



NEEP 2018 QUARTERLY REPORT QUARTER TWO



Leadership Recognition and Policy Tracking



Advanced EM&V Solutions

Hosted the [EM&V Annual Public Meeting: Advancing EM&V in the Region and the Industry](#):

Held in Nashua, N.H. on May 8, the meeting addressed a range of topics that illustrate the opportunities and challenges associated with planning and assessing impacts of energy efficiency in the changing landscape of the energy industry. This includes, for example, declining avoided costs, integration of efficiency with storage and demand response, increasing emergence of control technologies, and delivery of efficiency as a non-wires (geotargeted) strategy.



Policy and Program Trends and Progress Tracking

ACEEE summer study paper was completed and submitted for peer review: The paper – which will be presented at the [ACEEE 2018 Summer Study on Energy Efficiency in Buildings](#) in August – discusses the integration of energy efficiency, strategic electrification, and clean energy. Through an analysis of each of these three strategies, the paper identifies the necessary steps in order to integrate and achieve deep decarbonization.



Resilient, High Performance Buildings and Communities



Pathways for Efficient and Resilient Communities

Hosted three high performance schools tours: As a part of [Healthy Schools Day](#), NEEP partnered with the Maine Indoor Air Quality Council (MIAQC), N.H. Department of Education, Massachusetts Facilities Administrators' Association (MFAA), Metropolitan Area Planning Council (MAPC), and others to host three tours of high performance school buildings in the region. These tours were held at schools in Maine, New Hampshire, and Massachusetts to showcase building features that improve occupant health, energy efficiency, and productive learning. Experiencing a high performance school in-person can provide stakeholders with the necessary insights and inspiration to replicate projects in their own communities. In total, approximately 60 stakeholders attended the three tours.



Building Energy Codes and Benchmarking

Published an update to our paper, [Construction Codes in the Northeast: Myths and Realities of Energy Code Adoption](#): This paper, first [published in 2015](#), has been [updated for 2018](#) and utilizes [ConstructConnect](#) data reflecting construction permit starts for every state in the NEEP region from 2014-2017. This analysis addresses the myth that updated energy codes cause construction projects to slow down, pause, or move to areas with less progressive energy codes. NEEP discovered trends in construction activity including geography, building type, commercial or residential, and costs of building projects. Square footage additions data from the Pacific Northwest National Laboratory (PNNL) was used to calculate energy, cost, and carbon emissions savings for each state in the NEEP region updated to the latest energy code. These savings were translated into equivalencies such as miles of bike lanes, number of students' college paid for, and how many homes could be powered with that saved energy. These findings will inform state partnerships and one-page resources for each state reflecting the savings.



Home Energy Labeling Information eXchange (HELIX)

Submitted a data request to the Residential Energy Services Network (RESNET) to gain access to home energy data: Data was requested on Home Energy Rating System (HERS) scores, U.S. Department of Energy (US DOE) zero energy ready homes, and ENERGY STAR for homes. The request is under review and should be approved in Q3. RESNET will then provide access to this data for all seven of the pilot states for the Home Energy Labeling Information eXchange (HELIX). With this, HELIX will move into the full pilot phase by engaging with all seven states as well as with multiple listing services (MLSs) to get the data into the market.



Integrated Advanced Efficiency Solutions



Air-Source Heat Pumps and Smart Energy Homes

Co-hosted the [Renewable Heating and Cooling Workshop](#), in Saratoga Springs, N.Y. on June 18-19: The workshop, co-hosted by NEEP and the Renewable Thermal Alliance (RTA), explored how the region can work more collaboratively to accelerate the adoption of renewable heating and cooling technologies that will ultimately transform the way we heat and cool our homes and businesses. The two-day event drew 125 attendees and included keynote speakers from the New York State Energy Research and Development Authority (NYSEDRA) and Connecticut's Department of Energy and Environmental Protection (CT DEEP) as well as a mix of panels and breakout sessions.



Efficient, Low Carbon Commercial and Industrial Solutions

Created content for our Community Action Planning for Energy Efficiency (CAPEE) web-based tool to educate users about strategic energy management (SEM): New content included information on the [ISO 50001 standard](#), US DOE's [50001 Ready program](#), and DOE's [50001 Ready Navigator tool](#). NEEP is in the process of convening SEM program administrators (PAs) in the Northeast to discuss implementation of DOE's 50001 Navigator tool. Through this engagement, we aim to collect feedback from PAs regarding the current status of the adoption of the tool through their respective programs, provide a platform for them to have PA-to-PA discussions, and identify resources that NEEP or DOE could provide to accelerate implementation of the tool. Additionally, NEEP's Technology & Market Solutions Manager, Giselle Procaccianti, completed the [CP EnMS](#) training in May. This will help NEEP provide more effective support to the region in its adoption of SEM.



Federal and State Appliance Standards

State appliance standards advanced throughout the region: NEEP has been working with regional stakeholders to advance the collective understanding of, and commitment, to state-level appliance standards. In Q2, we hosted state-specific discussions regarding appliance standards efforts in R.I., Mass., D.C., Vt., N.Y., Conn., and began outreach to N.J. Rhode Island ([senate](#) and [house](#)), [Mass.](#), and [Vt.](#) all had standards legislation being considered in their 2018 sessions. In Vermont, H410 was signed into law in May. In Rhode Island, their house and senate versions of the bill did not pass before the session ended in June. The Massachusetts legislative session continues into July when the fate of H3404 will be decided. For Conn., N.Y., N.J., and D.C., the opportunity to enact appliance standards will continue through the year.



Strategic Electrification



Strategic Electrification

Published the [Action Plan to Accelerate Strategic Electrification in the Northeast](#): The plan outlines a series of actions that regional stakeholder groups can take in order to move strategic electrification forward over the next three to five years. NEEP hosted a [webinar](#) on May 17 to present the key elements of the plan, with 96 stakeholders in attendance. We also published a [blog](#) on key takeaways from the report on June 5. We will leverage the plan going forward by convening a regional working group to coordinate implementation of the key actions identified.



Leadership Recognition and Policy Tracking

Events & Stakeholder Engagement

- **Published the blog entry [A Drumroll for the Future of EM&V](#) covering topics for the [2018 EM&V Annual Public Meeting](#):** Selected topics captured the evolving state of the industry, including EM&V issues that receive ongoing attention – such as avoided cost trends and technical reference manuals – and those that represent synergies of interest for future focus – such as expanding roles for control technologies, the need to evaluate non-wires alternatives, and the integration of efficiency with demand response (DR) and storage.
- **Participated in panel discussion at the [International Energy Program Evaluation Conference \(IEPEC\)](#):** The June discussion focused on the harmonization of energy efficiency information, and sharing of Northeast products and experience with protocols development and standardized reporting tools.
- **Co-hosted a quarterly M&V 2.0 project update webinar for state partners:** NEEP and project partners the Connecticut Department of Energy and Environmental Protection (CT DEEP) and the Lawrence Berkeley National Laboratory (LBNL) presented a progress report on the commercial M&V 2.0 pilot that is now underway, an outreach plan to reach key stakeholders through webinars, a workshop, etc., and an overview and update on LBNL protocol developments.
- **Posted a blog on [National Standard Practice Manual \(NSPM\) cost-effectiveness best practices](#):** The blog highlighted progress in the Northeast including development of the Rhode Island test per Docket 4600, along with expressions of interest in reviewing cost-effectiveness in New Hampshire and Connecticut. This post was written by Julie Michals, Director of Clean Energy Valuation at E4TheFuture, as part of its membership in [NEEP's Allies Program](#).
- **Engaged with the other regional energy efficiency organizations (REEOs) and the California Efficiency + Demand Management Council:** This group holds quarterly teleconferences to share information and resources, and to identify areas of common interest among REEOs' policy work. The Q2 discussion led to coordination between NEEP and the Midwest Energy Efficiency Alliance (MEEA) and sharing of information on the NSPM and related efforts in the Northeast.
- **Distributed a survey to program administrators (PAs):** The survey was intended to gather information about PAs' measure incentives and costs, program implementation, and program design. Responses to the survey were collected in June and will be shared in a final report to the U.S. Energy Information Administration (EIA) in September.
- **Engaged with state energy efficiency boards and councils:** NEEP continued to engage with these groups as well as environmental advocacy organizations to stay informed of state and local updates on legislative and regulatory policies. We participate in New York's Clean Energy Organizations Collaborative (CEOC), Maryland Energy Efficiency Advocates, the Massachusetts

Global Warming Solutions Group, and others to provide educational materials and to gain insights into policy updates.

- **Provided weekly policy updates to [NEEP Allies](#):** These updates keep our Allies apprised of what is happening both legislatively and in the regulatory landscape. Policy updates are also provided during the bimonthly Allies webinars, which provide a deeper dive into the policy updates shared on a weekly basis.
- **Presented on the status of ongoing EM&V research:** At the [2018 EM&V Annual Public Meeting](#), staff participated in a panel discussion on National Standard Practice Manual cost-effectiveness outreach and ongoing non-energy impact research.

Research, Analysis, Reports, and Case Studies

- **Completed an update to the [Advanced Building Analytics Tools List](#):** This online spreadsheet contains links to companies offering M&V 2.0-related resources.
- **Kicked off a project to assess state energy office information resources and needs for planning and forecasting for strategic electrification:** This included research and completion of a survey to be distributed to state energy offices.
- **Posted a blog titled [Let's Get the 'Auto' in Auto M&V Pointed Down the Right Road](#):** This post on auto M&V opportunities and challenges was written by Jeremy Eddy, Managing Director/V.P. of Opinion Dynamics, as part of its membership in [NEEP's Allies Program](#). You can read more about this topic on the [newly published report from Opinion Dynamics](#).
- **Published a [REED Renderings](#) issue:** This is part of a series of blogs on interesting trends that we see in the data and the stories behind those trends. The latest issue focused on opportunities for low-income communities and connecting the emerging understanding of health and environmental benefits with untapped efficiency potential of the low-income sector in the region.
- **Published a [policy tracker](#):** The tracker is used to highlight the latest trends in legislative and regulatory proceedings and puts a regional pulse on policy. The May tracker highlighted New York and the release of the long awaited energy efficiency targets and [New Efficiency New York plan](#).
- **Completed invited peer review of an ACEEE paper:** The paper, which will be available in Q3 at ACEEE's [2018 Summer Study on Energy Efficiency in Buildings](#), discussed benchmarking energy efficiency program performance. It reviews program performance nationwide, making use of data from the [Regional Energy Efficiency Database \(REED\)](#) for Northeast programs and discusses the elements contributing to high performance in energy efficiency programs.

Technical Assistance and Resource Centers

- **Completed the [Version 8 update of the Mid-Atlantic Technical Reference Manual](#):** This jointly funded technical assistance was kicked off in January with support in in-kind assistance from District of Columbia stakeholders and financial support from the Delaware Department of Natural Resources and Environmental Control (DNREC) and Maryland electric utilities.

- **Updated our [online policy tracking tool](#) to include new 2018 policies:** NEEP uses PowerSuite for automatic policy updates, which ensures the resource center is as accurate as possible. The tool was modified this year to make it simpler to understand by updating when the policy passes a chamber, both chambers, passes and fails, and when it is signed by a governor.



Resilient, High Performance Buildings and Communities

Events & Stakeholder Engagement

- **Convened the New Hampshire High Performance Schools Working Group:** Efforts were primarily focused on increasing the number of schools being benchmarked in EPA's Portfolio Manager. The group also discussed the need for fact sheets for community-level stakeholders to highlight the benefits of high performance schools and key questions to ask design teams. Work is currently underway to develop these resources, which will equip school building committees or interested citizens with information to help make the business case for the development of high performance schools.
- **Presented at a US DOE Zero Energy Schools Accelerator meeting:** In May, Accelerator participants and others from across the country gathered in Colorado for an in-person meeting. NEEP's presentation highlighted existing resources for schools including the Northeast Collaborative for High Performance Schools (NE-CHPS), NEEP's [Regional Operations & Maintenance Guide](#), and the Community Action Planning for Energy Efficiency (CAPEE) tool. The Accelerator meeting also provided a platform to discuss barriers and opportunities for schools to achieve zero energy performance.
- **Shared resources with Massachusetts communities:** Through a webinar organized by the Environment Massachusetts Research & Policy Center, NEEP presented CAPEE and other resources to over 100 participants. Webinar attendees consisted primarily of town energy committee members. This webinar provided a valuable platform to disseminate NEEP resources and hear from community members on the barriers to implementation of energy efficiency projects at the local level.
- **NEEP featured at the U.S. Environmental Protection Agency's (US EPA's) Best Practices Network World Café:** NEEP presented to commercial, industrial, and institutional company representatives at [EPA Region One](#) ENERGY STAR Best Practices Network World Café on June 7. NEEP was one of eight organizations showcased at the World Café event. Information ranged from [zero energy buildings](#), carbon reduction, and energy codes in eight 20-minute presentations to representatives of companies such as Coca Cola, Harvard University, and non-profit organizations. The event was an opportunity for NEEP to disseminate information about our initiatives, papers, [Allies network](#), and technical assistance offerings. The day resulted in increased awareness of NEEP's diverse experience and market trends in high-performance buildings.



- **Facilitated two [Pennsylvania Energy Code Collaborative](#) meetings:** These meetings focused on sharing best practices around green and energy [workforce development](#) to increase code compliance. It is anticipated that the region, and in particular Pennsylvania, will need additional [code officials](#) due to an aging workforce population. We identified the need for a rural outreach survey to code officials. Survey questions will inquire into training and resource needs, and which geographic areas to target.
- **Enhanced understanding of strategic electrification for NEEP's Regional Building Energy Codes Working Group:** NEEP facilitated a webinar meeting for our Regional Building Energy Codes Working Group on June 22, with 25 attendees from 10 states in attendance. The focus of the webinar was [strategic electrification and energy codes](#). Strategic electrification is powering end uses with electricity instead of fossil fuels to ensure efficiency and reduce carbon emissions. Additionally, Katie Bartolotta from Green Building United spoke to the group about the [City of Philadelphia's](#) recent adoption of the [2018 International Energy Conservation Code \(IECC\)](#) for commercial buildings, and Pennsylvania's adoption of the 2015 IECC statewide, both great accomplishments as the state lagged three cycles behind national code before the recent adoption.
- **Staff trained to present US DOE's Zero Energy Ready Home Seminar:** A NEEP staff member partook in a DOE Zero Energy Ready Program builder training and train-the-trainer event to enable NEEP to offer our own half- to full-day seminar/training on [DOE's Zero Energy Ready Home Program](#) and certification. The training provides builders with the tools and resources to enable the construction of homes that are zero energy capable, with increased attention to indoor air quality and overall higher construction quality. NEEP will coordinate training within the region. Education and dissemination of information regarding zero energy buildings is a primary initiative of NEEP as communities and codes move toward all zero energy construction.
- **Convened a regional stakeholder meeting to discuss residential labeling efforts with state energy offices and utilities:** This meeting helped inform efforts of our [Home Energy Labeling Information eXchange \(HELIX\)](#) project by identifying the needs of states in the region to advance voluntary and/or mandatory policies and programs. This invitation-only meeting provided a space for stakeholders to discuss the barriers to residential labeling and potential solutions, such as HELIX.
- **Planning for the 2018 [HELIX Summit](#) began:** The Summit will be held in Providence, R.I. on December 7. An agenda was drafted and shared with the HELIX project team for review before being finalized. The Rhode Island Office of Energy Resources (RI OER), National Grid, and E4TheFuture are already signed up as sponsors of this event.
- **Hosted a webinar on [The Emerging Green Homes Marketplace: Fear, Challenges, and Opportunities](#):** The June 27 webinar focused on educating the real estate community on green data fields and the value of HELIX auto-populating multiple listing service (MLS) listings with this information. Ninety-four stakeholders attended, representing 12 of the 13 states in the NEEP region, along with 11 states from outside of the NEEP region.
- **Participated in a residential home energy scorecard [panel discussion](#):** HELIX was highlighted in the discussion as a tool that states and cities can use to drive market transformation of the residential real estate market. The panel provided an opportunity to discuss challenges and



concerns that have been raised about home energy scorecards at the city- and state level, and how HELIX can be used as a tool to address some of the barriers to access of verified home energy information.

Research, Analysis, Reports, and Case Studies

- **Produced a new exemplar of a high performance school:** In preparation for the Regional High Performance Buildings and Communities Working Group in-person meeting in July, NEEP developed an exemplar of the [Christa McAuliffe School](#) in Concord, N.H. This exemplar will be used in conjunction with a tour of the school at the end of the in-person meeting. It highlights the wide-ranging sustainability features of the school, which has experienced reduced absenteeism rates since its opening.
- **Published a new blog, [Pennsylvania Rings the Bell of Energy Efficiency](#):** This blog highlights the accomplishments of Pennsylvania in updating their energy code to the 2015 IECC, and Philadelphia in updating their code to the 2018 IECC for commercial only.
- **Published a new blog, [Step Up to the Plate and Benchmark Your Building Energy Usage](#):** This blog relates benchmarking building energy usage to baseball. Just as fans of baseball evaluate players and teams year to year to track progress, the same should be done for public and commercial buildings. It highlights the six municipalities in the NEEP region with [benchmarking ordinances](#), with a deeper dive into [South Portland's benchmarking pilot program](#).
- **Coordinated group of energy codes experts from across the country:** Representatives from five REEOs met in Atlanta, Ga., with US DOE, PNNL, and the Energy Foundation (EF). The agenda included identifying opportunities for collaboration, current resources being developed by each REEO, US DOE, PNNL, and EF, and goals including scheduling a September teleconference around benchmarking, and scheduling monthly REEO discussions to continue sharing of best practices.
- **Played a major role in planning national, annual [US DOE National Energy Codes Conference](#):** Others involved in the planning for the July conference included the US DOE, PNNL, EF, and the National Association of State Energy Officials (NASEO).
- **One-page resources were developed to support HELIX:** The resources outline the benefits of HELIX as a solution and tool for [MLs](#), [appraisers](#), the [real estate community](#), and [states](#).
- **The HELIX governance team researched a potential new business model:** The team researched the cost and revenue basis for HELIX to better understand a potential business model that would enable HELIX to be self-sufficient after current US DOE funding expires.

Technical Assistance and Resource Centers

- **Engaged communities on the development of high performance school projects:** In Q2, NEEP worked with the towns of Belmont, Mass. and Burlington, Vt. to provide resources and direct technical assistance on high performance school projects. Belmont is pursuing a zero energy school while Burlington is considering using NE-CHPS as their pathway forward. Through these engagements, NEEP is able to provide communities with important information that will help



drive the development of schools that are energy efficient, healthy, productive learning environments.

- **Provided technical assistance to Providence, R.I.:** The city of Providence, R.I. recently launched a program called [RePowerPVD](#). This voluntary program challenges large buildings in the city to save energy and money. Participants agree to one of two tracks: 1) commit to a 20% energy reduction by 2020; or 2) compete to become the first zero energy building in Providence. As a partner of this program, NEEP has provided guidance to the city and made resources available to program participants. This type of challenge program could serve as a model for other cities going forward to drive energy efficiency upgrades in commercial buildings.
- **Supported Delaware's Code Coalition:** NEEP continued to provide technical assistance to the [Delaware Codes Coalition](#), which is in the process of adopting the [2018 International Energy Conservation Code](#). Delaware may incorporate beyond code provisions directly into the base code or possibly enact a stretch code.
- **Provided technical assistance to New Hampshire:** New Hampshire is considering adoption of new residential and commercial codes. NEEP provided the N.H. Department of Environmental Services (NH DES) with resources, case studies, and technical information to inform the process. The result of our assistance led to planning for a webinar to be hosted by [NH Local Energy Solutions](#), which will focus on code adoption, costs, compliance, and the energy code as a life safety code. NEEP – among other technical experts, the NH DES, and Unitil – will present.
- **Provided technical assistance in Maryland:** The state is in the process of adopting the 2018 IECC. NEEP has provided technical assistance to the [Maryland Division of Labor and Industry](#) related to diagnostic testing requirements of the code. We anticipate that we will review formal code change proposals in third quarter.
- **Connecticut considered its second code update for the state in two years:** In May 2018, the state's [Codes and Standards Committee](#) finalized a draft of the 2015 IECC code adoption. The 2012 IECC was adopted and became effective just over a year ago. The 2015 IECC is slated to become effective October 1, 2018. NEEP provided technical assistance to the state throughout this process, and will continue to do so.
- **Pennsylvania moved from the 2009 IECC to the 2015/2018 IECC:** Lagging multiple code cycles behind the national code, Pennsylvania has moved from the 2009 IECC and adopted the 2015 IECC. The [city of Philadelphia](#) has adopted the 2018 IECC for commercial buildings. NEEP attended code hearings, provided technical assistance to the state's [Review & Advisory Council \(RAC\)](#), and coordinated technical assistance with other code advocates. Additionally, NEEP launched a Pennsylvania code adoption group to seek input into the state's code adoption process, encourage support of the most recent adoption, and coordinate responses for technical assistance from the RAC and Philadelphia-based code [stakeholders](#). The significance of these code adoptions cannot be overstated and the process has provided valuable lessons toward supporting other states that have not yet adopted the latest codes.
- **A standard memorandum of understanding (MOU) was developed for HELIX to access data:** This MOU can be used by the HELIX project team to engage data providers for access to their data, such as LEED for Homes or Pearl. This will enable HELIX to have a consistent form across

providers and save time in developing new ones each time the team engages with new stakeholders.

- **HELIX beta tested in several states:** HELIX was tested with Rhode Island Home Energy Score, a Massachusetts pilot program, and Vermont home energy and solar data, as well as with CRS and the New England Real Estate Network (NEREN), a data aggregator and regional multiple listing service.

Regional Market Transformation Strategies

- **Began updating the [NE-CHPS Criteria](#):** In collaboration with CHPS and a number of regional stakeholders, NEEP is in the process of updating the energy and acoustics sections of NE-CHPS. This update will advance the baseline energy efficiency requirements of the criteria and streamline the documentation requirements associated with the energy and acoustics sections. Additionally, NEEP staff met with representatives from the Massachusetts School Building Authority (MSBA) to discuss the update and how it will impact the state’s current green schools building requirements.
- **Data collection progressed for the Connecticut Energy Code Field Study:** CT DEEP is conducting a [Residential Energy Code Field Study](#) based on US DOE/PNNL methodology. Field data collection has begun and is anticipated to conclude in October. NEEP will publish a final report based on PNNL’s analysis of the data. The report will be utilized by Connecticut and the state’s utilities to design code training to enhance compliance toward increased energy efficiency.



Integrated Advanced Efficiency Solutions

Events & Stakeholder Engagement

- **Convened our Home Energy Management Systems (HEMS) Working Group:** NEEP hosted a HEMS Working Group meeting on May 2. It was well attended, with 28 participants across 24 organizations representing states including N.Y., Mass., R.I., Vt., Wis., as well as MEEA, US EPA, and the National Renewable Energy Laboratory (NREL). In a post-webinar survey, 100% of respondents reported finding participation in the HEMS Working Group to be valuable, with six participants attributing some level of professional success to their participation in the group.
- **Successfully organized and presented at the Smart Home track at the Home Performance Coalition’s (HPC’s) National Conference:** For the fourth year, NEEP organized a Smart Homes component for the [HPC National Conference](#). This included organizing a nine-session Smart Homes track with an additional Smart Homes Happy Hour. Additionally, NEEP presented in sessions on our recent brief on [smart home resources for contractors](#) and on upcoming research into the integration of HEMS with strategic electrification and distributed energy resources.
- **Attended the Air-to-Water Air-Source Heat Pump (ASHP) Summit:** The full-day workshop on air-to-water heat pumps included the basics of these systems, comparison of air-to-water heat



pumps with other options, and the importance of low-temperature distribution systems. NEEP is assessing its role in supporting the air-to-water market, a configuration with a number of benefits.

- **Hosted a Strategic Energy Management (SEM) Collaborative webinar:** This was the second SEM Collaborative webinar hosted by NEEP, and provided a platform for collaboration with policy makers, program administrators, and commercial and industrial energy managers in the Northeast with the hope of accelerating the adoption of SEM in the commercial and industrial sectors.
- **Participated in the Consortium for Energy Efficiency's (CEE's) SEM Committee meeting:** This committee convenes program administrators and SEM practitioners to collect and analyze the growing data set on SEM implementations to identify facility profiles where SEM has proven effective and replicable. This meeting discussed a set of use cases for which SEM programs currently do or will support energy information technologies.
- **Participated in [US DOE's 50001 Ready Utility Network Series](#):** This network series, hosted by US DOE, is a facilitated forum for SEM stakeholders (including those with interest in ISO 50001 and DOE's 50001 Ready Program) to interact and learn from each other. The latest session featured Ed Birch of the Strategic Energy Group, who provided insights into his use of the 50001 Ready Navigator and recognition program to add value for his customers.
- **Federal and state appliance standards updates discussed in quarterly working group meeting:** NEEP hosted the second quarterly Appliance Standards Working Group meeting of the year, attended by 13 representatives from N.Y., Vt., D.C., Mass., and R.I. The meeting agenda was split between updates on federal activities and on state standards progress.
- **Planning began for an in-person meeting of the Appliance Standards Working Group:** After the success of our in-person meeting in September 2017, NEEP and project partner the Appliance Standards Awareness Project (ASAP) have decided to host an in-person meeting again in 2018 to strategize on moving forward state standards. The meeting will take place on October 1 in conjunction with the [NEEP Summit](#) in Middletown, R.I.

Research, Analysis, Reports, and Case Studies

- **Began research on integrating the smart home with strategic electrification and distributed energy resources:** NEEP is producing a whitepaper on the integration of HEMS with strategic electrification and distributed energy resources (DER). In Q2, NEEP continued this research through stakeholder interviews, holding over a dozen conversations with key stakeholders in the HEMS/DER/strategic electrification space. These interviews, along with additional topical research, are being used to inform case studies as well as trends and ultimately strategies for the final report, expected in Q4.
- **Continued development of an ACEEE Summer Study paper focused on ASHP:** NEEP is co-authoring a paper for ACEEE focused on the opportunity that ASHPs present for the U.S. for the advancement of energy efficiency. NEEP joins authors from the Northwest Energy Efficiency Alliance (NEEA), the Bonneville Power Administration (BPA), and ACEEE, pulling from our experience managing a [regional market transformation](#) initiative to inform the report.

- **Continued work on the Northeast and Mid-Atlantic R&D Connector Report:** This report takes the reader through NEEP’s journey toward achieving the objectives of the Northeast and Mid-Atlantic Regional Connector project. It represents the groundwork for a deeper dive into what can be done to bridge the energy efficiency commercialization gaps in the Northeast and Mid-Atlantic states, with the ultimate goal of accelerating the R&D commercialization pipeline.
- **Created informational resources on state standards opportunities:** NEEP staff, along with ASAP, have been coordinating closely to create fact sheets with key information about state-level appliance standards. In Q2, NEEP worked with stakeholders in N.Y., N.J., and D.C. to better understand their standards opportunities, and also fine-tuned educational resources already in development for standards efforts in R.I., Mass., and Vt.

Technical Assistance and Resource Centers

- **Continued updates to NEEP’s ASHP installer guides:** NEEP began to improve the [best practice guides for sizing, selecting, and installing ASHPs in cold climates](#). The guides are linked from the Massachusetts Clean Energy Center (MassCEC) and Efficiency Vermont’s websites. To inform the updates, we circulated a survey that received 25 stakeholder responses. We also began planning for the development of video versions of the installer guides, scheduled for production in Q3.
- **Engaged stakeholders to drive awareness and usage of NEEP’s ASHP installer guides:** NEEP presented “Improving the Field Performance of Heat Pumps in Cold Climates” at April’s Home Performance Coalition Conference, with approximately 100 stakeholders in attendance.
- **Informed an ASHP integrated controls pilot:** The development of integrated control systems that can manage the operation of ductless heat pumps in concert with other heating systems is a key strategy area for NEEP’s ASHP Initiative. NEEP has partnered with NEEA, BPA, and PNNL to inform a pilot to study the effectiveness of various control technologies and strategies to maximize the use of ductless heat pumps.
- **Informed the development of next generation rating methods for ASHPs:** NEEP contributed to a multi-stakeholder process to develop a new rating method for ASHPs. The group is facilitated by ACEEE and includes efficiency advocates and manufacturers. NEEP contributed insights into the benefits of a new test/rating method being developed by CSA as a potential model from which to start. NEEP also brought perspective gained through management of [our ccASHP specification](#).
- **Shared ASHP expertise with the California Energy Commission:** NEEP was invited to participate on a panel as part of the California Energy Commission’s [Integrated Energy Policy Report \(IEPR\)](#) Workshop on Zero Emission Buildings. The panel included a discussion on design practices and technology solutions.
- **Assisted Rhode Island stakeholders in advancing state appliance standards:** NEEP continued to collaborate closely with R.I. stakeholders – including the RI OER, National Grid, members of the state efficiency advisory board, and energy organizations – to build awareness and understanding of appliance standards through education and technical assistance. This built off of activity in Q1 when we provided an [educational briefing](#) on state-level appliance standards at the R.I. state house as well as provided testimony when requested to present the regional



context and technical analysis for the [House](#) version of the standards bill. In Q2, NEEP was again asked to provide educational testimony on the [Senate](#) version of the bill. NEEP also continued to convene R.I. stakeholders to advance appliance standards effort in the state, and while ultimately unsuccessful in 2018, momentum has been built for new standards to be enacted in 2019.

Regional Market Transformation Strategies

- **Continued process to update the cold-climate air-source heat pump specification:** Working with the [ccASHP specification](#) sub-committee, NEEP is developing a revised specification – version 3.0. The process will include an opportunity for public, stakeholder review and comment before any changes to the specification are finalized.
- **NEEP’s ccASHP products list continued to grow:** By the end of the second quarter of 2018, seven leading programs – including MassCEC, Efficiency Vermont, and NYSERDA – had adopted the specification and products list as part of their qualification for incentives. The [specification and associated products list](#) includes over 1,000 products, and is a mechanism for the market to differentiate ASHP systems that can operate efficiently in cold climates.
- **Began market assessment of variable refrigerant flow (VRF) technology:** With the ultimate goal of developing a Regional VRF Market Transformation Strategy whitepaper (a document intended to bring together key VRF market information and regional strategies), NEEP weighed in on NYSERDA’s VRF Market and Technical Analysis report and identified informational gaps and areas where content could be more comprehensively addressed. NEEP has had discussions with the Vermont Energy Investment Corporation (VEIC) regarding co-hosting an in-person meeting with NEEP’s stakeholders to discuss opportunities to leverage greater VRF adoption, and to work with them to develop the Regional VRF Market Transformation whitepaper.
- **NEEP and the region weighed in on value of federal and California appliance standards:** NEEP worked with ASAP to developed [joint comments](#) on the Notification of Proposed Rulemaking (NOPR) for dishwashers as well as contributed to [joint comments](#) to the California Energy Commission on closing the loophole for federally exempted linear fluorescent lamps.
- **Engaged with the US EPA ENERGY STAR Program:** In addition to coordinating with other efficiency stakeholders on the ENERGY STAR program, through efforts led by the Alliance to Save Energy and participation in the Retail Products Platform, NEEP educated regional stakeholders in the Q2 Appliance Standards Working Group meeting on the range of product specifications being updated by ENERGY STAR.



Strategic Electrification

Events & Stakeholder Engagement

- **Shared our latest findings on strategic electrification:** NEEP's Executive Director Sue Coakley presented the key aspects of NEEP's [Action Plan to Accelerate Strategic Electrification in the Northeast](#) to the Climate and Energy Funders Network, stressing the opportunity and need for foundation funding to support the implementation of key aspects of the plan.
- **Participated in Massachusetts utility event focused on decarbonization:** NEEP's Executive Director Sue Coakley participated in an invitation-only panel, Driving Decarbonization in the Northeast, hosted by National Grid in Boston. The panel was part of National Grid's [Northeast 80x50 Pathway](#) report introduction.