

Glazing Retrofit Coating

What is this Technology?

This clear, water-based spray-on window coating molecularly bonds to existing windows surfaces, and is designed to reduce heat gains across the entire solar spectrum without significantly reducing transmittance of visible light. It is intended for use in retrofits where existing windows do not have coatings or have coatings that need to be replaced.

Why is GSA Interested?

The glazing retrofit coating can be used in any climate. It is projected to reduce cooling loads most effectively in hot climates where solar heat gain is a larger issue.



ENERGY EFFICIENCY Energy to heat and cool federal buildings represents 35% of total GSA's total energy spend. Studies project that coatings, such as this one, have the potential to deliver heating and cooling energy savings of between 20% and 40%. Validation of these projections, and definition of the variables affecting the range of potential energy savings will be key components of this study.



COST EFFECTIVENESS The manufacturer's case studies suggest a typical payback of between 2 and 4 years. This claim will be evaluated, and the technology compared to the incumbent technology for retrofit application—commercially available film-based solutions.



OCCUPANT SATISFACTION Occupant acceptance of this coating, including their satisfaction with light transmittance and no distortion of views of the outdoors will be validated.



OPERATIONS & MAINTENANCE According to the manufacturer, the technology does not require special maintenance other than the use of nonacid window cleaners. The product's performance after six months of window cleaning following this protocol will be included in the assessment.



DEPLOYMENT POTENTIAL This evaluation will identify the site-specific variables, including building design (e.g., window-to-wall ratio), orientation, location (e.g., surrounding landscape and structures), climate, and the condition of existing windows needed to prioritize its potential for deployment by GSA, should the technology prove out.

Adapted from a report by the National Renewable Energy Laboratory. The Green Proving Ground program, in association with a federal laboratory, is subjecting the glazing retrofit coating to real-world measurement and verification in GSA buildings. Findings from that investigation will be available in late 2013 or early 2014.