Green Space … Milton Times 9-15-11, By Henry MacLean

Dropping our Energy Costs: Investment Strategy for Homes

As leaves begin to turn color and fall, homeowners in Milton are pulling out AC units and taking steps to seal up, repair and ready their homes for the coming chilly weather.

Winter brings on the big energy expenses in our climate, accounting for more than 80 percent of the total use of heat, hot water and electricity for our homes.
With energy prices where they are today, the cost to heat, cool and power an average existing 2,400-square-foot home in Milton is about $5,000 a year (using 70 kBtu, or 1,000 thermal British units, per square foot, per year), about $4,000 for an existing new home built to code (using 54 KBTU/SF/YR) and roughly $3,300 for an Energy Star home (using 45 KBTU/SF/YR complying with the new stretch code now in effect). In addition to paying back the added costs in energy savings, these homes are more comfortable and healthy year round with added invested and resale value.

Carbon reduction targets embraced by the state and the feds to stave off the worst effects of climate change and extreme weather, now more frequent, call for an 80 percent reduction in carbon by 2050. While buildings produce close to 50 percent of that carbon, existing buildings have become the real focus here in New England, as much as 90 percent of them expected be here in 40 years. Since 2005, only 0.3 percent of residential building permits were for new construction here in Milton.

Over the last few years, new pilot programs called Deep Energy Retrofits have been initiated by the utilities to show the feasibility of dropping carbon use in homes by 50 percent, and as low as 85 percent when adding solar or other renewables. The incentive is typically $42,000 for a one-family home, which in many instances pays for the increased levels of insulation and efficiency in the systems, while the savings over time become an investment strategy. An 85 percent reduction for a typical home using $5,000 worth of fuel annually is dropped to $750 a year, and in 20 years this translates to more than $65,000, before considering inflation or cost of energy increases.

A number of these DER projects in the Boston area will be on view during the annual Northeast Sustainable Energy Association’s Green Building Open House on Oct. 1, when more than 500 green homes and businesses will be opening their doors throughout the region to help educate and inspire those who participate.

One nearby DER project I was fortunate to work on in Quincy, a transformation of a 1903 bungalow, has achieved this 85 percent reduction, meeting an ongoing target energy use of 10,500 KBTU/SF/YR. The owners, a young family of five, are thrilled with the building and doing their part to make a greener world, while creating a beautiful home and investment strategy that is “consistently comfortable.”