

Residential Fenestration Implications Summary

The 2012 IECC, once adopted by individual States, will require higher energy performance standards for residential fenestration in most parts of the United States. Key provisions of the 2012 IECC that will impact residential fenestration include:

- A more stringent .25 SHGC requirement for southern climate zones (1-3) – lowered from the .30 SHGC requirement for all three climate zones in the 2009 IECC.
- A new SHGC requirement of .40 for climate zone 4 – the 2009 IECC had no SHGC requirement for this zone.
- More stringent U-factor requirements for climate zones 2 and 3 – reduced from .65 to .40 in zone 2, and from .50 to .35 in zone 3.
- Elimination of any special U-factor allowance for impact-resistant (e.g., hurricane) glazing.

In addition to requiring higher energy performance standards, the 2012 IECC adopted several other positions relevant to residential fenestration:

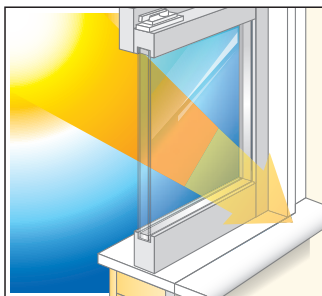
- Removal of the weaker International Residential Code (IRC) as a compliance option.
- Rejection of a proposed 20% maximum Window-Wall-Ratio (WWR).
- Rejection of a “trade-off” proposal that would have permitted the use of more energy-efficient HVAC systems in exchange for less energy-efficient building envelope products, including fenestration.

While the 2012 IECC has won final approval, it will have no legal significance until adopted and enforced by individual states and/or local jurisdictions. Many states have only recently adopted the prior version of the IECC (2009 IECC), and we expect they will begin to adopt the 2012 version over the next several years. States often vary widely with regard to the residential energy codes they have adopted at any given time.

The chart on the following page compares the 2012 and 2009 IECC performance requirements for residential fenestration. We have also included a map identifying the regions associated with each of the climate zones.

Updated information can be obtained for individual State energy code requirements at the Online Code & Environment Advocacy Network (OCEAN) website <http://www.bcap-energy.org/node/5>.

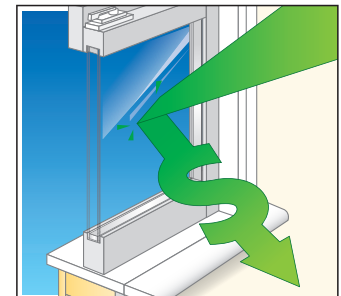
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IECC 2012

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Comparison for Proposed Prescriptive Criteria for Vertical Fenestration in Low-Rise Residential Buildings

Zone	1	2	3	4 (Except Marine)	5 & 4 Marine	6	7	8
Fenestration U-factor								
2009 IECC	1.20	0.65	0.50	0.35	0.35	0.35	0.35	0.35
2012 IECC	NR	0.40	0.35	0.35	0.32	0.32	0.32	0.32
Skylight U-factor								
2009 IECC	0.75	0.75	0.65	0.60	0.60	0.60	0.60	0.60
2012 IECC	0.30	0.30	0.30	0.60	0.60	0.60	0.60	0.60
Fenestration SHGC								
2009 IECC	0.30	0.30	0.30	NR	NR	NR	NR	NR
2012 IECC	0.25	0.25	0.25	0.40	NR	NR	NR	NR
Hurricane Impact U-factor Allowance								
2009 IECC	≤ 0.75 in Zone 2 and ≤ 0.65 in Zone 3							
2012 IECC	No U-factor allowance for hurricane impact-resistant products							

