CLIMATE CORNER

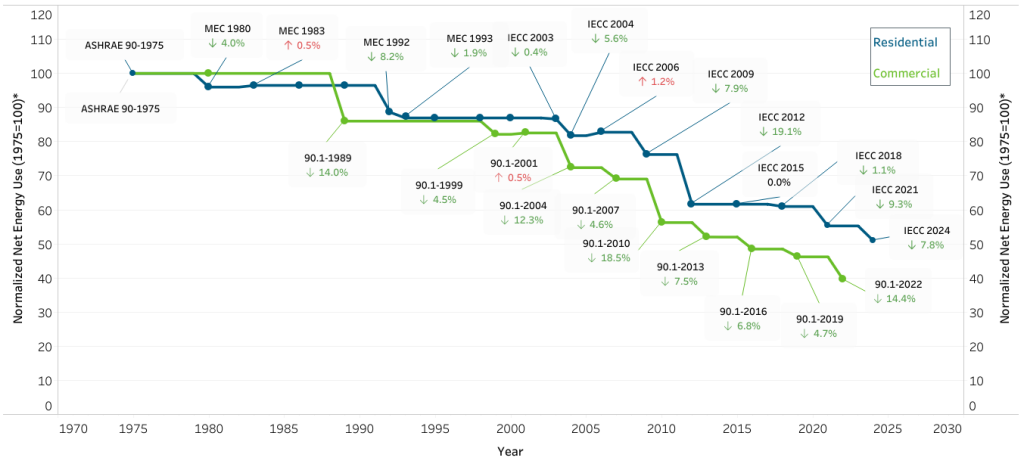
"Building energy codes are projected to save $138 billion in energy cost savings, and 900 million metric tons (MMT) of avoided CO_2 emissions."
– US Department of Energy.[1]

Are Building Energy Codes at Risk?

Architects can advocate for policies that reduce carbon, mitigate resilience challenges, and save clients' operation coss.

Over the years in the U.S., states and jurisdictions have adopted codes that standardize minimum energy performance criteria for buildings. Since the first model code was adopted in 1975, energy codes have transformed the industry, enabling designers to focus on glazing and envelope performance criteria and establishing minimum requirements for HVAC and lighting loads. In many states and localities, energy code compliance is standard practice among designers and builders; however, some states and jurisdictions are introducing legislation to prevent or slow down code adoption, or are proposing roll-backs of minimum code requirements. Architects are in a position of advocacy and can champion the value of energy codes to their clients and communities.

Energy code trajectory over the years



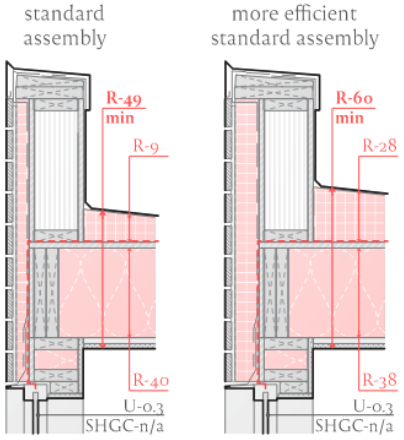
*Net energy use includes the contribution of renewable energy generation

States and jurisdictions that have kept up with model energy code adoption have seen minimum building energy efficiency improve by 50% since 1975.[2]

[1] https://www.energycodes.gov/codes-101

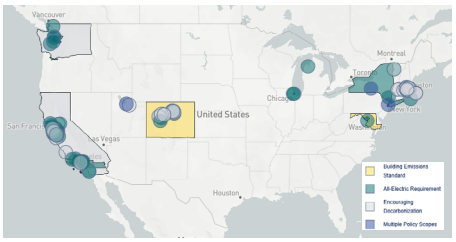
[2] https://public.tableau.com/app/profile/doebecp/viz/HistoricalModelEnergyCodeImprovement/CombinedHistoricalCodeImprovement_1

Beyond Minimum



Massachusetts: Stretch & Specialized Code

Massachusetts' energy code has been expanded to provide two levels beyond the "base" energy code: the "stretch" code adopted by 249 municipalities, and the outcome-based "specialized" code adopted by 51 municipalities including Boston and the greater municipal area.[3] [4]



Decarbonization Ordinances

Shifts in renewable energy and heating, lighting and conditioning technology have enabled trends for homes and buildings to be designed without fossil-fuel combustion. There are currently 152 policies throughout 11 states and D.C. that require or encourage electric equipment in new and/or existing buildings.[5]

[3] https://www.mass.gov/info-details/2025-massachusetts-building-energy-codes

[4] https://www.boston.gov/sites/default/files/file/2020/03/200306_DND%20book_FOR%20WEB.pdf

[5] https://buildingdecarb.org/zeb-ordinances

Climate Corner
May 2025 Edition
Developed by the AIA Strategic Council

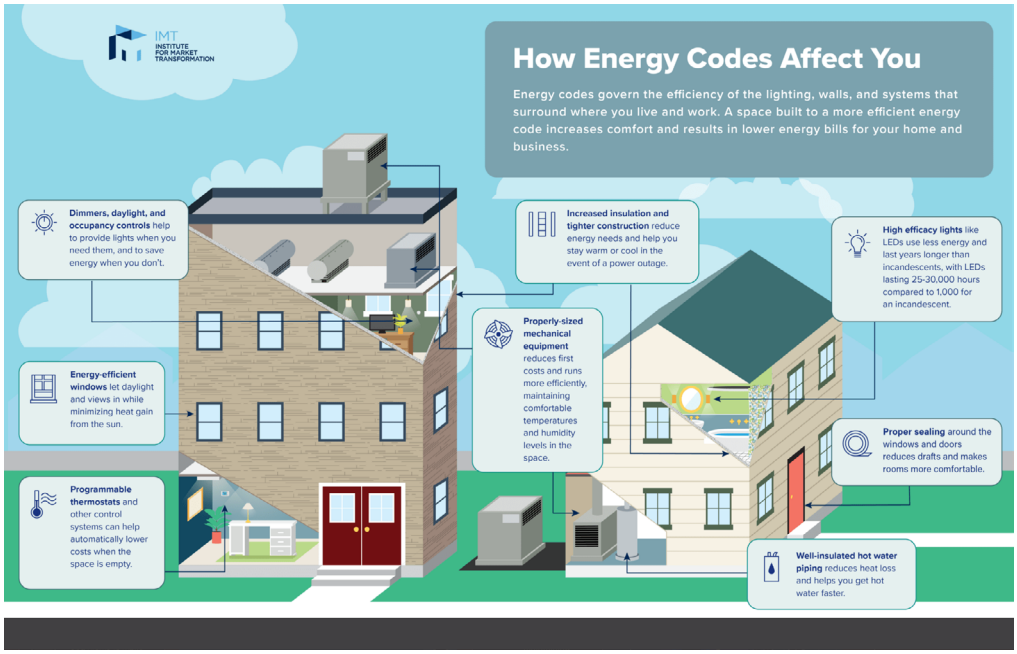
Challenges on the Horizon

Despite the proven benefits of energy codes and their value to communities and businesses, many challenges to energy code adoption have been seen in local legislative session (including Iowa, North Carolina, Missouri, and Oklahoma.) These bills obstruct advancements to energy code adoption and may come at a cost to homeowners, tenants, and consumers. Some arguments cite cost impact studies with questionable data; be sure to check the sources of entities claiming that energy codes will raise costs and not deliver energy savings. Life-cycle cost (LCC) metrics are best to demonstrating cost savings (rather than simple payback).[6]

Beyond Operational Energy

California adopted new code provisions to require minimum performance standards for embodied carbon in the California Green Building Code (CALGreen.) Architects in this state are expected to comply with one of three pathways that intend to incentivize reduced embodied carbon metrics. More info at AIA California.

Other case studies of embodied carbon policy in action available from the Carbon Leadership Forum (Northeast region, Pacific region). The case studies note the method of development and stakeholder involvement and input.



Source: https://imt.org/building-energy-codes/

Energy Codes Outlook

Outcome-based code approach. As seen in Massachusetts, there is more interest in ensuring that energy codes are implemented in construction as well as design, with alignment with Passive House certification pathways.

Alignment with resilience goals. Disaster and damage mitigation requirements amplify climate change mitigation strategies. Codes that encourage tight envelopes and allow passive strategies can result in reduced energy demands as we well as spaces that can endure temperature swings and peak weather events, which are being experienced more often across the country.

6 https://imt.org/wp-content/uploads/2023/11/Comparison-of-2021-IECC-Residential-Cost-Effectiveness-Analyses.pdf

How to Get Involved

The AIA Codes Advocacy Program represents architects influence code adoption (not limited to energy codes.) https://classic.aia.org/resource/10716-codes-advocacy-program

The Building Decarbonization Coalition includes members who are invested in and actively supporting decarbonization in the United States. https://buildingdecarb.org/join-the-coalition

The Responsible Energy Codes Alliance tracks development and adoption of the IECC in states and jurisdictions across the country. The group provides compliance guides for designers to understand the basic requirements of the IECC as adopted by their state. https://reca-codes.com/

The Building Energy Codes Program tracks and supports energy code development, adoption, and implementation. BECP developed the table below. https://energycodes.gov/