

# DYNAMIC GLAZING

Solar Innovations, Inc. offers several types of dynamic glass options. Doors, windows, structures, and skylights can be outfitted with dynamic glass to help control light and heat. Dynamic glazing tints (darkens) either on command or by an automated controls, which can be linked to a building management system. This highly energy efficient glass switches from a clear to a tinted state on demand, providing glare and heat control, while maintaining unobstructed views. Using dynamic glass enables designers the freedom to use more glass, providing natural daylight, without sacrificing energy efficiency.

Because dynamic glass has the ability to reduce a glazed structure's solar heat gain, HVAC costs and ongoing energy consumption may be reduced. The tinted glass allows clients to prevent the heat gain rather than condition the space after the fact. In its tinted state, dynamic glass blocks solar heat, reduces cooling loads, and controls glare, all while maintaining the sight lines. In its clear state, the glass transmits more solar heat than typical LowE glass, reducing the need for supplemental heating. Varying zones can be created with the glass technology, allowing groups of the windows to be independently controlled. For example, a transom in a conservatory remain clear to provide improved day lighting, while glass at eye level can be tinted to reduce glares.

Projects seeking LEED certification can benefit from the use of dynamic glass. Possible credits include Sustainable Sites (Credit 8 for light pollution reduction), Indoor Environment Quality (Credits 6.1, 6.2, 7.1, 8.1, and 8.2 for daylighting, thermal comfort and lighting), Energy and Atmosphere, and Innovation in Design.

Dynamic glass units have been independently tested to the ASTM E2141-06 standard by the National Renewable Energy Laboratory (NREL). The results of the test showed dynamic glass has a life expectancy of over 40 years. Solar is currently capable of sourcing dynamic glazing in units as large as 5' x 10' by utilizing relationships with several dynamic glass manufactures. Once specific project parameters have been determined, the appropriate vendor will be introduced to the project to ensure it has the appropriate capabilities.

The Solar R&D team has designed a patent pending system that can accommodate the wires, cabling, and control boxes required by dynamic glazing solutions.



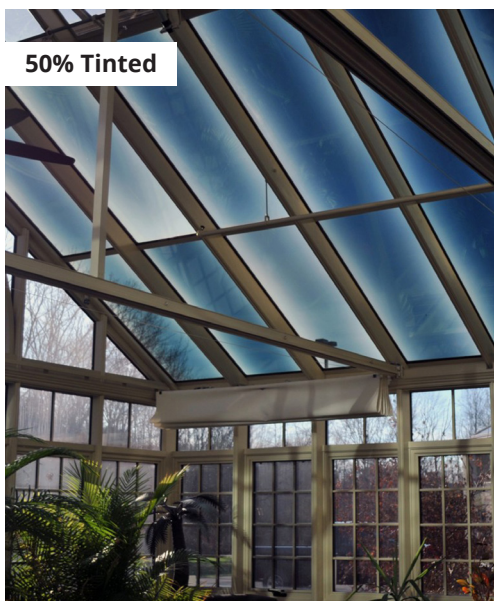
**Clear State**



**100% Tinted**



**Clear State**



**50% Tinted**



**100% Tinted**