



Building Energy Codes, Benchmarking, and Home Energy Labeling

Efficient and Resilient Buildings and Communities

MISSION

Assisting states and communities to save energy, reduce costs, decrease emissions, improve resiliency, and strengthen workforce development through best practices in building energy code adoption, enforcement, compliance benchmarking, and home energy labeling.

ABOUT THIS PROJECT

Building Energy Codes, Building Energy Benchmarking, and Home Energy Labeling offer major opportunities to achieve long-term, cost-effective energy savings in new, retrofitted, and existing homes and buildings. In the NEEP region, the energy savings potential from the adoption of model energy codes is more than \$260 million dollars from projected new construction in 2016-2020.¹ Effectively implemented, energy codes, benchmarking, and labeling can significantly reduce carbon emissions from homes and buildings which together emit 45 percent of our region's annual carbon pollution. Building energy codes, benchmarking, and labeling offer public officials powerful tools to address climate goals, economic growth, community resiliency, and public health. Pathways to achieve these benefits are described in NEEP's 2017 strategy report "[Building Energy Codes for a Carbon-Constrained Era](#)".

LONG-TERM MARKET TRANSFORMATION GOALS

2022

All Northeast states adopt the latest model energy code that increases energy savings.

2030

At least six Northeast States require zero energy for building energy codes for new and renovated homes and buildings.

30% of existing homes and buildings are benchmarked and retrofitted to reduce carbon emissions 50%.

2019 PROJECT OUTCOMES

1. Six Northeast states (DC, DE, MD, NJ, NY, VT) adopt a recent model energy code (2018 IECC).
2. Three Northeast states implement zero energy stretch codes (DC, NY, VT) and three additional Northeast states adopt stretch codes (DE, MA, NJ).
3. Five Northeast states invest in initiatives to achieve 90+ percent code compliance statewide (CT, DE, MD, NJ, PA).
4. Two Northeast states and cities commit to create and implement a benchmarking and labeling (e.g., Energy Star for Existing Homes) policy roadmap as a building decarbonization strategy.

¹ Goldthwaite and Westmoreland, ACEEE Paper, Regional Construction Starts: Trends, Impacts and Energy Codes. https://aceee.org/files/proceedings/2016/data/papers/5_461.pdf

REGIONAL TRENDS & LEADERS

- Seven states (CT, DC, MA, MD, NJ, NY, VT) reference the most recent national model energy codes which save building owners or occupants 8-15 percent on electric and fuel costs. Additionally, model energy codes assure better air quality, durability, and resiliency.
- Seven states (DC, MA, MD, NH, NY, RI, VT) are offering a total of 11 regional stretch codes that provide additional energy as well as water savings beyond base code.
- Three states (DC, NY, VT) are developing next generation zero energy codes; all buildings in these states will be built to zero energy between 2022 and 2030.
- Nine cities, counties, or utilities in the region have adopted building energy benchmarking policies or programs that support the market valuation of energy efficient commercial buildings.
- Five states, jurisdictions, or utilities in the region have implemented residential building energy labeling policies or programs that support the market valuation of energy-efficient residential buildings.

2019 Strategies with Associated Products, Services and Technical Assistance

STAKEHOLDER ENGAGEMENT

NEEP brings together key stakeholders, resources and data to build knowledge and understanding of the best paths to advance the adoption and implementation of building energy codes, benchmarking, and labeling policies and programs.

- Facilitate the NEEP Regional Building Energy Codes working group
 - Three webinars on topics determined by working group members
 - One in-person meeting with agenda shaped by working group members
 - Working group is updated regularly via emails on energy code news for the NEEP region and beyond
- Facilitate the Pennsylvania Building Energy Code Compliance Collaborative
 - Four meetings per year: two in-person and two web-based meetings, agendas for which are shaped by collaborative members
- Provide technical assistance to and participate in building energy codes stakeholder groups:
 - Delaware Codes Coalition
 - Maine Codes Working Group (Portland)
 - Rhode Island Code Compliance Enhancement Initiative
- Facilitate NEEP's Regional Home Energy Labeling Stakeholder Group to share best practices with mandatory or voluntary labeling pilots, programs, and policies
- **New** Convene a Regional Commercial Building Energy Benchmarking stakeholder meeting

- **New** Convene a Massachusetts Getting to Zero Initiative
 - Facilitate a Massachusetts Building Energy Code Stakeholder Group
 - Conduct research and analysis
 - Develop and assist a plan to advance Massachusetts toward zero energy codes

TRACKING & ANALYSIS

NEEP will track and analyze leading efforts and progress across the region and facilitate peer exchange to inspire and transfer learning.

- **Update** Web-based [energy code tracker](#) available on NEEP website
- **Update** Web-based [energy code-related policy](#) tracking
- **New** Dashboard analyzing energy code compliance rates and cost in the region
- **New** Exemplar examining home energy ratings throughout NEEP region to assess the impact on decarbonization.
- **Update** Tracking the number of communities and states with residential labeling policies, voluntary or mandatory in a policy summary brief
- **New** Tracking of whole building data aggregation policies in a policy summary brief
- **New** Online benchmarking dashboard tracking the impacts of building energy benchmarking ordinances in cities that have adopted policies

TOOLS & GUIDELINES

NEEP's work will advance the development of strategies, tools and best practices for state and local government leaders to adopt and effectively implement building energy codes, benchmarking and labeling policies and programs.

- **Update** Building Energy Code [Adoption Toolkit](#)
- **Update** Building Energy Code [Compliance Toolkit](#)
- **Update** [Green Real Estate Resources web resource center](#)
- **New** Four state-specific fact sheets – Building Energy Codes and Carbon Reduction
- **New** Washington D.C. Exemplar – Building Energy Codes and Zero-Energy
- **New** New York State Exemplar – Advanced Stretch Codes
- **New** Add Building Energy Code content to NEEP's [Northeast Operations and Maintenance Guide for High Performance Schools and Public Buildings](#) with a focus on alterations and retrofits
- Topical blogs, exemplars, and technical assistance as requested

RESEARCH & REPORTS

NEEP will track and analyze state needs, trends and impacts to facilitate the adoption and enforcement of buildings codes and beyond base code initiatives for new buildings and decarbonization of existing buildings.

- **Update** [Roadmap to Zero Energy Public Buildings](#): Progress Report
- **New** Brief: Linkage to Strategic Electrification and Building Energy Codes
- **New** Building Energy Codes and Zoning White Paper addressing how home-rule communities can adopt advanced energy code energy provisions through zoning regulations.
- **New** Report on Building Energy Benchmarking trends and needs in the region
- **New** Brief on Commercial Building Asset Scores, Pathways, and Solutions
- **New** Buildings Energy Lifecycle White Paper accompanied by two webinars

NATIONAL/REGIONAL COLLABORATION

NEEP will leverage state, federal, and national resources to inform state plans and policies.

- Monitor, communicate, present, and coordinate with national and regional organizations (e.g., Regional Energy Efficiency Organizations (REEOs), National Association of State Energy Officials (NASEO), Building Codes Assistance Project (BCAP), Responsible Energy Codes Alliance (RECA), International Code Council, Inc. (ICC))
- **New** Collaboration with national partners and allies to develop and implement benchmarking roadmap and tools. Initiative integrates benchmarking, listing and labeling, codes, and national programs such as [Energy Star for Existing Homes](#). (Institute for Market Transformation (IMT), New Buildings Institute (NBI), REEOs)
- Disseminate U.S. DOE and EPA best practices and link states to federal programs and resources ([DOE Zero Energy Ready Homes Program](#), Energy Star for Existing Homes)
- Engage with stakeholders to contribute to the development of national building energy code initiatives (e.g., 2021 Energy Code; regional/national stretch code and zero energy code)
- Continued partnership and collaboration with other REEOs

