

Massachusetts Commercial Energy-Zero (E-Z) Code Summary

The Massachusetts E-Z Code defines a zero-energy building as an ultra-low-energy, combustion-free building that sources 100 percent of its annual energy from additional renewable energy. The MA E-Z Residential Code pays particular attention to embodied carbon.

New Construction

- 1) For residential buildings 10,000 sf+, compliance pathway follows the E-Z Commercial Code.
- 2) For residential buildings less than 10,000 sf, the MA E-Z Residential Code provides two pathways for energy compliance: HERS 40 or Passive House Certification.

Renovations (applies to buildings less than 10,000 sf undergoing renovation or addition)

- Renovation projects that meet certain project types regardless of "work area" must meet deeper energy savings.
- Projects with "work area" equal to or greater than 50 percent gross finished floor area are required to achieve improved energy performance upgrades such as maximum HERS score of 55.
- Projects with "work area" less than 50 percent must meet certain requirements, such as
 obtaining a MassSave audit and blower door test.
- Major renovations are required to achieve maximum HERS score of 55. Additions are required to achieve maximum HERS score of 40, which is the same as new construction.

Renovations (applies to buildings 10,000 sf+ undergoing renovation or addition)

 The E-Z Commercial proposal does not currently include renovations, alterations, or additions to existing buildings. However, the E-Z Residential Code makes recommendations on improvement measures and HERS scores maximums and HERS score reductions, based on project scope and pre-renovation HERS scores.

Project Types



Embodied Carbon

- 1) Approaches to incorporate embodied carbon reductions into building code:
 - a. Calculation and submission of Whole Building Life Cycle Assessment report with Whole Building emissions limit per square foot of construction
 - b. Low-Carbon Concrete Disclosure, Reporting, and Limits
 - c. Prescriptive limits by material category
- 2) Whole Building LCA Threshold
 - a. Applies to new construction and major renovations and additions
 - b. Sets a limit for embodied carbon per unit area of project

The creation of the Massachusetts Energy-Zero Code (MA E-Z Code) was a consensus-based process, drawing from professionals with extensive experience with zero and high-performance buildings in Massachusetts and the surrounding region, review of precedent zero energy codes and standards, and feedback from municipal and regulatory representatives. The development and management of this code was organized by Northeast Energy Efficiency Partnerships (NEEP), <u>www.neep.org</u>. *For more information, contact Darren Port* (<u>dport@neep.org</u>) or Cornelia Wu (<u>cwu@neep.org</u>)