

Articles that conclusively prove your historic windows are far better than replacements. Read on to see how replacement windows waste money and DO NOT save energy. Follow the links for more information on how you can inexpensively make your historic windows more efficient than replacements and how your historic windows will long outlast replacements at a small fraction of the cost.

Three Steps to Super-Efficient Windows from Green America, formerly Co-op America

Probably the best article we have seen.

"Heat loss through windows actually represents a modest (10 to 20 percent) portion of a house's energy leaks. ...adding insulation and sealing up major air leaks...should come before windows."

"Most [90%] of the heat lost through windows is lost through drafts (air leaks), not through the pane of glass itself."

"Old wood windows can last another 100 years or more with proper maintenance. Modern replacement windows, on the other hand, only last 15 to 20 years."

So, if as little as 10% of your energy loss is through windows, and 90% of that can be fixed with weatherstrip and V-seal for less than a dollar or two, that leaves only 1% of energy loss through windows. No wonder everyone says windows are not the place to address energy loss. Plus lots of information on how to tune-up your real windows.

www.greenamerica.org/livinggreen/windows.cfm

Restoring Window Sashes from Fine Homebuilding Magazine

"Yes, they're worth fixing. Those old windows were built better (and from better wood) than anything you can buy today."

"Why not spend a little time, and a lot less money to help your existing windows last another century?"

www.finehomebuilding.com/pdf/021161084.pdf

"Old" Wood Window/Replacement Window Energy Analysis by John Leeke of Historic HomeWorks

He does the math and it is irrefutable! What a great analysis!

WHAT THOSE HOME IMPROVEMENT ADVERTISEMENTS WON'T TELL YOU!

- ♦ U value of a single pane window (that old wood window): 1.10
- ♦ U value of a single pane window combined with a storm window: 0.50
- ♦ U value of an expensive new double pane thermal replacement window: 0.58 (remember that the lower the U value the better. You will note that your old wood window combined with a storm window is about 15% more energy efficient than that new replacement window. Those new windows will cost you, not save you money.)

He also calculates the payback period of replacing a single pane window with a replacement:

♦ Simple payback if you assume a decent replacement window will cost \$400 installed: \$400/\$9.65 year = 41 1/2 years!!

(Not a good investment. You would do better by putting your money in a bank savings account! Also remember that as most thermal replacement windows will have a life span of 15 to 20 years, they will not last long enough to pay themselves off.)

BUT, since most houses do NOT have a single pane and have storms (which the salesperson neglected to tell you) the payback of replacing your historic windows and storm with replacements is:

♦ Simple payback if you assume a decent low-e replacement window will cost \$450 installed: \$450/\$2.03 year = 222 years!!

Now if you didn't already own a storm, and you added one, what is the payback:

◆ Simple payback if you assume a storm window will cost \$50: \$50/ \$9.65 year = 4-1/4 years

www.historichomeworks.com/hhw/education/WindowsHandouts/WindowEnergyAnalysis.pdf

Windows National Trust for Historic Preservation

Reasons to keep your old windows:

- 1. Old Windows are Built with High-Quality Materials
- 2. Old Windows "Fit" Their Openings.
- 3. Old Windows Can Be Repaired
- 4. Old Windows Perform Well and are Energy Efficient

Myths about replacements:

- Myth 1: Replacements Will Save You Money
- Myth 2: Replacement Windows Are Guaranteed [Read the fine print and see article.]
- Myth 3: Replacement Windows are Maintenance Free
- Myth 4: Replacement Windows are the Environmentally-Responsible Choice

We Need to Run Out and Get New Windows for Energy Efficiency!!! from a window restorer

"Replacing windows is rarely cost effective based solely on energy savings." US EPA Energy Star Program

"Tearing out historic windows for replacement units not only wastes embodied energy, it requires additional energy to remove and dispose of them." The National Trust "Window replacement isn't the best place to start in energy upgrades.", "the best way to improve single-glazed windows is to install exterior storm windows" www.greenbuildingadvisor.com

Interestingly, when I went to the Energy Star website to triple check my sources for this article, I stumbled upon this entry on the discussion board, "I just got new ENERGY STAR windows. I can feel they are leaking. What should I do?" I got a good laugh. Our best customers have been the ones who had some windows replaced and some restored. They've been shocked to notice that the restored windows with storms feel less drafty. Imagine how they'll feel in 10 years when the restored windows need to be painted and the new windows need to be replaced altogether.

www.historicwindowrestoration.com/html/energy_efficiency.html

Top Myths About Replacement Windows Louisiana State Historic

Preservation Office

Myth #1: Replacement windows are more energy efficient and will pay for themselves.

Myth #2: Replacement windows are the "green" solution.

Myth #3: Replacement windows are lower maintenance.

Myth #4 Historic windows are too expensive to repair.

Myth #5: Replacement windows will last as long as historic windows.

Myth #6: Replacement windows don't leak.

ncshpo.org/current/pdfinitiatives/SHPO%20windows%20proof.pdf

Replacement Window Myths from National Alliance of Preservation Commissions

Has a great chart showing where your heat loss really goes, and it's not through the windows. Exposes as false the "lead scare" tactic the replacement companies are using. Since their windows don't insulate, don't work, and aren't installed right, many companies are trying scare tactics to convince you. Read the truth here:

While any house built before 1978 might contain lead paint, it is possible to remove lead paint from historic sash without posing serious health hazards. Local municipalities often have guidelines for safe and effective de-leading, including windows, but it needs to be done by a professional. An experienced contractor or window restoration specialist should be able to identify unstable lead paint (the most hazardous condition) and treat it appropriately. Oftentimes, stable lead paint can be encapsulated with lead-free paint to comply with state laws. With proper precautions and safety measures, historic wood windows with lead paint can be remedied.

On most houses we see the paint is stable. Encapsulation with another paint will solve the so-called problem. The lead-scare tactic keeps us from thinking about this clearly. We aren't raising and lowering our windows hundreds of times a day. Even if we were, the amount of dust would be non-existent or negligible, and is much less than a proper diet would take care of. Unless the paint is so unstable it is peeling off in chips, you'll find infinitely more lead in the yard surrounding your house, and no one is recommending your lawn be dug up and hauled away.

napc.uga.edu/Popular%20Window%20Replacement%20Myths.pdf

What Replacement Windows Can't Replace: The Real Cost of Removing Historic Windows APT Bulletin: Journal of Preservation Technology

A detailed analysis, with worksheets.

In actuality, typical window-replacement systems offer payback periods that are often nowhere near manufacturers' claims: the payback of a typical unit could take as long as 100 years..

www.dahp.wa.gov/sites/default/files/WhatReplacementWindowsCantReplace.pdf

<u>Top Ten Reasons to Restore or Repair Wood Windows</u> by New England Window Restoration Alliance

From the article:

- 1. Because your windows fit your house.
- 2. Because you appreciate good craftsmanship.
- 3. Because you value good materials.
- 4. Because you love the character of antique glass.
- 5. Because you think a warranty should be more than 20 years.
- 6. Because you want to avoid vinyl.
- 7. Because you want more light.
- 8. Because windows are a functional part of your house.
- 9. Because you really can save 30-40% on heating costs [just not from replacements].
- 10. Because the greenest building is one that is already built. windowrestorationne.org/topten.pdf

Strips and Storms Old House Journal

Techniques for tuning up sash windows for winter.
www.oldhousejournal.com/magazine/2004/oct/strips.shtml

Guidelines for Preservation and Replacement of Historic Wood Windows in Cambridge by Cambridge, MA Historical Commission

Another major claim of the window replacement industry is insulating glass. Insulating glass involves two panes of glass with an inert gas sealed in the space between them; these windows are called "double-glazed." Their design, however, does not lend to sustainability. Windows with insulating glass come with only a 15 to 20 year warranty; when the sealant fails, the window will lose its insulating quality, the glass will fog, and the entire window may have to be replaced. Historic wood windows with a single pane of glass can be repaired with tools found at a local hardware store and will last up to 10 times longer than a replacement model. Homeowners should be aware that the payback period for restoring wood windows and installing quality storm windows is significantly less than installing replacement windows. In sum, the term "replacement window" means just what it says – it will have to be replaced again and again. What about Lead Paint?

Property owners are often concerned that the presence of lead paint on windows may require immediate replacement of the windows. Although it is not uncommon to find lead paint on historic wood windows, lead abatement can be achieved without posing serious health hazards. A licensed risk assessor can confirm the presence and location of lead paint and a licensed lead abatement contractor should be able to stabilize and treat it appropriately. With proper precautions and safety measures, however, historic wood windows with lead paint can be remedied. The regulations do not require the immediate removal of windows or window sash containing lead paint, but rather careful and thorough abatement. Special consideration is given to buildings on the State Register of Historic Places, recommending offsite stripping and reinstallation of any components containing lead paint and advising against permanent removal of "historic architectural features" such as wood sash. The abatement method, either through stripping of the lead paint or replacing the sash, is ultimately at the discretion of the homeowner.

www2.cambridgema.gov/Historic/windowglines final.pdf

<u>Historic Wood Windows</u> A tip sheet from the National Trust for Historic Preservation

There is an epidemic spreading across the country. In the name of energy efficiency and environmental responsibility, replacement window manufacturers are convincing people to replace their historic wood windows. The result is the rapid erosion of a building's character, the waste of a historic resource, and a potential net *loss* in energy conservation. Typically replacement windows are vinyl, aluminum, or a composite with wood, and none will last as long as the original window. Repairing, rather than replacing, wood windows is most likely to be the "greener option" and a more sustainable building practice.

www.historic-albany.org/docs/Wood-Windows-Tip-Sheet-July-2008.pdf