

The Regional Roundup of Energy Efficiency Policy in the Northeast and Mid-Atlantic States

Northeast Energy Efficiency Partnerships February 2015



# A CHANGING LANDSCAPE: THE REGIONAL ROUNDUP OF ENERGY EFFICIENCY POLICY IN THE NORTHEAST AND MID-ATLANTIC STATES FEBRUARY 2015

NEEP verified the data in this report to the best of our ability. The assessment of state progress is purely our own, and does not reflect the opinions of NEEP's board of directors, Sponsors, Partners and funders. We thank the following allies for their review of data and general insights: Peter Adamczyk - Commons Energy; Josh Berman - Sierra Club; Bill Dornbos - Acadia Center; Marion Gold - Rhode Island Office of Energy Resources; Christine Guhl-Sadovy - Sierra Club; Jamie Howland - Acadia Center; Brian Kaufmann - Keystone Energy Efficiency Alliance; Rich Reis - Sierra Club; John Rhodes - NYSERDA; Robert Scott - New Hampshire Public Utility Commission; Ed White - National Grid; John Williams - NYSERDA; Eric Winkler - ISO New England and Rob Underwood - Delaware Division of Energy and Climate. In addition we thank NEEP's contributors and reviewers: Jim O'Reilly, Sue Coakley, Julie Michals, Kevin Rose, Brian Buckley, David Lis, Lisa Cascio, Alicia Dunn, John Otterbein and Jennifer Skerker.

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# **ABOUT NEEP**

Northeast Energy Efficiency Partnerships (NEEP) is a non-profit founded in 1996 based in Lexington, Massachusetts. NEEP supports the expansion and implementation of policies and programs to accelerate energy efficiency in the Northeast and Mid-Atlantic region. NEEP works in four key areas: speeding the adoption of high-efficiency products, reducing building energy use, advancing knowledge and best practices and generally increasing the visibility of the benefits of efficiency.

Our vision is that the region will fully embrace energy efficiency as a cornerstone of sustainable energy policy to help achieve a cleaner environment and a more reliable and affordable energy system. NEEP is available to assist state energy offices, political candidates, legislators, regulators or administration officials in any of these areas. NEEP works through funded partnerships with the U.S. Department of Energy (DOE), as well as with utilities, third-party program administrators, public officials, various advocacy groups, businesses and foundations.



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### **WELCOME**



Thank you for reading the Regional Roundup of Energy Efficiency Policy in the Northeast and Mid-Atlantic states.¹ This report represents NEEP's annual assessment of the major policy developments of the last year, as well as our look into the immediate future, where we gauge states' progress toward capturing cost-effective energy efficiency as a first-order resource. While looking at the region as a whole, we also provide summary and analysis of some of the biggest building energy efficiency successes and setbacks from Maine to Maryland — including significant energy efficiency legislation and regulations and changes in funding levels for energy efficiency programs.

The Roundup is intended to give policymakers, regulators, efficiency advocates, program administrators and other stakeholders a comparative view of the progress of energy efficiency policies and programs across the region. Along with state-level highlights, the report examines regional trends and shared challenges in harnessing the potential of energy efficiency to meet today's pressing energy and environmental challenges — controlling energy costs, improving system reliability, modernizing the electric grid, strengthening the economy, growing jobs, improving public health and curbing emissions of greenhouse gases and other pollutants.

As we enter 2015, we are witnessing an energy policy landscape of many changes, with more undoubtedly to unfold throughout the year. The November 2014 elections brought us new governors in Rhode Island, Pennsylvania, Massachusetts and Maryland, as well as new legislative makeups across the region. There will also be new public utility commissioners in several states, as well as leadership changes on key legislative committees. And in Delaware, we await the coming of ratepayer-funded statewide efficiency programs, thanks to landmark legislation passed this year, which will finally bring that state into line with the other 10 Northeast states and the District of Columbia.

Against the backdrop of these changes remains a heated public debate about how the region will meet its future energy needs. New England's over-reliance on natural gas as an electric generating fuel has resulted in not only significant rate increases this winter, but increased scrutiny of the solutions being proposed to address the issue — one position being a call to expand pipeline capacity, another to build new electric transmission lines to Canadian resources, and another to accelerate other demand and clean energy

<sup>1</sup> NEEP focuses our work in Vermont, New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland and Washington, D.C. The insights in this report are subjective and do not reflect the views of NEEP sponsors or board of directors.



resources to meet the region's needs. The PJM Interconnection, likewise, is increasing its reliance on gas-fired electric generation to replace aging, carbon intensive coal-burning power plants. In that context, more states will join New York and Massachusetts in exploring new utility business and regulatory models along with modernization of the electric grid to support the integration of distributed energy solutions and dynamic electric loads. We're also witnessing a push for markets and private financing to play larger roles in delivering efficiency savings — coupled with concerns over how states will ensure quality, results and progress toward other policy goals. Underlying all such alternatives are the questions of: Who will bear the costs and risks of new infrastructure investments to meet future needs? What pathways will achieve state and federal environmental goals at the least life-cycle cost? And which scenarios are most likely to provide needed resources when we need them?

We at NEEP still see cost-effective energy efficiency as a primary building block of our region's clean energy future. Just as it is important to reduce the energy loads of a home or building as a first step to right-size heating and cooling systems, it is likewise important that our region's policymakers fully understand the contribution of all cost-effective efficiency from all fuels before committing to new large-scale supply. With a history of regional cooperation to meet energy and environmental goals, we believe that it is in the public interest to have strong analysis, planning and stakeholder input before making decisions that will impact ratepayers and progress on broader public policy goals for years to come.

We also believe that while there are many exciting new ways of engaging market actors and aligning interests to advance efficiency and other clean energy solutions, the region should be proud of — and build upon — its record of success in delivering innovative, far-reaching efficiency programs and services.

#### **FORMAT**

In response to the rapidly evolving landscape in which efficiency programs operate, we've changed the format of the Regional Roundup as well. In our fourth annual edition, you'll find a brief recap of some of the major efficiency policy developments in each of the Northeast and Mid-Atlantic states, as well as the most current available data on state investment and savings levels for regulated electric and gas efficiency programs.

This year, we've shifted the focus to be more forward-looking, examining some of the major trends and issues affecting the region as a whole. This year, we're also striving for the Roundup to be more dynamic and in the present, you'll see links to blogs and our state policy pages, linking its content to the newly redesigned NEEP website, while also including key insights from some of the region's thought leaders.

Along with metrics such as energy efficiency investment and savings data for the most recent year available (2013), this report provides an overview of the major successes and



hurdles states faced in 2014 and what is unfolding at time of publication. Some definite trends emerge, which we will examine more closely in the Issues to Watch section, with further information provided in the Appendices.

Here are some of the features you'll find in this year's Roundup:

NEEP's Take on State Progress provides a summary of which states continue to lead the pack, those that are steadily advancing, and those which have some catching up to do.

Issues to Watch lays out some of the biggest factors influencing the future of energy efficiency programs and policies in the Northeast and Mid-Atlantic states, and the larger energy, economic and societal issues with which they interact.

Complementary Policies presents NEEP's recommendations on which additional public policies can help augment and propel effective ratepayer funded efficiency programs. In this section, three NEEP experts lay out opportunities for states and what they are most excited about in 2015.

In our Case Study, we examine two emerging states — New Hampshire and Delaware – which are at either end of the NEEP region, and both of which are also at the cusp of big changes. Read about the factors that have led to a dramatic shift in one state, as well as why the other has bright prospects to ramp up its efficiency programs.

**Thought Leader Quotes** are featured throughout the report, including insights from some of the region's key policy leaders from the government, program administration, and non-profit sectors.

The State Pages examine what we see as some of the major issues and key data points from each state. We include some recent history, as well as what's on the horizon in 2015 and beyond.

The 'At a Glance' Boxes provide an overview of results for energy efficiency programs in each state. These summaries show total annual energy efficiency program expenditures, per capita expenditures, net annual energy savings, and savings as compared to annual energy consumption.

# The Regional EE Database: A Companion Tool

In order to provide for a more "apples to apples" comparison, the Roundup draws on the Regional Energy Efficiency Database (REED), a project of NEEP's Regional Evaluation, Measurement, and Verification (EM&V) Forum, to provide for greater transparency and consistency in state energy efficiency program data. REED is based on the EM&V Forum's Common Statewide Energy Efficiency Reporting Guidelines, which were adopted by the Forum Steering Committee in 2010. The Guidelines provide state-level reporting templates and process recommendations for improving the consistency of energy efficiency reporting across the region.



REED includes program year 2011-2013 energy efficiency data from the following nine states: Connecticut, Delaware, District of Columbia, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont. The complementary Annual Reports provides an overview of the high-level impacts of energy efficiency programs at the regional level as well as comparisons across states that help increase our understanding of similarities and differences in results across programs by type, sector and state. For states in our region not providing data to REED, we used 2013 data from state and utility annual reports and research by partner organizations.<sup>2</sup>

The Appendices include information on the status of key policies and programs, and illustrations of where investments and savings stand across the region.

<sup>2</sup> Maine, New Jersey, and Pennsylvania do not currently provide data to the Regional Energy Efficiency Database.



# STATES GOING THE DISTANCE

We think of the states in the Northeast as runners along a racecourse — a course where advances in technologies, programs and policies mean there is always further to go, and where states that aren't moving forward are falling behind their neighbors. These icons are meant to provide our quick illustrative representation of a state's overall progress on public policies to accelerate energy efficiency, as well as notable advances or setbacks in the state's recent history. It has been our experience that the attitudes and leadership demonstrated by policymakers can be as important as verified energy savings in assessing state progress, especially for those that have more recently joined the cadre of states that recognize and value energy efficiency as a first-order energy resource.

# **NEEP's Take on State Progress**

# Leading the Pack: Connecticut, Massachusetts, New York, Rhode Island and Vermont



These states show sustained and even increasing support for energy efficiency program funding and are implementing policy and program innovations like building energy rating, new financing tools, improved program tracking and coordination, and evolving regulatory frameworks. This assessment comes with a caveat, however, for the state of New York, where a ground breaking regulatory proceeding could either propel energy efficiency to the next level, or leave it to private forces that are not appropriately responsive or accountable to key state policy goals.

# Moving Ahead: Delaware, Maryland and Washington D.C.



In 2014, Delaware enacted legislation to create the first state-wide rate-payer funded efficiency programs. Maryland is working on its next iteration of EmPOWER Maryland programs. But will goals go far enough? The District of Columbia has won praise for its Sustainable Energy Utility programs — which not only offer energy efficiency and renewable options, but are a driving force in green job creation for District residents.

# Keeping Pace: Maine and Pennsylvania



Efficiency Maine continued to deliver solid program saving results, despite less than robust gubernatorial support of energy efficiency as a first-order resource. Pennsylvania has embarked on Phase 3 of its "Act 129" efficiency programs, and the election of a new governor has clean energy advocates hopeful.



# Falling Behind: New Hampshire and New Jersey



New Hampshire and New Jersey's energy efficiency programs continue to lag in comparison with other states around the region. New Hampshire has undertaken numerous studies in recent years, all pointing to the importance of creating policies to increase efficiency. Yet it remains without mandated energy savings goals or sufficient funding for it to keep pace with its neighboring states. Will 2015 be the year of change, given recent developments on an energy efficiency resource standard (EERS)? New Jersey continues headlong with natural gas expansion, has rejected a call for the creation of an EERS, and has opposed the U.S. EPA's proposed regulation of carbon emissions from power plants.

# Still in the Starting Blocks



Thanks to significant policy progress in Delaware and other emerging states in recent years, we're happy to note that we are able to retire this category from the Regional Roundup.

Later in the Roundup the State Pages examine what we see as some of the major issues and key data points from each state. We include some recent history, as well as what's on the horizon in 2015 and beyond.



# **ISSUES TO WATCH IN 2015**

# New leadership in state government

While an intangible value to driving state policy, conveying the value of energy efficiency in helping to meet an array of public policy goals — reducing waste, driving down costs, curbing pollution, deferring contentious generation and transmission projects, and creating jobs — can take some time and demonstration for newly elected and appointed officials. New governors, department heads, legislators and utility regulators have a great deal to learn and many competing interests as they settle into their posts.

In the NEEP region, new gubernatorial administrations are getting oriented in Massachusetts, Rhode Island, Pennsylvania and Maryland. Supporters of energy efficiency have lost leadership posts in the New Hampshire and Maine state legislatures, and new utility commissioners have or will be appointed in a number of the states, including Massachusetts, Maine and Maryland

Efficiency backers, including program administrators, service professionals and advocacy groups, will need to work to ensure that efficiency stays solidly on the radar of policymakers for its economic and societal benefits, and that program funding levels remain robust and stable. Such a task is made even more challenging against the backdrop of a partisan, national debate on energy, where groups like the Koch-brothers backed Americans for Prosperity have made state energy debates a priority, funneling hundreds of millions of dollars to oppose clean energy, including energy efficiency.

# New utility models and efforts to modernize the electric grid



"We are excited to see traditional energy efficiency

programs blended with existing and emerging smart technologies to deliver proven benefits for customers. The goal is to provide choice, control and convenience for customers as they manage energy use today and well into the future."

Edward White Vice President, Customer Strategy & Environment, National Grid Massachusetts and New York have been out front with their respective Grid Modernization and Reforming the Energy Vision (REV) proceedings in the last two years. But Rhode Island, Connecticut and other states are delving into such complex issues through regulatory proceedings and integrated resource planning — including the deployment of smart meters and other upgrades designed to make the grid more flexible and responsive in terms of managing power flow and quality.<sup>3</sup> They are also instituting time-varying rates and other price signals to induce customer behavior changes.

Mitigating demand spikes — and the resulting energy costs — remains a central objective of grid actors, but reducing overall energy use, increasing reliability and resiliency, and allowing for two-way

<sup>3</sup> Maryland, Maine and Vermont have smart meters in place; Vermont and Maine for all customers, Maryland for all Baltimore Gas & Electric customers.



power flow and distributed generation — think customers as renewable generators and increasing electric vehicles — are all part of the puzzle.

As New York's Department of Public Service staff prepares to release a draft Track 2 proposal on Reforming the Energy Vision in early 2015, NYSERDA moves forward with its related Clean Energy Fund proposal, with more detail on the draft plan expected in late February.

Meanwhile, the Massachusetts DPU issued an order in November 2014 establishing a policy framework on time varying rates (D.P.U. 14-04-C), and laid forth requirements for the regulated electric utilities to file their Grid Modernization business case and 10-year plans within nine months (D.P.U. 12-76-C).

Coupled with these complex proceedings are questions about the evolving roles of utilities themselves, and how they will continue to provide public benefits as their traditional rate bases erode, energy supply becomes more and more distributed through means such as rooftop solar, and an increasing number of market actors seek to bring their services to customers.

NEEP sees energy efficiency as integrally connected with utility and market efforts to improve communication and data flow, manage demand and total consumption, and mitigate overall customer bills as states transition to a more decentralized, clean energy power system.

# Evolution of rate structures, and the need to align utility profits with public benefits

Investor-owned utility companies are regulated to provide a public benefit, but they are also for-profit entities accountable to shareholders. While decoupling of volumetric rates from bills can help remove the disincentive for utilities to be drivers of efficiency and performance incentives encourage the utilities to meet savings goals, utilities are faced with a new set of challenges with diminishing usage and the surge in customer-owned renewable generation (see above). Not only must the utilities make distribution upgrades to manage the evolution to two-way power flow, but they are facing a declining rate base upon which to which to spread operating expenses.

As a result, the region has seen interest through legislation and rate filings for electric utilities to increase fixed charges on customers as a way to ensure base profits. However, this can also have the effect of providing a disincentive to saving energy, and, additionally, could have a disproportionate impact on low-volume users — many of whom may already be on a limited income.

In Connecticut, Northeast Utilities has asked the Public Utility Regulatory Authority (PURA) to approve a fixed rate hike from \$16 up to \$25.50 for residential customers. While a more modest increase of \$19.25 was granted in December, clean energy advocates are calling for legislation to cap fixed rates at \$10



The increased focus on fixed charges also has energy efficiency experts nationally weighing in, with plenty of evidence to suggest such measures are harmful to consumer energy savings. Jim Lazar of the Regulatory Assistance Project posited that minimum bills, rather than fixed rate charges, could be an effective means of helping utilities cover costs. And Seth Nowak of the American Council for an Energy Efficient Economy (ACEEE) notes that in addition, full decoupling, peak charges and time of use rates (that can go hand-in-hand with smart meters) can help align utilities with broader policy benefits. Going forward, it is vital that policymakers craft thoughtful solutions that will ensure utilities continue to serve the public interest while at the same time they are able to evolve and thrive in this brave new world of distributed generation and grid modernization.

The need for careful analysis, planning, energy efficiency and clean resources in preventing costly overbuilding of energy infrastructure.



"Out of market proposals to subsidize natural gas are a questionable

bet. Transferring risk to ratepayers and increasing our reliance on gas will leave us exposed to price swings and make it harder to reach our greenhouse gas reduction requirements. States should prioritize cleaner alternatives such as efficiency, renewable energy, and smart energy management - all of which can help wean us from our addiction to natural gas while building a clean energy future. " Jaime Howland Director, Climate & Energy Analysis Center, Acadia Center

Natural gas — once thought to be the ideal solution for a region needy for electricity generating fuels but concerned about environmental impacts —has morphed into a flashpoint of energy policy. Whereas New England's electricity generated from gas accounted for about 15 percent of the region's resource mix in 2000, it now accounts for nearly half. While natural gas burns cleaner than coal or oil, it was the proliferation of hydraulic fracturing, or "fracking" methods of extracting gas from Pennsylvania shale fields that really drove the shift. Producing gas from previously hard to reach deposits drove down prices, and drove up demand.

But what has turned out to be a clear over-reliance on one fuel source has had its consequences, with none being more dramatic than the price spikes in electricity costs that accompanied the "polar vortex" winter of 2013-2014. For a very few hours of a very few days last winter, prices in the region rose to historic levels — as electricity generators scrambled to arrange for pipeline capacity to deliver adequate amounts of gas, while competing with distribution companies for their reserved firm pipeline capacity

to provide their customers with gas to heat their homes and businesses. Predictably, as electricity prices increased, a variety of proposed solutions began to emerge – including increased demand response.

Yet, in the public debate that has ensued, what policymakers still lack is a comprehensive analysis of all energy efficiency and other clean energy solutions



that will provide them with the information they need to "right-size" our energy infrastructure – in alignment with state and regional environmental and economic goals – before committing to new large-scale supply. Such analysis has been part of public policy decision-making in the Northwest U.S. for decades,<sup>4</sup> and has allowed states in that region to make well-informed decisions about resource need in a way that limits risk to both consumers and the environment.

Without the benefit of a comprehensive alternative energy resources analysis, several New England governors have embraced a proposal for a new "greenfields" gas pipeline across northern Massachusetts, from the New York border to a distribution facility in Dracut – a proposal that has been met with much controversy. On the one hand, a number of stakeholders and policy makers - including a number of utility regulators, legislators and elected officials, appear convinced that the best solution is to build new natural gas pipelines to serve the region and that an unprecedented tariff on electric ratepayers in the region should be implemented to pay for it.

But NEEP and many other clean energy organizations have asked that, before we saddle consumers and businesses across the region for generations to come with billions of dollars in new costs to pay for such infrastructure, state policymakers should undertake a complete and comprehensive accounting of alternative resources – including a full assessment of the potential for energy efficiency across all fuel types - that could be deployed much less expensively and without shackling the region to a continuing reliance on fossil fuels.

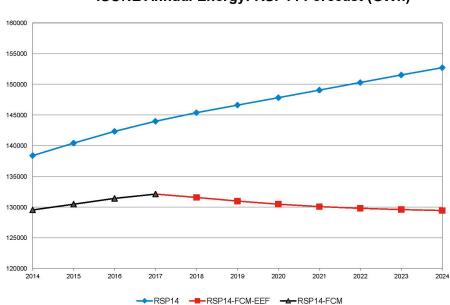
Likewise, New York and the Mid-Atlantic states are facing similar winter peak price spikes, despite the fact that a large tract of the region sits atop the Marcellus and Utica shale gas that some advocate should be brought into New England in much higher quantities, questioning whether the issue is one of basis differential or over-reliance on a single commodity. That region, too, lacks a comprehensive analysis of the potential for energy efficiency, though some states – notably Delaware and Maryland - have recently completed updated technical assessments for energy efficiency to meet future needs.

Clearly, energy efficiency has much to offer as a regional solution. Indeed, our region has benefitted greatly from nearly three decades of investments in energy efficiency to meet resource needs, as is evidenced by recent analysis from ISO-New England showing that efficiency has helped "flatten" the electricity demand. But policymakers need to take off the restraints that have kept the region from realizing its full energy efficiency potential. For example, a regional assessment of energy efficiency potential with a regional procurement strategy that includes all New England states attaining all economically-achievable energy efficiency would be a great start. We should also place higher value on those efficiency measures that have the greatest impact on peak demand, as well as those that

<sup>4</sup> The Northwest Power and Conservation Council "develops a plan, updated every five years, to ensure the region's power supply and acquire cost-effective energy efficiency." See: http://www.nwcouncil.org/energy/powerplan/



can be deployed to targeted geographic locations where they can be most effective. Such deployment of demand-side solutions should be considered across the Northeast and Mid-Atlantic as both a hedge against future price increases in natural gas as well as a more strategic investment to adhere to state clean air and climate goals.



**ISONE Annual Energy: RSP14 Forecast (GWh)** 

And we need to couple efficiency with other clean energy resources, including demand response, energy storage, wind and solar generation, and combined heat and power. As these resources are also less vulnerable to energy price volatility, they hold the promise of greater cost assurance for residents and businesses, while helping to grow our clean energy economy, instead of continuing to ship our energy dollars out of state for fossil fuels. How our state leaders — and, ultimately, the federal government — address this issue in the next year will have lasting impacts on the region.

# Innovative financing programs that complement energy efficiency portfolios

As efficiency programs become more mature, it is natural to look for ways to build upon their success that will entice market actors and private lenders to augment ratepayer-funded offerings. Property Assessed Clean Energy loans for commercial and residential owners have gained traction in municipalities and states in recent years. Long-successful programs such as the Mass Save® HEAT Loans have allowed thousands of Bay State homeowners to finance efficiency upgrades through subsidized zero-interest loans. Connecticut's Green Bank leverages \$10 in private capital for every \$1 in ratepayer funds, and works to link clean energy and efficiency projects in coordination with the EnergizeCT® programs.

NEEP sees an important role for financing as a complementary offering— one that supplements, but does not supplant, successful, cost-effective programs delivered by utili-



ties and third-party administrators. While a new breed of state leaders seems enamored with financing as some kind of silver bullet, there are cautionary tales about cities and states that rushed to new models — only to find business and home owners reluctant to take on new debt. Ideas such as creating tradable energy efficiency credits, or using ratepayer funds to securitize private dollars — models that risked ratepayer funded program budgets being delayed or outright reduced — have been proposed and rejected by policymakers upon realizing that energy efficiency investments present a unique set of circumstances that require a combination of legal mandates, public investments, enforceable policy goals and multiple actors working in collaboration and cooperation.<sup>5</sup>

Thus, we see reason for concern in states like New York, where a steep decline in System Benefit Charge collections is planned under NYSERDA's Clean Energy Fund proposal, with the promise of market animation an alluring, yet unproven, prospect.



"Because the Public Purpose Energy Service Company model only

addresses public-serving entities, such as multi-family affordable housing, healthcare, education and municipal/ community, there are 'affinity investors' for each of these sectors who see this as a vehicle to have impact in the communities they serve in a way that they are not able to do by themselves."

Peter Adamczyk Capital Operations Director, Commons Energy An alternative has evolved in an exciting new model seen in Vermont, under the stewardship of industry pioneer Vermont Energy Investment Corp. (VEIC). Commons Energy is the first of its kind Public Purpose Energy Service Company (PPESCO), and is working to spread that model. As Managing Director David Barash explained in a May 2014 article, "Energy efficiency has long proven to be a viable, and even lucrative, opportunity for private companies with capital to invest — and an incentive to seek out simple upgrades that offer short paybacks."

"Unfortunately, despite this market activity, a swath of more difficult, smaller-scale, and lower-return efficiency opportunities still remains virtually untouched," he added. The unique value-add of the PPESCO model is that it mobilizes capital provided by private foundations and combines it with investments from traditional sources to reach deeper opportunities for energy savings.

Commons Energy provides turn-key technical assistance to develop projects — from audits, to design, to permitting, to quality control — tasks that otherwise keep comprehensive energy projects from proceeding. Without these services, the capital from private foundations would not find its way to these smaller-scale projects. We have seen that capital by itself — no matter the source — is insufficient to overcome the barriers to comprehensive energy efficiency.

Commons Energy is already working on turnkey projects in Vermont, Maryland and the

<sup>5</sup> Massachusetts legislators in 2013 rejected a provision in an energy bill that would have securitized energy efficiency funding to financing private financing through property assessed clean energy districts.



District of Columbia to help municipalities, hospitals, public schools and multifamily housing projects undertake efficiency and other clean energy projects, and realize an average of 30 percent savings in their energy costs. Commons Energy is filling a gap, not taking the place of existing efficiency programs. We hope to see the PPSESCO model flourish in 2015 and beyond, as it provides a path forward to meet the goal of animating private markets to invest in energy efficiency, but does so without putting at risk the very energy efficiency programs that have not only made our region a national leader, but caught the eye of private investors.

# Impact of federal carbon regulations on regional, state initiatives

Rarely in recent memory has a presidential announcement regarding energy and environmental policy captured public attention as when in June of 2013, based on the authority provided in Section 111(d) of the federal Clean Air Act, President Obama directed the U.S. Environmental Protection Agency to "issue carbon pollution standards, regulations, or guidelines, as appropriate, for modified, reconstructed and existing power plants." Of greatest interest to NEEP and to those policymakers working in our region was that the President's proposed Clean Power Plan (CPP) — which seeks to cut carbon pollution from power plants by 30 percent from 2005 levels — included as one of its four "building blocks" through which states can comply the use of "demand-side energy efficiency to reduce the amount of electricity generation required."

Over the last year, NEEP worked with a variety of stakeholders — our fellow Regional Energy Efficiency Organizations, or REEOs, from around the country; state air and energy offices and regulators; efficiency program administrators; and other energy efficiency advocates — to help foster greater understanding of the role of energy efficiency in meeting the CPP requirements, and to prepare comments to the EPA supportive of the comprehensive inclusion of energy efficiency as a key strategy to reduce power plant carbon pollution. This effort addressed a variety of topics, including the complex issues of evaluation, measurement and verification (EM&V) of energy efficiency programs.

Of particular note was EPA calling out the Northeast states participating in the Regional Greenhouse Gas Initiative (RGGI) as a model for regional implementation. How the RGGI states are able to work with the EPA to integrate their RGGI plans into their federal compliance strategies is something that will be closely scrutinized from all corners of the country. As our region has shown, aggressive carbon emissions reductions can not only be attained, but can also contribute substantially to economic growth and system reliability.

Final standards and guidelines for state compliance are due this summer, with states required to submit their plans by June 2016 to implement the new carbon emissions standards. States opting for a "mass-based" compliance approach, such as the RGGI, will have until June 2017 to submit compliance plans.<sup>6</sup>

<sup>6</sup> See NEEP comments and related links at http://www.neep.org/energy-efficiency-and-proposed-epa-clean-power-plan



Certainly, maintaining commitments to RGGI in the face of political change in several Northeast states should be bolstered by the realization that RGGI represents one of the best avenues for compliance with the Clean Power Plan. But as there are few givens in politics, state actions from the RGGI states over the next year — as well as from Pennsylvania and New Jersey over the next six months — will tell us whether they'll take full advantage of energy efficiency as a best path to compliance.

# How to keep pace with aggressive savings goals amid calls for rate reductions

As many states in the region enter new planning cycles for multi-year efficiency plans, skeptics worry about whether utilities and third-party administrators can actually deliver on ambitious savings goals. Perhaps of greater worry, however, is the growing list of opponents to energy efficiency who are quick to point to the cost of energy efficiency investments, without acknowledging the myriad benefits including costing less than new supply. This development is exacerbated by the fact that the Northeast and Mid-Atlantic regions pay among the highest utility rates in the nation, though energy efficiency programs have been hugely successful in helping to control energy costs for residential and commercial customers alike.



"Energy
Efficiency
continues to be
an important
resource in ISO

New England's capacity
markets. Aggressive energy
efficiency policy goals make
significant impacts to the ISO's
long range forecasts of energy
and peak demand growth. In
turn, energy efficiency is making
its mark on how the ISO plans
and operates the grid."

Eric Winkler System Planning ISO-NE Through its stakeholder Energy Efficiency Advisory Council (EEAC), Massachusetts begins 2015 by planning for its 2016-18 gas and electric efficiency programs — acknowledging that the programs will likely fall short of goals for the current three-year plan. As utilities and the Cape Light Compact scramble to reallocate resources and urge business customers to follow through on large-scale projects, environmental and low-income advocates are pressing hard on the state to hold the program administrators to their goals. Program administrators in Maryland are likewise challenged to achieve the EmPOWER Maryland goals. However, program administrators in other states, e.g., Rhode Island, are demonstrating that it is possible to continue to scale-up efficiency to achieve and exceed 2 percent energy savings per year.

Meanwhile, there is concern that amid record-high electricity rates this winter driven by the region's over-dependence on natural gas, some corners will call for cuts in efficiency budgets — never mind that it remains much more cost-effective to meet customer demand by investing in energy efficiency than by turning to more expensive new supply.

As states such as Vermont, Rhode Island, Connecticut and Massachusetts continue with aggressive savings goals and planning for future program years, it is important that policymakers understand the full value of efficiency, and program administrators are



properly encouraged to meet what have been deemed as attainable and economically feasible savings levels. Moreover, it is incumbent upon NEEP and all supporters of cost-effective energy efficiency to help policymakers understand that efficiency is a resource investment that is as reliable as traditional energy generation, transmission and distribution, but one that carries a far lower price tag in both direct economic and broad-scale environmental terms.

To succeed, program administrators will need to keep rowing hard together and incorporating new learnings, evolving technologies, and regional strategies to transform markets and evaluate savings. Likewise, regulators should continue examining new models of measuring cost effectiveness that incorporate broader policy goals, and allow program administrators latitude to try bold new ways of reaching customers and driving for deeper savings.



# **OUR TAKE: COMPLEMENTARY POLICIES**

Complementary public policies such as building energy codes, building energy rating and disclosure, and appliance efficiency standards help states lock in savings and foster progress on energy efficient technologies and practices. Building energy codes target new construction and substantial building renovations, with training and compliance key to realizing savings. Appliance standards remove least-efficient products from the market while preserving customer choices. High performance building programs — including rating, disclosure, and zero-net energy construction guidelines — improve overall energy and environmental performance for both new and existing buildings.

All of these policies can work hand-in-hand with ratepayer-funded efficiency programs. Increasingly, we are seeing utilities and third-party program administrators taking leading roles in advancing and helping to implement such complementary policies — and their efforts being acknowledged by state energy offices as part of their program plans and in their performance incentives.

NEEP is home to a number of subject matter experts on buildings and products. Here is what they have to say about the role of complementary policies, and what they see as high potential areas in the coming year.



# STATES NEED TO ENGAGE ON APPLIANCE STANDARDS IF THEY WANT TO SEE RESULTS



Appliance and equipment efficiency standards exist to ensure a range of consumer choices are available, while culling the most energy-hungry products from the market as technology evolves. They work to lock in savings, complementing ratepayer-funded efficiency programs.

Currently, the U.S. Department of Energy (DOE) is on an historic pace of completing standards rulemakings for a host of product categories, issuing 10 during 2014 alone. A number of states in our region are counting

on new and improved federal efficiency standards for products and equipment as a strategy to achieve their energy savings or greenhouse gas reduction goals. Yet standard-setting is not a spectator sport; successful federal rulemakings depend on states to weigh in with DOE.

Through the Northeast/Mid-Atlantic Appliance Standards Project, NEEP works to facilitate this engagement by energy offices, advocacy groups, utilities, and other efficiency program administrators. The Standards Project provides regional stakeholders a coordinated avenue to learn about and participate in these important federal rulemaking processes to ensure we achieve the results that maximize benefits for our states. Together, NEEP and the Project do the heavy lifting— researching, coordinating, and even drafting joint public comments. But our strength is in our partnerships, and there is plenty of opportunity for states and others to get involved.

The pace of rulemaking at DOE does not appear to be slowing as 2015 gets underway. We'll have ample opportunity to participate in a number of important federal appliance standards rulemakings this year, including proposal stages for residential gas furnaces, residential boilers (gas and oil), general service lamps (household light bulbs), computers, and others.

Each of these product categories offer the region unique opportunities to reduce energy use and peak demand for years to come. The DOE's recent Proposed Rule for Commercial Packaged Air Conditioners/Heat Pumps (roof-top units) seeks a 30 percent jump in efficiency over the current standard. If enacted, this rule would achieve the largest national energy savings of any standard ever developed by DOE.

The Northeast/Mid-Atlantic region is a national leader when it comes to energy efficiency, and these rulemakings offer our states an opportunity to bring experience to the national stage and ensure a strong outcome for our region and the nation.



For the priority categories mentioned, as well as others, NEEP will work with interested stakeholders to develop comments to inform the DOE as they move from proposal to final rule. We encourage state energy offices, efficiency program administrators and clean energy advocates to join us in this process and lend your insights to build a powerful case for the outcomes we seek. The savings opportunities are too impactful to sit on the sidelines. Let's be sure our voices are heard.

And let's also not forget that states themselves have ample opportunity to enact their own standards for which the DOE has not established rulemakings. Our region has a long history of doing just that, having enacted more than two dozen appliance and equipment standards over the last 12 years — most of which had the effect of the federal government being driven to set those same standards nationally. NEEP each year prepares for states a model package of state-based appliance standards that they can adopt through either legislative or administrative action, and 2015 will be no different.

For more information, please visit the Appliance Standards section of NEEP's website.



David Lis is Director of Market Strategies for NEEP, and manages the Northeast/Mid-Atlantic Appliance Standards Project.



# NEXT-GEN ENERGY CODES ON THE PATH TO NET ZERO BUILDINGS



"Rhode Island is proud to be one of the few states in the region that

allows utilities to support energy code training and technical assistance and the only state in the region that allows the utility to claim the resulting energy savings. In partnership with National Grid, we have pioneered the use of extensive education and technical assistance to code officials, builders, contractors, architects and engineers. This collaborative work to achieve measurable increases in code compliance will lower energy costs for Rhode Islanders and ensure that our buildings are comfortable and safe."

Marion Gold Commissioner, Rhode Island Officer of Energy Resources Unlike automobiles, appliances, or our favorite consumer electronics, buildings constructed to-day will still have an impact on U.S. energy use 50 to 100 years from now— if not longer. Building energy codes improve the energy efficiency of these long term physical investments by setting minimum efficiency requirements for new and renovated buildings.

In addition to lowering energy bills for building owners and occupants, energy codes reduce the demand for new energy generation capacity, thereby limiting air pollution and greenhouse gas emissions. Adopting newer versions of these codes that are more energy efficient, as well as easier to enforce and comply with, is one of the most cost-effective strategies for decreasing energy use over the life of the building and, in turn, reducing greenhouse gas emissions.

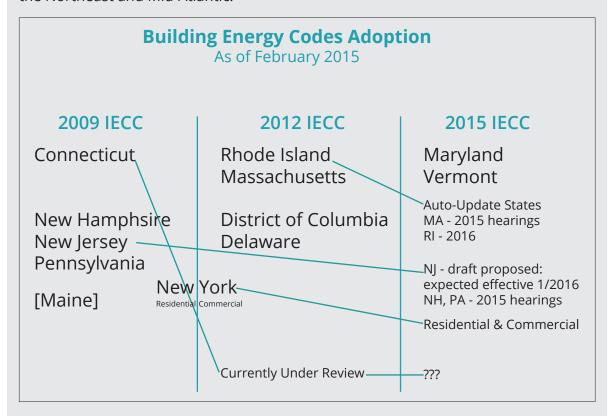
As requirements in state and local energy codes are advanced, it becomes increasingly important to analyze a building as an interconnected system, instead of simply addressing the efficiency of its components. The adoption of newer, more efficient energy codes drives the market towards this whole building performance approach, which is an important step in the

path toward making zero net energy buildings — buildings that can produce as much energy as they consume — the recognized standard of new construction.

In 2014, five of the 12 jurisdictions in the NEEP region — New York, Maryland, Vermont, and the District of Columbia — adopted new, more efficient energy codes, which I'm happy to say beat my prediction of four states last February. This year, NEEP anticipates that as many as five more states (Massachusetts, New Hampshire, Connecticut, Pennsylvania, and New Jersey) may adopt new building energy codes. New York might also adopt another new code—this time for commercial and residential buildings. Most, if not all, of these states would be adopting the newest model energy code, the 2015 International Energy Conservation Code (2015 IECC).



See below for a quick look at the present and future building energy code outlook in the Northeast and Mid-Atlantic.



For more information, check out NEEP's Building Energy Codes webpage. Our staff also tracks the status of energy codes and posts building code related updates from around the region. In addition, NEEP's Model Progressive Building Energy Codes Policy provides policy recommendations and best practices for energy code adoption and compliance, including stretch codes.



Kevin Rose is NEEP's Building Energy Technical Associate.



# LED STREET LIGHTING RETROFITS AN EXCITING OPPORTUNITY FOR CITIES AND TOWNS TO SAVE

Many jurisdictions in the Northeast/ Mid-Atlantic region are beginning to view their street lights—which often account for more than 20 percent of municipal electricity usage—as an opportunity for dramatic cost savings and energy usage reductions. While most municipalities still use high pressure sodium (HPS) or metal halide lighting to illuminate their streets, recent advancements in solid state "LED" technologies offer the potential for increased reliability, as well as much better lumen-per-watt efficiency. These modern fixtures also help reduce light pollution, shining light where it's needed for safety, and sending less into the nighttime sky.

In fact, municipal energy efficiency programs, such as the Massachusetts Green Communities Initiative, often explore LED street light conversion as a primary step for attaining municipal energy efficiency goals.

Yet the region faces many barriers impeding widespread deployment of LED street lights. In some cases, key decision-makers lack the expertise needed to conduct a conversion. In others, high upfront costs and undepreciated legacy lighting equipment impede broad adoption of newer technologies. Most importantly, regulatory lag and the delayed utility adoption of LED tariffs have impeded widespread conversion to LED technologies.

For example, if a utility doesn't offer an LED street lighting rate within its electric service delivery tariff, LED technologies are unavailable to the municipalities it serves. This barrier is compounded by the typical timeline for a major tariff revision, which can take up to a year and often occurs only once every one to three years. As utilities revise their tariffs, the widespread adoption of LED street lighting will hinge upon whether rates for LED fixtures are offered and, more specifically, whether the LED rates provide municipalities a financial advantage over incumbent HPS technologies.

In spite of the above-mentioned technical, regulatory, and financial challenges, several recent developments in our region highlight the field as ripe for movement away from outdated technologies toward LEDs:

LED Tariff Offerings: Approximately one third of the region's utilities now offer tariffs that provide a rate for company-owned LED fixtures. These include: United Illuminating, , Delmarva Power, Central Maine Power, Baltimore Gas and Electric, Potomac Edison, Unitil, Atlantic City Electric, Rockland Electric Company, Orange and Rockland Utilities, Duquesne Light and Power, Pike County Electric, Green Mountain Power, and two Eversource companies: Eversource CT Electric and Eversource New Hampshire. Notably, the Eversource New Hampshire tariff (rate EOL) is a "customer contributed" tariff, allowing a municipality to purchase their own LED street lighting fixtures for



contribution to the utility. This "customer contributed" model is important because it allows a municipality who currently leases their fixtures from the utility to engage a third party performance contractor to perform an LED conversion.

Growing Public Awareness: LED street light conversion projects in large cities like New York, Philadelphia, and Boston have drawn the attention of many, and outlined the business case for conversion. Even more notably, smaller municipalities in Connecticut and Massachusetts have joined together to pursue LED conversion strategies. To share best practices and promote awareness, some communities in our region — including Portland, Maine — have committed to joining the U.S. DOE's High Performance Outdoor lighting Accelerator.

Legislative Action: To circumvent regulatory barriers to adoption, legislation in Massachusetts, Maine, Maryland and Rhode Island has enabled municipal purchase of utility-owned street lights, while public utility commissions in Connecticut and Vermont have also set precedents for such purchases. Just as importantly, legislatures in Vermont and Rhode Island have enacted laws to alter tariffs requiring investor-owned utilities to offer an LED street lighting option for municipalities.

**Dramatic Price Drops:** As technology has rapidly improved and more players enter the market, an LED street light that cost \$432 in 2009 cost just \$141 in 2013. In fact, trusted manufacturers now offer LED streetlights at the 100 watt HPS equivalent lumen level for under \$100.

These, and other recent developments within the field highlight our region as ripe for movement away from legacy technologies and toward LED street light conversions. To learn more about street lighting opportunities and hear about the recent Presidential Challenge for Advanced Outdoor Lighting, visit the Department of Energy's Better Buildings Challenge website. For more information on LED product performance testing, visit the website of NEEP's DesignLights Consortium. <sup>7</sup>



Brian Buckley is NEEP's High Performance Public Buildings Associate.

<sup>7</sup> These insights are excerpted from a January 2015 NEEP report on LED Street Lighting Assessment and Strategies for the Northeast and Mid-Atlantic



# CASE STUDY: TWO STATES, TWO PATHS

What ingredients are propelling Delaware, and what could ensure progress in New Hampshire?

In our 2013 Regional Roundup, we rated the state of Delaware as "Still in the Starting Blocks," noting that "the clock [ran] out before legislation aimed at fixing the funding mechanism and program administration for Delaware's efficiency programs could be passed." Still, we added that plenty of promise remained for Delaware to join the ranks of the 10 other states and the District of Columbia in enacting a policy for delivering ratepayer-funded energy efficiency programs.

In the state of New Hampshire, by contrast, we described a situation whereby mounting evidence and substantial analysis had still not moved policymakers in the state to embrace the full value of energy efficiency, describing the situation thusly: "While New Hampshire has dedicated significant time to considering whether and how to make efficiency a first-order resource, action has yet to follow."

This year, we revisit these two states in particular, to examine why one state seems to be surging forward, while the other has been slow to make progress.

#### **Delaware**



In 2014, Delaware's per capita efficiency investments were about \$5.65, compared to a 12-state regional average of \$50.36, with leading states budgeting more than twice that amount. But thanks to strong administrative leadership, buy-in from lawmakers, a committed energy office staff, and a coordinated advocacy effort from non-profit and business groups alike, big changes are afoot in the First State.

After repeated legislative attempts to expand efficiency funding in Delaware, last summer saw the passage and signing of Senate Bill 150 — a turning point for the state, which will greatly expand cost-effective electric and gas efficiency programs for customers across Delaware. The Act allows utilities to deliver energy efficiency programs and recover the costs through rates, and specifies that they will operate in partnership with the existing, but chronically under-funded Sustainable Energy Utility (SEU) under the guidance of a new stakeholder Energy Efficiency Advisory Committee.

In the next year, the state's largest utility — Delmarva Power and Light (DP&L) — will submit three-year plans and budgets with savings goals, evaluation measurement and verification, cost effectiveness screening, and the like. Though the state's municipal electric companies and rural electric cooperatives have their own governance bodies, it is anticipated that they will work to align their program offerings with those of DP&L and the SEU.

The Department of Energy and Natural Resources Control's Division of Energy and Climate (DNREC) has many determined champions of efficiency on staff, and has also ben-



efited from strong support from Gov. Jack Markell and both former and current secretaries: Collin O'Mara and David Small, respectively.

In December, Division Director Philip Cherry and Energy Programs Administrator Robert Underwood presided over the first stakeholder EEAC meeting. Soon after, it was announced that the Agency had retained highly-regarded consultants to the board, mirroring best practices in use in such leading states as Connecticut, Rhode Island and Massachusetts. With much work to be done to create a framework, timeline, budgets and plans for statewide efficiency programs over the next year, the state is in a strong position to make rapid progress. Hats off to Delaware for implementing what are being recognized nationally – and practiced by many of the states in the NEEP region – as best-in-class in developing and delivering first-order energy efficiency programs.



"As a result of efforts from a broad group of stakeholders in Delaware wanting to change our energy efficiency policies, we are delighted that the 147th General Assembly passed Senate Bill 150 with House Amendment 2 and it was signed by Governor Markell. By allowing utilities to implement energy efficiency programs with cost recovery,

all Delawareans stand to gain from this ground breaking legislation. Under the leadership of the Energy Efficiency Advisory Council created by the law, a game plan for program implementation is being developed. We look forward to producing our first annual report by the end of the calendar year."

Rob Underwood Energy Administrator, Deleware Division of Energy & Climate

# **New Hampshire**



The Granite State has been operating successful rate-payer funded utility efficiency programs for more than two decades. But as other states in the region surge ahead, the problem still plaguing New Hampshire is that without a policy framework directing the utilities to capture as much cost-effective efficiency before turning to new supply, program savings levels have remained modest, and budgets have strained against customer demand. Without any policy-directed energy savings goals, New Hampshire continues to lag the

region in its per capita investments in efficiency, being the only state in the Northeast without some type of policy directive to capture all cost-effective energy efficiency.

New Hampshire's landscape features many of the same characteristics as do states with more robust efficiency programs: committed advocates, legislative champions and some talented employees of state agencies. Through 2014, it also had a supportive governor, energy efficiency proponents in both the House and Senate, and a slate of well-informed Public Utility Commissioners. While Governor Hassan was returned



to office in November 2014, party control switched in both the General Court and the powerful Executive Council.<sup>8</sup>



"The NH PUC staff has spent a considerable amount of time with interested

stakeholders in developing a proposal to incorporate the best features of an Energy Efficiency Resource Standard into New Hampshire's energy efficiency programs. We look forward to publically vetting this proposal in the near future."

Robert Scott Commissioner, New Hampshire Public Utility Commission Now, with nearly half a dozen major energy studies and reports completed in the last few years, including a comprehensive Energy Strategy published in September 2014, and all of them pointing to the value of increased efficiency investments and a policy such as an Energy Efficiency Resource Standard, it remains a question of political will, and not of feasibility, as to whether New Hampshire can move ahead in the pack.

As the Granite State enters 2015, there appears to be continued momentum to create an Energy Efficiency Resource Standard (EERS), with the Public Utilities Commission staff (PUC) having just released a straw proposal in February on how to move forward with an EERS. Chief among a series of recommendations, "The NHPUC should act promptly to use its existing regulatory powers to establish an

EERS," and "Establish mandatory electrical and natural gas (gas) equivalent savings targets for the next ten years."

Could 2015 finally be the year for New Hampshire to ramp up from its modest savings levels (about .6 percent of electric demand) and ultimately reach more of the cost-effective efficiency potential that neighboring states are realizing? NEEP and other energy efficiency advocates will be closely watching developments in New Hampshire, and offering our support where needed.

<sup>8</sup> Among other charges, the Council oversees all department contracts with a value over \$25,000, including state and federal funding. www.nh.gov/council



# STATE ENERGY EFFICIENCY POLICY DEVELOPMENTS IN 2014

# **CONNECTICUT**

# **Key Developments**



Connecticut is in the last year of the 2013-15 Conservation & Load Management (C&LM) Plan — the joint, statewide electric and gas energy efficiency plans. 2014 was a very strong year for the programs, particularly with a marked uptick in activity in late fall due to customer education of the benefits of energy efficiency in mitigating rising energy costs this winter. The program administrators came in on budget and exceeded goals for the year, and the stakeholder Energy Efficiency Board (EEB) will support utility performance incentives.

Late in 2014, the Department of Energy and Environmental Protection issued its draft Integrated Resource Plan (IRP) as required by statute. The plan examines resource adequacy for the state, with efficiency continuing to play a leading role. Gov. Dannel Malloy's emphasis on natural gas pipeline expansion is also a major strategy of the plan, leaving some doubt as to the role energy efficiency will play in meeting resource need.

The EEB and the Connecticut Energy Finance and Investment Authority (CEFIA or the "Green Bank") are now holding quarterly joint board meetings. This initiative has improved communication and coordination of program funds. The Green Bank will use private capital to help recapitalize some of the financing products that the utilities use, with the Energy Efficiency Fund dollars helping to ensure projects are economical for customers.

#### At a Glance

Electric Program Expenditures	\$121,612,253.44
Gas Program Expenditures	\$25,010,456.00
Per Capita Expenditures	\$40.77
Electric Savings (MWh)	266,364
Electric Savings as a Percent of Retail Sales	0.96%
Gas Savings (Therms)	4,812,815
Gas Savings as a Percent of Retail Sales	0.39%

Footnotes: 2013 program year data as reported to ISO-New England for its 2014 Energy Efficiency Forecast and to the NEEP EM&V Forum for the Regional Energy Efficiency Database (REED). Savings are expressed in net annual terms.



# **DELAWARE**

# **Key Developments**



In the summer of 2014, Delaware enacted landmark legislation that will enable the first-ever ratepayer funded efficiency programs, including statewide coordination among the regulated and non-regulated utilities and the existing, but under-funded, Sustainable Energy Utility.

A new stakeholder Energy Efficiency Advisory Council first convened in December. Modeling it's actions after best practices in some of the region's leading states, Delaware's energy office (DNREC) Division of

Energy and Climate has retained expert consultants, Optimal Energy, to help guide the process of setting program goals, plans and procedures. In 2013/2014, Optimal also completed an efficiency potential study, which laid forth the cost effective potential and a roadmap for how the state might roll out programs.

Delaware's Building Energy Code Collaborative continues its progress as a partnership to drive code awareness, training and adoption.

#### At a Glance

Electric Program Expenditures	\$461,351.00
Gas Program Expenditures	\$604,001.00
Per Capita Expenditures	\$1.15
Electric Savings (MWh)	134,325
Electric Savings as a Percent of Retail Sales	1.18%
Gas Savings (Therms) <sup>1</sup>	0
Gas Savings as a Percent of Retail Sales	0.00%

Footnotes: 2013 program year data as reported to the NEEP EM&V Forum for the Regional Energy Efficiency Database (REED). Savings are expressed in net annual terms.

<sup>1. 2013</sup> gas savings figures were not reported to REED for program year 2013.



# **MAINE**

# **Key Developments**



Maine Governor Paul LePage continues to push for expansion of natural gas infrastructure and supply, believing that this will lower energy costs for consumers. His Public Utilities Commission went so far as to ignore a staff report and recommendations against a tariff on electric customers to pay for new gas pipelines.

Efficiency Maine continues to deliver a successful suite of programs, with an emphasis on new heating equipment, including heat pumps.

Efficiency Maine also offers a variety of financing products to help residential customers bridge the gap and implement cost-effective measures.

The state has seen little improvement in the area of building energy code issues since the Maine Uniform Building Energy Code (MUBEC) was largely rendered moot by legislative action in 2013. Worse still, 2015's legislative session has seen even more initiatives to repeal the building code entirely, including the energy provisions. Despite assurances made to the U.S. Department of Energy in accepting federal funds under the American Recovery and Reinvestment Act (ARRA, or the "stimulus") that it would commit to updating and enforcing its building energy code, the state has reneged on those commitments with each new attempt to chip away at MUBEC.

#### At a Glance

Electric Program Expenditures	\$24,279,396.00
Per Capita Expenditures	\$18.28
Electric Savings (MWh)	134,554
Electric Savings as a Percent of Retail Sales	1.20%

Footnotes: 2013 program year data taken from Efficiency Maine Trust's 2013 Program Report (http://www.efficiencymaine.com/docs/2013-Efficiency-Maine-Annual-Report. pdf). Data here are for SBC, RGGI, and ARRA funded electric efficiency programs. Gas data were not available at the time. Savings are expressed in gross annual terms.



# **MARYLAND**

# **Key Developments**



The Maryland Public Service Commission (PSC) has approved, largely unchanged, the utilities' 2015-2017 energy efficiency plans. This ensures that programs will continue beyond the end of 2015, which is the last date for which the legislature had established targets.

The PSC has added gas efficiency to the state's program portfolio by incorporating Washington Gas Light into the ongoing consolidated energy efficiency docket. These modest gas programs are the first to be offered in the state.

Meanwhile, the state's EmPOWER Maryland Act goals were finalized in late January 2015. The Commission acknowledged the need for further consideration of goal allocation methodologies and cost-effectiveness screening methodologies beyond 2015, and accepted comments on both issues, with public hearings scheduled for mid-February.

In buildings news, the PSC has granted cost recovery for an automated commercial building benchmarking system, which will facilitate customer awareness and engagement with the EmPOWER energy efficiency programs. Adoption of the 2015 International Energy Conservation Code (IECC) will make commercial building codes eight percent more stringent, and one percent more so for residential codes.

The election of Gov. Lawrence Hogan and the change in party administration is leading to new department appointments, as well as new PSC commissioners. As of publication date, those appointments — and their implications — were not yet known.



"In recent years, Maryland has emerged as a potential leader in the energy efficiency world, increasingly saving Maryland residents money under the existing EmPOWER framework by ramping up energy savings to levels approaching the best-performing states. As EmPOWER transitions into its next phase of goal setting, we hope and

expect that the new administration of Governor Hogan will continue the trend of saving Marylanders money by saving energy, further expanding the state's energy efficiency programs."

Rich Reis Chair, Energy Committee, Maryland Chapter of the Sierra Club



# At a Glance

Electric Program Expenditures	\$292,031,001.35
Per Capita Expenditures	\$49.26
Electric Savings (MWh)	638,341
Electric Savings as a Percent of Retail Sales	1.04%

Footnotes: 2013 program year data as reported to the NEEP EM&V Forum for the Regional Energy Efficiency Database (REED). Savings are expressed in net annual terms.



# **MASSACHUSETTS**

# **Key Developments**



In Massachusetts, the gas and electric utilities and the Cape Light Compact (collectively, the program administrators, or PAs) have begun work on their 2016-18 joint three year plans, with a draft due in April 2015. The stakeholder Energy Efficiency Advisory Council (EEAC) has been accepting public input and conducting workshops on plan development for residential and commercials & industrial (C&I) programs.

Though the program administrators (PAs) have achieved historic levels of savings and are projected to far exceed lifetime savings goals for 2014, C&I programs will likely come up short again as evaluated results are reported. Each year of savings deficits makes it harder for the PAs to meet their goals.

In 2014, the Department of Energy Resources (DOER), responding to public pressure to consider alternatives to a proposed and controversial greenfields natural gas pipeline, agreed to conduct a Low Demand Scenario Analysis to examine need and alternative solutions to meet regional natural gas demand. The final report, released on the day of Gov. Charlie Baker's inauguration, has come under heavy fire for its narrow scope and for being skewed towards supply-side resources, and, in particular, for underplaying the role that energy efficiency can play in meeting regional energy resource need.

In November 2014, the Department of Public Utilities release two orders related to Grid Modernization, with the clock now ticking for 10-year utility Grid Modernization Plans due in August 2015.

### At a Glance

Electric Program Expenditures	\$438,950,759.38
Gas Program Expenditures	\$176,816,675.47
Per Capita Expenditures	\$92.00
Electric Savings (MWh)	1,108,907
Electric Savings as a Percent of Retail Sales	2.35%
Gas Savings (Therms)	24,667,976
Gas Savings as a Percent of Retail Sales	0.88%

2013 program year data as reported to ISO-New England for its 2014 Energy Efficiency Forecast and to the NEEP EM&V Forum for the Regional Energy Efficiency Database (REED). Savings are expressed in net annual terms.



# **NEW HAMPSHIRE**

# **Key Developments**



As the Granite State enters 2015, there appears to be momentum to create an energy efficiency resource standard (EERS), with the Public Utilities Commission (PUC) releasing a proposal in early February that includes the option for opening a docket under authority granted it by previous legislation to establish such a measure. We are hopeful that 2015 will be the year that New Hampshire is able to move forward and join other states in the region in recognizing energy efficiency as a first-order resource.

2014 saw ongoing research and reporting on the feasibility of creating an EERS. In November, the state Office of Energy and Planning released an interim report "Requiring the Development of an Energy Efficiency Implementation Plan," as mandated by HB 1129.

A 10-year Energy Strategy, mandated by the legislature in 2013, was released in September. Like many studies before it, the strategy leads with the recommendation for New Hampshire to increase energy efficiency.

November 2014 elections brought a changing of the guard in the legislature, where a number of supporters of energy efficiency were replaced by lawmakers with a decidedly different philosophical and political bent, which was illustrated in the early days of the new session with the filing of measures to pull the state out of the highly successful Regional Greenhouse Gas Initiative. While Gov. Maggie Hassan has been outspoken in her support for energy efficiency, the likelihood seems slim for any major gains for efficiency being made in the legislature this session.

#### At a Glance

Electric Program Expenditures	\$25,552,012.21
Gas Program Expenditures	\$6,216,041.25
Per Capita Expenditures	\$24.00
Electric Savings (MWh)	58,833
Electric Savings as a Percent of Retail Sales	0.58%
Gas Savings (Therms)	1,417,527
Gas Savings as a Percent of Retail Sales	0.58%

Footnotes: 2013 program year data as reported to ISO-New England for its 2014 Energy Efficiency Forecast and to the NEEP EM&V Forum for the Regional Energy Efficiency Database (REED). Savings are expressed in net annual terms.



# **NEW JERSEY**

# **Key Developments**



In June 2014, the New Jersey Board of Public Utilities denied a citizens petition by the Sierra Club to create an Energy Efficiency Resource Standard, which would have created long-term savings targets and fully-funded energy efficiency programs.

In July, the state announced the creation of the New Jersey Energy Resilience Bank (ERB). Using a Community Development Block Grant-Disaster Recovery allocation as capital, the ERB is focused on providing

low-interest loans and grants, for distributed energy projects at mission-critical facilities.

Gov. Chris Christie continued to brush aside calls for the state to rejoin the Regional Greenhouse Gas Initiative, as clean energy proponents noted that RGGI participation would help the state comply with the coming Clean Air Act (CAA) carbon regulations. Instead, Christie's Department of Environmental Protection filed comments opposed to the proposed CAA 111 (d) regulations.

#### At a Glance

Electric Program Expenditures	\$202,221,164.29
Per Capita Expenditures	\$22.72
Electric Savings (MWh)	513,732
Electric Savings as a Percent of Retail Sales	0.70%

Footnotes: 2013 program year data is taken from the New Jersey Clean Energy Program's Quarter 4 fiscal year report (http://www.njcleanenergy.com/main/public-reports-and-library/financial-reports/clean-energy-program-financial-reports), which shows data from July 2013 - June 2014. Savings are expressed in gross annual terms.



### **NEW YORK**

### **Key Developments**



In 2014, the New York Public Service Commission (PSC) opened a proceeding on Reforming the Energy Vision (REV) — a sweeping, landmark undertaking aimed at creating a new model for utilities at platform providers for distributed resource, including energy efficiency and renewable energy.

In September, the New York State Energy Research and Development Authority (NYSERDA) released its draft Clean Energy Fund Proposal,

calling for a ramp-down of ratepayer fund collections and a shift to more market-based strategies for delivering energy efficiency programs. More details in this major shift became available at a January public forum, with the final proposal due February 20. With utility Efficiency Transition Implementation Plans (ETIPS) due later this year, questions linger as to how and whether state savings goals can be met with such a sharp shift from ratepayer-funded programs to private market investments. Among the many questions being asked are: Are market actors ready to step up? And will utility programs fill the void left if NYSERDA programs are substantially scaled back?

Meanwhile, Gov. Andrew Cuomo is slated to release his new State Energy Plan, perhaps this summer, which it is said will include goals for energy efficiency and renewable energy. One question yet to be addressed is whether and how goals of the State Energy Plan can be enforceable as if they were issued by the PSC, as it appears that the governor is committed to engaging market actors who are not regulated by the Commission.

January 2015 also brought the unsettling news that Gov. Cuomo planned to take \$36 million in RGGI funds to balance his proposed 2015-16 state budget.

All of this uncertainty warrants an asterisk for New York State. Efficiency advocates have every reason to hope that the state will continue to be a leader. However, these times of great transition call for strong oversight, communication and stakeholder engagement to ensure that the state continues on its strong path of putting clean, least-cost efficiency resources first.



"Accelerated adoption of energy efficiency across New York State is critical to Governor Cuomo's energy vision, as the State undertakes groundbreaking initiatives under its Reforming the Energy Vision (REV). Through the REV regulatory process and the proposed Clean Energy Fund, the State is providing unprecedented support to ensure

grid resiliency, a reduction in energy costs, a decrease in greenhouse gas emissions and growth in its clean energy economy."

John B. Rhodes

President and CEO, New York State Energy Research and Development Authority



# At a Glance

Electric Program Expenditures	\$347,718,718.70
Gas Program Expenditures	\$110,674,455.40
Per Capita Expenditures	\$23.33
Electric Savings (MWh)	1,214,633
Electric Savings as a Percent of Retail Sales	0.85%
Gas Savings (Therms)	20,700,253
Gas Savings as a Percent of Retail Sales	0.26%

Footnotes: 2013 program year data as reported to the NEEP EM&V Forum for the Regional Energy Efficiency Database (REED). Savings are expressed in net annual terms.



### **PENNSYLVANIA**

# **Key Developments**



On December 19, 2014, the Pennsylvania Public Service Commission accepted comments on Act 129 Phase III, considering a five-year term for Phase III — to operate beyond June 1, 2016, for three to six years.

On January 20, Gov. Tom Wolf took office after running on a platform embracing clean energy, but coupled with the reality that he will have to work with a strongly conservative legislature to develop

joint priorities on energy and policies. Gov. Wolf's administration is bringing some new faces to state departments and the Public Utility Commission, which efficiency and clean energy advocates hope will put the state on a more progressive path. This could include formal entry into the Regional Greenhouse Gas Initiative (RGGI).

In September of last year, the state Treasury Department launched the Sustainable Energy Bond program to help municipalities, universities, schools and hospitals invest in energy efficiency.



"2015 is a pivotal year for energy efficiency in Pennsylvania. The utility efficiency programs have resulted in over \$1 billion of benefits for ratepayers in recent years. We are eagerly anticipating the Public Utility Commission's Tentative Order on Phase 3 of these programs, to be released in March. There is also a key opportunity this year to

maximize energy efficiency in the state's plan required by the U.S. EPA's Clean Power Plan. Now is the time to leverage the full benefits of energy efficiency for Pennsylvania."

Brian Kauffman

Executive Director, Keystone Energy Efficiency Alliance

#### At a Glance

Electric Program Expenditures	\$244,506,374.00
Per Capita Expenditures	\$19.14
Electric Savings (MWh)	1,567,006
Electric Savings as a Percent of Retail Sales	1.08%

Footnotes: 2013 program year data are taken from the 2013 Program Report (http://www.puc.pa.gov/pcdocs/1274547.pdf). Savings are expressed in gross annual terms.



### **RHODE ISLAND**

# **Key Developments**



Rhode Island is leading the way with innovative utility partnership to drive savings from building energy codes and appliance efficiency standards by allowing National Grid to claim energy savings as part of its regulated efficiency programs from support those programs lend to code training, analysis and support for updates

The stakeholder Energy Efficiency Resource Management Council (EE-RMC) voted unanimously to approve the 2015-17 Three-Year Least Cost

Procurement Plan. In late December 2014, the Public Utility Commission approved National Grid's cost recovery for the 2015 efficiency programs.

National Grid recently completed a successful multifamily benchmarking pilot, providing lessons and potential solutions to unlocking energy savings in one of the hardest to reach market segments

2015 may once again see a legislative effort to advance appliance efficiency standards for a number of key products.

### At a Glance

Electric Program Expenditures	\$61,546,967.00
Gas Program Expenditures	\$19,510,311.00
Per Capita Expenditures	\$77.09
Electric Savings (MWh)	149,033
Electric Savings as a Percent of Retail Sales	1.93%
Gas Savings (Therms)	3,124,333
Gas Savings as a Percent of Retail Sales	0.82%

Footnotes: 2013 program year data as reported to ISO-New England for its 2014 Energy Efficiency Forecast and to the NEEP EM&V Forum for the Regional Energy Efficiency Database (REED). Savings are expressed in net annual terms.



### **VERMONT**

# **Key Developments**



A long-time leader, Vermont was first state in the nation to enact 2015 model energy codes for residential and commercial buildings.

The Vermont Energy Investment Corporation (VEIC) recently launched Commons Energy, a Public-Purpose Energy Services Company. The goal of this new model of innovative energy efficiency financing is to improve building energy performance in municipalities, schools, hospitals and multifamily housing.

The Public Service Board continues to oversee the Demand Resources Planning Process, with the energy efficiency utilities having filed plans in December 2014.

### At a Glance

Electric Program Expenditures	\$34,068,317.00
Gas Program Expenditures	\$1,884,123.00
Per Capita Expenditures	\$57.37
Electric Savings (MWh)	96,323
Electric Savings as a Percent of Retail Sales	1.75%
Gas Savings (Therms)	869,762
Gas Savings as a Percent of Retail Sales	0.92%

Footnotes: 2013 program year data as reported to ISO-New England for its 2014 Energy Efficiency Forecast and to the NEEP EM&V Forum for the Regional Energy Efficiency Database (REED). Savings are expressed in net annual terms.



### WASHINGTON, D.C.

# **Key Developments**



The District's Sustainable Energy Utility released its 2014 Annual Report, blowing past benchmark goals— with \$105M in lifetime energy cost savings, 82 new full-time equivalent jobs for District residents, and peak demand reductions of 8,620 kW.

The District has earned praise for its Green Construction Code for large commercial construction projects and multifamily buildings. The Department of the Environment developed a strategic compliance plan to

deliver code training to contractors and code officials.

In December, Mayor Anthony Gray released the Sustainable DC Task Force Report focused on building efficiency, public health and environmental quality. The Building Energy Performance Standards section lays forth recommendations to achieve three overarching goals relative to reducing greenhouse emissions in both public and private buildings and increasing transparency of building energy data.

#### At a Glance

Efficiency Program Expenditures	\$15,786,078.00	
Per Capita Expenditures	\$24.42	
Electric Savings (MWh)	45,545	
Electric Savings as a Percent of Retail Sales	0.41%	
Gas Savings (Therms)	503,752	
Gas Savings as a Percent of Retail Sales	0.17%	

Footnotes: 2013 program year data as reported to the NEEP EM&V Forum for the Regional Energy Efficiency Database (REED). Savings are expressed in net annual terms.



### CONCLUSION

As we enter 2015, the Northeast and Mid-Atlantic states are experiencing times of great change and opportunity in the energy landscape. While significant prospects remain for states to harness efficiency to help meet an array of public policy challenges, there is also a very real risk that the region could lose ground without continued education and awareness among policymakers and the public alike.

While states like New Hampshire and Delaware seem poised to enact policy and program advances that will help more customers and the broader economy wring out building energy waste, historically leading states appear vulnerable to changing political winds and the temptation to assume the short — but potentially very costly — view that fails to recognize energy efficiency as a first-order resource investment. Such moves could negatively impact consumers and the environment for decades to come.

NEEP believes that it's time for a coordinated regional accounting of the economically-achievable energy efficiency potential that includes all fuels. Time and again energy efficiency has proven the least-cost resource when compared to expensive and contentious generation and transmission projects. It's vital that decision-makers understand efficiency as a resource investment and a benefit to all ratepayers, and not simply a monthly adder to electric and gas bills.

We are closely watching state proceedings relative to grid modernization and new models of providing energy solutions to customers. Included in that is the need for a considered approach to ratemaking that balances consumer protection, public benefits, and the needs of for-profit regulated utilities. Greater customer access to information and price signals can encourage increased uptake of efficiency program offerings and peak use reductions, curtailing the need for expensive new energy supply and delivery investments.

While new financing products and wider engagement by market players can play important roles in expanding efficiency opportunities, we encourage states to build on successes and ensure that policy and budget changes do not undermine proven strategies. We also believe it's important for states to develop ways to measure the impact of these evolving delivery mechanisms, acknowledging that there will be a shift from the historic focus on net savings attribution. It could be that total energy use reduction is what matters; certainly this is something that will be relevant as the federal government seeks ways to drive down carbon emissions.

Efficiency, distributed generation, customer-owned renewables and demand response strategies can and are having a major impact on the region's energy forecasts and capacity needs. States should continue to work collaboratively to forge strategies that help mitigate cost, stimulate job creation, protect environmental resources and support efforts towards resiliency and sustainability in the face of a changing global climate.



There is much more to be done in the way of comprehensive programs and policies to save energy and improve health and comfort in both existing and new buildings. NEEP will continue working with our partners in state, local and federal government, program administrators, market actors and fellow advocates to develop and share best practices as technologies and delivery models continue to evolve.

In the meantime, we invite you to stay engaged by reading our blog, utilizing our web resources and sharing your insights with us. Together we can help states realize the promise of energy efficiency as a first-order resource to meet demand, drive down costs, and serve as an important bridge to a cleaner, more integrated, responsive and resilient energy future.



### NEEP'S VIEW: ELEMENTS OF SUCCESSFUL ENERGY EFFICIENCY POLICY

- 1. Direct or provide incentives to encourage utilities to capture all cost effective energy efficiency, and link efficiency to broader public policy goals, and integrate such programs with other energy management resources, such as peak demand response.
- 2. Ensure adequate, stable, long-term funding for efficiency programs, even as new utility business models are being explored and private financing is lured to complement ratepayer program funding.
- 3. Allow for robust stakeholder input and engagement ideally through a standing advisory board with expert consultants to help states plan, deliver and evaluate methods to achieve long-term savings goals.
- 4. Ensure that investor-owned utilities are not harmed financially when they help their customers to save energy, but that new distributed energy system models likewise do not result in new fixed customer service charges that serve as disincentives to energy efficiency.
- 5. Advance policies and programs that enable a whole-building approach with an eye to total energy savings.
- 6. Support complementary public policies such as building energy codes, building energy rating and disclosure, appliance efficiency standards, and state and local governments "leading by example."
- 7. Integrate energy efficiency into long-range state energy and air quality planning, and ensure that robust and comprehensive analyses are performed on a regional basis before committing ratepayers to expensive new infrastructure investments.
- 8. Foster a supportive and flexible regulatory framework on issues such as cost effectiveness that match policy goals to regulatory mechanisms.
- 9. Support development and implementation of greater transparency and consistency in evaluation, measurement and verification of program savings.
- 10. Continually demonstrate the value proposition of energy efficiency by sharing success stories.



# **APPENDICES**

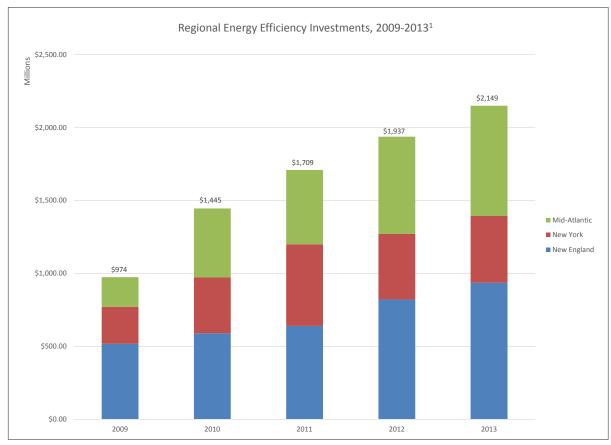
Figure 1: Overview of State Energy Efficiency Policies,
Administration Model & Savings Goals 9

State	Policy Type	Program Administrator	Energy Savings Goals
Connecticut	All Cost-Effective Energy Efficiency	Electric & Gas Utilities	~1.4% of electric sales
Maine	All Cost-Effective Energy Efficiency	Efficiency Maine	~1.5% of electric sales by 2016
Massachusetts	All Cost-Effective Energy Efficiency	Electric & Gas Utilities + CLC	2.6% of electric & 1.14% of natural gas sales annually by 2015
New Hampshire	Program Funding Only	Electric & Gas Utilities	No mandated sav- ings goals, but EERS in planning stages
Rhode Island	All Cost-Effective Energy Efficiency	Electric & Gas Utilities	2.6% of electric & 1.1% of natural gas sales annually by 2017
Vermont	All Cost-Effective Energy Efficiency	Energy Efficiency Utilities	2.1% of electric sales annually by 2017
Delaware	All Cost-Effective Energy Efficiency	Utilities+ Sustainable Energy Utility	Goal setting in progress
District of Columbia	N/A	Sustainable Energy Utility	Benchmark per- formance goals
Maryland	Energy Efficiency Resource Standard	Electric Utilities	15% of per capita electric use by 2015
New Jersey	Efficiency Funding Only	Office of Clean Energy + Utilities	No mandated savings goals
New York	Energy Efficiency Portfolio Standard	NYSERDA + Utilities	15% of electric & natural gas sales by 2015, major restructuring underway
Pennsylvania	Energy Efficiency Resource Standard Funding Capped	Electric Utilities	0.75% of electric sales annually through 2015

<sup>9</sup> The table above takes its data from the major state energy efficiency statutes and regulatory orders.



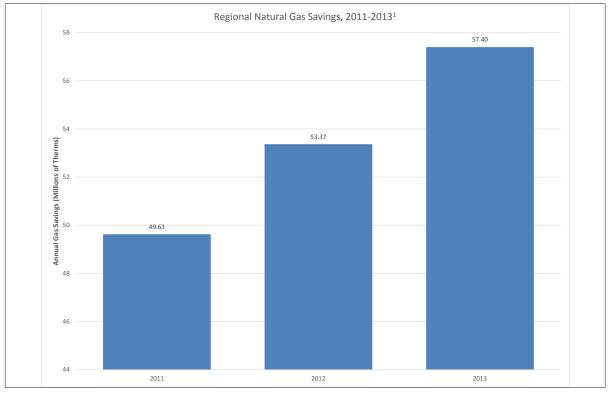


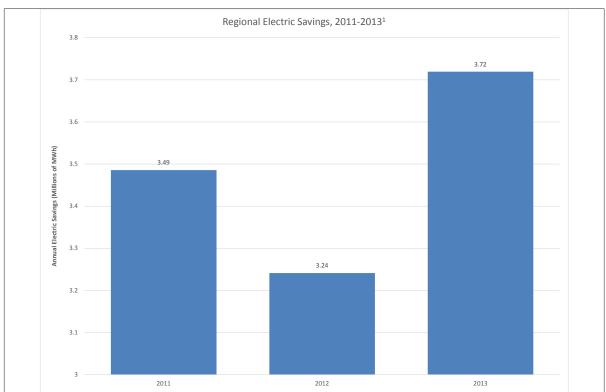


<sup>10</sup> Data compiled from state annual energy efficiency reports, data submitted to ISO-New England for its annual energy efficiency forecast, and to NEEP for its Regional Energy Efficiency Database (REED

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Figure 3: How Much Are The Northeast and Mid-Atlantic States Saving?<sup>11</sup>

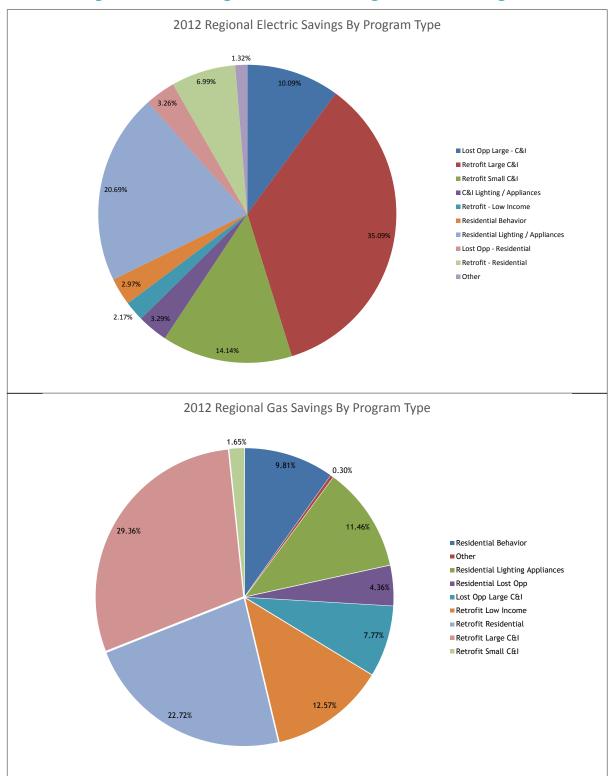




<sup>11</sup> Data are only based on information submitted to ISO-New England for its annual energy efficiency forecast and to NEEP for its Regional Energy Efficiency Database (REED). Annual energy efficiency reports were not consulted for states that didn't provide data to REED because of issues with data comparability. Please view the At-A-Glance boxes in the body of this report or visit www.neep-reed.org to see which states reported data to REED.



Figure 4: What Programs are Achieving the Most Savings?<sup>12</sup>



<sup>12</sup> Data are compiled by NEEP for its 2012 Regional Energy Efficiency Database (REED) Annual Report

### **FURTHER INFORMATION**

Northeast Energy Efficiency Partnerships (NEEP) maintains and updates an abundance of news materials and policy and program information resources on our website, www.neep. org. You will find information on building energy codes and high performance buildings, appliance efficiency standards, regional work on market strategies to advance efficient lighting and other products, and more. We encourage you to subscribe to our newsletters, and contact us if we can be of assistance in any way. Please check out the following:

Highlights, our bimonthly policy news and analysis e-newsletter.

The Efficiency Policy Snapshot focuses on New England investment and savings data.

EnergyEfficiencyMatters.org is NEEP's blog.

The Regional Evaluation, Measurement and Verification Forum, which supports the development and use of common and/or consistent protocols to evaluate, measure, verify, and report the savings, costs, and emission impacts of energy efficiency.

The Regional Energy Efficiency Database - REED is the only regional resource to provide for transparent and consistent reporting of electric and natural gas energy efficiency program energy and demand savings and associated costs, avoided emissions, and job impacts, with the purpose of supporting state and regional energy and environmental policies.

