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ENERGY CONSERVATION

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LOW-E WINDOW FILM RETROFIT: *Go with Experience and Follow the Money*

Energy lost through windows in U.S. buildings represents a flow of energy greater than that moving through the Alaskan oil pipeline. Energy efficient windows could cut U.S. annual energy costs by 15 percent according to Florida Power and Light. Considering the cost for a barrel of crude oil and rapidly rising heating fuel prices, it's time to implement serious conservation measures. While you're looking out your office window pondering where to start…start right there…with that window. No need to replace, simply retrofit with window film.

Since the 80's energy crisis, window film technology has improved dramatically. We now carry a series of Low-E (emissivity) window films [3M™ Scotchtint™ Plus All Season Films] that can reduce heat loss by up to 23% to 30% and can reduce air conditioning costs by blocking 55% to 73% of the sun's heat. This particular series of films is designed for energy conservation. Similar to 3M's sun control films, they provide increased performance against cold weather heat loss and warm weather heat gain. They are inexpensive compared to window replacement, and they pay for themselves with the energy cost savings they provide.

Depending upon the type of window--clear, tinted, insulated, single or double pane--and the desired effects--energy conservation, security, U.V. protection or aesthetics--there is an appropriate window film. For example, we carry a high performance silver film when installed on double pane clear glass that carries a shading coefficient of 0.36, emissivity of 0.45, and a "U" value of 0.43. Visible light reflected is 51% and transmitted is 16%. For the non-technical, the shading coefficient

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is the ratio of total solar transmittance to the transmittance through 1/8-inch clear glass. Emissivity is the amount of radiation at any given temperature and wavelength that a surface emits, and "U" value is the measure of air-to-air heat transmission (loss or gain) due to thermal conductance and the difference in indoor and outdoor temperatures. Bottom line: this particular 3M film offers substantial summer and winter benefits. It features Wavelength-Selective metals that block more of the solar spectrum than conventional metals... one of our best window films for heat retention in cold climates.

For customers concerned with balancing performance and aesthetics, 3M offers a high performance amber film with substantial summer and winter benefits while maintaining a lower level of reflectivity and good visible light transmission. On insulated clear glass, this film carries a shading coefficient of 0.35, emissivity of 0.34 and "U" value of 0.40. Visible light reflected is 54% and transmitted is 29%.

Go with experience and follow the money. There are a myriad of window films on the market. With technical data available for each film for every circumstance, choice becomes a challenge. An experienced window film dealer and manufacturer with the financial strength to invest heavily and consistently in research and development will be your best asset when selecting a window film appropriate for your needs.

An $18 billion diversified technology company and an ISO9002 certified facility, 3M has effectively responded to market demands through the introduction of solar control films, ultraviolet light control films, low reflectivity, high optical clarity and shatter-resistant window films. Their films vary in color, density and heat rejection/retention qualities. They offer up to 99% U.V. protection and unlike other manufacturers, their U.V. inhibitors are included directly in their adhesives, ensuring lifelong clarity and long-lasting protection from fading of fabrics and furnishings. A manufacturer that produces their own raw materials such as adhesives, polyesters, metals and scratch-resistant coatings, 3M has positioned itself as an industry leader and their patented micro-layered construction has proven itself in the field.

An installation of a quality window film by an experienced installer will reduce the flow of energy out of your building's windows and save dramatically on heating and cooling expense. When your installation is complete, go carve your initials on the Alaskan oil pipeline... you've done your part to conserve.

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