

BEFORE THE DEPARTMENT OF LABOR AND INDUSTRY
STATE OF MONTANA

In the matter of the amendment of) NOTICE OF PUBLIC HEARING ON
ARM 24.301.161, model energy code) PROPOSED AMENDMENT

TO: All Concerned Persons

1. On November 30, 2009, at 10:00 a.m., a public hearing will be held in room B-07, 301 South Park Avenue, Helena, Montana to consider the proposed amendment of the above-stated rule.

2. The Department of Labor and Industry (department) will make reasonable accommodations for persons with disabilities who wish to participate in this public hearing or need an alternative accessible format of this notice. If you require an accommodation, contact the department no later than 5:00 p.m., on November 23, 2009, to advise us of the nature of the accommodation that you need. Please contact David Cook, 301 South Park Avenue, P.O. Box 200513, Helena, Montana 59620-0513; telephone (406) 841-2053; Montana Relay 1 (800) 253-4091; TDD (406) 444-2978; facsimile (406) 841-2050; e-mail dcook@mt.gov.

3. The rule proposed to be amended provides as follows, stricken matter interlined, new matter underlined:

24.301.161 INCORPORATION BY REFERENCE OF INTERNATIONAL ENERGY CONSERVATION CODE (1) The Department of Labor and Industry adopts and incorporates by reference the International Code Council's International Energy Conservation Code, ~~2003~~ 2009 Edition, referred to as the International Energy Conservation Code, unless another edition is specifically stated, together with the following amendments:

(a) Subsection ~~104.4~~ 103.1, General, is deleted and replaced with the following: "With each application for a building permit, and when required by the building official, plans and specifications shall be submitted. The building official may require plans and specifications be prepared by an engineer or architect licensed to practice by the state, except for owner-occupied, single-family dwelling houses. ~~All designs submitted under the provisions of Chapter 4 shall be prepared by an engineer or architect licensed to practice by the state.~~

(i) "Exceptions:

~~"1. The code official is authorized to waive the submission of construction documents and other supporting data not required to be prepared by an engineer or architect licensed to practice by the state if it is found the nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with this code.~~

"The code official is authorized to waive the requirements for construction documents or other supporting data if the code official determines they are not necessary to confirm compliance with this code."

~~"2. For residential buildings having a conditioned floor area of 5000 square feet (465m²) or less, designs submitted under the provisions of Chapter 4 shall be prepared by anyone having qualifications acceptable to the code official."~~

(b) Subsection ~~105.2, 104.2, Approvals Required, Required Approvals~~, is deleted in its entirety when the code is used by the Building Codes Bureau of the Department of Labor and Industry. It remains undeleted and available for use for certified local governments using the code.

(c) ~~Subsection 502.2.3.6, Basement Walls~~, is amended by adding the following: "Basement wall insulation below uninsulated floors, except for rim joists and perimeter cripple walls, may be delayed until such time as the basement is actually finished for occupancy."

(c) Section 202, General Definitions, the definition for "Air Barrier" is deleted and replaced with a new definition for "Air Barrier" as follows: "Air Barrier: Material(s) assembled and joined together to provide a barrier to air leakage through and into the building envelope. An air barrier may be a single material or a combination of materials."

(d) ~~Subsection 502.2.4.1, Walls~~, is amended by adding the following: "Lesser R value may be allowed for log building walls."

(d) Table 402.1.1, INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT, is amending footnote c for climate zone "6" and is adding footnote k as follows:

Footnotes: "c." "15/19" means R-15 continuous insulated sheathing on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulated sheathing on the interior or exterior of the home. "10/19" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall.

"k." Fenestration U-Factor is 0.33 after January 1, 2010."

<u>Climate Zone</u>	<u>Fenestration U-Factor(b)</u>	<u>Skylight(b) U-Factor</u>	<u>Glazed Penetration SHGC(b,d)</u>	<u>Ceiling R-Value</u>	<u>Wood Framed Wall R-Value</u>
<u>6</u>	<u>0.35(k) 0.33(l)</u>	<u>0.60</u>	<u>NR</u>	<u>49</u>	<u>21 or 13+5(h)</u>

<u>Mass Wall R-Value(i)</u>	<u>Floor R-Value</u>	<u>Basement(c) Wall R-Value</u>	<u>Slab(b) R-Value & Depth</u>	<u>Crawl Space Wall(c) R-Value</u>
<u>15/19</u>	<u>30(g)</u>	<u>15/19</u>	<u>10, 4 ft</u>	<u>10/19</u>

(e) ~~Subsection 503.3.3.1, Piping Insulation~~, is amended by adding a fourth exception as follows: "4. Pipe insulation is not required in heated or conditioned areas."

(e) ~~Subsection 402.2.2, Ceilings Without Attic Spaces~~, is deleted and replaced with the following: "Where Section 402.1.1 would require insulation levels above R-30 and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. This reduction of insulation from the requirements of Section 402.1.1, shall be limited to 250 square feet or ten percent of

the total insulated ceiling area, whichever is less. This reduction shall not apply to the U-factor alternative approach in Section 402.1.3, and the total UA alternative in Section 402.1.4."

~~(f) Table 503.3.3.3, Minimum Duct Insulation, is amended by adding footnote e as follows: "e. In locations where annual heating degree days exceeds 7500, minimum R-value for ducts in all areas need not exceed R-8."~~

(f) Subsection 402.2.9, Crawl Space Walls, is deleted and replaced with the following: "As an alternative to insulating floors over crawl spaces, crawl space walls shall be permitted to be insulated when the crawl space is not vented to the outside. Temporary crawl space vent openings are allowed during construction for crawl spaces that have insulated crawl space walls. These temporary crawl space vent openings shall be closed, sealed, and insulated to the same R-value of the surrounding crawl space wall insulation once construction is complete and prior to the time that the final building inspection would occur. Crawl space wall insulation shall be permanently fastened to the wall and shall extend downward from the floor, the entire height of the crawl space wall. Exposed earth in unvented crawl space foundations shall be covered with a continuous Class I vapor retarder. All joints of the vapor retarder shall overlap six inches and be sealed or taped. The edges of the vapor retarder shall extend at least six inches up the stem wall and shall be attached and sealed to the stem wall."

(g) Subsection 402.4.2.1, Testing Option, is deleted and replaced with the following: "Building envelope tightness and insulation installation shall be considered acceptable when tested air leakage is less than four air changes per hour (ACH), when tested with a blower door at a pressure of 33.5 psf (50Pa). Testing shall occur after rough in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation and combustion appliances. During testing:

"(i) exterior windows and doors, fireplace and stove doors shall be closed, but not sealed;

"(ii) dampers shall be closed, but not sealed, including exhaust, intake, makeup air, back draft and flue dampers;

"(iii) interior doors shall be open;

"(iv) exterior openings for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;

"(v) heating and cooling system(s) shall be turned off;

"(vi) "B" or "L" vents, combustion air vents, and dryer vents shall be sealed;

"(vii) HVAC ducts shall not be sealed; and

"(viii) supply and return registers shall not be sealed."

(h) Table 502.2(1), BUILDING ENVELOPE REQUIREMENTS OPAQUE ASSEMBLIES, is deleted for climate zone "6" and replaced, with all footnotes remaining the same as in the original text of the code, as follows:

Climate Zone	<u>6</u>	<u>6</u>
	<u>All Other</u>	<u>Group R</u>
<u>Roofs</u>		

Insulation Entirely Above Deck	<u>R-20ci</u>	<u>R-20ci</u>
Metal Buildings (with R-5 Thermal Blocks) a, b	<u>R13+R19</u>	<u>R-19</u>
Attic and Other	<u>R-49</u>	<u>R-49</u>
<u>Walls, Above Grade</u>		
Mass	<u>R-13.3ci</u>	<u>R-15.2ci</u>
Metal Buildings (b)	<u>R-13+R-5.6ci</u>	<u>R-13+R-5.6ci</u>
Metal Framed	<u>R-13+R-7.5ci</u>	<u>R-13+R-7.5ci</u>
Wood Framed and Other	<u>R-13+R-7.5ci</u> or <u>R-21</u>	<u>R-13+R-7.5ci</u> or <u>R-21</u>
<u>Walls, Below Grade</u>		
Below Grade Wall (d)	<u>R-7.5ci</u>	<u>R-7.5ci</u>
<u>Floors</u>		
Mass	<u>R-12.5ci</u>	<u>R-14.6ci</u>
Joist/Framing Steel/Wood	<u>R-30</u>	<u>R-30(e)</u>
<u>Slab-on-Grade Floors</u>		
Unheated Slabs	<u>R-10 for 24 in. below</u>	<u>R-15 for 24 in. below</u>
Heated Slabs	<u>R-15 for 24 in. below</u>	<u>R-20 for 48 in. below</u>
Opaque Doors		
Swinging	<u>U-0.70</u>	<u>U-0.50</u>
Roll-up or sliding	<u>U-0.50</u>	<u>U-0.50</u>

(2) remains the same.

(a) The department encourages owners, design professionals, and builders to voluntarily implement greater levels of energy efficiency in building design and construction than those required by the International Energy Conservation Code. Information regarding voluntary building standards for greater levels of energy efficiency can be obtained from the department by contacting the department at the address listed in (3), by telephone at 406-841-2053, or at the department's web site, <http://mt.gov/dli/bsd/bc/bs>.

(3) The International Energy Conservation Code is a nationally recognized model code for energy efficient construction of buildings. A copy of the International Energy Conservation Code may be obtained from the Department of Labor and Industry, Building Codes Bureau, P.O. Box 200517, Helena, MT 59620-0517, at cost plus postage and handling. A copy may also be obtained by writing to the

International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, or visiting the International Code Council web site at www.ICCsafe.org.

AUTH: 50-60-203, 50-60-803, MCA

IMP: 50-60-201, 50-60-203, 50-60-803, MCA

4. The department is required by law to adopt, via rulemaking, a state building code. The department, in consultation with the building codes council, periodically updates the state building code by adopting nationally-recognized standards and requirements for construction and construction materials on an as-needed basis. Energy efficiency standards are currently part of the state building code. Improvements and innovations in construction materials and building techniques, along with improvements in energy efficiency techniques, have led to creation of a 2009 edition of the International Energy Conservation Code ("IECC"). In order to provide Montanans with the advantages of those improvements and innovations in building construction standards, the department believes that there is reasonable necessity to amend ARM 24.301.161 by adopting by reference virtually all of the provisions in the 2009 edition of the IECC.

The 2009 edition of the IECC is the most recent version of the IECC. The department believes that the adoption of the most recent version of the IECC, as opposed to the most recent version of standards created by another author of building code standards, will minimize confusion and disruption for project owners, design professionals, builders, building code inspectors, and other building code officials. In addition, the department believes that adoption of the 2009 IECC, as opposed to continuing with the existing 2003 version of the IECC, is consistent with the legislative intent for the use of modern energy efficiency codes, as expressed in 50-61-201 and 50-61-202, MCA. The department notes that although the IECC is updated on a three year cycle, the department consciously did not adopt the 2006 version of the IECC, on the grounds that the department (in consultation with various stakeholders) did not believe that the 2006 edition of the IECC promoted greater energy efficiency than the 2003 version of the code.

The department further believes that there is reasonable necessity to make certain modifications to the 2009 IECC in order to adapt it to the needs of Montanans, based upon the input of the building codes council and various stakeholders. The department notes that the existing version of the IECC also contains similar modifications. An explanation of each of the proposed modifications follows:

(1)(a): It is reasonably necessary to modify the subsection due to formatting changes within the new edition. In addition, exception 1 and 2 are deleted, since the new edition no longer has exception 2. Listing an "exception" tracks with the overall format of the IECC, and thus is shown in manner.

(1)(b): It is reasonably necessary to modify the subsection and title due to formatting changes within the new edition.

[existing] (1)(c): It is reasonably necessary to no longer modify this subsection to allow basements to be noninsulated, until such time as the basement is finished. This is primarily due to the energy loss experienced through the basement walls, the ability to utilize insulating systems that can be incorporated into the finishing process, and the higher utility costs for not insulating the basement walls that have a more pronounced negative impact to the monthly energy bills of those in the affordable housing market.

[new] (1)(c): It is reasonably necessary to modify the definition of "Air Barrier" by the addition of the words "and into" which adds clarity to the extent that the air barrier must perform within the building envelope.

[existing] (1)(d): It is reasonably necessary to remove this modification to the previous edition due to the inclusion of log walls as "mass walls" in the new edition, with provisions included for stipulating the required R-Values or *U*-Factors of mass walls.

[new] (1)(d): It is reasonably necessary to modify this table to stipulate changes requested by various stakeholders and confirmed by the Building Codes Council (BCC) for certain R-Values and *U*-Factor for fenestration of the building envelope. It was determined by the BCC that the existing R-21 R-Value for wood framed walls would be carried over to this edition since designers, builders, and owners are already utilizing this factor for walls under the 2003 edition. Crawl space walls are increased from R-13 to R-19 R-Value when utilizing cavity insulation, which allows for greater thermal protection to crawl space walls. The BCC determined it was reasonably necessary to increase the *U*-Factor from 0.35 to 0.33 effective January 1, 2010, to increase the efficiency of windows in residential buildings and because information from window manufacturers relayed that *U*-Factors would be increasing to those levels at that time anyway. The department concurs with the BCC determination.

[existing] (1)(e): It is reasonably necessary to remove this modification to the previous edition since the exception no longer applies, due to the fact that the new edition has already placed the exception language in the body of the code.

[new] (1)(e): The BCC determined it is reasonably necessary to modify this subsection to allow less ceiling area than the code allows in a residential building to have less than the R-Value of insulation that is required in areas with attic space. The BCC determined that the difference between the required R-49 ceiling R-Value in areas with attic space and that of the R-30 R-Value of nonattic space ceiling areas was too great and therefore reduced the allowable area of ceiling where the lower R-value ceiling insulation would be permitted. The department concurs with the BCC determination.

[existing] (1)(f): It is reasonably necessary to remove this modification to the previous edition since the footnote is no longer needed, due to the fact that the new edition has already stipulated the R-Value for ducts in all locations and no longer

uses a table for specifying under what conditions, and to what R-Value, ducts shall be insulated.

[new] (1)(f): It is reasonably necessary to delete the current subsection language and replace with language that adds a provision for temporary crawl space vents. The BCC determined from information presented to it during its meetings that there was the need for temporary vents to control moisture during the construction process and reduce the possibility of mold growth from moisture build-up in the crawl space during construction. The department concurs with the BCC determination.

[new] (1)(g): It is reasonably necessary to delete the subsection and replace with new language, which modifies the number of air changes allowed during an air leakage test from seven air changes per hour (ACH) to four ACH. In addition, the BCC determined, from information presented to it during its meetings that it is necessary to add item #6 under "During Testing" which is the sealing of "B" or "L" vents, combustion air vents, and dryer vents. The department concurs with the BCC determination.

[new] (1)(h): It is reasonably necessary to modify this table to stipulate changes requested by various stakeholders and confirmed by the BCC for certain R-Values of the building envelope. It was determined by the BCC that the existing R-21 R-Value for wood framed walls would be carried over to this edition since designers, builders and owners are already utilizing this factor for walls under the 2003 edition. It was determined by the BCC that attic and other areas under a roof should have an R-Value of R-49 for those areas, which is the same R-Value stipulated for residential buildings. It was determined that this consistency between commercial and residential attics would be beneficial for installers, designers, and owners. The department concurs with the BCC determination.

The department notes that in addition to consulting with the building codes council, and receiving its advice and consent as provided for in 50-60-201, MCA, the department has met with a variety of stakeholders prior to proposing the amendments. The department recognizes that while some stakeholders have suggested that greater energy efficiency levels be required by rule, the department concludes that building codes, by their nature, set mandatory minimum standards for construction. The department believes that the efficiency levels required by the 2009 IECC represent levels that are consistent with accepted standards for mandatory standards. The department encourages project owners, design professionals, and builders to voluntarily implement greater levels of energy efficiency, and supports the use of higher levels of efficiency. The department finds there is reasonable necessity to articulate that encouragement as part of the rule, in (2)(a), and that such a statement is consistent with the provisions of 50-60-201(6) and (7), MCA.

Finally, the department believes there is reasonable necessity to amend the rule in (3) to include a web site address of the International Code Council, given the

increasingly widespread use of web sites as a means of purchasing publications and documents.

5. Concerned persons may present their data, views, or arguments either orally or in writing at the hearing. Written data, views, or arguments may also be submitted to the department, 301 South Park Avenue, P.O. Box 200513, Helena, Montana 59620-0513, by facsimile to (406) 841-2050, or by e-mail to dcook@mt.gov, and must be received no later than 5:00 p.m., December 14, 2009.

6. An electronic copy of this Notice of Public Hearing is available through the department on the World Wide Web at www.buildingcodes.mt.gov. The department strives to make the electronic copy of this Notice conform to the official version of the Notice, as printed in the Montana Administrative Register, but advises all concerned persons that in the event of a discrepancy between the official printed text of the Notice and the electronic version of the Notice, only the official printed text will be considered. In addition, although the department strives to keep its web site accessible at all times, concerned persons should be aware that the web site may be unavailable during some periods, due to system maintenance or technical problems, and that technical difficulties in accessing or posting to the e-mail address do not excuse late submission of comments.

7. The department maintains a list of interested persons who wish to receive notices of rulemaking actions. Persons who wish to have their name added to the list shall make a written request that includes the name, e-mail, and mailing address of the person to receive notices and specifies for which program or areas of law the person wishes to receive notices. Notices will be sent by e-mail unless a mailing preference is noted in the request. Such written request may be sent or delivered to the department, 301 South Park Avenue, P.O. Box 200513, Helena, Montana 59620-0513, faxed to the office at (406) 841-2050, e-mailed to dcook@mt.gov, or made by completing a request form at any rules hearing held by the agency.

8. The bill sponsor contact requirements of 2-4-302, MCA, do not apply.

9. The Department's Hearings Bureau has been designated to preside over and conduct this hearing.

/s/ MARK CADWALLADER
Mark Cadwallader
Alternate Rule Reviewer

/s/ KEITH KELLY
Keith Kelly, Commissioner
DEPARTMENT OF LABOR AND INDUSTRY

Certified to the Secretary of State October 19, 2009