



Zero Net Energy Public Buildings - Recommended Steps for the Northeast & Mid-Atlantic

Recognizing the leadership potential of the public sector, Northeast Energy Efficiency Partnerships (NEEP) believes the road to a full-scale deployment of zero net energy buildings starts with the facilities our states and communities construct. This report outlines key steps the public sector can take to facilitate the eventual broad adoption of zero net energy building practices throughout the Northeast and Mid-Atlantic states.

Why Public Buildings?

- The public sector has a responsibility to “lead by example”.
- The public sector has a longer investment horizon and is more likely to be able to accept longer payback periods, and therefore can serve as an incubator for new technologies and alternative design and construction practices.

Critical Next Steps

In order to achieve the intermediate-term changes, NEEP has identified five critical next steps.

- Step 1** - Develop a “Path to Highest Performance” Information Campaign
- Step 2** - Promote the Continued Development of Exemplary Public Buildings
- Step 3** - Prioritize Measurement and Reporting of Public Building Energy Performance
- Step 4** - Implement Stretch Building Energy Codes
- Step 5** - Create a Revolving Loan Fund or Similar Mechanism to Provide Capital for Energy Investments

What Is a Zero Net Energy Building?

A zero net energy building produces as much energy as it consumes over the course of a year - and directs its focus to the simple premise that the path toward zero net energy begins with (1) significant reductions in as-designed building energy consumption, and (2) building operations that ensure as-designed performance. The near-term focus must be on creating conditions and incentives that promote these two goals.

“The leadership potential of the public sector in creating zero net energy buildings is significant. Northeast Energy Efficiency Partnerships recognizes that engaging public clients, designers and policy makers is key to making zero net energy buildings not just a reality but the norm in our communities. I am honored to have been part of this leadership Group , to help identify the strategies included in NEEP’s ‘Roadmap to Zero Net Energy Public Buildings’ and congratulate them on its publication.”

Mark Walsh-Cooke PE, Arup Principal and member of the Massachusetts Zero Net Energy Advisory Committee

ZERO NET ENERGY ROADMAP - WHERE ARE WE NOW?

Two years have passed since NEEP's initial release of the Roadmap for Zero Net Energy Public Buildings. Zero Net Energy and Zero Net Energy Capable pilot buildings have been developed throughout the region. Yet, much work remains to be done before zero net energy buildings become the norm. Below is a discussion of our region's recent accomplishments and ongoing projects on the path toward net zero.



NORTHEAST AND MID-ATLANTIC HIGHLIGHTS (2012-2014)

1. New York's NYSERDA and Connecticut's CEFIA are pioneering the "Green Bank" model, offering C-PACE and On-Bill Financing mechanisms.
2. The 2012 IECC is now the base code in Delaware, Washington D.C., Maryland, Massachusetts, and Rhode Island. Additionally, Massachusetts, Rhode Island, and Vermont are currently developing stretch codes to reach beyond the 2012 IECC.
3. Connecticut, Delaware, New York, Massachusetts, Rhode Island, and Maryland's Montgomery County require or enable energy rating and disclosure in state or municipal buildings.
4. Boston and Philadelphia join New York and Washington D.C. in mandating energy rating and disclosure in large commercial buildings
5. NEEP continues to disseminate their ZNEB information campaign through website updates, toolkits, presentations, leadership groups, and legislative commentary.
6. The most recent update to the Northeast Collaborative for High Performance Schools' design and renovation criteria (NE-CHP 3.0) emphasizes the importance of zero net energy through the use of the zero net energy policy indicator (zEPI) rating system, and offers additional credits for zero net energy capable designs.

About NEEP

NEEP transforms the way we use and think about energy. We are a non-profit organization that builds partnerships among the efficiency industry, communities, businesses and policymakers in the Northeast and Mid-Atlantic states. Through advocacy, collaboration and education, we accelerate energy efficiency and make visible its impacts on the region, the economy, the planet, and future generations.

The High Performance Buildings Project was developed to promote operational energy savings in new and retrofitted buildings throughout the region. NEEP's vision is that the work done today on High Performance Buildings will pave the way for the development of zero net energy buildings, buildings that consume no more energy than they produce, on a broader scale throughout the region.

For more information please contact:

Carolyn Sarno, Senior Program Manager - csarno@neep.org

Brian Buckley, High Performance Buildings Associate- bbuckley@neep.org