



### From Our Leadership

Thank you to you, our stakeholders, for your continued partnership and regional collaboration. In 2017, NEEP kicked off its third decade of work to advance energy efficiency. We are proud that NEEP's regional stakeholder teamwork, thought leadership, research and analyses, market transformation strategies, targeted technical assistance, and best practice resources are contributing to the region's efficiency success. And we are thankful to you for your contributions of time and knowledge. Our success is truly dependent on the incredible partnerships we have formed.

This past year marked NEEP's first full year as "NEEP 2.0". The DesignLights Consortium was successfully spun off as its own entity at the beginning of the year, we finished our internal restructuring, and we moved offices (across the parking lot). It was a year of settling into our new normal and planning for the future.

NEEP was committed to focusing on advanced energy efficiency, which includes new ways of reaching customers, integrating home and building efficiency with other demand-side resources, and exploring intelligent technology and smart grid solutions. It was the start of NEEP's deepening relationship with strategic electrification. We solidified our role as market leaders in the built environment through the development of the Home Energy Labeling Information eXchange (HELIX) and Community Action Planning for Energy Efficiency (CAPEE) tool. And we celebrated as 50 percent of our regional states were ranked in the top 10 on the ACEEE score-card due to their leadership in utility-led energy efficiency programs and policies, as well as building codes, state-led initiatives, and transportation.

In 2017, NEEP also expanded our new "partnership" model of working with states and program administrators based on a contract-for-service model with clear objectives and deliverables, and regular communication with key stakeholders to ensure our projects support their goals and initiatives. In addition, we continued to grow our highly-successful NEEP Allies program, providing tangible benefits for business affiliates including access, intelligence, and visibility.

In the following pages, you'll read about NEEP's progress in 2017 to advance four overarching strategies, and the projects that supported these efforts. With numerous projects and initiatives to choose from, it was difficult to highlight just a few stories to share. However, we see these vignettes as exemplary in terms of the ways we interact with key players from across the Northeast and Mid-Atlantic, our impact as a regional energy efficiency organization, and our role as a conduit between the U.S. Department of Energy and state and local initiatives.

We are very excited about all that was accomplished in 2017 and the impact we made in helping to move forward market transformation. As we look to 2018 and beyond, we will be doing a deeper dive into the integration of efficiency solutions and an analysis of the steps needed to successfully achieve an 80 percent reduction in carbon by 2050. We look forward to our continued partnership with you and encourage you to reach out to see how you can get more involved in our work.

Thank you.

Junan C. Coalley

Sue Coakley Executive Director



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Scott Johnstone Board President

\* All content in report is for calendar year 2017



Our **mission** is to accelerate regional collaboration to promote advanced energy efficiency and related solutions in homes, buildings, industry, and communities.

Our long-term shared **goal** is to assist the Northeast and Mid-Atlantic region to reduce building sector energy consumption three percent per year and carbon emissions 40 percent by 2030 (relative to 2001).

### **NEEP Products & Services**



Studies

and Resource Centers

**NEEP's Unique Value**: 21 years of scanning the horizon for the next best thing in policies and programs; deep technical expertise in buildings, products, state policymaking and EM&V; relationships spanning government, utilities, and energy service providers; and a regional approach that delivers cost-effective results for our sponsors and partners, enabling them to stretch their resources further.

### **NEEP** Core Strategies



Facilitate Market Transformation for **Advanced Solutions** 



Promote Resilient. **High Performance Buildings &** Communities



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



**Advanced Efficiency** Leadership Network

### 2017 Projects



State and Federal Appliance Efficiency Standards



Emerging Commercial Sector Business Models for Efficiency



Building Energy Rating and Disclosure



Cold Climate Air Source Heat Pumps (ccASHPs)



Emerging Advanced Efficiency Solutions Connector



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



Building Energy Codes

Market Transformation for Electric Vehicles



Home Energy Labeling Information Exchange (HELIX)





Home Energy Management Systems (HEMS)



High Performance & Zero Energy Buildings, Homes & Communities



Northeast Industrial Strategic Energy Management Initiative (SEM)



State and Local Policy Tracking, Analysis and Technical Assistance



Regional Energy Efficiency Database (REED)



Regional Strategic Electrification Assessment

### Market Transformation for Advanced Solutions Related Projects: 📫 🏫 🚟 🛱 😥

### Navigating Technological Innovation Change

New advanced Information and Communications Technologies (ICT) and smart high efficiency products are pouring into the marketplace and stimulating new thinking and an industry shift to integrate demand response with efficiency. These emerging technologies and products build on the concept of smart energy home and buildings as electric grid assets, helping states to realize their carbon reduction goals, reducing costly peak energy demand, expanding customer control over daily energy use, and supporting the market valuation of energy efficient homes and buildings. In 2017, NEEP worked closely with states, industry, and utilities to navigate the rapid change in policy and program associated with these technological innovations.

NEEP focused on how EM&V can serve energy efficiency programs in the forward-looking environment, where energy efficiency is increasingly integrated with other distributed resources. We facilitated discussion and best practice sharing on the intersection between policy, technology, EM&V and evolving approaches to market transformation. Our stakeholders trusted us to paint an honest picture of the current situation, demystify the latest software tools, and outline the many different applications of emerging technologies and software. NEEP's web-based reports, blogs and webinars addressing this were accessed and used by state official and staff across the NEEP region, in addition to over 600 national stakeholders, over the course of the year. Our work provided a foundation to help stakeholders prepare for the evolution of EM&V to include distributed resources. Building on the 2017 National Standard Practice Manual, we highlighted the important role of EM&V (e.g., cost-effectiveness analyses) to support evolving public policy goals – e.g., carbon emission reduction, grid reliability, energy affordability, economic development, resilience, and public health – with the range of impacts provided by efficiency and associated clean demand-side resources.

NEEP also addressed key market barriers and market opportunities to accelerate regional market adoption of cold climate air source heat pumps (ccASHPs). In 2017 we specifically targeted the key strategy areas of increasing installer/builder awareness and enabling the promotion of climate-appropriate ASHPs through improved performance metrics as outlined in our Northeast/Mid-Atlantic Air-Source Heat Pumps Market Strategies Report 2016 Update. NEEP published two new guides to assist ccASHP installers to optimize system performance through proper sizing and installation. The guides, A Guide to Sizing & Selecting ASHPs in Cold Climates and A Guide to Installing ASHPs in Cold Climates, provide practical, best practice guidance for ASHP installation to optimize high equipment performance in cold climates. The sizing & selecting guide was downloaded 827 times, and the installation guide was downloaded 740 times throughout 2017. NEEP's publicly available ccASHP list is a mechanism for the market to differentiate ASHP systems that can operate efficiently in cold climates. By the end of 2017, seven leading programs - including the Massachusetts Clean Energy Center, Efficiency Vermont, and NYSERDA - had adopted the specification and products list as part of their gualification for incentives. The specification and associated list grew to include over 500 products and was downloaded over 5,040 times by year end.

Through NEEP's stakeholder engagement, tracking and analysis, tools and guidelines, research and reports, and collaboration, we helped our stakeholders navigate changes brought on by these new technologies and products. We helped shine the light on incorporating them into existing work in order to transform the market for a low-carbon future.

# 250%

increase in products included on the ccASHP products list

new companies presenting ccASHPs on the products list

### 2017 Impacts and Outcomes

Because of your partnership, NEEP was able to help transform markets with advanced energy efficiency technologies and solutions through public policy, research and collaboration, and public-private partnerships that deliver regional-scale impacts.

30%

increase in HEMS products listed by NEEP for a total of 590 products

# 25 +

commercial projects recruited to include in the M&V2.0 pilot project

# 20+

companies with advanced M&V applications invited into conversation with regional stakeholders

states actively engaged U.S. DOE's Appliance Standards program



new state appliance standards

states launched or announced SEM pilots

Northeast energy efficiency programs adopted Strategic Energy Management (SEM) as a program offering

## High Performance Buildings & Communities Related Projects: 🔗 Ż 📓

### Changing the Future through Building Codes

Buildings continue to be one of the largest users of energy in the United States, accounting for approximately 41 percent of all energy consumption, 72 percent of electricity usage, and over one-third of greenhouse gas emissions. This means that the built environment presents a large opportunity to drastically reduce carbon emissions. Carbon reduction goals cannot be met, however, without significant gains in energy efficiency through better building energy codes. In 2017, NEEP undertook the initiative to review the current status of energy codes in the Northeast and Mid-Atlantic region, analyze the opportunities for improvement, recommend regional goals into 2050, and outline the action steps needed for success. The result of this intensive assessment and analysis was the publication of Building Energy Codes for a Carbon-

Constrained Era: A Toolkit of Strategies and Examples.

This report provides a set of clear strategies and action steps that will better position states in the Northeast and Mid-Atlantic region to achieve two critical objectives:

- Advance building energy code development and adoption to enact zero energy buildings codes within the next 15 to 25 years
- Improve the administration of building energy codes to ensure that desired performance levels are realized

Because of this paper, states within the NEEP region have a comprehensive roadmap to transform existing buildings to zero energy and zero carbon buildings. Additionally, the report explores an essential conversion of code adoption and compliance administration from low-tech and dispersed to integrated, leading-edge, data-driven, and viable. The report is more than a step-by-step guide to zero energy codes. It is one part of regional market transformation. Codes and policy - combined with strategic electrification and distributed generation - will give us a new model for how power is generated and sold, and the way buildings are designed and constructed, ultimately creating a clean energy economy.

'2h presentations on HELIX helped

communities and one county have adopted benchmarking ordinances that support high performance commercial buildings

### 2017 Impacts and Outcomes

Because of your partnership, NEEP was able to provide guidance and technical assistance to support the development of resilient, healthy, highperformance and zero energy buildings and communities at the local and state level.

cultivate the regional conversation

states received technical assistance for the adoption and/or implementation of new codes

integral components of municipal energy efficiency road-mapped in the CAPEE states and five MLS are committed to moving forward HELIX

Northeast states are in the top ten with the most homes obtaining a HERS Index score of 40 or less in 2017

new database, HELIX, to make home energy score to home buying like miles per gallon is to car shopping

# Strategic Electrification



Efficiency

Æ

Renewable Electricity

### Z Related Projects:

### Leading the Charge for Strategic Electrification

Enhanced energy efficiency and carbon-free electricity can reduce regional emissions by only about 40 percent by 2050-half the amount required to achieve the region's 80% goal. To meet 80% reductions, we need to incorporate a third strategy (strategic electrification). Strategic electrification is powering end uses with electricity instead of fossil fuels in a way that increases energy efficiency and reduces pollution, while lowering costs to customers and society, as part of an integrated approach to deep decarbonization.

To better understand the current state of strategic electrification, NEEP produced a Regional Opportunity Assessment for Strategic Electrification in New England and New York. The report, informed by a regional Advisory Committee of stakeholders from industry, states, utilities, academia and non-profits, found that decarbonizing home and building heating as well as transportation on a large scale are necessary to reduce carbon emissions 80 percent by 2050. Key strategies to decarbonize home and building heating include comprehensive thermal efficiency and replacement of carbon-intensive fuels with electricity from clean, renewable sources.

In June 2017, NEEP convened regional leaders and stakeholders at a Regional Strategic Electrification Summit to discuss the results of the regional opportunity assessment and inform the development of a regional action plan to accelerate deep decarbonization in building and transportation energy use. NEEP also used this collaboration to expand its catalogue of resources and public policy proceedings in Northeast states related to strategic electrification including action plans, research reports, articles, analyses and state dockets such as the Rhode Island Power Sector Transformation Initiative.

NEEP's assessment, resource dissemination, and recommended best practices for the advancement of strategic low-carbon electrification is helping to move strategic electrification to the core of the regional clean energy narrative. Strategic electrification is an energy makeover. It's a shift in the way we think about energy. Our reports rethink how we currently use energy and how can we be more efficient and effective in that use. Through this work, NEEP is helping to create a healthier, more sustainable environment and a region more resilient to climate change.





Strategic

Electrification

**Pathway To Decarbonization** =

(80% Reduction in GHG emissions by 2050)

2017 Impacts and Outcomes

Because of your partnership, NEEP was able to provide guidance and technical assistance to support the development of resilient, healthy, highperformance and zero energy buildings and communities at the local and state level

3,391 downloads of strategic electrification resource guides

449

downloads of the strategic electrification assessment report

IBR attendees at the Strategic

**Electrification Summit** 

## Advanced Efficiency ¥) Leadership Network

### Related Projects: 😂 🛔

### Cost-Effectiveness and Non-Energy Impacts

In 2017, the New Hampshire Public Utilities Commission sought out NEEP for technical assistance on best practices in costeffectiveness and non-energy impacts (NEIs) across the NEEP region and beyond. NEEP responded to the request and authored a report that objectively accounted for the treatment of NEIs in various jurisdictions, with a focus on distinguishing approaches used to develop the impacts (e.g. evidence-based versus other approaches). In addition, a brief summary of key elements in recent and forthcoming cost-effectiveness guidance and selected studies identified from a literature review were included.

The intent of this report was to provide an objective foundation of current practices that New Hampshire could use to formulate its own recommendations on how to proceed with NEIs. The report found that across the country, cost-effectiveness tests are not implemented in uniformed ways and that states use a variety of different tests to evaluate programs. In addition, the research showed that while there is ample evidence out there, much of it is dependent on state specific bias, such as climate, that impact the values of different NEIs. NEEP identified the National Standard Practice Manual as a framework that could be used in tandem with New Hampshire's cost-effectiveness evaluation.

This report has moved the conversation forward in New Hampshire, where NEEP presented the findings in front of the Energy Efficiency and Sustainable Energy (EESE) Board. The report has also been cited in presentations and other proceedings beyond the work in New Hampshire and resulted in an invitation to participate in the International Energy Agency's workshop on the multiple benefits of energy efficiency in early 2018. As NEEP continues its efforts in cost-effectiveness, this report will be updated to further the conversation in the region.

1290

individuals read four REED Renderings and six policy trackers

states had policy discussions or public utility commission orders addressing costeffectiveness

### 2017 Impacts and Outcomes

Because of your partnership, NEEP was able to provide 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.



# 250

logins to the REED database to inform energy efficiency research

# 100 + 10

policy updates shared with NEEP Allies to help our stakeholders stay current on key policy trends in the region

states uploaded their 2016 program-level data to REED

Northeast states scored in the top ten of ACEEE's State Energy Efficiency Scorecard

vears REED has been used in regulatory update research report for ACEEE Summer Study and **second** time Vermont has used REED for its state benchmarking

# NEEP By The Numbers

79,751 unique website visitors

 $\langle \downarrow \rangle$ 42,167

downloads from NEEP.org



unique working group participants

472

unique attendees at NEEP in-person events

146%

Program since 2016



43

staff and partners)



36

NEEP Allies

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34

presentations by



22

NEEP Events (13 webinars and nine



2 NEEP publications

### 2017 Event Attendees



### 2017 Allies Members



Program Designer, Administrator, or Evaluator: 30%



NEEP is a part of national network of regional energy efficiency organizations (REEOs) funded inpart by U.S. DOE to support state and local efficiency policies and programs.







### **State Partners**







### District of Columbia



### Rhode Island





















### **NEEP Allies**

NEEP Allies are industry leaders, non-profits, manufacturers, etc. that support NEEP's mission and wish to highlight their leadership in energy efficiency.





### NEEP Financials

In 2017, NEEP intentionally used some of its reserves to research new strategic initiatives that would lead the way in assisting the region's transformation to an efficient, affordable, low-carbon, resilient place for all to thrive and also place NEEP in a collaborative leadership role in those efforts. This 2017 financial information demonstrates NEEP's commitment to remain a leader in advancing energy efficiency and effectively engage all interested partners.

### Operating Revenue



Partners & Allies
Contracts & Grants
Contracted Services
Meetings, Workshops & Events
Interest & Other

### **Operating Expenses**



- Leadership Recognition & Progress Tracking
- Pathways for Efficient and Resilient Communities
- Integrated Advanced Efficiency Solutions
- Strategic Electrification & Distributed Energy Resources
- Contracted Services
- Fundraising
- General and Administrative

### Statement of Activities and Changes in Net Assets For the Year Ended December 31, 2017

Changes in Unrestricted Net Assets:		
Operating revenue:		
Partners and allies	\$ 875,987	
Contracts and grants	989,412	
Contracted services	428,748	
Meetings, workshops and events	106,932	
Interest and other	19,018	
Total operating revenue	2,420,097	
Operating expenses * : Leadership Becognition & Progress Tracking	216 002	
Dethwaya for Efficient and Regilient Communities	094 661	
	984,661	
Integrated Advanced Efficiency Solutions	781,885	
Strategic Electrification & Distributed Energy Resources	216,846	
	258,458	
	15,412	
General and Administrative	549,532	
Total operating expenses	3,022,796	
Changes in unrestricted net assets from operations	(602,699)	
Other expense:		
Loss on disposal of property and equipment	(45,031)	
Changes in unrestricted net assets	(647,730)	
Changes in Temporarily Restricted Net Assets:		
Foundation grants	80,430	
Net assets released from restrictions	(264,300)	
Changes in temporarily restricted net assets	(183,870)	
Changes in net assets	(831,600)	
Net Assets:		
Beginning of year	3,482,480	
End of year	\$ 2,650,880	

\* Includes fully allocated indirect costs.

The above information is an excerpt from NEEP's 2017 audited financial statements.

# The NEEP Team



Sue Coakley Executive Director



Denise Rouleau Deputy Director



Bob McTighe Director of Finance & Administration



Lisa Cascio Public Relations Senior Manager



John Balfe Communities Senior Associate



Angela Brooks



Samantha Caputo



Lucie Carriou Industry Relations & Event Manager



Laura De Angelo Grants & Contracts Manager



Lisa Mirra Accounts Payable





**Claire Miziolek** Technology & Market Solutions Senior Manager



Dave Lis Director of Technology & Market Solutions



Elizabeth Titus Director of Research & Evaluation



### Carolyn Sarno-Goldthwaite Director of Buildings & Community Solutions



Allison O'Rourke Accounting Associate



Darren Port Buildings & Community Solutions Manager



Giselle Procaccianti Commercial & Industrial Energy Efficiency Manager



Susan Stocker Senior Accounting Manager



Chris Tanner Senior Associate



Jennifer Wassan Development

# Board of Directors

Scott Johnstone President

**Steve Nadel** Treasurer

28

Edward White Jr.

Vignesh Gowrishankar

TUF



Steve Cowell Vice President

18

Richard Sedano Clerk

Barry Coflan

# Thank you for your continued support.

