



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

Commercial Energy Code Technical Advisory Group Meeting Review Notes for March 28, 2025

TAG Members Present: Kjell Anderson, Chair; Ray Allshouse; Larry Andrews; Kim Barker; Erik Bedell; *Andi Burnham; *Ian Casey; *Kevin Charap; *Brett Conway; *Shailesh Desai; Kevin Duell, Luke Howard; Gregory Johnson; Duane Jonlin; *Nick Massie; Nathan Miller; Margaret Montgomery; *Erik Olon; Irina Rasputnis; Lisa Rosenow; *Deepa Sivarajan; Poppy Storm; Irina Susorova; Shaun Vig; Markus Virta

TAG Members Absent: *Todd Blevins, *Rick Blumenthal, *Marty Brennan, Alessandra de la Torre, Sloan Richie, *Kevin Roberts *Premkumar Siddharth

Visitors Present: Tim Attebery, Laura Bloyd, Clarence Clipper, Cathie Coyle, Lindsey Gaunt, Jeff Giffin, Glenn, Patrick Hanks, Rob Kilmer, Eric Lacey, Dave Nehren, Kevin Rose, Earl Smith, Lia Sommer, Kerry Sutton, Aaron Tanner, Kelly Thomas, Rachel Thompson, Michael Tillou, Elizabeth Torske, Aaron W.

Staff: Dustin Curb, Krista Braaksma, Rozanna Ghanie

* indicates an alternate member

Agenda Items	TAG Actions
1. Welcome and Introductions	Meeting called to order at 8:30 a.m. Kjell Anderson welcomed everyone, and roll was called.
2. Review and Approve Agenda	The agenda was approved as modified, with proposals 024, 025 and 264 moved up to the beginning of the agenda and 190 and 191 removed as they have been withdrawn by the proponent.
3. Review and Approve meeting notes from February 28, 2025	The summary minutes were approved as written for the February 28, 2025, meeting.
4. Review of Proposals	
24-GP1-024	<p>Kerry Sutton introduced her petition to allow an alternate standard for thermal bridge mitigation. ACI-TMS 122.1 fills a gap in addressing thermal bridging for concrete and masonry.</p> <p>The TAG discussed the proposal and arranged to have copies of the standard available for members. The TAG also requested a summary of the standard. It was suggested that this may not be the most appropriate location for the citation; it may be better placed in C402.6 or with the psi factor table C402.1.4. A few editorial changes were also suggested. The consensus was the TAG could not address this proposal without reviewing the standard.</p>

	<p>Motion: Greg Johnson moved to postpone 024 until review of the standard. Lisa Rosenow seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-025</u>	<p>Kerry Sutton introduced the next petition, which is similar to the previous but adds a new standard for the thermal performance of concrete and masonry systems.</p> <p>The TAG voiced the same concerns with this proposal as with 024.</p> <p>Motion: Greg Johnson moved to postpone 025 until review of the standard. Margaret Montgomery seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-264</u>	<p>Duane Jonlin spoke to his petition to remove the exception for CMU walls from Table C402.1.2. Washington is the only place north of Climate Zone 2 that doesn't require insulation for CMU walls. The petition also brings forward a couple of Seattle amendments regarding concrete that pierces through the ground floor of a building as well as some clarifications in Table C402.1.3 for mass wall and below grade wall assemblies.</p> <p>The TAG discussed the heat loss of CMU walls versus the durability and thermal gains. They also debated the positives and negatives of providing additional line items and deviating from the model code table. There was some discussion of moving the new lines to a footnote instead. They also discussed the Table C402.1.3 changes to the mass walls and below grade walls and suggested some editorial amendments.</p> <p>Motion: Lisa Rosenow moved to approve 264 as modified, removing the reference to exterior and interior proposed for Table C402.1.3 mass walls and exterior for below grade walls. Duane Jonlin seconded the motion. The motion carried by voice vote with one opposing.</p>
<u>24-GP1-206</u>	<p>Kjell Anderson reported that the Council voted to direct both the commercial and energy code TAGs to use annual metered site energy as the basis for the energy code, including C406.1, C406.2 and C407 but not C4063.</p> <p>The TAG reviewed the language for the site energy option and suggested some modifications for consistency with the Council's motion.</p> <p>Motion: Erik Bedell moved to postpone consideration of 206 until after the lunch break to allow further wordsmithing. Duane Jonlin seconded the motion. The motion carried by voice vote.</p> <p>The TAG revisited 206 after the lunchbreak (approximately 1.5 hour later). Kjell and Greg worked on some revised language for C101.3.1 based on the motion at the Council. There was some TAG debate on the inclusion of the last sentence of that proposed section and a modification was suggested to make it clearer that this is more TAG direction than instructions to the local jurisdiction.</p> <p>The TAG also discussed C101.3, the intent section also included in this petition. There was concern voiced that the IECC language is not appropriate for the WSEC as the two groups have different policies.</p>

	<p>Motion: Duane moved to accept the new Section C101.3.1 as modified today. Erik Bedell seconded the motion. The motion carried by voice vote with one abstention.</p> <p>Motion: Kevin Duell moved to postpone the question on the Section C101.3 modifications. Margaret Montgomery seconded the motion. The motion failed 4 to 9 with three abstentions.</p> <p>Motion: Duane Jonlin moved to not accept the IECC revisions to C101.3 and retain the current 2021 WSEC language. Lisa Rosenow seconded the motion. The motion carried 11 to 4 with one abstention.</p>
24-GP1-224	<p>Jeff Giffin spoke on behalf of the proponent on this petition. This was discussed while reviewing other associated petitions and just switches “low carbon district energy” to “thermal energy network” within the definition section and in C403 and C404. This is consistent with industry momentum and aligns with the EPCA rulings.</p> <p>The TAG briefly discussed the proposal. It was noted that a key word search should be done later to ensure all terms are converted.</p> <p>Motion: Duane Jonlin moved approval of 24-GP1-224. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
24-GP1-157	<p>Lisa Rosenow introduced her petition to do some editorial cleanup throughout the code. The first set of changes replaces ‘arranged to’ and ‘able to’ with ‘configured to’ for consistency and clarity. The next group is just formatting and numbering cleanup. The third group removes the term ‘newly installed’ since it doesn’t really add value and is the only section that that makes the reference. The last portion is just correcting section references.</p> <p>Motion: Kevin Duell moved to approve 157. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
Section C407	
24-GP1-265	<p>Duane Jonlin spoke to his petition for the envelope backstop for building modeling. It clarifies the title of the section and reduces the allowance over the allowed total UA to 10 percent. Seattle has had the 10 percent requirement in code for a while, and it still provides flexibility. He could not find any additional cost associated with the change.</p> <p>The TAG discussed the proposal, concerned that the reduction on top of the new mandatory measures make it a more complicated change.</p> <p>Motion: Greg Johnson moved to approve 265 but modify the backstop to 15 percent. Andi Burnham seconded the motion. The motion failed, 3 to 8 with four abstentions.</p> <p>Motion: Duane Jonlin moved to approve 265 as submitted. Lisa Rosenow seconded the motion. The motion carried 10 to 1 with five abstentions.</p>

<u>24-GP1-199</u>	<p>Mike Tillou presented PNNL's petition adjusting the energy targets in C407. The numbers are based on the integrated draft and may need to be updated once all the changes are determined. The proposed BPF numbers go both up and down based on adjustments made by PNNL to their methodology to better align with ASHRAE 90.1 Appendix g and Washington policy objectives.</p> <p>The TAG discussed the changes and a few specific building types, as well as a timeline for approval.</p> <p>Motion: Greg Johnson moved to approve 199 with the final numbers determined after the work on the prescriptive path is completed. Duane Jonlin seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-226</u>	<p>Jeff Giffin spoke to this petition on behalf of the proponent. It is a continuation of the name change from low carbon district heating to thermal energy network, addressing the C407 occurrences.</p> <p>Motion: Duane Jonlin moved approval of 226. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-283</u>	<p>Larry Andrews requested that his proposal on removing the low carbon district energy/thermal energy network requirements from C407 be postponed.</p> <p>Motion: Larry Andrews moved to postpone discussion of 283 until a future meeting. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
Section C402	
<u>24-GP1-179</u>	<p>Brett Conway introduced his petition regarding walls separating semi-heated spaces from fully conditioned space when those walls are not exterior walls. This proposal acknowledges the difference in thermal performance between an exterior wall and an interior wall with no wind or solar exposure and an ambient temperature of about 45°F and essentially removes the requirement for continuous insulation.</p> <p>The TAG discussed the proposal and the structure of Table C402.1.3 and its footnotes. Lisa Rosenow offered an alternate proposal with the decreased insulation allowance included as text in C402.1.1.2. The TAG debated the efficacy of the requirement in the table versus within the semi heated requirements.</p> <p>Motion: Brett Conway moved to approve 179 as modified by Lisa Rosenow. Lisa Rosenow seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-171</u>	<p>Brett Conway's next petition addresses where a heat pump is used to heat a semi-heated space and the output exceeds the 8 Btuh/ft² allowance. It provides an exception stating that the energy consumption of the semi-heated space isn't counted as part of the building capacity calculations.</p> <p>The TAG debated the proposal, with some feeling that this would move code efficiency backwards and negate the purpose of the semi-heated allowance.</p>

	<p>Motion: Greg Johnson moved to disapprove 171. Duane Jonlin seconded the motion. The motion carried, 9 to 3 with four abstentions.</p>
<u>24-GP1-261</u>	<p>Andi Burnham spoke to her petition to exempt storm water or fire pump detention vaults from the floor insulation requirements in Table C402.1.2 based on constructability issues.</p> <p>The TAG discussed the proposal, noting some of the same concerns as with 179. It was again suggested that the table line item be relocated to the floor insulation detailed requirements in Section C402.2.3.</p> <p>Motion: Erik Bedell moved to approve 261 as modified, adding two exceptions to C402.2.3 in lieu of adding a row to Table C402.1.2. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-221</u>	<p>Lindsey Gaunt noted her petition is very similar to the one previously heard. It looks at three envelope conditions where insulation is impractical or structurally unfeasible. Two of those were addressed by Jonlin's 264. The third is a slab penetrating a thermal envelope, such as in a parking garage with an electrical room or elevator lobby surrounded by unconditioned space. The slab surrounding that space cannot be insulated. This proposal provides a lower U-factor for those locations.</p> <p>The TAG discussed the proposal and whether the allowance should be shifted into the insulation detail section or remain in the table.</p> <p>Motion: Duane Jonlin moved to approve 221 as modified, removing the two rows in the Floors category. Nathan Miller seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-295</u>	<p>Lisa Rosenow Spoke to her proposal that moves insulation requirements for steel joist floors from the footnotes of Table C402.1.3 into the body of the table. She noted a revised version was submitted yesterday to coordinate with Nathan Miller's 215; the revision correlates the R-value and U-factors for steel joist framing.</p> <p>The TAG discussed the various insulation requirements and how the correlation should work.</p> <p>Motion: Duane moved to approve 295 as revised. Kim Barker seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-255</u>	<p>Kevin Rose stated this petition is integrating model code changes for slab insulation. The heated slab requirements are not as straight forward as the unheated slab, since the WSEC requires full underslab insulation and the IECC and 90.1 both take slightly different approaches.</p> <p>The TAG discussed the proposed changes, focusing mostly on the heated slab requirements. Consensus was to accept the R-20 perimeter insulation but retain R-10 for the underslab requirement for heated slabs. The TAG also discussed the required F-factors for heated slabs.</p>

	<p>Motion: Lisa Rosenow moved to approve 255 as modified, noting that the F-factors for heated slabs would need to be calculated and added. Kim Barker seconded the motion. The motion carried by voice vote with one opposing.</p>
<u>24-GP1-256</u>	<p>Kevin Rose stated this petition updates the wall insulation requirements to the anticipated 90.1-2025 values, which are also proposed for the 2027 IECC. ASHRAE has found these changes to be cost effective. The only value that is not within those standards is the R-27 cavity option in wood framed walls.</p> <p>The TAG discussed the proposal. There was concern voiced regarding the thickness required for steel framed walls, as well as the ability to accommodate R-27 in a framing cavity. It was noted that if concerns were brought up at either ASHRAE or ICC they could be brought forward during the public hearing process.</p> <p>Motion: Duane Jonlin moved to approve 24-GP1-256. Lisa Rosenow seconded the motion. The motion carried, 7:3:6.</p>
<u>24-GP1-296</u>	<p>Lisa Rosenow introduced her petition that restores a second R-value option for metal building walls for all continuous insulation. It is consistent with the model code and the U-factor in Table R402.1.2.</p> <p>Motion: Duane Jonlin moved to approve 24-GP1-296. Lisa Rosenow seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-215</u>	<p>This petition was withdrawn by the proponent based on the TAG action on 295.</p>
<u>24-GP1-190</u>	<p>This petition was withdrawn by the proponent prior to the meeting.</p>
<u>24-GP1-191</u>	<p>This petition was withdrawn by the proponent prior to the meeting.</p>
<u>24-GP1-223</u>	<p>Rachel Thompson introduced her petition to add a specification to Table C402.1.3 for ventilated refrigerant shaft walls. There is a change in the mechanical code that will require ventilation for VRF systems that penetrate multiple floors. The proposal would exclude them from the prescriptive envelope requirements as long as the shaft walls have at least 4 inches of insulation.</p> <p>The TAG discussed the proposal and what systems would be affected, they number of shafts per building, and how the ventilation works. It was felt the footnote language was vague. Lisa Rosenow offered some amendatory language stating they would need to meet the below grade wall insulation requirements.</p> <p>Motion: Erik Bedell moved to postpone further discussion on 223 to review possible amendments. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-184</u>	<p>Duane Jonlin spoke to his petition to allow up to one percent single-pane glazing for security glazing and revolving doors. This has been in the Seattle</p>

	<p>code for a while. He also attempted to clarify the meaning of operable in footnote c.</p> <p>The TAG discussed the proposal. There was concern voiced regarding the revision to the term ‘operable’ and the problems with rating a multi-pane assembly. It was also felt that revolving doors shouldn’t be included as there are multi-pane versions available. There was also discussion regarding the term ‘security purposes.’</p> <p>Motion: Larry Andrews moved to postpone discussion to allow for revisions. Erik Bedell seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-169</u>	<p>Duane Jonlin noted the skylight U-factors have been unchanged for several cycles. This petition lowers the U-factor and SHGC for skylights. There should be no problems in meeting the new values; they are commercially available.</p> <p>Motion: Greg Johnson moved to approve 24-GP1-169. Lisa Rosenow seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-260</u>	<p>Kevin Rose presented his petition to reduce the fixed window U-factor to 0.32, matching the upcoming value for 90.1-2025. He noted that the TAG should amend his proposed skylight U-factor to match that approved in Duane’s 169.</p> <p>Motion: Lisa moved to approve 260 as modified. Kim Barker seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-176</u>	<p>Duane Jonlin introduced his petition to require 20 percent of the fenestration in a building to be triple glazing. He noted the cost for window wall and curtain wall was high, but the cost has come down with the introduction of triple pane systems using a toughened laptop glass as the center layer.</p> <p>The TAG discussed the proposal. Some of the concerns voiced were the aesthetics of the building, the cost, what the UA calculation would look like, and how it would apply to existing buildings.</p> <p>Motion: Greg Johnson moved to postpone discussion of 176 until the workgroup reports out. Lisa Rosenow seconded the motion. The motion carried by voice vote.</p> <p>Duane Jonlin, Andi Burnham, Patrick Hanks, and Greg Johnson volunteered for the workgroup.</p>
<u>24-GP1-192</u>	<p>Duane Jonlin felt this was a simple change, allowing the fixed and operable high performance glazing to be combined when doing an area weighted average.</p> <p>Motion: Greg Johnson moved to approve 24-GP1-192. Margaret Montgomery seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-259</u>	<p>Lisa Rosenow noted this petition deals with an SBCC opinion on window to wall calculations and the use of below grade and interior partition walls. This change would clarify that you cannot include that area in your calculations for exterior glazing.</p>

	<p>The TAG discussed the proposal briefly, debating the merits of allowing underground parking garage walls to be used.</p> <p>Motion: Duane Jonlin moved to approve 24-GP1-259. Lisa Rosenow seconded the motion. The motion carried by voice vote with one opposed and one abstention.</p>
<u>24-GP1-193</u>	This petition was withdrawn by the proponent
5. Meeting Schedule	<p>The next meeting will be Friday, April 4, at 8:30am. Kjell would like to have the workgroups report back at that meeting. He would also like to get through all of the previously postponed items.</p> <p>Kjell noted the TAG has completed review of approximately 35 percent of the submitted proposal. He hopes to be able to get through all the proposals in another three to four meetings.</p>
6. Other Business	<p>Dustin Curb, the SBCC Managing Director, spent some time discussing Initiative 2066 and the bench ruling issued last week ruling the initiative unconstitutional. There is a potential for an appeal, which can't be filed until the written ruling is issued. The Council recently opened a proposal window for proposals addressing I-2066 compliance issues with the 2021 WSEC, both commercial and residential provisions. The plan is to stay the course and continue to move towards compliance until the Council determines a new course of action.</p> <p>There was some discussion by the TAG as to whether the initiative was still in effect pending a written order. It was also mentioned that there is some overlap between I-2066 and EPCA.</p>
7. Adjourn	The meeting was adjourned at 2:59 p.m.