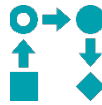




NEEP 2017 FIRST-QUARTER REPORT

Executive Summary – Quarter-One Highlights

In 2017, NEEP cast its eye on the lofty goal of assisting the Northeast & Mid-Atlantic region in reducing total carbon emissions 80% by 2050. While NEEP’s focus may have pivoted in response to the changing industry landscape, one thing remained constant – our work to bring stakeholders together to engage around energy solutions. We’re proud that through collaboration, NEEP and our network of state and federal partners, allies, foundations, and other stakeholders from across the region and nation have worked to embrace next generation energy efficiency as a core strategy to meet energy needs in a carbon-constrained world.



Facilitate Market Transformation for Advanced Solutions



Northeast Industrial Strategic Energy Management Initiative

Developed a final draft of a new report on Strategic Energy Management (SEM) Evaluation, Measurement and Verification (EM&V) Best Practices: The report identifies best practices when it comes to measuring savings from SEM programs, evaluating those measured savings, and screening for cost effectiveness. SEM in the industrial sector is an emerging opportunity to achieve significant energy savings through both increased capital projects as well as operations and maintenance (O&M). NEEP circulated earlier drafts with several leading stakeholders including individuals from the U.S. Department of Energy (US DOE), national laboratories, energy efficiency program administrators, and other SEM experts. The report is expected to be complete in the second quarter, and we anticipate that it will be used by states and programs to inform their consideration of launching SEM offerings.



Home Energy Management Systems (HEMS)

Organized a session at the [2017 Home Performance Coalition \(HPC\) National Conference](#): NEEP organized a “Smart Homes Track,” which included nine formal sessions, an evening technology showcase, and a breakfast discussion. An estimated 450 individuals participated in parts of the track, with sessions ranging from “The Smart Home for People with Disabilities” to “A Contractor’s Guide to the Smart Home.” In addition to selecting and taking part in organizing all of the sessions, NEEP’s Technology & Market Solutions Manager, Claire Miziolek, presented in three sessions and hosted a breakfast roundtable discussion. Additional metrics on attendance and ratings of sessions are forthcoming from HPC, but through discussion and meeting follow-up, the event was found to be successful at making progress toward one of NEEP’s key goals for 2017: to advance HEMS in home performance.



Emerging Commercial-Sector Business Models for Efficiency

Kicked off project research: NEEP staff began the process of developing a Market Transformation Strategy Report for emerging commercial-sector business models by producing a research scope – influenced by a set of research objectives – to better understand the various components of this project. Through this process, numerous existing reports were identified to help shape the market assessment portion of the project. NEEP began sifting through this secondary material to collect key information that should be included in the project. Research is expected to continue through the second quarter, with the goal of a completed project in the third quarter.



Regional EM&V Forum (EM&V 2.0 Focus)

Kicked off activities for M&V 2.0 Pilot Project: In partnership with project host the Connecticut Department of Energy and Environmental Protection (CT DEEP), NEEP is participating in a three-year regional research project funded by a US DOE State Energy Program grant. The project, “Standardized, Sustainable and Transparent EM&V - Integrating New Approaches” will conduct pilots, background research on M&V 2.0, and develop guidance on its applicability as an evaluation tool for use by states. Eversource-Connecticut, United Illuminating, NEEP, and Lawrence Berkley National Laboratory (LBNL), and other states (N.Y., R.I., Vt., N.H., Del., D.C., and Penn.) are members of the project team.



State and Federal Appliance Efficiency Standards

Hosted the first quarterly meeting of the Northeast/Mid-Atlantic Appliance Standards Working Group: This meeting, which highlighted some of the recent developments with state and federal appliance standards, also focused on a new strategic approach for NEEP’s Appliance Standards work. After eight years of strong activity from the US DOE Federal Standards Program, the expectation amongst efficiency stakeholders is that the DOE will be ramping down federal standards activity. Through the working group, NEEP is developing multi-faceted strategies to best advance strong efficiency standards, which includes long-term market development through support of strong specifications through the ENERGY STAR program, such that when federal standards once again resume, the market has still evolved to be more efficient, thus justifying a stronger federal standard. This re-orientation was approved by the working group and informed some of our activities this quarter.



Promote Resilient, High Performance Buildings & Communities



High Performance & Zero Energy Buildings, Homes, and Communities

Published an updated Regional Operations and Maintenance Guide: NEEP finalized and published the latest update to the [Regional Operations & Maintenance Guide for High Performance Schools and Public Buildings in the Northeast and Mid-Atlantic](#). This update, produced through a collaborative process

amongst various stakeholders, provides strategies for the latest and greatest in facility operations. Much of the information in the original guide remains relevant today, but a refresh was needed to cover new information on lighting retrofits, electric vehicle charging, financing, recycling, and more. This report ensures that existing buildings are properly maintained to improve occupant health and energy efficiency. NEEP hosted a webinar on the updated guide on March 30 for the Regional Public Buildings Leadership Group and the greater public. A total of 32 people viewed the webinar; a recording can be found [here](#).



Building Energy Codes

Advanced energy codes in Connecticut: The state of Connecticut is looking to update their energy code for a second time in two years, moving to the 2015 International Energy Conservation Code (IECC). To support this, NEEP provided technical assistance to the State Department of Energy, CT DEEP, the State Building Inspector, and Connecticut-based non-governmental organizations (NGOs). At their request, NEEP reviewed proposed code amendments to the 2015 IECC and will continue to provide assistance directly to CT DEEP and the State Building Inspector through the adoption process, anticipated for August 2017. In addition, NEEP was asked to review code change proposals drafted by the Arcadia Center and the Connecticut Sierra Club, which seek to include electric vehicle charging stations in residential garages.



Home Energy Labeling Information Exchange (HELIX)

Completed two rounds of solicitation for an IT contractor: The goal for the first year of the HELIX project, which ended in the first quarter, was to conduct research and stakeholder engagement in order to solicit and select the IT contractor who will build the HELIX database. In January, we released the [HELIX RFI](#), which received four responses that informed the technical specifications for “HELIX v1,” the minimum viable product upon which additional elements could be added over time. The [HELIX RFP](#), which received five responses, invited bids to create HELIX v1. The HELIX team will select a successful bidder in the second quarter.



Building Energy Rating and Disclosure

Assisted with the development of South Portland, Maine’s benchmarking ordinance: On January 4, The City of South Portland, Me. adopted a building energy and water usage benchmarking ordinance. This new policy is a part of the city’s [Zoning Regulations](#) and specific to one business district in the city. Throughout the process, NEEP provided technical assistance to the city, including fact sheets, presentations to city council and planning staff, and model language for the ordinance. Benchmarking is a key first step to improving a city’s energy efficiency and NEEP’s regional perspective was a valuable resource for South Portland to enact this ordinance. NEEP is now working with the city to plan a workshop to train building managers on how to properly benchmark their buildings.



Share Best Practices to Advance Strategic Electrification & Next Generation Energy Efficiency



Regional Strategic Electrification Assessment

Formed a Strategic Electrification Leadership Committee: The Committee, made up of approximately 30 stakeholders, will inform development of both a Regional Strategic Electrification Opportunities Assessment Report, as well as assist in the development of a regional action plan for [Strategic Electrification](#). The Committee consists of representatives from a broad range of stakeholders including state energy policymakers, NGOs, consumer advocates, utilities, manufacturers, and grid operators.



Cold Climate Air-Source Heat Pumps (ccASHPs)

Published two new guides for ASHP installers: [A Guide to Sizing & Selecting ASHPs in Cold Climates](#) and [A Guide to Installing ASHPs in Cold Climates](#) provide practical, best practice guidance related to sizing, selecting, and installing ASHPs in cold climates. ASHP system performance, including energy efficiency of the systems, can be negatively impacted by poor sizing, system selection, and installation, which also affect customer comfort. The guides were developed to assist installers in sizing and selecting ASHPs for cold climate applications, while maintaining high efficiency, performance, and customer satisfaction. Dozens of external stakeholders contributed to the contents of the guides, including close partnership with a team at US DOE's Buildings Technologies Office.



Advanced Efficiency Leadership Network



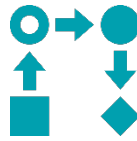
Regional Energy Efficiency Database (REED)

The [Regional Energy Efficiency Database \(REED\)](#) was populated with 2015 data: The databased now includes energy efficiency data for ten states.



State and Local Policy Tracking, Analysis, and Technical Assistance

Published the [2017 Regional Roundup](#): This annual publication provides insights into the latest policy developments, as well as updated REED data. The report includes links to external resources such as Public Utility Commission orders, policy documents, listserv information, as well as utility plans and programs.



Facilitate Market Transformation for Advanced Solutions

Help to transform markets with advanced energy efficiency technologies and solutions through public policy, research and collaboration, and public-private partnerships that deliver regional-scale impacts.

Events & Stakeholder Engagement

- Organized a session at the [2017 Home Performance Coalition \(HPC\) National Conference](#):** NEEP organized a “Smart Homes Track,” which included nine formal sessions, an evening technology showcase, and a breakfast discussion. An estimated 450 individuals participated in parts of the track, with sessions ranging from “The Smart Home for People with Disabilities” to “A Contractor’s Guide to the Smart Home.” In addition to selecting and taking part in organizing all of the sessions, NEEP’s Technology & Market Solutions Manager, Claire Miziolek, presented in three sessions and hosted a breakfast roundtable discussion. Additional metrics on attendance and ratings of sessions are forthcoming from HPC, but through discussion and meeting follow-up, the event was found to be successful at making progress toward one of NEEP’s key goals for 2017: to advance HEMS in home performance.
- Hosted the first quarterly meeting of the Northeast/Mid-Atlantic Appliance Standards Working Group:** This meeting, which highlighted some of the recent developments with state and federal appliance standards, also focused on a new strategic approach for NEEP’s Appliance Standards work. After eight years of strong activity from the US DOE Federal Standards Program, the expectation amongst efficiency stakeholders is that the DOE will be ramping down federal standards activity. Through the working group, NEEP is developing multi-faceted strategies to best advance strong efficiency standards, which includes long-term market development through support of strong specifications through the ENERGY STAR program, such that when federal standards once again resume, the market has still evolved to be more efficient, thus justifying a stronger federal standard. This re-orientation was approved by the working group and informed some of our activities this quarter.
- Co-led a regional Strategic Energy Management (SEM) working group:** In partnership with Efficiency Vermont, NEEP organized and hosted a regional working group focused on program implementation of SEM. The group offers a structured information exchange between regional industrial program administrators either implementing or exploring SEM as a program measure. The group met on February 14, with 16 in attendance.
- Engaged several leading SEM implementation firms:** NEEP met with these stakeholders to discuss strategies for making a strong case for SEM incorporation into ratepayer-funded energy efficiency programs. During the meeting, both messaging and stakeholder identification were discussed.
- Presented on Home Energy Management (HEMS) strategies:** NEEP presented key strategies from our 2016 report, [The Smart Energy Home: Strategies to Transform the Region](#), at regional



events. In January, we were invited by the U.S. Environmental Protection Agency (US EPA) to present at a [public webinar on connected homes](#), and in February, we were invited to the Parks Associates' [Smart Energy Summit](#), presenting NEEP's HEMS strategies to over 200 attendees.

- **Hosted HEMS Working Group meetings:** NEEP hosted two meetings of the HEMS Working Group in January and March. With over 30 participants in each meeting, NEEP was able to gather great buy-in and support for 2017 planned activities for the HEMS project.
- **Began stakeholder outreach for the Commercial-Sector Business Models for Efficiency project:** A major component of this project is engaging with the different market players to gain a better understanding of what existing information can be pulled into this project and what new information needs to be generated. NEEP compiled a stakeholder list and began to hold discussions to gain perspectives on the barriers and opportunities in the market.
- **Planned for the EM&V Forum Spring Meeting:** Planning for the [EM&V Forum Spring Meeting](#), scheduled for April 27, 2017 at the California University in Washington, D.C., commenced and was ongoing throughout the quarter, including finalizing agenda topics, inviting speakers, and outreach to attendees and event sponsors. The theme of the event is "The Future of Evaluation, Measurement & Verification (EM&V): Where Technology and Policy Meet."
- **M&V 2.0 project support and communication:** NEEP joined a national M&V 2.0 Stakeholder Group convened by LBNL to assist in recruitment of other project team members, reach out to Saas vendors as part of its ongoing industry research, and collaborate with the project team on start-up decisions and communications. In addition, NEEP presented the project concept to [NEEP Allies](#) at a February webinar, and to an audience of over 100 at the [NESEA Building Energy Boston](#) conference in March.
- **Began formation of EM&V Forum Leadership Advisory Committee:** NEEP began the process of assembling the Forum Leadership Advisory Committee that will guide content and direction of research and deliverables for the EM&V Forum in 2017. Invitations and a kick-off meeting of this group are expected in the second quarter.
- **Hosted state-focused discussions on appliance efficiency standards:** NEEP hosted state-focused standards discussions, working with efficiency actors in several Northeastern states to help them understand the opportunities in adopting state standards. After these initial discussions, these meetings were put on hold until late in the summer, given the legislative season coming to an end.
- **Participated in an Appliance Standards Awareness Project (ASAP) Steering Committee meeting:** In March, NEEP joined ASAP's first quarterly Steering Committee meeting, which included a brief presentation on the opportunities for standards-focused efficiency stakeholders to repurpose efforts toward developments of strong and appropriate ENERGY STAR specifications, given expected lack of movement on federal standards.

Research, Analysis, Reports, and Case Studies

- **Developed a final draft of a new report on Strategic Energy Management (SEM) Evaluation, Measurement and Verification (EM&V) Best Practices:** The report identifies best practices



when it comes to measuring savings from SEM programs, evaluating those measured savings, and screening for cost effectiveness. SEM in the industrial sector is an emerging opportunity to achieve significant energy savings through both increased capital projects as well as operations and maintenance (O&M). NEEP circulated earlier drafts with several leading stakeholders including individuals from the U.S. Department of Energy (US DOE), national laboratories, energy efficiency program administrators, and other SEM experts. The report is expected to be complete in the second quarter, and we anticipate that it will be used by states and programs to inform their consideration of launching SEM offerings.

- **Kicked off project research for commercial-sector business models:** NEEP staff began the process of developing a Market Transformation Strategy Report for emerging commercial-sector business models by producing a research scope –influenced by a set of research objectives – to better understand the various components of this project. Through this process, numerous existing reports were identified to help shape the market assessment portion of the project. NEEP began sifting through this secondary material to collect key information that should be included in the project. Research is expected to continue through the second quarter, with the goal of a completed project in the third quarter.
- **Kicked off activities for M&V 2.0 Pilot Project:** In partnership with project host the Connecticut Department of Energy and Environmental Protection (CT DEEP), NEEP is participating in a three-year regional research project funded by a US DOE State Energy Program grant. The project, “Standardized, Sustainable and Transparent EM&V - Integrating New Approaches” will conduct pilots, background research on M&V 2.0, and develop guidance on its applicability as an evaluation tool for use by states. Eversource-Connecticut, United Illuminating, NEEP, and Lawrence Berkley National Laboratory (LBNL), and other states (N.Y., R.I., Vt., N.H., Del., D.C., and Penn.) are members of the project team.
- **Kicked off development of HEMS guidance document:** NEEP began development of the forthcoming guidance document focused on Claiming Savings from Smart Thermostats. The resource is expected to be complete in the second quarter.
- **Disseminated resources on M&V 2.0:** In December 2016, NEEP published a brief, “[How Fast is the EM&V Paradigm Changing?](#)” This brief was disseminated to interested stakeholders throughout the first quarter, and a blog on the subject is slated for early in the second quarter.
- **Released a brief on Non-Wires Alternatives:** In January, the NEEP brief “[State Leadership Driving Non-Wires Alternatives Projects and Policies](#),” was completed and distributed.
- **Released a brief on Advanced Metering Infrastructure (AMI):** In February, the brief, “[Advanced Metering Infrastructure: Utility Trends and Cost-Benefit Analyses in the NEEP Region](#),” was completed and distributed.
- **Prepared state-specific appliance efficiency standards resources:** NEEP worked closely with ASAP to prepare several state-level analyses of the impact of adopting state standards and worked with State Energy Offices to present this information.
- **Contributed to ENERGY STAR specification development:** NEEP submitted comment letters to ongoing ENERGY STAR specifications, including for [clothes washers](#), [clothes dryers](#), and [televisions](#).



Technical Assistance and Resource Centers

- **Provided technical assistance to Delaware on industrial energy efficiency and SEM:** NEEP assisted the Delaware Division of Energy and Climate on the topic of industrial energy efficiency programs generally, and more specifically on the opportunities available through SEM. This information was intended to inform the development of a new efficiency program offering, Energy Efficiency Industrial (E2I). To support this, NEEP shared existing resources and coordinated discussions with US DOE staff and other regional program administrators.
- **First update to the HEMS product list complete:** In February, NEEP made the first 2017 revision to the online [HEMS product list](#). This list now features 14 different product categories and 544 individual products, a significant update since the list was first published in late 2015 with fewer than 300 products.
- **Mid-Atlantic Technical Reference Manual (TRM) neared completion:** A project to update the Mid-Atlantic TRM was kicked off in January, with selection of measures and parameters for update, including the addition of smart thermostats as a measure. The preliminary draft deliverable was submitted for subcommittee review.
- **Contributed to national EM&V best practices protocol development:** NEEP participated in the US DOE's Uniform Methods Project (UMP) Steering Committee planning, and provided review of draft national documents, including a draft SEM UMP and draft SEE Action guidance on Technical Reference Manual development.
- **Contributed to development of national EM&V conferences:** NEEP participated in planning of the International Energy Program Evaluation Conference (IEPEC), which will take place in August 2017.
- **Supported the ENERGY STAR program:** Given the strategic positioning to include ENERGY STAR specification development activity in development of strong markets for future appliance efficiency standards, NEEP has been working with efficiency stakeholders to ensure that our partners have information to voice support of federal programs potentially dismantled or cut by the FY2018 federal budget, motivated by the March release of the "skinny" budget from the White House which called for elimination of the ENERGY STAR program. NEEP worked with several efficiency stakeholders to develop an unbranded toolkit of information about the ENERGY STAR program and has been working with regional stakeholders to share that information.

Regional Market Transformation Strategies

- **Established NEEP's 2017 HEMS strategy:** Continuing our HEMS work from 2016, NEEP established a strategy and schedule for 2017, including outlining several deliverables to advance the regional market transformation goal established in this product category. This includes multiple concept briefs, guidance documents, a workshop, trainings, and several meetings.
- **Strategic Energy Management Report neared completion:** A draft report, "Evaluation, Measurement and Verification Best Practices and Recommendations for Industrial Strategic



Energy Management Programs” was completed. It is currently undergoing peer review and will be finalized and distributed in the second quarter.

- **Began development of a white paper on Net Savings Evaluation of Midstream Market Transformation programs:** US EPA and US DOE are collaborating on a white paper on guidance for the evaluation of Mid-Stream Market Transformation Programs. NEEP is a member of the group of evaluators contributing to this effort, and the scope and outline were completed in the first quarter.



Promote Resilient, High Performance Buildings & Communities

Provide guidance and technical assistance to support the development of resilient, healthy, high-performance and zero energy buildings and communities at the local and state level.

Events & Stakeholder Engagement

- **Convened the Regional High Performance Schools and Public Buildings Leadership Groups:** The Leadership Groups assembled twice via webinar to highlight new resources and share best practices. The [first webinar](#), on February 6 with 40 attendees, showcased NEEP's new report, [Public Sector Building Energy Benchmarking: Utility Data Access Options and Opportunities](#). Stakeholders joined to learn about current regional trends with US EPA's Portfolio Manager, Connecticut's Clean Energy Communities Program, US DOE resources, and NEEP's new report. Energize Connecticut's Clean Energy Communities Program serves as transferable model of successful collaboration between communities and utilities to drive energy efficiency improvements through benchmarking and developing municipal energy plans. Additionally, this webinar provided resources to advance streamlined access to regional energy data.
- **Shared resources and high performance best practices at regional events:** NEEP presented on March 1 at the Northern New England Facilities Masters Conference in Exeter, N.H. on the importance of proper operations and maintenance, as well as NE-CHPS. On March 8, staff participated in a Zero Energy Schools Workshop at the NESEA BuildingEnergy Boston Conference, attended by 20 people. Topics covered during the workshop included the regional status of zero energy (ZE) schools, planning for ZE, case studies, and more. Lastly, on March 22, NEEP gave a presentation to Connecticut stakeholders at the Energize CT Center. This presentation focused on two topics – the importance of operations and maintenance and NE-CHPS. This event led to discussions about the need to update Connecticut's High Performance Building Standards.
- **Convened and facilitated state-specific High Performance Schools Working Groups:** NEEP convened the Rhode Island and New Hampshire schools leadership groups, the first meeting for each group since last year's schools summits. The main objective of each meeting was to synthesize information collected from the 2016 summits and to begin plotting a path forward for 2017. These state-specific working groups play an important role in bringing together key stakeholders to discuss how to advance the construction of high performance schools.
- **Presented on the legal implications of ZE buildings and codes:** NEEP was invited to present to Defense Resources Inc. (DRI) on zero energy, water, and waste at their annual conference in Las Vegas, Nev. in March. Approximately 150 attorneys heard from NEEP staff on emerging zero energy, water, and waste construction methodologies, codes, and policies and the legal implications of these emerging topics for their clients.



- **Presented on a panel on energy codes and zero energy:** In March, NEEP headed a panel titled [Energy Codes and Zero Energy Buildings: Strategies for Today, Tomorrow, and Beyond](#) at the 2017 NESEA conference in Boston. As the session organizer and moderator, NEEP convened energy code thought leaders from our region (Massachusetts DOER and Rhode Island OER) and beyond (BCAP, California) in order to discuss the strategies being put in place to move from present energy codes to zero energy codes. NEEP identified connections while guiding the audience discussion, and also provided the perspective of other states in the region – most notably New York.
- **Maintained our national network of building energy codes partners:** NEEP continued to play an active role in the National Code Collaborative, as well as provide monthly updates to groups assembled by RECA and NASEO in order to coordinate energy code support activities across the country. We also continued to guide the efforts of the Northeast HERS Alliance in informing its network of energy professionals across our region by identifying resources to promote increased code compliance.
- **Formed Advisory Committee for the Home Energy Labeling Information Exchange (HELIX) project:** NEEP hosted the first HELIX Advisory Committee meeting to gain insights from interested stakeholders on the development of HELIX. The Advisory Committee is a forum for information dissemination and exchange between real estate professionals, state energy offices, utilities, and other stakeholders within the states participating in the project. This group convenes for webinars to accelerate the HELIX project process and provide input on the various stages throughout.
- **Participated in the N.H. Green Realtors Symposium:** NEEP presented on two panels engaging the real estate community about HELIX and the importance of educating the real estate community on energy rating for high performance homes. NEEP disseminated the [realtor's checklist](#) and other [green real estate resources](#) to the 140 symposium attendees.
- **Engaged policy leaders nationwide to promote alignment and replicability with the HELIX project:** NEEP presented to 55 attendees at the [Buildings Committee](#) meeting of NASEO's 2017 Energy Policy Outlook Conference, an invite-only convening of state policy leadership. NEEP provided information on the basic methodology behind the HELIX project to inform stakeholders interested in launching similar efforts in their own states or regions.
- **Formed relationships with New York realtors:** NEEP met with representatives from the New York State Association of REALTORS (NYSAR) to introduce HELIX to this important group of stakeholders. As a product of this meeting, NYSAR provided useful feedback for the project team and joined the HELIX Advisory Committee.
- **Engaged with NYSEERDA to coordinate on multifamily building efforts:** NEEP engaged with NYSEERDA on multifamily and HELIX efforts to maintain a connection with the organization and to identify potential points of coordination. This maintains our presence in the multifamily sector and allows opportunities to share how NEEP has integrated multifamily into all aspects of our community-level work.
- **Engaged with residential building energy rating partners to promote nationwide coordination:** NEEP continued to participate in US DOE's Home Energy Information Accelerator, a forum for national collaboration to promote the scaling up of rating programs, by providing progress



updates from across the region. NEEP also shared information during topical sessions with stakeholders representing similar efforts on the west coast at RESNET's 2017 Conference.

Research, Analysis, Reports, and Case Studies

- **Published an updated Regional Operations and Maintenance Guide:** NEEP finalized and published the latest update to the [Regional Operations & Maintenance Guide for High Performance Schools and Public Buildings in the Northeast and Mid-Atlantic](#). This update, produced through a collaborative process amongst various stakeholders, provides strategies for the latest and greatest in facility operations. Much of the information in the original guide remains relevant today, but a refresh was needed to cover new information on lighting retrofits, electric vehicle charging, financing, recycling, and more. This report ensures that existing buildings are properly maintained to improve occupant health and energy efficiency. NEEP hosted a webinar on the updated guide on March 30 for the Regional Public Buildings Leadership Group and the greater public. A total of 32 people viewed the webinar; a recording can be found [here](#).
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- **Published a blog on the joint REEO Multifamily Report:** NEEP published a blog summarizing a recent report titled "[Multifamily Energy Efficiency Retrofits: Barriers and Opportunities for Deep Energy Savings](#)," published in December 2016. NEEP coordinated a team of other Regional Energy Efficiency Organizations (REEOs) to develop the report on the barriers and opportunities for achieving deep energy savings in multifamily housing retrofits across the country. The report includes a multifamily market characterization with data on the national multifamily housing stock and a number of relevant case studies which demonstrate the strategies that have been effective in achieving deep energy savings in this market. This project was made possible by the generous support of the John D. and Catherine T. MacArthur Foundation. The report on [NEEP's multifamily webpage](#) is accompanied by a [YouTube webinar](#) of the paper's findings.
- **Collaborated with stakeholders to better understand the non-energy benefits of high performance schools:** NEEP met with the Harvard T.H. Chan School of Public Health to discuss their recently released [Schools for Health](#) report. This report assesses the impacts school buildings have on the health and academic performance of students. The purpose of this meeting was to discuss how to collaborate on this work and disseminate it in the future. Ultimately, information gleaned from this report will help NEEP build the value proposition for the design and construction of high performance schools.
- **Launched a regional home energy rating cost study:** There is a wide spectrum of costs for home energy ratings; for example, in Connecticut a rating costs \$975 to \$1850 for the same rating service in the same home. In New York, we found a smaller range in the costs but a variance as



what each rating delivers in terms of data. To better understand the rating market and clearly define a rating, NEEP commenced a regional home energy rating cost study. We anticipate the study will assist regional and national rating organizations to offer more consistency for energy rating services.

- **Partnered with Yale and other collegiate institutions:** NEEP began conversations with Yale University in order to build a partnership that will provide NEEP with needed data and universities with research opportunities for Ph.D. and Master candidates. Similar conversations were also had with Carnegie Mellon University and the Massachusetts Institute of Technology.
- **Researched HELIX governance and ownership frameworks, privacy considerations, and funding structures:** The HELIX project team continued to investigate these issues and developed final recommendations related to how the components of any future HELIX database should be owned and operated. These recommendations will guide the development path of HELIX toward one that: 1) allows for fair decision-making considering stakeholders across the Northeast; 2) maintains all privacy restrictions associated with the stored data; and 3) is configured to operate as a scalable, replicable, long-term asset with an adequate funding or revenue stream.
- **Conducted research on the green real estate market:** NEEP conducted a Green Real Estate survey that was sent to our network of realtors, appraisers, Multiple Listing Services (MLSs), and others, to gain an understanding of how “green” homes and real estate professionals have interacted in the marketplace. NEEP received 50 responses to the survey from eleven of twelve states in the region. The findings were compared to two surveys conducted in other regions. This provides NEEP insight when developing training and education tools for realtors.

Technical Assistance and Resource Centers

- **Advanced energy codes in Connecticut:** The state of Connecticut is looking to update their energy code for a second time in two years, moving to the 2015 International Energy Conservation Code (IECC). To support this, NEEP provided technical assistance to the State Department of Energy, CT DEEP, the State Building Inspector, and Connecticut-based non-governmental organizations (NGOs). At their request, NEEP reviewed proposed code amendments to the 2015 IECC and will continue to provide assistance directly to CT DEEP and the State Building Inspector through the adoption process, anticipated for August 2017. In addition, NEEP was asked to review code change proposals drafted by the Arcadia Center and the Connecticut Sierra Club, which seek to include electric vehicle charging stations in residential garages.
- **Assisted with the development of South Portland, Maine’s building energy benchmarking ordinance:** On January 4, The City of South Portland, Me. adopted a building energy and water usage benchmarking ordinance. This new policy is a part of the city’s [Zoning Regulations](#) and specific to one business district in the city. Throughout the process, NEEP provided technical assistance to the city, including fact sheets, presentations to city council and planning staff, and model language for the ordinance. Benchmarking is a key first step to improving a city’s energy efficiency and NEEP’s regional perspective was a valuable resource for South Portland to enact this ordinance. NEEP is now working with the city to plan a workshop to train building managers on how to properly benchmark their buildings.



- **Maintained our online buildings resources:** NEEP maintained and updated our [new Bulletin Board](#), [High Performance Schools state pages](#), and [blog](#) to feature the latest news, events, and resources on high performance schools and public buildings. A new high performance school exemplar was created for the [Francis T. Bresnahan Elementary School](#). These resources provide information to interested stakeholders and assist with NEEP's dissemination strategy.
- **Led the Pennsylvania Energy Code Collaborative:** In January, NEEP organized a meeting of the [Pennsylvania Energy Code Collaborative](#) in Harrisburg, Penn., which drew 13 participants, including Pennsylvania Department of Environmental Protection (PA DEP) staff. The meeting focused on methods for improving the impact of the energy code training program underway as part of the Residential Energy Code Field Study and adapting a simple resource to improve commercial code compliance in Colorado for use in the Commonwealth.
- **Provided technical guidance to the Delaware Energy Code Coalition:** In March, NEEP provided information regarding the 2015 IECC and HERS Rating at the Delaware Energy Code Coalition meeting in Dover, Del. NEEP provided the Delaware Department of Natural Resources and Environmental Control (DNREC) and other Collaborative members with data and arguments supporting updating the code without weakening amendments. After this meeting, NEEP met with DNREC to discuss strategies for proceeding with this code update.
- **Served on Rhode Island's Code Adoption and Compliance Groups:** NEEP continued to work in partnership with National Grid and the state Building Code Commission on Rhode Island's Code Compliance Enhancement Initiative, which is the only program in our region that allows utilities to claim savings for code support activities. Specifically, NEEP provided technical guidance while participating in the quarterly meetings of both the Implementation and Evaluation working groups. NEEP also continued to serve on the Rhode Island Residential and Commercial Stretch Code Committees, which meet monthly, developing an updated commercial stretch code and a new residential stretch code. The commercial code, based on the 2015 International Green Construction Code (IGCC), is complete and will be publicly vetted in May. Progress toward a first draft of the residential code is anticipated to continue through May 2017.
- **Provided technical guidance to assist synergistic efforts related to HELIX:** NEEP forged new connections with the Rocky Mountain Institute and the Natural Resources Defense Council (NRDC), providing information to help guide similar efforts undertaken by these groups.
- **Provided technical assistance on building data aggregation:** NEEP coordinated with NRDC on the data aggregation threshold in the New York Distributed System Implementation Planning process. We discussed potential technical assistance we could provide on a regional, objective perspective of what jurisdictions are using for whole building data aggregation thresholds and best practices within the Northeast and Mid-Atlantic region.
- **Provided technical guidance on Rhode Island's residential labeling efforts:** NEEP continued to guide the Rhode Island Office of Energy Resources (RI OER) and the working groups they have convened to implement building energy rating across its entire building stock. For residential buildings, NEEP provided updates on synergistic efforts like HELIX at the group's quarterly meeting and provided technical assistance as the state prepares to pilot US DOE's Home Energy Score via National Grid's home performance program.



- **Provided New York City with guidance on residential and multifamily rating:** NEEP formed a new relationship with the NYC MOS, which is interested in catalyzing energy savings in the underserved small multifamily market to pair with its transparency ordinance for large commercial buildings. NEEP provided technical guidance on the various rating programs that are available, as well as different strategies for introducing rating programs or policies at the time of listing of properties for sale.
- **Updated the regional Building Energy Benchmarking Policy Inventory:** NEEP maintains a document that catalogues all of the benchmarking policies that have been enacted throughout the region. The document was updated and [published online](#) to include the recent adoption of benchmarking policies in both Portland and South Portland, Maine. The purpose of this brief is to provide a snapshot of the basics of benchmarking and also more detailed information on the policies that have been enacted in the NEEP region.

Regional Market Transformation Strategies

- **Collected input for upcoming Building Energy Codes Market Transformation Strategy report:** In March, NEEP hosted a webinar for 25 members of our Building Energy Codes Leadership Group to gather feedback regarding the policy recommendations featured in our upcoming *Building Energy Codes Market Transformation Strategy* report, which will be published in the second quarter. During this webinar, members were asked to provide comments and vote on whether the recommendations included in the report were feasible and reasonable for the jurisdictions they represent. NEEP collected this input and incorporated it into the forthcoming report to ensure it meets the needs of stakeholders across the entire region.



Share Best Practices to Advance Strategic Electrification & Next Generation Energy Efficiency

Support the region’s move to strategic electrification of buildings and transportation – backing out of carbon-based fuels, and pairing deep energy efficiency with distributed renewable power, energy storage and demand response.

Events & Stakeholder Engagement

- **Convened the Strategic Electrification Assessment Leadership Committee and planned for regional Summit:** The Leadership Committee gathered for its first meeting to be introduced to the Strategic Electrification project and provide input on the development of a [Request for Proposals](#) for contractor services. The Committee met again by teleconference to review the selected contractor’s draft work plan and to provide initial feedback on the planning for an in-person [Regional Strategic Electrification Summit](#), scheduled for June 29 in Andover, Mass.
- **Hosted a Regional ASHP Working Group meeting:** The ASHP Working Group, whose objectives are to effectively implement the strategies included in the [2016 ASHP Market Strategies Report](#), met to discuss installer guidance materials and integrated controls, and to plan for the [2017 Regional Cold Climate Air-Source Heat Pump Market Transformation Workshop](#), scheduled for June 27-28 in Andover, Mass.
- **Provided ASHP thought leadership at several regional events and audiences:** One of the recommended strategies from NEEP’s ASHP Market Strategies report is to educate a wide range of industry stakeholders on ASHPs and on our cold climate specification. In the first quarter, we:
 - Contributed to the Bringing Renewable Thermal Solutions to Scale in New England project;
 - Contributed to the February 27 Northeast Renewable Thermal Summit;
 - Submitted comments ahead of a March 16 US DOE meeting on “Smart Tools for Improving Installed Performance of Residential and Small Commercial HVAC Systems” to highlight the need for tools to verify in-field performance of ASHPs; and
 - Contributed to NYSERDA’s ASHP Advisory Group.

Research, Analysis, Reports, and Case Studies

- **Published two new guides for ASHP installers:** [A Guide to Sizing & Selecting ASHPs in Cold Climates](#) and [A Guide to Installing ASHPs in Cold Climates](#) provide practical, best practice guidance related to sizing, selecting, and installing ASHPs in cold climates. ASHP system performance, including energy efficiency of the systems, can be negatively impacted by poor sizing, system selection, and installation, which also affect customer comfort. The guides were developed to assist installers in sizing and selecting ASHPs for cold climate applications, while



maintaining high efficiency, performance, and customer satisfaction. Dozens of external stakeholders contributed to the contents of the guides, including close partnership with a team at US DOE's Buildings Technologies Office.

- **Issued a [Request for Proposals](#) to conduct a Regional Strategic Electrification Opportunities Assessment:** The RFP was issued on February 13 and NEEP selected a contractor team made up of Synapse Energy Economics and Meister Consulting Group on March 9 to conduct the Regional Strategic Electrification Opportunities Assessment Report. The draft report will be prepared for review by NEEP's Strategic Electrification Advisory Committee. Following Advisory Committee review, NEEP will hold a [regional summit in late June](#) with a wider audience to discuss preliminary findings, provide input for report finalization, and inform development of a regional action plan.
- **Cold Climate ASHP specifications expanded:** The ccASHP [specification and associated list](#) grew to include 300 products. Product manufacturers must submit complete applications to NEEP to be listed. The specification continues to be used in various ways by stakeholders throughout the region including Massachusetts Clean Energy Center, Rhode Island energy efficiency programs, Efficiency Vermont, and NYSERDA.

Technical Assistance and Resource Centers

- **Provide technical assistance to regional program administrators on ccASHPs:** NEEP provided direct input to program planners in Massachusetts, Rhode Island, Connecticut, and New York.



Advanced Efficiency Leadership Network

A regional center for learning and sharing best practices and a dashboard of state and local progress on energy efficiency and integrated clean energy solutions. Bringing together thought leaders on policy, programs and market-based solutions, the Advanced Efficiency Leadership Network (AELN) is working to drive progress towards an energy-efficient, resilient, and accessible low-carbon economy.

Events & Stakeholder Engagement

- **Presented on policy updates to NEEP’s Allies via webinar:** These webinars are held twice quarterly, by invite only for [NEEP Allies](#). Topics covered include state-by-state updates on regional policy developments.
- **Engaged with E4theFuture about mutual support in policy tracking.**
- **Participated in New Hampshire Energy Efficiency Resource Standard (EERS) workshops:** Topics covered included cost effectiveness testing and regional best practices.
- **Participated in grid modernization dialogue:** Hosted by The Nature Conservancy, these discussions focused on current trends and policies in the Northeast.

Research, Analysis, Reports, and Case Studies

- **The [Regional Energy Efficiency Database \(REED\)](#) was populated with 2015 data:** The databased now includes energy efficiency data for ten states.
- **Published two new Public Policy & REED resources:** NEEP released the Spring 2017 [Policy Snapshot](#) as well as [REED Renderings Issue #4: Taking a Deeper Look at New REED Data](#).
- **Completed two new Policy Trackers:** NEEP published new *Policy Trackers* in [February](#) and [March](#) to highlight policy developments in the Northeast and Mid-Atlantic, including updates on activities by Public Utility Commissions and state legislatures.
- **Published a report on [Advanced Metering Infrastructure \(AMI\) cost-benefit analyses in the NEEP region](#):** The purpose of this report is to provide insight into utility trends regarding AMI deployment costs and benefits within the NEEP region. The report reviews the costs and benefits evaluated in both retrospective and prospective AMI deployment proposals, highlighting any outlying factors included in each proposal.
- **Published the [2017 Regional Roundup](#):** This annual publication provides insights into the latest policy developments, as well as updated REED data. The report includes links to external resources such as Public Utility Commission orders, policy documents, listserv information, and utility plans and programs.



Technical Assistance and Resource Centers

- **Updated our online state-specific public policy pages:** The state-specific webpages, which can be accessed [here](#), include state policy and program information and statistics on energy efficiency jobs, program expenditures, savings, etc.
- **Responded to requests for technical assistance in New York:** NEEP provided policy guidance on New York's Reforming the Energy Vision Proceeding (NY REV) on recent Commission orders and relevant NEEP reports.
- **Monitored regional policy developments:** NEEP continuously monitors state and local policy developments via energy efficiency board/council meetings, as well as media outlets and legislative tracking.