



Oregon

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November 17, 2009

Oregon Solar Energy Code Committee

October 22, 2009

Meeting Summary

****NOTE:** *The following is a summary of the committee's discussion.*

To review the meeting in its entirety, the archived video of the meeting is available on the committee's Web site at the following link: <http://www.bcd.oregon.gov/committees/10sec.html>

Members Present: Doug Aljets, Electrical and Elevator Board **and** Solar Installer for NW Current Energy, LLC
Brian Crise, International Brotherhood of Electrical Workers (IBEW), Local 48
Jerry Henderson, Independent Contractor for Department Of Energy (DOE) **and** Energy Trust of Oregon (ETO)
Robert Lane, Three Phase Electric
Dave Mumford, Lear Electric
Robin Rabirot, Oregon Solar Energy Industries Association (OSEIA) **and** EC Company
Len Ralston, Solar Installer for Dynalectric
Robert Rice, Oregon Building Officials Association (OBOA) **and** Josephine County Building, Official
Marcus Reed, State Fire Marshal
Jaimes Valdez, City of Portland – BPS/BDS
Nathan Philips, National Electrical Contractors Association (NECA)

Members Absent: None

Guests Present: Greg Creal, Central Electrical Training Center
Bruce Beyer, BEB 237
Johnathan Balkema, OHBA
Kendal Hansen, Energy Trust
Scott Barrie, OHBA
Peter Strawhal, AIA

Staff Present: Chris Huntington, Policy and Technical Services Manager
Dennis Clements, Electrical Program Chief
Areon Teverbaugh, Policy Analyst
Jim Denno, Policy Analyst
John Powell, Facilitator
Shauna Parker, Rules Coordinator
Dana Fischer, Building Code Para-Technical

Chris Huntington, Manager Policy and Technical Services opened the meeting, discussing the intent of the document the committee has been reviewing. The division has been discussing options to create a stand-alone code or to keep provisions in the state codes where they currently reside. The best option is to move forward with a stand-alone document which would include structural and administrative provisions. The division believes the electrical provisions should remain in the Oregon Electrical Specialty Code (OESC). Manager Huntington asked if the committee had any comments or concerns they wished to discuss.

Nathan Philips commented that he and the National Electrical Contractors Association (NECA), is in support of a stand-alone document. He also expressed concern that having a stand-alone document and referencing electrical provisions back to Article 690 of the OESC could be problematic because it means there would be two electrical documents industry would be required to refer to.

Jerry Henderson asked if the electrical provisions would be reviewed by the electrical board. Manager Huntington replied that through 2009 legislation, a new board was created called the Construction Industry Energy Board. This board includes members from the Electrical, Structural and Residential Boards. He explained that one of the roles of the new board will be to review energy provisions.

John Powell, Facilitator asked if Robert Rice wanted to share with the committee, work that the sub-committee has been working on. Robert Rice briefly discussed the work the sub-committee has developed for Chapter 3. He stated they have not had time to completely review the chapter, but hopes it can be discussed today.

Chapter 4 Electrical Requirements

III Disconnecting Means

Mr. Powell reminded the committee that they were assigned to research existing disconnects. He explained he found there to be several manufacturers and types of fuses, combiner boxes, combiner boxes with disconnects, disconnects and many others available on the market. He concluded that there are several choices that would work to help create a simple method for a firefighter who is on a roof to separate out disconnects from the rest of an electrical system. He asked the committee to provide input.

Committee members discussed different types of systems associated with combiner boxes. Marcus Reed commented that the idea of having equipment on the roof, while ideal, the reality is the fire industry would act as if the equipment is hot and would need to take the necessary precautions to make sure no injuries occur. *He expressed the fire communities desire would be to have equipment located in one spot.* Mr. Powell stated the committee will need to ensure appropriate shut off equipment requirements are included in the code.

Committee members discussed issues that can occur when equipment is located on a roof, one being there is a danger if a firefighter is using a chain saw and could potentially cut through a roof into the electrical conduit. Committee discussion continued. *The committee agreed to delete Section 690.13 All Conductors, subsection (A) Fire Fighting Disconnect and subsection (B) Utility Disconnect.*

The committee continued to discuss disconnects and the fire life and safety hazards associated with them, sharing individual ideas and concerns.

Section 690.4 Installation

Brian Crise read to the committee language being discussed at the national level for proposal number 4-187. Mr. Powell suggested the committee discuss whether or not the language should be added to the proposed code. Committee members agreed the proposed language should be added and continued to discuss the proposed language, potential safety concerns and language options.

The committee discussed national code proposal number 4-228 and safety concerns related to how wiring is installed in roof lines and whether wire should be installed through a roof line or not.

After considerable discussion, the committee decided to move the definition for “*roof covering*” found in Chapter 15 of the Oregon Structural Specialty Code (OSSC) to Chapter 2 of the proposed OSEC and decided to add “subsection E” which reads “*(E) Circuit routing. PV source and output circuits shall not be embedded in the roof covering. Exception: Embedment shall be permitted in areas directly below PV modules and associated equipment or where passing perpendicularly through the roof assembly.*”

Motion to approve as modified Section 690.4 which includes the addition of subsection (E).
Motion approved unanimously.

Mr. Powell summarized the changes to this section, stating the two sections that remain tabled are Section 690.13 and 690.14 and that the proposed changes to both sections were not adopted. The sections remain as written per what is in the national model code. He also stated that Section 690.4 was modified by adding a new subsection “E”.

Chapter 3 Structural Requirements

Mr. Rice discussed the revision for Chapter 3 he handed out to the committee today. He stated that as the sub-committee reviewed Chapter 3, they concluded that Chapter 3 is not technically structural provisions, but installation requirements. Mr. Rice suggested re-naming Chapter 3 to “Installation Requirements”, and then create a new sub-section in Chapter 3 for structural requirements. He commented on the work the sub-committee is preparing for the Administrative Section, stating that their intent is to bring a draft copy back to the committee to review. The document will include structural provisions currently found in the OSSC, which also need to be incorporated into the draft OSEC. He continued to explain other details that should be included in the Administrative Section if the OSEC is to be a stand-alone code.

Mr. Powell suggested that the committee move forward with discussion on fire fighter access for Section 301.1

Section 301.1 Equipment Location and Controls

Committee members discussed power disconnects and whether they should be located on the exterior of a structure or not. Concerns discussed included where electrical lines should be located and how the lines could be installed and still be considered to be “visible” to fire fighters. The committee also discussed how far below the roof line conduit should be located. They expressed that 18 inches is an acceptable depth for conduit to be located and would place it below the depth of a saw blade cutting through a structure's roof line.

Mr. Reed proposed three additional exceptions for this section, which he read out loud to the committee. The committee discussed the exceptions, offering comment on how they envision the exceptions would work and if they meet fire and life safety guidelines. Committee members continued to discuss different disconnect scenarios.

Summary

Ms. Teverbaugh wrapped up committee discussion asking for the purpose of the next meeting's agenda and if the committee wants to change the name of Chapter 3 from "Structural Requirements" to "Installation Requirements". She also asked if the intent will be to include permitting, plan review and other aspects typically found in Chapter 1 Administration, in this code to align it with the other state codes. Committee members discussed Ms. Teverbaugh's questions.

Adjourn

The meeting adjourned at 3:58 p.m.