and workforce development in underserved communities. Through the Resource Hub, there will also be resources for consumer and contractor education that can aid these kitchen table conversations.

NEEP has also been engaging state energy offices across the region in support of developing IRA-funded [Training for Residential Energy Contractors](#) ("TREC") programs. NEEP expects at least five states from the region to launch their formula and/or competitive grant programs by the end of 2024.



Public Policy and Programs

In the second quarter, NEEP continued to meet with State Energy Offices (SEOs) and stakeholders across the region on implementation of the Inflation Reduction Act Rebates and Training Residential Energy Contractors (TREC) Programs. NEEP kicked off its New Hampshire Energy Efficiency Working Group meeting with the steering committee. NEEP also continued working to finalize two papers. The first is a white paper on attribution of savings generated from IRA Rebate program funds informed by the feedback of its evaluation, measurement, and verification (EM&V) working group: [Expanding the Energy Savings Pie: Attribution Frameworks to Align IRA Home Energy Rebates and State Programs](#). The second is a paper on the framework of policies needed to decarbonize the building sector across four pillars of policies, [Decarbonizing Buildings: How States Can Set the Table for Success](#). Finally, NEEP provided technical assistance to CT DEEP, working with five states in the region to coordinate the drafting of a multistate application for the Climate Pollution Reduction Grants.

Working Groups

In 2024, our state energy office working group continues to focus on how to best leverage the Inflation Reduction Act to grow energy efficiency and demand response programs in the region. The working group is open to State Energy Offices (SEOs) only and provides a space for states to learn about innovations in programs and identify pathways to implement them. Last quarter, NEEP met with each state energy office individually to identify the best topics for the working group.

Technical Assistance

In Q2, NEEP met with each state energy office in the region to determine how we could best help with implementation of IRA Home Energy Rebates. NEEP is currently designing webinars to help states with implementing rebates and with submitting the Market Transformation Blueprint.

In addition to engaging with state energy offices, NEEP has been attending technical sessions to learn about plans for program design for Clean Heat Standards in both Massachusetts and Vermont, as well as energy efficiency plans in Massachusetts, Maine, New Jersey, and New York.

Deliverables

In Q2 NEEP continued work on a paper on best practices for attributing energy savings when braiding IRA and utility programs, [Expanding the Energy Savings Pie: Attribution Frameworks to Align IRA Home Energy Rebates and State Programs](#). This paper is informed by our EM&V Working Group and lays out pathways for states to braid programs depending on their current program landscape and statewide energy and building decarbonization



goals. NEEP offered several partner organizations the opportunity to provide peer review, and published the paper in June. NEEP has already presented findings from this paper in various forums, such as the National Home Performance Conference in Minneapolis in April and (partner REEO) MEEA’s Utility Leadership Group, and will continue do so based on stakeholder requests.

NEEP published [Decarbonizing Buildings: Setting the Table for Success](#). This brief presents four key areas or “legs” that together can help states accelerate building electrification. The legs are: Equity and Workforce Investments, Carbon Reduction Obligations, Codes and Standards, and Utility Planning and Regulation. The Report also provides real world examples from California, Maryland, Massachusetts, Washington, D.C., and Washington State of how these legs work together to accelerate building decarbonization. This paper was highlighted in a session at the NEEP Summit and featured a speaker from Maryland, who shared that their new climate plan contains policies representing each of the legs.

NEEP also published [The Problem in Multifamily Energy Data Access](#), a blog which looked at the barriers to gathering data on multifamily programs and provided recommendations for states as they draft their Data Access Plans for IRA Home Energy Rebates.

Tracking Energy Efficiency and Building Decarbonization

NEEP is tracking regulatory proceedings and legislation, as well as participating in state-run working groups to advance decarbonization policies throughout the region. For the second quarter, NEEP released a blog on energy efficiency programs that are currently being designed in the region, [Policy Roundup: Looking at the Latest Energy Efficiency Planning Processes](#). The blog looked at the energy efficiency processes in Massachusetts, New York, New Jersey, Maryland, and Maine.

NEEP continued to track energy efficiency plans in Massachusetts, Maryland, and New Jersey, and the design of Clean Heat Standards in Massachusetts and Vermont. NEEP includes updates on these dockets and legislation in our region in our weekly Allies Intel. NEEP also tracks bills with our [legislative web tracker](#), which also includes legislation from the past three years. NEEP follows new bills closely to identify key target areas and trends, with an emphasis on climate goals and roadmaps, workforce development, equity, and building codes and standards.

Progress Toward 2024 Outcomes

1. Four states advance legislation or regulatory initiatives that increase equitable access to benefits of energy efficiency programs statewide.

Progress Toward Outcome:

In January 2024, the Massachusetts DPU ordered a study of [energy burden and affordability](#) programs in an effort to ease the burden of [higher electrical costs](#) during its transition. As part of this proceeding, regulators will determine how to reduce the financial energy burden for lower-income residents. This study will consider options to lower costs by changing the requirements to qualify for assistance and tying utility costs to



Progress Toward 2024 Outcomes

household income, as several other states do through percentage of income payment plans (PIPPs). This step is significant in addressing the growing energy burden in underserved communities as well as the cost (upfront and operational) of building decarbonization technologies as this transition continues.

Connecticut continues their Connecticut's Performance-Based Rates Proceeding, which provides insight into how the state prioritizes equity. So far, the state has identified four regulatory goals for the performance-based rates: excellent operational performance, public policy achievement, customer empowerment and satisfaction, and reasonable, equitable, and affordable rates. To read more about how performance-based rates can increase equitable access to programs, see [NEEP's blog](#).

Connecticut and Massachusetts are both designing energy efficiency statewide portfolios that prioritize community-based programs. Massachusetts provides technical assistance at the community level. Both programs coordinate with community-based organizations to increase adoption of energy efficiency measures.

2. Three states take steps to align energy efficiency programs with state climate policies by incorporating climate-focused metrics.

Progress Toward Outcome:

In New York, the [Public Service Commission \(PSC\) required](#) the new portfolio of efficiency programs to dedicate 85% of portfolio budgets to electrification and electrification readiness measures or "strategic measures". These programs must use heat pumps as a primary heating source and combine efficiency with electrification where possible. This includes removing rebates for lighting and plug in appliances to prioritize deeper, whole home measures in programs.

In Maine, legislation was passed in 2023 mandating [Beneficial Electrification Plans](#) as part of the Efficiency Maine Trust's (EMT) energy efficiency portfolios. Under this legislation, the EMT's plans must include beneficial electrification measures that are cost effective and reliably reduce electricity rates over the life of the measures. Over the summer, EMT will hold a series of workshops to design their portfolio. More information can be found [here](#).

In Maryland, utilities are working with the Public Service Commission to redesign energy efficiency portfolios after passage of [legislation](#) that required the state's energy efficiency programs, EmPOWER to adopt GHG emission goals.

NEEP is monitoring and providing technical assistance to New Jersey, Maine, Connecticut, Maryland, and Massachusetts's energy efficiency proceedings and will report on other actions taken in 2024.



Progress Toward 2024 Outcomes

3. Three state regulatory agencies advance beneficial electrification policies that regulate gas, oil, and/or propane use.

Progress Toward Outcome:

Last year, Massachusetts passed [legislation](#) mandating Mass Save [discontinue rebates, incentives, and financing](#) for equipment powered by natural gas, oil, or propane by 2024. Program implementers are designing these programs right now.

The New Jersey Board of Public Utilities [Triennium 2 Order](#) requires utilities to file Beneficial Electrification Programs as part of their portfolios. The Beneficial Electrification Programs will provide financial incentives for residents using fossil fueled equipment to voluntarily adopt efficient electric equipment, including heat pumps, water heaters, and other appliances. It also requires utilities to leverage IRA (Inflation Reduction Act) rebates and tax credits in designing the plans.

Other proceedings we are watching:

New York continues to design their economy-wide [Cap-and-Invest Program for New York](#). The [cap-and-invest](#) program will set a declining cap on Greenhouse Gas (GHG) emissions and invest in an equitable emissions reductions program. Large scale greenhouse gas emitters and distributors of heating and transportation fuels will be required to purchase allowances for emissions associated with their activities. The proceeds will support state investments in climate mitigation, energy efficiency, clean transportation, and an annual Climate Action Rebate that will be distributed to all New Yorkers to mitigate potential consumer costs associated with the program.

In Maryland, utilities are working with the Public Service Commission to redesign energy efficiency portfolios after passage of [legislation](#) that required the state's energy efficiency programs, EmPOWER to adopt GHG emission goals. As the state adopts these goals, the utilities will need to change parts of their energy efficiency programs to help reach the new climate goals. This will likely include beneficial electrification policies that encourage fuel switching.

Massachusetts Department of Environmental Protection (MassDEP) has [initiated a stakeholder process](#) to develop the state's [clean heat standard \(CHS\)](#).

Vermont passed legislation to enact a Clean Heat Standard. The Public Utilities Commission (PUC) has initiated a docket to establish the standard. The PUC has held working group meetings focused on technical information and equity, which are open to the public.



Progress Toward 2024 Outcomes

4. Four states, through legislation or regulation, invest in and implement statewide energy efficiency workforce initiatives that prioritize historically marginalized and/or undeserved communities.

Progress Toward Outcome:

In Massachusetts, the [Mass Save 2025 - 2027 Draft Plan](#) proposes a doubling of workforce investment from the previous cycle, from \$12- to \$24-million. Mass Save will use this funding to increase initiatives that create a more diverse workforce and better represent the communities the programs serve. The funding will also contribute to continuing the Heat Pump Installer Network and expanding opportunities for commercial and industrial workforce training.

New Jersey Board of Public Utilities [Triennium 2 Order](#) mandates that the state continue its workforce development program and grow efforts to encourage supplier diversity and contractor coaching/mentoring in addition to training. The program also provides competitive grants to community-based organizations in partnership with the NJ Department of Labor and utility companies. The state is in the process of finalizing these plans.

New York's [Public Service Commission \(PSC\) established](#) NYSERDA as the single implementer for workforce programs statewide. In this role, NYSERDA will develop and implement a workforce strategy that leverages ratepayer funding and ensures creation of an appropriately skilled and trained workforce.



Retrofit Models

NEEP's Retrofit Models project accelerates the uptake of comprehensive retrofits in both the residential and commercial sectors. The team fosters collaboration to explore and identify barriers, best practices, and expand upon scalable ideas.

Total Energy Pathways (TEP)

The Total Energy Pathways (TEP) Workforce Development project aims to grow and diversify the residential retrofit workforce. The absence of an adequate workforce was identified as a barrier to scaling whole-home energy retrofit programs such as the Zero Energy Now Pilot in Vermont. NEEP has been working with BPA (Building Performance Association), BPI (Building Performance Institute), and EFG (Energy Futures Group) to create a new BPI Certificate of Knowledge and accompanying training materials. This quarter the full certificate, called the Total Building Performance Certificate, launched and can be earned on BPI's website. This was a big milestone which had been two years in the making. The team is now considering how to raise awareness of the certificate and how to integrate it into established training programs. We are considering communications with trade associations, trade/tech schools and state workforce programs. Our outreach led to a connection at the Pennsylvania College of Technology, who is interested in using the TBP certificate and training materials as the basis for a weatherization contractor upskilling pilot.

CT Geothermal Project

During the second quarter, NEEP continued working with the Connecticut Department of Energy and Environmental Protection (CT DEEP), University of Connecticut, and the Wallingford Housing Authority on a U.S. DOE-funded networked geothermal design project. The project involves designing a geothermal heating and cooling system for an affordable housing community, which will serve as a model for other jurisdictions. In June, the NEEP team published the [CT Geothermal Workforce Needs Assessment](#) after surveying and interviewing industry stakeholders. NEEP also facilitated four Geothermal Workforce Solutions Workshops in May, presenting findings from the needs assessment and gathering input from industry stakeholders about potential solutions. The workshops were successful in fostering conversation between stakeholders and generating ideas for recommendations to the state. In June, NEEP began drafting the CT Geothermal Workforce Development Plan with recommendations to CT DEEP on how to address the existing needs for the industry.



Inflation Reduction Act Implementation Working Group

NEEP’s state energy office IRA Implementation Working Group will help states implement scalable and sustainable retrofits models with IRA Rebates and offer follow up technical assistance. During the last quarter the NEEP team collaborated to host two working group meetings. The first meeting introduced the Energy Offices to three retrofit programs (Massachusetts Decarbonization Pathways Pilot, Vermont Zero Energy Now, and Philadelphia Built to Last) and featured external speakers representing these programs. The second meeting focused on workforce development and training programs to support states wishing to use the federal TREC funds. The NEEP team highlighted three training programs: Mass Save Clean Energy Pathways, ReMaine, and Total Building Performance Certificate, as well as a deep dive on heat pump- and heat pump hot water-specific trainings and opportunities.

Partnership for Advanced Window Solutions (PAWS)

The U.S. Department of Energy (U.S. DOE), along with regional energy efficiency organizations like NEEP, NEEA and national labs, launched the Partnership for Advanced Window Solutions (PAWS). PAWS supported utility programs and assisted in developing consumer incentive programs for advanced window solutions. NEEP serves on the PAWS leadership team and participates in PAWS’s Utility working group. NEEP also led the formation of an Equity Working group for driving High Performance Window adoption through LMI programs. NEEP continues to participate in the Commercial Windows Secondary Glazing working group and promote storm windows and insulating panels as cost-effective efficiency measures. NEEP is also working with PAWS and State Energy Offices to add high performance windows to Technical Reference Manuals (TRMs) in the northeast states. In the first quarter, NEEP completed a research project to summarize the offerings of current TRMs and identify which ones contain information on modern electrification and energy efficiency technologies. This research will be used to support talks with state energy offices to update TRMs.

Progress Toward 2024 Outcomes

1. Five states take regulatory or legislative steps to implement statewide programs that expand access to whole-building deep energy efficiency retrofits in underserved communities.

Progress Toward Outcome:

In July, the Massachusetts Clean Energy Center opened the second cohort for the Decarbonization Pathways Pilot. NEEP remains engaged in the project advisory committee.

[New Jersey’s Triennium 2](#) Order placed additional requirements on utility-run residential programs to provide comprehensive energy efficiency retrofits for existing homes. The program must include energy assessments, incentives for whole home efficiency plus electrification, behavioral programs, and incentives for efficient products.

New Jersey, Massachusetts, Maine, Connecticut, and New York are all designing energy efficiency programs right now. NEEP is monitoring these filings for action in this space.



Progress Toward 2024 Outcomes

2. Two states standardize definitions for weatherization.

Progress Toward Outcome:

There is nothing new to report on this outcome at this time.

3. Three state or municipal whole-building retrofit programs include training opportunities focused on expanding access to workforce opportunities for historically marginalized communities.

Progress Toward Outcome:

States throughout the region are eligible to receive formula funding through DOE’s State-Based Home Energy Efficiency Contractor Training Grants. Initial TREC applications were due in January, NEEP is engaging with state energy offices and preparing to provide technical assistance to help implement equitable training opportunities.

4. Three energy efficiency program implementers modify programs to expand delivery of deep energy efficiency retrofits over direct install measures.

Progress Toward Outcome:

In the first Order Approving the framework for the New Jersey [Triennium 2 Energy Efficiency Programs](#) for the state, it requires that utilities design “incentives for whole home EE and electrification solutions, including solutions that generate deep, long-lasting, and cost-effective energy strategies. Utilities will also be submitting plans for Building Decarbonization (fuel switching measures) as part of this Triennium. Plans were filed in December and are currently being approved.

In Massachusetts, the [Mass Save 2025 - 2027 Draft Plan](#) proposed creation of a coordinated, statewide approach for joint delivery and funding of electrification. This includes the use of a single statewide contractor that provides “turnkey” solutions to customers. The program will include multi-lingual, holistic customer support and will process all rebates to ensure proper allocation of funds and alleviate additional burdens on participants. It will also identify a contractor for participants to streamline their experience with the program.

5. Three energy efficiency programs increase the number of measures included in their whole-building retrofit programs.

Progress Toward Outcome:

New Jersey BPU has ordered utilities to file plans for deeper whole home measures. The utilities filed plans in December outlining new initiatives for deeper whole home retrofits. NEEP is monitoring these filings for when plans are finally approved.



Community Solutions

NEEP's Community Solutions team facilitates the development and implementation of various building decarbonization initiatives with state and local governments and community stakeholders. We engage stakeholders, facilitate topical working groups and cohorts, conduct research and develop resources, and aid in the creation of flexible software tools that enable jurisdictions to meet their climate goals.

Multifamily Housing Strategic Development

At the beginning of 2024, NEEP began developing a strategy to address the need for rapid and equitable decarbonization of multifamily housing stock in New England and the Mid-Atlantic. Buildings and homes account for approximately three-quarters of the electricity used in the United States, with [twenty percent](#) of this total attributed to residential dwellings. Multifamily properties tend to be [old and inefficient](#), with approximately sixty percent of residential apartment buildings having been constructed before 1980, and more than half of these apartments being at least fifty years old. [Eighty-five percent](#) of households living in apartment homes are considered low- to moderate-income. During the first quarter, NEEP [made a commitment](#) to develop an equity-centered multifamily strategy.

During the second quarter, NEEP made demonstrable progress toward this goal. NEEP's Community Solutions team has created multiple databases and contact lists to inform and advance our multifamily strategy. NEEP has forged new relationships and strengthened existing partnerships that are expanding our capacity to engage with stakeholders and support projects that are highly applicable to the multifamily sector. One example is our support of the Connecticut DEEP's Department of Energy funded [networked geothermal project](#) at an affordable multifamily property in Wallingford, Connecticut. NEEP has contributed to a statewide geothermal workforce development plan and conducted community engagement activities to ensure the program is equity centered. Lessons learned from this project have greatly enhanced NEEP's ability to provide networked geothermal subject matter expertise and project support for multifamily program development across the region.

NEEP's pursuit of a multifamily strategy has also led to the development of several new, highly strategic partnerships with organizations working in the multifamily sector. The Community Solutions team is currently developing a strong relationship and seeking collaborative opportunities with New Ecology Inc., a recognized leader in multifamily program implementation. Additionally, NEEP has increased our capacity to support multifamily electrification initiatives by establishing or reestablishing relationships with mission-aligned organizations such as the Center for Eco Technology, Sustainable Comfort, and the Keystone Energy Efficiency Alliance.



NEEP's is also addressing existing gaps in program implementation at multifamily properties. NEEP is supporting ACEEE's [Energy Equity for Renters](#) initiative by developing a learning group of municipal stakeholders in New England interested in embedding protections for renters into electrification programs. While this initiative is not specifically focused on the multifamily sector, the project will directly benefit apartment dwellers due to the disproportionate number of underserved stakeholders living in subsidized and unsubsidized multifamily communities. This project launched in the second quarter and the NEEP team will begin recruiting a cohort of municipal stakeholders in August.

NEEP's multifamily strategy was well represented at our Annual Summit in June. The "Networked Geothermal is Having a Moment: Multifamily Applications in the Northeast" session featured a very well received discussion on networked geothermal as a pathway to scalable, community-level decarbonization. In the "Multifamily MythBusters: Decarbonizing Affordable Housing" session, panelists from ICAST, New Ecology, HUD, and the DOE engaged in a discussion on funding, designing, and implementing energy efficiency and electrification programs at multifamily properties.

Lastly, NEEP is in the process of planning the Decarbonizing Communities and Campuses collaboration with PowerOptions, which will focus on networked geothermal program applications for community level decarbonization, including the multifamily sector. This event will take place in Spring 2025.

ReMaine

During the second quarter, NEEP continued to create relationships with employers and place interns in the [ReMaine Clean Energy Internship Program](#), after placing 26 interns in paid clean energy positions in year one. The project team placed seven additional interns during Q2, bringing the total to 12 placements so far for year two. The team secured commitments for an additional four positions to reach our goal of 16 interns for year two. The positions range from weatherization technicians and heat pump installers to computer programming, mechanical engineering, and research and communications roles. NEEP led a Project Advisory Committee meeting for the project, where stakeholders discussed the potential of eventually transitioning management of this program to a new, Maine-based host organization.

Buildings Upgrade Prize (Buildings UP)

NEEP serves as Regional Navigator (RN) with nine winners of the Buildings UP Phase 1 Prize as they scale up in the planning phase. NEEP staff meets monthly with each team to check in on any updates and issues while providing support with their retrofit initiatives. The teams are working on developing their retrofit initiatives, selecting technology, and conducting meaningful engagement with the prize funds. The NEEP team is also collaborating with the Prize Administration team (the US Department of Energy, the National Renewable Energy Lab, and other regional energy efficiency organizations serving as regional navigators) and the technical assistance providers (TAPs) at monthly meetings and webinars. This project is giving NEEP insight into various community level retrofit models and best practices for scaling initiatives while providing an opportunity to share our expertise through technical assistance in areas such as heat pump transformation and the Total Building Performance Certificate.



Community Driven Transportation Planning

In October 2023, NEEP launched a new project funded by the Department of Energy's Vehicle Technologies Office, called Community Driven Transportation Planning. NEEP is the prime recipient and is working with Vermont Clean Cities Coalition, Connecticut Southwestern Areas Clean Cities Coalition, Vital Communities, and the Upper Valley Lake Sunapee Regional Planning Commission. The project involves working with "target communities" to conduct transportation audits, determine high priority transportation decarbonization actions, identify workforce and public education needs, and develop implementation plans. During Q2, NEEP held regular meetings with the project partners to plan the community transportation audits, finalized the compensation plan for distributing stipends to individual participants and community-based organization partners, prepared to launch the Online Resource Center and Community of Practice, and worked with the project partners to identify the members of the Stakeholder Advisory Committee.

Community Level Electrification

Increasingly, states and communities are interested in local electrification initiatives to reduce building related energy consumption and greenhouse gas emissions. Experiences from partner organizations such as the Massachusetts Clean Energy Center, NYSERDA, Abode Energy and others have shown that neighbor-to-neighbor coaching is an effective strategy to advance electrification initiatives. NEEP will utilize funding from the Barr Foundation to gather a cohort of communities that support the development of a community electrification model and toolkit. This quarter, NEEP engaged with strategic partners (Building Electrification Accelerator, Abode Energy, and various municipalities) to align the project parameters with pre-existing initiatives. NEEP presented the idea at the Local Electrification Collaborative, a group of organizations and communities working on electrification in Massachusetts. The team is working closely with the Building Electrification Accelerator (BEA) to identify participants and align goals.

Technical Assistance

In June, the Community Solutions team made a technical assistance qualifications presentation to community leads and co-leads for the [Communities Local Energy Action Program \(LEAP\)](#). Communities LEAP is a DOE funded program that creates sustained community-wide economic and environmental benefits by funding and supporting clean energy deployment projects in low-income, energy-burdened communities that are currently shifting away from a historical reliance on fossil fuel-based industries and/or infrastructure. This presentation highlighted the team's experience with stakeholder facilitation, community engagement, clean transportation planning, energy efficiency and building electrification program development. NEEP will be providing technical assistance as needed to two teams in Pennsylvania and one team in Connecticut working on a variety of building electrification and clean transportation planning projects.

Also in June, the Community Solutions team was invited by NREL to participate in a new regional partnership model framework being developed to provide technical assistance to rural communities. This program will provide rural communities with technical support for basic energy efficiency education, community engagement strategies, and resource navigation, e.g., funding opportunities, available incentives, grant-writing support, etc.



Progress Toward 2024 Outcomes

1. Four states pass or implement building decarbonization strategies.

Progress Toward Outcome:

This outcome was completed in Q3 2023. In 2024, NEEP will continue to support regional implementation of building decarbonization strategies by participating in relevant working groups, including the [Massachusetts Building Electrification Accelerator Retrofits Working Group](#). NEEP is also actively seeking to strengthen its network of regional state partnerships to expand the implementation of building decarbonization strategies in New England and the mid-Atlantic.

2. Six states, utilities, or program administrators increase support of and direct new resources towards community-level decarbonization initiatives while specifically addressing equity in disadvantaged communities through these programs.

Progress Toward Outcome:

In June, Eversource in MA held a ribbon-cutting ceremony for its [Geothermal Pilot Project](#) in Framingham and turned the system on. The pilot is a networked geothermal system that has a loop roughly a mile long, designed to serve 36 buildings. The buildings include single family homes, commercial properties, a gas station, a fire station, and a large affordable housing building. This project represents a significant step toward the vision of gas utilities owning and operating networked geothermal systems.

During the second half of 2024, NEEP will be recruiting stakeholders from regional municipalities for a working group focused on developing and implementing [equitable electrification initiatives](#) for Low- to Moderate-Income renters in New England.

3. Fifteen jurisdictions pass or implement innovative decarbonization policies/programs targeting existing or new buildings.

Progress Toward Outcome:

In June, Philadelphia City Council [approved \\$5 million for the Built to Last program](#), run by the Philadelphia Energy Authority. Built to Last is a one-stop-shop that serves city residents by providing health and safety upgrades for homes, repairing aging roofs, upgrading appliances, and installing heat pumps and rooftop solar. This is the first time the program has received city funding.

In June, the Massachusetts Attorney General approved the town of Concord’s [fossil fuel free bylaw](#). The [FFF bylaw](#) is part of [MASS DOER’s Municipal Fossil Fuel Building Demonstration Program](#) which enables cities and towns to adopt and amend ordinances or by-laws to require new building construction or major renovation projects to be fossil fuel-free, with some exceptions.

The town of Lincoln, Massachusetts [fossil fuel free bylaw](#) also went into effect in June. Lincoln is also participating in the FFF Building Demonstration Program.