



# Heating Electrification Market Transformation

All states in the Northeast and Mid-Atlantic region have established aggressive long-term greenhouse gas (GHG) reduction goals and are in the process of creating specific plans to achieve those goals. Replacing building technologies that use fossil fuels with technologies that use electricity has been established as one of the critical pathways to achieving these goals. Space and water heating make up over 90 percent of all direct carbon emission from homes and buildings in the region. Heat pump technologies, including a wide variety of cold climate air source heat pumps (ccASHP), ground-source heat pumps (GSHP), and heat pump water heaters (HPWH), offer households and businesses important solutions to reduce and eliminate these emissions. Electrifying heating also improves indoor air quality, and reduces risks related to combustion, creating safer and healthier buildings.

NEEP works to accelerate market adoption of high-efficiency residential and commercial heat pumps for space and water heating through multi-sector stakeholder collaboration. Informed by this collaborative network, NEEP develops strategies, tools, and resources for key stakeholders such as policy makers, program administrators, advocates, and industry to implement through their unique market channels.

Over time, this work has expanded to provide high performance product specifications and products lists, best practice guidance for consumer education, tools for quality heat pump installation, workforce development, and coordinated technology and market research for a broad range of high performance heat pump options for cold climates. NEEP projects that broad adoption and coordinated implementation of these strategies and tools will remove market barriers and lead to dramatic scaling of heat pumps across the region.

## NEEP's 2022 Project Outcomes

1. Five new programs use NEEP's ccASHP product list as a qualified products list (QPL) and product selection tool to help ensure high performance ASHPs are being selected by the market, and sized appropriately.
2. 30 percent increase in annual sales of residential-size ASHP systems across the NEEP region. (*This information will be available in the summer of 2023*)
3. Regional heating electrification programs exceed their own 2022 goals for ASHP, VRF, GSHP and HPWH sales, with particular emphasis on surpassing their specific goals for LMI customers.
4. Fifty regional stakeholders engage NEEP's new regional Advanced Water Heating working group to establish highest priority regional market transformation strategies.

## NEEP's 2022 Strategies and Activities

**Stakeholder Engagement and Collaboration:** NEEP engages a diverse group of stakeholders, including industry, efficiency programs, state and local government, U.S. DOE, U.S. EPA, national labs, advocates, and organizations serving underserved and historically marginalized communities to develop and advance long-term regional market transformation strategies to speed the market introduction and adoption of high performance heat pumps for space and water heating. NEEP will monitor and participate in national efforts in the heating electrification market, bringing initiatives and successes from the region and beyond to state and national partners through a program of stakeholder engagement and outreach, building interest and momentum for advancing solutions through the region.

- Convene and facilitate working groups for Residential ASHPs, Commercial ASHPs, and Advanced Water Heating; includes quarterly working group meetings, subcommittee meetings, and email updates
- Lead multi-party collaborative research project into heat pump performance and metrics

## NEEP's 2022 Strategies and Activities Continued

### *Stakeholder Engagement and Collaboration Continued:*

- Collaborate with federal agencies such as U.S. EPA, U.S. DOE, Natural Resources Canada, and National labs
- Collaborate with other regional organizations advancing heating electrification (i.e. Heat Pump Coalition, Regional Energy Efficiency Organizations, Rocky Mountain Institute, Green Urban Council, Building Electrification League, Building Electrification Initiative, NY-GEO, Geo Exchange, advocacy organizations, community-based organizations (CBOs), etc.)

**Technical Assistance:** NEEP provides direct technical assistance to stakeholders, such as program administrators, policymakers, industry, and advocate organizations. Technical assistance topics include:

- Regional/national market insights
- Policy/program design best practices, including equity considerations
- Heat pump performance and ratings
- Consumer/installer education
- Regional/national research activity
- Refrigerant regulation best practices

**Tracking and Analysis:** NEEP expands its collaboration with states, program administrators, U.S. DOE, U.S. EPA, national labs, REEOs, and others to track, assess, and provide initiative members critical insights into the regional landscape for heat pumps across policy, program, technology and progress towards market transformation.

- Space and water Heating Electrification Public Policy tracker
- Space and water Heating Electrification Program tracker
- Online repository of strategic electrification reports/analysis/resources

**Tools and Reports:** NEEP develops market and program facing tools to support the broad use of ccASHPs and Heat pump water heaters. NEEP will support initiative expansion to include additional high performance heat pump technologies for space and water heating, expand scope of the Cold Climate ASHP Product List, and update best practice resources for consumers and installers

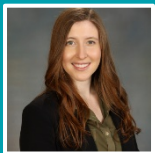
- Progress Report: Heat Pump Market Transformation Strategy Implementation and Results
- Maintain and update NEEP's ccASHP Specifications and Product List (currently includes categories for ccASHP, ccVRP and ccPHTP).
- Develop new specifications for additional heat pump categories (likely including air-to-water heat pumps and roof-top packaged heat pumps)
- Update ASHP/VRF installer guides
- Update ccASHP Product List Sizing Visualization Tool
- Develop ASHP Program Best Practice Toolkit
- Develop ccASHP Product List Rebate Search Tool
- Brief: Public Policies to Prioritize for Heating Electrification

## NEEP's 2022 Strategies and Activities Continued

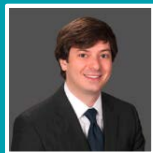
**Thought Leadership:** NEEP influences the narrative around heating electrification market transformation by positioning NEEP and its partners as consistent, reliable expert sources of information and resources on ASHPs, GSHPs, and HPWHs.

- NEEP 2022 Summit and other events to share work and influence decision makers
- Annual Heating Electrification Workshop to explore approaches for electrifying the heating and cooling sector while guaranteeing quality and comfort for occupants
- Develop communications program (blogs, interviews, articles, joint papers) to broadcast work, building a broader cohort of engaged partners
- Highlight and champion solutions in regional and national forums
- Representation on national committees, and regional and state boards and committees
- Collaborate with New Buildings Institute (NBI) and other organizations on the national Advanced Water Heating Initiative (AWHI)

### Project Staff



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