



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

1500 Jefferson • P.O. Box 41449 • Olympia, Washington 98504-1449
(360) 407-9277 • e-mail sbcc@des.wa.gov • www.sbcc.wa.gov

Energy Code Technical Advisory Group Meeting Review Notes for July 30, 2021

TAG Members Present: Kjell Anderson, Chair; Erik Bedell; CJ Brockway; Michael Curtright; Michael Fowler; Patrick Hayes; Gary Heikkinen; Luke Howard; Duane Jonlin; Mike McGivern; Erik Olon; Irina Rasputnis; David Reddy; Lisa Rosenow; Gavin Tenold; Shaun Vig; Amy Wheelless

TAG Members Absent: Scott Henderson, Chris Holliday, Allan Montpellier

Visitors Present: *Michael Baranick, *Kevin Duell, *Jon Lange, *Henry Odum, *Poppy Storm; Bryan Ahee, E. Anderson, Austin Bonnes, Joe Boros, Diana Burk, Andi Burnham, Carmen Cejudo, Reggie Christor, Clarence Clipper, John Frankel, Nicolas Garcia, Jeff Griffin, Chelsea Guenette, Nich Harbeck, Reid Hart, Chris Hawes, Emma Johnson, Mike Kennedy, Mary Koban, Jonny Kocher, Ben Lalor, Marcus Lew, Chris Little, Jeanette McKague, Nick O'Neil, Robby Oylear, D. Scott Peterson, Stan Price, Mark Rehley, Kat Rosenbaum, Michael Rosenberg, Ben Roush, S. Belzak, Aaron Tanner, Kelly Thomas, Eric Vander Mey, Aaron Whitlatch, Geoff Wickes, Bob Wolfer, Justin Wood

Staff: Krista Braaksma, Stephanie Feuchter

* indicates an alternate member. *v indicates a voting alternate

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. Kjell went over the rules of the meeting—using Zoom reactions to raise hands to speak or ask questions or use other icons to note agreement; removing reactions after they have been acknowledged; mute while not speaking; and be respectful of one another. Patrick Hayes moved to require a roll call vote if there were any dissenting votes. Erik Bedell seconded the motion. The motion carried.
2. Review and Approve Agenda	The agenda was approved as modified: proposals 147, 052 and 054 were moved to the top of the agenda.
3. Review and Approve meeting notes from July 16, 2021	The meeting notes were unavailable for approval.

4. Proposals tabled from Earlier Meetings.	
21-GP1-147	Proponent: Mark Frankel, Ecotope Subject: C403.3.1.1, Hot water coil capacity
21-GP1-052	Proponent: Robby Oylear Subject: C403.3, C403.3.7, C403.3.7.1, Hydronic coils Robby Oylear stated he revised the proposal based on feedback from the June 11 meeting, trying to incorporate changes from 147 to a limited extent, going to a 20° temperature difference rather than 10°, lowering the flow rate and pump energy but being compatible with future heat pump installation. The TAG discussed the ΔT and maximum water temperature and how that worked for various coil configurations and replacements. The TAG suggested moving exception 5 up to C403.3.7 to apply to chilled water systems as well. MOTION: Erik Bedell moved to recommend approval as modified . Erik Olon seconded the motion. The motion carried with two abstentions. With the approval of 052, 147 was withdrawn by Ecotope.
21-GP1-054	Proponent: Robby Oylear Subject: C403.4.4, Part load controls Based on previous TAG comments, Robby Oylear attempted to come up with defining language for thermal storage, or setting some sort of limit. He determined it was not needed, as this is currently not common, but it may become more widely used. The TAG discussed if this would be a loophole in the code, or if the exception was necessary. MOTION: Duane Jonlin moved to recommend disapproval . Patrick Hayes seconded the motion. The motion was rescinded after further discussion regarding the impact on commissioning and issues related to enforcement. MOTION: Erik Bedell moved to recommend approval as submitted . Erik Olon seconded the motion. The motion carried with one abstention.
21-GP1-192	Proponent: Mike Kennedy Subject: Table C404.2, Water heater efficiency Lisa Rosenow asked for a reconsideration of this proposal to help clarify how the table applies to heat pumps. Mike Kennedy provided a revision to add clarifying language. The TAG discussed the various rating systems and standards. AHRI and Bradford White noted the standard covering heat pumps was incorrect. MOTION: Duane Jonlin moved to recommend approval as further modified . Lisa Rosenow seconded the motion. The motion carried.
21-GP1-161	Proponent: Duane Jonlin, City of Seattle Subject: Table C402.4, Reduced fenestration U-values

	<p>Duane Jonlin submitted a revised proposal, adding a line for combination fixed/operable windows in both the table and high performance section. It was noted his modification did not include the changes the TAG made previously. Those changes were reinstated. Further discussion centered on the testing of combination units and how they should be addressed in the requirements.</p> <p>MOTION: Duane Jonlin moved to recommend approval as modified. Mike Fowler seconded the motion. Motion carried.</p>
<p>21-GP1-239</p>	<p>Proponent: Henry Odum, Ecotope Subject: C403.3.5.5, DOAS tempering</p> <p>Henry Odum introduced a modification that was posted yesterday evening, including language from the existing C403.7.3 and swapping it from a cooling to a heating measure. This proposal builds on the DOAS requirements and sets tempering limits, allowing the space heating system to do its job. Concern was expressed regarding the applicability to buildings that don't have zoned cooling, like some high performing multifamily or office occupancies.</p> <p>MOTION: Lisa Rosenow moved to recommend approval as modified. Mike McGivern seconded the motion. Due to time considerations, discussion and vote was tabled until after the 10 am Key Issue discussion. (Note: this was not removed from the table at this meeting. It will be added to the August 13 agenda.)</p>
	<p>The remaining proposals (235, 194, 184, 185, and 228) will move to the August 13 agenda.</p>
<p>5. 10 am Key Issue Discussions</p> <p>Heat Pump Water Heating</p>	
<p>21-GP1-136</p>	<p>Proponent: Jonny Kocher, RMI Subject: Heat pump space heating</p> <p>Modified Proposal 7/29 Modified Proposal (without NEEA Standard) 7/30 Minority Report</p> <p>Jonny Kocher noted the most recent version, without the NEEA standard, is closer to the Seattle code language. The NEEA standard is currently out as a draft; the final is not expected to be approved until January 2022. The TAG expressed concern about the late publication of the most recent version and reviewed a side by side comparison. There was some question as to how the alterations language would work with current requirements. In general, interested parties expressed a desire to have more time to review the latest changes.</p> <p>MOTION: Lisa Rosenow moved to recommend the version without NEEA references be considered the primary proposal. Duane Jonlin seconded the motion. The proponent then withdrew the 7/29 and earlier versions, that included the NEEA language, from consideration. Lisa Rosenow moved to table</p>

	discussion, including the minority report, to allow coordination with interested parties.
C406	Various links and documentation provided for discussion: WPUDA letter on distributed generation DOE technical brief on energy credits
21-GP1-206	<p>Proponent: Reid Hart, PNNL Subject: Revision of C406, Efficiency Packages</p> <p>Modified proposal</p> <p>Kjell indicated his plan was to go through the proposal, then table the proposal for a workgroup to review and revise, similar to the heat pump water heater proposal.</p> <p>Reid Hart said the revision sent yesterday also incorporates changes from proposal 217 for R-1/R-2 peak demand pipe sizing. The new version also adjusts to the revised 0.44 carbon emissions metric for electricity. The points are equivalent to 0.1 carbon reduction. The load management measures are similar to those going through review for ASHRAE 90.1.</p> <p>The TAG debated carbon emissions versus energy savings, and whether the 0.1 increment was the way to go, given the range of values generated. Would it be better to use both emissions and savings, or would it be possible to show the current measures with the points based on the previous system? Mike Kennedy stated his calculations show that carbon reduction is equivalent to energy savings at 0.44 for electricity. Should there be a cap on some of the higher values, or not allow one area use apply towards another portion of the building? What would happen with shell and core projects that transition between the 2018 and 2021 code?</p> <p>MOTION: Michael Curtright moved to recommend approval as modified. Motion died for lack of a second.</p> <p>MOTION: Gary Heikkinen moved to base the table on site energy savings, with the code as the baseline. Patrick Hayes and Erik Bedell both seconded the motion. The motion failed, 6 to 7, with three abstentions.</p> <p>MOTION: Mike Fowler moved to recommend approval as modified. Michael Curtright seconded the motion. Mike Fowler rescinded his motion.</p> <p>MOTION: Mike Fowler the moved to accept using carbon as the metric for C406. Lisa Rosenow seconded that motion. Motion carried, 7 to 5 with three abstentions.</p> <p>MOTION: Erik Bedell made and rescinded a motion to base point values on 1.0 percent carbon reduction rather than 0.1. Mike McGivern seconded and rescinded his second. There was concern expressed that this would eliminate options going forward. Erik Bedell made a new motion to base the point values</p>

	<p>on 0.25 percent, allowing half-point fractions in the table. That motion failed for lack of a second.</p> <p>MOTION: Michael Curtright moved to recommend approval as modified. Mike Fowler seconded the motion. The motion was rescinded upon discussion that there are still flaws within the revised proposal.</p> <p>MOTION: Mike Fowler moved to retain the currently proposed 0.1 metric. Lisa Rosenow seconded the motion. The motion carried, 12 to 1 with two abstentions.</p> <p>MOTION: Patrick Hayes moved to not introduce a point cap. Mike Fowler seconded the motion. The motion carried, 6 to 2 with six abstentions.</p> <p>The TAG quickly went through the remainder of the proposals to highlight concerns/problems.</p> <p>MOTION: Patrick Hayes moved to table discussion to the August 13 meeting. Amy Wheelless seconded the motion. The motion carried.</p>
<p>21-GP1-078</p>	<p>Proponent: Mark Frankel, Ecotope Subject: Additional Efficiency</p> <p>This proposal was moved up on the agenda to allow Nicolas Garcia to comment. Mr. Garcia stated that the Washington Public Utility District Association had concerns regarding the economic analysis. There are statutory limitations on net metering that were not considered. He suggested the payback would be closer to 20 years than 16.</p> <p style="text-align: center;">WPUDA letter on distributed generation</p> <p>It was noted this proposal would need to be correlated with others as well.</p> <p>MOTION: Amy Wheelless moved to table discussion. Lisa Rosenow seconded the motion. Motion carried.</p>
<p>21-GP1-100</p>	<p>Proponent: Sean Denniston, New Buildings Institute Subject: Additional Energy Credits for Existing Buildings</p> <p>Diana Burk spoke for New Buildings Institute on this proposal.</p> <p>The TAG discussed the need to add pointer language in Chapter 5 if C406 credits were required for alterations. The TAG also discussed the IEBC definitions for the various levels of alteration. It was felt this would be difficult to implement.</p> <p>MOTION: Lisa Rosenow moved to recommend disapproval. Duane Jonlin seconded the motion. Motion carried.</p>
<p>21-GP1-195</p>	<p>Proponent: Mike Kennedy Subject: 503.8, C406 compliance for alterations</p> <p>This proposal is similar to the previous, but adds a compliance table to C503.8. The TAG discussed this proposal in relation to the Clean Buildings Act. There</p>

	<p>were concerns regarding enforcement and how it could be determined if an alteration was going over the threshold.</p> <p>MOTION: Patrick Hayes moved to recommend disapproval. Duane Jonlin seconded the motion. The motion carried.</p>
<p>21-GP1-230</p>	<p>Proponent: Aaron Whitlatch, Rushing Subject: C406.1, Clarification of space conditioning category compliance with C406</p> <p>Eric Vander Mey spoke on behalf of the proponent. This proposal aligns the existing language with the Council interpretation on this subject.</p> <p>MOTION: Lisa Rosenow moved to recommend approval as modified. Duane Jonlin seconded the motion. The motion carried, 9 to 1 with four abstentions.</p>
<p>21-GP1-146</p>	<p>Proponent: Mark Frankel, Ecotope Subject: Additional Efficiency</p> <p>MOTION: Patrick Hayes moved to recommend disapproval. Gary Heikkinen seconded the motion.</p> <p>Amy Wheelless moved to table discussion. David Reddy seconded the motion. The motion carried, 10 to 2.</p>
<p>6. Review of Definitions and Envelope Proposals 7. Proposals Tabled from Earlier Meetings (continued) 8. Chapter 5 and Miscellaneous Proposals 9. Cleanup Remaining</p> <p>Due to time constraints, the TAG did not review these items. They will be carried over to the agenda on August 13, and again to August 20 if necessary.</p>	
<p>10. Adjourn</p>	<p>The meeting was adjourned at 3:06 p.m.</p>