

The Specialized Code, Article No 8, Annual Town Meeting 2024

West Tisbury Energy Committee, March 2024

As participants in the Green Communities program, we have operated under the Stretch Code since 2011.

The Stretch Code requires greater energy efficiency than the Base Code.

The Massachusetts Department of Energy Resources (**DOER**) updated the Stretch Energy Code in 2022, increasing the energy performance required of new and renovated buildings. The Stretch Code was changed on January 1st and will be further changed on July 1st. The **Commonwealth's Climate Act of 2021 directed DOER to develop a municipal opt-in specialized code** that advances net-zero building performance.

1. Why adopt the Specialized Code in West Tisbury?

It is much easier to build a well-insulated, tight, energy efficient home than to retrofit an existing house to be energy efficient later. The climate crisis requires us to reduce our energy use as much and as soon as possible. **31 towns in MA, including Aquinnah, have already adopted the Specialized Code.**

Opting-in to the Specialized Code is in keeping with the Town's non-binding resolution passed at town meeting setting a goal of 100% electric from renewable resources by 2040 and our submittal of a Home Rule Petition to the MA Legislature for all new construction and major renovations to be 100% electric.

It also makes us eligible to be part of the new Green Communities "Climate Leaders" program which will provide **enhanced funding for Town energy resilience projects.**

2. Key Requirements

The Stretch code applies to both residential and commercial new construction, as well as certain renovations and additions. **The Specialized code** applies only to new residential and commercial new construction.

Residential buildings

- The Specialized Code requires that houses with fossil fuel-burning equipment must be pre-wired for future electric systems and must have solar.
- The Specialized Code requires that multifamily buildings over 12,000 sq. ft. meet Passive House standards or net-zero home performance scores.
- Both levels of code require that any parking must be wired for at least one EV charger in small buildings, or 20% of spaces in multifamily buildings.

Commercial buildings

- Both the Specialized and updated Stretch Codes create a new metric (TEDI) regulating the amount of heating and cooling energy required. The school is the main building under this criteria for West Tisbury.
- The Specialized Code encourages the use of all-electric heating, cooling, and hot water. Buildings that use fossil fuel systems must be pre-wired for future electric systems and have solar.
- Both codes require 20% of parking spaces to be wired for electric vehicle charging.

3. What is a HERS rating? HERS stands for 'Home Energy Rating System,' and is a national standard that uses the design of the energy systems in a home to calculate the average energy needs of that home and give it a rating score.

- On the HERS index scale, smaller numbers are better, with 0 representing a net zero energy home, and 100 represents a home built according to meet the national model energy code in 2006.
- A HERS rating of 52 means that the home uses about 48% less energy than the same size home built to the 2004/2005 IECC code requirements.

The Stretch Code as of July 1, 2024 and the Specialized Code have the same HERs requirements.
Mixed Fuel Dwellings units must have solar and be wired for future all-electric.



Specialized vs Stretch code - Residential Low-Rise

HERS is Home Energy Rating System. Current average in MA is HERS 51.

Energy Source(s)	Home Size	Stretch code (July 2024)	Specialized Code (Jan 2025?)
All Electric New Homes	Any Size home	HERS 45 or Passive house	
Mixed-Fuel New Homes- use fossil fuels for any of these: heating, hot water, cooking...	Under 4,000 sq ft	HERS 42	+Solar PV (min 4kw) + wiring for electrification
	4,000 sq ft and over	HERS 42	+ Solar PV (to net-zero) + wiring for electrification
	Any	Passive house option	+ wiring for electrification
Home additions & alterations	Any	Same as Stretch code	
Historic or Existing homes	Any	Energy Code exemption if it would damage the historic fabric of the building	

4. This Code Change will not increase the work of the Building Department

Both the Stretch and Specialized Code require all new residential construction projects to have a HERS rating. This is done by a certified HERs rater, not by the Building Inspector. They produce a report detailing the energy systems in the building and provide a HERS rating. The Building Inspector retains their Building Code oversight role.

5. How can architects, designers and builders achieve the lower HERs ratings required by both Codes?

Insulating buildings well and making them airtight while employing controlled ventilation systems (now required by Code) and using higher performance windows ensures a good building envelope. Employing air source heat pumps for heating and cooling, using a hybrid electric water heater, and using an induction stove are all possible strategies for reducing a house's HERs rating.

According to our Building Inspector, heat pumps are increasingly being used now. They have the advantage of providing both heating and cooling and being able to provide dehumidification as well.

6. Does the Specialized Code make construction cost more?

The Stretch and Specialized Code have the same HERs rating requirements. The DOER has done analysis and have found these buildings to be less expensive in part because of the significant rebates available through Mass Save and, because of anticipated lower operating costs. ***If you choose to go the mixed fuel route, you will need to add solar.*** *If buying a system is too much, there are also lease options that will reduce your total electrical bill about 10%.*

7. Prewiring Requirement for Mixed Fuel Houses

The DOER feels this pre-wiring requirement protects current and future homeowners from the greater expenses that would be incurred if the additional wiring had to be done once the house was completed. The pre-wiring is not deemed to be inordinately expensive.

The meeting was called to order by the Moderator at 6:20pm who declared a quorum of 5% with 224 qualified voters present. All articles were duly moved, seconded and voted upon. There were eight amendments from the floor. The meeting was adjourned at 9:55pm.

Annual Town Meeting April 9, 2024

ARTICLE 8: To see if the Town will vote to enact a bylaw entitled “Specialized Energy Code,” for the purpose of regulating the design and construction of buildings for the effective use of energy and reduction of greenhouse gas emissions, pursuant to the entirety of 225 CMR 22 and 23 including Appendices RC and CC, including future editions, amendments, or modifications thereto, with an effective date of January 1, 2025, a copy of which is on file with the Town Clerk, or take any other action relative thereto.

SPECIALIZED ENERGY CODE

- § 1 Definitions
- § 2 Purpose
- § 3 Applicability
- § 4 Specialized Code

§ 1 **Definitions**

International Energy Conservation Code (IECC) – The International Energy Conservation Code (IECC) is a building energy code created by the International Code Council. It is a model code adopted by many state and municipal governments in the United States for the establishment of minimum design and construction requirements for energy efficiency, and is updated on a three-year cycle. The baseline energy conservation requirements of the MA State Building Code are the IECC with Massachusetts amendments, as approved by the Board of Building Regulations and Standards and published in state regulations as part of 780 CMR.

Specialized Energy Code – Codified by the entirety of 225 CMR 22 and 23 including Appendices RC and CC, the Specialized Energy Code adds residential and commercial appendices to the Massachusetts Stretch Energy Code, based on amendments to the respective net-zero appendices of the International Energy Conservation Code (IECC) to incorporate the energy efficiency of the Stretch Energy Code and further reduce the climate impacts of buildings built to this code, with the goal of achieving net-zero greenhouse gas emissions from the buildings sector no later than 2050.

Stretch Energy Code - Codified by the combination of 225 CMR 22 and 23, not including Appendices RC and CC, the Stretch Energy Code is a comprehensive set of amendments to the International Energy Conservation Code (IECC) seeking to achieve all lifecycle cost-effective energy efficiency in accordance with the Green Communities Act of 2008, as well as to reduce the climate impacts of buildings built to this code.

§ 2 **Purpose**

The purpose of 225 CMR 22 and 23 including Appendices RC and CC, also referred to as the Specialized Energy Code, is to provide a more energy efficient and low greenhouse gas emissions alternative to the Stretch Energy Code or the baseline Massachusetts Energy Code, applicable to the relevant sections of the building code for both new construction and existing buildings.

§ 3 Applicability

This energy code applies to residential and commercial buildings.

§ 4 Specialized Code


The Specialized Code, as codified by the entirety of 225 CMR 22 and 23 including Appendices RC and CC, including any future editions, amendments, or modifications, is herein incorporated by reference into the Town of West Tisbury General Bylaws.

The Specialized Code is enforceable by the inspector of buildings.

PASSED

(RECOMMENDED 5-0)

CERTIFIED COPY



TOWN CLERK
WEST TISBURY
MASS. 02575