

## 2017 Stretch Energy Code

Massachusetts gives communities two options for their building energy code – a base energy code or an optional stretch energy code. Municipalities can choose to adopt the stretch energy code by vote of City Council or Town Meeting article and it can be rescinded by vote of Town Meeting or City Council. Adoption of the Stretch Code is one of the criteria necessary for a municipality to apply for designation as a Green Community and thus be eligible for grants to pay for energy saving projects in municipal buildings.

On January 1, 2017, both the Base Energy Code as well as the Stretch Energy Code were updated. The difference between the two will be much smaller than in the past. In fact, the new Stretch Code will be incorporated into the new Base Code; no more extensive and separate language to describe it. Basically, new residential construction in a Stretch Code town will need to follow the Performance Path of the Base code and achieve a HERS rating of 55 rather than following the Prescriptive Path of the Base Code. The updated Stretch Code will also apply to new commercial buildings over 100,000 square feet. Additions, renovations, and repairs to residential or commercial buildings are not applicable to the updated Stretch Code, only the Base Energy Code is applicable.

A key feature of the Stretch Energy Code is that it is performance based. It requires new homes to meet a HERS (Home Energy Rating System) index rating target, rather than requiring the installation of specific levels of energy efficiency for each building element (e.g. windows, wall insulation, roof insulation, furnace etc). 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.

One benefit of using HERS ratings for compliance with the Stretch Energy Code is that builders do not have to install specific energy efficiency measures, rather they have the flexibility to choose which energy efficiency measures to install, and how to design the home in order to meet the HERS rating target. It is also a way to ensure that homes are well built. 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.

The Base Energy Code in Massachusetts is updated approximately every 3 years. The Stretch Energy Code must be updated periodically in order to maintain the “stretch.” When the stretch energy code was first adopted, it was characterized as adopting the next version of the base energy code early, which is how it turned out.

The Board of Building Regulations and Standards (BBRS) and the Department of Energy Resources (DOER), two state entities responsible for the building energy codes, have completed work on a new stretch energy code. Basically, it requires that the performance path of the standard building code be followed in Stretch Code municipalities for new homes and for large new commercial buildings. The new Stretch Code will add an additional cost to new home construction which will be primarily for the services of the HERS Rater. This is generally in the \$700 - \$1300 range per residence. There are also typically significant annual energy bill savings that more than tip the balance to give homeowners a net savings every year. Some, if not all, of the HERS Rater costs may be reimbursed to the builder through the MassSave program.

Once adopted, the stretch energy code would take effect on the date identified in the local City Council's ordinance adopting the Stretch Code. Over 210 communities, representing more than half of the state's population (over 65%), have adopted the Stretch Energy Code, and that number continues to go up. Most builders in the area are familiar with the requirements of the Stretch Energy Code. Many builders say that the energy efficiency trade-off features of the Stretch Code makes it easier to fulfill customers design wishes than following the Base Energy Code prescriptive requirements.