



## NEEP 2024 Quarterly Report Quarter 1



### *Building Energy Codes and Appliance Standards*

At the end of 2023, the U.S. Department of Energy (US DOE) opened applications for states, territories, and local governments with the authority to adopt building codes to access \$530 million in [competitive funding](#) to improve building energy codes. The new funding expands eligible activities to include customized codes and innovative code approaches such as building performance standards (BPS). States who submitted concept papers by February 9, 2024, must submit full applications by April 30, 2024. This competitive funding opportunity announcement (FOA) follows the earlier formula funding - [Assistance for Latest and Zero Building Energy Code Adoption \(Sec. 50131\) for States and Territories](#), and both are funded by the [Inflation Reduction Act](#) (IRA).

#### **Base Code Adoption**

The Connecticut Code Amendment Subcommittee began meeting in January to discuss the proposed 2025 Connecticut state codes. The new building code based on the 2024 International Code Council (ICC) codes, including IECC, is expected to go into effect in fall 2025. Code change proposals will continue to be accepted through April 30, 2024.

New York and Rhode Island have decided to skip the 2021 IECC in favor of adopting the 2024 IECC when it becomes available. New York State Energy Research and Development Authority (NYSERDA) released a [proposed rule](#) for the Cost-Effectiveness of Energy Code Updates and is currently reviewing the public comments received for the cost-effectiveness methodology. NYSERDA is working with the New York Department of State and the New York State Code Council to propose an energy code that meets the requirements of the Codes & Standards Act of 2022, and is expected to release a Notice of Rule in Development related to the new energy code soon.

Vermont's Residential and Commercial Building Energy Standards updates incorporated 2021 IECC with strengthening amendments, with an effective date of July 2024.

Maryland adopted the 2021 IECC with weakening amendments on May 29, 2023, with an effective date starting one year from adoption. Notably, the weakening amendments may make Maryland ineligible for IRA funding based on adoption of the latest building code.

New Hampshire's Building Code Review Board voted to keep the 2018 IECC in place while moving to adopt the rest of the suite of 2021 I-Codes. Currently, the bill HB 1059, proposed in the legislature, supports the decision of New Hampshire's Building Code Review Board. This bill aims to maintain the 2018 IECC while also moving forward with adopting the remainder of the 2021 I-Codes. If New Hampshire elects to keep the 2018 IECC, 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, Maine, Massachusetts, and Pennsylvania.

- The District of Columbia continues to actively discuss the adoption of the 2021 IECC and is two-thirds of the way through the development process of the 2021 IECC base code update.
- Delaware is accepting proposals based on the 2024 I-Codes will through April 15, 2024. A second round of proposals for the IRC and IECC will be accepted through June 2024.
- In Maine, the final version of the energy code based on the 2021 IECC was approved by the Maine Uniform Building and Energy Code (MUBEC) Board in October 2023, and it was sent for review to the Attorney General. The commercial code is unamended. The residential code is amended to improve air sealing and increase wall insulation to assist with moisture issues. The MUBEC Board passed Chapter 6, which includes the base energy code and the stretch energy language, on December 21, 2023. At the January meeting, the MUBEC Board decided to separate the stretch energy language from Chapter 6 so that Chapter 6 could move to public comment with the other chapters of the code. The MUBEC Board-approved language for the stretch energy code is queued for review by the State Fire Marshall and the Attorney General's office in 2024 after the review of the other chapters is complete.
- In Massachusetts, the Board of Building Regulation and Standards (BBRS) released the draft 10<sup>th</sup> edition of the Massachusetts State Building Code on December 11, 2023. The BBRS conducted public hearings on February 14<sup>th</sup> (in-person), 21<sup>st</sup> (virtual), and 28<sup>th</sup> (in-person). The BBRS held a special open meeting to discuss public comments on March 27, 2024 during which they discussed public comments on Chapters 1 through 3. Another special open meeting to continue the discussion of public comments is tentatively scheduled for April 30, 2024.
  - Massachusetts Department of Energy Resources (DOER) held a public listening session on March 27, 2024 about the stretch code and specialized opt-in code. The most prevalent themes were the need for training mandates, more training, clarification on energy code compliance for existing buildings, clarification on change of use, more support for code compliance and consistency in code interpretation.
- The Pennsylvania Review and Advisory Council (RAC) closed its comment period on the 2021 IECC on August 30, 2023. RAC released a code adoption timeline for reference that can be found [here](#). Based on public comments received during the public comment period, the Technical Advisory Committee (TAC) provided [recommendations](#) to RAC for additional changes to the code draft. The RAC held three hybrid public comment hearings on February 1<sup>st</sup>, 29<sup>th</sup> and March 28<sup>th</sup>. NEEP commented at the February 29<sup>th</sup>



meeting supporting the adoption of the 2021 IECC without weakening amendments. At each meeting, there were comments by various stakeholders opposing weakening amendments. The RAC will continue to meet biweekly to deliberate on code language.

### **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 also serves on the Maine Energy Technical Advisory Group (TAG).

NEEP has been working with the Massachusetts Net Zero Buildings (MA NZB) Coalition to collect data on case study projects that have successfully implemented the updated Stretch and Specialized Opt-In Codes. The MA Department of Energy Resources held a listening session on the above codes on March 27, 2024 and written comments were due on April 3, 2024. NEEP worked with the Coalition to submit written comments, which were based on discussions and research by the Coalition over the last two quarters.

Delaware's Climate Action Plan sets emission reduction targets to 26-28% by 2025, and to 40% by 2030, compared to 2005 levels. NEEP provides technical assistance at biweekly meetings of the Delaware State Energy Stakeholders Group. NEEP is actively 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 continuing to work with 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.

### **Building Performance Standards (BPS)**

The first quarter of 2024 saw NEEP begin a new BPS initiative. With funding from ClearlyEnergy's DOE Resilient and Efficient Codes Initiative grant, NEEP is convening a cohort of Massachusetts and Rhode Island municipalities to pilot a model of BPS adoption that takes advantage of aggregated and shared resources amongst towns and cities. NEEP gave a BPS 101 presentation to a group of Massachusetts Green Communities. NEEP will continue to engage with potential participants in Q2 and plans to launch the cohort in May. NEEP is also supporting the administration of a similar cohort in Maryland. This work has strengthened NEEP's relationships with Massachusetts DOER, Maryland Department of Environment, the Maryland Energy Agency, and numerous municipalities. NEEP provided direct technical assistance to the city of Watertown, Massachusetts who will be submitting proposed legislation to their city council in Q2. A [resource](#) providing a summary of BPS adopted in jurisdictions within NEEP's region was published in January.



## Appliance Standards

NEEP's [State Appliance Standard Database \(SASD\)](#) is the most comprehensive appliance standards database worldwide. Massachusetts, New Jersey, New York, and Rhode Island are fully utilizing SASD as of March 31, 2024, and other states and jurisdictions (DC and MD) are expected to follow in 2024. Colorado adopted [HB23-1161](#), which specifically 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 published the following resources in the first quarter:

- [Bridging the Gap: Advancing Equity in the Public Hearing and Comment Period for Building Energy Codes](#)
- [A Guide for Communities: Getting Involved with Building Energy Codes](#)
- [Addendum to Building Energy Codes for a Carbon Constrained Era: Regional Progress & Next Steps](#)
- [Off-Site Construction: Meeting Passive House and Zero Energy Ready Home Requirements](#)
- [Exploring the Health Benefits of Off-site Construction](#)
- [Emerging Technologies in Off-site Construction](#)
- [Communities Using Remote Virtual Inspections](#)
- NEEP also published a blog post titled [Proficient Code Enforcement Workforce for an Energy Efficient Future](#). NEEP published the [tenth edition of the Code Word newsletter](#) in February.

NEEP continues to work on Remote Virtual Inspections (RVI) and Off-Site Construction. NEEP published four new resources on these topics, which are linked above. NEEP and the Midwest Energy Efficiency Alliance (MEEA) submitted an abstract for the [ACEEE 2024 Summer Study on Energy Efficiency in Buildings](#) entitled “*Benefits and Opportunities of Off-Site Construction: Analysis of Indiana and Pennsylvania*.” The abstract was accepted for review as a Refereed Paper to be published in the proceedings of the 2024 ACEEE Summer Study on Energy Efficiency in Buildings and as backup for presentation at the 2024 Summer Study Conference.

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.

We 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.

NEEP is committed to integrating diversity, equity, inclusion, and justice (DEIJ) in all aspects of our work, and we recognize that the work we do is more than just reducing energy consumption. Energy efficiency can serve as a foundation for a just and equitable transition to a clean energy future by reducing the energy cost burden, creating safe homes and buildings, investing in local communities, improving public health, generating sustained economic growth with good paying jobs, and creating opportunities to undo past injustices in the energy, housing, and environmental sectors. Since the 2021 IECC will provide significant savings in energy costs compared to the 2018 IECC, our efforts to advance adoption help to lessen energy burden in low-to-moderate income households. During this quarter, NEEP published resources to help [state energy offices](#) provide better access to information, public hearings, and public comment submission, and to help DEIJ [communities](#) and residents participate in the code adoption process. As we embed diversity, equity, inclusion, and justice into our core values and organizational culture, we are confident that we will generate deeper and more varied insights that we can apply to our work.

### Progress Toward 2024 Outcomes

**1. Significant adoption and implementation of beyond-base codes (NEEP supports jurisdictions in achieving this goal: may include Delaware, District of Columbia, Maine, Massachusetts, New Jersey, New York, Rhode Island, Vermont, New Castle County, DE; and Montgomery County, MD)**

**Progress Toward Outcome:** NEEP continues to work with New Castle County, Delaware on language for an ordinance toward development of a stretch code. NEEP has provided technical assistance while attending five Delaware State Energy Stakeholders Group Meetings.

In 2024, 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.



## Progress Toward 2024 Outcomes

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

#### **Progress Toward Outcome:**

NEEP is working on a project selected for funding under the Bipartisan Infrastructure Law’s Resilient and Efficient Codes Implementation. This project will start with building energy code compliance studies in Pennsylvania and Delaware, which will also 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 use of in-person and online trainings, and through a hotline connected to a “circuit rider” (codes expert spanning multiple jurisdictions). Work on this project will begin in Q2 2024.

NEEP is developing a digital flyer that can guide anyone interested in a career in code enforcement. The flyer will provide insights into the role, necessary skills, qualifications, and steps for preparation. The flyer will also offer a link to a spreadsheet containing regional training, education, and apprenticeship programs. Additionally, NEEP is developing a brief addressing the challenges faced by jurisdictions in attracting and retaining professionals in this field and proposed strategies to retain and diversify their code enforcement workforce. The flyer and the brief are expected to be published in May 2024.

NEEP developed a Code Enforcement Workforce Field Study questionnaire for code enforcement professionals. The questionnaire focuses on training, diversity, and attracting new code enforcement professionals within the NEEP region. NEEP will use the questionnaire in Q2 to solicit feedback from the code enforcement community.

### **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 their new appliance standards, though the effective date has been pushed back to July 1, 2024. The draft standards can be found [here](#). In Pennsylvania, two bills to adopt new energy standards are moving through the legislature, SB755 and HB1615. HB 1615 will be heard in the Consumer Protection, Technology, and Utility Committee on April 16<sup>th</sup>, 2024.



### *Grid-Interactive Homes and Buildings*

Grid interactive homes and buildings are a key component 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 are serving to 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 continuing to work 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 reviewing and providing recommendations for course outlines. NEEP also responded to requests for the REED Data Master Workbook and continues work on the next round of data collection.

#### ***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><b>1. Two state regulatory agencies (New Jersey, New York, Vermont) 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.</b></p> <p><b>Progress Toward Outcome:</b></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>



**Progress Toward 2024 Outcomes**

**2. Two utilities or program administrators (New Jersey, Vermont) design incentive programs for grid-interactive appliances and equipment with specific consideration for overcoming equity barriers.**

**Progress Toward Outcome:**

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 (Massachusetts, New Jersey) 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 Workgroup and instructions on how to join can be found [here](#). The Workgroup 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 (Massachusetts, New York, Rhode Island) 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 directed that the utilities 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*

Q1 of 2024 kicked off another year of regional collaboration toward accelerated heating electrification across the Northeast and Mid-Atlantic. Not only did NEEP convene our Residential and Commercial Heating Electrification Working Groups, but one of our working groups was identified in the [Multistate Memorandum of Understanding](#) 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.

The team shared research progress on several regional and national projects in Q1. Findings from VRF In-Field Validation Project were presented at ASHRAE and the ACEEE Hot Air Forum to shed light on how VRF technology performs in buildings. A final report on the study is expected in July. NEEP launched the Accelerating the Market for Residential Heat Pumps in Cold Climate – Northeast Initiative in partnership with PNNL. The Initiative was presented to stakeholders before launching research and convening advisory committees that will 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.

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. Additionally, 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.

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](#) 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 Albany this November.



**Progress Toward 2024 Outcomes**

**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.**

**Progress Toward Outcome:** 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.

**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).**

**Progress Toward Outcome:** ENERGY STAR Specification development is active for both small air-to-water heat pumps (“Residential Boilers”) and window heat pumps (“Room Air Conditioners”)

[https://www.energystar.gov/products/residential\\_boilers\\_specification](https://www.energystar.gov/products/residential_boilers_specification)

[https://www.energystar.gov/products/room\\_air\\_conditioner\\_specification\\_version\\_5\\_2](https://www.energystar.gov/products/room_air_conditioner_specification_version_5_2)

We expect EPA to complete these development processes by the end of 2024.

**3. Five programs introduce new incentives/promotions to support emerging heat pump categories in applications that benefit low and moderate income consumers. (MA, RI, CT, VT, NY, NJ, DC, MD)**

**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.

Specifications for Central HPWH’s are emerging in the Northwest and are expected to help jump start Northeast promotional program activity.

Other emerging categories that NEEP will be tracking are large air-to-water heat pumps, “combi” heat pump systems, and “roof top” heat pumps.

**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. (MA, RI, CT, VT, NY, NJ, DC)**



### Progress Toward 2024 Outcomes

**Progress Toward Outcome:**

NEEP has 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 first 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: 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 and a paper on the four policies needed to decarbonize the building sector. 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 more about innovations in programs and identify pathways to implement them. Last quarter, NEEP convened state energy offices for one group meeting and focused on offering more direct one-on-one assistance.

NEEP also continues to convene its EM&V working group as it finalizes its attribution report. NEEP is also convening stakeholders in New Hampshire to plan advocacy around utility plans and applications for federal grants; this work kicked off in early 2024 and will continue to grow.

#### **Technical Assistance**

NEEP provided significant technical assistance to New England states, which requested support for a multistate coalition application for the EPA Climate Pollution Reduction Grant program. 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**

NEEP is writing a paper on best practices for attributing energy savings when braiding IRA and utility programs. This paper is informed by our EM&V Working Group and will lay out pathways for states to braid programs depending on their current program landscape and statewide energy and building decarbonization goals. This paper has been reviewed by numerous peers from NEEP partner organizations and will be published in May 2024. NEEP will be presenting this paper in various forums, such as the Building Performance Association conference in Minneapolis in April and (partner REEO) MEEA's Utility Leadership Group.



NEEP continued its work on the Policy Layering Brief, now Policy Table Brief, in Q1. The Brief will look at long-term policies such as building performance standards, emissions-based appliance standards, and clean heat standards and examine how these policies interact with one another to drive market transformation. The Brief will be ready for review in April 2024. Both the attribution project and Table Brief have undergone external review.

Additionally, NEEP is continuing to work 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 reviewing and providing recommendations for course outlines. NEEP also responded to requests for the REED Data Master Workbook and continues work on the next round of data collection.

### Presentations

NEEP presented alongside the Regulatory Assistance Project and Northeast States for Coordinated Air Use Management (NESCAUM) at the ACEEE Hot Air, Hot Water Forum on new policies and initiatives in the region for building decarbonization.

### 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. In the first quarter, NEEP tracked and attended state-run regulatory working groups on the Massachusetts Energy Efficiency Plans and New York Cap-and-Invest Program. NEEP is also tracking Maryland Energy Efficiency Plans, New Jersey Energy Efficiency Plans, and design of Clean Heat Standards in Massachusetts and Vermont.

NEEP also tracks bills across the region with our [legislative web tracker](#), which also includes legislation from the past three years. The tracker is updated weekly and highlights are shared with NEEP’s Allies network via the Allies newsletter. 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 (Maryland, New Hampshire, New York, Pennsylvania) 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 are going to look at 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 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



**Progress Toward 2024 Outcomes**

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 to see 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](#).

**2. Three states (New Jersey, New York, Vermont) 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. Due to 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 be holding a series of workshops to design their portfolio, more information can be found [here](#).

NEEP is monitoring and providing technical assistance to Maine, Maryland, and Massachusetts’s energy efficiency proceedings to see if other actions are taken in 2024.

**3. Three state regulatory agencies (Massachusetts, New York, Vermont) 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.

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 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



### Progress Toward 2024 Outcomes

activities. The proceeds will support states 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.

- 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.

#### **4. Four states (Maine, Maryland, New Jersey, Pennsylvania), through legislation or regulation, invest in and implement statewide energy efficiency workforce initiatives that prioritize historically marginalized and/or underserved communities.**

##### **Progress Toward Outcome:**

- In Massachusetts, the [Mass Save 2025 - 2027 Draft Plan](#) proposes a doubling of workforce investment from the previous cycle, \$12 to \$24 million. Mass Save will use this funding to increase initiatives that create a more diverse workforce and better represents 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 organization in partnership with the NJ Department of Labor and utility companies. The state is in the process of finalizing these plans right now.
- 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 ensure 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 Administration), BPI (Building Performance Institute), and EFG (Energy Futures Group) to create a new BPI Certificate of Knowledge and accompanying training materials. The pilot exam closed on March 31<sup>st</sup> and the results will be analyzed to determine a pass/fail score, questions that were too hard, questions that were too easy, and what the appropriate pre-requisite is. When the pilot exam closed ~250 people had taken it. NEEP had a promising conversation with the Pennsylvania College of Technology Clean Energy Center, which operates the State's weatherization training programs. The CEC is piloting a workforce development program to increase the knowledge of weatherization contractors beyond weatherization. The CEC plans to use the TBP training materials and final exam as the class curriculum. In Q2, NEEP will launch the full exam and commence outreach to identify a diverse group of participants.

#### **CT Geothermal Project**

During the first 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 March, the NEEP team drafted the CT Geothermal Workforce Needs Assessment after surveying and interviewing industry stakeholders. NEEP also led a second meeting of the Stakeholder Advisory Committee, co-hosted an in-person event in February at the housing authority complex, and began preparing for a series of geothermal workforce solutions workshops that NEEP will host in May. NEEP's promotion of geothermal heating and cooling is expanding beyond the CT Geothermal project, with a member of the team having been recently invited to moderate a panel on networked geothermal and thermal energy networks for the Architecture Institute of America Connecticut Chapter's Architecture Sustainability Week in April.

#### **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 and Codes/Standards/Ratings working groups. 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
<p><b>1. Five states (Maine, Maryland, New Jersey, Rhode Island, Vermont) take regulatory or legislative steps to implement statewide programs that expand access to whole-building deep energy efficiency retrofits in underserved communities.</b></p> <p><b>Progress Toward Outcome:</b></p> <p>In July, the Massachusetts Clean Energy Center opened the second cohort for the Decarbonization Pathways Pilot. NEEP remains engaged in the project advisory committee.</p> <p>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.</p>
<p><b>2. Two states (Connecticut, New York) standardize definitions for weatherization.</b></p> <p><b>Progress Toward Outcome:</b> There is nothing new to report on this outcome at this time.</p>



### Progress Toward 2024 Outcomes

**3. Three state or municipal whole-building retrofit programs (Connecticut, New Jersey, New York) 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 (New Jersey, New York, Rhode Island) 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.

**5. Three energy efficiency programs (Massachusetts, New York, Vermont) 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. Work is conducted through stakeholder engagement, facilitation of topical working groups and cohorts, research, resource development, and by aiding in the creation of flexible software tools that enable jurisdictions to meet their climate goals.

#### **Multifamily Housing Strategic Development**

During the first quarter, 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. Many multifamily properties are 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 currently living in apartment homes are considered to be low- to moderate-income.

NEEP aims to address this demand by developing and implementing a LMI-focused multifamily strategy. Currently, NEEP is engaging in relevant research, strengthening existing partnerships, and developing new relationships with organizations working in the multifamily space. This strategy is focused on several existing gaps in regional efforts to increase energy efficiency and building electrification at multifamily properties. One area of strategic focus will be facilitating projects that leverage Inflation Reduction Act and Bipartisan Infrastructure Law funds earmarked for efficiency projects at [subsidized affordable multifamily](#) properties. Another area of concern will be ensuring historically disadvantaged communities in naturally occurring, unsubsidized affordable housing communities are not left behind as the region moves toward a net zero economy. The Community Solutions team is currently working with regional allies on initiatives that advance the goal of rapid and equitable decarbonization in low- and moderate-income multifamily properties, including a proposed collaboration with the American Council for an Energy Efficient Economy's [Equitable Electrification for Renters Initiative](#). This developing collaboration will create a working group cohort of regional municipalities to discuss best practices and lessons learned for ensuring electrification projects do not result in excessive energy burdens for LMI communities in New England and the mid-Atlantic. NEEP will also feature sessions focused on the multifamily sector at its annual summit in June and is currently developing a multifamily-focused community workshop to be held in Fall 2024.



## ReMaine

During the first 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 secured eight employees during Q1, and two interns began working. In total, the team secured 11 of the 16 positions for year two and filled six of them. The positions range from weatherization technicians and heat pump installers to computer programming, mechanical engineering, and research and communications roles. To grow NEEP's partnerships in support of this program, the NEEP team met with organizations such as [JMG](#) (Jobs for Maine Graduates), [Portland Adult Education](#), and the formal project partners [IntWork](#) and [E2Tech](#) to discuss collaboration.

## Buildings UP

NEEP is continuing its role as Regional Navigator (RN) with nine winners of the Buildings UP Phase 1 Prize as they scale up in preparation for Phase 2 submissions. Every month, NEEP staff meets with each team to check in on any updates and issues while providing support with their retrofit initiatives. The NEEP team is also communicating and 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 in areas such as heat pump transformation and the Total Building Performance Certificate. During the first quarter, NEEP published a blog post introducing our teams entitled, "[Meet the Nine Community Retrofit Teams NEEP is Supporting Through DOE's Buildings Upgrade Prize](#)". The blog highlights our variety of teams working on retrofitting a number of building typologies such as rowhomes in urban Philadelphia and single-family homes and small commercial on the remote Great Cranberry Islands in Maine. Some of our teams are considering retrofitting whole homes to passive house standards, while others are focused solely on heat pump water heaters. NEEP is also seeing various program designs and diverse uses of the prize funds, with teams using the prize money to offer mini grants to faith congregations for energy audits and others are collecting resident feedback to develop extensive community engagement plans.

## Community Driven Transportation Planning

In October, 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. The duration of the project is thirty months, ending in March 2026. In the first quarter of 2024, NEEP held regular meetings with the project partners to plan the community transportation audits, prepared to launch the Online Resource Center and Community of Practice, and



developed a draft compensation plan for paying participants and community-based organizations for their participation.

**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 be utilizing Barr grant funds to gather a cohort of communities that support the development of a community electrification model and toolkit. The toolkit will contain best practice guidance and administrative tools and resources to help launch community programs. The Cohort will focus first on Massachusetts where communities have taken great strides already. In the future, NEEP will bring the model to other states in the region. This project builds on efforts that began last year to identify barriers and opportunities for community electrification.

Progress Toward 2024 Outcomes
<p><b>1. Four states (Connecticut, Massachusetts, New York, Rhode Island) pass or implement building decarbonization strategies.</b></p> <p><b>Progress Toward Outcome:</b> 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 <a href="#">Massachusetts Building Electrification Accelerator Retrofits Working Group</a>. NEEP is also actively seeking to strengthen its network of regional state partnerships in order to expand the implementation of building decarbonization strategies in New England and the mid-Atlantic.</p>
<p><b>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.</b></p> <p><b>Progress Toward Outcome:</b></p> <p>In 2024, the <a href="#">Kickstart Massachusetts</a> program was launched by the Massachusetts Clean Energy Center’s Home Energy Efficiency Team (HEET) with \$450,000 to fund community level networked geothermal feasibility studies. In order to realize HEET’s focus on equity and serving disadvantaged communities, almost 50% of this funding is being allocated to environmental justice communities. Through the Kickstart Massachusetts program, \$10,000 grants were awarded to projects located in the communities of Acton, Ashland, Melrose, New Bedford, and Newton, and \$50,000 grants were awarded to projects located in the communities of Arlington, Deerfield, Gloucester, Lexington, Lowell, Salem, Somerville, and Worcester.</p>



### Progress Toward 2024 Outcomes

During the first quarter of 2024, NEEP is beginning to engage with regional municipalities seeking to establish a working group with the end goal of developing and implementing equitable electrification initiatives for Low to Moderate-income renters in New York, Massachusetts, New Hampshire, Vermont, Rhode Island, Maine, and Connecticut.

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

#### **Progress Toward Outcome:**

In January, the town of Bedford, New York passed an [update to its Landlord Registry Law](#) that includes mandatory energy benchmarking using Portfolio Manager and related health and safety inspections.

Also in January, the state of Rhode Island passed the [Building Decarbonization Act of 2024](#), establishing a program for energy benchmarking of large buildings and creating standards for building energy performance.

In March, the Providence Rhode Island City Council passed [Ordinance ORD-2024-3](#), a law that will require all city-owned buildings, including schools, to be carbon neutral by 2040.

In April, both legislative chambers in the State of Maryland voted in favor of the Working for Accessible Renewable Maryland Thermal Heat ([WARMTH](#)) Act requiring gas companies serving at least 75,000 customers in their distribution territories and authorizing gas companies serving fewer than 75,000 customers to develop a plan for a pilot thermal energy network system or systems on or before October 1, 2024.