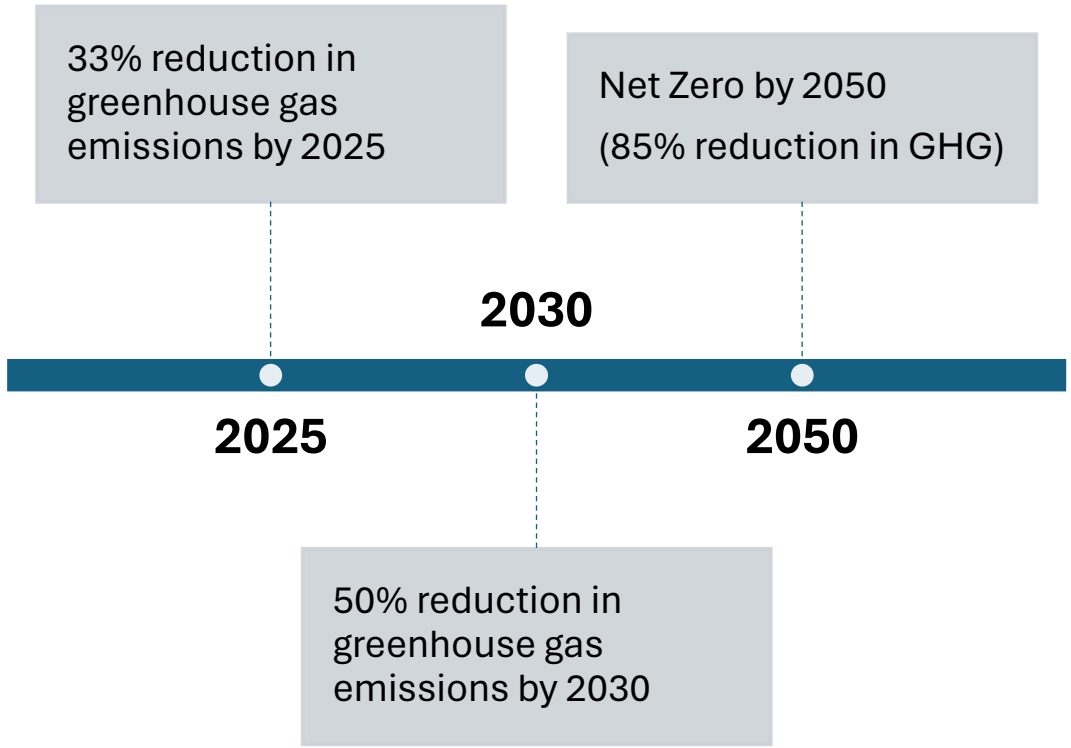
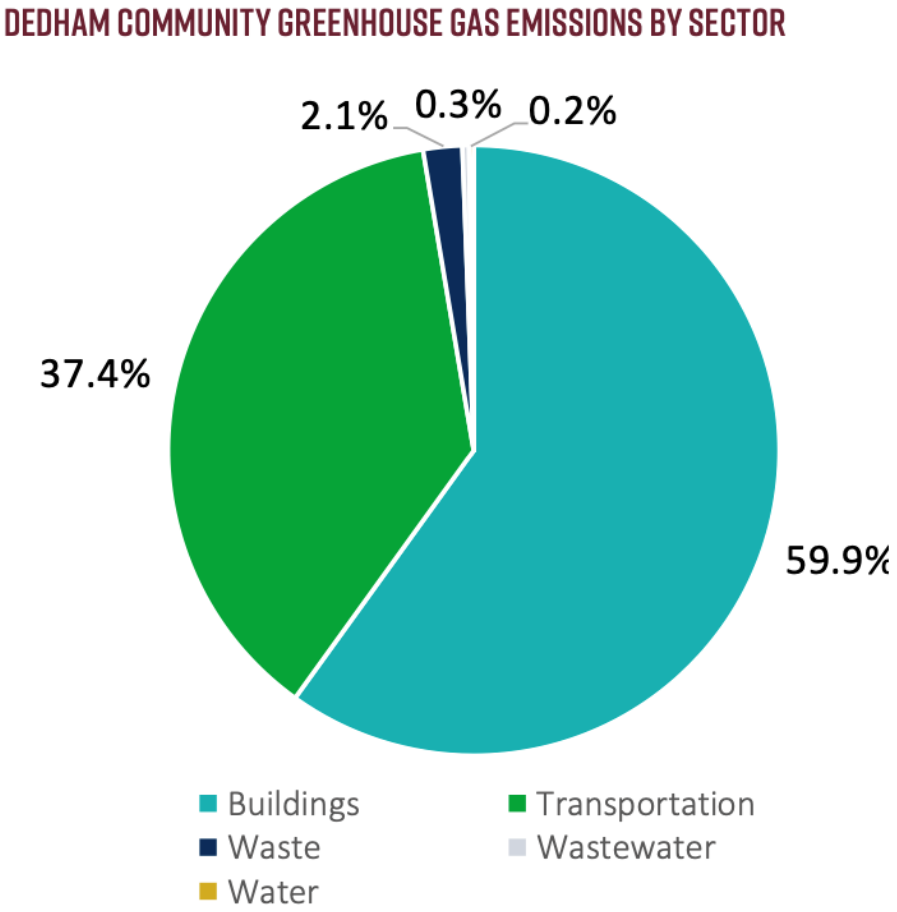
Article 18

Adoption of the Opt-In Specialized Energy Code

Submitted by: Dedham Sustainability Advisory Committee

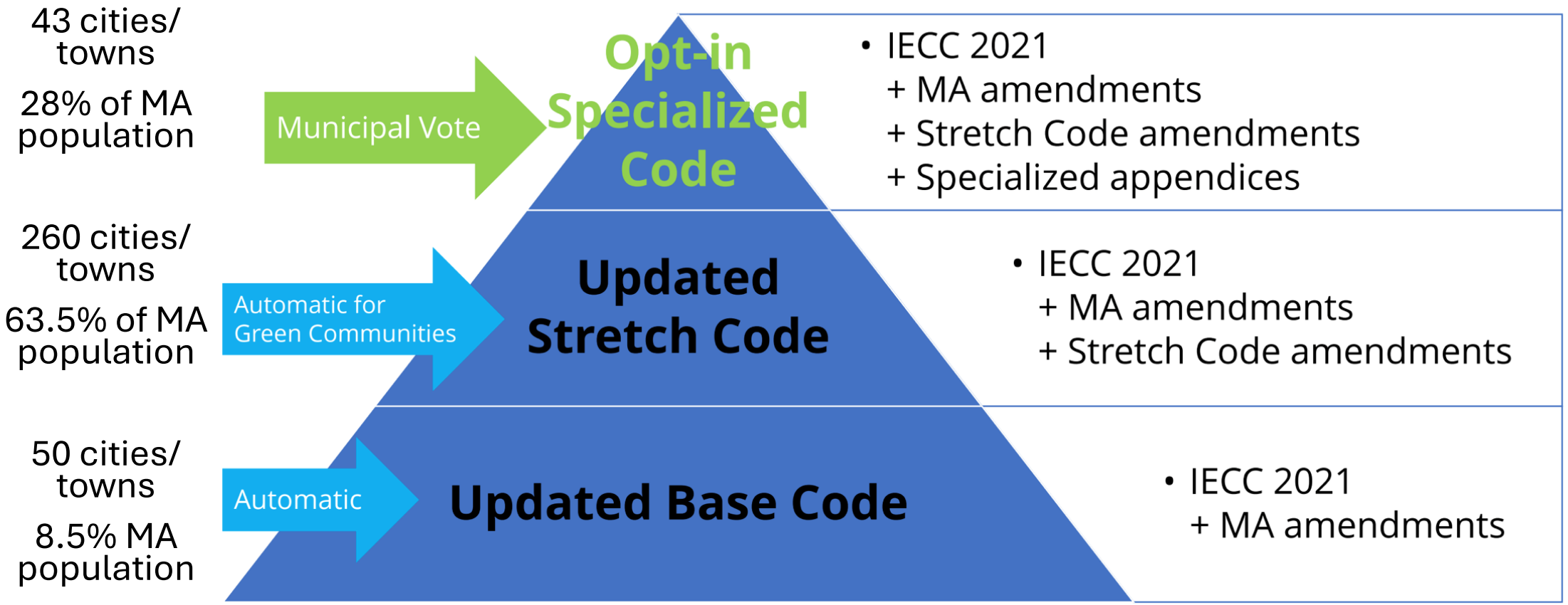
Massachusetts Climate Goals





Taken from MA Clean Energy and Climate Plan for 2050; Town of Dedham Climate Action Plan

Building Code Levels



Opt-In Specialized Code

Opt-In Code Implications for Low-Rise Residential Buildings (NEW CONSTRUCTION ONLY)		
Fuel Type	**Home Size**	**Opt-In Code Requirements**
All electric	Any size	Same as Stretch Code
Mixed fuel	Under 4,000 sq ft	Stretch Code + wiring for electrification + Solar PV (min 4kw)
	4,000 sq ft and over	Stretch Code + wiring for electrification + Solar PV to net zero

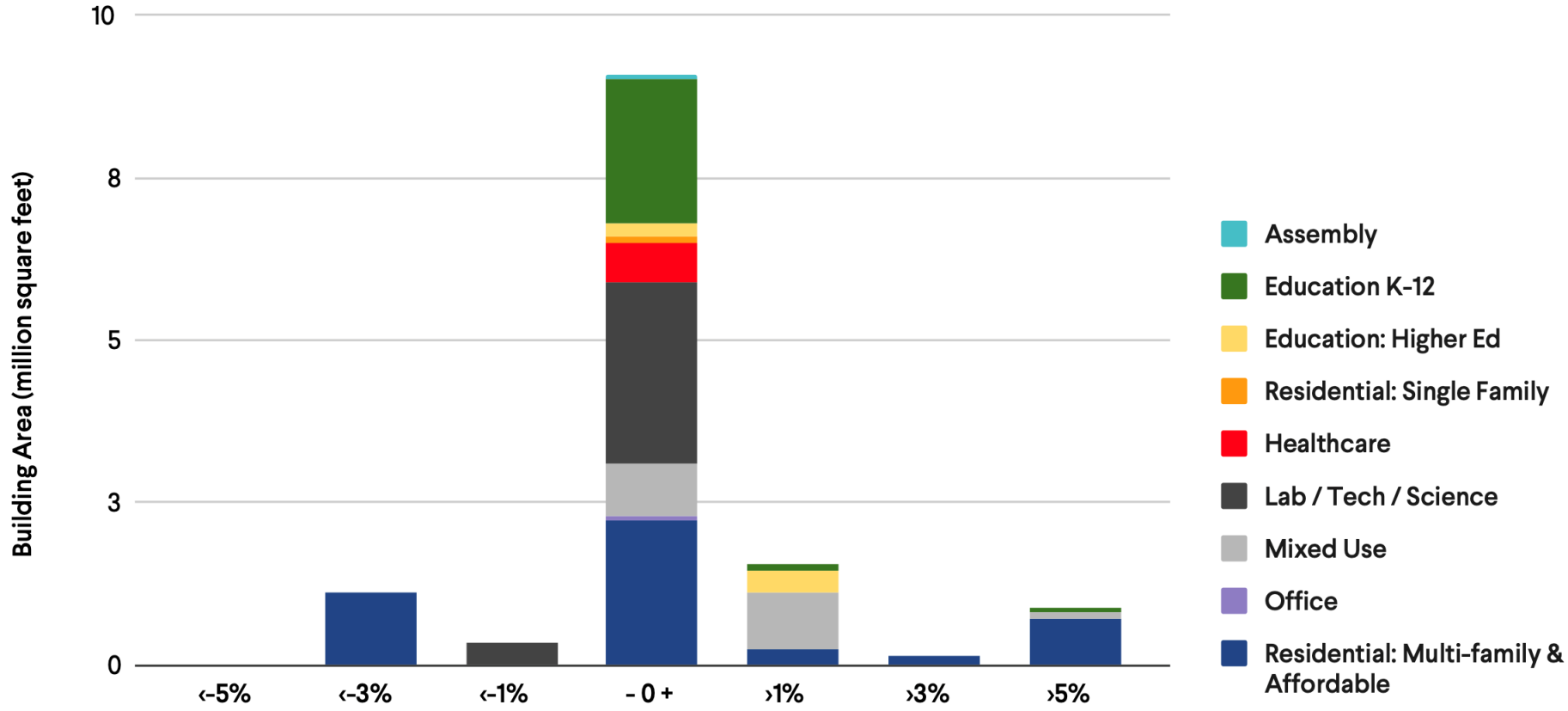
Opt-In Code Implications for Commercial Buildings (NEW CONSTRUCTION ONLY)		
Building Type	**Fuel Type**	**Opt-In Code Requirements**
New multi-family (4+ stories, over 12,000 sq ft)	All electric	Passive House*
	Mixed fuel	Passive House* + wiring for electrification
New schools, offices, municipal buildings	All electric	Same as Stretch Code
	Mixed fuel	Same as Stretch Code + *either* Solar PV *or* wiring for electrification
Other new commercial (over 20,000 sq ft)	All electric	Same as Stretch Code
	Mixed fuel	Same as Stretch Code + *either* Solar PV *or* wiring for electrification

Why the Opt-In Specialized Code?

- Ensures new construction is more energy efficient and puts less strain on the electric grid
- Protects consumers' long-term investment in new buildings
  - Avoids costly retrofits in the future
- Provides cost savings to operate and maintain buildings
- Puts Dedham in position to access Climate Leaders grant funding for on-site renewables, heat-pumps, feasibility studies

Cost of Net Zero Building in MA

- Of 13.1 million sq ft of reported cost data for net zero ready buildings, **80% had less than 1% construction cost increase**



Opt-In Code and the Electric Grid

- The new Stretch Code and Opt-In Code were designed to minimize electric demand through increased energy efficiency

- Summer peak electric load under updated Stretch Code + Opt-In Code would be 2% **lower** than continued building to current codes
  - Winter peak load would increase by 4% but would still be ~15% below summer peak

- Annual energy use has been decreasing since 2006, when we hit an all-time peak demand
  - 2023 peak demand was only 85% of what it was in 2006
  - Largely due to increasing rooftop solar and energy efficiency

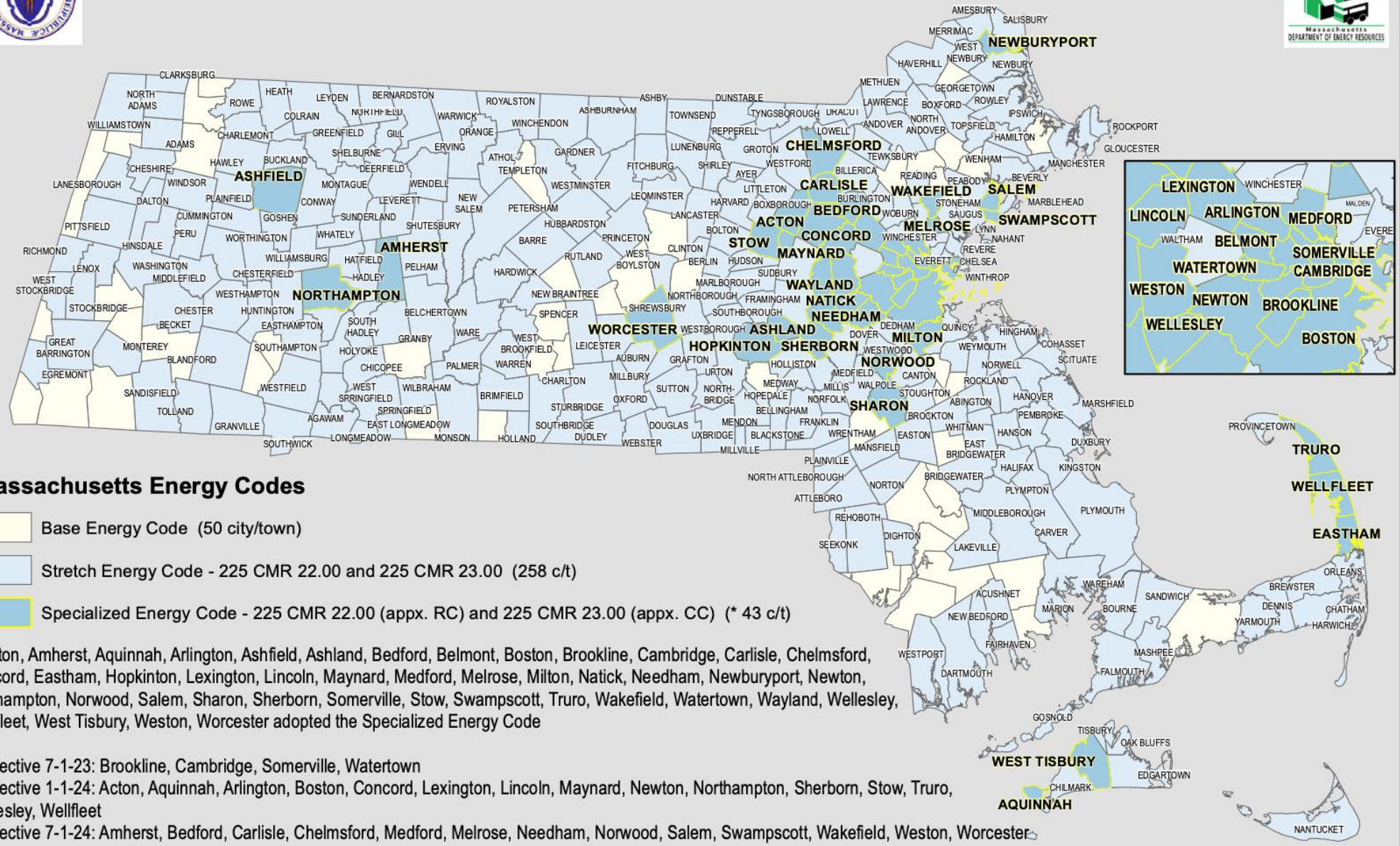
Mass.gov – *Stretch Energy Code Study Report*
ISO New England – *Electricity Use Data*

Towns That Adopted Opt-In Specialized Code

- Acton
- Amherst
- Aquinnah
- Arlington
- Ashfield
- Ashland
- Bedford
- Belmont
- Boston
- Brookline
- Cambridge
- Carlisle
- Chelmsford
- Concord
- Eastham
- Hopkinton
- Lexington
- Lincoln
- Maynard
- Medford
- Melrose
- Milton
- Natick
- Needham
- Newburyport
- Newton
- Northampton
- Norwood
- Salem
- Sharon
- Sherborn
- Somerville
- Stow
- Swampscott
- Truro
- Wakefield
- Watertown
- Wayland
- Wellesley
- Wellfleet
- West Tisbury
- Weston
- Worcester

SUSTAINABLE DEDHAM
HEALTHY. RESILIENT. TOGETHER.

Massachusetts Building Energy Code Adoption by Municipality



Massachusetts Energy Codes

Base Energy Code (50 city/town)

Stretch Energy Code - 225 CMR 22.00 and 225 CMR 23.00 (258 c/t)

Specialized Energy Code - 225 CMR 22.00 (appx. RC) and 225 CMR 23.00 (appx. CC) (* 43 c/t)

* Acton, Amherst, Aquinnah, Arlington, Ashfield, Ashland, Bedford, Belmont, Boston, Brookline, Cambridge, Carlisle, Chelmsford, Concord, Eastham, Hopkinton, Lexington, Lincoln, Maynard, Medford, Melrose, Milton, Natick, Needham, Newburyport, Newton, Northampton, Norwood, Salem, Sharon, Sherborn, Somerville, Stow, Swampscott, Truro, Wakefield, Watertown, Wayland, Wellesley, Wellfleet, West Tisbury, Weston, Worcester adopted the Specialized Energy Code

-- Effective 7-1-23: Brookline, Cambridge, Somerville, Watertown
-- Effective 1-1-24: Acton, Aquinnah, Arlington, Boston, Concord, Lexington, Lincoln, Maynard, Newton, Northampton, Sherborn, Stow, Truro, Wellesley, Wellfleet
-- Effective 7-1-24: Amherst, Bedford, Carlisle, Chelmsford, Medford, Melrose, Needham, Norwood, Salem, Swampscott, Wakefield, Weston, Worcester
-- Effective 1-1-25: Ashfield, Ashland, Belmont, Eastham, Hopkinton, Milton, Sharon, Wayland, West Tisbury
-- Effective 7-1-25: Natick, Newburyport

MA DOER, 5-15-2024, jpfister