

NEEP 2016 QUARTERLY REPORT FIRST QUARTER

Executive Summary

Energy efficiency has often been referred to as the least-cost, first-order resource for achieving reduced energy use. In 2016, we're seeing a developing conversation about customer and market engagement to create new efficiency solutions. In the midst of this shift, NEEP will seek to continue bringing stakeholders together to find solutions for the challenges we face today.

We're proud that through collaboration, NEEP and our network of sponsors, allies, foundations, other funders and stakeholders from across the region and nation have worked to embrace efficiency as the least-cost, first-order resource to meet economic, environmental, and energy system needs. As we move forward with an eye on Next Generation Energy Efficiency, NEEP shares this report to highlight some of our 2016 first-quarter achievements.

Advancing Efficiency Innovation

Home Energy Management Systems

• Planned for a Home Energy Management Systems (HEMS) Workshop: NEEP planned for an inperson HEMS workshop in coordination with the Home Performance Coalition (HPC) to take place at ACI's National Conference in Austin from April 6-7. The ACI Conference focuses on home performance, and integrating a HEMS workshop for that audience is a great opportunity to ensure that programs and installers who are going into homes and making efficiency improvements understand the technology and how to work with homeowners to integrate the technology. Through close collaboration with HPC and ACI, NEEP prepared a day and a half agenda of HEMS information, speakers, and a technology showcase. The agenda includes a range of topics, from new products and home energy labeling integration with HEMS, to program design and auto-M&V. In addition to the six HEMS-focused sessions on the ACI agenda, NEEP and HPC organized a lunchtime discussion and evening HEMS product showcase. This workshop presents a great opportunity to increase visibility of HEMS amongst home performance stakeholders, as well as make progress in the discussion of the opportunities within the technology.

Residential Air Source Heat Pumps

• Created the Proposed Version 2.0 ccASHP Specification: NEEP discussed potential revisions to the Cold Climate Air Source Heat Pump Specification (ccASHP Specification) with the cold-climate metrics sub-committee of the Air Source Heat Pumps Working Group in the fall of 2015. Based on sub-committee teleconferences, survey results, and additional input received over the past six months, NEEP proposed revisions to the ccASHP Specification, and has strongly encouraged members of the ASHP working group and other interested stakeholders to submit written comments. Included in the proposal are qualitative and quantitative reasons for the improvements, as well as a high-level long-term vision for Version 3.0.

Residential Lighting

 Planned for 2016 'State of the Market' Residential Lighting Briefs: For many years, efficient lighting such as CFLs and LEDs have helped residential efficiency programs realize the majority of their



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savings. In the past 12 months, however, several groundbreaking events have occurred that signal we are in the late stages of market transformation. As energy efficiency program administrators and other stakeholders need to understand the changing landscape, NEEP has decided to take a more nimble approach to communicating updates in the residential lighting market through publication of bi-annual briefs. We plan to undertake two report briefs in 2016 that will address the big picture of the residential lighting market, market transformation, and the appropriate role for efficiency programs to help inform efficiency program decisions. NEEP has held several targeted meetings with stakeholders to help inform the development of the first residential lighting brief, and we continue to collect key lighting data and recent reports. The first brief, expected in in the second quarter or early third quarter, will include: lower-lifetime lighting options; summary of the General Service Lamp Federal rulemaking; and information on lighting market transformation in addition to updates on key residential lighting activities throughout the region.

Comprehensive Multifamily Retrofit

Updated the Comprehensive Regional Multifamily Program Matrix: NEEP completed an update of
our matrix of regional ratepayer-funded energy efficiency programs. The spreadsheet matrix details
the specific measures, program partners, outreach methods, and eligibility criteria for programs that
retrofit multifamily housing in the region. NEEP incorporated stakeholder feedback to create an
accurate dataset that is accessible by those working to design their programs using best practices
from around the region that enable deep energy savings in multifamily buildings.

Industrial Efficiency

• Drafted the Industrial Energy Efficiency Market Assessment and Regional Strategy Recommendation: This Market Assessment is the foundation of NEEP's Industrial Energy Efficiency (IEE) initiative. It provides an industry overview and quantification of industrial energy use and paints a picture of tools and resources available from the U.S. Department of Energy (US DOE) as well as from regional utility and state programs. The assessment serves as a reference for concepts and terminology in the industry and IEE, especially Strategic Energy Management (SEM). The report also includes recommended strategies for how to move IEE forward in the region through the expanded adoption of SEM.

Business Leader Recognition Program

• Business Leaders highlight the economic and environmental benefits of energy efficiency: The Northeast Business Leaders for Energy Efficiency Program is a unique opportunity for energy efficiency program administrators (sponsors of NEEP) to profile a customer who demonstrates exceptional leadership and best practices in energy efficiency in the operations and maintenance of their business. These leaders are recognized at the annual NEEP Summit, and provide important examples of the economic and environmental benefits of energy efficiency. The 2016 Business Leaders Program will highlight six regional businesses succeeding with energy efficiency as a rewarding and compelling business strategy. Nominated by NEEP Sponsors, these business case studies demonstrate exemplar commitments to do more with less energy, and showcase their accomplishments to reach environmental and budgetary goals via investments in efficiency.



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High Performance and Zero Energy Schools and Public Buildings

• Led development of a national energy efficiency agenda for state and local governments: NEEP's Carolyn Sarno Goldthwaite co-Chairs the SEE Action Existing Commercial Buildings Working Group and led the development of the group's latest resource released in February: The 2020 Leadership Agenda for Existing Commercial and Multifamily Buildings which establishes a national benchmark for state and local government leadership on energy efficiency by defining a suite of bold-yet-practical solutions they can take over the next five years, including: strengthening market demand for energy efficiency; unlocking data related to buildings and energy; expanding public-private partnerships and intergovernmental collaboration; improving access to capital for energy efficiency improvements; improving the energy efficiency of publicly owned facilities; and adopting and implementing strong building energy codes. In January, Ms. Sarno Goldthwaite was invited to attend a Whitehouse event recognizing the completion of the resource and presented on a webinar attended by over 200 stakeholders from across the country in February.

DesignLights Consortium and Advanced Lighting Controls

• The DesignLights Consortium™ (DLC) continued to implement program developments and changes: One important change was the successful transition of the Solid State Lighting Qualified Products List (SSL QPL) from technical requirements table version 2.0/2.1 to version 3.0/3.1. As of March 25, 2016 all products on the DLC SSL QPL must meet Technical Requirements V3.0 which includes updated efficacy, rated data, and new category definitions. Products that do not meet these requirements were removed from the active QPL, though they will remain searchable in the DLC database. Furthermore, to keep the requirements current and seek increased savings for DLC membership, we have launched a specification revision effort. Drafts for the V4.0 revisions were distributed for stakeholder comment, with the intention to release criteria as final in time for the normal 270 day transition period to be complete on January 1, 2017. Additionally, as part of the DLC's Commercial Advanced Lighting Controls (CALC) project, we issued Draft 2 of the first-of-its-kind Networked Lighting Control System Specification. More than 200 stakeholders participated in a webinar to learn more about the specification, and we received 243 formal comments from industry stakeholders including 17 manufacturers and the National Electrical Manufacturers Association. The lighting industry continues to be very positive and supportive of the CALC project.

Building Efficiency Markets

Home and Building Energy Rating, Labeling and Disclosure

• Supported innovative building energy projects in New York: NEEP continued to support residential and commercial building rating pilot programs led by the New York State Energy Research and Development Authority (NYSERDA). First, we provided comments to the first draft plan for the Tompkins County Home Energy Rating Disclosure pilot, which was launched last year to investigate the feasibility of home energy information disclosure at the time of sale. The plan cites NEEP's Home Energy Labeling Exchange (HELIX) project as well as our web resources for real estate professionals. NEEP also contributed data points to the NYSERDA-convened National Labeling Group on the technical committee, by sharing the specific data collected for the Massachusetts Building Asset Rating (BAR) pilot and NEEP's Renter's Checklist. This group includes a wide range of national stakeholders working to create a ubiquitous building energy label for multifamily and commercial



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buildings. These labels aim to provide more transparency in the real estate market and drive the market for energy efficiency retrofits.

Contractor, Realtor and Design Community Tools and Training

Disseminated resources for real estate professionals: NEEP's <u>Checklist for Real Estate Professionals</u> was <u>linked to</u> by todayeco.com, a newsletter with nearly 20,000 Facebook subscribers. This resource provides guidance to realtors aiming to incorporate energy efficiency characteristics into their sales process. The <u>Renter's Checklist for an Energy Efficient Home</u> is aimed at renters who want to gain visibility into the energy efficiency of a potential new home. These resources seek to address a gap in the real estate market that currently exists by providing more information to tenants and building owners.

Updating Baselines

Progressive Model Building Energy Codes

• Provided direct support to improve New York energy code effectiveness: NEEP provided technical guidance to NYSERDA and the state Department of State (DOS) to shape improvements in building energy code compliance and adoption, respectively. First, NEEP met with NYSERDA staff to discuss opportunities to collaborate this year to support three new programs intended to increase the use of third parties in code enforcement and provide more direct assistance to individual municipalities to expand the use of these promising techniques for improving energy code compliance. In response, we provided NYSERDA with an assessment of other states' activities to support these initiatives. Second, NEEP provided guidance as New York completed its 2015 IECC adoption process, which will provide a roughly ten percent boost in efficiency from the state's previous energy code. NEEP also began assisting in the design of a statewide voluntary stretch energy code that will partially ensure code compliance by focusing on performance requirements.

State and Federal Appliance Standards

• Engaged in the US DOE's General Service Lighting (GSL) Notice of Proposed Rulemaking (NOPR): Released on February 12, this is a particularly impactful appliance standard as it represents the second phase of the Energy Independence and Securities Act (EISA) 2007 law and impacts most residential lighting products. While the first phase of EISA effectively moved the minimum lightbulb from a traditional incandescent to a halogen bulb and resulted in about a 38% energy savings starting in 2012, the proposed second phase of EISA would bring the minimum bulb for most general lighting applications up to a very efficient LED bulb by 2020. This is a huge and progressive proposal from DOE, and NEEP has been collaborating closely with efficiency stakeholders to ensure a strong standard is finalized. NEEP reviewed the proposal, working with stakeholders to unpack and understand the content, and shared this information with members of NEEP's Appliance Standards Working Group as well as residential lighting and retail products stakeholders. NEEP is planning to prepare written comments to submit to DOE in May.



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Tracking Efficiency Policies & Results

Regional Evaluation, Measurement and Verification Forum

• Hosted the 2016 EM&V Forum Annual Public Meeting: Nearly 100 evaluators, regulators, program administrators, and other interested stakeholders from across the region gathered in Hartford, Conn. on March 31, 2016 for the Regional EM&V Forum Annual Public Meeting (APM). NEEP, along with Forum leadership, brought together stakeholders to discuss implications of an emerging world of integrated distributed energy resources, how utilities can prepare for and incorporate M&V 2.0 into their EM&V practices, and developments in national EM&V standards. Panel presentations are available on the APM website. The APM was preceded on March 30 by an M&V 2.0 Workshop, in coordination with US DOE and Lawrence Berkeley National Laboratory (LBNL), where a group of more than 50 industry experts and interested stakeholders gathered to review and discuss the technical details, opportunities, and challenges of using advanced data collection tools and data analytics to support EM&V for energy efficiency programs. Discussion covered both commercial and residential application, with LBNL also leading a brainstorm on key elements of piloting M&V 2.0 for regional energy efficiency programs.

Regional Energy Efficiency Database

• Program year 2014 data was added to the Regional Energy Efficiency Database (REED): NEEP finalized data collection from for the 10 jurisdictions included in REED, conducted quality control of the data including cross checking with publically reported Public Utility Commission (PUC) reports and direct communications with state representatives before publishing the state data. Visitors to REED can now view 2014 Program Year data <u>live</u> on the REED website, along with 2011-2013 data. This trend data was used to inform analysis for <u>NEEP's 2016 Regional Roundup</u>, and will soon be followed with a snapshot of the 2014 program year data, highlighting key trends within a policy analysis framework.

Public Policy Trends Analyses, Reports and Education

• Released the fifth annual Regional Roundup of Energy Efficiency Policy: This year's theme: "Next Generation Energy Efficiency," matches the vision laid forth in NEEP's recent strategic plan. Along with state-level data and analysis, the report examines regional trends and shared challenges in harnessing the potential of energy efficiency, with a focus on Next Generation themes including: Grid Modernization; Strategic Electrification and Geo-targeting; Advanced Building Policies; New Program Strategies; Integrating Energy Efficiency and Demand Response; EM&V 2.0; and the Ongoing Evolution of Financing Tools. Thanks in part to support from the US DOE, 2016 was the first time the report received professional design support and was given a limited print run of hard copies. The report is being disseminated to policymakers, program administrators, and thought leaders across the NEEP region and at a national level — to much acclaim. We have described and linked to the report in several e-blasts and blogs, and will continue leveraging the report throughout the year — in blogs, at the NEEP Summit, and in meetings and speaking engagements.



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Northeast Energy Efficiency Summit & 20th Anniversary Celebration

• Planned for the upcoming 2016 Northeast Energy Efficiency Summit: Planning moved forward in the first quarter with the formation of our internal planning committee and development of the program and agenda. Commissioner Robert Scott, of the New Hampshire Public Utilities Commission, was confirmed as a Summit co-chair and will open the dinner celebrating our 2016 Business Leaders and NEEP's 20th Anniversary on Monday, June 13. The agenda, composed of three different roundtables on Monday, June 13 and Power Talks on Tuesday, June 14 was finalized, and speakers were invited. Robb Pratt, Chairman and President of the International Institute for Energy Conservation (IIEC) and Taylor Coswell, Executive Director of the New Hampshire Community Development Finance Authority, have also been confirmed as speakers. A new session, the "NEEP Olympics," will offer exhibitors the opportunity to highlight their latest innovations, with the audience voting for the most exciting pitch. Exhibitors have begun to apply to participate, and selections will be made in May.







Advancing Efficiency Innovation

Drive efficiency product, service, and program innovation to increase energy savings on a regional scale through multi-state research, analysis, and market transformation strategies; tools and resources such as qualified product lists, technical guidelines, and case studies; and best practice peer exchange and industry engagement.

Home Energy Management Systems

- Development of Home Energy Management Systems (HEMS) Regional Market Transformation Strategy: NEEP is planning to research and establish a regional HEMS Market Transformation Strategy report for the Northeast. Part of that effort includes identifying market barriers and opportunities and establishing strategies to overcome them. In the first quarter, NEEP worked to develop a plan for this work over the course of 2016, including coordination with research on smart thermostats expected to start in the second quarter.
- Helped NEEP Sponsors expand HEMS promotions: NEEP leads a HEMS Working Group, whose
 goal is to set a path for HEMS technology to evolve with efficiency as a major component. The
 working group develops common objectives, terminology, and goals in the HEMS space. In the
 first quarter, webinars were held on January 13 and March 17, with 24 and 26 attendees,
 respectively.
- Disseminated information through participation in regional and national meetings: In
 February, NEEP staff presented at the <u>Smart Energy Summit</u> in Austin, Tex. on the role of HEMS
 in efficiency programs, as well as at the <u>MEEA Energy Solutions Conference</u> on the opportunities
 for energy efficiency with HEMS. We also presented on the residential opportunities of autoM&V, enabled through HEMS, at the <u>workshop preceding the NEEP EM&V Forum Annual Public Meeting</u>.
- Updated the <u>HEMS Technology Assessment</u>: Originating from the 2015 HEMS research report,
 NEEP reviewed and updated the HEMS technology assessment inventory twice throughout the
 quarter. Additional products added to the inventory list included costs, availability, and
 descriptor information. A total of 24 products, mostly comprising smart lighting and smart hubs,
 were added to the technology assessment.
- Updated the retail products online resource center: NEEP tracked web-traffic analytics and found that the retail products webpages were visited significantly, with the HEMS webpages receiving 314 quarterly page views. Additionally, the recent blog, "HEMS Can Enable Deep Savings, But Important Work Ahead for Programs and Policymakers" was published on March 16 and received 44 page views.



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Residential Air Source Heat Pumps

- Maintained the Cold-Climate Air Source Heat Pump (ccASHP) Specification: With the publication of the ccASHP specification, stakeholders across the region now have a model equipment and performance requirement specification. The specification and its associated metrics were developed to help regional stakeholders to better identify products that perform under low-temperature conditions. By collaborating with program implementers, there were a total of 135 units included on the list by the end of the first quarter, up from 17 at the list's launch in January 2015. Eight manufacturers are currently participating in the process, and their interest clearly demonstrates the value that a qualification provides to their business and subsequent participation in regional programs. NEEP also manages a cold-climate metrics subcommittee to inform the draft specification, which met on February 25.
- Cold-Climate ASHP specification drawing interest: The ccASHP specification webpage garnered 2,300 views in the first quarter, making it the second most viewed page behind the landing page. Further, the specification document was downloaded 351 unique times and was ranked second for document download rates on the entire NEEP website.
- Hosted a regional ASHP Working Group meeting: NEEP leads an ASHP Working Group and
 associated sub-committees, whose goals are to effectively implement the strategies included in
 the 2014 ASHP Market Strategies Report. The ASHP Working Group held a quarterly meeting on
 March 24. In a survey following the meeting, 100% of the 10 respondents noted that the
 meeting was "Good" or "Great" and 100% stated that they would recommend the meeting to a
 colleague.
- Updated the ASHP and HPWH online resource center: The ASHP landing page houses NEEP's cold-climate ASHP page with the listing and specification, while the HPWH page is educational. ASHP-based posts to NEEP's blog continuously receive over 100 page views and are among the top ranking blogs. The recent blog, "NEEP's Greatest Heat Pump Hits" was published on February 29 and received 73 page views.
- Delivered a presentation on cold-climate ASHP: One of the recommended strategies from the ASHP report is to educate a wide range of industry stakeholders on ASHPs and on our coldclimate specification. At the <u>2016 ACI New York Regional Home Performance Conference</u>, held February 9-10, NEEP presented at a session covering an overview of the cold-climate systems and the specification.

Residential Lighting

- Held the kick-off meeting for the 2016 Residential Lighting Leadership Advisory Committee:
 The Committee's goals are to guide the development of two 2016 'State of the Market'
 Residential Lighting Briefs highlighted in the Executive Summary, as well as to help collect
 information on changes to the residential lighting market. This year's kick-off meeting was held
 on March 8.
- **Development of our residential lighting workshop**: NEEP is planning an in-person Residential Lighting Workshop to take place in September. The agenda will focus on market transformation, smart lighting products, and new LED products entering the market.



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- Sponsor retail products programs achieve significant energy savings: NEEP sponsors were recognized as winners of the 2016 ENERGY STAR Partner of the Year-Sustained Excellence Award for Qualifying Products Award, which NEEP applied for on behalf of the retail product sponsors' programs. In the application NEEP made the case that, in aggregate, regional efficiency programs are making a tremendous impact. The award will be presented to NEEP on behalf of the sponsors at a ceremony on April 13 in Washington, D.C., and we will present each member with a framed certificate to commemorate the honor.
- **Updated the residential lighting online resource center:** NEEP tracked web-traffic analytics and found that the retail products webpages were visited significantly in the first quarter, with 65 page views of the Residential Lighting webpages. Additionally, the recent blog, "Changing of the Guards in Residential Lighting" was published on January 25 and received 383 page views.
- Sponsors highly satisfied with retail products initiative: In order to support NEEP sponsors' retail products programs to achieve significant energy savings, NEEP held the first quarterly Retail Products Working Group meeting on March 28 with representation from states across the Northeast region. These meetings provide a platform for stakeholders to discuss regional strategies in efficiency programs. In addition to compiling program summaries in Lighting, Electronics, and Appliances, NEEP provides a monthly update newsletter to members of the Working Group, which averaged a strong 26.2% open rate, compared to the average non-profit open rate for membership organizations at 11.66%. Furthermore, in a survey after the March meeting, all sponsors who responded rated the meeting as a 5 out of 5 for quality.
- Engaged with the ENERGY STAR Retail Products Platform (RPP): NEEP engages with efficiency efforts in retail products including participation in the RPP process. This includes attending monthly calls for the RPP EM&V and RPP Products task forces and bi-weekly calls for the larger RPP organizers concerning the implementation of a nation-wide pilot of the RPP. NEEP provided comments on EPA's Guidance on Evaluation of the RPP as well as their product selection. We also aided with targeted outreach to our sponsors by answering questions and building a connection to the platform.

Comprehensive Multifamily Retrofit

- Presented to the Portland, Maine City Council on benchmarking and transparency ordinances: NEEP provided technical guidance to the City of Portland on successes and challenges seen in jurisdictions across the country that have adopted legislation mandating the disclosure of building energy consumption. The presentation outlined the energy savings benefits associated with benchmarking commercial and multifamily buildings as well as making this data more available in the real estate market to ensure the proper valuation of energy efficiency.
- Created regional multifamily market characterizations with other Regional Energy Efficiency
 Organizations (REEOs): As part of a national best practices collaborative project on Multifamily
 Retrofits, each REEO team compiled data on the multifamily housing sector in their respective
 regions into a format that is consistent and accessible to stakeholders. Some REEOs are also
 compiling more in-depth market characterizations that they will include in their regional section.
 These characterizations aim to provide decision makers with accurate data on the market in
 order to help shape multifamily efficiency program plans.



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Contributed to news articles detailing the challenges and best practices of retrofitting
multifamily buildings: NEEP was quoted in the article "Can low-income housing be energyefficient and affordable?" posted to Vox.com. This site was visited by 167 million unique viewers
per month in 2015. The large readership of this website will ensure the exemplary projects and
best practices detailed in the article reach a large audience who are able to implement more
efficiency retrofits on low-income housing nationwide.

- Co-convened a stakeholder group working to facilitate access to energy data in multifamily buildings: As a part of the Network for Energy, Water, and Health in Affordable Buildings (NEWHAB), NEEP worked with a small national sub-group to develop a white paper on the barriers and next steps for stakeholders seeking to access aggregated whole building energy data as the first step in reducing energy and water usage in their buildings. This resource aims to lay the groundwork to removing some of the barriers that persist in allowing building owners to access this crucial data and provide some guidance on how to use it effectively.
- Presented best practices in program design and implementation to regional stakeholders:
 NEEP organized a panel and presented to attendees of the <u>Better Buildings by Design</u>
 <u>Conference</u> in Burlington, Vt. on "The Path Forward for Multifamily Efficiency Programs." This presentation to 80 stakeholders included best practices learned from the region as well as case studies from two providers of efficiency services to low-income multifamily housing in Vermont in order to assist other providers of efficiency services in the region.
- Convened Regional Multifamily Leadership Group: NEEP hosted a webinar for the Regional Multifamily Leadership Group, a set of stakeholders working directly to advance the efficiency of multifamily housing. We presented to 15 attendees on an analysis of trends in the region's multifamily programs in order to support program administrators with program design. Michael Colgrove of NYSERDA presented to the group on national efforts to establish a ubiquitous building energy label and Sean Denniston of the New Buildings Institute detailed the progress thus far in the proposal to establish a multifamily section of the International Energy Conservation Code (IECC).
- Updated the multifamily online resource center: NEEP provided timely and relevant updates to
 the online resource center for multifamily efficiency stakeholders. In addition to resources
 developed by NEEP aiming to advance the efficiency of this segment of the building market, the
 resource center was updated to include the newest research and best practices developed by
 third-party organizations to create a centralized location to access resources to reach this
 underserved market.
- Collaborated with regional and national organizations on multifamily retrofit efforts: As part
 of a national best practices collaborative project on Multifamily Retrofits, NEEP engaged with
 the Institute for Market Transformation (IMT) and the American Council for an Energy-Efficient
 Economy (ACEEE) to find areas of collaboration and information sharing in order to maximize
 our collective impacts on the multifamily market.

Industrial Efficiency

• **Co-hosted a regional working group meeting**: In partnership with Greg Baker at Efficiency Vermont, NEEP organized and hosted a Northeast Regional Continuous Energy Improvement



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(CEI) Discussion Group teleconference on February 8. NEEP presented on a number of important topics including an update on the development of the regional market assessment and a sneak peak of NEEP's Industrial Energy Efficiency Project.

Business Leader Recognition Program

- NEEP Sponsors engaged in Business Leaders Recognition Program to highlight the business
 voice for energy efficiency: Six <u>NEEP Sponsors</u> submitted a qualified nomination in February, a
 process that requires specific information and details along with the express interest of the
 nominated company. We appreciate the time and effort of our sponsors to prepare high quality
 nominations to highlight their customers' energy efficiency achievements. The focus remained
 on those businesses going "above and beyond" in the vein of "Next Generation Energy
 Efficiency."
- Six Business Leaders selected for recognition for their commitment to accelerate energy
 efficiency: NEEP's technical review committee reviewed and approved six 2016 Business
 Leaders. All met specific criteria which demonstrate outstanding acts of leadership and best
 practices for energy efficiency in their business, including continuous energy improvement
 processes. They represent a range of business types and reflect the important role of ratepayerfunded energy efficiency programs to help achieve significant energy savings while promoting
 economic development.
- Completed Business Leader case studies and planned for recognition program: With the 2016
 Business Leaders selected, NEEP worked with our sponsors to prepare the development and
 production of inspiring written and video case studies to take place in April and May as well as
 for the presentation of the Business Leader Recognition Awards at the NEEP's 2016 Northeast
 Energy Efficiency Summit to take place June 13-14 at the Omni Mount Washington Resort in
 Bretton Woods, N.H.

High Performance and Zero Energy Schools and Public Buildings

- Formed and convened the New Hampshire High Performance Schools Working Group: In January, NEEP organized a meeting for the Working Group, which was created with input from the N.H. Department of Education. The purpose of this initial meeting was, in part, to provide attendees with an overview of high performance schools in the state and how NEEP has been involved in the past in this capacity. The group also discussed a visioning document that was created prior to the meeting. Working Group members offered feedback and their input was subsequently incorporated into the document. During the March meeting, attendees got an overview of NE-CHPS and began planning for a high performance schools event in the fall of 2016.
- Advanced zero energy public buildings in the region: NEEP disseminated its newest report, A
 Zero Energy Roadmap: Progress Report, for peer review and received feedback from numerous
 regional stakeholders. The feedback will be used to craft state progress reports in regard to the
 "Critical Next Steps" outlined in the original report. The focus of this upcoming report is on
 progress to date throughout the region in terms of zero energy buildings programs, initiatives,
 and actual construction. Additionally, the updated report will offer guidance in the field related



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to buildings codes, financing mechanisms, utility regulation, resiliency, and more. The report is being finalized and a dissemination strategy is being developed. Zero energy buildings are the ultimate goal of this initiative and this report should support this by allowing states to assess their current standing and their paths forward.

- Disseminated NE-CHPS and operations and maintenance best practices at the Northern New England Facilities Masters Conference: NEEP's High Performance Buildings Associate John Balfe presented at the conference hosted in New Hampshire. The presentation was focused on NE-CHPS and provided attendees with guidance on how to get their facilities on the path to highest performance. The audience of 30 included facilities managers, energy managers, and school business administrators. This conference served as a platform to introduce NE-CHPS and the regional Operations and Maintenance Guide to stakeholders from Maine, Vermont, and Connecticut that may not have been too familiar with NEEP's work.
- Disseminated exemplary high performance schools progress at the state level at the Green Schools Conference and Expo: NEEP presented during two sessions. The first session focused on work done in three states (Vt., R.I. and Pa.) in regard to the advancement of high performance schools. Carolyn Sarno Goldthwaite presented on R.I.'s history and ongoing success to becoming one of the regional leaders in the development of high performance schools. In a separate session, John Balfe presented on a track entitled "High Performance and Zero Net Energy: The Perfect Partnership for Schools." This portion of the session focused on two zero energy capable schools—Pell Elementary and the Paul Crowley MET Center—both located in Newport, R.I.
- Engaged with the Delaware Valley School Facilities Managers Association (DVSFMA): At the request of EPA Region 3, NEEP began a collaborative effort with the DVSFMA to address preventative maintenance issues prevalent across the region. The initial discussion highlighted the lack of preventative maintenance programs in Pennsylvania, and a pathway forward was illuminated through the Pennsylvania Association of School Business Officials. NEEP shared our Operations and Maintenance Guide, which in turn was shared with the 100-plus members of the DVSFMA.
- Convened regional High Performance Schools and Public Buildings Leadership Groups: NEEP held a joint working group webinar featuring three different topics. Stakeholders from nine states learned about facilities certification programs currently under development in Massachusetts and New Hampshire. Additionally, NEEP introduced two new projects that are being launched this year: 1) an update to the 2013 Regional Operations and Maintenance Guide (O&M guide); and 2) a data research project on the health benefits of high performance schools. NEEP engaged the group regarding new information to include in the O&M guide to gauge where regional guidance is still needed.
- Facilitated the Rhode Island High Performance Schools Working Group: The purpose of the group is to promote operational savings through energy efficiency improvements while paving the way to zero energy schools. The group met to continue planning for the R.I. High Performance Schools Summit that will take place in October. Outcomes of this meeting included target audience, list of possible speakers, confirmed venue, and a general theme for the event. This meeting was attended by 10 stakeholders spanning a diverse set of interests including architects, facility managers, school administration, state education officials, and more.



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Educated practitioners about best practices in high performance school design: NEEP, alongside the Massachusetts Facilities Administrators Association (MFAA) and Collaborative for High Performance Schools (CHPS), will host a high performance schools training in April. This event will focus on NE-CHPS and will apply to a broad range of buildings professionals including architects, engineers, and facilities managers. NEEP worked with CHPS to make the training American Institute of Architects (AIA) approved, and design practitioners attending the CHPS Training Workshop will be eligible to receive 8 AIA learning units as approved by the Mass. Chapter.

- Maintained and updated schools and public buildings online resource center: NEEP continually
 maintained and updated the <u>Bulletin Board</u>, <u>High Performance School's State Pages</u>, and <u>blog</u> to
 feature the latest news, events, and resources on high performance schools and public
 buildings. These resources provide easy access for information by interested stakeholders and
 assist with NEEP's dissemination strategies.
- Engaged regional stakeholders in research on health outcomes in high performance schools:
 NEEP presented to the Regional High Performance Schools Working Group on preliminary
 survey data collected in New Hampshire with information on Indoor Air Quality (IAQ)
 Management from nearly 300 schools in the state. Stakeholder feedback was collected and
 additional states offered to partner to collect survey data from their schools in order to grow
 the dataset to provide more information on the health, educational, and financial outcomes of
 investing in high performance school buildings.
- Advanced zero energy buildings and homes in Rhode Island: NEEP continued to be an active member of the R.I. Zero Net Energy Council, which is working to create a roadmap for the state. The council is using NEEP's Zero Energy Roadmap as guidance for what measures to include.

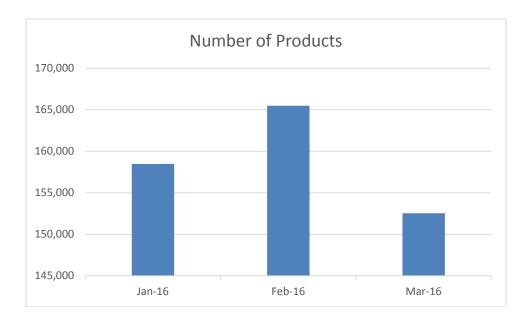
DesignLights Consortium and Advanced Lighting Controls

- Vetted products for inclusion in incentive programs and product performance data to inform
 program design strategies: The DesignLights Consortium™ (DLC) served its members by
 maintaining the DLC Solid-State Lighting Qualified Products List (SSL QPL) via a publicly available,
 searchable, and comprehensive web-based listing of qualifying SSL products. The QPL and its
 technical requirements are the backbone of the DLC SSL project that members rely on to
 promote high efficiency lighting products and achieve energy efficiency program savings goals.
- Revised Technical Requirements raised the bar for quality to identify today's best performing products:
 - SSL Specification Revisions: To keep the requirements current and seek increased savings for DLC members, the DLC has launched a specification revision effort. Drafts for the V4.0 revisions were distributed for stakeholder comment, with the intention to release criteria as final in time for the normal 270 day transition period to be complete on January 1, 2017. Comments were received by over 50 organizations, and as a result the DLC will be postponing the final publication to allow adequate time to thoroughly review and address these comments.
 - o **26,507 products de-listed as of March 25, 2016:** As part of the transition from technical requirements table version 2.0/2.1 to version 3.0/3.1, all products on the DLC SSL QPL



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must meet Technical Requirements V3.0 which included updated efficacy, rated data, and new category definitions. Products that do not meet these requirements were removed from the active QPL, though they will remain searchable in the DLC database when selecting the checkbox "Include De-Listed Products."



- Randomized product performance verification testing to defend against gaming and fraud and
 maintain integrity of the QPL: The DLC developed a surveillance testing program, which
 represents an initial effort to ensure the validity of data submitted to the DLC SSL QPL pre- and
 post-qualification. In order to maximize the use of limited resources, surveillance will focus on
 identifying products with higher than average risk of non-compliance. Launch of the program
 has been pushed out until the summer.
- Received funding commitments to Pilot Incentive Strategy: A key component of the DLC's
 Commercial Advanced Lighting Controls (CALC) project is to develop more effective energy
 efficiency program approaches and incentives strategies to support Advanced Lighting Control
 Systems (ALCS) that can be adopted across North America. Development of these strategies is a
 key component to improve leveraging and partnership with industry to accelerate adoption. In
 2015, DLC developed a framework for this incentive strategy and in the first quarter of 2016,
 received formal commitments from Efficiency Vermont, National Grid, Eversource, and Xcel
 Energy to pilot the incentive strategy. Additional programs are expected to join in piloting the
 new incentive strategies later in 2016 and 2017.
- Third ALC demonstration project installed: In 2015, the DLC began work to select 10 Advanced Lighting Control technologies and sites for demonstrations in partnership with US DOE. These demonstration projects will be used as deployment tools for DLC member utilities and provide valuable experience and content to inform the CALC project training programs and other activities. In the first quarter of 2016, installation began on the third of 10 projects. This project will install the Cree SmartCast lighting control system at a multi-tenant medical office building in Avon, Conn. In addition, site selection began on projects 5-10.



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Held first Industry Advisory Committee meeting: The DLC's Industry Advisory Committee (IAC) includes a cross-section of the six largest manufacturers on the QPL, three small manufacturers, two lighting designers, and two controls manufacturers. The committee met to discuss strategic direction with respect to specification development, quality definitions, and the role of lighting specifiers and designers in the retrofit space.

- New website features an online forum, accessible information resource, added security, and Application Program Interface access to product data:
 - Access to the DLC Application Program Interface (API): The API is now ready for use by DLC members. In the first quarter, the DLC developed necessary paperwork including terms and conditions and instruction guides. After agreeing to the terms, DLC members will be set up with a username and password and can start implementing the API.
 - o **Increased web traffic:** During the first quarter, the DLC website received 548,867 page views by 51,535 users, 26.8% of which were new users. About 70% of the total sessions on the website came from the U.S., while roughly 13% came from China, and approximately 10% from Canada. The rest of the visits are made up from countries including Taiwan, South Korea, India, Hong Kong, United Kingdom, and Mexico.
 - Improved web-based list functionality: Early in 2016, DLC went out for bid for a new web developer in order to re-design the DLC website. The re-design will allow for seamless integration of the CALC initiative, as well as increase functionality and userfriendliness.
- Engagement of and representation at industry events and conferences: In the first quarter of the year, the DLC was represented at 10 conferences and workshops, providing presentations on the DLC at many and broadening the reach of and interest in the program.
- Held regular member meetings: The first member meeting of the year was held in February to
 inform membership about ongoing developments and collect feedback on timelines, use of
 specs, the Premium tier, and the annual Stakeholder Meeting advisory committee.
- Gained new social media followers: This quarter, <u>@DesignLightsSSL</u> gained approximately 50 new followers on Twitter as a result of tweets about industry news, conference outcomes and observations, as well as general updates from DLC.
- Held a Technical Committee meeting: During this meeting, several topics were discussed including planning and prioritization for: new category development from wish list items, revision 4.0 of the specification, new policy development, horticultural spec development, and proposed annual product performance update policy. We also introduced the Technical Committee Chair position, which for 2016 will be held by Edward Bartholomew from National Grid/MassSave.
- Planned for the annual Stakeholder Meeting and CALC Summit: Planning for the 2016 DLC
 Stakeholder Meeting is underway. A hotel in Denver, Colo. has been selected and agenda
 development, solicitation for sponsorship, as well as planning for an off-site reception have
 started. The conference website www.dlcmeeting.org was updated with the newly created
 meeting banner, as well as other important information regarding the meeting. Registration will
 open in mid-May.







Building Efficiency Markets

Develop regional market capacities to value and deliver energy efficiency through outreach, guidance, and tools that provide common specifications, training, and frameworks to scale-up efficiency across states.

Home and Building Energy Rating, Labeling and Disclosure

- Provided regional collaboration and resources supporting uptake of DOE asset rating tools:
 NEEP continued to participate in DOE's <u>Home Energy Information Accelerator</u>, representing the
 Northeast region as one of six hotbeds across the country that are actively expanding the use of
 this information in real estate transactions. Consequently, NEEP exchanged best practices with
 national leaders on regular Accelerator conference calls and formally catalogued its lessons
 learned from our first six months of participation in the Accelerator in a progress report that is
 being shared to accelerate efforts nationwide.
- Provided technical guidance to Rhode Island's commercial and residential building labeling working groups:
 - NEEP contributed lessons learned and stakeholder feedback from the <u>Massachusetts</u> <u>BAR Pilot</u> to guide the development of a commercial building asset rating pilot. This project aims to incorporate the US DOE's Commercial Building Energy Asset Score into existing ratepayer-funded energy efficiency programs to increase the uptake of ratings and drive efficiency upgrades through increased conversion rates.
 - NEEP also continued to play a major role in propelling the state's residential building rating working group toward a statewide labeling program. NEEP provided technical assistance including working with the state Office of Energy Resources to identify priorities for advancing this project as the team coordinated with National Grid as it prepares to incorporate energy labeling into its home performance program.
- Provided technical guidance to New Hampshire residential labeling efforts: NEEP continued to participate in the Vermont-New Hampshire "REVEAL" energy rating project, which launched at the end of 2015 to advance the alignment of energy rating programs in the two states. This quarter, NEEP participated in the group's three monthly meetings where we have served as the primary technical resource for providing answers to stakeholder questions about rating programs, summaries of the activities of others in the region, and updates on parallel efforts happening across the country.
- Provided technical guidance on building benchmarking and transparency ordinances: NEEP
 presented to the Mayor and City Council of Portland, Maine on the existing policies in place
 around the country that require certain buildings to benchmark and disclose their energy



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consumption. NEEP laid out the barriers and best practices in implementing such policies in order to inform Portland as they move to reduce the total municipal energy consumption.

- Presented leading building energy rating strategies to key market actors: NEEP presented in
 February on home energy labeling programs and policies and the HELIX project at the Affordable
 Comfort Institute's New York Regional Home Performance Conference in Saratoga. We also gave
 a presentation in March at the Northeast Sustainable Energy Association's 2016 Building Energy
 Conference in Boston on methods for educating the real estate market to effectively value
 building energy efficiency.
- Bridged the energy and water efficiency sectors: NEEP spoke at the 2016 American Water Works Associations Annual Meeting in Providence, R.I. in March. As we strive to scale up efficiency efforts on a community scale, the importance of energy efficiency within the wastewater and water filtration sectors was emphasized. Additionally, the rising risk of global climate change on municipal infrastructure and the importance of energy resilience was examined as it relates to water and wastewater resources. The opportunity for energy savings within municipal and state water infrastructure throughout the NEEP region could result in millions of dollars in energy savings.
- Led groundbreaking home energy labeling connection efforts in the Northeast: NEEP
 continued its Home Energy Labeling Information Exchange (HELIX) project, a three-year project
 whose main objective is the creation of a highly accessible database for DOE Home Energy Score
 (HES) information for the Northeast states which will enable automatic transfer of this
 information into local Multiple Listing Services (MLS). NEEP spent considerable time in the first
 quarter interfacing with various market actors to prepare for launch of this project in April. The
 HELIX project continues to be cited by in several presentations, plans (e.g. the Tompkins County
 Home Energy Rating and Disclosure draft plan discussed above), and conversations as an
 important and exciting component in the effort to transform the real estate market.
- Maintained regional and national network of energy rating allies: NEEP provided updates on
 regional building energy rating activities through our Building Energy Codes and Public Buildings
 Leadership Groups. We continued to engage with our national and regional codes counterparts,
 most notably by providing updates on our region through coordination with allies such as the
 National Association of State Energy Officials (NASEO).
- Maintained and updated the building energy rating online rating resource center: NEEP
 maintained and regularly updated its <u>Building Energy Rating Homepage</u> and <u>Resources</u> pages to
 feature the latest news, events, and resources on commercial energy benchmarking and home
 energy labeling. These resources help to accelerate building energy rating efforts throughout
 the region by providing state and municipal officials with news on building energy rating
 initiatives underway throughout the region. We also wrote a <u>blog assessing home energy rating</u>
 data for Northeast states, which identified major trends and instances of regional leadership.

Contractor, Realtor and Design Community Tools and Training

 Disseminated resources to New Hampshire stakeholders: NEEP introduced some of the resources discussed above at the real estate market focused February meeting of the New



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Hampshire Home Energy Score Working Group, which includes representatives from the realtor and appraiser professions.

- Cited as a resource in the National Association of Realtors' (NAR) Resource Efficient Green
 Home Instructor's Manual: NEEP was cited in NAR's manual as a resource to learn more about
 the energy efficiency characteristics of homes that can be incorporated in the sales process. This
 course is included in the required material to receive NAR's "Green Designation" which seeks to
 keep realtors educated on energy features in housing to ensure the market more accurately
 values energy efficiency.
- Cited in Tompkins County Home Energy Rating and Disclosure Plan: This <u>draft plan</u> identifies NEEP's real estate resources as "great educational resources."
- Established new connections with Maine real estate agents: NEEP developed relationships with representatives from the Maine Association of Realtors to introduce our current resources as well as forthcoming resources such as HELIX.







Increase energy savings by aligning efficiency programs with advanced building energy code initiatives and appliance standards to lock-in the positive market impacts of successful efficiency programs.

Progressive Model Building Energy Codes

- Led Code Compliance Collaboratives in Pennsylvania and Vermont: State Energy Code
 Collaboratives are effective vehicles for bringing together diverse stakeholders to promote transparency and dialogue concerning energy code adoption and compliance.
 - NEEP continued to facilitate the <u>Pennsylvania Energy Code Collaborative</u>, in which we have participated since its inception in 2013. NEEP held a January teleconference and March meeting in Philadelphia, the primary goal of which were to develop and refine a Penn. Code Compliance 101 factsheet that will be used to help drive increased support of energy codes from elected officials. This resource was identified as a need by the group last year and is one component of the <u>Collaborative's roadmap</u> to full compliance with the energy code.
 - NEEP also continues to facilitate the <u>Vermont Code Collaborative</u> which was launched last year. The Collaborative is currently developing its goals for the coming year.
- Engaged energy codes stakeholders in Delaware and New Hampshire: NEEP has played an
 active role in Delaware and New Hampshire's Energy Code Collaboratives since their inceptions
 in 2011 and 2012, respectively.
 - NEEP continued to provide technical support to the Delaware Energy Code Coalition by providing information to new staff at the state Department of Natural Resources and Environmental Control (DNREC) that have assumed group leadership responsibilities.
 - NEEP also continued to provide technical guidance to the New Hampshire Building Energy Code Compliance Collaborative, which convenes to advance strategies set in the state's <u>Code Compliance Roadmap</u>. NEEP helped the state to begin assessing its code compliance rate by assisting in the design of a survey to be filled out by other Collaborative members, building officials, and other code stakeholders.
- Provided direct support to state efforts to adopt and implement 2015 IECC in Maine and New Hampshire:
 - NEEP serves on Maine's Energy Technical Advisory Group (TAG) to help develop the state's code update. NEEP played active roles in meetings of the Energy TAG and the Maine Uniform Building and Energy Code (MUBEC) board where we provided regional and long-term context for the state's proposed 2015 IECC adoption. NEEP also provided regional and national resources as requested by members of these groups to counter



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- potential amendments that would weaken the proposed code update and help clarify the advantages of adoption of a stronger energy code in the context of current demonstrated shortcomings in code-built structures in the state.
- NEEP also contributed to discussions in New Hampshire among state energy code stakeholders to organize support for the proposed 2015 IECC adoption and respond to major weakening amendments to residential energy code provisions that sought to maintain current requirements.
- Supported cutting-edge code compliance enhancement efforts in Rhode Island: National Grid, in partnership with the state Building Code Commission and NEEP, administers training programs the savings from which it is allowed to claim as part of its regulatory proceedings through its Code Compliance Enhancement Initiative. This quarter, the initiative delivered eight classroom trainings plus two additional trainings with industry partners (184 attendees). NEEP helped to assess and adjust the training and outreach activities the program delivers by providing local insight and regional updates to help improve the programs and delivering resources to help the state prepare for its 2015 IECC adoption in 2016. NEEP also supported the evaluation of the program to guide attribution of energy savings by discussing changes in program focus in light of the onset of a new funding cycle for this initiative.
- Advised code compliance assessments in several states: After designing a code compliance assessment strategy for Connecticut in 2012, NEEP began to work with the Connecticut Department of Energy and Environmental Protection (DEEP) to act upon this plan to identify opportunities to improve the state's energy code compliance. NEEP is currently engaged in the coordination of a statewide residential (single family) code compliance study for the State of Connecticut. The study will utilize DOE and Pacific Northwest National Laboratory's code compliance study methodology. Next steps include creating a statewide sampling protocol, and securing home inspection and diagnostic testing contractors. NEEP also continued to support the two federally funded residential code compliance field studies awarded to states in our region last year (Maryland and Pennsylvania).
- Extended knowledge and resources through NEEP's Codes Leadership Group: NEEP continued to facilitate our Regional Building Energy Codes Leadership Group, a forum for information dissemination and exchange between building energy code stakeholders throughout the region, to accelerate adoption of and compliance with increasingly efficient energy codes. In March, NEEP organized and delivered the first webinar of the year to 36 stakeholders, including at least one representative from each of our 12 states. Presentations and discussion focused on: 1) the NYStretch stretch code development process (see below); and 2) New Hampshire's barriers to adoption of the 2015 IECC. NEEP also disseminated our new model residential and commercial stretch codes and provided an original analysis of state 2015 IECC amendment trends.
- Supported new and existing stretch energy codes in Massachusetts, Rhode Island, and New York:
 - Massachusetts' Stretch Energy Code was designed in 2009 as an overlay code which
 yields additional building energy savings, but it remains without update nearly two code
 adoption cycles later. NEEP supplied technical guidance to a coalition of stakeholders
 promoting a more efficient stretch energy code than the one currently proposed for
 adoption, which leaves many buildings without any additional requirements.



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 A 2015 Executive Order in Rhode Island requires the state to develop a stretch code for non-residential properties. To support this effort, NEEP provided National Grid and other state stakeholders with our model stretch energy code and other guidance as requested.

- o NEEP supported the development of NYStretch in New York, a voluntary stretch code for residential and commercial buildings that is projected for completion by this summer.
- Provided leadership and represented the region at DOE's National Energy Codes Conference: NEEP served on the conference planning committee to help to shape the program and agenda for the DOE Annual Energy Codes Conference held March 21-24 in Tucson, Ariz. We also organized and delivered the Jolt Session, Opening Reception, and REEO receptions. Additionally, we coordinated presenters on a panel exploring the relationship of energy codes and existing buildings, with seventy-five attendees. The panel discussed the history of energy code compliance for existing buildings; reviewed current codes (ASHRAE Standard 100-2015; 2015 IEBC; 2015 IECC, and IGCC existing buildings chapters) related to efficiency in existing buildings; the role of code officials in assuring energy efficiency in existing buildings. The panel concluded with a discussion of 2018 International Energy Construction Code proposals for energy efficiency through a change of use designation for existing buildings. The proposals will be heard at the forthcoming International Code Council 2018 code hearings scheduled for April 17-27 in Lexington, Ky. Existing building energy use is the leading consumer of energy at 40 percent of U.S. electricity. Reduction retrofits are crucial, and represent an investor opportunity exceeding \$280 billion that could account for over \$1 trillion in energy savings within a decade.
- Maintained national network of energy code allies: NEEP continued to engage with our
 national and regional codes counterparts, providing updates on our region through monthly
 teleconferences with the Responsible Energy Codes Alliance (RECA), National Association of
 State Energy Officials (NASEO), Building Codes Awareness Project (BCAP), and the Northeast
 HERS Alliance. NEEP also participated in meetings with the National Energy Codes Collaborative,
 a joint partnership of the US DOE, PNNL, BCAP, NASEO, and the other REEOs.
- Maintained and updated building energy codes online resource center: NEEP maintained and regularly updated its <u>Building Energy Codes Homepage</u>, <u>News Bulletin Board</u>, <u>Codes Tracker</u>, and <u>Resources</u> pages to feature the latest news, events, and resources on code adoption and compliance throughout the region.

State and Federal Appliance Standards

- Convened Appliance Standards Working Group via webinar: To facilitate regional stakeholder input and share information and best practices, NEEP convened the first quarterly Working Group meeting via webinar on March 7. The webinar engaged 16 stakeholders from across the region to discuss the ongoing General Service Lamp, Central Air-Conditioner/Heat Pump (CAC/HP), and Residential Gas furnace standard rulemakings, and prepare for upcoming appliance standards opportunities. This engagement promotes understanding and awareness of appliance standards as a valuable policy mechanism to achieve cost-effective energy savings.
- Informed negotiation process for revised Residential Central Air-Conditioner/Heat Pump standards: NEEP coordinated with fellow national advocates to develop supporting



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documentation/positions in preparation for <u>ASRAC</u> Working Group meetings. NEEP attended the CAC Working Group Term Sheet Review, Discussion, and Final Vote by webinar on January 19. We provided analysis of the financial value of increased Energy Efficient Ratio (EER) ratings to the Northeast - Mid-Atlantic region. The accepted term sheet included an increase in Seasonal Energy Efficiency Rating (SEER) from 13 to 14 for CAC, an increase in SEER from 14 to 15 for HP, and an increase from 8.2 to 8.8 in Heating Seasonal Performance Factor (HSPF) for HP. This represents the third improvement in AC/HP standards in the past 15 years, the latest representing approximately another 7% reduction when effective in 2023.

Supported state-level appliance standards activities in Rhode Island: NEEP engaged deeply with several key stakeholders in Rhode Island to inform efforts to adopt minimum efficiency standards. We coordinated communication between Representative Arthur Handy, National Grid staff involved in their codes and standards initiative, and Rhode Island's Office of Energy Resources. We also provided guidance on the mechanics of state administration of state standards. Rhode Island is a leader in the region when it comes to allowing program administrators to conduct activities related to appliance standards and the mechanisms to achieve savings from those activities. Additionally, NEEP provided written comment to House Bill 7700 that included energy savings impact analysis.







Tracking Efficiency Policies & Results

Keep stakeholders abreast of best practices in public policy to drive energy efficiency by tracking, comparing, and making accessible state efficiency polices, their implementation, and results, and by highlighting key trends and issues.

Regional Evaluation, Measurement and Verification Forum

- NEEP led joint EM&V <u>comments</u> on EPA's draft Clean Power Plan 111(d) Model Rule and EM&V Guidance: NEEP, with ACEEE, led the effort to draft comments for broad stakeholder review, and NEEP convened and facilitated several webinars to review draft comments and build consensus on key issues. NEEP also convened EM&V Forum member teleconferences in which staff provided an overview of the EPA's Final Clean Power Plan (CPP), the proposed Federal Plan (and Model Trading Rule), draft EM&V guidance, as well as the draft/final joint EM&V comments. The involved energy efficiency stakeholders included ACEEE, Natural Resources Defense Council (NRDC), NASEO, other REEOs, the Northwest Power & Conservation Council (NWPCC), Regulatory Assistance Project (RAP), and others.
- Launched two projects in the first quarter:
 - Mid-Atlantic Technical Reference Manual 2016 Version: This annual update to the Mid-Atlantic Technical Reference Manual kicked off in January with a review of approximately 50 proposed updated and new residential, commercial, and industrial measures.
 - Loadshape Catalog: This project kicked off in January with a subcommittee meeting to review and discuss project structure, project schedule, and a preliminary set of criteria and template for the content that will be included in the catalog. The objective of this project is to develop a catalog of annual energy and peak demand savings data based on information from existing studies; the catalog contents make information available for use in developing impact estimates as well as other research efforts.
- Hosted a webinar on early replacement measure research: NEEP hosted the webinar delivered by Evergreen Economics to present findings on the Early Replacement and Persistence Findings and Recommendations study. The recently completed multi-utility research project compared customer, installer, and utility assumptions about the remaining life of operating household furnaces, boilers, and central air conditioners. Evergreen Economics found that many utilities deem the remaining useful life (RUL) or estimate it as the difference between a deemed expected useful life (EUL) and estimated age of the existing equipment; both approaches inaccurately reflect the actual RUL, and more accurate methods for estimating RUL and cost-effectiveness of early replacements were presented.



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Delivered a memo to DOE reporting results of research to characterize several core skills and competencies required for gross impact evaluations: As part of the Forum's research on evaluator certification, NEEP delivered the memo along with summary tables identifying characteristics of six examples of certification programs, to inform next steps in the research. The purpose of this project is to assess competencies and identify options for the development of a Certification Process for energy efficiency evaluators.

Regional Energy Efficiency Database

- Established user ID function in the Regional Energy Efficiency Database (REED): With over 10,000 user sessions in REED since its launch, NEEP has only been able to identify users by state using google analytics. In order to better understand the range of users and respective interests in REED, NEEP added an identification wall on the REED landing page, whereby prior gaining access to the database, users must enter their name, e-mail, organization, and title. Gathering this information will help inform future REED functional developments.
- Developed and executed 2016 scope of work (SOW) for REED with Peregrine Energy Group: The SOW for 2016 includes modifying the data collection tables, making minor cosmetic modifications, and exploring the development of new program typology to better align with national reporting efforts (e.g., LBNL's).

Public Policy Trends Analyses, Reports and Education

• Tracking trends in state energy efficiency investment and savings remains a mainstay of our work: Another key element is electronic communication of our resources including the NEEP blog, The Policy Tracker, Highlights, and the Policy Snapshot, which is slated for update in April 2016. Below is a table detailing unique page visits for the policy team's blogs during the first quarter of 2016:

Blog	Unique Views
Next Generation Energy Efficiency:	63
What Can Policymakers do to keep states at the forefront?	
The Policy Tracker: March 2016	42
HEMS Can Enable Deep Savings, But Important Work Ahead for Policymakers	41

- NEEP continued our involvement with "emerging" efficiency states such as Delaware: The
 state is in the process of establishing its first state-wide programs. On February 10, NEEP's Policy
 Analyst Brian Buckley presented on <u>Best Practices in Cost-effectiveness Testing</u> at the monthly
 meeting of the state's Energy Efficiency Advisory Council.
- **Engaged with stakeholders on financing programs:** On February 4, Mr. Buckley <u>presented</u> at the Better Buildings by Design conference in Vermont, where he convened a panel on complementary financing programs.
- Submitted public comments in the following proceedings:
 - o Rhode Island: Docket on the Changing Distribution System
 - o Pennsylvania Docket on Alternative Ratemaking



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o Comments on the ISO-NE 2016 EE Forecast

- NEEP was heavily relied upon as a resource during New Hampshire's proceeding on the
 creation of an Energy Efficiency Resource Standard (EERS): NEEP has played an integral role in
 New Hampshire's proceeding on the creation of an EERS per docket 15-137. NEEP was invited to
 serve as a non-intervening technical expert in this collaborative process, and participated in the
 final two technical sessions on February 16 and March 30. A final order by the Public Utilities
 Commission is pending.
- Educated consumer advocate in New Hampshire: On March 1, NEEP met with the recently appointed New Hampshire Consumer Advocate, Don Kreis. We briefed Mr. Kreis on the ongoing EERS proceeding, NEEP's involvement over the past decade in the state, and our general insights on key energy efficiency policy issues.
- Educated policymakers in Massachusetts: NEEP co-sponsored a briefing for Massachusetts state legislators and staff on current energy efficiency issues on March 10, in which Policy Director Jim O'Reilly participated.
- Participated in stakeholder advisory meetings: Throughout the quarter, staff participated in monthly meetings including the Mass. Energy Efficiency Advisory Council (EEAC), Delaware Energy Efficiency Advisory Council (EEAC), Connecticut Energy Efficiency Board (EEB), Maryland EmPOWER Planning Group, and New York proceedings.
- Collaborated with partner advocates: NEEP collaborated with numerous allies, including the
 Acadia Center, Conservation Law Foundation, Natural Resources Defense Council, the Pace
 Energy and Climate Center, E4TheFuture, National Consumer Law Center, Interfaith Power and
 Light, Massachusetts Climate Action Network, Chesapeake Climate Action Network, Sierra Club,
 New York Clean Energy Organizations Coalition, and many others on policy developments in
 states across the region. NEEP sits on the policy committee of the Northeast Clean Energy
 Council, NECEC's Grid Mod Working Group, and the Massachusetts Global Warming Solutions
 Project.

Northeast Energy Efficiency Summit & 20th Anniversary Celebration

- Three Gold Summit Sponsors secured: NHSaves with the New Hampshire utilities, PSEG Long Island, and D&R International confirmed to sponsor the 2016 Summit at the Gold level. See here for sponsorship opportunities and benefits.
- Made progress toward fundraising goals: As of March 31, 22 sponsors had confirmed funding for the event, achieving 42% of our objective.
- Keynote speakers confirmed: Kathleen Hogan, US DOE Assistant Deputy Secretary for Energy Efficiency and Rob Pratt, Chairman and President, International Institute for Energy Conservation will join us as keynote speakers.
- Developed the Summit agenda: Three paths of roundtables were defined, with each roundtable
 having a distinct focus. NEEP staff will moderate the roundtables, for which we have invited
 speakers. See the full agenda here.





2016 NEEP SUPPORTERS

NEEP would like to recognize and thank our 2016 funders, including our <u>Sponsors</u>, <u>Allies</u>, <u>Regional EM&V Forum funders</u>, <u>DesignLights Consortium Members</u>, and <u>federal and foundation funders</u>. We are grateful for their support, which makes this work possible.

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