

How to Use This Guide

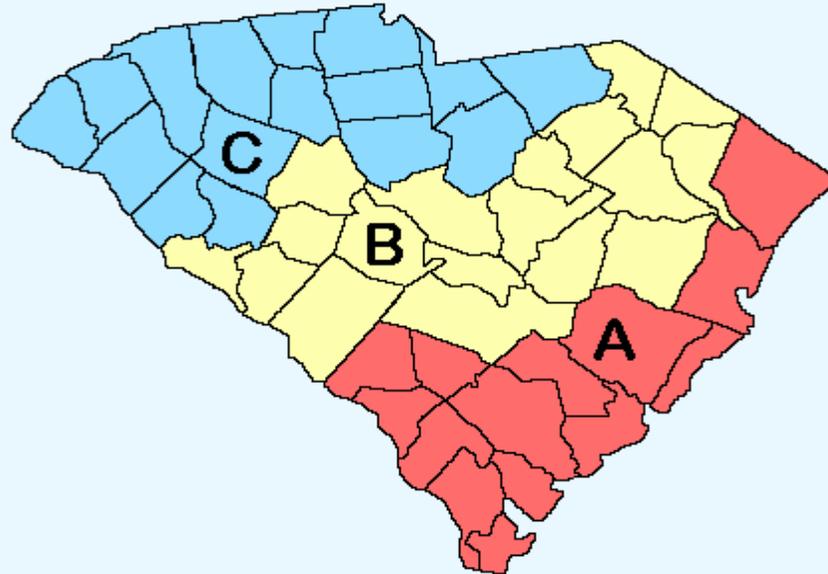
This pamphlet contains three generic packages designed to simplify compliance with the IECC as it relates to residential occupancies in South Carolina. Each county is assigned to one of the three packages (A through C), which vary according to the different climate zones in South Carolina.

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 Building Envelope Requirements for South Carolina" (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

Limitations

This guide is an energy code (IECC based) compliance aid for South Carolina. 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 South Carolina may adopt or has adopted, and does not, therefore provide a guarantee for meeting the state energy code. For additional details on South Carolina's energy code, please contact your local building code official.



Example:

If you are constructing a home in Greenville County, you will comply with the IECC in South Carolina if you follow any one of the three paths listed in Package C.

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.

South Carolina Counties by Package

A 2,000 - 2,499 HDD	
Allendale	Colleton
Bamberg	Dorchester
Barnwell	Georgetown
Beaufort	Hampton
Berkeley	Horry
Charleston	Jasper

B 2,500 - 2,999 HDD	
Aiken	Marion
Calhoun	Marlboro
Clarendon	McCormick
Darlington	Newberry
Dillon	Orangeburg
Edgefield	Richland
Florence	Saluda
Lee	Sumter
Lexington	Williamsburg

C 3,000 - 3,499 HDD	
Abbeville	Kershaw
Anderson	Lancaster
Cherokee	Laurens
Chester	Oconee
Chesterfield	Pickens
Fairfield	Spartanburg
Greenville	Union
Greenwood	York

HDD = Heating Degree Days

Table of IECC Building Envelope Requirements for South Carolina

Simplified Prescriptive Paths for Compliance with the IECC in South Carolina

WINDOWS AND INSULATION

FOUNDATION TYPE

Package		Window Area %	Window U-factor	Window SHGC	Ceiling	Wall	Floor	Basement Wall	Slab Perimeter	Crawl Space Wall
A	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
B	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
C	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

* According to the IECC, South Carolina 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 2000 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 requirements for the Table: 2000 IECC, Ch. 5, Prescriptive Packages for Climate Zones 5-7. 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 wall 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.