

Window Know-How: A Guide to Going Green

To live green at home, and reduce your monthly energy bills, it's important to evaluate windows. If you live in an older residence, don't assume that replacement windows are the only option. Historic wooden windows are remarkably efficient as long as they're well maintained. (And there's nothing greener than preserving what you already have.) Conversely, manufacturing and installing replacement windows consumes enormous amounts of energy. Keep these tips in mind as you consider your options:

Older is Better: Old windows were fabricated from old wood. It's generally denser and lasts longer than the new wood used for modern windows.

Caveat Emptor: Some salespeople promote replacements as cure-alls, but even the highest-quality replacement units can fail. In addition, experts note that new vinyl or PVC replacement windows can release toxic byproducts into the atmosphere.

Watch Your Pennies: Tearing out existing windows to install replacements is expensive and wasteful. Although you may achieve some energy savings, it will take decades (or centuries) to recoup your investment. Plus, you'll have to dispose of the old windows, adding to the nation's waste management woes.

Maintenance is Key: A well-sealed, tight-fitting window saves energy.

Check for Condensation: It can rot window sills and rails.

Use Storm Windows: They increase energy efficiency. Monitor them for clues about your house. Cold air leaking in through a storm window can create condensation on your window panes. Warm air escaping from your house can cause a storm to fog up.

Insulate: More heat is typically lost through the roof and walls than through windows. Adding just 3 1/2 inches of insulation to your attic can save more energy than new windows.

Install Window Treatments: Something as simple as a conventional window shade mounted inside the frame and touching the sill, with no more than a 1/4-inch gap at the sides, can reduce heat loss by as much as 27 percent. A shade with a reflective coating will provide even more protection.

Remember to...

1. **Keep all exterior surfaces painted.** A coat of paint protects wood. Pay particular attention to horizontal surfaces, such as window sills, where water collects.
2. **Replace glazing compound (the putty that holds panes in place) when it dries out.** Missing or cracked compound results in air infiltration. Always paint glazing after it has cured.
3. **Maintain window locks.** Functioning locks hold rails tightly in place. A tight fit reduces air exchange.
4. **Keep movable surfaces free of paint buildup** so that sashes slide freely.
5. **Replace any cracked or broken panes promptly.**
6. **Add or renew weather stripping** where it makes sense. When correctly installed, weather stripping can increase a window's efficiency by as much as 50 percent.
7. **Watch for water.** Whenever you use storm windows, remember to clear the weep holes at the base to allow condensation to drain away.
8. **Check seals around exterior storms and caulk well.**
9. **Test for air leaks.** On a windy day, hold a lighted birthday candle or incense stick near the window frame to detect drafts.
10. **Think about safety.** Evaluate emergency exit routes before sealing windows with caulk or adding storms.



Sum of Its Parts

Jamb Vertical or horizontal member that frames the window opening

Rail Horizontal part of sash

Pane or Light Glass held in place by glazing putty and metal glazing points

Top Sash Upper section of window, may slide down to open

Stile Vertical part of sash

Meeting Rail One of the two horizontal members of a double-hung sash which come together

Muntin Strip that separates the panes of a window. The shape, or profile, of a muntin provides a clue to the window's age.

Bottom Sash Lower section of window, typically slides up to open

Casing The finished, often decorative, framework around a window

Stool Interior shelf-like board at the bottom of a window against which the bottom rail of the sash rests

Sources: *Forum Journal*, 20, no. 2 (2006); National Trust for Historic Preservation; Historic Home Works, historichomeworks.com; calculations by Keith Heberem; Cornell Extension Service