



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

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Energy Code Technical Advisory Group Meeting Review Notes for August 13, 2021

TAG Members Present: Kjell Anderson, TAG Chair; Erik Bedell; Michael Curtright; *^vKevin Duell; Michael Fowler; Patrick Hayes; Luke Howard; Duane Jonlin; *^vElizabeth Joyce; *^{v(partial)}Jon Lange; Mike McGivern; *Henry Odum; Erik Olnon; Irina Rasputnis; David Reddy; Lisa Rosenow; Gavin Tenold; Shaun Vig; Amy Wheelless

TAG Members Absent: CJ Brockway, Martin Connor, Gary Heikkinen, Scott Henderson, Chris Holliday; Allan Montpellier

Visitors Present: Caroline Traube, Bryan Ahee, E. Anderson, Steve Barnard, Kyle Bergeron, Austin Bonnes, Joe Boros, Andi Burnham, Carmen Cejudo, Clarence Clipper, Sean Denniston, John Frankel, Mark Frankel, Nicolas Garcia, Jeff Griffin, Nick Harbeck, Reid Hart, Mike Kennedy, Dan Kirschner, Mary Koban, Jonny Kocher, Eric Lacey, Ben Lalor, Marcus Lew, Duane Lewellen, Chris Little, Rob Marks, Nick O'Neil, Robby Oylear, D. Scott Peterson, Kathleen Petrie, Stan Price, Alex Ramel, Alex Ratcliff, Jeff Rigotti, Tena Risley, Kat Rosenbaum, Ben Roush, Treasa Sweek, Aaron Tanner, Kelly Thomas, Markus Virta, Helen Walter-Terrinoni, Cobi Waxman, Bill Will, James York

Staff: Stoyan Bumbalov, Krista Braaksma, John McEntyre, 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. He thanked everyone for volunteering their time and work through the TAG process. 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. MOTION: Patrick Hayes moved to require a roll call vote if there were any dissenting votes. Amy Wheelless seconded the motion. The motion carried.
2. Review and Approve Agenda	The agenda was approved as modified: Lisa Rosenow withdrew her proposal 184.
3. Review and Approve meeting notes from July 16, 2021 and July 30, 2021	The minutes of the July 16 and July 30, 2021 meetings were approved as written.

4. Proposals Tabled from Earlier Meetings	
21-GP1-239	<p>Proponent: Henry Odum, Ecotope Subject: C403.3.5.5, DOAS Tempering</p> <p>Henry Odum noted there was an updated version of this proposal. There was discussion on providing a definition for tempering, and a motion to table was made and withdrawn. There was some modification to the language to change tempering to heating and cooling, and further modification for consistency within the code.</p> <p>MOTION: Lisa Rosenow to recommend approval as modified. Duane Jonlin seconded the motion. The motion carried.</p>
21-GP1-235	<p>Proponent: Nick O'Neil, Energy 350 Subject: C403.1.3, Data Center MLC updates</p> <p>Nick O'Neil presented this revised version of his proposal that aligns with the Seattle code and 90.4-2019.</p> <p>MOTION: Duane Jonlin moved to recommend approval as modified. Lisa Rosenow seconded the motion. Motion carried.</p>
21-GP1-194	<p>Proponent: Mike Kennedy Subject: PTHP Controls</p> <p>Mike Kennedy said he is attempting to modify the language to be more enforceable and achievable. The TAG came to consensus over a few editorial changes.</p> <p>MOTION: Mike Fowler moved to recommend approval as modified. Duane Jonlin seconded the motion. Motion carried.</p>
21-GP1-185	<p>Proponent: Lisa Rosenow, Evergreen Technology Consulting Subject: C403.5, Group R-2 exclusion for Exception 1</p> <p>Duane Lewellen presented this proposal in Lisa's stead. He stated that this would restrict using PTHP and PTVP with DOAS in R-2 without using an economizer. There was concern expressed that there are some newer units coming onto the market with higher efficiency but that don't have AHRI ratings.</p> <p>MOTION: Lisa Rosenow moved to recommend approval as submitted. Duane Jonlin seconded the motion. The motion carried with two abstentions.</p>
21-GP1-228	<p>Proponent: Eric Vander Mey, Rushing Subject: C403.5, Airside economizer clarification</p> <p>MOTION: Lisa Rosenow moved to recommend approval as modified. Duane Jonlin seconded the motion.</p> <p>There were some remaining questions from TAG members on the language and possible modifications, so it was suggested that this be tabled until the proponent was available.</p>

	<p>Kevin Duell moved to table the proposal. Patrick Hayes seconded. The motion carried.</p>
21-GP1-166	<p>Proponent: Duane Jonlin, City of Seattle Subject: C403.3.7, Flow rate in hydronic systems</p> <p>Duane Jonlin said the TAG has previously added the row from ASHRAE for the larger piping, and suggested the 6-inch row be reviewed. Duane felt the proposal should move as modified with the 14 to 24-inch line added, so it mirrored the ASHRAE 90.1 language.</p> <p>MOTION: Duane Jonlin moved to recommend approval as modified. Mike Fowler seconded the motion. The motion carried.</p>
21-GP1-227	<p>Proponent: Eric Vander Mey, Rushing Subject: C403.4.11, DDC controls</p> <p>Mike Kennedy said this proposal reverts the control language for DDC to the ASHRAE 90.1 requirements. Mike had originally proposed the amendment to Table C403.4.11.1 that are proposed to be struck here, which could require some single story buildings to have DDC control. Mike was unsure of the rationale for the demand response set point adjustment language. It was noted this is a revision to the original proposal and was originally posted for the July 16 meeting.</p> <p>MOTION: Amy Wheelless moved to table discussion. Kevin Duell seconded the motion. The motion carried.</p>
21-GP1-240	<p>Proponent: Henry Odum, Ecotope Subject: C403.5.11/C403.14, Operable opening interlock</p> <p>Henry Odum said the intent of this proposal was to capture garage-style doors as seen at some restaurants, but he had not updated the proposal based on the last TAG discussion. The TAG further discussed the door size and clarifying language to limit this to entrance doors.</p> <p>MOTION: Patrick Hayes moved to recommend disapproval. Duane Jonlin seconded the motion. Upon discussion, Duane Jonlin withdrew his second. Erik Bedell then seconded the motion to disapprove.</p> <p>MOTION: Amy Wheelless moved to table discussion. Duane Jonlin seconded the motion. The motion to table carried.</p>
21-GP1-190	<p>Proponent: Mike Kennedy Subject: Demand control ventilation</p> <p>Mike Kennedy stated this was a complex proposal rewriting the DCV requirements. The biggest change is the exception for energy recovery in DOAS has been eliminated.</p> <p>The TAG discussed the proposal and made some minor editorial revisions. It was noted that this would also need to be coordinated with the DOAS requirements.</p>

	<p>MOTION: Lisa Rosenow moved to recommend approval as modified. Duane Jonlin seconded the motion.</p> <p>MOTION: Duane Jonlin moved to table discussion for 15 minutes to develop language. Kevin Duell seconded the motion. The motion to table carried.</p> <p>The proposal was removed from the table. Mike Kennedy brought forward an additional modification to C403.3.5.1 for correlation.</p> <p>MOTION: Lisa Rosenow and Duane Jonlin moved to recommend approval <u>as modified</u>. The motion carried.</p>
<p>21-GP1-229</p>	<p>Proponent: Eric Vander Mey, Rushing Subject: C403.7.5.2, Garage ventilation controls</p> <p>Lisa Rosenow felt this was a good change and makes the code clearer and easier to enforce.</p> <p>MOTION: Lisa Rosenow moved to recommend approval as submitted. Duane Jonlin seconded the motion. The motion carried.</p>
<p>21-GP1-236</p>	<p>Proponent: Nick O’Neil, Energy 350 Subject: Kitchen demand control ventilation.</p> <p>Nick O’Neil presented a modification to his proposal. It was felt the proposal should include a definition for kitchen demand control ventilation.</p> <p>MOTION: Lisa Rosenow moved to recommend approval as modified. Duane Jonlin seconded the motion.</p> <p>MOTION: Duane Jonlin moved to table the discussion to develop language. Lisa Rosenow seconded the motion. The motion to table carried.</p> <p>Later in the meeting, the proposal was removed from the table and a definition for kitchen DCV was reviewed.</p> <p>MOTION: Lisa Rosenow moved to recommend <u>approval as modified</u>. Duane Jonlin seconded the motion. The motion carried.</p>
<p>21-GP1-191</p>	<p>Proponent: Mike Kennedy Subject: C403.7.5, Garage ventilation</p> <p>Mike Kennedy said this proposal is incorporating language from the latest version of ASHRAE 90.1, and removes the word “enclosed” to make the requirements clearer and easier to enforce.</p> <p>MOTION: Kevin Duell moved to recommend approval as submitted. Duane Jonlin seconded the motion. The motion carried.</p>
<p>21-GP1-226</p>	<p>Proponent: Eric Vander Mey, Rushing Subject: C403.10.3, Refrigerant piping</p> <p>After a brief discussion by the TAG, where Duane Jonlin noted this was hotly debated in Seattle, it was determined that there was further study necessary.</p>

	<p>MOTION: Duane Jonlin moved to table discussion until the next meeting. Kevin Duell seconded the motion. The motion carried.</p>
21-GP1-172	<p>Proponent: Duane Jonlin, City of Seattle Subject: C403.11, Radiant heating</p> <p>Duane Jonlin noted this was in the Seattle code. The TAG had discussion on how this would work with the requirements of Section C402.1.1.1. It was suggested a sub section be created to clarify the interaction. Also discussed was the amount of time the timer should be set, and the availability of timers capable of a short time span.</p> <p>MOTION: Kevin Duell moved to recommend approval as modified. Mike McGivern seconded the motion.</p> <p>MOTION: Duane Jonlin moved to table discussion. Kevin Duell seconded the motion. The motion to table carried.</p>
21-GP1-097	<p>Proponent: Sean Denniston, New Buildings Institute Subject: C403.4.1, Demand response thermostats</p> <p>Sean Denniston noted the proposal had been tabled previously to integrate more of the Title 24 language, and clarification on how it would work in multi-zone applications. The terminology has also been changed a bit for clarity.</p> <p>MOTION: Erik Bedell moved to recommend approval as modified. Kevin Duell seconded the motion. The motion carried.</p>
21-GP1-099	<p>Proponent: Sean Denniston, New Buildings Institute Subject: C403.4.1, Demand response water heaters</p> <p>Sean Denniston said he contact AHRI and manufacturers regarding this proposal since this was tabled at a previous meeting, and he provided some revisions. It was noted there was still no consensus. The TAG discussed the different standards, the sizing differences between Commerce’s rules and this proposal, and the availability of products able to meet the proposed requirement.</p> <p>MOTION: Kevin Duell moved to table the discussion. Erik Bedell seconded the motion. The motion carried.</p>
21-GP1-095	<p>Proponent: Sean Denniston, New Buildings Institute Subject: C403.15, Indoor horticulture dehumidification</p> <p>The TAG discussed the revised proposal that includes a heat pump option. The TAG discussed the origin of the energy factors used.</p> <p>MOTION: Duane Jonlin moved to recommend approval as modified. Lisa Rosenow seconded the motion. The motion carried.</p>
<p>7. Chapter 5 and Miscellaneous Proposals</p> <p>Since there was time remaining before beginning the 12 pm key issue discussion, the TAG moved into Item 7.</p>	

21-GP1-179	<p>Proponent: Duane Jonlin, City of Seattle Subject: Electrical receptacles at gas appliances</p> <p>Duane Jonlin traduced this proposal intended to ensure everything is ready for future installation of electric appliances. The TAG made some suggested editorial changes. There was discussion regarding the need and cost effectiveness of including this in the code.</p> <p>MOTION: Mike Fowler moved to recommend approval as modified. Lisa Rosenow seconded the motion. The motion carried, 12 to 2 with one abstention</p>
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5. 12 pm Key Issue Review/Discussion

Heat Pump Water Heating

21-GP1-136	<p>Proponent: Jonny Kocher, RMI Subject: Heat pump water heating</p> <p>Jonny Kocher introduced the modified proposal in which the language from the NEEA standard was removed; it is now largely based on the Seattle code language. He thanked everyone who helped with modifications over the last two weeks. There were also substantive changes in the existing buildings section.</p> <p>There was concern voiced from AHRI and the industry about product availability and the need for a transition period. It was noted that the 2021 code would not go into effect until July 2023.</p> <p>MOTION: Duane Jonlin moved to recommend approval as modified. Mike Fowler seconded the motion. Motion carried, 11 to 5.</p> <p>Minority Report</p> <p>Kevin Duell presented a PowerPoint illustrating decarbonization efforts in Denmark and their incorporation of RNG in the process. The TAG discussed the inclusion of condensing water heaters and whether it would result in any energy savings.</p> <p>MOTION: Patrick Hayes moved to recommend approval of the proposed minority amendments to 136. Kevin Duell seconded the motion. The motion failed, 5 to 11.</p> <p>MOTION: Kevin Duell moved to have the TAG request the SBCC to prepare a report detailing the economic impact that proposals 103 and 136 will have on small businesses, housing affordability, construction costs and lifecycle costs. Patrick Hayes seconded the motion.</p> <p>The TAG debated the motion on the table and if it asked for anything that wasn't already part of the normal process. Dan Kirschner pointed out that Section 6 of the SBCC Bylaws stated the TAG could request such a report.</p> <p>MOTION: David Reddy moved to table the discussion of the request. Amy Wheelless seconded the motion. The motion carried, 11 to 5.</p>
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	<p>Kjell suggested that Kevin work with interested parties prior to bringing the motion back to the TAG.</p> <p>MOTION: Kevin Duell moved to request that the TAG prepare an equity impact statement and submit it to the Washington Office of Equity with a formal request that they apply the equity lens to proposals 103 and 136, pursuant to RCW 43.06D. Patrick Hayes seconded the motion. It was suggested that this should be included in the request of the previous motion.</p> <p>MOTION: Amy Wheelless moved to table the discussion of the request. Gavin Tenold seconded the motion. The motion carried unanimously.</p>
<p>C406</p>	
<p>21-GP1-206</p>	<p>Proponent: Reid Hart, PNNL Subject:</p> <p>Reid Hart said he had modified the proposal, incorporating some of the TAG’s earlier requests including breaking out areas, ventilation control, and core and shell provisions. They also incorporated language from some of the other C406 proposals. The TAG spent some time going through the proposal.</p> <p>MOTION: Duane Jonlin moved to recommend approval as modified, with the caveat that there is some further editorial cleanup to be completed. Mike Fowler seconded the motion.</p> <p>MOTION: David Reddy moved to table the discussion until all the revisions were complete. Patrick Hayes seconded the motion. The motion failed, with a tied 8 to 8 vote.</p> <p>The question was called on the earlier motion. The motion carried, 14 to 0 with one abstention.</p>
<p>21-GP1-078</p>	<p>Proponent: Mark Frankel, Ecotope Subject: C411, Renewable energy</p> <p>Mark Frankel introduced the proposal to require a modest amount of on-site renewable energy, combining requirements from Seattle and California. While it does have a C406 component, it is not directly related to C406. Mark Frankel felt that, based on changes made to Reid Hart’s proposal, the C406 portion of this proposal can go away. It was felt that this proposal would be better dealt with under the Miscellaneous category later.</p> <p>MOTION: Amy Wheelless moved to table the discussion. Duane Jonlin seconded the motion. The motion carried.</p>
<p>21-GP1-146</p>	<p>Proponent: Mark Frankel, Ecotope Subject: C406, Additional efficiency</p> <p>Mark Frankel asked that the proposal be tabled; it is dependent on the outcome of some of the other proposals.</p>

	<p>MOTION: Kevin Duell moved to table the discussion. Mike Fowler seconded the motion. The motion carried.</p>
<p>6. Other C406 Proposals</p>	
<p>21-GP1-221</p>	<p>Proponent: Eric Vander Mey, Rushing Subject: C406.2, Building areas and occupancies</p>
<p>21-GP1-220</p>	<p>Proponent: Eric Vander Mey, Rushing Subject: C406.5, On-site renewable energy</p> <p>These two proposals were tabled until the proponent was available to address them.</p>
<p>21-GP1-120</p>	<p>Proponent: Gavin Tenold, WA Solar Energy Indus. Assoc. Subject: was Community Solar, now Offsite renewables</p> <p>Gavin Tenold introduced a revised proposal based on Reid Hart's 206 proposal as modified, using the framework for off-site renewables discussed in reviewing the C407 proposal. The TAG questioned how the weighting worked and the change to watts rather than kilowatts. There was also a suggestion that the table only appear in one section and be referenced in the other, rather than duplicating it. There were also some questions regarding the equation.</p> <p>MOTION: Duane Jonlin moved to table the discussion. Kevin Duell seconded the motion. The motion carried.</p>
	<p>Due to lack of time, the remaining proposals will be considered at the August 20 TAG meeting.</p>
<p>7. Chapter 5 and Miscellaneous Proposals</p>	
	<p>Due to lack of time, the remaining proposals will be considered at the August 20 TAG meeting.</p>
<p>8. Cleanup Remaining</p> <p>These proposals will be moved to the August 20 agenda.</p>	
<p>9. Adjourn</p>	<p>The meeting was adjourned at 3:06 p.m.</p>