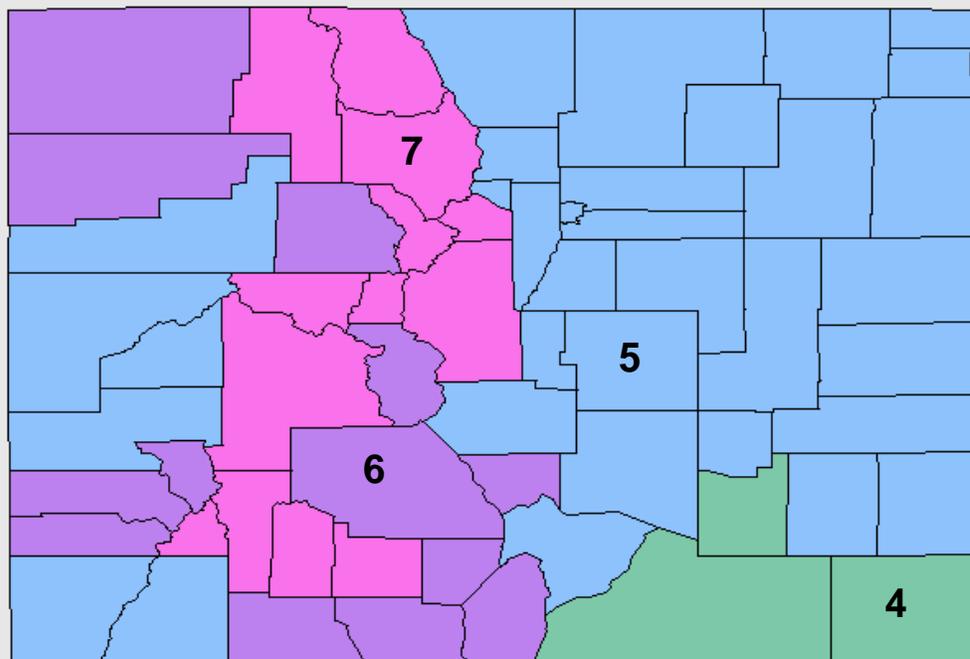


IECC Compliance Guide for Homes in Colorado

Code: 2006 International Energy Conservation Code



The IECC assigns the counties in the state of Colorado into four climate zones. The envelope performance requirements vary for each zone as detailed in the building requirements found on the back of this sheet.

Example: If you are constructing a home in Denver County, you will comply with the 2006 IECC if you follow the requirements for Climate Zone 5.

Step-by-Step Instructions

1. Use the color-coded map or list of counties to locate the IECC climate zone in which construction is taking place.
2. Use the "Table of IECC Building Envelope Requirements for Colorado" (on the back of this sheet) to determine the envelope performance requirements associated with the climate zone.
3. Construct the building according to the envelope performance requirements and comply with certain other basic code requirements, which include:
 - a. providing preventative maintenance manuals
 - b. attaching a permanent certificate listing insulation, window and HVAC performance information
 - c. installing temperature controls
 - d. limiting window and door leakage
 - e. caulking or sealing joints and penetrations
 - f. installing vapor retarders (in certain circumstances)
 - g. sealing and insulating ducts

The 2006 International Energy Conservation Code

The 2006 IECC was adopted during the 2005 International Code Council (ICC) code cycle and is currently available to states for adoption. It is published by the International Code Council. For additional details or to obtain a copy of the 2006 IECC, contact the ICC by phone or visit their website at www.iccsafe.org

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

IECC Climate Zone 4

Baca	Las Animas	Otero
------	------------	-------

IECC Climate Zone 5

Adams	Elbert	La Plata	Prowers
Arapahoe	El Paso	Larimer	Pueblo
Bent	Fremont	Lincoln	Sedgwick
Boulder	Garfield	Logan	Teller
Cheyenne	Gilpin	Mesa	Washington
Crowley	Huerfano	Montezuma	Weld
Delta	Jefferson	Montrose	Yuma
Denver	Kiowa	Morgan	
Douglas	Kit Carson	Phillips	

IECC Climate Zone 6

Alamosa	Costilla	Moffat	San Miguel
Archuleta	Custer	Ouray	
Chaffee	Dolores	Rio Blanco	
Conejos	Eagle	Saguache	

IECC Climate Zone 7

Clear Creek	Jackson	Pitkin	Summit
Grand	Lake	Rio Grande	
Gunnison	Mineral	Routt	
Hinsdale	Park	San Juan	

Limitations

This guide is an energy code compliance aid for Colorado based upon the 2006 IECC. It does not provide a guarantee for meeting the IECC. The guide is not designed to reflect the actual energy code, if any, in Colorado and does not, therefore, provide a guarantee for meeting the state energy code. For details on Colorado's energy code, please contact your local building code official.

Table of IECC Building Envelope Requirements for Colorado

Prescriptive Path for Compliance with the 2006 IECC

WINDOWS AND INSULATION

FOUNDATION TYPE

Package	WINDOWS AND INSULATION					FOUNDATION TYPE			
	Window U-factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value and Depth	Crawl Space Wall R-Value
Climate Zone 4	0.40	0.60	R-38	R-13	R-5	R-19	R-10/13	R-10, 2 ft.	R-10/13
Climate Zone 5	0.35	0.60	R-38	R-19 or 13+5	R-13	R-30	R-10/13	R-10, 2 ft.	R-10/13
Climate Zone 6	0.35	0.60	R-49	R-19 or 13+5	R-15	R-30	R-10/13	R-10, 4 ft.	R-10/13
Climate Zone 7	0.35	0.60	R-49	R-21	R-19	R-30	R-10/13	R-10, 4 ft.	R-10/13

- This table applies to new construction, as well as all additions, alterations and replacement windows and is based upon the envelope performance requirements for Climate Zones 4-7, Table 402.1.1 in the 2006 IECC, and does not reflect any state-specific amendments to the IECC. This table applies to residential buildings, as defined in the IECC, with wood framing and/or mass walls. For steel-framed buildings, refer to Section 402.2.4 of the IECC.
- Window refers to any translucent or transparent material (i.e., glazing) in exterior openings of buildings, including skylights, sliding glass doors and glass block, along with the accompanying sashes, frames, etc.
- Window and skylight U-factor values are maximum acceptable levels. An area-weighted average of fenestration products shall be permitted to satisfy the U-factor requirements. 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. Up to 15 square feet of glazed fenestration is permitted to be exempt from the U-factor requirement.
- 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 NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440 by an accredited, independent laboratory.
- Opaque exterior doors must meet the window U-factor requirements. One exempt door is allowed.
- Insulation R-values are minimum acceptable levels; R-19 shall be permitted to be compressed into a 2x6 cavity. R-values for walls represent the sum of cavity insulation plus insulated sheathing, if any.
- If structural sheathing covers 25% or less of the exterior, insulated sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25% of the exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.
- Supply and return ducts shall be insulated to a minimum of R-8. Ducts in floor trusses shall be insulated to a minimum of R-6.
Exception: Ducts or portions thereof located completely inside the thermal building envelope.
- Where there are two different values for basement and crawl space insulation requirements, the first R-value applies to continuous insulation, the second to framing cavity insulation. Crawl space wall R-value shall only apply to unventilated crawl spaces; R-5 shall be added to the required slab edge R-values for heated slabs; and floors over outside air must meet ceiling requirements.
- Prescriptive packages are based upon normal HVAC equipment efficiencies (NAECA minimums). The code also requires the HVAC system to be properly sized using a computational procedure like the ASHRAE Handbook of Fundamentals.