

New windows increase value, energy efficiency of house

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For the Journal-Constitution
Published on: 11/08/04

With colder weather just around the corner, you may be considering some changes to increase the energy efficiency of your house. If it has single-pane windows, upgrading them is one way to do that and perhaps increase the value of your home as well. As with most things, it is helpful to know a little about a product to make a wise purchase.

With new technologies emerging daily, choosing the right window is not as easy as it appears. Here is some basic information about windows that should make your shopping easier.

What we use here

Four types of windows are used in Georgia, defined by the way they open. Double- or single-hung windows have either one or two sashes (the part of the window that moves) that slide up and down to open the window. Sliding windows also have one or two sashes that slide side-to-side for opening the window; awning windows have a single sash that is hinged at the top and casement windows are a single sash window that is hinged on the side. If you are going to change your windows you will have to decide whether to stay with the same type or install a different type of window. This decision is usually based on standard window sizes and which windows fit best in the openings you have.

Names of the parts

Windows are comprised of a frame (the material around the glass) and the glazing (the glass itself). Both parts of the window have an impact on its energy efficiency. Window frames can be aluminum, wood, vinyl or composites. The frame you choose typically depends on your house and how you want the window to look. The energy efficiency of glass is achieved by tinting it, coating it (low-E) or putting two or more panes of glass together (Thermopane). Often, more than one method is used in manufacturing an energy-efficient window.

Energy efficiency

Windows are rated by the National Fenestration Rating Council. There is an NFRC label on most windows. The values on the label are the only reliable way to compare the energy efficiency of different windows. The NFRC label lists four variables.

- The label lists the window's U-Factor, the rate of heat loss through the window. The lower the U-factor, the more energy efficient the window. In Southern climates, the window's U-factor should be lower than .75. Lower than .60 is even better.
- The second part of the label is the Solar Heat Gain Coefficient. The SHGC addresses the solar radiation allowed through a window. As with the U-factor, the lower the SHGC, the more energy efficient the window. In Southern climates, a SHGC less than .40 is preferable.
- Next, the label addresses the visible transmittance of the glass. The VT is the amount of light the glass allows through. Choose windows with a higher VT to allow more light into the room.
- The final part of the NFRC label addresses air leakage, the amount of air that leaks through the window assembly. The lower the AL the better. Choose windows with an AL of .30 or less.

Additional information and assistance can be obtained from the Efficient Windows Collaborative online at www.efficientwindows.org or by calling 202-530-2234.

Do you have a home repair question? Send e-mail to Ask the Inspector at H&G@ajc.com. Our expert, Bill Garwood, spent 15 years as a building contractor before becoming a home inspector in 1990. He is part owner of a residential inspection firm and a company providing training in building inspection and codes.