

A better environment inside and out.®

Architectural Solar Control Window Film Solutions

Energy Savings and Carbon Emissions Key Facts

A Climate Declaration measures the carbon impact of a product. If a Climate Declaration shows a product to be carbon negative - as is the case with Solar Gard® architectural solar control window films - it means that the carbon saved by using the product is greater than the energy used to make and dispose of it.

Solar Gard is the first window film manufacturer to measure and report the carbon impact of its products and Solar Gard window films are the first building improvement products made in the U.S. with a Climate Declaration that shows their full carbon impact.

The carbon output of the average family (of four) in the US is 110 tons per year.ⁱ The carbon output for the same family in the UK is 36.8 tons, and in Sweden, the same family's carbon impact is 21.6 tons.ⁱⁱ

Solar Gard architectural solar control window film installed from 2007-2008 saved 3.6 million tons of CO₂ from entering the atmosphere. This is equivalent to the carbon output of 16,350 American families (with four people).

The carbon cost of one square meter of a low-e wood window, the type with the smallest carbon footprint, is 253 kilograms.ⁱⁱⁱ

The carbon cost of one square meter of Solar Gard window film is less than one kilogram (.998 kg). Solar Gard window film saves 1001 times more GHG emissions from entering the atmosphere than is used and/or created during its manufacture.

In the US, buildings produce 39% of the total CO₂ emissions (2236 million metric tons). Over the next 25 years, CO₂ emissions from buildings are projected to grow faster than any other sector.^{iv}

Solar Gard window film can help buildings reduce energy expenditures by up to 30% by reducing interior temperature fluctuations and reducing air conditioning usage.



The average cost of a new energy efficient wood frame window installed in the US is approximately \$29 per square foot. The cost to install window film on an existing window ranges from \$6-14 per square foot.^v

Lawrence Berkley National Laboratory, a US Department of Energy laboratory, says that window film is the most cost-effective way to upgrade a building's windows.^{vi}

Improved fenestration can lower energy consumption and GHG emissions by 10-40 percent in both commercial buildings and homes, and an installation of Solar Gard window film transforms standard glass into high performance windows.^{vii}

Solar Gard is the first and only window film manufacturer to:

- Measure and publish the carbon footprint of its window film products;
- Obtain a Climate Declaration;
- Certify its company carbon footprint;
- Be awarded the title of Climate Action Leader.

ⁱ <http://www.nature.org/initiatives/climatechange/calculator/>

ⁱⁱ European data from www.nationmaster.com

ⁱⁱⁱ 2009 Buildings Energy Data Book, published by the U.S. Department of Energy

^{iv} USGBC, Buildings and Climate Change

^v BSF estimates based on internal data and data obtained from RSMean Cost Construction Data Book 2011

^{vi} "Cost Effective Building Envelope Options for Reducing Cooling Loads in Commercial Buildings," Lawrence Berkeley National Laboratory, University of California

^{vii} Ander, G. D. "Windows and Glazing"



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