



# Heating Electrification Market Transformation

Replacing building technologies that use fossil fuels with technologies that use electricity is critical for states to achieve their aggressive long-term greenhouse gas (GHG) reduction 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.

In 2023, NEEP will focus on increasing installer awareness/confidence, reducing upfront costs, promoting improved ASHP performance specifications, coordinating technology and market research for a broad range of high-performance heat pump options for cold climates, advancing emerging technologies designed to serve large commercial and multi-family applications, and expanding adoption of policies and regulations that support heating electrification for all, particularly those from historically marginalized communities who bear a disproportionately high energy burden.

## NEEP's 2023 Outcomes:

- 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.
- 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.
- 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).
- 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.
- Three states (Connecticut, Massachusetts, New Jersey, Vermont) reconsider key state policies that slow adoption of heating electrification.

## NEEP's 2023 Activities:

NEEP works with partners to determine high priority work throughout the year. In 2023, this includes:

**Stakeholder Engagement and Collaboration:** *NEEP works with key market actors to inform the creation and implementation of market strategies and related tools and resources to accelerate the adoption of high-efficiency residential and commercial heat pumps for space and water heating.*

- Working Groups: NEEP convenes several working groups including the Heating Electrification Working Group, Regional Heating Electrification Strategy Update Advisory Group, Regional HPWH Working Group,

Specification/Product List Advisory Committee, Sizing Tool Advisory Committee, VRF Research Advisory Committee, and ASHP Rating Representativeness Advisory Committee.

- Collaboration: NEEP monitors and participates in national, regional, and other groups, including National Building Electrification collaborative, National Lab ASHP Group, Advanced Water Heating Initiative (AWHI), to advance regional interests and report back to state and other partners on activities, information, and opportunities

**Tracking, Analysis, Tools, and Reports:** *To support the regional market transformation strategies, NEEP leads a variety of activities to update strategies, develop/update tools and resources, conduct multi-party research, and track and analyze the market.*

- Cold Climate ASHP Product List: NEEP maintains and updates this nationally recognized resource to assist heat pump market actors in identifying ASHPs suitable for cold climate applications. The list currently includes specifications for heat pumps, packaged terminal heat pumps, and variable refrigerant flow systems, with potential to expand.
- Web-based Resources: NEEP develops and maintains several website resources, including installer best practice guides/videos, online resource center, and a regional heating electrification market tracker (including market, program, policy).
- White papers: NEEP researches and reports on several topics including regional market transformation strategies, program “readiness” for emerging technologies, and leading policies that center equity.
- In-field Research: NEEP leads two studies on the topics of VRF in-field performance validation and ASHP rating representativeness.
- Blog: NEEP produces blogs highlighting best practices and innovations in high-efficiency residential and commercial heat pump decarbonization policies, programs, strategies and practices.

**Technical Assistance:** *NEEP is available to provide customized technical assistance to accelerate market adoption of high-efficiency residential and commercial heat pumps for space and water heating.*

- Technical Assistance: NEEP provides heating electrification market transformation assistance via research, reports, presentations, or briefings.
- Public Comments: NEEP responds to requests for public comments that assist states and programs with their heating electrification goals.
- Insights: NEEP participates in state, regional, and national working groups and works with synergistic partners to help accelerate the heating electrification market.

**Thought Leadership:** *NEEP will partner with regional partners to serve as reliable experts on topics related to market transformation of the space and water heating sectors.*

- Webinar Series: NEEP hosts a bi-monthly webinar series that will highlight leading policies, programs, strategies and practices.
- Events: NEEP will identify opportunities to promote innovative policies and champion solutions at events including the Heating Electrification Market Transformation Workshop, NEEP-run and industry-hosted summits, workshops, and other convenings.