

INSULATING GLASS RETROFIT IGR

UPCYCLE FIXED & OPERABLE GLAZING WITHOUT REMOVAL OR REPLACEMENT

Patented non-invasive insulating glass retrofit technology cuts the cost and time of upgrades by up to 90% and eliminates disruptions, offering up to 10x higher ROI. Compatible with most fixed or operable window and curtain wall systems, transforming them into smart, energy efficient, and future-proof systems. IGRs can incorporate the latest energy-saving, sound-insulating, dynamic-tinting, transparent photovoltaic, and R-10 vacuum insulated glass (VIG) innovations.

PROVIDES UP TO:

- 10X** Faster Payback
- 40%** Energy Savings
- 30%** Operational Carbon Savings
- 70%** Embodied Carbon Savings
- 2-3X** Improved Thermal Comfort
- 65%** Improved Acoustic Comfort
- 0 Tons** Hauled to Landfill

COSTS AS LOW AS :

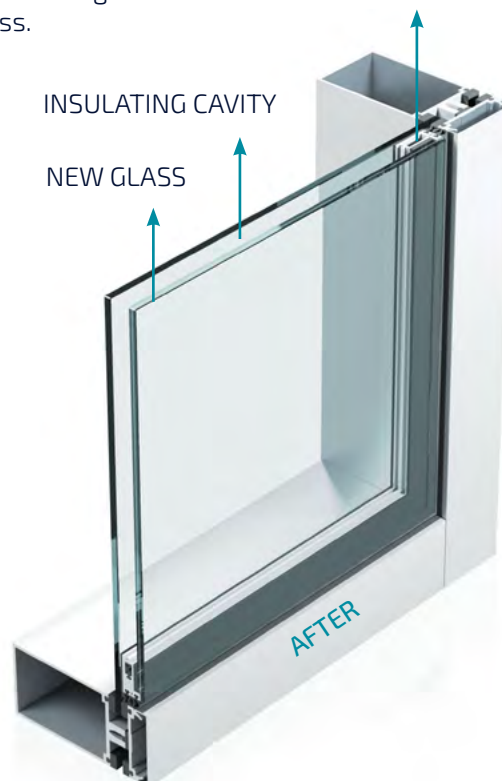
- 10%** Cost of Replacement
- \$\$\$** Eligible for Cash & Tax Incentives

Magnitude of benefits varies depending on the local climate, energy costs, existing systems, and the specified retrofit system options, particularly glass selection.



Interior IGR retrofit of single-glazed operable windows, transforming them into double-glazed without replacement. Achieved 19° degrees higher interior surface temperature in winter, minimizing energy loss.

THERMALLY-BROKEN ATTACHMENT / SPACER



- 1" thickness with ~1.5" sightline
- 0.63" hermetically-sealed insulating air cavity
- Virtually unlimited new glass options
- As low as 2 lb/sq. ft. added weight

USA-designed & manufactured





Original Windows

Windows retrofitted with INOVUES IGRs



Exterior IGR retrofit of double-glazed windows, transforming them into triple-glazed without replacement.

IGR PERFORMANCE

	Existing	+ IGR	+ IGR-IG	+ IGR-VIG
Glass	Single-Pane, Clear	+ Single-Pane, Low-E	+ Double-Pane Insulating Glass, Low-E, Argon	+ Double-Pane Insulating Glass, Low-E, Vacuum
U-Value (Total)	0.97 Btu/hr ft ² F 5.52 W/m ² K	0.49 Btu/hr ft ² F 2.77 W/m ² K	0.36 Btu/hr ft ² F 2.05 W/m ² K	0.29 Btu/hr ft ² F 1.66 W/m ² K
R-Value (CoG)	1	3	6	11
SHGC	0.73	0.52	0.22	0.22
VLT	0.76	0.55	0.39	0.39

The U-Value, Center-of-Glass (CoG) R-Value, Solar Heat Gain Coefficient (SHGC), and Visible Light Transmittance (VLT) vary from one building to another based on the existing window system and other factors. They are calculated using methods set by the National Fenestration Ratings Council (NFRC) using the industry-standard WINDOW 7.8 and THERM 7.8 software by the Lawrence Berkeley National Laboratory (LBNL). U-value / R-value measure the insulating properties of a window. They are reciprocal: a lower U-value (higher R-value) indicates better insulation. SHGC measures the amount of solar heat that enters the building through the glass. VLT measures the amount of visible light that passes through the glass — higher VLT generally translates to brighter, naturally lit interiors.

QUICK & EASY INSTALLATION from the interior or exterior without occupant disruptions. Compatible with most existing fixed and operable glazing systems. Transform single-pane windows to double- or triple-pane and double-pane windows to triple- or quadruple-pane. Offered with a 10-year limited warranty.



CERTIFIED BY THE ATTACHMENTS ENERGY RATING COUNCIL (AERC)



REQUEST A COST-BENEFIT ANALYSIS (CBA) OR A CUSTOM IGR SAMPLE:
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