



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

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Commercial Energy Code Technical Advisory Group Meeting Review Notes for March 14, 2025

TAG Members Present: Kjell Anderson, Chair; Larry Andrews; Kim Barker; *Rick Blumenthal; *Andi Burnham; *Ian Casey; *Kevin Charap; Alessandra de la Torre; *Shailesh Desai; Kevin Duell, Luke Howard; Gregory Johnson; Duane Jonlin; *Nick Massie; Nathan Miller; Margaret Montgomery; Irina Rasputnis; Sloan Richie; *Kevin Roberts; Poppy Storm; Irina Susorova; Markus Virta

TAG Members Absent: Erik Bedell, *Todd Blevins, *Marty Brennan, *Brett Conway, *Erik Olon; Lisa Rosenow, *Premkumar Siddharth; *Deepa Sivarajan, Shaun Vig

Visitors Present: Ray Allshouse, Tim Attebery, Michael Baranick, Patrick Hanks, Harshad Inamdar, Hoyt Jeter, Mike Kennedy, Rob Kilmer, Jonny Kocher, Eric Lacey, Dave Price, David Reddy, Kevin Rose, Earl Smith, Lia Sommer, Quyen Thai, Elizabeth Torske

Staff: Dustin Curb, Krista Braaksma

* 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 minus the review and approval of the minutes.
3. Review and Approve meeting notes from February 28, 2025	The summary minutes were not available for approval and removed from the agenda.
4. Review of Proposals	
Section C404	
24-GP1-175	Duane Jonlin presented his petition regarding the exception for process equipment. This proposal would include water pipe insulation in the list of compliance requirements for process equipment. A secondary purpose of the proposal is to clarify that lab sinks are considered process equipment. Motion: Larry Andrews moved to approve 24-GP1-175. Gregory Johnson seconded the motion. The motion carried by voice vote.
24-GP1-277	Duane Jonlin's next petition is to move ground source heat pumps out of the exception 2 for Section C404.2.1 and include it in the main body of the requirement along with an air source heat pump. It also adds exceptions for instantaneous water heaters, waste heat for other than Group R and I, and

	<p>standby water heating. It also provides some clarification on exceptions 2 and 4.</p> <p>The TAG spent some time discussing this proposal while noting that it would be impacted by the conditionally approved Kocher 279 and postponed 183. The exceptions are necessary in the context of the equations in C406. The TAG also agreed that changes similar to those accepted for Section C403.1.4 should be included. They questioned the need for both exception 7 and the new exception 10. Additional clarifications were suggested for exceptions 1 and 5. It was also noted that the following proposal 253 had very similar exceptions.</p> <p>Motion: Kevin Duell moved to postpone 277 to allow a workgroup to develop language to be compatible with Kocher's 279, incorporating some of the changes discussed. Greg Johnson seconded the motion. The motion carried by voice vote.</p> <p>A workgroup was created to include Greg Johnson, Mike Kennedy, Duane Jonlin, Kevin Duell, and Jonny Kocher.</p>
<u>24-GP1-253</u>	<p>Andi Burnham, representing the proponent of the petition, requested that it be postponed and reviewed in conjunction with 277 with the workgroup convened for that issue.</p> <p>Motion: Andi Burnham moved to postpone 253 until the report out from the workgroup on 277. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-232</u>	<p>The TAG voted to postpone this proposal as the proponent was not available today.</p>
<u>24-GP1-162</u>	<p>David Price presented his petition to amend exception 1 of C404.2.1 to apply the limitation on heating capacity to a tenant space rather than the total building. This exception is difficult to enforce in multifamily buildings.</p> <p>The TAG briefly discussed the enforcement issues with multifamily and shell and core buildings. It was suggested that there be some sort of size limitation.</p> <p>Motion: Greg Johnson moved to postpone 162 and refer it to the workgroup looking at 277 and 253. Kevin Duell seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-268</u>	<p>Duane Jonlin presented a petition to integrate some Seattle language on sizing heat pump water heaters to handle 100 percent of the demand at 40 degrees and 50 percent of the demand at 24 degrees. It also adds exceptions for heat recovery and solar thermal systems.</p> <p>The TAG discussed the proposal, noting that this section was also impacted by Kocher's 279. It was mentioned that the language originally began at 100 percent but was not found to be cost effective. The proponent discussed improvements in refrigerants and controls. It was also mentioned that it would</p>

	<p>be good to have some monitoring requirements to ensure they are performing as expected.</p> <p>Motion: Greg Johnson moved to postpone 268 and refer it to the previous workgroup. Larry Andrews seconded the motion. The motion carried by voice vote.</p>
24-GP1-254	<p>Andi Burnham presented Eric Vander Mey's petition on changing "thermostatic mixing valve" to "mixing valve" in various locations in C404. This just allows the language to be more generic.</p> <p>Some TAG members voiced concerns over the change and felt the term thermostatic was necessary to define the control of the valves.</p> <p>Motion: Greg Johnson moved to approve 254, with Duane Jonlin as second. The motion was withdrawn after further discussion.</p> <p>Motion: Kevin Duell moved to disapprove 254, with Greg Johnson as the second. The motion carried with one abstention.</p>
24-GP1-236	<p>Larry Andrews presented his petition to eliminate the heated hot water supply piping section. Upon discussion with the TAG, Larry revised his proposal to modify Table C404.3.1 to eliminate the first three rows, based on the fact that the minimum pipe size in Chapter 6 of the UPC is ½-inch. He stated he would also like to have a maximum distance of 12 feet.</p> <p>After discussion with the TAG on what change is actually being proposed, Larry agreed to work with David Price to rewrite his proposal. It was noted that using UPC appendices A and C will allow smaller pipe sizes.</p> <p>Motion: Kevin Duell moved to postpone 236 until the proponent submits a revised proposal. Nick Massie seconded the motion. The motion carried by voice vote with one opposing vote.</p>
24-GP1-174	<p>Duane Jonlin's petition seeks to require the use of UPC Appendix M for water supply sizing in Group R occupancies. It would prevent oversizing and result in the reduction of construction cost and energy use. This is currently in the Seattle code. The proposal would also reduce the credits for the right sizing option in C406.</p> <p>The TAG discussed pipe sizing, when the current standards were established, how this would work for shell and core buildings and when larger pipe sizing is necessary.</p> <p>Motion: Duane Jonlin moved to approve 174. Luke Howard seconded the motion. The motion carried by voice vote with one abstention.</p>
24-GP1-269	<p>The next petition brought forward by Duane Jonlin rewrites the pipe insulation table, providing specifications for circulation loop piping in partition and not in partition, and all other piping in partition and not in partition. The requirement for piping in partitions was previously in a footnote and this makes it easier to find.</p>

	<p>The TAG suggested some minor editorial changes for simplicity and consistency.</p> <p>Motion: Kevin Duell moved to approve 269 as modified. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
24-GP1-278	<p>Duane Jonlin stated this next petition is mostly clarification of the control requirements for multiple riser systems, but also adds a new requirement for a variable speed pump. There isn't much of a cost issue any longer and they are commonly used. It also exempts Groups R and I from some control requirements since there are not really any set operating hours for those occupancies.</p> <p>The TAG discussed the proposal and debated whether to require a variable speed pump or electronically commutated motor. The wording of item 3 was also discussed, but no specific language changes were suggested. In the end it was determined to specify a variable speed or ECM circulation pump.</p> <p>Motion: Kevin Duell moved to approve 278 as modified. Duane Jonlin seconded the motion. The motion carried by voice vote.</p>
Section C405	
24-GP1-240	<p>Kevin Rose presented the petition from PNNL to reduce the maximum time for occupancy sensors from 20 minutes to 15 minutes. This reduction should be included in the 2027 IECC and ASHRAE 90.1-2025 and provides an opportunity to save energy with no incremental cost. Kevin noted that there were a few other sections not captured in the proposal that should be included in the reduction: C405.2.11, C405.2.12.1, and C405.2.12.2.</p> <p>Upon review, the TAG also noticed that the change was not provided in C405.2.1.4 even though the language was cited in the petition.</p> <p>Motion: Duane Jonlin moved to approve 240 as modified, including the changes in Sections C405.2.1.4, C405.2.11, C405.2.12.1, and C405.2.12.2. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
24-GP1-189	<p>Duane Jonlin stated his petition clarified the scoping of the first sentence in C405.2.1.1 and moves the exception up to the applicable list item.</p> <p>Greg Johnson noted that this section also has a reference to occupancy sensors that should be updated to reflect the changes in 24-GP1-240.</p> <p>Motion: Greg Johnson moved to approve 189 as modified, with the change in item 1 to correlate with the changes in 240. Duane Jonlin seconded the motion. The motion carried by voice vote.</p>
24-GP1-164	<p>The next petition is also from Duane Jonlin and reduces the maximum area that can be controlled by a single time switch from 5,000 to 2,500 square feet. It also provides clarification on what the time switches are controlling.</p> <p>Motion: Margaret Montgomery moved to approve 164. Duane Jonlin seconded the motion. The motion carried by voice vote.</p>

<u>24-GP1-165</u>	<p>Duane Jonlin stated this petition comes out of the Seattle code and restricts the maximum size of a daylight zone to 60 feet of façade. This helps prevent situations where a portion of the façade may be shaded by a neighboring building or tree while another portion receives full sunlight. It also sets an initial threshold of 30 footcandles for activation.</p> <p>Motion: Duane moved to approve 165. Luke Howard seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-239</u>	<p>Kevin Rose presented the petition from PNNL regarding horticultural lighting, incorporating language from ASHRAE 90.1-2022 addendum bz and ICC CE111-24. It shifts to luminaire PPE rather than lamp PPE to focus on the output and increases the efficacy from 1.9 to 2.5 $\mu\text{mol/J}$ with a 3-5 year simple payback. Approximately 78 percent of products on the market meet this requirement.</p> <p>The TAG discussed the proposal. It was noted that neither model code proposal had been formally accepted yet; however, it is also slated to be part of the California Title 24 requirements. Margaret Montgomery suggested that the language be modified to correlate with the LPA table to specify controlled plant growth environment rather than horticultural lighting. It was also suggested that the language be simplified since the same efficacy is required for both greenhouses and other horticultural lighting.</p> <p>Motion: Greg Johnson moved to approve 239 as modified. Margaret Montgomery seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-167</u>	<p>Duane Jonlin next petition allows lighting used for decorative plants to have a lower efficacy than the horticultural lighting discussed previously. It also modifies an item under connected power to clarify the exemption and coordinate it with C405.3. Duane noted that the new language under C405.3 is a new paragraph and not part of the exception.</p> <p>Motion: Duane Jonlin moved to approve of 167 as modified, removing an extraneous 's' from growth in the new language in C405.3. Margaret Montgomery seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-291</u>	<p>Kevin Rose spoke on PNNL's behalf for the petition revising the calculation of lighting power. This is based on 90.1-2022 addendum ck but is not intended to increase stringency, just adjust the calculation to address OLED lighting and more modern terms and technology.</p> <p>The TAG discussed the proposal and made a few editorial corrections to the language. They discussed the change in wattage for track lighting, noted the metric factor needed to be adjusted if 10 W/lin. ft. is retained. No motion was made to move back to 16 W/lin. ft.</p> <p>Motion: Duane Jonlin moved to approve 291 as modified with the editorial corrections. Greg Johnson seconded the motion. The motion carried by voice vote.</p>

<u>24-GP1-234</u>	<p>The PNNL LPA proposal was moved in front of the Jonlin LPA proposal. Kevin Rose introduced the proposal from PNNL to reduce the interior LPA by 10 percent, except for healthcare, correctional institutions, and facilities for the visually impaired. The proposal is based on an ASHRAE study of 800 fixtures but is more stringent than the proposed 90.1-2025 values.</p> <p>The TAG briefly discussed the proposal and how it might impact C406 credits.</p> <p>Motion: Greg Johnson moved approval of 234. Duane Jonlin seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-172</u>	<p>The proponent withdrew 172 based on the TAG action on 234.</p>
<u>24-GP1-246</u>	<p>The next PNNL Petition is regarding reducing the additional retail lighting allowance. This proposal is a bit better than 90.1-2022.</p> <p>The TAG discussed the proposal briefly, noting that this most likely was based on technological efficiencies.</p> <p>Motion: Duane Jonlin moved approval of 246. Luke Howard seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-247</u>	<p>This PNNL petition increases the minimum efficacy for lighting in dwelling and sleeping units. This brings Washington state from lagging the model codes to being slightly better.</p> <p>The TAG discussed the proposal, the costs associated, and the federal requirements for bulbs going into effect in 2028.</p> <p>Motion: Greg Johnson moved to approve 247. Duane Jonlin seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-292 Rev 2</u>	<p>The final PNNL petition on today's agenda concerns exterior lighting. Kevin Rose stated this mostly aligns with the changes being made to the IECC and 90.1. IES recently changed the description of zones 9 through 4. The exception for luminaires on motion detectors was deleted as these should still achieve an efficacy greater than 100 lumens per watt. The biggest change in the LPA table was a decrease in allowance for dining. Some of the values were higher than the interior LPA.</p> <p>The TAG discussed the proposal and the elimination of the exception. In the end, no additional changes were made to the proposal.</p> <p>Motion: Duane Jonlin moved approval of 298 Revision 2. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-173</u>	<p>Duane Jonlin introduced his petition to require commercial food service equipment to meet Energy Star efficiency requirements and remove the C406 credit for said appliances.</p> <p>The TAG discussed the proposal, the cost associated, and the popularity and common use of used commercial appliances. It was also mentioned that the</p>

	<p>economic analysis uses two different sets of numbers. Duane noted that the second set of figures was the correct version.</p> <p>Motion: Greg Johnson moved to disapprove 173. Larry Andrews seconded the motion. The motion failed 4 to 9 with one abstention.</p> <p>Motion: Duane Jonlin moved to approve 173 with the addition of an exception in C405.1.4 allowing reused or refurbished equipment that has been in commercial use for more than one year. Kim Barker seconded the motion. The motion carried by voice vote with three abstentions.</p>
	The remaining petitions on the agenda were not discussed due to lack of time and will be addressed at a future meeting.
5. Meeting Schedule	There is a Council meeting scheduled for Friday, March 21, so the next TAG meeting will be Friday, March 28, at 8:30 am.
6. Other Business	Not addressed due to lack of time.
7. Adjourn	The meeting was adjourned at 2:59 p.m.