EWFA
EUROPEAN WINDOW FILM ASSOCIATION

Cost-effective strategies for solar control through retrofitting

The example of window film

European Union leaders remain committed to decrease their countries' primary energy consumption by 20% by 2020. A portfolio of legislation has been put forward to increase efficiency at all stages of the energy chain, be it at generation, transformation, distribution or final consumption.

The building sector has potential for significant reduction of CO_2 emissions. The recent Energy Efficiency Directive and the recast Energy Performance of Buildings Directive (EPBD) will play a substantial role in leading public authorities to proceed with renovation works that improve the energy efficiency of existing buildings. The Window Film industry is positioning its product as a cost-effective and environmentally friendly retrofit solution for use in such building renovations. Retrofitting of glazing with Window Film technology is proven to improve the overall energy performance of existing buildings across all European climate zones.

WHAT IS WINDOW FILM?

Window Film is polyester film with an optically clear pressure-sensitive adhesive that is applied to the inside or outside of existing glass windows to modify and enhance their properties. Application is non-disruptive and typically carried out during normal working hours. In simple terms, Window Film changes the way that a window reflects, absorbs and transmits the different parts of the solar spectrum.

Just like windows themselves, there are many different types and styles of Window Film, each with their own unique benefits. From virtually clear to tinted or decorative films, there are multiple options available to suit any need, whether for thermal comfort, UV protection, safety or decoration.

THE ROLE OF WINDOW FILM IN ENERGY EFFICIENCY

The Energy Efficiency Directive has imposed an annual target for Member States to renovate 3% of existing central government buildings and requires that they make long-term strategies for more expansive renovations. When calculating the energy performance of glazing and shading, the European Commission specifies that commercial buildings must take into account solar heat gain reductions. Window Film is a "technically, economically and functionally feasible" technology to provide such reductions in line with Article 7 of the recast EPBD:

- Window Film can stop up to 80% of all solar energy coming through windows, significantly reducing solar heat gain.
- By reducing solar heat gain, Window Film can reduce energy use associated with cooling costs by up to 30%.
- Window Film helps reduce lighting and air conditioning use, plus associated energy costs. Because it blocks heat and reduces glare, building occupants can keep blinds and curtains open to better utilize natural light and reduce the need for artificial light sources.
- Installation time of Window Film is far less than that of new windows, leading both to lower costs and less downtime.
- The installation of Window Film on an existing window has a much lower environmental impact over the entire lifecycle than complete window replacement.

In light of the regulatory pressure to increase building renovation rates across the EU, Window Film is one of the cost-effective and environmentally friendly retrofit solutions to be taken into account by property owners, public authorities or any other actor looking to improve energy efficiency of buildings.

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