

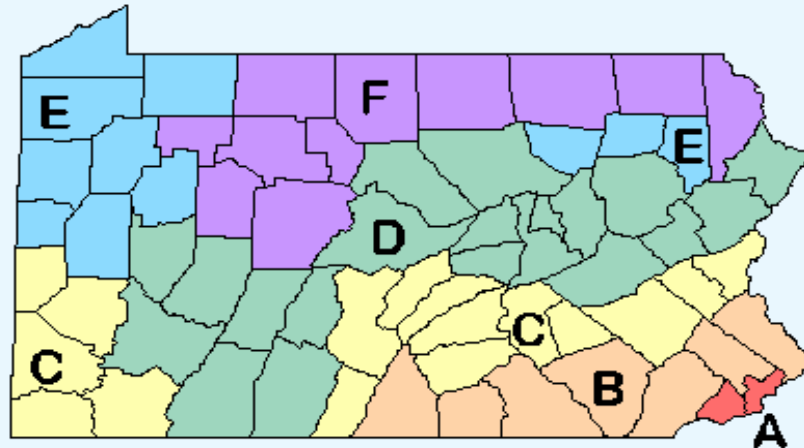
IECC Compliance Guide for New Homes in Pennsylvania

Code: 2003 International Energy Conservation Code (IECC)

First Edition

How to Use This Guide

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



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 F, associated with that county.
2. Use the "Table of IECC Building Envelope Requirements for Pennsylvania" (on the back of this sheet) to find the set of construction options or "path" associated with the package selected above.
3. Construct the building according to the corresponding 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 Bucks County, you will comply with the IECC in Pennsylvania if you follow the path listed in Package B.

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.

Limitations

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

Pennsylvania Counties by Package

A	4,500 - 4,999 HDD		
	Delaware	Philadelphia	
B	5,000 - 5,499 HDD		
	Adams	Franklin	York
	Bucks	Lancaster	
	Chester	Montgomery	
C	5,500 - 5,999 HDD		
	Allegheny	Fulton	Mifflin
	Beaver	Greene	Northampton
	Berks	Huntingdon	Perry
	Cumberland	Juniata	Washington
	Dauphin	Lebanon	
	Fayette	Lehigh	
D	6,000 - 6,499 HDD		
	Armstrong	Columbia	Pike
	Bedford	Indiana	Schuylkill
	Blair	Luzerne	Snyder
	Cambria	Lycoming	Somerset
	Carbon	Monroe	Union
	Centre	Montour	Westmoreland
	Clinton	Northumberland	
E	6,500 - 6,999 HDD		
	Butler	Lackawanna	Venango
	Clarion	Lawrence	Warren
	Crawford	Mercer	Wyoming
	Erie	Sullivan	
F	7,000 - 8,499 HDD		
	Bradford	Forest	Susquehanna
	Cameron	Jefferson	Tioga
	Clearfield	Mckean	Wayne
	Elk	Potter	

HDD = Heating Degree Days

Table of IECC Building Envelope Requirements for Pennsylvania

Simplified Prescriptive Paths for Compliance with the IECC in Pennsylvania

GLAZING AND INSULATION

FOUNDATION TYPE

Package		Window U-factor	Ceiling	Wall	Floor	Basement Wall	Slab Perimeter	Crawl Space Wall
A	4,500-4,999 HDD	0.45	R-38	R-16	R-19	R-9	R-6, 2 ft.	R-17
B	5,000-5,499 HDD	0.45	R-38	R-18	R-19	R-9	R-6, 2 ft.	R-17
C	5,500-5,999 HDD	0.40	R-38	R-18	R-21	R-10	R-9, 2 ft.	R-19
D	6,000-6,499 HDD	0.35	R-38	R-18	R-21	R-10	R-9, 4 ft.	R-20
E	6,500-6,999 HDD	0.35	R-49	R-21	R-21	R-11	R-11, 4 ft.	R-20
F	7,000-8,499 HDD	0.35	R-49	R-21	R-21	R-11	R-13, 4 ft.	R-20

* This table of prescriptive requirements is applicable to homes in which the ratio of the rough opening of windows to the gross wall area, expressed as a percentage, is 15%. For homes with glazing areas that are greater than 15%, please refer to Tables 502.2.4(4) - (6) in the IECC.

HDD = Heating Degree Days

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 requirements for the Table: 2003 IECC, Ch. 5, Prescriptive Packages for Climate Zones 10-15. Alternate compliance approaches must be used for glazing areas over 25%.
3. Window area % and U-factors 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 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.