



## FREQUENTLY ASKED QUESTIONS ABOUT ENERGY EFFICIENCY IN WINDOWS AND DOORS

Savvy homeowners know that energy-efficient windows and doors are important factors that contribute to making their home comfortable. Here you will find clear answers to frequently asked questions about energy efficiency and selecting the best windows and doors for your home.

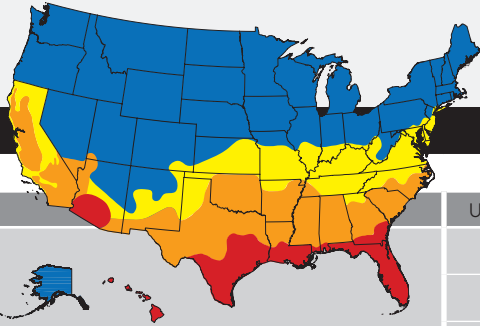
### Q HOW DO I KNOW IF A WINDOW OR DOOR IS ENERGY EFFICIENT?

A Certification programs such as ENERGY STAR® provide ratings designed to indicate window and door energy efficiency. Various performance ratings – like U-factor and Solar Heat Gain Coefficient – measure a product's effectiveness in insulating and blocking heat from the sun.

<b>U-FACTOR</b>	U-factor measures heat loss. The lower the number, the better a window is at keeping heat inside a building. The U-Factor is key in regions with cold winters.
<b>SOLAR HEAT GAIN COEFFICIENT (SHGC)</b>	A number between 0 and 1 measures how well a product blocks heat from the sun. A higher solar heat gain coefficient means a window will allow more heat to pass through. Solar heat gain can provide free heat in the winter, but can cause overheating in warmer climates or a sunny room.

### Q WHAT DOES IT MEAN TO BE AN ENERGY STAR CERTIFIED WINDOW?

A To obtain ENERGY STAR certification, a window or door must meet a set of requirements that are determined by the U.S. government. Those requirements differ based on geography, meaning a window that's being installed in Minnesota has different requirements than one in Florida. The certification indicates that the window is energy-efficient in the region where it will be used, and can help homeowners save on energy costs. ENERGY STAR has updated requirements for windows and doors in recent years, raising the bar for ENERGY STAR certification.

	ENERGY STAR CRITERIA			
	WINDOWS		DOORS	
	U-FACTOR	SHGC	U-FACTOR	SHGC
 <b>NORTHERN ZONE</b>	≤ 0.27	any	≤ 0.30	≤ 0.40
	= 0.28	≥ 0.32		
	= 0.29	≥ 0.37		
	= 0.30	≥ 0.42		
<b>NORTH CENTRAL ZONE</b>	≤ 0.30	≤ 0.40	≤ 0.30	≤ 0.40
<b>SOUTH CENTRAL ZONE</b>	≤ 0.30	≤ 0.25	≤ 0.30	≤ 0.25
<b>SOUTHERN ZONE</b>	≤ 0.40	≤ 0.25	≤ 0.30	≤ 0.25



**Q DO MY WINDOWS AND DOORS NEED TO BE ENERGY STAR CERTIFIED IN ORDER TO BE ENERGY EFFICIENT?**

**A** No. While an ENERGY STAR® label can be helpful in identifying energy-efficient products, every home is unique. ENERGY STAR provides a one-size-fits-all guideline, but does not take into consideration, for example, the orientation of the house or the number or size of windows and associated Solar Heat Gain. A window expert like your Marvin® dealer can help determine which products will work best for you.

**Q ARE WINDOWS WITH TRIPANE GLAZING THE BEST? THE MORE PANES THE BETTER, RIGHT?**

**A** Not always. Triple-pane windows are a good choice when enhanced energy performance is a key objective. But other solutions can make a big difference in energy efficiency. No matter how many panes there are, if the window is poorly constructed, poorly installed or allows air leakage, it will not be efficient.

**Q MY WINDOW IS FREEZING IN THE WINTER, EVEN THOUGH I HAVE THE HEAT CRANKED. WHAT CAN I DO?**

**A** First, closely inspect your window to see if it needs caulking, if there is air leakage or if it otherwise appears to be in need of repair. If no major problems are seen upon close inspection, you may need a quality replacement option, particularly one with a low U-factor, which will do a better job of keeping the heat inside your home. You may want to consider a window with a higher Solar Heat Gain Coefficient, which means during the day, it will allow more natural heat from the sun to pass into your home.

**Q SOME ROOMS IN MY HOME WITH EXTERIOR WINDOWS ARE TOO HOT. IS THAT SOMEHOW DUE TO MY WINDOWS?**

**A** Your windows may indeed be the culprit, especially if there is strong, direct sunlight. You may want windows with a lower Solar Heat Gain – meaning they will keep more of the sun's natural heat out of your home.

**Q WHAT DO I NEED TO KNOW IF I WANT TO MAKE MY HOME SUPER ENERGY EFFICIENT?**

**A** It's easier than ever before. Modern sustainable building practices, like Passive building, LEED® (Leadership in Energy and Environmental Design) and Net Zero building can help you minimize environmental impact and maximize energy efficiency. ENERGY STAR also offers a "Most Efficient" list, a distinction that recognizes products that deliver superior efficiency through cutting-edge technologies and innovations. See the list at [www.energystar.gov/mostefficient](http://www.energystar.gov/mostefficient). Marvin is an industry leader in offering a wide selection of products that meet these rigorous criteria.

Visit **MARVIN.COM/ENERGY** for more information on energy-efficient windows and finding the perfect solution for your unique home.

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