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Window Film: An Energy Savings Superhero?

To the casual observer, energy efficiency means very little, that is until they see the cost savings associated with making tweaks to their homes and businesses. According to a new report, one energy retrofit may be more efficient than the rest.

Who's thought of installing window film on their windows lately? Well, the International Window Film Association (IWFA) says you may want to move that up on the priority list.

In a study commissioned by the IWFA, and conducted by Consol, the energy saving effect of installing window film was compared to several traditional energy saving techniques, such as updating HVAC systems, adding R-38 ceiling insulation, and air sealing and caulking. The study took place in California and used the same variables the California Energy Commission uses in assessing energy savings.
The data shows that installing window film on new homes and businesses is not an attractive energy efficiency measure, as the windows are already using high performance glazing. For example, the return on investment for window film installations in new office spaces is small, standing at 1%-3% per year.

Although, the story changes completely when discussing older homes and buildings. In this area, the savings per cost of adding film to windows outperformed all other energy saving measures.
Three differing regions of the California were studied. In the mild climate of Oakland, the return on investment ranged between 6% and 37% -- single pane existing windows have a 37% ROI, while double pane windows pay back at about 20% annually.

Meanwhile, the warmer climates of San Diego and Pasadena offered an even greater investment opportunity. In San Diego, the ROI ranged from 16%-64%, with single pane windows paying back at an annual rate of 32%-64% and double pane windows paying at 20%-44%. Pasadena saw the largest cost savings. In this region, outfitting single pane windows with film represented a 34%-68% return on investment annually, while double pan windows represented a 20%-46% ROI.

Depending on the construction, location, and window film used, the study shows that installations will be paid off within two years. There are several reasons for window film's effectiveness as an energy efficient tool. For example, it reduces solar heat gain, while letting in natural light without harsh glare and UV exposure; therefore, it reduces air conditioning costs and lighting bills.

There is no doubt that installing window film on older homes and buildings is a smart investment in warm or moderate climates (cold climates were not assessed). However, the opportunity becomes even brighter if you live in California, says Mike Hodgson, president of ConSol: "With over 70% of the buildings and homes in the California market having been constructed before 1980, window film has to be high on the list for every building retrofit project across the state."
In Californian, 1980 represents the year state-wide building codes were put into effect. Over 70% of greenhouse gas emissions related to single family homes in California can be attributed to residences built before 1980. California's ambitious climate law, AB 32, calls for a 14% reduction in energy use in every building in the state by 2020. This is the equivalent of eliminating the emissions from 1.8 million homes or 3.5 million cars.
The retrofit market will be booming in the near future, and the window film industry appears to be where the smart money will be flowing.

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