1. What is the ‘stretch’ code?
   The ‘stretch code’ is an optional appendix to the Massachusetts building energy code that allows cities and towns to choose a more energy-efficient option. This ‘stretch code’ option increases the energy efficiency code requirements in any municipality that adopts it, for all new residential and many new commercial buildings, as well as for those residential additions and renovations that would normally trigger building code requirements.

2. How is the stretch code different from the existing ‘base’ energy code?
   The stretch code appendix offers a streamlined and cost-effective route to achieving approximately 20% better energy efficiency in new residential and commercial buildings. This is largely achieved by moving to a performance-based code, where developers are required to design buildings so as to meet an energy target substantially better than code, and have flexibility in how they meet that target to allow for cost-effective and appropriately designed solutions. New residential construction must use the performance-based approach, but residential renovations and most commercial buildings may instead follow a ‘prescriptive’ route that requires a set of specific energy efficiency improvements, which in the commercial case add up to approximately a 20% improvement over the current code (IECC 2009). Many of these changes have been endorsed by the federal Department of Energy and are likely to be incorporated into the next International Energy Efficiency Code (IECC) in 2012, so to a large degree the stretch appendix is an early look at the potential ‘next’ code.

3. What is the anticipated cost of implementing a more stringent energy code?
   Initial adoption of a higher performance standard for buildings is likely to result in slightly higher first costs for new construction, estimated to be approximately $2000-$4000 for a typical single family home, and in the 1% to 3% range for commercial buildings. However, after energy cost savings on heating and electricity are included these higher performance standards save money. In addition, the electric and gas utilities in the state provide financial incentives that further reduce the upfront costs of high performance buildings, and allow for faster returns on the investment in energy saving measures.

   For example, a residential home purchased with a 30-year mortgage would typically result in net savings to the homeowner in the first year due to energy bill savings that are larger than the increase in mortgage payments from construction and financing costs. On the commercial side, case studies of specific buildings by Massachusetts utility companies National Grid and NSTAR show that the savings in reduced energy costs far exceed the greater initial construction costs. Moreover, the utilities offer generous incentives that make the efficiency improvements even more profitable.

4. Does the stretch code apply to major renovation projects as well as new construction?
   For commercial buildings: no, for residential buildings: yes. The ‘stretch’ energy code does apply to residential building renovation and addition projects, but has less stringent energy performance requirements for renovations than for new buildings. In addition, renovators have the option of using a simple ‘prescriptive’ path to code compliance, installing specified efficiency measures, instead of performance testing. This greater flexibility is available for residential renovations due to the greater design constraints in working with an existing building. Due to the wide variety in types and conditions of commercial buildings, at this time there are no widely-accepted standards for renovating such buildings, so only new commercial buildings are covered by the stretch code requirements.

5. If I'm doing a small residential remodeling project, like a kitchen or a bathroom renovation, will I have to meet the stretch energy code?
   If a small renovation involved replacing a couple of windows and opening part of an exterior wall cavity, then only those new windows and wall cavity would have to be brought up to meet the stretch energy code, just as the plumbing in the kitchen or bathroom being remodeled would have to comply with the plumbing code. However, improving a kitchen or bathroom would not trigger required changes to the rest of the home such as attic insulation or a new heating system. Only the systems being modified have to be brought up to code. Despite not being required, your contractor, utility company and code official may help advise on cost-effective changes – often with tax and rebate incentives to reduce your energy bills that you may want to consider doing at the same time.
6. What financial savings/rebates are there from building to the stretch code?
The stretch code is designed to allow builders to get the maximum benefits of the existing ENERGY STAR® Homes program with its full range of training, support and financial incentives. A new home that is constructed 30% more energy efficient than code can qualify for $1,250 from the Sponsors of the ENERGY STAR® Homes Program, and additional rebates are available for installing high efficiency heating and cooling equipment, appliances and lighting. The utility and non utility partners also subsidize the cost of hiring a HERS rater (up to $900) to work with the builder. In addition to these Massachusetts-based incentives there is a federal $2,000 tax credit available for homes built with less than half of the heating and cooling load of a 2004 code home. The HERS rater and software can tell you whether a new home qualifies for this and the REMRate (HERS) report provides the core documentation needed.

For existing home renovations there are tax credits for the homeowner as well as the same utility incentives on efficient equipment, appliances, and windows. For additions (+500 sq/ft) in towns serviced by NGRID Electric, NSTAR Electric, WMECO and the Cape Light Compact there is the Major Renovations Pilot Program that offers incentive for energy efficiency upgrades and HERS Rater subsidies. There are also additional major incentives available to add insulation to existing homes, through the MassSave program sponsored by the gas and electric utility companies.

7. How is the MA stretch code different from the existing ENERGY STAR for Homes program?
The ENERGY STAR for Homes program is a voluntary program for home builders. In Massachusetts this program is currently administered by ICF International on behalf of the major energy utility and non utility partners in the state, and has several hundred builders enrolled. This program accounted for 30% of all new homes in Massachusetts in 2009, up from 17% in 2008. The Program offers participants a performance based tiered incentive based on home performance. The stretch code essentially makes the current ENERGY STAR program requirements mandatory in any adopting municipality, and sets a specific minimum HERS index rating of 65 or 70 based on the size for new homes, and less strict requirements for renovations. This standard for new construction is more stringent than the ENERGY STAR for Homes requirement currently set at 85, for most large homes the stretch code requirement is equivalent to the guidelines for achieving the Tier II incentive through the Massachusetts New Homes with ENERGY STAR Program.

8. How does the stretch code apply to historic buildings?
The stretch code appendix, similar to the base energy code, allows an exemption for listed historic buildings. More specifically, historic buildings listed in state or national registers, or designated as a historic property under local or state designation law or survey, or with an opinion or certification that the property is eligible to be listed, are exempt from both the base energy code and the stretch appendix to the energy code.

9. How soon after a town or city adopts it would the stretch code take effect?
In order to provide consistency among communities, once adopted the stretch code can only go into effect on January 1st or July 1st and there must be at least six months between adoption and when the stretch code becomes mandatory. For example: if Town A voted to adopt prior to July 2011, then on July 2011 the stretch code would run concurrent to the existing base code and on January 1, 2012 the stretch code would replace the base energy code as the sole, mandatory energy code in Town A.

10. How would the stretch code be implemented and enforced?
Once the stretch energy code is adopted by a town or city, it supplements the base energy code language and becomes the binding energy code language for building projects in that municipality. Implementation and enforcement of the code is similar to existing code, where the developer is responsible for submitting documentation of compliance to the building inspector for review, and the building inspector conducts a site review.