



Authored by
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Stretch Energy Code Frequently Asked Questions



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What is the Stretch Energy Code?

Codified by the Board of Building Regulations and Standards as 780 CMR Appendix 115.AA of the Massachusetts building code, the Stretch Energy Code is an appendix to the Massachusetts building code. The Stretch Energy Code provides guidance for cost-effective **new** construction that is more energy efficient than the Base Energy Code. It is updated periodically in order to maintain the "stretch" to greater energy efficiency. Note that the Stretch Code only applies to **new** construction for homes and new large commercial buildings. According to Needham bylaws, "New Construction" means any one or any combination of the following: (a) Any construction of a structure on a vacant lot; (b) Any construction which involves demolition of more than 50% (fifty percent) of the building shell exclusive of demolition of a single story attached garage.

What is Needham's current energy code?

Building construction in Needham currently has to meet the Base Energy Code, which specifies certain standards that all building projects must achieve regarding their energy consumption. All buildings in Massachusetts must follow the Base Energy Code, unless the optional Stretch Code is adopted. The Base Energy Code, which is updated about every 3 years, is based on the International Energy Conservation Code (IECC)'s most current version.

Why is Town Meeting Considering Adopting the Stretch Energy Code?

Adoption of the Stretch Energy Code is an option that requires approval by a majority vote of Town Meeting. The primary reasons for adopting the Stretch Code are:

- To ensure that newly constructed buildings in Needham are more energy efficient, thus minimizing the yearly energy costs.
- To meet one of the five criteria for Needham to achieve Green Community status. (See Green Communities FAQ).

How do the Base and Stretch Energy Codes currently differ?

The Base Energy Code provides two options* builders may use to meet energy efficiency requirements:

- **Prescriptive Method**, installing elements with specific energy efficiency levels (e.g., windows, or wall & roof insulation, furnace, etc.), or
- **Performance-based Method**, building to ensure the home performs to a specific level of efficiency, measured through a **HERS** (Home Energy Rating System) analysis both pre- and post-construction. The builder can decide how to design the house to reach the performance target

*Both options require inspections during and post construction

The Stretch Energy Code simply requires that builders use the **performance-based method**. Measuring the home in this way verifies it is performing as expected, which is an **important protection for the home owner and for any future buyer**. Some builders in

non-Stretch Code communities choose to use the performance-based method required by the Stretch Code because it can often provide greater flexibility.

How does the HERS rating predict how much energy a building will require?

The HERS rating is a measure based on a home's total expected energy use and overall efficiency. It is calculated by a certified HERS rater using accredited software, which uses information on the design of the energy systems in a home to calculate the annual energy needs of the home and give it a rating score. As part of the HERS rating, the HERS rater tests the home for air leakage and inspects insulation installation, which helps ensure that the home performs as designed.

How much will the Stretch Code add to the cost of new construction?

This will vary case to case, but generally, building a home to the Stretch Code adds roughly \$700 to \$2,000 to the price of construction primarily for the cost of the added services provided by the HERS rater. Building to the Stretch Code generates savings in the form of reduced energy costs to heat, cool, and power the home, which in most cases outweigh the added construction costs in year one of ownership. Some, if not all, of the HERS Rater costs may be reimbursed to the builder through the MassSave program.

Are Needham builders familiar with the Stretch Energy Code?

All the communities abutting Needham have adopted the Stretch Code, and local builders should be accustomed to working with it. As of May 1 2019, 253 of the 351 cities and towns in Massachusetts had adopted the Stretch Code, which represents 79% of Massachusetts residents and 71% of Massachusetts municipalities.

What will the impact of the Stretch Code be on additions and renovations?

The current Stretch Code only applies to new construction. (see the definition of 'New Construction' in FAQ #1 above.)

Once Needham adopts the Stretch Code, does the Town need to follow this permanently?

No. The Town can revoke the adoption of the Stretch Code at any time through a vote at Town Meeting. By revoking the Stretch Code, the town would be giving up Green Community status.

Town Meeting did not pass the Stretch Code in 2012. What is different in 2019?

There are three major differences:

- In 2019, the Stretch Code applies only to new construction, defined in Needham as all new construction, or additions that are more than 50% of the current building size.
- The Base Code has become more stringent since 2012 and is now similar to the Stretch Code aside from the HERS rating requirement of the Stretch Code.
- Surrounding communities have adopted the Stretch Code, and builders are generally building to this code.

What town resources will be required to implement the Stretch Code?

No additional town resources are needed to implement the Stretch Code.