

Case Study



PROJECT CREDITS

Owner

B. F. Saul Company
Bethesda, MD

Vitro Products

Solarban[®] 60 solar control low-e glass

Glazing Fabricators

Hartung Glass Industries
Seattle, WA

Vitro America
Memphis, TN

Glazing Contractor

Miller Bros., Inc.
Marshall, VA

Curtain Wall Supplier

REHAU
Leesburg, VA

A new curtain wall with windows made with *Solarban*[®] 60 glass delivers both aesthetic appeal and energy savings on the renovated Holiday Inn Gaithersburg near Washington D.C.

Holiday Inn

GAITHERSBURG, MD

PROJECT BACKGROUND

A new curtain wall on the Gaithersburg Holiday Inn, just outside Washington D.C., is doing more than giving the building a brand new look. It also is expected to generate more than \$10,000 per year in energy costs savings.

Conducted as part of Holiday Inn's "Our Big Green" mission to promote energy savings and environmental sustainability, the \$9 million renovation of the 200-room Maryland hotel encompassed a comprehensive refurbishment of its 35-year-old exterior as well as substantial interior upgrades.

The new exterior incorporates a *REHAU-Polytec*[™] 50 hybrid curtain wall system manufactured by REHAU of Leesburg, Va., with windows made with *Solarban*[®] 60 glass by Vitro Architectural Glass (formerly PPG glass). Mike Maher, sales manager, renewable energies, for REHAU, said the primary goals for the curtain wall were to maximize interior daylighting and to create a distinct, modern look.

Holiday Inn

He knew the *Polytec* 50 hybrid curtain wall with *Solarban*® 60 glass would help him do both. Initially, the building's owner, B.F. Saul Company, had planned to reglaze the hotel's façade with aluminum replacement windows with a U-value of 0.44. When Maher found out, he was quick to recommend his company's product as an alternative.

"We had done thermal simulations with our system and found that the system provided an overall performance rating of 0.29 U-value, according to the NFRC (National Fenestration Rating Council) standard," Maher explained. Not only was that superior from a performance standpoint, "the bonus was that our system was less expensive," he added.

Along with providing lower material and operating costs, Maher said use of the *Polytec* 50 curtain wall system with *Solarban*® 60 glass allowed the building owners to gain a \$37,000 tax credit under the Commercial Building Tax Reduction (CBTD).

Energy modeling conducted by EMO Energy Solutions of Falls Church, Va., showed that use of the *Polytec* 50 hybrid curtain wall with *Solarban*® 60 glass would provide energy cost savings of about 12.5 percent, or about \$10,000 per year. Because these and other improvements to the building envelope projected energy cost savings of more than 10 percent, the owners qualified for a tax deduction of \$.60 per square foot.

According to Maher, earning the tax credit would not have been possible with aluminum replacement windows. "According to the model, the hotel would have needed a curtain wall system with a minimum U-value of 0.35 to qualify," he said.

A winner of the Gaithersburg Environmental Award, the renovated hotel is a showcase of environmentally sustainable building products, from low-VOC paints and coatings, to carpets and wall coverings made from recycled materials, low-flow bathroom fixtures, LED lighting and drought-resistant landscaping.



The Holiday Inn Gaithersburg pictured before its recent renovation.

Because of its clear glass appearance, *Solarban*® 60 glass can be combined with a wide range of nautically inspired performance-tinted glasses to deliver exceptional light to solar gain (LSG) ratios of 1.92 to 1.99. For heightened transparency, *Solarban*® 60 glass may also be paired with *Starphire* Ultra-Clear™ Glass, which yields visible light transmittance of 74 percent and a LSG ratio of 1.85. *Solarban*® 60 glass has a winter nighttime U-value of 0.27 and a summer daytime U-value of 0.29 in a standard 1-inch insulating glass unit.

For more information about *Solarban*® 60 glass and other architectural glasses by Vitro Glass, visit vitroglazings.com, or call 1-855-VTRO-GLS (887-6457).