



PLANNING AND BUILDING DIVISION

P.O. Box 1190
Fort Collins, CO 80522-1190
Building Department (970) 498-7700
Fax (970) 498-7667

Residential Energy Conservation Handout

There are three options to comply with the energy code.

- (i) Prescriptive Package see chart reverse side.
- (ii) REScheck Program bring in REScheck Compliance Certification showing you pass the 2009 IECC; an architect may be able to help with this. (For a free download go to www.energycodes.gov on the web and click on REScheck)
- (iii) Simulated Performance Alternative; (HERS) done by a certified energy rater (visit www.resnet.us on the web to find certified energy raters). Larimer County allows a \$75.00 rebate on permit fee if certified energy rater inspects and documents by issuing a compliance report that the home meets the 2009 IECC residential requirements and a computer report showing how the home will pass the IECC be available for the insulation inspection.



Please indicate which way you are going by marking one of the above options.

If you are building a **log home** you will use option (ii) or (iii) showing compliance with the 2009 IECC.

To use the Prescriptive Package see the chart below. Decide if you will be installing 2x6 stud wall with R-20 insulation or using footnote (f) and make sure that detail is on your plans. All window U-factors labels should be left on windows until insulation inspection has been approved.

HVAC contractor shall size heating/cooling equipment to ACCA Manual J, 8th Edition. An ACCA Manual J 8th calculation package shall be submitted with the plans for new residences and additions with new furnace. Heat Loss calculations from software choices, such as: Wrightsoft, Nitec, and Elite are required. Calculations shall show the size of the appliances: furnace and air conditioner-make, model, and BYU's /(SEER Rating-A/C) for both. The following thermal design parameters in shall be used for calculations required under this code:

- a.) Winter Outdoor Design Dry-bulb (4⁰F),
- b.) Winter Indoor Design Dry-bulb (72⁰F),
- c.) Summer Outdoor Design Dry-bulb (89⁰F),
- d.) Summer Indoor Design Dry-bulb (75⁰F),
- e.) Summer Design Wet-bulb (62⁰F),
- f.) 6368 Degree Days Heating, and
- g.) 479 Degree Days Cooling.

IRC (Table N1102.1) Larimer County Single-Family Prescriptive Package^(h)

	Maximum	Maximum	Minimum	Minimum	Minimum	Minimum	Minimum	Minimum	Minimum
Climate Zone	Fenestration U-Factor	Skylight U-factor ^(b)	Ceilings R-value ^(e)	frame wall R-value	Mass Wall R-value ^(g)	Floor R-value over unheated space	Basement Wall R-Value continuous /cavity	Slab perimeter R-value/Depth ^(d)	Crawl Space R-value Cont./cavity ^(c)
5	0.35	0.60	38	20 ^(a) or 13+5 ^(f)	13/17	30	10/13	10, 2ft.	10/13

- (a)** R-19 shall be permitted to be compressed into a 2x6 cavity such the the R-value is reduced by R-1 or more shall be marked with the compressed batt R-value in addition to the full thickness R-value. If this method is used it should be supplemented with insulated sheathing of at least R-2.
- (b)** The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
- (c)** The first R-value applies to continuous insulation, the second to framing cavity insulation; either insulation meets the requirement.
- (d)** The R-5 shall be added to the required slab edge R-values for heated slabs.
- (e)** R-30 shall be deemed to satisfy the requirements of R-38 wherever the full height of R-30 insulation extends over the wall top plate at the eaves.
- (f)** “13+5 means R-13 cavity insulation plus R-5 insulated sheathing. If structural sheathing cover 25% or less of the exterior, R-5 sheathing is not required where structural sheathing is used. If structural cover more than 25% of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.”.
- (g)** The second R-value applies when more than half the insulation is on the interior.
- (h)** In addition Larimer County will accept REScheck Compliance Report that passes using 2009 International Energy Conservation Code and any Home Energy Rating Score (HERS) by an certified energy rater showing pass the 2009 IECC. For additional information on energy codes or free software download of ResCheck go to www.energycodes.gov .

Equipment Sized to ACCA Manual J, 8th Edition by HVAC Contractor

Furnace Make & Model	Efficiency Rating	BTUH of Furnace	AC Make & Model	Efficiency Rating	Size of AC	Name of Contractor of HVAC