

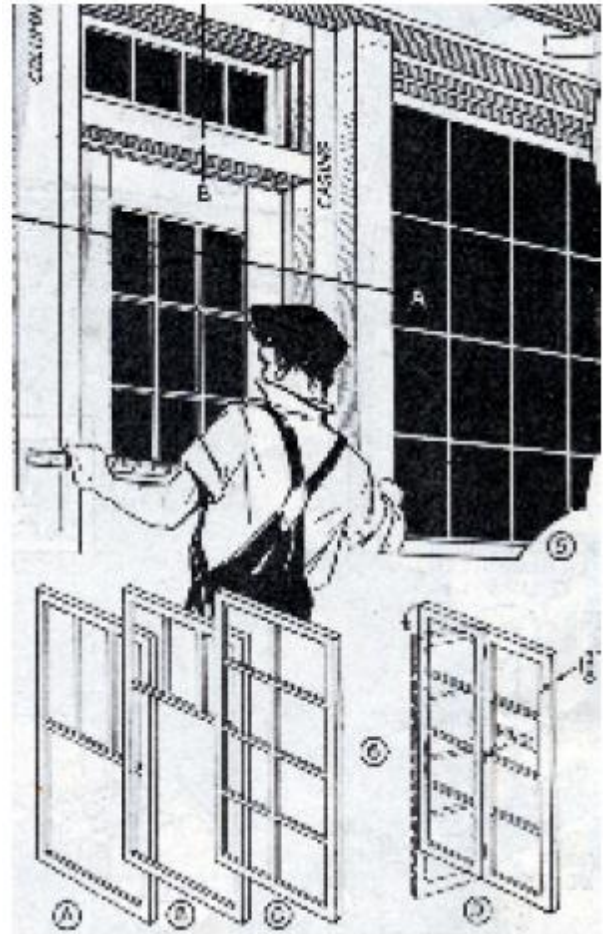
# Repairing Wood Windows is “Greener” than Replacement

*Excerpts from the Historic Wood Windows Tip Sheet by 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, a wood window is most likely to be the “greener option” and a more sustainable building practice.

Research shows that most traditionally designed wood frame buildings lose more heat through the roof and in insulated walls than through the windows.(1) A historic wood window, properly maintained and fitted with a storm window, can be just as energy efficient as a new window.(2) Replacing a historic single-pane window also may not save you much money in the long run. While the exact figure will vary depending on the type of window installed and whether or not a storm window is used, studies have found that it could take 100 years or more for a replacement window to pay for itself in energy savings.(3) According to information published in a recent *Old House Journal* article, it could take 240 years to recoup the cost of replacing a single-pane window-storm window combination with a low-e glass double-pane thermal replacement window.(4) Also, a historic wood window can easily last more than 100 years, while a new window may not last 25.

Not every wood window can be repaired and there are situations where replacement is appropriate. However, many historic wood windows can and should be repaired, especially if the windows were manufactured before about 1940. Wood windows made before this time were constructed with individual parts, each of which can be repaired or replaced. The wood itself is denser and of higher quality than what is grown today, and it is generally more rot and warp-resistant than modern wood.



These are just some of the practical reasons to repair rather than replace historic wood windows. In addition, repairing the historic window helps maintain a building's authenticity. Once original material is removed from a building, it is gone forever.

### **My Windows Are Old and Drafty, Why Shouldn't I Buy New Ones?**

1. More heat is typically lost through your roof and un-insulated walls than through your windows. Adding just 3 and 1/2 inches of insulation in your attic can save more energy than replacing your windows. (1)

2. Replacement windows are called "replacement" for a reason. Manufacturers often offer lifetime warranties for their windows. What they don't make clear is that 30% of the time, a replacement window will be replaced within 10 years. (1)

3. Replacement windows that contain vinyl or PVC are toxic to produce and create toxic by-products. Installing these in your house is not a 'green' approach. (2)

4. If your wood windows are 60 years old or older, chances are that the wood they are made of is old growth—dense and durable wood that is now scarce. Even high-quality new wood windows, except for mahogany, won't last as long as historic wood windows.

5. Studies have demonstrated that a historic wood window, properly maintained, weather stripped and with a storm window, can be just as energy efficient as a new window. (2)

6. According to studies, it can take 240 years to recoup enough money in energy savings to pay back the cost of installing replacement windows. (3)

7. Each year, Americans demolish 200,000 buildings. That is 124 million tons of debris, or enough waste to construct a wall 30 feet high and 30 feet thick around the entire U.S. coastline. (4) Every window that goes into the dump is adding to this problem.

8. With a little bit of practice, it can be easy—and inexpensive—to repair and maintain your wood windows. (5)

9. Not a DIY-er? There are people near you who can do it for you. Hiring a skilled tradesperson to repair your windows fuels the local economy and provides jobs. (1)

10. Historic wood windows are an important part of what gives your older building its character.

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(1.) Rypkema (2006).

(2.) Sedovic (2005).

(3.) e.g. *Calculations by Keith Heberern available at [www.historichomeworks.com/hhw/education/windowshandout/windowenergyanalysis.pdf](http://www.historichomeworks.com/hhw/education/windowshandout/windowenergyanalysis.pdf).*

(4.) Hadley (2006). 5. e.g. [www.historichomeworks.com](http://www.historichomeworks.com).