Sustainability and historic preservation: how federal policies and green marketing conspire to sell window replacement and what can be done about it

Owners of historic houses who want to improve their home’s energy efficiency face conflicting information regarding the best practices for single-pane windows. Federal agencies and window replacement manufacturers encourage window replacement, while preservationists favor repairing old windows and adding storm units. Despite federal policies that encourage sustainable practices, publications by agencies such as the Department of Energy favor window replacement over other, more sustainable, retrofits. Window manufacturers use this opportunity to their full advantage in their own sustainable marketing strategies. In order to counter the negative effects of federal agencies and window manufacturers on old windows, historic preservationists must analyze the problem and, using this research, develop a comprehensive marketing plan that identifies sustainable solutions that save money, energy and the environment. This project is a first step in that direction.

Sustainability begins with preservation. A recent report The Greenest Building: Quantifying the Value of Building Reuse (2011) delved into the question of how green an existing building truly is. Historic windows are important features that can be upgraded to meet energy efficiency, security, and other requirements. Many modern replacement windows have a relatively short lifespan, compared to historic windows, and are made of glazing assemblies that cannot easily be repaired, leading to a cycle of disposal and waste that conflicts with sustainability goals for protecting the environment as well as Secretary of the Interior Standards for protecting cultural resources. Historic windows can play an important role in the efficient operation of a building and should be retained. New architectural styles, beginning with the International Style of the 1920’s, brought about an increase in the percentage of glazing in the total building envelope. This argument, often used to sell replacement windows, is simply not true. Although it varies from building to building, the U.S. Department of Energy (DOE) has documented that air loss attributable to windows in most buildings is only about 10% of the total air loss. Install cool roofs and green roofs. The treatments listed first have less potential to negatively impact the historic fabric of a building. They tend to be less intrusive, are often reversible, and offer the highest potential for energy savings. The environmental sustainability focus would argue that the preservation of the wetland is more important than everything else. Sustainable development will show that by incorporating preservation areas, and contributing to the overall preservation of a different wetland area that the damage is balanced out. What can be done to promote greater attention to both? The best approach is to educate the consumers, and the industry, to leave behind an either/or approach to development and conservation and to take on a balanced ratio approach that seeks the best of both worlds. This is very hard to do as it requires an element of sacrifice be adopted by the present society.