



**Comments of Northeast Energy Efficiency Partnerships (NEEP)  
To the Connecticut Energy Efficiency Board (EEB)  
Regarding the 2015 Updates to the 2013-2015 Conservation and Load Management Plan  
May 20, 2014**

Chairperson Howland and members of the Energy Efficiency Board:

On behalf of Northeast Energy Efficiency Partnerships, I am pleased to offer input on the 2015 revisions to the 2013-2015 Conservation and Load Management (CL&M) plans being developed through the Connecticut Energy Efficiency Fund (CEEF).<sup>1</sup> NEEP is a regional non-profit whose mission is to serve the Northeast and Mid-Atlantic to accelerate energy efficiency in the building sector through public policy, program strategies and education. 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.

As a follow up to the oral comments delivered last week at the public input session, I will concentrate my written comments on some key concepts that are the focus of NEEP's Market Strategies and Buildings teams. Of particular interest to the board seemed to be which products areas NEEP recommends be considered for inclusion in future programs. These items are listed in bulleted form, per the board's request.

To reiterate our highest-level comments, we are pleased that Connecticut continues to be a leader in energy efficiency programs, and note that we often cite your state in terms of regional best practices in programs and policies and in the administration of the Energy Efficiency Board itself. We encourage the electric and gas utilities (EDCs and LDCs) and the Department of Energy and Environmental Protection (DEEP) to continue to leverage opportunities to work regionally through NEEP's various stakeholder working groups, including NEEP's Regional Evaluation, Measurement & Verification Forum.

In addition, after hearing Jeff Schlegel's presentation on winter peak energy prices and the role of energy efficiency<sup>2</sup>, we cannot emphasize enough the need for Connecticut to work with neighboring states to prioritize efficiency programs that can help reduce coincident peak demand in the immediate term, and to jointly evaluate total regional electric and natural gas demands and the role that efficiency can play in mitigating price and capacity constraints.

As was discussed at the board meeting, we acknowledge the great level of concern not only about system reliability, but on the potential for heavy price burdens on commercial and residential customers as gas demand surges. However, we strongly urge Connecticut's policymakers to also be concerned about the cost impacts on electric ratepayers of large-scale expansions of the region's natural gas infrastructure as it is currently being contemplated, and to consider the role that energy efficiency and demand response can play in this context.

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<sup>1</sup> These comments are offered by NEEP staff and do not necessarily represent the view of NEEP's Board of Directors, sponsors or underwriters.

<sup>2</sup> Presentation by Jeff Schlegel at 5/14/14 EEB meeting: <https://app.box.com/s/g1c6lclegympspwdyebp/1/1916343683/17120869528/1>

## PRODUCTS & MARKET STRATEGIES

In terms of C&LM programs, NEEP recommends the following:

### Top Tier Product Incentives

- NEEP encourages Connecticut to continue to be a leader in the area of “top tier” or most efficient product promotions, structuring retail product incentives accordingly. ENERGY STAR Most Efficient and the Consortium for Energy Efficiency’s tiers should be utilized, as should new online tools such as those being developed by Enervee,<sup>3</sup> a new initiative being launched in partnership with TopTen USA.

### Heat Pump Water Heaters

- As markets develop, we encourage the programs to continue strong marketing promotion as well as more contractor education on how and where to install heat pump water heaters.
- We emphasize the need for additional research on installation location conditions and how the performance and efficiency of various water heaters are affected by varying conditions. It’s important at this early stage of market development that we identify and promote only products that perform up to consumer expectations, including those installations that might not be in ideal conditions.
- We note that ENERGY STAR may not be sufficient to differentiate which products perform best during Connecticut’s heating season. The programs should utilize information like low temperature cut off information that ENERGY STAR will be reporting as part of new specification’s released next year to guide consumer purchases.

### Air Source Heat Pumps

- This is an exciting technology gaining greater customer awareness and market penetration.
- Heat pumps for heating and cooling can cost half as much to operate as a conventional HVAC systems, while generating 60 percent less CO<sub>2</sub>.
- As with heat pump water heaters, ENERGY STAR alone may not be enough to differentiate products that perform well during Connecticut’s heating season.
- If consumer expectations are to be met, it is important that specifications do a better job of recognizing the cold climate issues. We encourage program planners to review NEEP’s Air Source Heat Pump working group recommendations on this topic.<sup>4</sup>

### Clothes Dryers

- The next generation clothes dryer technology is coming to the North American market, as ENERGY STAR will have two specifications in 2015 for clothes dryers. We encourage Connecticut to work with NEEP and the Super-Efficient Dryer Initiative (SEDI) initiative to explore new dryer programs.

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<sup>3</sup> <http://enervee.com/>

<sup>4</sup> <http://www.neep.org/efficient-products/emerging-technologies/Air-Source-Heat-Pumps/index>

- As this will be the first opportunity for programs to achieve savings through dryers, it is important for Connecticut's program administrators to work with others in the region and nationally to leverage common opportunities and learn from each other.

### Residential Lighting

- We commend Connecticut's commitment to transitioning the market from CFLs to LEDs, as well as its strong emphasis on consumer education. NEEP sees Connecticut as a model state in its approach to moving the market to solid state lighting.
- This is a critical time to promote LEDs as the prices are dropping quickly and many products are becoming ENERGY STAR certified. Connecticut's commitment to promoting LEDs now will help ensure high quality, high performance, high consumer-acceptance, and more cost effective products moving forward.
- Connecticut can benefit greatly from continued participation in NEEP's Residential Lighting Initiative,<sup>5</sup> including helping to develop the 2014-2015 Residential Lighting Strategy Update.

### Business and Consumer Electronics

- We encourage Connecticut to include Advanced Power Strips (APS) in its CL&M programs, both as a retail product and direct installation measure. We also would remind the program administrators of the many resources and tools NEEP can make available through its APS stakeholder working group to help (both for Tier 1 and Tier 2 APS).<sup>6</sup>
- Connecticut should leverage the efforts of other Northeast states – including Massachusetts, New Hampshire, New York, Rhode Island and Vermont – in joining together in efforts to increase the currently low regional market penetration and exploit the a large opportunity for increased product deployment.
- We commend Connecticut for being forward-thinking on its retail products program and encourage continued participation in NEEP's Home Energy Management Systems (HEMS) stakeholder working group, which started in 2014 out of program administrator interest in the potential of this measure.
- Looking ahead to the pipeline of retail products, now is a critical time for program administrator staff input into new opportunities such as HEMS, and we hope the EDCs and LDCs will make participation in such collaborative efforts a priority.
- Additionally, there are other electronics measures (such as televisions and desktop computers) that other New England states are including in their program portfolios that we encourage Connecticut to consider as. NEEP's 2013 Business and Consumer Electronics Report<sup>7</sup> is a resource for developing these other programs.

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<sup>5</sup> <http://www.neep.org/efficient-products/high-efficiency-lighting/residential-lighting-strategy/index>

<sup>6</sup> <http://neep.org/efficient-products/business-consumer-electronics/Products/Plug-LoadAdvanced-Powers-Strips>

<sup>7</sup> <http://www.neep.org/efficient-products/business-consumer-electronics/BCE-Strategy/index>

## BUILDINGS POLICIES

### High Performance Schools and Public Buildings

Earlier this year, NEEP supported SB 357, “Recommendations for Energy Efficient Building and Product Efficiency Standards,” particularly for the purposes of phasing out the use of the Leadership in Energy and Environmental Design (LEED) rating system for state facilities in favor of the ENERGY STAR Target Finder tool or ASHRAE modeling. Within this context, NEEP recommends that new public school construction or substantial renovations instead meet the criteria established by the Northeast Collaborative for High Performance Schools (NE-CHPS), a regionally developed building and renovation criteria with a specific focus on educational facilities. Developed with input from regional stakeholders to meet the educational priorities, building codes, and climate of Connecticut and other Northeast states, NE-CHPS is a school design roadmap that streamlines the construction and renovation of healthier, more productive, and less costly schools.<sup>8</sup>

The NE-CHPS criteria employ the Target Finder program to assess a designed facility’s energy performance, an integral component of the criteria’s verification system. The state could further emphasize the use of such standards by providing an incentive for high performance school construction, beyond the recommendations currently outlined in Section 16a-38k-7 of the Connecticut Office of Policy and Management Regulations. Other states in the Northeast region have provided local school districts with a NE-CHPS construction compliance incentive equivalent to roughly 3 percent of school construction costs, or integrated the criteria into their state construction guidance. The state could provide a similar incentive for NE-CHPS, which in many cases directly aligns with the goals of Connecticut’s Green LEAF Schools program.

Additionally, Connecticut should continue to promote building performance and utilize economies of scale offered by the public sector to encourage sustainable building design and operation. Leading by example, the state of Connecticut has made benchmarking and disclosure of public buildings energy usage a priority with Section 41 of Public Act No. 13-298. NEEP urges the EDCs to continue to work with DEEP as champions of this issue, which was unfortunately accompanied by a “may” rather than a “shall” in its enabling legislation. Building energy rating and disclosure is an important tool for identifying energy saving opportunities. These identifications should then be used to strategically target outreach regarding savings opportunities within Connecticut’s Leading by Example (LBE) Program, managing EDC electric load in places where it is unnecessarily high.

### Home Energy Solutions

NEEP supports the continued efforts of the utilities and their delivery partners to reach more customers and whenever possible, to go deeper with coordinated and comprehensive efficiency solutions. As stated in prior comments, NEEP understands that going deeper does not mean going cheaper. Indeed, new federal lighting standards are changing the program savings baselines, as are efforts to serve fossil fuel customers under HES. But by taking a portfolio approach, we are confident that these evaluated programs continue to deliver strong value for the Energy Efficiency Fund, as well as for program participants.<sup>9</sup>

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<sup>8</sup> <http://neep.org/Assets/uploads/files/public-policy/high-performance-schools/NE.CHPS.3.0.Criteria.Final.4.9.14.pdf>

<sup>9</sup> See CT. Docket 13-03-02, Q-BETP-063 at:  
<https://www.box.com/s/7mi6xtsc6pw1hy851elt/1/818584288/7590648642/1#/s/7mi6xtsc6pw1hy851elt/1/818584288>

The addition of LED lamps to the portfolio of energy saving products in the HES program will continue to increase the cost-effectiveness of the programs in the long-term. We have seen increases in efficacy of lamps to a rate of up to 30 percent per year. This was followed with a decrease in LED lamp prices of up to 75 percent to the level of \$10 per lamp, achieved last month by a leading manufacturer. As a result, we will soon see other manufacturers follow suit.

NEEP applauds the state for incorporating DOE's Home Energy Score into the Home Energy Solutions Program to help drive eventual market valuation of home performance via a platform with national support.

### Building Energy Labeling and Reporting

The EDCs have also referenced their intentions to cooperate with DEEP to establish a voluntary time-of-sale energy labeling program for homes in Connecticut. Such work is vitally important to helping to drive energy efficiency retrofits in the state. Because homes right now come with very little information to inform potential buyers of their energy use, the relative efficiency of a home is rarely considered as part of a homebuyer's decision-making process, and, thus, is not valued by the real estate market. By providing basic information on home energy characteristics, markets will come to attach a value to energy use, and, thus, prompt owners to take advantage of opportunities to make their homes more energy efficient.

### Multifamily Energy Efficiency Program

- In May NEEP released a white paper: "Increasing Energy Efficiency in Small Multifamily Properties: Recommendations for Policy Action."<sup>10</sup> The paper contains valuable information on market characterization and data analysis, market barriers, current policy and recommendations addressing small, 5-20 unit, multi-family buildings, and we hope it will be a programmatic and policy resource.
- In addition, NEEP staff participates in the Energy Efficiency in Affordable Multifamily Housing Network, sponsored by the Energy Foundation. The network of energy efficiency and affordable housing organizations facilitates national coordination toward increasing energy efficiency in multifamily affordable housing. NEEP staff will be sharing best practices and tools with our partners, and we want to let you know that this is another resource for DEEP and the efficiency program administrators.

### Building Energy Codes

NEEP is the organization designated by the U.S. Department of Energy (DOE) to provide support to Northeast states on building energy code development, adoption and compliance,, and as such, we are particularly gratified to see the emphasis on codes featured in the electric distribution companies' (EDCs) plans.

As the companies have noted, changes to the energy code provide significant opportunities to capture energy savings in new construction and renovations, but can only be realized through adoption of the latest model building energy code *and* high levels of compliance with that code. To that end, the companies are proposing a

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<sup>10</sup> [http://www.neep.org/Assets/uploads/files/public-policy/multifamily-retrofit/NEEP%20Multifamily%20Report\\_April%202014.pdf](http://www.neep.org/Assets/uploads/files/public-policy/multifamily-retrofit/NEEP%20Multifamily%20Report_April%202014.pdf)

number of activities focused on outreach, education and training. In addition, the companies have linked these trainings and elements of code compliance with the work they're proposing on the incentives offered as part of their new construction programs, which represents a sound, coordinated approach to building energy efficiency.<sup>11</sup>

In particular, the companies have noted that a new element of the building energy code reflected in the 2012 International Energy Conservation Code (IECC) will be requirements to test for air leakages in both the home/building as a whole, as well as within duct work contained in that home or building. As these elements represent new requirements, the companies have proposed to provide incentives to offset a portion of the costs of these tests. NEEP fully supports this proposed incentive. As the companies note, this will not only better ensure a qualified pool of testers, but can help link customers to other high-performance building programs that they offer, taking advantage of a significant opportunity to improve building energy efficiency at the time of construction or renovation.

NEEP appreciates the stated goal of 2012 IECC adoption but suggests that this adoption should be more highly prioritized given that: (1) efforts to adopt this code have been underway for several years; and (2) legislation to instead adopt the 2015 IECC (SB352) was heard by the Joint Committee on Energy and Technology this past March. Also, it is this 2015 IECC—and not the 2012 IECC, as stated in the plan—that incorporates the HERS Rating index as an optional compliance path. This is the only significant change from the 2012 IECC on the residential side, though there are incremental efficiency savings to be gained by updating to the 2015 IECC commercial code.

Regarding the two proposed incentive tracks (HERS Index and Prescriptive Path), NEEP supports lowering the Track 1 HERS Index tiers to the proposed levels. We also note that, upon the adoption of the 2012 IECC (or the 2015 IECC, which sets compliance at a HERS Index of 55 for Connecticut), the HERS thresholds will have to be lowered by at least 20 points to reflect the raised code baseline.

Throughout the plans, the companies referenced enhanced training as being a key to ensuring high levels of compliance with the building energy code. NEEP is highly supportive of this approach.

The utilities also have proposed that they be allowed to claim savings from new appliance and product efficiency standards. We would suggest that a similar approach be taken for their work to support building energy codes. Such programs are currently underway via the utilities in both Rhode Island and Massachusetts—National Grid will claim savings this year for their compliance enhancement activities in Rhode Island—and supported by a significant body of research and analysis performed by NEEP and others that such work is an effective means of coordination between ratepayer-funded efficiency programs and complementary public policies that can aid the state in achieving its energy savings goals.<sup>12</sup>

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<sup>11</sup> See Joint 2013-2015 Electric and Natural Gas Conservation and Load Management Plans, p. 166-167.

<sup>12</sup> For example, see Rhode Island Docket 4451, "Energy Efficiency Program Plan for 2014, Settlement of the Parties, Attachment 2, p. 27-31 at [http://www.ripuc.org/eventsactions/docket/4451-NGrid-EEPP2014\\_11-1-13.pdf](http://www.ripuc.org/eventsactions/docket/4451-NGrid-EEPP2014_11-1-13.pdf). For a more comprehensive approach, see our NEEP Codes and Standards attribution report at [http://neep.org/uploads/EMV%20Forum/EMV%20Products/NEEP\\_IMT\\_IEE\\_Codes%20Attribution%20FINAL%20Report%2002\\_16\\_2013.pdf](http://neep.org/uploads/EMV%20Forum/EMV%20Products/NEEP_IMT_IEE_Codes%20Attribution%20FINAL%20Report%2002_16_2013.pdf).

## EVALUATION, MEASUREMENT AND VERIFICATION (EM&V)

Along with its own EM&V efforts, Connecticut participates in the Regional EM &V Forum hosted by NEEP. The Forum is a collaborative of state energy regulators, efficiency program administrators and expert consultants. Since 2009, the Forum has worked to develop and support state adoption and consistent use of common protocols/guidelines and data to estimate, verify, evaluate, track and report the energy and capacity-related savings, costs and emission reductions resulting from investments in electric and gas energy efficiency resources in New England, New York and the Mid-Atlantic States. In 2012, the Forum released the Regional Energy Efficiency Database (REED),<sup>13</sup> the first tool of its kind in the nation, helping states to increase transparency in reporting of energy savings data.

The Forum will continue to support Connecticut's energy efficiency goals by promoting appropriate policy and effective EM&V methods, especially as the state works to implement recommendations from the first-ever Comprehensive Energy Strategy for Connecticut.<sup>14</sup>

## Conclusion

Thank you for the opportunity to comment on the 2015 updates to the Conservation and Load Management Plan. Please consider NEEP a resource to provide advice and support to the state as you pursue clean, efficient energy solutions for Connecticut's long-term future. I am happy to connect you with any of my colleagues at NEEP if you have questions on any of the policy or program strategies mentioned above.



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<sup>13</sup> <http://neep-reed.org/>

<sup>14</sup> <http://neep.org/emv-forum>