

Technically Speaking

Building Certification



Window film improves energy efficiency in new and older buildings alike and should be a consideration when choosing building materials and enhancements. There are two major commercial building certification programs operating in the United States – Energy Star by the U.S. Department of Energy and LEED (Leadership in Energy and Environmental Design) by the USGBC (U.S. Green Building Council). Madico window film can help improve a building's score in both of these programs and can even be the deciding factor that allows a building to become certified.

Energy Star Building Certification

Energy Star uses a 100 point scale to rate how efficient a building is compared to similar buildings around the country. The score is based on utility consumption, building type, size and location. A score of 75 is required for certification, meaning the building is more efficient than 75% of similar buildings. If an upgrade such as window film is installed then at least one year of utility data is required from before and after the project to reflect the full reduction in consumption.

A building's score can vary considerably and the effects of window film can be large or small. A window film that

reduces electric consumption by 10% annually can add 6 points to a building's Energy Star score in Boston and 8 points if the building were in Los Angeles. It's difficult to predict what the improvement score will be but it can be significant enough to push a building past the 75 point minimum for certification and also open up more available points in LEED certification, as outlined later.

You can find more information on Energy Star's Portfolio Manager at: https://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager

Sample of an office building with window film installed

Building Location	Reduction in Electric Consumption from Window Film	Energy Star Points Gained
Boston, MA	5%	2
Los Angeles, CA	5%	4
Boston, MA	10%	6
Los Angeles, CA	10%	8

Daylighting and Window film

Daylighting is the controlled use of natural lighting through windows, skylights and light wells in a building design. Allowing in natural lighting reduces energy consumption, helps create a visually stimulating environment for building occupants and has been proven to increase productivity.

Using Madico window film to control heat and glare while allowing the maximum amount of visible light can achieve these benefits in a retrofit application.



Madico architectural window films are available in many shades and colors so the optimal amount of visible light can be achieved while reducing glare and unwanted heat.



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LEED Building Certification

The USGBC has developed a 110-point scale with categories that vary slightly based on the type of project. The USGBC assigns four different levels of LEED certification; Certified: 40-49 points, Silver: 50-59 points, Gold: 60-79 points, and Platinum: 80+ points.

Solar control window films can gain points in the following three categories:

1. *Energy and Atmosphere – Optimize Energy Efficiency Performance (1-18 points, earn same number of points as gained in building’s Energy Star score)*

- Points are earned based on the increase in the Energy Star score as explained above.
- Energy Star score must be calculated for the building beforehand.
- The Energy Star score must be at least 71. For example, window film could raise a building’s Energy Star score from 63 to 70, but it would not increase the LEED score since the building must have at least a 71 to be eligible for LEED energy efficiency points. An example of a better case scenario would be if window film raised the Energy Star score from 70 to 76. The window film makes the building eligible for Energy Star certification and also adds an additional 5 points to the LEED score.

2. *Indoor Environmental Quality (1 point)*

- This point can be earned regardless of the Energy Star score.
- Occupant Comfort - Implement occupant comfort survey and complaint systems which cover many aspects including those affected by window film; thermal comfort, glare, and lighting levels.

3. *Daylight and Views (2 points)*

- These points can be earned regardless of the Energy Star score
- Achieve a direct line of sight to the outdoors via vision glazing for 50% of all regularly occupied floor area. View glazing in the contributing area must provide a clear image of the exterior, not obstructed by frits, fibers, patterned glazing, or added tints that distort color balance.

LEED points are gained for a given Energy Star score:

Energy Star Score	LEED Points Gained
71	1
73	2
74	3
75	4
76	5
77	6
78	7
79	8
80	9
81	10
82	11
83	12
85	13
87	14
89	15
91	16
93	17
95	18

What’s next?

Achieving Energy Star or LEED certification is a major milestone for a building and window film offers some very significant improvements, at a relatively low cost. Madico’s Technical Services team is available to recommend which window films will help meet those criteria. Contact us at: 727-388-2105 for assistance.

Contact us for more information

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