



# Oregon

Kate Brown, Governor

Department of Consumer and Business Services

Building Codes Division

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## ***Mechanical Board***

Regular meeting agenda

Wednesday, September 2, 2015, 9:30 a.m.

Conference Room A

Board meetings are broadcast live via the Internet at

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### **I. Board business**

- A. Call to order
- B. Roll call
- C. Approval of agenda and order of business
- D. Approval of the combined board meeting minutes with the Construction Industry Energy Board of [October 30, 2014](#)
- E. Date of the next regularly scheduled meeting: December 2, 2015
- F. Welcome new board member Stan Danielson, heat and frost insulation craft person position created by House Bill 2005

### **II. Public comment**

*This time is available for individuals wanting to address the board on **non-agenda items only**. The board will not take action on non-agenda items raised under public comment at this meeting. Testimony on agenda items will be heard when the item is called. (See "*Issues to remember when addressing board*" at the end of this agenda).*

### **III. Reports**

- A. Building Codes Division report
- B. Program update

### **IV. Communications**

- A. Updated [errata](#)
- B. Statewide Code Interpretation: [No. 15-02](#) Craft Distillery Occupancy Classification

### **V. Appeals - None**

### **VI. Unfinished business - None**

### **VII. New business**

Board review and recommend to the Administrator [proposed code change](#) to the definition of a conveyor pizza oven in the Oregon Mechanical Specialty Code

### **VIII. Announcements - None**

## IX. Adjournment

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### Issues to remember when addressing the board:

- All public participation is subject to the discretion of the board Chair for order of testimony, length and relevance.
- Speakers are generally limited to five minutes.
- Please register on the attendance registration form and on the public testimony registration form, listing the appropriate agenda item.
- The board Chair will call you to the front testimony table.
- Please state your name and the organization you represent (if any).
- Always address your comments through the Chair.
- If written material is included, please provide 20 three-hole-punched copies of all information to the boards coordinator prior to the start of the meeting and, when possible, [staff](#) respectfully requests an electronic copy of materials 24 hours prior to the meeting.

**Interpreter services or auxiliary aids for persons with disabilities are available upon advance request. Persons making presentations including the use of video, DVD, PowerPoint, or overhead projection equipment are asked to contact boards coordinator 24 hours prior to the meeting. For assistance, please contact [Debi Barnes-Woods](#) at (503) 378-6787.**

Please do not park vehicles with "E" plates in "customer only" spaces.

*Note:* For information regarding re-appointments or board vacancies, please visit the Governor's [website](#).

**Mechanical Board-Construction Industry Energy Board**  
**Combined meeting minutes**  
**October 30, 2014**

**Mechanical members present:** Jay Winchester, Chair, building official  
Linda Kennedy, Vice-chair, natural gas Company, or other utility  
Eric Fanning, HVAC installer  
Chris Miller, sheet metal contractor  
Derek Frazier, sheet metal installer  
Gerald Scheuermann, plumbing industry  
Darrell Skondin, municipal mechanical inspector

**Members absent:** Jay Hansen, HVAC contractor  
Vacancy, Public member  
Vacancy, Heat and frost insulation craftsperson

**CIEB members present:** Steven Trapp, Chair, representing EE Board  
Bruce Dobbs, Vice-chair, representing RMSB  
Timothy Frew, representing EE Board  
Rene Gonzalez, representing BCSB  
Gregory Nelson, representing BCSB  
Darrell Skondin, representing Mechanical Board  
Travis Argue, representing State Plumbing Board  
Martin Stipe, representing State Department of Energy

**Members absent:** John Chmelir, representing RMSB  
Jay Hansen, representing Mechanical Board  
Matthew Rozzell, representing State Plumbing Board

**Staff present:** Brett Salmon, manager, policy and technical services  
Mark Heizer, mechanical & energy code specialist  
Debi Barnes-Woods, boards coordinator

**Guests Present:** Stan Danielson, Local No. 36  
Kate Newhall, FocusPoint Communications

**I. Board business**

**A. Call to order**

Brett Salmon, manager, policy and technical services, called the combined Mechanical and Construction Industry Energy Board meeting to order at 9:34 a.m. The meeting was held at Building Codes Division, Conference Room "A," 1535 Edgewater Street NW, Salem, Oregon.

**B. Roll call**

- Mechanical Board - Quorum present. Requires six members. Linda Kennedy, Vice-chair, was connected by teleconference. Jay Hansen and Dereck Frazier were absent excused.
- Construction Industry Energy Board - Quorum present. Voting for this board requires super majority vote. 11 member board. Rene Gonzalez, Building Codes Structures Boards connected by teleconference following the approval of the amended agenda. John Chmelir, RMSB; Jay Hansen, Mechanical Board; and Matthew Rozzell, State Plumbing Board were all absent excused.

**C. Approval of agenda and order of business**

The agenda was amended to add Agenda Item I.G. Welcome State Plumbing Board members and to move New Business Item VII before Public Comment.

The agenda was **RULED** approved as amended.

**D. Approval of the board meeting minutes**

- Mechanical Board – Meeting minutes of June 4, 2014, approved.

**E. Date of the next regularly scheduled meetings:**

- Mechanical Board – December 3, 2014
- Construction Industry Energy Board – April 23, 2015

**F. 2015 board meeting dates**

*The agenda was amended to add this item*

**G. Welcome State Plumbing Board members:**

- Travis Argue, journeyman plumbing
- Matthew Rozzell, building official

*(Rene Gonzalez, representing the Building Codes Structures Board, connected to the meeting by teleconference. Because the new business item on the agenda needed a vote by the CIEB, the item was moved to be heard before public comment)*

**VII. New business**

**Board approval of the technical and scientific facts of Statewide Alternate Method No. 14-01 Installation of Vestibules**

There was no board discussion.

**Motion by Bruce Dobbs, Vice-chair**, to approve the technical and scientific facts of Statewide Alternate Method No. 14-01 Installation of Vestibules

**Motion carried unanimously**

*(Agenda back in order)*

**II. Public comment** – None

### **III. Reports**

#### **A. Building Codes Division report**

**Code adoption:** Structural, mechanical and energy codes effective date was July 1, 2014. Residential, plumbing and electrical codes effective date was October 1, 2014. Manager Salmon added that a new process has begun with the residential code moving to a six-year adoption with a three-year interim. The three-year interim review is what the board is reviewing today.

**Update on code training:** The division has developed a new curriculum and is offering 2014 code-change classes for the upcoming codes. The training combines code changes for the Oregon Structural Specialty Code (OSSC), Oregon Mechanical Specialty Code (OMSC), and Oregon Energy Efficiency Specialty Code (OEESC).

The division is implementing changes to rules that impact certified building officials and building inspectors. These rules add specific training requirements for new building officials, modify continuing education requirements for building officials and inspectors, develop an application process for inspector certifications with non-traditional scope, and expand the scope of certain inspector certifications.

In the past, building officials and inspectors have received training and continuing education from a variety sources. As of April 1, 2014, the division will provide all state required training directly with a goal to improve code consistency.

#### **D. Program update**

Mark Heizer, mechanical & energy code specialist, said the 2014 Oregon Mechanical Specialty Code and the 2014 Oregon Energy Efficiency Specialty Code were both effective July 1, 2014. On-line training was also discussed.

### **IV. Communications - None**

### **V. Appeals – None**

### **VI. Unfinished business**

#### **Board review of the mechanical checklist created by the Mechanical Specialty Code Inspection Committee for ensuring that mechanical systems operate as efficiently as possible**

Mr. Heizer explained that at the last combined meeting of the Mechanical Board and the Construction Industry Energy Board, both boards discussed methods for increasing energy efficiency in buildings to meet the requirements of [ORS 455.530\(2\)](#). He said two suggestions came out of that meeting:

- Methods to address existing buildings with emphasis on incentives for retrofits; and
- Improving new installations with the use of an inspection checklist

Martin Stipe, Oregon Department of Energy; Darrell Skondin, municipal mechanical inspector; and Stan Danielson, International Association of Heat & Frost Insulators & Allied Workers volunteered to participate on the advisory group.

**VIII. Announcements** - None

**IX. Adjournment**

Manager Salmon adjourned the meeting at 11:05 a.m.

Respectfully submitted by Debi Barnes-Woods, boards administrator/coordinator



Errata for the  
2014 Oregon Mechanical Specialty Code

Agenda  
Item  
IV.A.

~~Strikethrough~~ text represents deleted language.  
Underlined text represents added language.

Errata Summary:

- Section 304.11

Chapter 3 General Requirements

**304.11 Guards.** Guards shall be provided where appliances, equipment, fans or other components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such appliances, equipment, fans, components and the top of the guard shall be located not less than 42 inches (1067 mm) above the elevated surface adjacent to the guard. The guard shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the Building Code.

Exception: This section shall not apply to the replacement, repair or maintenance of an existing appliance or piece of equipment lawfully in existence at the time of the adoption of this code.

Contact

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**No. 15-02**

**Craft Distillery Occupancy Classification**

**Agenda  
Item  
IV.B.**

**Code Edition:** 2014 Oregon Structural Specialty Code (OSSC)  
2014 Oregon Mechanical Specialty Code (OMSC)  
2014 Oregon Fire Code (OFC)

**Code Section:** OSSC Sections 306, 307, 311, 414 and 415  
OMSC Section 502.9.5 and 511  
OFC Sections 5001 and 5701

**Date:** August 12, 2015

**Subject:** Occupancy classification for various uses within craft or micro distilleries.

**Questions:**

1. Is the barrel storage room for a craft distillery required to be classified and constructed as an H-3 occupancy if the amount of distilled spirits stored in wooden barrels exceeds the OSSC Table 307.1(1) Maximum Allowable Quantity (MAQ) for Class 1B or 1C liquid?
2. Is the barrel storage room required to have hazardous exhaust?
3. Does the barrel storage room require hazardous classification for electrical wiring?
4. Does grain handling trigger an H-2 occupancy for areas where:
  - a. Pre-bagged grain is handled or stored?
  - b. Milling of grain occurs?

**Answers:**

1. No, not when the storage is in a separate control area constructed per OSSC 414.2.1 and 414.2.4.
2. No.
3. No.
4.
  - a. No.
  - b. Varies depending on analysis per OSSC 414.1.3

*In accordance with OAR 918-008-0110, the information contained in this statewide code interpretation is legally binding on any party involved in activities regulated by applicable Oregon law, applicable Oregon regulations or the state building code. If the information contained in this statewide code interpretation is cited as a basis for a civil infraction, a representative of the jurisdiction must cite the interpretation number found in this document.*



## Analysis:

### OCCUPANCY CLASSIFICATION:

A distillery is typically classified as an F-1 occupancy (OSSC 306). This designation applies to craft distilleries where the quantities of flammable liquids in the remainder of the facility are within those allowed for the F-1 classification.

More specific construction requirements for the storage of distilled spirits in wooden barrels and casks are found in Chapters 50 (Hazardous Materials – General Provisions) and 57 (Flammable and Combustible Liquids) of the Oregon Fire Code (OFC). The **storage** of distilled spirits and wines in wooden barrels and casks is specifically excluded from consideration both as a hazardous material and under the scoping language for flammable liquids (OFC Section 5001.1, Exception 10 and OFC 5701.2, Exception 10.)

When quantities of a 1B or 1C liquid over 240 gallons stored in barrels (in a sprinklered space) exceed the MAQ under OSSC Section 307 (Table 307.1(1)), a potential outcome is classification of the barrel storage room as an H-3 occupancy. However, the more specific construction requirements found in the OFC exempt storage of distilled spirits in barrels and casks from MAQ limits.

**Barrel Storage.** In order to meet the exceptions found under the OFC, barrel storage must be in a separate control area requiring a 1-hour fire barrier between the storage area and the remainder of the facility.

Barrel storage located in a storage control area is considered separated, has no MAQ, and thus would not be included in the total MAQ quantities in processing areas. During the distillation process and filling of the barrel, processing areas where a standard wooden barrel (53 gallons) is filled can expose more than 30 gallons of 1B or 1C liquids to “open use”. To remain under the MAQ limits for open use, the building must be sprinklered throughout to maintain a 60 gallon open use maximum per OSSC Table 307.1(1). Some distilleries use barrels under 30 gallons or have specialized collection and transfer methods that can maintain the process within a “closed use” that allows a higher MAQ without sprinklers. The required hazardous material report must include this information.

The H-3 flammable liquid storage requirements found in OSSC Sections 414.2 through 414.5, 414.7, 415.9 and 415.8.2, reference construction in accordance with the *Fire Code*, which exempts these sections. When there are sprinklers and 1-hour separation, there are no significant differences for the required safeguards between S-1 storage in an F-1 occupancy and the requirements for H-3 storage in wooden barrels. <sup>i</sup>

**Barrel Processing.** Barrels in processing areas are not considered “**in storage**” and would count toward the MAQ limits in the processing area. The MAQ limit for any sprinklered control area is 60 gallons of open use and 240 gallons of closed use/storage (which includes any open use quantities). Any barrels in the process area are considered in-use (not stored), if not in a separate storage area. Barrels filled or used for mixing, bottling, etc. are not distinguished from barrels “stored”. Thus, the barrel quantities are counted toward the space MAQ. The potential classification of the process area would be an H-3 occupancy.

## **HAZARD MATERIAL VENTILATION:**

Mechanical hazardous material ventilation is addressed in the OMSC. OMSC 502.9.5 shows the more specific requirements for flammable and combustible liquids and exempts hazardous ventilation requirements where exempted from the *Fire Code*.

## **ELECTRICAL CLASSIFICATION:**

Special electrical classification requirements are listed in OFC Section 5701.5. However, this section does not apply because 5701.2 exempts barrel storage locations from Chapter 57. Because a special classification is not assigned for this space, no special electrical requirements are required under the Oregon Electrical Specialty Code (OESC).

## **COMBUSTIBLE DUSTS:**

In areas where Class 1B or 1C liquids or combustible dusts are processed or handled, special measures or hazard classification may apply based on OSSC Section 414.1.3. This code section requires a hazardous material report identifying the maximum expected quantities of hazardous materials stored, used in a closed system, and used in an open system. This report determines whether or not the processing areas exceed MAQs and require "H" occupancy. When the distillation and bottling processes are not performed simultaneously, many smaller operations can remain below the MAQs for an H-3 classification. The hazardous material report must also identify how the process will or will not exceed the MAQs and how ventilation systems will maintain flammable vapor levels below 25% of the lower flammable limit (LFL) levels or whether hazardous material exhaust is required.

Grains in a craft distillery are crushed or rough milled, rather than processed into fine flour and do not produce combustible dust. A hazard report is not necessary for the use of bagged and palletized pre-milled grain.

Milling grain on-site, bulk storage of milled or un-processed grain in silos, and use of grain conveyor systems requires identification of the process in the hazardous materials report. A qualified person shall identify grain handling processes and whether the process requires a dust control system (OMSC Section 511). The report must identify whether the process produces dust in quantities that present an explosion hazard and H-2 occupancy classification.

## **Contact:**

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<sup>i</sup> *Analysis of differences between F-1/S-1 storage and H-3:*

*Under an H-3 occupancy, due to the exemption of barrel storage under the OFC, the following would be the only remaining special construction requirements:*

- 1. 25% of the storage room on an exterior wall*
- 2. An approved manual emergency alarm system to notify on-duty occupants of a spill in the storage room; the alarm is monitored at a continuously supervised location (OSSC 414.7.1 & 414.7.3)*
- 3. The manual emergency alarm system requires stand-by power (414.5.3)*
- 4. Upgraded egress requirements under OSSC Ch. 10 for an H-3 occupancy:*
  - a. Limits on egress thru intervening spaces (1014.2)*
  - b. Common path limit of 25-ft (1014.3)*
  - c. Larger spaces require two doors (1015.1: max occupant load of 3 for H-3 to have one exit)*
  - d. Reduced travel distance allowed for H-3 vs. F-1 (1016)*
  - e. Panic hardware (fire door rated) on the exit door(s) from the H-3 storage room (1008.1.10)*

*Elimination of these additional construction requirements does not lessen the relative safety of the building. Unlike the accidental release of some hazardous materials, a spill in a barrel storage room would not create an immediate toxic or explosive atmosphere. Speedy, unimpeded egress is not crucial (no toxic cloud). Given limited space and number of occupants, warning others to not re-enter the space is not essential.*

**State of Oregon**

**Board memo**

**Building Codes Division**

**September 2, 2015**

**To:** Mechanical Board

**From:** Mark Heizer, mechanical & energy code specialist, Policy and Technical Services

**Subject:** Definition of a conveyor pizza oven in the Oregon Mechanical Specialty Code (OMSC)

**Action requested:**

The Division requests the board review and approve a proposed code change to revise the definition of a conveyor pizza oven from a Medium Duty Cooking Appliance to a Light Duty Cooking Appliance.

**Background:**

Current model mechanical code defines a gas or electric conveyor pizza oven as a *medium duty cooking appliance*. This definition comes to the OMSC via the model codes (International Mechanical Code). Medium duty cooking appliances are required to have a Type I hood (grease hood) per OMSC Section 507.2.1. Light duty cooking appliances may be installed under less restrictive Type II hoods.

The Division has received many calls from building officials and owners of pizza restaurants regarding this issue. The Division has investigated current standard practices for installation of conveyor pizza ovens and found that a majority of current installations are installed as light duty cooking appliances under Type II hoods. The question is whether jurisdictions should enforce to the most restrictive code application or whether these installations are currently operating safely and meet intent of code.

The code definition for *light duty cooking appliances*, shows that jurisdictions are justified in allowing operation under a Type II hood as a light duty appliance. A conveyor pizza oven has three functions: 1) Baking of the crust (bread product), 2) Baking/heating of the toppings (pre-cooked meats, vegetables), and 3) Melting of cheese. These three functions are covered under the definition for a light duty cooking appliance: gas and electric ovens including “conveyorized baking/finishing” ovens, standard ovens, and cheesemelters. The baking of the pizza takes 3 to 6 minutes and does not involve cooking of raw meats or other products that would release grease or smoke into the air in quantities that can accumulate on surfaces of the exhaust hood or ductwork.

The Division took samples on surfaces at several operating conveyor pizza ovens. Swabs were taken on the top of the oven and different surfaces inside the Type II hood. The samples showed no sign of standing grease that might present a grease hazard. Photos and designation of the sample locations were noted. Roof fans were also viewed where access was available.

Investigation at several sites confirmed that grease does not accumulate on the surfaces of the hood, cooking equipment or nearby walls. These ovens were working well without risk to employees or the public. Relocating gas and electric conveyor pizza ovens from the *Medium duty cooking appliance* definition to the *Light duty cooking appliance* definition brings the OMSC in alignment with current practice in most of the state.

**Options:**

- Approve the conveyor pizza oven definition code change in the 2014 OMSC as proposed by the division with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Amend and approve the conveyor pizza oven definition code change in the 2014 OMSC proposed by the division with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Disapprove the proposed changes the conveyor pizza oven definition in the 2014 OMSC and state the reason for the disapproval for the record.

**Recommendation:**

Approve the conveyor pizza oven definition code change in the 2014 OMSC as proposed by the division, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

**Code Change:**

**Suggested changes** (~~strikeout text~~ denotes deletion, **bold/underline** denotes addition)

**SECTION 202  
DEFINITIONS**

**LIGHT-DUTY COOKING APPLIANCE.** Light duty cooking *appliances* include gas and electric ovens (including standard, bake, roasting, revolving, retherm, convection, combination convection/steamer, countertop conveyORIZED baking/finishing, deck, ~~and~~ pastry, **and deck or conveyor pizza ovens**), electric and gas steam-jacketed kettles, electric and gas pasta cookers, electric and gas compartment steamers (both pressure and atmospheric) and electric and gas cheesemelters.

**MEDIUM DUTY COOKING APPLIANCE.** Medium-duty cooking *appliances* include electric discrete element ranges (with or without oven), electric and gas hot-top ranges, electric and gas griddles, electric and gas double-sided griddles, electric and gas fryers (including open deep fat fryers, donut fryers, kettle fryers and pressure fryers), ~~electric and gas conveyor pizza ovens~~, electric and gas tilting skillets (braising pans) and, electric and gas rotisseries.