IECC Compliance Guide for New Homes in Georgia

Code: 2003 International Energy Conservation Code (IECC) **First Edition**

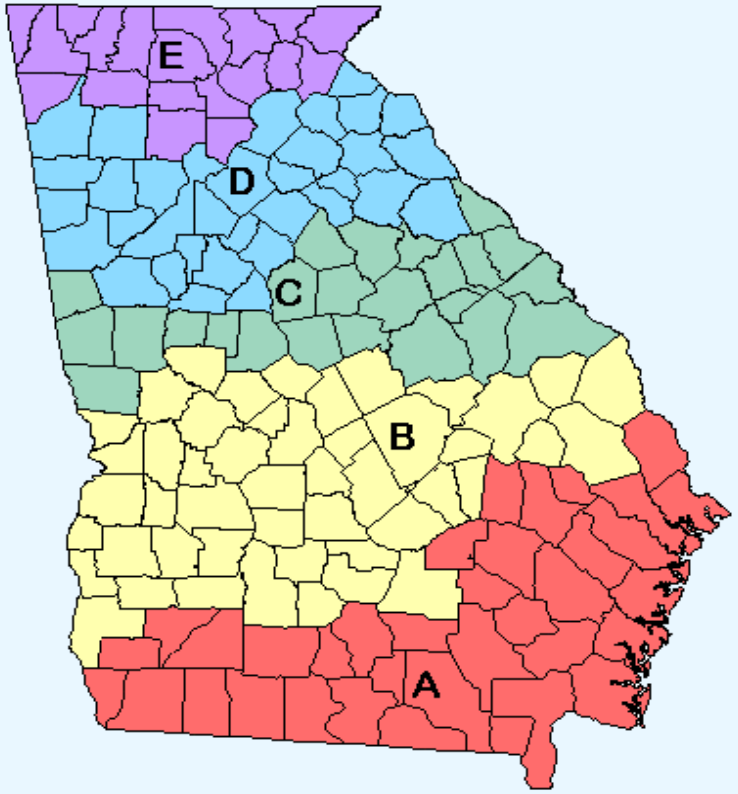
How to Use This Guide

This pamphlet contains five generic packages designed to simplify compliance with the IECC as it relates to residential occupancies in Georgia. Each county is assigned to one of the five packages (A through E), 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 E, associated with that county.
2. Use the "Table of IECC Building Envelope Requirements for Georgia" (on the back of this sheet) to find the set of construction options or "paths" associated with the package selected above.
3. Select the path best suited to your project (window area, basement vs. crawl space, etc.)
4. Construct the building according to the selected path and comply with certain basic code requirements, which include:
   a. providing preventative maintenance manuals
   b. installing temperature controls
   c. limiting window and door leakage
   d. caulking or sealing joints and penetrations
   e. installing vapor retarders
   f. sealing and insulating ducts

Example:
If you are constructing a home in Fulton County, you will comply with the IECC in Georgia if you follow any one of the three paths listed in Package D.



Limitations

This guide is an energy code (IECC based) compliance aid for Georgia. It does not provide a guarantee for meeting the IECC. The guide has not been customized to reflect any state-specific amendments to the IECC that Georgia may adopt or has adopted, and does not, therefore, provide a guarantee for meeting the state energy code. For additional details on Georgia's energy code, please contact your local building code official.

Obtaining the IECC

The IECC is the national model energy standard certified by the US Department of Energy pursuant to the Energy Policy Act (EPAct). EPAct requires that all states review and consider adopting the IECC as the state building energy code.

The IECC is published by the International Code Council (ICC). For additional details on the IECC, contact the ICC by phone at (703) 931-4533 or visit their website at www.iccsafe.org.

Georgia Counties by Package

A	**1,500 - 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 - 2,499 HDD**			
	Ben Hill	Dooly	Montgomery	Telfair
	Bibb	Dougherty	Muscogee	Terrell
	Bleckley	Early	Peach	Tift
	Bulloch	Emanuel	Pulaski	Treutlen
	Calhoun	Houston	Quitman	Turner
	Candler	Irwin	Randolph	Twiggs
	Chattahoochee	Jenkins	Schley	Upson
	Clay	Johnson	Screven	Webster
	Coffee	Laurens	Stewart	Wheeler
	Crawford	Lee	Sumter	Wilcox
	Crisp	Macon	Talbot	Wilkinson
	Dodge	Marion	Taylor	Worth
C	**2,500 - 2,999 HDD**			
	Baldwin	Harris	Lincoln	Putnam
	Burke	Heard	Mcduffie	Richmond
	Columbia	Jasper	Meriwether	Taliaferro
	Glascock	Jefferson	Monroe	Troup
	Greene	Jones	Morgan	Warren
	Hancock	Lamar	Pike	Washington
D	**3,000 - 3,499 HDD**			
	Banks	De Kalb	Haralson	Polk
	Barrow	Douglas	Hart	Rockdale
	Bartow	Elbert	Henry	Spalding
	Butts	Fayette	Jackson	Stephens
	Carroll	Floyd	Madison	Walton
	Clarke	Franklin	Newton	Wilkes
	Clayton	Fulton	Oconee	
	Cobb	Gwinnett	Oglethorpe	
	Coweta	Hall	Paulding	
E	**3,500 - 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 Building Envelope Requirements for Georgia

Simplified Prescriptive Paths for Compliance with the IECC in Georgia

Package		WINDOWS AND INSULATION					FOUNDATION TYPE			
		Window Area	Window U-factor	Window SHGC	Ceiling	Wall	Floor	Basement Wall	Slab Perimeter	Crawl Space Wall
A	1,500-1,999 HDD	15%	0.75	0.40	R-26	R-13	R-11	R-5	R-0	R-5
		20%	0.60	0.40	R-30	R-13	R-11	R-5	R-0	R-5
		25%	0.52	0.40	R-30	R-13	R-13	R-6	R-0	R-6
B	2,000-2,499 HDD	15%	0.65	0.40	R-30	R-13	R-11	R-5	R-0	R-6
		20%	0.52	0.40	R-38	R-13	R-11	R-5	R-0	R-6
		25%	0.50	0.40	R-38	R-13	R-19	R-8	R-0	R-10
C	2,500-2,999 HDD	15%	0.60	0.40	R-30	R-13	R-19	R-6	R-4, 2 ft.*	R-7
		20%	0.50	0.40	R-38	R-13	R-19	R-6	R-0	R-7
		25%	0.46	0.40	R-38	R-16	R-19	R-6	R-0	R-7
D	3,000-3,499 HDD	15%	0.55	0.40	R-30	R-13	R-19	R-7	R-4, 2 ft.*	R-8
		20%	0.46	0.40	R-38	R-13	R-19	R-7	R-0	R-9
		25%	0.45	0.40	R-38	R-19	R-19	R-7	R-0	R-9
E	3,500-3,999 HDD	15%	0.50	NR	R-30	R-13	R-19	R-8	R-5, 2 ft.*	R-10
		20%	0.42	NR	R-38	R-13	R-19	R-8	R-6, 2 ft.*	R-10
		25%	0.41	NR	R-38	R-19	R-19	R-8	R-6, 2 ft.*	R-10

HDD = Heating Degree Days

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

* According to the IECC, Georgia qualifies as an area of "very heavy" termite infestation probability. Under an exception in the IECC, the slab perimeter insulation requirement in these paths may be avoided by following other IECC compliance options. Some states have prohibited or restricted the use of slab perimeter insulation due to termite infestation probability. Please check with your local building code official to determine whether slab insulation is allowed in your area.

NOTES:

1. This table is based upon the 2003 International Energy Conservation Code (IECC), published by the International Code Council, and does not reflect any state-specific amendments to the IECC.
2. Source of the requirements for the Table: 2003 IECC, Ch. 5 Prescriptive Packages for Climate Zones 4-8. Alternate compliance approaches must be used for glazing areas over 25%.
3. Window area %, U-factors and SHGCs are maximum acceptable levels.
4. Insulation R-values are minimum acceptable levels.
5. This table applies to single-family, wood-frame residential buildings. For steel-framed wall construction or high-mass wall construction refer to Chapter 5 of the IECC.
6. "Window" refers to any translucent or transparent material (i.e., glazing) in exterior openings of buildings, including skylights, sliding glass doors, the glass areas of opaque doors, and glass block, along with the accompanying sashes, frames, etc.
7. Window U-factor and SHGC must be determined from a National Fenestration Rating Council (NFRC) label on the product or from a limited table of product "default" values in the IECC.
8. Window area % is the ratio of the rough opening of windows to the gross wall area, expressed as a percentage.
9. Opaque doors must have a maximum U-factor of 0.35. One exempt door allowed.
10. 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).
11. R-2 shall be added to the requirements for heated slabs.
12. Floors over outside air must meet ceiling requirements.
13. R-values for walls represent the sum of cavity insulation plus insulated sheathing, if any. Crawl space R-value shall only apply to unventilated crawl spaces.
14. Prescriptive packages are based upon normal HVAC equipment efficiencies (see Chapter 5 of the IECC). The code also requires the HVAC system to be properly sized using a computational procedure like ACCA Manual J.