



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

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Energy Code Technical Advisory Group Meeting Review Notes for March 26, 2021

Agenda Items	TAG Actions
1. Welcome and Introductions	Meeting called to order at 8:32 a.m. Kjell Anderson welcomed everyone and roll was called. A quorum was present.
<p>TAG Members Present: Kjell Anderson, Chair; Michael Baranick*; Erik Bedell; CJ Brockway; Mike Fowler; Patrick Hayes; Gary Heikkinen; Scott Henderson; Luke Howard; Duane Jonlin; Elizabeth Joyce*; Jon Lange*; Mike McGivern; Erik Olon; David Reddy; Lisa Rosenow; Poppy Storm*; Gavin Tenold; Shaun Vig; Amy Wheelless</p> <p>Visitors Present: Caroline Traube, Kevin Duell, Scott Kenaston, Mike Kennedy, Eric Lacey, Carolyn Logue, Robby Oylear, Alexander Ratcliff, Tena Risley, Brad Rowe, Louis Starr, Kelly Thomas</p> <p>TAG Members Absent: Martin Connor, Chris Holliday, Bill Kraus*, Allan Montpelier, Henry Odum*, Andrew Pultorak*</p> <p>Staff: Krista Braaksma</p> <p style="text-align: right;">* indicates an alternate member</p>	
2. Review and Approve Agenda	Agenda approved as written.
3. Review and Approve Minutes	The meeting notes of the March 12, 2021 , meeting were approved as written.
4. Review Integrated Draft – 2021 Washington State Energy Code, Commercial	
<i>Chapter 4 C407</i>	<p>The list of mandatory provisions for Section 407 was discussed and compared with the IECC format. Consensus was to move forward with the individual applicable subsections for C403, as currently listed in the WSEC, while for C405 referencing the whole section with a footnote that a referenced code section includes all relevant subsection except as indicated.</p> <p>Since the IECC did not include exceptions for heated or cooled vestibules, that exception for Section C403.4.1.4 was removed from the WSEC. The exception for C403.4.2 for Group R was removed as well, since the referenced section states in the opening paragraph that it does not apply to Group R.</p> <p>A reference to Section C401.3 was added, since the proponent of that section noted it was intended to be mandatory and should be in the IECC errata.</p>
<i>C409</i>	<p>The TAG reviewed the new metering language in the IECC and compared it to the existing WSEC language. The biggest difference between the two was the scope of buildings required to have metering. The IECC only requires it for electrical, but sets the threshold at 25,000 square feet; the WSEC requires it for all energy sources but at a threshold of 50,000 square feet. Consensus was to go with the more stringent requirements of both—moving forward with the WSEC language but with the threshold lowered to 25,000 square feet of gross conditioned floor area.</p>

C410	The TAG discussed the changes in the IECC refrigeration requirements, which removed the majority of the text and inserted a reference to the federal requirements. Mike Kennedy said there were still some units that were not covered under the federal rules. The TAG determined that the existing WSEC requirements should be retained to cover those items, but the exception for, and reference to, those covered under DOE 10 CFR 431 should be added. The new tables from the IECC will also replace the WSEC efficiency tables.
Chapter 5	The TAG debated the move of change in space conditioning from the alterations section to the additions section. In the end, the TAG felt it should remain in the alterations section.
Research items/ Homework	<p>The TAG went through a number of items flagged for further research and accepted the following:</p> <p>Data center systems: move forward with the IECC language.</p> <p>C402.1.1.3 Greenhouses: move forward with the IECC language, replacing non-opaque envelope with fenestration, removing the orientation component for vertical fenestration, and using the IECC U-factor of 0.6 for vertical fenestration.</p> <p>C402.4.4 Doors: Kjell brought forward modifications to better coordinate existing WSEC language with the new IECC language: Modification of the definition for garage door, adding a new row for garage doors with glazing between 14 and 50 percent to Table C402.1.4, and modifying the WSEC language under C402.4.4 to reference the table.</p> <p>C403.4.1.1 Heat pump supplemental heat: retain the WSEC language. It has more stringent requirements and better clarity.</p> <p>C403.7.1 Demand control ventilation: Mike Kennedy brought forward modifications to the IECC language for clarity and conformity to WSEC provisions.</p> <p>C403.8.4 Low capacity ventilation fans: David Reddy brought forward language coordinating the IECC changes with the requirements in the residential provisions for range hoods.</p> <p>C403.9.2.1/9.2.4: Adding the word “Condenser” to the titles to clarify that it is addressing condenser heat recovery and not just heat recovery.</p> <p>C403.9.2.5 Heat recovery in healthcare: do not adopt IECC section. Better correlated through keeping existing WSEC provisions.</p> <p>C405.1 General lighting: Duane Jonlin brought forward modifications to better coordinate the new IECC language with how the WSEC handles residential lighting.</p> <p>C405.2.1 Occupant sensor controls: Duane Jonlin brought forward modifications to this section to better coordinate the various occupancy types.</p> <p>C406: Mike Kennedy shared his analysis of C406 and a chart showing the relative credit received for various options. The TAG upheld their previous decision to retain the WSEC language for C406.</p> <p>A number of other items were discussed and were determined to require a code change proposal.</p>
MOTION:	There were three motions made to extend the meeting another 10 minutes, adding up to an additional 30 minutes of meeting time.
Significant	The TAG identified the following as significant changes.

<p><i>Changes</i></p>	<p>Section C401.3: Similar to the residential provisions of the WSEC, a requirement was added to include a certificate listing the specifics of the R-values and U-factors of the various building envelope components and the results of air barrier testing.</p> <p>Table 402.4: The U-factor for fixed windows was slightly decreased, and the orientation allowances in SHGC requirements was replaced by requirements for fixed or operable fenestration resulting in much lower SHGC requirements in some windows. This will have a cost impact.</p> <p>Section C402.5.2: The requirements for air barrier testing was divided into two sections—one for dwelling and sleeping units accessed from the outdoors and another for all other buildings. For the former, units are required to be tested individually, although sampling is allowed for buildings with eight or more testing units.</p> <p>Section C403.3.2: The efficiency tables have been updated to the latest federal requirements and are extracted from, and in the same order as, ASHRAE 90.1-2019. This also adds several new tables not previously in the IECC, including heat recovery chillers.</p> <p>Section C403.7.1: The scope of the requirements for demand control ventilation was expanded to include all single-zone systems providing ventilation. This will have a cost impact.</p> <p>Section C403.8.3: The metric for fan efficiency is changed from fan efficiency grade (FEG) to fan energy index.</p> <p>Section C405: There are many small changes throughout the lighting control provisions that could cause an increase in cost. Integration of various systems could result in a significant cost increase.</p> <p>Section C405.2.1.6: A new requirement is added for occupant sensor controls in corridors. This will have a cost impact.</p> <p>Section C405.2.7.3: Specific requirements for setback lighting in outdoor parking areas was added to the exterior lighting controls section.</p> <p>Section C405.2.8: A new section is added for parking garage lighting controls. This section was integrated with existing requirements to eliminate any conflicts.</p> <p>Section C405.3: A new section for lighting efficiency for plant growth and maintenance was added, along with a new reference standard.</p> <p>Section C405.10: The IECC requirements for controlled receptacles includes requirements for a controlled receptacle to be within 12 inches of each uncontrolled receptacle. The previous WSEC requirement was 72 inches.</p> <p>Section C409.1: The threshold for requiring energy metering was reduced from 50,000 square feet to 25,000 square feet. This will have a cost impact.</p> <p>Section C410: The refrigeration section includes new efficiency tables for commercial refrigerators and freezers.</p>
<p>5. Other Business</p>	<p>Due to lack of time, no other business was addressed.</p>
<p>6. Adjourn</p>	<p>The meeting was adjourned at 1:30 p.m.</p>

Attachments: [Final Integrated Draft](#)