



6,795 WINDOWS RETROFITTED AT JAVITS FEDERAL BUILDING, NYC

Focus on Hi-R Low-E Window Panels

RETROFIT INSTALLATION, 30-MINUTES PER WINDOW

Many of the 6,795 windows in the Jacob K. Javits Federal Building provide sweeping views of lower Manhattan. Until a recent retrofit, they were also the source of HVAC energy loss and occupant discomfort. Built between 1963 and 1969, the Javits Federal Building had 41 stories of single-pane windows. An Energy Savings Performance Contract (ESPC) explored different options for retrofitting the windows and found high-performance (Hi-R) low-emissivity (low-e) window panel inserts to be the most cost-effective.

Beginning in 2016, GSA retrofitted all 6,795 windows. The Hi-R low-e panels were installed after normal business hours, and took two installers working together about 30 minutes per window. There was no need to move cubicles, so tenants, who included the Department of Homeland Security and the FBI, suffered minimal disruption. "The retrofit incurred no complaints from agencies," observed Pascal Jeambon, a supervisory general engineer at Javits, "which is surprising given that federal employees are known for speaking their minds, especially when they are unhappy." Windows are now considerably more air-tight and occupants say that they no longer feel drafts. A 12.8% reduction in overall building energy expenditure is estimated. To date, GSA has deployed Hi-R low-e window panels across more than 3.2 million square feet of floor space, including multiple installations in historic buildings.

Hi-R Low-E window panels attach like interior storm windows and provide energy savings similar to that of double-pane windows at roughly half the cost.

"Occupants are already commenting on increased thermal comfort, and the window panels are expected to reduce our building energy expenditure by 12.8%, with payback of about 5 years."

– Pascal Jeambon
Supervisory General Engineer, GSA

Hi-R Low-E Window Panels, GSA Office Building, Provo, Utah

- 41% heating savings in winter, when compared to single-pane windows
- 11% whole-building HVAC savings
- Positive return on investment; installed cost estimate of \$14/sf
- Improved thermal comfort
- Suitable for historic buildings
- Best suited to single-pane windows in cold climates

RESOURCES

Learn More About Hi-R Low-E Window Panels

[GPG Findings 007 & Lawrence Berkeley National Laboratory Report »](#)

[Webinar Recording, 03.30.17 »](#)

[Webinar Presentation Slides »](#)

For more information about GSA's Proving Ground program or tested technologies: www.gsa.gov/gpg or contact Michael Hobson michael.hobson@gsa.gov



Emerging Building Technologies' two programs, GSA Proving Ground (GPG) and Pilot to Portfolio (P2P), enable GSA to make sound investment decisions in next-generation building technologies based on their real-world performance. www.gsa.gov/gpg