



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

Department of Enterprise Services

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Energy Code Technical Advisory Group Meeting Review Notes for July 20, 2018

Agenda Items	TAG Actions
1. Welcome and Introductions	Meeting called to order at 9:05 a.m. Duane Jonlin welcomed everyone and introductions were made
<p>TAG Members Present: Duane Jonlin, Chair; Al Audette; Amy Wheelless; Chuck Murray; Dave Baylon; Gary Heikkinen; Kim Barker; Lisa Rosenow; *Louis Starr; Mike Fowler; Mike Lubliner; Patrick Hayes; Robby Oylear</p> <p>Visitors Present: Eric Vander Mey, Mike Kennedy, Michael Rosenberg, Dave Nehren, Guy Miller, Russell Parson, John Jennings, Michael Baranick, Jon Heller, Mary Kate McGee</p> <p>TAG Members Absent: Alan Duer, Bryan Russo; CJ Brockway, Dean Moody, Jared Sheeks, Jonathan Jones, Todd Blevins, Paul Highly, Treasa Sweek</p> <p>Staff: Krista Braaksma, Lori Yantzer</p> <p style="text-align: right;">* indicates an alternate member</p>	
2. Review and Approve Agenda	Agenda approved as modified. Chuck Murray requested that Env020 be taken off the table and added to the agenda. The TAG concurred.
3. Review and Approve meeting notes for June 29	The meeting summary was approved as written.
4. Review of Commercial Mechanical Code Change Proposals	
EM068	Eric Vander Mey noted this provides a path for not providing the temperature sensor and just setting freeze protection. Duane suggested modifying the proposal to be specific that the protection was being provided for sprinklers and piping. Motion: Robby Oylear, Patrick Hayes moved to recommend approval as modified . Motion carried.
EM050	Duane noted the proposal was added to the agenda after the agenda was originally sent out. There was considerable discussion on the appropriateness of adding and discussing a controversial proposal without adequate notice. Duane asked that the proponent be allowed to present their materials and the proposal can be voted at a later time. PNNL provided a PowerPoint and a handout on their proposal. Michael Rosenberg noted PNNL developed the calculation software but that is not included as a part of the proposal. Any method or software may be used to show compliance. There was also discussion about the use of a tool that is still under development and has not been examined or tested on the requirements. Duane suggested a group get together to beta test the tool.

	<p>Gary Heikkinen had concerns on the carbon emission numbers similar to those concerns regarding 141. He would like to see the software run with different numbers to see the impact it has on the results.</p> <p>Eric noted there would be additional enforcement issues. Robby Oylear felt it could conflict with other code requirements and exceptions. He also didn't think the cost estimate data were realistic.</p> <p>The discussion and vote were tabled to a later TAG meeting.</p>
EM055	<p>Jon Heller, presenting a slideshow, noted they had a number of proposals aimed at clarifying and redirecting some of the DOAS requirements and tried to align them with the goals of the 2015 code for fan and heat energy savings and to reduce reheating.</p> <p>Robby was concerned about instances where exhaust air is required and recirculation is prohibited and this would cap the supply air.</p> <p>Motion: Chuck Murray, Mike Lubliner moved to recommend approval. Motion carried.</p>
EM056	<p>Withdrawn by Proponent</p>
EM057	<p>Robby noted that reducing the airflow to chilled beams could cause them to not function correctly. Eric said that in order to meet the sensible loads in the space you need this airflow. Jon Heller said you could use induced air; he was concerned about the code specifying conditions for one design option.</p> <p>Duane noted the phrase "can utilize" was not good code language.</p> <p>Motion: Robby Oylear, Patrick Hayes moved to recommend approval as modified. Motion carried with two opposing votes.</p>
EM058	<p>Eric introduced this proposal to clarify that exhaust air is also included as ventilation air. He noted there may be a need for additional exceptions for labs or similar uses, but they would most likely be covered under the VOC dilution in the first exception. Robby thought the relief part would also cover labs.</p> <p>Exception 4 was struck for consistency with EM55.</p> <p>Motion: Patrick Hayes, Robby Oylear moved to recommend approval as modified. Motion carried.</p>
EM059	<p>Eric noted there are no federal minimum efficiencies for air-to-water heat pumps, although they are covered by AHRI 550/590. This tries to not get them lumped together with air cooled chillers covered by the same standard and state they are not covered by the maximum tonnage requirement.</p> <p>Lisa asked if the exceptions applied only to the chilled water sentence. Eric said that was the interpretation. It was suggested the sentence be sub-numbered to make that clear.</p> <p>Mike Rosenberg suggested adding "and reported" after "will be calculated."</p> <p>Motion: Robby Oylear, Patrick Hayes moved to recommend approval as modified. Motion carried.</p>
EM060	<p>Duane noted this proposal changes the way you control simultaneous heating and cooling for humidity control. It says it is consistent with 90.1 but looks to be quite different than the language in 90.1. Robby said he was not clear where the proposal was going.</p> <p>Motion: Robby Oylear, Patrick Hayes moved to recommend disapproval. Motion</p>

	carried.
<u>EM062</u>	<p>Dave Baylon noted this was an effort to line the DOAS requirements up with the IBC occupancy classifications and add assembly occupancies not currently required to comply with that section. Duane said a Council interpretation determined daycare was not included, but would be if this applied to all E. Dave said he didn't see why it would be excluded. Those that are classified as I-4 or home daycares would not be included.</p> <p>Motion: Chuck Murray, Dave Baylon moved to recommend approval. Motion carried.</p>
<u>EM063</u>	<p>Jon Heller said this was to get an actual separation between the heating and cooling and to avoid reheating air from multi-zone systems, to keep a VAV system from being called a DOAS system.</p> <p>Eric asked if there was a definition of multi-zone DOAS. After discussion, the TAG agreed to strike multi-zone part, with some additional language refinement.</p> <p>Motion: Dave Baylon, Chuck Murray moved to recommend approval <u>as modified</u>. Motion carried.</p>
<u>EM064</u>	<p>Duane submitted this clarification to refine language people were finding confusing. It clarifies that the tables do not determine when you need energy recovery; energy recover is required for DOAS. Dave suggested adding "for energy recovery requirements" to further clarify.</p> <p>Motion: Lisa Rosenow, Robby Oylear moved to recommend approval <u>as modified</u>. Motion carried</p>
<u>EM065</u>	<p>Jon said he tried to put all the requirements for DOAS together, rather than having it spread over several sections to clarify system requirements. He noted that the 60% minimum sensible recovery effectiveness was similar to the 50% enthalpy effectiveness currently required. Eric asked if the sensible recovery effectiveness was heating or cooling. Duane thought it would apply to both. After a discussion on the equivalency of the sensible recovery effectiveness, it was determined the 50% enthalpy should be included in the sentence and strike the undefined sensible recovery efficiency. Duane felt the section referencing fan hp needed clarification.</p> <p>Mike expressed concern about the 1 W/CFM fan limitation and if there were compliant products on the market. Chuck felt the proposal needed a cost benefit analysis on the fan portion.</p> <p>Motion: Dave Baylon, Chuck Murray moved to recommend approval <u>as modified</u>. Motion carried with one opposing vote.</p> <p>The proponent was requested to provide the cost benefit analysis on the change to the limitation of fan power to 1W/CFM and the availability of equipment.</p>
<u>EM066</u>	<p>Duane noted this proposal was requested to be resubmitted on the long form with the cost information and that has not been received. Duane asked the TAG members if they wanted to move forward on this. The TAG replied in the affirmative.</p> <p>Jon said this was target similar systems to the previous proposal, not trying to use the DOAS for heating and cooling.</p> <p>The TAG discussed wordsmithing the proposal to specify this applies to heating mode. It was suggested there was a conflict with Section C403.7.3.</p> <p>Motion: Dave Baylon, Lisa Rosenow moved to recommend approval. Robby Oylear, Chuck moved to table to correlate with other code sections. Motion carried.</p>

<p><u>EM067</u></p>	<p>Eric said the way the code reads the controls for dedicated outdoor air units have to be based on space temperature. There are DOA units that provide air to spaces like kitchens or other spaces where this is problematic. This would provide an exception for those types of systems.</p> <p>Motion: Robby Oylear, Mike Fowler moved to recommend approval.</p> <p>Motion: Dave Baylon moved to amend to between 65° and 75°. The 65° change was accepted as friendly, but not the 75°.</p> <p>Motion carried <u>as modified</u>.</p>
<p><u>EM080</u></p>	<p>Economizers are currently exempt on DOAS system. This limits that exemption to only those systems where it is difficult to provide economizers, such as a ductless system.</p> <p>Robby didn't think this proposal accomplished that goal. This is way too stringent. He suggested modifying the language similar to that found in the Group R exception. Eric questioned the term non-ducted HVAC system.</p> <p>Robby felt the cost data was not adequate unless the modification to the language was made.</p> <p>Motion: Lisa Rosenow, Dave Baylon moved to recommend approval. Motion failed.</p> <p>Motion: Lisa Rosenow, Dave Baylon moved to recommend approval <u>as modified</u>. Motion originally failed, 2 to 3, but the vote was called into question and re-voted and carried.</p>
<p><u>EM084</u></p>	<p>Jon Heller noted this was just a clarification, adding a reference to the other section that deals with energy recovery.</p> <p>Motion: Robby Oylear, Mike Fowler moved to recommend approval. Motion carried.</p>
<p><u>EM085</u></p>	<p>Michael Baranick noted the first part of the change was just editorial, replacing the word serving with ventilation. The second part adds an exception for DOAS serving multiple zones. This would increase energy use, but decrease costs substantially. It was noted this section was not updated when DOAS was added. It could provide a cheaper option for schools.</p> <p>Motion: Robby Oylear, Patrick Hayes moved to recommend approval. Motion failed, 2 to 5.</p> <p>Duane asked that that a minority report be prepared for this proposal.</p>
<p><u>EM094</u></p>	<p>Robby said the way the code is written it is hard to understand how to evaluate fan power with DOAS. The intent, he believes, was that they be evaluated separately. He noted this is how Seattle looks at it.</p> <p>Motion: Dave Baylon, Patrick Hayes moved to recommend approval <u>as modified</u>. Motion carried.</p>
<p><u>EM086</u></p>	<p>Eric said this was intended to clarify that the occupant sensor controls be provided in spaces similar to those listed, regardless of what they're named.</p> <p>Duane noted the change from serving equipment should be changed to ventilation equipment. Eric suggested removing the word zone. Robby suggested adding an exception similar to that found in the DCV section.</p> <p>Motion: Patrick Hayes, Dave Baylon moved to recommend approval <u>as modified</u>. Motion carried.</p>

<p><u>EM087</u></p>	<p>Eric said this would allow you, in accordance with ASHRAE 62.1 and the mechanical code, to maintain minimal ventilation in an unoccupied room for offgassing of furnishings. Mike Rosenberg said the mechanical code may need to be amended to correlate with the most recent changes to 62.1.</p> <p>Robby suggested modifying the proposal to strike the last sentence with the equation, which is found in the mechanical code and just reference the section in the mechanical code.</p> <p>Motion: Patrick Hayes, Lisa Rosenow moved to recommend approval <u>as modified</u>. Motion carried with two opposing votes.</p>
<p>5. Other Business</p>	<p>The TAG discussed the meeting schedule and whether to hold longer meetings or meet for two days. No consensus was reached.</p> <p>The next meeting is scheduled for July 27 at the Smart Building in Seattle.</p>
<p>5. Adjourn</p>	<p>The meeting was adjourned at 1:40 p.m.</p>