

# Making Changes

## Energy Conservation

There exist many myths and much misinformation with regards to 'improvements' you can make which could 'save' energy and therefore, money.

Windows are often seen as the weakest point in a building's thermal envelope and therefore targeted for 'improvement'. There is no doubt that windows are truly the weakest point in most buildings, when it comes to energy loss. This, however, is true, no matter how efficient your windows are. Even the most efficient, triple pane, EnergyStar certified windows, typically have an equivalent R-value of an un-insulated, 2x4 wall!

**Air sealing is the MOST important aspect in the energy performance of your windows and throughout your home.**

Historic windows, when properly maintained, can be very easily made to be as tight as the newest replacement window on the market.

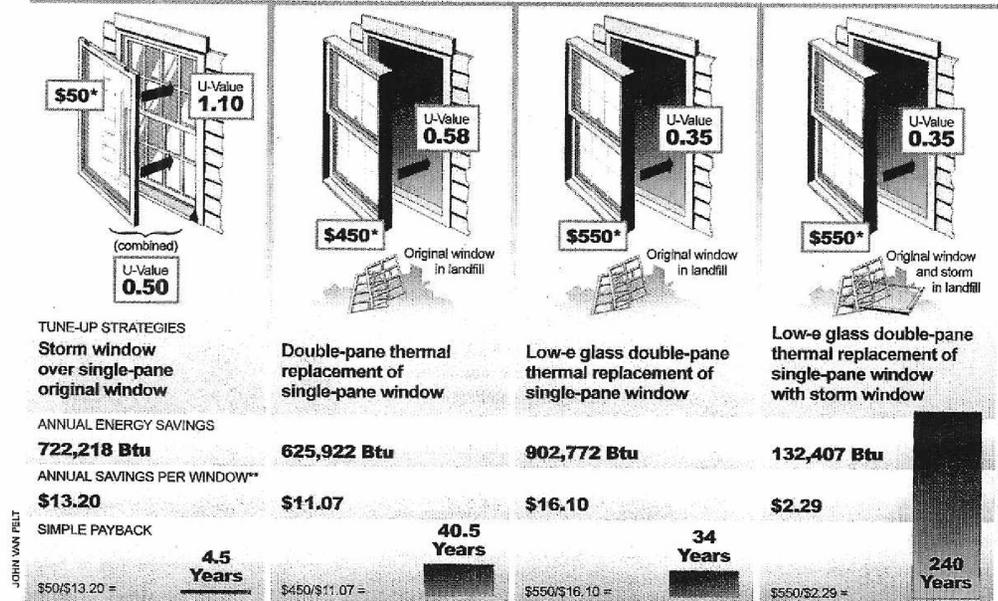
As the chart to the right indicates, you are better off preserving your original windows and, if necessary, adding a high-quality aluminum storm window to increase your energy performance.

There are many weather-stripping and air sealing products that are cost effective and easy to use. Your windows have likely lasted 75+ years already, why would you consider replacing them with a vinyl product with an effective 20 year life-cycle?

The most effective way to increase the energy performance of your building is to make sure you have a minimum R-38 insulation at your roof. Most historic buildings were not built with anywhere near the insulation that is required to meet today's energy codes. Luckily, adding insulation within your attic is a very inexpensive and typically easy to do improvement.

Secondly, as with your windows, make sure the exterior is well air-sealed. Key areas to investigate include: Doorways, eaves, sill plates, basement openings, vents, and exterior lights. Any element that penetrates the exterior skin of your building is a natural pathway for air infiltration. Again, these areas can be easily and cost effectively sealed with modern foams and caulks.

### Let the Numbers Convince You: Do the Math



\*Cost of 3' x 5' window, installed  
 \*\*Assuming gas heat at \$1.09/therm

Source: Keith Haberern PE, R.A.  
 Collingswood Historic District Commission

A 2007 study found that window replacement was generally not cost-effective for homeowners. Image source: <http://blog.timesunion.com/holland/this-message-brought-to-you-by-the-letter-%E2%80%9Cw%E2%80%9D/131/>