Building Codes Division

Working with Oregonians to ensure safe building construction while supporting a positive business climate.

Notice of Public Hearing

December 21, 2010

Adopting radon gas mitigation standards amending 2008 ORSC & 2010 OSSC

Opportunity for public input:

Those who would like to provide public testimony may attend a public hearing on December 21, 2010 at 10:00 a.m. The hearing will be located at the Building Codes Division, Conference Room A. Written comments may also be submitted to the contact below. The last day to submit written comments is 5:00 p.m. December 27, 2010.

Live broadcast via the internet:

To view the public hearing live, click on "View live meeting"

Purpose of the rule:

These proposed rules implement Senate Bill 1025 approved by the 2010 Legislature. The bill requires the Residential and Manufactured Structures Board to adopt radon mitigation standards for most types of new residential buildings and requires the Building Codes Structures Board to adopt radon mitigation standards for certain types of new residential buildings and new public buildings. Radon mitigation standards adopted by these rules amend both the 2008 Oregon Residential Specialty Code (ORSC) and the 2010 Oregon Structural Specialty Code (OSSC). These requirements are applicable in Baker, Clackamas, Hood River, Multnomah, Polk, Washington and Yamhill Counties.

These proposed rules would become effective April 1, 2011 for new residential buildings and April 1, 2013 for new public buildings.

Citation:

Amend: OAR 918-460-0015 & 918-480-0010

To view the proposed amended code language, click the following:

Proposed amendments for new residential buildings & new public buildings

History:

Senate Bill 1025, approved during the 2010 Special Legislative Session, requires radon mitigation standards for new residential buildings and new public buildings in certain counties in the state. Radon is a radioactive, colorless, odorless gas that is present in soil and air and, consequently, present at some level in most buildings. Radon is classified as a known human carcinogen and is the second-leading cause of lung cancer in the nation. The U.S. Environmental Protection Agency has established standards for reasonable levels for human exposure. A number of states and local jurisdictions have adopted building codes requiring radon resistant construction in new buildings. These requirements will ensure that radon mitigation standards for new residential buildings and new public buildings are used in high-radon areas of Oregon.

Contact:

If you have questions or need further information, please contact Hearing Officer Richard Rogers at 503-378-4472, or richard.rogers@state.or.us .

Secretary of State

NOTICE OF PROPOSED RULEMAKING HEARING*

A Statement of Need and Fiscal Impact accompanies this form.

Department of Consumer and Business Services, Building Codes Division	918
Agency and Division	Administrative Rules Chapter Number

Stephanie Snyder	PO Box 14470, Salem, OR 97309	(503) 373-7438
Rules Coordinator	Address	Telephone

RULE CAPTION

Adoption of radon gas mitigation standards amending the 2008 ORSC and 2010 OSSC.

Not more than 15 words that reasonably identify the subject matter of the agency's intended action.

December 21, 2010	10:00 a.m.	1535 Edgewater Street NW, Salem, OR 97304	Richard Rogers
Hearing Date	Time	Location	Hearings Officer

Auxiliary aids for persons with disabilities are available upon advance request.

RULEMAKING ACTION

ADOPT:

AMEND: OAR 918-460-0015 & 918-480-0010

REPEAL:

RENUMBER:

AMEND & RENUMBER:

Stat. Auth.: ORS 447.231, 447.247, 455.020, 455.030, 455.110, 455.112, 455.525, & 455.610

Other Auth.: Ch. 83, 2010 Oregon Laws

Stats. Implemented: ORS 447.247, 455.110, 455.112 & 455.610

RULE SUMMARY

These proposed rules implement Senate Bill 1025 approved by the 2010 Legislature. The bill requires the Residential and Manufactured Structures Board to adopt radon mitigation standards for most types of new residential buildings and requires the Building Codes Structures Board to adopt radon mitigation standards for certain types of new residential buildings and new public buildings. Radon mitigation standards adopted by these rules amend both the Oregon Residential Specialty Code (ORSC) and the Oregon Structural Specialty Code (OSSC). These requirements are applicable in Baker, Clackamas, Hood River, Multnomah, Polk, Washington and Yamhill Counties. Additionally, radon mitigation standards applicable to new residential buildings become effective April 1, 2011 while radon mitigation standards applicable to new public buildings becomes effective April 1, 2013.

The Agency requests public comment on whether other options should be considered for achieving the rule's substantive goals while reducing the negative economic impact of the rule on business.

December 27, 2010 at 5:00 p.m.

Last Day for Public Comment (Last day to submit written comments to the Rules Coordinator)

	Patrick Allen	
Signature	Printed name	Date

Secretary of State

STATEMENT OF NEED AND FISCAL IMPACT

A Notice of Proposed Rulemaking Hearing or a Notice of Proposed Rulemaking accompanies this form.

Department of Consumer and Business Services, Building Codes Division 918

Agency and Division Administrative Rules Chapter Number

Adoption of radon gas mitigation standards amending the 2008 ORSC and 2010 OSSC.

Rule Caption (Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.)

In the Matter of: Amending OAR 918-460-0015 & 918-480-0010

Statutory Authority: ORS 447.231, 447.247, 455.020, 455.030, 455.110, 455.112, 455.525, & 455.610

Other Authority: Ch. 83, 2010 Oregon Laws

Stats. Implemented: ORS 447.247, 455.110, 455.112 & 455.610

Need for the Rule(s): These proposed rules are necessary as a result of the passage of Senate Bill 1025 (2010), which requires radon mitigation standards for new residential buildings and new public buildings in certain counties in the state. Radon is a radioactive, colorless, odorless gas that is present in soil and air and, consequently, present at some level in most buildings. Radon is classified as a known human carcinogen and is the second-leading cause of lung cancer in the nation. The U.S. Environmental Protection Agency has established standards for reasonable levels for human exposure. A number of states and local jurisdictions have adopted building codes requiring radon resistant new construction. These requirements will ensure that radon mitigation standards for new residential buildings and new public buildings are used in high-radon areas of Oregon.

Documents Relied Upon, and where they are available: Senate Bill 1025 (2010)

Fiscal and Economic Impact: The division has determined that the code amendments proposed in these rules will have a fiscal and economic impact on state agencies, units of local government, small businesses, and members of the public associated with the costs of providing radon mitigation standards in new residential buildings and new public buildings. These costs impacts are not statewide because the bill only requires radon mitigation standards to be applicable in Baker, Clackamas, Hood River, Multnomah, Polk, Washington and Yamhill Counties.

The division has determined through research and data received from industry that adding radon resistant construction to a typical 1,200 square foot detached single family dwelling may increase construction costs up to $500 depending upon the particular method of radon resistant construction being installed. In some cases, there may be monthly expenses associated with energy use of an electrical fan, which is estimated to be approximately $3.00 per month. In systems where a fan is installed, the fan is expected to operate for approximately 10-years. Replacement costs are estimated to be $145-$300.

Radon resistant construction for a new public building cannot be determined at this time because it is dependent on the specifics of a particular building, such as building type/size, design variables, construction methods and materials. The division received data from industry that estimated the cost for adding radon resistant construction for a 10,000 square foot building to be approximately $4,500. This cost may be increased an additional $450 if a fan were installed in the system. An annual cost for energy use is approximately $50 per year.

Additionally, the Residential and Manufactured Structures Board and the Building Codes Structures Board made the specific finding that the added cost, if any, is necessary to the health and safety of the occupants or the public, or is necessary to conserve scarce resources.

Statement of Cost of Compliance:

1. Impact on state agencies, units of local government and the public (ORS 183.335(2)(b)(E)):
The proposed rules will have minimal fiscal impact on state and local building officials and inspectors for the training and education on these new code requirements and ensuring these requirements or inspected. These proposed rules will have a fiscal impact on the general public, including building owners, developers, and contractors for the costs associated with installing radon resistant construction. These requirements are applicable in Baker, Clackamas, Hood River, Multnomah, Polk, Washington and Yamhill Counties. Fiscal impacts are estimated to be approximately $500 for residential buildings. Fiscal

impacts on public buildings cannot be determined at this time because it is dependent on the specifics of a particular building. It is estimated that the cost to install radon resistant construction in a 10,000 square foot building is approximately $4,500.

2. Cost of compliance effect on small business (ORS 183.336):
a. Estimate the number of small businesses and types of business and industries with small businesses subject to the rule:
Small businesses that are subject to these rules include residential and commercial contractors, designers, engineers, architects, and others associated with the construction industry. There are approximately 40,000 licensed active construction businesses in the state of Oregon. Construction businesses are primarily small and medium sized businesses: approximately 90 percent employ fewer than 20 workers, 80 percent fewer than 10, and nearly 75 percent employ fewer than five workers. Small businesses may see similar impacts to those seen by the general public and, building owners. The cost of compliance depends upon the services the small business is engaged in. The actual cost of compliance cannot be determined at this time because it is dependent on the specifics of a particular construction business, type of building, design variables, construction methods, and materials.

b. Projected reporting, recordkeeping and other administrative activities required for compliance, including costs of professional services:
The proposed rules do not impose any additional reporting or recordkeeping requirements. However, the need for additional professional services may increase. There are specialty businesses that currently install radon resistant construction for both new construction and existing construction. The cost of compliance cannot be determined at this time because it will vary depending on the type of construction the small business is engaged in or whether the business will perform the work themselves or hire a specialty business to do the work. Some small businesses will see some increase in costs for these services, while others may see no impact.

c. Equipment, supplies, labor and increased administration required for compliance:
The proposed rules may require additional equipment, supplies, or labor, or increased administration in order for a small business to comply with these requirements. Some of the materials used for radon resistant construction may be similar to those used in the typical construction; however some may be unique depending upon the particular system being installed.

How were small businesses involved in the development of this rule? Small businesses were represented on the work group as well as the Residential and Manufactured Structures Board, and the Building Codes Structures Board.

Administrative Rule Advisory Committee consulted?:
If not, why?: Yes

Patrick Allen

Signature | Printed name | Date

HOUSING COST IMPACT STATEMENT

FOR ESTIMATING THE EFFECT OF A PROPOSED RULE OR ORDINANCE ON THE COST OF DEVELOPING A *TYPICAL 1,200 SQ FT DETACHED SINGLE FAMILY DWELLING ON A 6,000 SQ FT PARCEL OF LAND.
(ORS 183.534)
FOR ADMINISTRATIVE RULES

AGENCY NAME: Consumer & Business Services
Building Codes Division
ADDRESS: 1535 Edgewater Street NW
CITY/STATE: Salem, OR
PHONE: 503-378-4133

PERMANENT: ☒ **HEARING DATE: December 21, 2010**

TEMPORARY: ☐ **EFFECTIVE DATE:**

BELOW PLEASE PROVIDE A DESCRIPTION OF THE ESTIMATED SAVINGS OR ADDITIONAL COSTS THAT WILL RESULT FROM THIS PROPOSED CHANGE.
PROVIDE A BRIEF EXPLANATION OF HOW THE COST OR SAVINGS ESTIMATE WAS DETERMINED.
IDENTIFY HOW CHANGE IMPACTS COSTS IN CATEGORIES SPECIFIED

Description of proposed change: (Please attach any draft or permanent rule or ordinance)
This proposed rule implements Senate Bill 1025 approved by the 2010 Legislature. The bill requires the Residential and Manufactured Structures Board to adopt radon mitigation standards for most types of new residential buildings. Radon mitigation standards adopted by these rules amend the Oregon Residential Specialty Code (ORSC) adopted under ORS 455.610. These requirements are applicable in Baker, Clackamas, Hood River, Multnomah, Polk, Washington and Yamhill Counties. Radon mitigation standards applicable to new residential buildings become effective April 1, 2011.

Description of the need for, and objectives of the rule:
This proposed rule is necessary as a result of the passage of Senate Bill 1025 (2010), which requires radon mitigation standards for new residential buildings in certain counties in the state. Radon is a radioactive, colorless, odorless gas that is present in soil and air and, consequently, present at some level in most buildings. Radon is classified as a known human carcinogen and is the second-leading cause of lung cancer in the nation. The U.S. Environmental Protection Agency has established standards for reasonable levels for human exposure. A number of states and local jurisdictions have adopted building codes requiring radon resistant new construction. These requirements will ensure that radon mitigation standards for new residential buildings are used in high-radon areas of Oregon.

List of rules adopted or amended:
Amend OAR 918-480-0010.

Materials and labor costs increase or savings:
The division has determined through research and data received from industry that adding radon resistant construction to a typical 1,200 square foot detached single family dwelling may increase construction costs up to $500 depending upon the particular method of radon resistant construction being installed. In some cases, there may be monthly expenses associated with energy use of an electrical fan, which is estimated to be approximately $3.00 per month. In systems where a fan is installed, the fan is expected to operate for approximately 10-years. Replacement costs are estimated to be $145-$300.

Estimated administrative construction or other costs increase or savings:
The proposed rules do not impose any additional administrative requirements. However, the need for additional professional services may increase. There are specialty businesses that currently install radon resistant construction for both new construction and existing construction. The cost of compliance cannot be determined at this time because it will vary depending on the type of construction the small business is engaged in or whether the business will perform the work themselves or hire a specialty business to do the work. Some small businesses will see some increase in costs for these services, while others may see no impact.

Land costs increase or savings: N/A

Other costs increase or savings: None.

*Typical-Single story 3 bedrooms, 1 ½ bathrooms, attached garage (calculated separately) on land with good soil conditions with no unusual geological hazards.

PREPARERS NAME: Richard J. Baumann
EMAIL ADDRESS: Richard.J.Baumann@state.or.us

918-460-0015
Amendments to the Oregon Structural Specialty Code

The **2010 Oregon Structural Specialty Code** is adopted and amended pursuant to OAR chapter 918, division 8. Amendments adopted for inclusion into the **2010 Oregon Structural Specialty Code** are placed in this rule, showing the section reference, a descriptive caption, and a short description of the amendment.

(1) Effective January 1, 2011 the 2010 Oregon Structural Specialty Code is amended by adding Section 1811 Radon Control Methods.

(a) Radon mitigation provisions in Section 1811 applicable to residential buildings indentified as Group R-2 or R-3 are adopted January 1, 2011 but do not become enforceable until April 1, 2011 as authorized by Chapter 83, 2010 Laws (Senate Bill 1025).

(b) Radon mitigation provisions in Section 1811 applicable to new public buildings are adopted January 1, 2011 but do not become enforceable until April 1, 2013 as authorized by Chapter 83, 2010 Laws (Senate Bill 1025).

[Publications: Publications referenced are available for review at the division. See division web site for information on where to purchase publications.]

Stat. Auth.: ORS 447.231, 447.247, 455.030, 455.110, 455.112, & 455.610
Stats. Implemented: ORS 447.247, 455.110 & 455.112
Hist.: BCA 18-1993, f. 8-24-93, cert. ef. 8-29-93; BCA 28-1993, f. 10-22-93, cert. ef. 1-1-94; BCD 6-1994, f. 2-25-94, cert. ef. 5-1-94; BCD 22-1994, f. 9-28-94, cert. ef. 1-1-95; BCD 31-1994(Temp), f. & cert. ef. 12-23-94; BCD 32-1994, f. & cert. ef. 12-30-94; BCD 2-1995, f. & cert. ef. 2-9-95; BCD 5-1995, f. & cert. ef. 3-15-95; BCD 2-1996, f. 2-2-96, cert. ef. 4-1-96; BCD 6-1996, f. 3-29-96, cert. ef. 4-1-96; BCD 12-1997, f. 9-10-97, cert. ef. 10-1-97; BCD 19-1998, f. 9-30-98, cert. ef. 10-1-98; BCD 24-1998(Temp), f. & cert. ef. 12-1-98 thru 5-29-99; Temporary Rule repealed by BCD 3-1999, f. 3-12-99, cert. ef. 4-1-99; BCD 5-1999, f. 6-17-99, cert. ef. 10-1-99; BCD 12-1999(Temp), f. 9-23-99, cert. ef. 11-1-99 thru 4-28-00; BCD 2-2000 f. 1-14-00, cert. ef. 4-1-00; BCD 20-2000, f. 9-15-00, cert. ef. 10-1-00; BCD 8-2001, f. 7-17-01, cert. ef. 10-1-01; BCD 18-2001, f. 12-21-01, cert. ef. 1-1-02; BCD 14-2003, f. 8-13-03, cert. ef. 10-1-03; BCD 18-2003(Temp) f. & cert. ef. 11-14-03 thru 5-11-04; BCD 5-2004,f. & cert. ef. 4-1-04; BCD 16-2004, f. 9-24-04, cert. ef. 10-1-04; BCD 21-2004, f. & cert. ef. 10-1-04; BCD 9-2005(Temp), f. & cert. ef. 4-7-05 thru 9-30-05; BCD 14-2005, f. & cert. ef. 7-5-05; BCD 18-2005(Temp), f. & cert. ef. 7-12-05 thru 9-30-05; BCD 22-2005, f. 9-29-05, cert. ef. 10-1-05; BCD 23-2005, f. 9-29-05, cert. ef. 10-1-05; BCD 1-2006, f. & cert. ef. 2-1-06; BCD 9-2006, f. 6-30-2006, cert. ef. 7-1-06; BCD 1-2007, f. 2-15-07, cert. ef. 4-1-07; BCD 9-2008(Temp), f. & cert ef. 6-25-08 thru 12-22-08; BCD 20-2008, f. 9-30-08, cert. ef. 10-1-08; BCD 4-2010, f. 5-14-10, cert. ef. 7-1-10

918-480-0010
Amendments to the Oregon Residential Specialty Code

(1) The **Oregon Residential Specialty Code** is adopted and amended pursuant to OAR chapter 918, division 8. Amendments adopted for inclusion into the **Oregon Residential Specialty Code** are placed in this rule, showing the section reference and a descriptive caption.

(2) Effective April 1, 2008:

(a) The 2006 Edition of the Uniform Plumbing Code, as published by the International Association of Plumbing and Mechanical Officials and amended by the division, is adopted to provide the plumbing provisions of the **Oregon Residential Specialty Code**; and

(b) The 2008 Edition of the NFPA 70, National Electrical Code as amended by the division is adopted to provide the electrical provisions of the **Oregon Residential Specialty Code**. See OAR chapter 918, division 305 for Oregon amendments to NFPA 70, National Electrical Code.

(3) During the phase-in period established in OAR 918-480-0005(3), plans designed to the **2005 Oregon Residential Specialty Code** must use the plumbing and electrical provisions included in that 2005 code. Plans that are designed to the **2008 Oregon Residential Specialty Code** must use the plumbing and electrical provisions adopted in this rule.

(4) Effective October 1, 2008, the following sections of the 2008 Oregon Residential Specialty Code are amended:

(a) Section R 109.1.4.1 Moisture content.

(b) Section R318.2 Moisture content.

(5) Effective February 1, 2009, following sections of the **2008 Oregon Residential Specialty Code** are amended:

(a) Section R602.10.9 Interior braced wall support.

(b) Section R613.2 Window sills is added

(c) Section R.613.2.1 Operation for emergency escape is added

(d) Chapter 43 Referenced Standards.

(6) Effective October 1, 2009, the following sections of the **2008 Oregon Residential Specialty Code** are amended:

(a) Section AG106 Entrapment Protection For Swimming Pool And Spa Suction Outlets is added.

(b) Section AG107 Abbreviations.

(c) Section AG108 Standards.

(7)(a) Effective January 1, 2010, the following sections of the **2008 Oregon Residential Specialty Code** are amended:

(A) Section R703.1 General

(B) Section R703.1.1 Exterior Wall Envelope

(b) Changes to the **2008 Oregon Residential Specialty Code** made by subsection (a) of this section are subject to a grace period ending March 31, 2010. During the grace period, the building official must approve installations that meet either the standard adopted under Section R703.1 prior to this amendment or the standard established by this amendment.

(8) Effective January 1, 2011, the 2008 Oregon Residential Specialty Code is amended by adopting Appendix F Radon Control Methods. This provision is adopted January 1, 2011 but do not become enforceable until April 1, 2011 as authorized by Chapter 83, 2010 Laws (Senate Bill 1025).

NOTE: The amendments are published in their entirety in Table 2-R beginning on page 9.

[Publications: Publications referenced are available for review at the division. See division web site for information on where to purchase publications.]

Stat. Auth.: ORS 455.020, 455.110, 455.525 & 455.610
Stats. Implemented: ORS 455.610
Hist.: BCA 18-1993, f. 8-24-93, cert. ef. 8-29-93; BCA 28-1993, f. 10-22-93, cert. ef. 1-1-94; BCA 29-1993, f. 11-24-93, cert. ef. 12-1-93; BCD 6-1995, f. 3-31-95, cert. ef. 4-1-95; BCD 3-1996, f. 2-2-96, cert. ef. 4-1-96; BCD 22-1996(Temp), f. 10-1-96, cert. ef. 10-4-96; BCD 5-1997, f. 3-21-97, cert. ef. 4-1-97; Administrative Reformatting 1-19-98; BCD 3-1998, f. 1-29-98, cert. ef. 4-1-98; BCD 19-1998, f. 9-30-98, cert. ef. 10-1-98; BCD 3-2000, f. 1-14-00 cert. ef. 4-1-00; BCD 19-2000(Temp), f.& cert. ef. 8-15-00 thru 2-10-01; BCD 32-2000, f. 12-27-00, cert. ef. 1-1-

01; BCD 3-2001, f. 2-9-01, cert. ef. 3-1-01; BCD 2-2002, f. 3-5-02, cert. ef. 4-1-02; BCD 22-2002(Temp), f. 9-13-02 cert. ef. 10-1-02 thru 3-29-03; BCD 30-2002, f. 12-6-02, cert. ef. 1-1-03; BCD 1-2003(Temp), f. & cert. ef. 1-10-03 thru 3-31-03; BCD 33-2002, f. 12-20-02 cert. ef. 4-1-03; BCD 15-2004, f. 9-10-04, cert. ef. 10-1-04; BCD 5-2005, f. & cert. ef. 3-28-05; BCD 9-2006, f. 6-30-06, cert. ef. 7-1-06; BCD 1-2007, f. 2-15-07, cert. ef. 4-1-07; BCD 5-2008, f. 2-22-08, cert. ef. 4-1-08; BCD 13-2008(Temp), f. & cert. ef. 7-3-08 thru 12-30-08; BCD 21-2008, f. 9-30-08, cert. ef. 10-1-08; BCD 24-2008(Temp), f. & cert. ef. 10-6-08 thru 4-1-09; BCD 1-2009, f. 1-30-09, cert. ef. 2-1-09; BCD 8-2009, f. 9-30-09, cert. ef. 10-1-09; BCD 5-2010, f. 5-14-10, cert. ef. 7-1-10