



# Building Energy Codes and Benchmarking

Efficient and Resilient Buildings and Communities

## MISSION

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

Building Energy Codes, Zero Energy Codes and Building Energy Benchmarking 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 and benchmarking policies are more than \$7 billion dollars in energy cost savings and would prevent 47.63 MMT of CO<sub>2</sub> from being emitted by NEEP states between 2020-2030, the equivalent of what over 1 million passenger cars would emit over 10 years.<sup>1</sup> Pathways to achieve these benefits are described in NEEP's 2017 strategy report "[Building Energy Codes for a Carbon-Constrained Era.](#)"

## Regional Trends and Leaders:

The NEEP region is a national leader in the advancement of building energy code adoption, stretch code implementation, zero energy code development and benchmarking and labeling: within the next two code adoption cycles the NEEP region will have five states with zero energy codes and eight states utilizing stretch codes to reduce energy and carbon emissions. Codes increasingly play an important part in regional strategic goals with buildings becoming a key asset towards grid electrification.

## NEEP's 2020 Project Outcomes:

1. The most recent energy code (2018 IECC) becomes effective or is adopted in six Northeast states (CT, D.C., ME, NH, RI, WV); three Northeast states implement zero energy stretch codes (DC, MA, NY), and four additional Northeast states adopt stretch codes (CT, DE, ME, NJ, RI).
2. Six Northeast states implement initiatives to achieve 100% code compliance statewide (CT, DE, ME, NH, NJ, PA).
3. Two Northeast states and two cities commit to create and implement a building benchmarking a policy as a strategy to decarbonize the built environment (e.g., Providence, RI)
4. One Northeast state and two cities implement building energy performance standards for existing buildings.
5. Three states (MA, NY, RI) design a policy pathway to retrofit existing buildings to become 50% more efficient.

## LONG-TERM MARKET TRANSFORMATION GOALS

### By 2025:

- At least six states adopt and support implementation of voluntary zero energy codes and require this of all state funded new construction and renovation.

### By 2030:

- Most Northeast States adopt mandates for all buildings to be carbon neutral by 2050.
- At least six Northeast States require zero energy for building energy codes for new and renovated homes and buildings, and have programs to make all state funded homes and buildings carbon neutral by 2050.

<sup>1</sup> US DOE Impacts of Model Building Energy Codes Report

[https://www.energycodes.gov/sites/default/files/documents/Impacts\\_Of\\_Model\\_Energy\\_Codes.pdf](https://www.energycodes.gov/sites/default/files/documents/Impacts_Of_Model_Energy_Codes.pdf)

**Stakeholder Engagement:** NEEP brings together key stakeholders, resources, and data to build knowledge and understanding to advance the adoption and implementation of building energy codes, zero energy codes, benchmarking, and labeling policies and programs.

- Facilitate the NEEP Regional Building Energy Codes and Benchmarking 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
- Convene/facilitate State Partnership-Funded Code Collaboratives
  - 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
  - Rhode Island Code Compliance Enhancement Initiative
- Convene/facilitate a Massachusetts Achieving Zero Energy (MAZE) Initiative
  - Facilitate a Massachusetts Building Energy Code Stakeholder group

**Tracking and 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
- **Update!** the Online benchmarking dashboard tracking the impacts of building energy benchmarking ordinances in cities and states that have adopted policies
- **New!** - Track code compliance pathways (ERI, Performance, and Prescriptive) to provide technical support resources and assistance to state building departments. [Provide regional data to national labs and ICC to improve code design, implementation, and energy savings]

**Tools and 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.

- Maintain [Online Resource center](#)
- **Update!** Building Energy Code [Adoption Toolkit](#)
- **Update!** Building Energy Code [Compliance Toolkit](#)
- Topical blogs, exemplars, and technical assistance as requested

**Research and Reports:** NEEP will track and analyze state needs, trends, and progress to facilitate the adoption and enforcement of building codes, beyond-base-code initiatives for new buildings, and decarbonization methods for existing buildings.

- **New!** Exemplar on Zoning and Codes
- **New!** Advancing benchmarking policies: putting data into action

**National/Regional Collaboration:** NEEP will leverage state, federal, and national resources to inform state plans and policies.

- Monitor, communicate, collaborate, 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))
- Disseminate U.S. DOE and EPA best practices and link states to federal programs and resources ([DOE Zero Energy Ready Homes Program](#))
- Engage with stakeholders to contribute to the development of national building energy code initiatives (e.g., zero energy code technical workgroup; regional/national stretch code and zero energy code)
- Continued partnership and collaboration with other REEOs and regional and national organizations.

### Pending Additional Funding

- Convene a Regional Commercial Building Energy Benchmarking stakeholder meeting
- **New!** Brief on recommendations to utility programs for improving energy efficiency in multifamily and affordable housing. Explore mechanisms that preserve equity and affordability while improving existing housing stock.
- **New!** Energy code perspective on electrification of buildings to achieve zero energy (technologies).

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