

Montana Residential Energy Code Checklist

Based on the 2012 IECC with Montana Amendments – Published November 2014

Montana Builder's Energy Code Checklist (2012 IECC)					
* Indicates Montana Energy Code value that was amended from the 2012 IECC.					
Date		Builder			
House Address				City	
<input type="checkbox"/> New Construction		<input type="checkbox"/> Addition to Existing Building		<input type="checkbox"/> Existing Building Renovation	
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> N/A	Component	Code Provision	Presc. Code Value	RESChk Tradeoff Value	2009 IECC Code Section
Pre-Inspection/Plan Review					
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Construction Documents	Construction drawings sufficiently demonstrates energy code compliance			R103.2
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	HVAC Load Calculations	HVAC loads sized according to ACCA Manual J			R403.6
Foundation					
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Slab	Unheated slab edge insulation R-value	R-10		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Heated slab edge insulation R-value	R-15		
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Depth/length from top of slab	4 ft		
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Basement Wall	Continuous exterior insulation	R-15		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Exterior Insulation	Insulation depth (or to basement floor)	10 ft		R402.2.8
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Crawl Space	Continuous, Exterior	R-15 *		
Framing/Rough-in					
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Windows & Doors	Area weighted average (maximum value)	U-0.32*		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Skylight	U-factor (maximum value)	U-0.55*		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Mass Wall **	More than 50% of insulation on interior	R-20 *		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Less than 50% of insulation on interior	R-15		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Duct Insulation	Supply ducts in unconditioned attic	R-8		R403.2.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		All other ducts outside thermal envelope	R-6		
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Ducts	Sealed with approved tapes, mastics, and gaskets			R403.2.2
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Building cavities not used for supply ducts			R403.2.3

** - Mass walls include log, solid timber, concrete block, and insulated concrete forms.

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<input type="checkbox"/> <input type="checkbox"/> N/A	Component	Code Provision	Presc. Code Value	RESChk Tradeoff Value	2009 IECC Code Section
Insulation					
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Crawl Space	Cavity Insulation	R-19		R402.1.1 R402.2.10
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Continuous, Interior	R-15		
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Continuous Class 1 vapor retarder, joints overlapped 6" and sealed, extending 6" up the stem wall			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Basement Wall Interior Insulation	Continuous Insulation	R-15		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Framed wall	R-19		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Floor Insulation	Must be in contact with floor sheathing	R-30		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Exterior Walls	Framed wall	R-21		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Framed wall + continuous	R-13+R-5		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Air Sealing	Tested by blower door (ACH50)	≤4		R402.4.2.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Air Barrier and Insulation Installation			R402.4.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Ceiling Insulation	Insulation R-value	R-49		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		If full thickness over wall top plates	R-38		R402.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Attic Access Hatch	Hatch door insulation	R-49		R402.2.3
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Duct Tightness Test (unless all ducts within conditioned space)	Postconstruction total leakage or leakage to outside (CFM per 100 ft ²)*	≤4 CFM		R403.2.2
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Rough-in total duct leakage test (CFM per 100 ft ²)	≤4 CFM		R403.2.2
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Lighting	% of lamps that must be high-efficacy	75%		R404.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Wood Fireplace	Gasketed doors, outdoor combustion air			R402.4.2
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Forced Air Furnace	Programmable thermostat installed			R403.1.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Heat Pump	Heat pump thermostat installed			R403.1.2
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Certificate Posted	Permanent energy label posted on electrical panel			R401.3
Sunroom with thermal isolation					
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Glazing U-factor	U-0.45		R402.3.5
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Skylight U-factor	U-0.70		
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Wall insulation	R-13		R402.2.12

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<input checked="" type="checkbox"/> <input type="checkbox"/> N/A	Component	Code Provision	Presc. Code Value	RESChk Tradeoff Value	2009 IECC Code Section
Other Provisions					
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	All Components	Installed per manufacturer's instructions and building code			R303.2
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Basement Wall Exterior Insulation	Exposed insulation protected			R303.2.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Snowmelt	Snow-melt controls			R403.8
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	U-factor Labeling	Windows, doors, and skylights certified and labeled			R303.1.3
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Insulation Labeling	Installed insulation labeled and observable for inspection			R303.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Sunroom	Ceiling insulation	R-24		R402.2.12
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Recessed Light Fixtures	IC-rated fixtures that meet infiltration criteria			R402.4.4
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Hot Water	HW piping insulation under specific conditions	R-3		R403.4
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Circulating HW systems have automatic or accessible manual controls			R403.4.1
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Mech Sys Piping Insul	Carrying fluids ≥ 105 degrees F or ≤ 55 degrees F	R-3		R403.5
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Exhaust Openings	Dampers on all outdoor intake & exhaust openings			R403.5
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Fenestration Air Leakage	Infiltration rate maximum for windows, skylights, and sliding doors	0.3 CFM/ft ²		R402.4.3
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Infiltration rate maximum for swinging doors	0.5 CFM/ft ²		
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Windows, doors, and skylights air leakage listed and labeled			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Pools and In-ground Spas	Heater accessible manual controls + time switch + cover			R403.9
Duct Tightness Test Results					
Test Date:		House Floor Area Ft ² :	Leakage CFM25:		
Rough-in Test: Total duct leakage in CFM per 100 ft ² of conditioned floor area:					
Postconstruction Test: Leakage to outdoors in CFM per 100 ft ² of conditioned floor area:					
Postconstruction Test: Total duct leakage in CFM per 100 ft ² of conditioned floor area:					
Blower Door Test Results					
Test Date:		Houser Volume Ft ³ :	House Floor Area Ft ² :		
Measured airflow at 50 Pascals (CFM50):					
Air Change at 50 Pascals (ACH50 = (CFM50 x 60)/Volume):					

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Air Barrier and Insulation Installation – Table R402.4.1.1

<input checked="" type="checkbox"/> <input type="checkbox"/> N/A	Component	Criteria
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Air barrier and thermal barrier	A continuous air barrier installed in the building envelope. Exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier sealed. Air-permeable insulation not be used as a sealing material.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Ceiling/attic	The air barrier in any dropped ceiling/soffit aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop-down stair, or knee wall doors to unconditioned attic spaces sealed.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Walls	Corners and headers insulated and the junction of the foundation and sill plate sealed. The junction of the top plate and top of exterior walls sealed. Exterior thermal envelope insulation for framed walls installed in substantial contact and continuous alignment with the air barrier. Knee walls sealed.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Windows, skylights, and doors	The space between window/door jambs and framing and skylights and framing sealed.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Rim joists	Rim joists insulated and include the air barrier.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Floors (above-garage and cantilevered floors)	Insulation installed to maintain permanent contact with underside of subfloor decking.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Crawl space walls	Where provided in lieu of floor insulation, insulation permanently attached to the crawlspace walls. Exposed earth in unvented crawl spaces covered with a Class I vapor retarder with overlapping joints taped.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space sealed.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Narrow cavities	Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Garage separation	Air sealing shall be provided between the garage and conditioned spaces.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be air-tight, IC-rated, and sealed to the drywall.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Plumbing and wiring	Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Shower/tub on exterior wall	Exterior walls adjacent to showers and tubs shall be insulated and the air barrier installed separating them from the showers and tubs.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Electrical/phone box on exterior walls	The air barrier installed behind electrical or communication boxes or air sealed boxes installed.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	HVAC register boots	HVAC register boots that penetrate building thermal envelope sealed to the subfloor or drywall.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Fireplace	An air barrier installed on fireplace walls. Fireplaces have gasketed doors.