NEEP 2023 Quarterly Report
Quarter 2

Building Energy Codes and Appliance Standards

The NEEP region is a national leader in adopting the latest building energy codes. Two states, Connecticut and New Jersey, have already adopted the 2021 IECC and the codes are currently effective. Two states, New York and Rhode Island, have elected to skip the 2021 IECC and adopt the soon-to-be released 2024 IECC. NEEP, through work with the Green Energy Consumers Alliance, provided technical assistance towards the recent passage of a bill (2023-S 0855A) which requires the Rhode Island Building Code Commission to adopt the 2024 IECC standards within three months of their publication.

Maryland adopted the 2021 IECC with weakening amendments on May 29, with an implementation and enforcement date one year after adoption. Vermont's Residential Building Energy Standards (RBES) update incorporating the 2021 IECC with strengthening amendments was approved at the Legislative Committee on Administrative Rules (LCAR) meeting on June 8, with an enforcement date of no earlier than July 2024. The Commercial Energy Building Standards (CEBS) update with strengthening amendments was approved at the LCAR Meeting on June 29 with an effective date of July 2024. These states are expected to adopt the 2021 IECC soon: Massachusetts, Maine, Delaware, and the District of Columbia. Rounding out the NEEP region, New Hampshire remains on the 2018 IECC, and West Virginia on the 2015 IECC.

Convening regional and state code collaboratives remains an important part of NEEP's stakeholder engagement. These include the Maine Code Collaborative, expansion of the New Hampshire Code Collaborative, the Massachusetts Net Zero Building Coalition and Technical Subcommittee, and the Regional Codes Working Group. NEEP facilitates monthly calls with all of the Regional Energy Efficiency Organizations (REEOs) to share information, trends, and lessons learned across regions. NEEP continues to provide direct technical assistance to NEEP region states.

NEEP has been working to facilitate adoption of the 2021 IECC as follows:

- NEEP facilitates the Massachusetts Net Zero Buildings Coalition (MA NZB). NEEP utilizes its technical knowledge to work with the MA NZB to produce resources explaining the benefits of Stretch and Municipal Opt-In Specialized Stretch Code adoption. This quarter, these resources included three YouTube Videos with NEEP staff explaining the Reasons to Adopt the Residential and Commercial Municipal Opt-In Specialized Energy Code. These videos were created in partnership with the Massachusetts Climate Action Network.

- Maine is continuing to focus on adopting the 2021 IECC as base code and bypassing the 2018 IECC. NEEP staff serves on the Maine Uniform Building and Energy Code (MUBEC) Energy Code Technical Advisory Group (TAG). The Energy TAG continues to work on a stretch energy code based on the 2021 IECC with proposed strengthening amendments.
- Delaware is working on a zero-energy-code-ready initiative per the Governor's executive order, and NEEP continues to assist the state. Delaware is also considering adopting the 2021 IECC but is getting pushback from builders.
    - NEEP is actively advising New Castle County, DE 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. This quarter, NEEP presented a net-zero-ready plan to the County Land Use Department for an ordinance to be introduced to New Castle County Council in the third quarter.
- NEEP continues to coordinate the New Jersey Zero Energy Buildings Roadmap Initiative. The New Jersey Roadmap is directly referenced in Executive Order No. 315 (2023), signed on February 15, 2023, by Governor Philip Murphy. To date, we have prepared and updated the NJ Zero Energy Buildings Roadmap Initiative Report, which is currently being reviewed by the BPU and Rutgers University. NEEP compiled a list of all of the public comments on the Roadmap to date to include in the latest Roadmap Report. We will convene the New Jersey Energy Code Collaborative in the third quarter to develop a timeline to complete the actions listed in the Roadmap.
- NEEP has been deploying staff in-person to counter efforts to introduce weakening amendments to the 2021 IECC in Maryland and New Hampshire. However, Maryland moved forward to adopt weakening amendments, and New Hampshire decided to stay with the 2018 IECC instead of adopting the 2021 IECC. NEEP will continue efforts to educate states with resources to emphasize that the 2021 IECC or equivalent must be adopted without weakening amendments to qualify for funds from the Inflation Reduction Act Section 50131.

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 June 1, 2023, and other states (DC, MD) will follow this year. Colorado recently adopted HB23-1161, which specifically references the use of SASD as an enforcement tool. NEEP is working with partners ASAP (Appliance Standards Awareness Project) and the US EPA (Environmental Protection Agency) to develop a methodology to inform manufacturers about standards updates. Additionally, NEEP will continue to build out the SASD toolbox this year.

This quarter NEEP continued the publication of the Codes and Standards newsletter, The Code Word. NEEP also updated and reposted the online ArcGIS codes tracker and updated both the appliance standards page and the main codes webpage. NEEP also published several resources on A Guide to DOE Zero Energy Ready Homes; a Guide to Passive House Design; and guidance on Inflation Reduction Act Funding for Building Energy Codes; as

well as blog posts on the impact of energy codes on building decarbonization and lessons learned from a former HERS Rater.

NEEP continues work on Remote Virtual Inspections (RVI) and Off-Site Construction. On May 18, 2023 NEEP hosted a webinar as part of NEEP's Ready, Set, Scale series on "Expanding Building Inspections: RVI and Off-Site Construction." New resources and additional efforts at dissemination are forthcoming.

For the 2023 NEEP Summit in June, members of the Codes and Standards team advised and coordinated the demystifying session "Passive House: Myths & Truths." Passive House was selected as a topic in part because it is becoming a more common alternative compliance pathway in energy base and stretch codes. The moderator was Ian Finlayson, Deputy Director, Energy Efficiency Division, Massachusetts Department of Energy Resources, and the speaker was Julie Torres Moskovitz, Senior Project Architect, WXY Architecture & Urban Design. Together they covered the evolution of Passive House from their own involvement since the 1990s to current trends and impacts on energy codes.

NEEP is committed to integrating DEIJ (Diversity, Equity, Inclusion, and Justice) 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. As we embed diversity, equity, inclusion, and justice in 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. We have made commitments to DEIJ throughout our organization, and members of the Codes and Standards team serve on the NEEP DEIJ working group to further embed core principles throughout our work.

Progress Toward 2023 Outcomes	% Complete at Q2
1. Five states (Delaware, District of Columbia, Maine, Massachusetts, New Jersey, New York, Rhode Island, Vermont) and two municipalities (New Castle County, DE; Montgomery County, MD) adopt beyond-base code measures. **Progress Toward Outcome:** Massachusetts updated their stretch code and developed a municipal opt-in specialized code. Maryland adopted the International Green Construction Code (IGCC) as an optional stretch code for commercial buildings. Montgomery County, MD passed legislation requiring all electric building standards for new construction.	42%

2. Five states (Connecticut, Delaware, Maine, Pennsylvania, West Virginia) improve code compliance through workforce development, specifically code official training, retention, and diversification. **Progress Toward Outcome:** Submitted a regional workforce proposal in response to the Resilient and Efficient Codes Implementation (RECI) Funding Opportunity Announcement (FOA) covering 7 states: Connecticut, Delaware, Maine, New Hampshire, New Jersey, Rhode Island, West Virginia; this proposal was not selected. However, in writing this proposal, we began the process of goal-setting and collaboration with our state partners.	15%
3. Four states (Connecticut, Maryland, New Hampshire, Pennsylvania, Vermont) adopt code and appliance standards attribution initiatives. **Progress Toward Outcome:** Maryland continues to move towards their new appliance standards being effective January 1, 2024. NEEP is looking forward to working with Maryland once they have posted their draft standards. Pennsylvania has two bills to adopt new energy standards moving through the legislature, SB422 and HB1467. Both have yet to be heard by committee as of July 3, 2023.	20%
4. Three states (Connecticut, Delaware, New Hampshire, Pennsylvania, Vermont) adopt appliance standards, four (District of Columbia, Massachusetts, New Jersey, New York, Rhode Island) implement adopted standards, and two (Connecticut, Maryland, Massachusetts, New Jersey, New York) adopt air regulations NOx for appliance standards. **Progress Toward Outcome:** Massachusetts, New Jersey, New York and Rhode Island all have implemented their adopted standards this quarter. States such as New York and New Jersey have expressed interest in adopting air regulation NOx standards for water heaters.	35%
5. Three states (Maryland, Massachusetts, New Jersey, Rhode Island) implement Remote Virtual Inspection. **Progress Toward Outcome:** NEEP has been disseminating its RVI resources through the project Technical Advisory Group. On May 18, 2023 NEEP hosted a webinar as part of NEEP's Ready, Set, Scale series on "Expanding Building Inspections: RVI and Off-Site Construction."	15%

Grid-Interactive Homes and Buildings

Grid interactive homes and buildings are a key complement 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.

Deliverables

NEEP continued to highlight the benefits of using IRA Rebates to promote grid flexibility as well as efficient electric upgrades. Using the resource on Virtual Power Plants and IRA Rebates created in the first quarter of 2023, NEEP has continued to highlight the benefits of braiding these programs together for current and future grid needs. Additionally, NEEP kicked-off our blog series on GIHBs and Virtual Power Plants (VPPs) this quarter with a blog that highlights how states have used VPPs to integrate renewables and create equity centered programs, Virtual Power Plants Are the Key to a Resilient, Clean Energy Grid.

Tracking and Technical Assistance

Across the region, NEEP is continuing to monitor opportunities to advance Grid-Interactive Resources as part of energy efficiency programs and other building decarbonization efforts. New Jersey is currently planning its second round of statewide energy efficiency programs, the state is proposing a demand response program as part of the portfolio. NEEP provided comments to help develop the framework and ensure that equity is considered in the implementation of the program. Additionally, New Jersey has announced that it will consider adopting the Total Systems Benefit metrics as part of its benefit-cost analysis. This metric will allow the state to properly value the real time of cost of energy generation and energy efficiency, which enables GIHBs and VPPs to be a part of the utility and state portfolio. Additionally, Maryland has announced a proceeding to establish a unified benefit-cost analysis that will be used to assess all resources on the grid, including VPPs, energy efficiency programs, and electric vehicles. NEEP has joined the working group for this process and will provide guidance and technical assistance on GIHBs and building decarbonization metrics, as it proceeds.

In Maine, LD542, An Act to Reform Electricity Rates was enacted into law. It requires the Public Utilities Commission to develop and implement a new rate structure for electric utilities that replaces the existing fixed net energy credit system with one that reflects the value of energy when delivered and with societal benefits and establishes a standard-offer service with various pricing levels based on the value of energy consumed at the time

of use. When adopted, this could provide a rate structure that provides more opportunity for GIHBs and VPPs to be a part of the grid.

Progress Toward 2023 Outcomes	% Complete at Q2
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. **Progress Toward Outcome:** New Jersey announced modifications to its benefit-cost analysis for its second round of programs. While the state did not adopt the Total Systems Benefit metric, it will study and review the possibility for adding the metrics to the next round of programs. Maryland has announced a proceeding to create a unified benefit-cost analysis. NEEP will be a part of the working group.	25%
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 their next round of energy efficiency programs that includes a demand response program. 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 will provide technical assistance when possible. NEEP is also monitoring proceedings in New Hampshire and Rhode Island: • New Hampshire Utilities have filed their 2024 – 2026 Triennial NHSaves Energy Efficiency Plan. The plans include converting pilot demand response programs into full programs. NEEP will continue to monitor the process to set up the demand response programs and will provide technical assistance when possible. • Rhode Island has initiated a new process to bid out their energy efficiency programs and will be writing the RFP for the programs over the summer. This could present an opportunity to require new programs, like demand response and beneficial electrification from the provider. NEEP will continue to monitor the process to set up the demand response programs and will provide technical assistance when possible.	25%

3. Two state regulatory agencies (Massachusetts, New Jersey) create statewide frameworks to accelerate adoption of GIHBs technologies. **Progress Toward Outcome:** Maryland Unified Benefit Cost Analysis Test Working Group: The Maryland Public Service Commission is convening a workgroup 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 Workgroup. In Maine, LD542, An Act to Reform Electricity Rates was enacted into law. It requires the Public Utilities Commission to develop and implement a new rate structure for electric utilities that removes the utilities revenue based on kilowatt-hour sales, replaces the existing fixed net energy credit system with one that reflects the value of energy when delivered and with societal benefits, and establishes a standard-offer service with various pricing levels based on the value of energy consumed at the time of use.	25%
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:** No state has adopted a framework, but a number of states have different policy initiatives to ensure their regulatory agencies adopt a similar program: • In Delaware, SB7, An Act To Amend Title 29 Of The Delaware Code Relating To The State Energy Office, recently passed. It seeks to amend the Delaware Energy Act by expanding upon the existing duties of the State Energy Office to ensure that planning for Delaware's energy future is prioritized and energy-related policy and programs are implemented in accordance with documents developed by the Governor's Energy Advisor Council and adopted by the State Energy Office. • In Maine, LD1724, the Beneficial Electrification Policy Act passed both chambers on June 21, 2023. It requires the Public Utilities Commission (PUC), Efficiency Maine Trust, and other state agencies to implement policies and programs that support beneficial electrification. The PUC shall study options	0%

for consumer financing of beneficial electrification products and submit those results to the Legislature by December 6, 2023. • In Rhode Island, H5849, Public Utilities Commission. This bill was signed by the Governor on June 19, 2023. It requires electricity and gas revenues to be decoupled and allows for the adoption of performance incentives. The decoupling hopes to accomplish investments in energy efficiency, reliability, and reduce risk.	

Heating Electrification Market Transformation

NEEP collaborates widely with stakeholders throughout the region. As the region continues to advance the heating electrification market, stakeholders are eager to learn from each other about successful programs and initiatives.

NEEP hosted several heating electrification-focused sessions at our 2023 Summit, resulting in lessons learned, new connections and promising ideas for the future. Read about some key takeaways from our heat pump-related case study and accompanying workshops in our blog.

NEEP also held an in-person working group meeting for both the Residential and Commercial Heating Electrification working groups on Day 0 of the NEEP Summit. Insights gained from our working group discussions will be used to inform the Heating Electrification Initiative's strategy and efforts in the coming years, which is especially important as states look toward fulfilling 2030 goals. Participants came away with ideas and next steps for regional collaboration opportunities to accelerate heating electrification.

NEEP's Cold Climate Air Source Heat Pump (ccASHP) product list and sizing tool continued to be leveraged by customers, installers and distributors, program administrators, manufacturers, service providers and other stakeholders. Six "cold climate states" use the list in programs and trainings. Over 5,642 users leveraged this list in the second quarter, and stakeholders reported using the sizing tool in installer training and at distribution centers over 429 times. These tools continue to help to ensure properly designed, sized, installed, and operated equipment for an efficient electric future.

Many of the team's collaborative research projects have progressed over the quarter, furthering our mission. NEEP has secured funding for Phase II of the Rating Representativeness project, which will include lab testing of the systems that have been field tested to more accurately understand real world performance. This can increase the confidence of customers and installers alike. NEEP continues to lead the VRF in-field validation research project, which has successfully gathered energy performance and refrigeration leakage data and convened advisory committee meetings.

NEEP continues to serve as a trusted resource raising awareness through tracking, analysis, and thought leadership. Dave Lis joined a NECA panel, Electrifying Gas Heating: The Need, Opportunity and Challenges, this quarter to disseminate NEEP's knowledge on the topic. We also published a blog post on The State of Residential Heat Pump programs based on tracking electrification programs in the Northeast and Mid-Atlantic to understand what is being incentivized and how. This can help programs understand best practices to incorporate in their own program, including equity measures, contractor support and emerging technology.

NEEP continued to work with Northeast Heat Pump Water Heater Alliance in partnership with ICF, D+R International, ENERGY STAR, U.S. Department of Energy, Pacific Northwest National Laboratory and Advanced Water Heating Initiative (AWHI). NEEP is developing an equity report for advancing HPWHs in Low-Income Weatherization Assistance Programs in the Northeast. NEEP is also working on a white paper with AWHI compiling all the presentations and discussions from the equity working group. This white paper will be featured at the ENERGY STAR Partner Meeting in September 2023.

Progress Toward 2023 Outcomes	% Complete at Q2
1. Five states (Delaware, District of Columbia, Maryland, Pennsylvania, New Hampshire, New Jersey) adopt workforce development programs to train existing installers and/or recruit and train new installers on installing heat pump technologies, with a focus on including candidates from historically marginalized communities. **Progress Toward Outcome:** Energize Delaware recently hosted green workforce development training on heat pump water heaters, and more trainings are planned. There is not a clear focus on inclusion of historically marginalized community members. Maine's Clean Energy Partnership - Workforce Initiative. The programs will support innovation of advanced technologies and services that contribute to the achievement of the State's clean energy and climate goals. New Jersey Triennium 2 Straw Proposal has put forth a new state-funded workforce development initiative in partnership with the Department of Labor to recruit and train participants from overburdened communities. New Jersey's Clean Buildings Working Group is guiding the state's roadmap to clean buildings, which will include recommendations for workforce development strategies. New York introduced S02469 which directs the public service commission to develop and issue guidelines for hiring training employees from priority populations for energy efficiency programs. Status: engrossed on June 1 2023 – 50% progression.	70%
2. Across the NEEP region, five states (District of Columbia, Massachusetts, New Jersey, New York, Rhode Island, Vermont) and/or energy efficiency program administrators introduce new program incentives/promotions to support emerging heat pump categories. **Progress Toward Outcome:** • VT (ATW)	60%

Progress Toward 2023 Outcomes	% Complete at Q2
• NY (ATW, Ground-source VRF) • MA (Ground-source VRF)	
3. Programs across nine "cold climate" states (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont) use NEEP's ccASHP product list (as a qualified products list (QPL) and/or product selection tool). **Progress Toward Outcome:** • Connecticut uses NEEP's product selection tool in contractor training. • Maine includes NEEP's Guide to Sizing & Selecting Air-Source Heat Pumps in Cold Climates in heat pump training resources. • As part of Mass Save's Heat Pump Installer Training (HPIN), Massachusetts utilizes NEEP's sizing tool. Several Municipal Light Plants and Mass DOER use NEEP's ccASHP product list. • New York State's Clean Heating and Cooling program along with participating utilities use NEEP's ccASHP product list for the program's QPL and our sizing tool is used in contractor training. • Rhode Island Energy uses NEEP's product list for their QPL. • Several Vermont entities use the ccASHP product list for their program's QPL including Efficiency Vermont and Burlington Electric Department.	67%
4. Three state programs (District of Columbia, Maryland, Massachusetts, New York, Pennsylvania) implement heat pump and heat pump water heater program enhancements for low-to-moderate income customers. **Progress Toward Outcome:** • MassCEC offers income-based rebate adders for clean heating and cooling technologies. Mass Save offers increased incentives for low-income households for ASHPs and GSHPs. • EmPower NY provides income-eligible NY residents with no-cost energy efficiency solutions, including the installation of clean heating and cooling heat pumps. Pennsylvania's State Energy Program is implementing a new High-Efficiency Electric Home Rebate for low- and moderate-income households geared toward heat pump rebates.	100%

5. Three states (Connecticut, Massachusetts, New Jersey, Vermont) reconsider key state policies that slow adoption of heating electrification. **Progress Toward Outcome:** • Massachusetts Commission on Clean Heat recently endorsed a Clean Heat Standard, which aims to reduce building sector emissions, including a goal of approximately 100,000 residential heat pump installations per year from 2025-2050. This will include supportive policies that will complement existing policies to speed up the adoption of heating electrification. • New Jersey's Gov. Phil Murphy has signed executive orders to accelerate the state's building electrification goals. The New Jersey Energy Master Plan calls for building electrification by 2050 and the state is aiming to accelerate heat pump adoption through legislative change. • New Jersey has directed its Board of Public Utilities to work with natural gas utilities and other stakeholders to create a comprehensive plan for a future less reliant on fossil fuels • Connecticut is aiming to speed heat pump adoption through the 2022-2024 Conservation and Load Management (C&LM) Plan. The plan addresses barriers to heat pump adoption, including policy barriers. • Vermont's Affordable Heat Act Bill S.5 proposes a clean heat standard which will accelerate heating electrification. The bill advanced in the Senate in March 2023 and will be voted on by the House next. • New York introduced the NY Home Energy Affordable Transition Act which directs the Public Service Commission to end the mandate for ratepayer-subsidized incentives for fossil fuel infrastructure in new buildings in an equitable manner.	100%

Public Policy and Programs

In the second quarter, NEEP met with stakeholders across the region, prepared for federal funding opportunities, and provided technical assistance to states on energy efficiency programs and clean heat standards.

Technical Assistance

NEEP attended and presented at various conferences on heating electrification, grid modernization, and Inflation Reduction Act Programs. In April, NEEP was a panelist for the 2023 Air-Conditioning, Heating, and Refrigeration Institute (AHRI) State Summit in Albany New York. For this summit, Erin Cosgrove joined a panel to discuss the impact state and local decarbonization policies will have on the future of businesses and manufacturing in New York. On May 4, NEEP hosted the Decarbonizing Communities & Campuses event in Massachusetts. At this event, NEEP hosted a full day of discussions on Decarbonizing Multi-Family Affordable Housing. Additionally, NEEP spoke at the New England Conference of Public Utilities Commissioners (NECPUC) 2023 Symposium on the role of energy efficiency in ensuring reliability and resiliency of our energy grid.

NEEP has also been providing updates to state energy offices in the Northeast and Mid-Atlantic on various opportunities available with federal funding. NEEP kicked off a working group to establish a framework for attribution of savings and evaluation, measurement, and verification procedures for utility energy efficiency programs combined with HEEHRA and HOMES Rebates. For this group, NEEP is convening experts in the field along with state energy offices, and utilities to discuss issues and identify a common framework that could be replicated throughout the region.

Deliverables

NEEP kicked off two projects in partnership with NESCAUM focusing on near-term and long-term building decarbonization policies. The Building Decarbonization Playbook will provide near-term recommendations and "no-regret" actions that states can take to leverage federal funding to lay a foundation and scale up building decarbonization programs. NEEP introduced the draft Playbook to state energy offices at the NEEP Summit, and we are working on incorporating their feedback into the next draft. The Policy Layering 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 and drive market transformation.

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 finalized the 2020 REED data collection process and published the resources online. REED collects key energy efficiency program metrics for program year 2020 (and 2021 where available) across the NEEP region and makes them publicly available. REED currently includes energy efficiency program results through program year 2020 in the form of an Excel-based Master REED Workbook (with program savings and expenditures) and a REED Supporting Information report. NEEP also published a blog on the what the data shows, Data Dive: How Energy Efficiency Programs Performed in 2020.

Tracking

NEEP tracks regulatory proceedings and legislation and participates in state-run working groups to advance decarbonization policies throughout the region.

New Jersey continued its stakeholder and planning process for the Second Triennium of Energy Efficiency Programs. NEEP attended the public stakeholder sessions, and submitted comments to provide technical assistance on the design of the programs. Specifically, NEEP provided technical assistance on updates to the state Benefit-Cost Analysis, workforce plan, braiding of programs with IRA programs, and opportunity to grow demand response resources in the state. In May, New Jersey released its first order of the framework of the programs, and the state adopted modifications to its benefit-cost analysis based on recommendations from NEEP. New Hampshire is also planning its next round of energy efficiency programs. NEEP has been attending stakeholder meetings there as well. NEEP is also monitoring the implementation of a clean heat standard for Massachusetts, which is being developed in a stakeholder process by the Massachusetts Department of Environmental Protection. In addition to these proceedings, NEEP continues to engage with state-level advocates throughout the region by attending meetings in Connecticut, Maryland, New York, and New Jersey.

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. NEEP also publishes blogs on innovative building decarbonization policies. NEEP published a blog highlighting Connecticut's regulatory proceeding on Performance Based Rates, and how adopting a similar policy could help other states in the region: Connecticut Aligns Utility Profits and State Goals with Performance Based Rates. As well as a blog highlighting Maine's legislative actions to increase access to weatherization programs for low-income residents, Maine Legislature Acts to Tackle Low-Income Whole Home Repairs.

Progress Toward 2023 Outcomes	% Complete at Q2
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:** Maine passed LD815, An Act to Provide Energy Efficiency Program Outreach and Assistance to Manufactured Housing Residents. It requires the Maine State Housing Authority to participate in education and outreach services to those living in manufactured housing. This outreach must include current energy efficiency programs run by the Efficiency Maine Trust and the Maine State Housing Authority and an application for the residents to apply. Maine also passed LD611, Establishing a Working Group to Maximize Eligibility for Energy Efficiency Programs for Low-income Homeowners. This bill was sent to the Governor's office on June 15, 2023. It requires the Maine State Housing Authority to convene a working group to design a program that will provide financial assistance to low-income homeowners for weatherization and home energy assistance programs. Connecticut released the framework for Phase 1 of their Performance Based Rates Proceeding. During this phase, the state identified four regulatory goals for the performance based rates to achieve: 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. A bill to create a low-income savings goal in Maryland passed both houses but was vetoed by the governor.	50%
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:** New Jersey released its first order of the framework of the programs and adopted modifications to its benefit-cost analysis based on the recommendations from NEEP. These modifications included an increase in the non-energy impacts (NEIs) for residential and commercial HVAC programs that use efficiency electric appliances to 15% and an increase in the low-income benefits adder to 15%. The state will also be	15%

Progress Toward 2023 Outcomes	% Complete at Q2
studying the adoption of the Total Systems Benefit metric to measure program impacts for the next cycle. Maine passed LD542, An Act to Reform Electricity Rates. This bill was enacted into law on June 20, 2023. It requires the Public Utilities Commission to develop and implement a new rate structure for electric utilities that removes the utilities revenue based on kilowatt-hour sales, replaces the existing fixed net energy credit system with one that reflects the value of energy when delivered and with societal benefits, and establishes a standard-offer service with various pricing levels based on the value of energy consumed at the time of use.	
3. Three state regulatory agencies (Massachusetts, New York, Vermont) advance beneficial electrification policies that regulate gas, oil, and/or propane use. **Progress Toward Outcome:** No state agency has ordered any action yet, but there are a number of proceedings we are watching listed below. • New York has announced an economy wide Cap-and-Invest Program for New York. The cap-and-invest program will set a declining cap on 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 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 states clean heat standard (CHS). • Vermont passed legislation to enact a Clean Heat Standard. The Public Utilities Commission has initiated a docket to establish the standard. • New Jersey's governor signed an executive order for the Board of Public Utilities to initiate a process to create a comprehensive plan for a future less reliable on fossil fuels and setting a statewide target for installation of zero-carbon emission heating and cooling technology.	0%

Progress Toward 2023 Outcomes	% Complete at Q2
• Rhode Island passed S0856, Duties of Utilities and Carrier. This bill was enacted into law on June 23, 2023. It adds technologies that reduce GHG emissions like clean heating to the Rhode Island Clean Energy Fund. • Maine passed LD1724, Beneficial Electrification Policy Act. It requires the Public Utilities Commission (PUC), Efficiency Maine Trust, and other state agencies to implement policies and programs that support beneficial electrification. The PUC shall study options for consumer financing of beneficial electrification products and submit those results to the Legislature by December 6, 2023. • Delaware passed SB7, An Act To Amend Title 29 Of The Delaware Code Relating To The State Energy Office. It seeks to amend the Delaware Energy Act by expanding upon the existing duties of the State Energy Office to ensure that planning for Delaware's energy future is prioritized and energy-related policy and programs are implemented in accordance with documents developed by the Governor's Energy Advisor Council and adopted by the State Energy Office.	
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 undeserved communities. **Progress Toward Outcome:** New Jersey Triennium 2 Straw Proposal has put forth a new state-funded workforce development initiative in partnership with the Department of Labor to recruit and train participants from overburdened communities.	25%

Retrofit Models

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

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 programs such as the Zero Energy Now Pilot in Vermont, a project that has completed nearly 30 whole-home retrofits over the past couple years. An Online Resource Center was created and is continually updated with new resources to promote self-learning, identify internship programs, job opportunities, and training classes for contractors. The project will also result in the development of a nationally recognized BPI certificate called the Total Building Performance (TBP) Certificate of Knowledge.

This quarter, draft training modules were completed corresponding with the knowledge, skills, and abilities that will be required by contractors completing the TBP certificate program. The training modules cover a wide range of topics necessary for someone to have a comprehensive understanding of whole home retrofits. To complete the training materials, NEEP and Energy Futures Group (EFG) did extensive research and leveraged content produced by the government or other experts in the field. NEEP will finalize the training modules and publish them on an interactive platform using ArcGIS's StoryMap functionality in the third quarter. NEEP is also conducting outreach to engage with interested contractors and program implementers ahead of the pilot exam launch at the end of the third quarter. As a part of this effort, NEEP and partners presented at the June NYSERDA Residential Market Advisory Group meeting to provide an update on the TBP certificate and engage with interested contractors in NY.

Two new working groups are being developed as a part of the Retrofit Models project. These groups will be dedicated to exploring how states and program implementers can expand their programs beyond single measure programs. One group will be devoted to residential buildings and the other will focus on commercial buildings. The content of these groups will take into consideration NEEP's work on federal funding and specifically programs that homeowners and contractors can take advantage of. In the first quarter of 2023, NEEP began researching important topics for each group, hosting meetings with key partners, and developing a timeline for the year. We plan to launch these working groups in third quarter, after the anticipated release of additional information about IRA programs from the federal government. The first session will likely distill information from the IRA guidance that is expected to be released by the Department of Energy, also in the third quarter.

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 partners with vendors of high-performance windows, utilities, trade allies, window manufacturers, glass makers, and home builders to create demand for advanced window solutions. PAWS will support utility programs and assist 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 to make high performance windows available in LMI communities. NEEP is working to understand the challenges and best practices in different regions and customizing these practices to facilitate adaptation in the Northeast. NEEP is involved in the Commercial Windows Secondary Glazing working group activities. NEEP was approached by the Storm Window and Insulating Panels (SWIP) Campaign to promote Storm Windows and Insulating Panels as a cost-effective tool in weatherization measures towards energy efficient homes. NEEP is also working with PAWS and State Energy Offices to add high performance windows to Technical Reference Manuals (TRMs) in the northeast states. Some of the States that already have triple panes window requirements in TRMs are Vermont, Massachusetts and New York.

Progress Toward 2023 Outcomes	% Complete at Q2
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. **Progress Toward Outcome:** The MA Clean Energy Center continues to conduct their Decarbonization Pathways Pilot and will be opening Cohort 2 in July. NEEP remains engaged in the project advisory committee. LD611, Resolve, Establishing a Working Group to Maximize Eligibility for Energy Efficiency Programs for Low-income Homeowners. This bill was sent to the Governor's office on June 15, 2023. It requires the Maine State Housing Authority to convene a working group to design a program that will provide financial assistance to low-income homeowners for weatherization and home energy assistance programs. LD815, An Act to Provide Energy Efficiency Program Outreach and Assistance to Manufactured Housing Residents. This bill passed both chambers on June 7, 2023. It requires the Maine State Housing Authority to participate in education and outreach services to those living in manufactured housing. This outreach must include current energy efficiency programs run by the Efficiency Maine Trust and the Maine State Housing Authority and an application for the residents to apply.	60%

Progress Toward 2023 Outcomes	% Complete at Q2
The Pennsylvania Whole Home Repairs Program took additional steps towards implementation in early 2023 by seeking county-level organizations to be program administrators. The list of community action agencies can be found on the participating agency list. Homeowners and landlords are now able to apply for funding by sending an email to their local agency.	
2. Two states (Connecticut, New York) standardize definitions for weatherization. **Progress Toward Outcome:** There is nothing new to report on this outcome at this time.	33%
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:** New Jersey Triennium 2 Straw Proposal has put forth a new state-funded workforce development initiative in partnership with the Department of Labor to recruit and train participants from overburdened communities. The program will be modeled after a similar PSEG program and will provide wrap-around services to participants, classroom, and on the job training opportunities.	50%
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:** New Jersey initiated the stakeholder process to plan for the state's next round of energy efficiency funding. The proposed framework includes a statewide building decarbonization program that is focused on converting customers from oil and propane to electric services. In the first Order Approving the framework for the NJ 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.	33%

5. Three energy efficiency programs (Massachusetts, New York, Vermont) increase the number of measures included in their whole-building retrofit programs. **Progress Toward Outcome:** The New Jersey Energy Efficiency Triennium 2 requires that the utilities design incentives for whole home energy efficiency and electrification solutions that generate deep, long-lasting, and cost-effective energy strategies.	0%

Solutions for Low-Carbon States and Communities

NEEP's Solutions for Low-Carbon States & Communities project facilitates the development and implementation of various building decarbonization initiatives with state and local governments. We carry this work out 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. Similar to 2022, there continues to be an extensive focus on community-level federal funding opportunities in 2023.

Federal Funding

The State and Communities team continued to deepen its understanding of federal funding opportunities from the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) in the second quarter of this year. NEEP hosted an in-person Rhode Island Community Decarbonization Workshop and gave a presentation on federal funding opportunities. NEEP also launched the Community Federal Funding Working Group, which met twice during the second quarter, convening municipalities, planning commission staff, and state representatives to prepare for municipal opportunities from BIL and IRA. More information about our support for municipalities is available in the blog Offering Communities a Much-Needed Helping Hand.

Electrification Cohort

Increasingly, states and communities are interested in local electrification initiatives as strategies to reduce energy consumption and greenhouse gas emissions from their buildings. Experiences from partner organizations such as the MA Clean Energy Center, NYSERDA, Abode Energy and others have shown that neighbor-to-neighbor coaching models are effective. NEEP engaged with stakeholders to explore utilizing a cohort model to convene communities interested in developing electrification campaigns in their own jurisdictions. Conversations with the Building Electrification Accelerator and the HeatSmart Alliance, identified the heat pump coaching model as one exemplary program type. A session at the PowerOptions and NEEP "Decarbonizing Communities & Campuses" event focused specifically on community heat pump coaching. We drafted a charter for this project and are working to identify 12-15 community participants. NEEP plans to launch the cohort in the third quarter.

Benchmarking and Building Performance Standards

NEEP continues to provide critical technical assistance and support to states and communities on the development of benchmarking and building performance standards (BPS). While BPS can play a key role in helping meet climate goals, they are still a relatively new concept with unproven real-world results. This quarter, NEEP and ClearlyEnergy commenced a research project to investigate how impactful BPS programs can be in relation to a

jurisdiction's broader climate goals. We are analyzing available data from existing BPS and benchmarking programs and plan to publish the report in the third quarter.

To help policy makers develop BPS programs, NEEP led a session at the New Buildings Institute Getting to Zero Forum on the topic of stakeholder engagement for BPS. NEEP collaborated with ClearlyEnergy, SEEA, and MEEA to lead small group discussions on different sections of BPS. The session demonstrated the importance of different viewpoints and collaboration and provided tools and resources to help policy makers design equitable BPS.

NEEP continued providing guidance to the Maryland Department of the Environment (MDE) on the development of a Statewide BPS regulation. NEEP facilitates weekly meetings with the MDE and bi-weekly meetings with a larger group including MDE regulators and federal partners such as DOE, EPA, and LBNL. We drafted implementation guidelines that will be published in the Technical Support Document along with the regulation in the third quarter.

Workforce Development

ReMaine

NEEP hosted one "Lunch & Learn" webinar for employers interested in the ReMaine Clean Energy Internship Program, and 12 interns started paid positions ranging from weatherization to engineering, marketing, community solar sales, and more. During the second quarter, one intern finished his 240 hours and was hired full time as a ventilation and heat pump installer. NEEP and its partners met with many organizations in Maine to build connections, such as Fedcap, Portland Adult Education, Green Training USA, and Volunteer Maine. The Project Advisory Committee also met in May and discussed further leads, potential partners, and strategies.

BPA

NEEP supported the Building Performance Association (BPA) in their Maine workforce development program, helping to coordinate contractor meetings, connect with new partners, and identify pathways for employers and job seekers to advance. We presented at two Maine BPA contractor meetings and helped foster meaningful conversation and relationships.

Peer-to-Peer Collaboration

RI Community Energy Network

NEEP collaborated with DEM and Climate Interactive to host an in-person Rhode Island Community Decarbonization Workshop, with support from the RI Community Energy Network's funder 11th Hour Racing. Organizations represented at the workshop included the Rhode Island Infrastructure Investment Bank (RIIB), RI League of Cities and Towns, Climate Jobs RI, RI Energy, Green Energy Consumers Alliance, and the RI Office of Energy Resources. Staff from nine Rhode Island municipalities joined in person, with more reviewing materials after the fact. We also met with Compete RI, a partnership with resources dedicated to offering entities in the

state grant writing capacity for winning federal funding, and the state IIJA coordinators to discuss working together in supporting the municipalities.

NEEP met with several other energy efficiency-focused organizations to stay connected and ensure coordination, including Rewiring America, Building Electrification Accelerator (BEA), and the US DOE Better Buildings Workforce Accelerator members.

On May 3, NEEP co-hosted an event with PowerOptions called "Decarbonizing Communities & Campuses" at the College of the Holy Cross in MA. Local government staff, nonprofits, facilities managers, and more gathered to join one of three tracks: campuses, communities, and affordable housing. Approximately 200 people joined the event.

Summit Planning

NEEP advised two case study sessions and four workshops for the 2023 NEEP Summit. The case study sessions were "Community Decarbonization: Beyond Lip Service" and "You Get a Heat Pump! You Get a Heat Pump! Everyone Gets a Heat Pump!" The workshops were "Planning and Capacity Building," "Program Development and Implementation," "Happy Programs, Happy Customers," and "Serving Underserved Communities."

Software Tools

Remotely

NEEP and ClearlyEnergy held another "Lunch & Learn" webinar for Remotely in May with 66 registrants. An additional 30 remote audits were done in New York, so the total reached 75 completed audits. Additional audits were done outside the state of NY, with interest growing across the region and country.

HELIX

During the second quarter, NEEP continued connecting with the Green Building Registry and ClearlyEnergy to discuss options about data sharing and connections with MLSs. The Vermont Home Energy Profile (VHEP) advisory committee met in June to discuss Montpelier's mandatory labeling program, MLS connection, and more. We also met with states interested in using HELIX for various other use cases including with Massachusetts Department of Energy Resources for their Fossil Fuel Free Demonstration Project to use HELIX for tracking, and more.

Progress Toward 2023 Outcomes	% Complete at Q2
1. Four states (Connecticut, Massachusetts, New York, Rhode Island) pass or implement building decarbonization strategies. **Progress Toward Outcome:** In Connecticut, this session's bill (SB 979) related to the development of a CT home energy labeling program for rental units did not pass, but NEEP remains engaged with	75%

Progress Toward 2023 Outcomes	% Complete at Q2
CT Department of Energy and Environmental Protection (DEEP) on a related pilot program that could launch later this summer. Maine passed legislation in June directing Efficiency Maine Trust to develop a statewide HES program, with the possibility to allow virtual audits with tools such as Remotely. The legislation also enables municipalities to create mandatory home energy labeling programs. Massachusetts is developing a Municipal Fossil Fuel Free Demonstration Program that allows cities and towns to adopt or amend general or zoning ordinances or by-laws to require new building construction or major renovation projects to be fossil fuel-free. Vermont passed the Clean Heat Standard in the Affordable Heat Act in May, which will require entities that import heating fuel into Vermont to reduce their greenhouse gas emissions annually. Massachusetts introduced legislation (SB2178/HB3213) that would establish building performance standards for buildings greater than 20,000 square feet. These bills are building off the benchmarking legislation that passed last year. A hearing is scheduled for July 17, 2023.	
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 Massachusetts announced the creation of the Massachusetts Community Climate Bank, the country's first green bank dedicated to affordable housing. The bank has $50 million of seed funding from the Department of Environmental Protection, and is poised to take advantage of new federal funding such as the Greenhouse Gas Reduction Fund. States in the region have begun planning how they will disburse at least 60 percent of their Energy Efficiency and Conservation Block Grant (EECBG) allocation to municipalities that are ineligible for a formula grant of their own. New Hampshire drafted plans to spend 100 percent of their allocation on solar grants for municipalities, MA Department of Energy Resources put out a Request for Information/survey for how they should make the money available, and more.	50%

Progress Toward 2023 Outcomes	% Complete at Q2
3. Fifteen jurisdictions pass or implement innovative decarbonization policies/programs targeting existing or new buildings. **Progress Toward Outcome:** South Portland, Maine was onboarded to the BEAM platform to manage the City's recently adopted benchmarking ordinance. The City plans to transition this into a building performance standard. Bedford, NY resolved to expand their rental registry in 2021, to include more health and safety and energy efficiency information. The city will require that any health and safety violations be resolved, and simply benchmark and disclose energy efficiency information. The city is also pooling funding for building owners in the Environmental Justice area of the jurisdiction to make upgrades identified in the inspection. The city has reached the end of grant scoping with NYSERDA (contract pending), and aims to pass the local law in September. Providence, RI's City Council introduced the Building Energy Reporting Ordinance (BERO) this quarter, for commercial buildings in the city, and plans to introduce another ordinance called Carbon Neutral Schools and Public Buildings, which would require that new construction and major renovations in that category be net zero ready by 2035. Providence has also been working with the National Renewable Energy Laboratory (NREL) on a solar readiness and battery storage assessment for the city. NEEP also began reengaging with the City on their benchmarking ordinance. The new regulation is slated to be introduced to City Council later in 2023. New Haven, CT will be working with a legal intern with the Sabin Center for Climate Change Law in the fall to learn more about possible legal avenues for pursuing building energy benchmarking and home energy labeling policies. The city may also coordinate with NEEP on a labeling pilot program in CT later this year. Arlington, MA runs the Electrify Arlington campaign, which has $50,000 funding through 2024. The city put out a Request for Proposals for one qualified contractor that program participants would go to, and is utilizing some funding from MA Community First to do outreach to landlords. The town recently hired a part time staff member to manage the heat pump coaching program offered by the town.	40%