

IECC Compliance Guide to Windows Used for Replacement and Remodeling in Georgia

Designed to Comply with the IECC Requirements for Existing Single-Family Residential Buildings in Georgia

Code: 2000 International Energy Conservation Code (IECC)

First Edition

How to Use This Guide

This guide is designed to help meet the requirements of the IECC as it relates to Georgia with respect to replacement windows and remodeling. Each county is assigned to one of three packages (A through C), which vary according to the different climate zones in Georgia.

Step-by-Step Instructions

1. Use the color-coded map to locate the county in which construction is taking place and find the package (A through C) associated with that county.
2. Use the "Table of IECC Requirements for Windows Used for Replacement or Remodeling in Georgia" (on the back of this sheet) to choose proper windows based upon the package selected in Step 1, above.
3. Replace the old windows or complete remodeling with windows that have U-factors and SHGCs less than or equal to the values for the selected path and meet the code's maximum air leakage requirements.

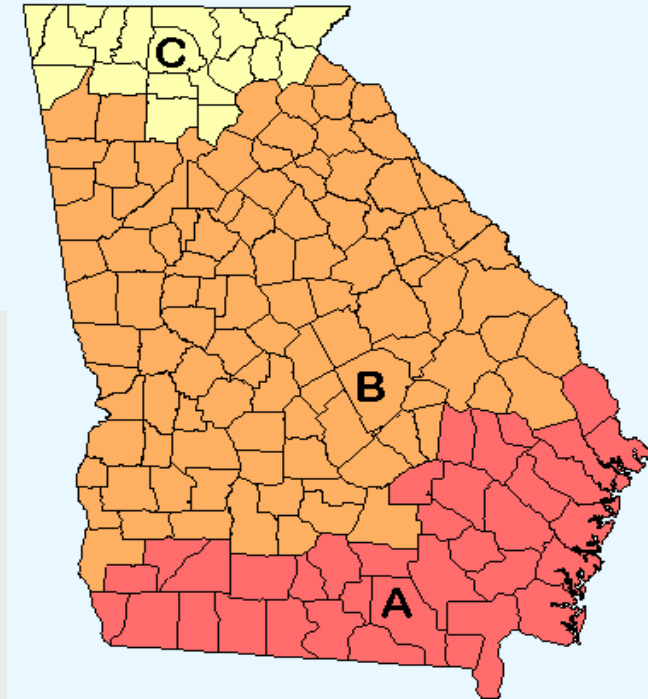
Example: If you are replacing windows in a home in Fulton County, found in Package B, you will comply with the IECC as it relates to Georgia if your replacement windows have a maximum U-factor of 0.50, an SHGC of 0.40, and air leakage less than 0.3 cfm/sq.ft.

Obtaining the IECC

The IECC is published by the International Code Council (ICC). For additional details on the IECC or to purchase a copy, contact the ICC or visit its website at www.iccsafe.org.

Limitations

This guide is an energy code (IECC based) replacement window and remodeling compliance aid for Georgia and does not provide a guarantee for meeting the state energy code. The guide has not been customized to reflect any state-specific amendments to the IECC that Georgia may adopt or has adopted. The window requirements in this guide, when used for remodeling, also depend upon the energy performance values of other envelope components in the home, i.e., insulation R-values in ceilings, walls, etc., not identified in this guide. For those values, refer to Tables in Chapter 5 of the IECC. For additional details on Georgia's energy code, contact your local building code official.



Georgia Counties by Package

A 0 to 1,999 HDD			
Appling	Charlton	Glynn	Mitchell
Atkinson	Chatham	Grady	Pierce
Bacon	Clinch	Jeff Davis	Seminole
Baker	Colquitt	Lanier	Tattnall
Berrien	Cook	Liberty	Thomas
Brantley	Decatur	Long	Toombs
Brooks	Echols	Lowndes	Ware
Bryan	Effingham	Mcintosh	Wayne
Camden	Evans	Miller	

B 2,000 to 3,499 HDD			
Baldwin	Coffee	Greene	Laurens
Banks	Columbia	Gwinnett	Lee
Barrow	Coweta	Hall	Lincoln
Bartow	Crawford	Hancock	Macon
Ben Hill	Crisp	Haralson	Madison
Bibb	De Kalb	Harris	Marion
Bleckley	Dodge	Hart	Mcduffie
Bulloch	Dooly	Heard	Meriwether
Burke	Dougherty	Henry	Monroe
Butts	Douglas	Houston	Montgomery
Calhoun	Early	Irwin	Morgan
Candler	Elbert	Jackson	Muscogee
Carroll	Emanuel	Jasper	Newton
Chattahoochee	Fayette	Jefferson	Oconee
Clarke	Floyd	Jenkins	Oglethorpe
Clay	Franklin	Johnson	Paulding
Clayton	Fulton	Jones	Peach
Cobb	Glascock	Lamar	Pike

Polk	Spalding	Terrell	Warren
Pulaski	Stephens	Tift	Washington
Putnam	Stewart	Treutlen	Webster
Quitman	Sumter	Troup	Wheeler
Randolph	Talbot	Turner	Wilcox
Richmond	Taliaferro	Twiggs	Wilkes
Rockdale	Taylor	Upson	Wilkinson
Schley	Telfair	Walton	Worth
Screven			

C 3,500 to 3,999 HDD			
Catoosa	Fannin	Lumpkin	Union
Chattooga	Forsyth	Murray	Walker
Cherokee	Gilmer	Pickens	White
Dade	Gordon	Rabun	Whitfield
Dawson	Habersham	Towns	

HDD = Heating Degree Days


Table of IECC Requirements for Windows Used for Replacement or Remodeling in Georgia

Simplified Prescriptive Requirements for Compliance with the IECC for Window Replacement and Remodeling in Georgia

Package	Maximum Window U-factor	Maximum Window SHGC
A	0.75	0.40
B	0.50	0.40
C	0.50	NR

"NR" means no requirement is specified in this package.

For more information on energy efficient windows, go to the Efficient Windows Collaborative website at:




www.efficientwindows.org

Look for the NFRC Label!
The 2 most important values to look for are: **U-factor** and **Solar Heat Gain Coefficient (SHGC)**.



NOTES:

1. This table of requirements for windows used for replacement or remodeling is based upon the International Energy Conservation Code (IECC) and does not reflect any state-specific amendments to the IECC. The IECC has requirements, in addition to those shown, for additions to existing homes.
2. Source of Requirements: 2000 IECC, Ch. 5, Section 502.1.5, 502.2.5, and Table 502.2.5.
3. This table applies to single-family, residential construction.
4. Remodeling projects permitted to use this guide are additions, other than sunroom additions, less than 500 square feet of conditioned floor area. The total area of fenestration products shall not exceed 40% of the gross wall and roof area of the addition.
5. Alternate compliance approaches must be used for additions greater than 500 square feet and/or 40% fenestration area.
6. This guide may also be used for conditioned sunroom additions that maintain thermal isolation; are not used as kitchens or sleeping rooms; and are served by a separate heating or cooling system or are thermostatically controlled as a separate zone of the existing system.
7. Replacement skylights shall have a maximum U-factor of 0.75 when installed in Package A. For Packages B - C (above 2,000 heating degree days), the maximum U-factor for a replacement skylight shall be 0.60.
8. "Window" refers to any translucent or transparent material (i.e., glazing) in exterior openings of buildings, including skylights, glass doors, the glass areas of opaque doors, and glass block, along with the accompanying sashes, frames, etc.
9. Replacement refers to instances in which an entire new window unit is installed, including insert or pocket-type window replacements, which are commonly installed over an existing window frame.
10. U-factor is a number, generally between 0.2 and 1.20, that indicates the rate of heat loss (or gain) through a window. A lower U-factor demonstrates a greater resistance to heat loss or gain, i.e., better insulating value, of the window. This number is important for winter comfort.
11. SHGC, or Solar Heat Gain Coefficient, is a number between 0 and 1 that indicates the fraction of radiation (heat) from the sun that is transmitted through the window: the lower the SHGC, the less the amount of solar radiation that is allowed to pass through the window and become unwanted heat in the summer. This number is critical for summer comfort.
12. Window U-factor and SHGC must be determined from a National Fenestration Rating Council (NFRC) label on the product (see sample label), or from a limited table of product "default" values in the IECC.

 World's Best Window Co. Millennium 2000+ Vinyl-Clad Wood Frame Double Glazing • Argon Fill • Low E Product Type: Vertical Slider	
ENERGY PERFORMANCE RATINGS	
U-Factor (U.S./I-P)	Solar Heat Gain Coefficient
0.35	0.32
ADDITIONAL PERFORMANCE RATINGS	
Visible Transmittance	Air Leakage (U.S./I-P)
0.51	0.2
<small>Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. Consult manufacturer's literature for other product performance information. www.nfrc.org</small>	

13. The code requires that windows be labeled in a manner to determine that they meet the IECC's air infiltration requirements; specifically, equal to or better than 0.30 cfm per square foot of window area (swinging doors below 0.50 cfm) as determined in accordance with AAMA/WDMA 101/I.S.2 (ASTM E 283).
14. The labeled product U-factor and SHGC values should also be used in calculation procedures to properly size the home's HVAC equipment. The IECC requires the use of a computational procedure like ACCA Manual J to size equipment. Properly sized equipment operates more efficiently and effectively and will save money up front because consumers can avoid paying extra for oversized equipment.