



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

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Commercial Energy Code Technical Advisory Group Meeting Review Notes for March 7, 2025

TAG Members Present: Kjell Anderson, Chair; Larry Andrews; Kim Barker; Erik Bedell; *Rick Blumenthal; *Andi Burnham; *Ian Casey; *Kevin Charap; *Brett Conway; Alessandra de la Torre; Kevin Duell, Luke Howard; Gregory Johnson; Duane Jonlin; *Nick Massie; Nathan Miller; Margaret Montgomery; *Erik Olsson; Irina Rasputnis; *Kevin Roberts; *Deepa Sivarajan; Poppy Storm; Irina Susorova; Shaun Vig; Markus Virta

TAG Members Absent: *Todd Blevins, *Marty Brennan, *Shailesh Desai, Sloan Richie, Lisa Rosenow, *Premkumar Siddharth

Visitors Present: Ben Omura, Ray Allshouse, Jason Armstrong, Tim Attebery, Clarence Clipper, Mike Fowler, Jeff Giffin, Pragya Gupta, Patrick Hanks, Gary Heikkinen, Paul Holt, Bryan Imai, Mike Kennedy, Eric Lacey, Mike Moore, Dave Nehren, Robby Oylear, Michael Rhodes, Kevin Rose, Cory Shaw, Shashank Singh, Kerry Sutton, Christian Taber, Gavin Tenold, Rachel Thompson, Ryan Thomson, Eric Vander Mey

Staff: Dustin Curb, Krista Braaksma, Brandin Groat

* 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 written.
3. Review and Approve meeting notes from February 14, 2025	The summary minutes were approved as written for the February 14, 2025, meeting.
4. Review of Proposals	
Section C406	
24-GP1-153	<p>Shashank Singh presented his petition to give credits for the use of induction cooktops in Group R-2 occupancies. The proposal is to require 100 percent of cooktops to comply to receive the credits, but he is willing to consider a lower threshold. The point value was based on two studies showing the energy use across various appliances at differing conditions showing a general 8.8% energy savings. Using Duane Jonlin's calculation method from the last cycle, that equates to about 5 credit points.</p> <p>The TAG discussed the practicality of using a lower threshold and prorating the credit value.</p>

	<p>Motion: Gregory Johnson moved to accept the petition but modified to set the threshold at 50 percent and allow proration of the credit value. He also specified that PNNL should also run calculations for gas cooktops to see if they warrant any credits. Larry Andrews seconded the motion. The motion carried 9 to 6 with one abstention.</p>
<u>24-GP1-178</u>	<p>Brett Conway introduced his petition to add a separate energy measure column in Table C406.1 for Groups S and F, which often just semi-heated and there are very few measures that can be utilized by semi-heated buildings.</p> <p>The TAG discussed the fact that not all these occupancies are semi-heated and it would constitute a step backwards for those that are fully conditioned. It was noted that most semi-heated buildings are already exempt from the load management credits via C406.1. After continued discussion, the TAG determined the best way to address the issue would be through an exception in C406.1.</p> <p>Motion: Greg Johnson moved to approve as modified, by removing the additional column proposed in Table C406.1 and instead adding an exception to Section C406.1 to allow semi-heated Group F and S occupancies to show compliance by achieving 50% of the credits required for new construction and exempting semi-heated Group F occupancies under 25,000 sq. ft. from the load management credit requirements. Erik Bedell seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-182</u>	<p>Gary Heikkinen spoke to his petition to replace the WSEC Section C406 with the 2024 IECC additional efficiency, renewable and load management requirements. It also adds a credit path for gas-fired heat pumps. These options are all vetted by ICC and calculated by PNNL.</p> <p>The TAG discussed the proposal, including the efficiency threshold for gas heat pumps and how credits would apply to existing building additions. They also looked at the need for the credits to be recalculated based on the WSEC prescriptive baseline versus the IECC baseline and how this would work with the two table approach adopted via 24-GP1-279. There were also unique credits within the WSEC options that some wanted to preserve.</p> <p>Motion: Kevin Duell moved to postpone discussion of the C406 replacement portion of 182 until Gary Heikkinen brings back a modified proposal. Greg Johnson seconded the motion. The motion carried with no opposing votes.</p> <p>Motion: Kevin Duell moved to accept the gas heat pump portion of 182. Erik Bedell seconded the motion. After further discussion of the values to be used in the equations and the appropriate credit values, Kevin moved to postpone discussion of 182 in total until it is modified. Greg Johnson seconded the motion, and the motion carried with no opposition.</p>
<u>24-GP1-237</u>	<p>Larry Andrews stated that he did not feel it was possible to have efficiency factors within C406, and that it should go back to mainly envelope incentives.</p>

	<p>The TAG discussed Larry's petition to remove all of Section C406 versus his statement that C406 should be envelope measures. Larry stated his intent was to start over and rebuild C406 entirely. It was suggested that Larry's revision be based on either the 2012 code or 2015 code.</p> <p>Motion: Poppy Storm moved to disapprove 237. Alessandra de la Torre seconded the motion. The motion carried, with one opposing vote.</p>
24-GP1-139	<p>Mike Kennedy requested that his petition be tabled, as it is really just a placeholder to make sure the credits in C406 are recalculated. Any future calculation factors will need to be well documented. This proposal can also be withdrawn as it seems this is already being done.</p> <p>The TAG discussed the need for the proposal and how they wanted to move forward with the request to PNNL. Also discussed what whether this would apply to the 2021 codes.</p> <p>Motion: Greg Johnson moved to postpone action on this proposal in order to establish a resolution to ask PNNL to recalculate the values. Kevin Duell seconded the motion. The motion carried by voice vote.</p>
24-GP1-229	<p>Jeff Giffin introduced the petition from Clarence Clipper on increasing the credits for low carbon district energy systems/thermal energy network to better reflect the energy savings potential. Ideally, these calculations should be run by PNNL. We did submit some initial numbers, aligning them with high efficiency water heating, high efficiency heating, and cooling and fan efficiency and reducing those values by 25% to account for the allowance of fossil fuel or electric resistance, but added back 10-20% to reflect the improved thermal energy network efficiency factors.</p> <p>Mike Kennedy pointed out that there was no prorating flag with the measure in either 279 table, so it cannot be used with the formulas, which could be an issue. The TAG discussed the proposal further, including if it was necessary given the action on the previous petition.</p> <p>Motion: Greg Johnson moved to postpone action on 229 to look at how it can be modified to be able to accommodate a prorating flag and work with the equations. Larry Andrews seconded the motion. The motion carried by voice vote.</p>
24-GP1-170	<p>Duane Jonlin petition provides a credit option for those who choose to double check their thermal envelope with a thermal imaging camera, to ensure a much better insulated building. The credit is just a placeholder value, assuming this will be part of the PNNL calculation.</p> <p>The TAG discussed the technicalities of the use of a thermal imaging camera and the practicality of the option.</p> <p>Motion: Erik Bedell moved to approve 170. Greg Johnson seconded the motion. The motion carried by voice vote.</p>

<u>24-GP1-212</u>	<p>Rachel Thompson introduced her petition to remove the equation under Section C406.2.14 for commercial kitchen equipment. The multiplier of 20 used in the equation limits the maximum number of credits to under 20 which doesn't make sense since the table value is from 18-31 depending on building type. The equation is originally out of the IECC, which had only required 10 credits for C406, vastly different from the WSEC. The equation was removed from the 2024 IECC.</p> <p>The TAG discussed the proposal and the credits for the measure and how to best move forward.</p> <p>Motion: Greg Johnson moved to postpone 212 to allow revisions. Larry Andrews seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-258</u>	<p>Mike Fowler's petition introduces a new option to reduce peak heating and cooling loads to lower building energy use, enhance building resiliency, and to ease demand on the grid during peak events by optimizing the building enclosure. It is proposed as both an efficiency credit option and a load management credit option. The efficiency credit is based on LEED v5, but the load management credit is arbitrary. It is assumed the values will be recalculated.</p> <p>The TAG discussed the measure, how it differed from existing credit options, and how the peak load is identified. The TAG recommended some language changes for consistency with other options and added some limitations on use with other measures.</p> <p>Motion: Larry Andrews moved to approve 258 as modified by the TAG, basing the maximum Btu/h per square foot of conditioned floor area and to specify the measure cannot be used with options 7, 25, 26 and 27. Erik Bedell seconded the motion. The motion carried by voice vote.</p>
<u>24-GP1-225</u>	<p>Jeff Giffin introduced a petition that changes the term "low carbon district energy system" to "thermal energy network" in Section C406. The main petition for the name change is 24-GP1-224, which hasn't been heard yet.</p> <p>Motion: Greg Johnson moved to approve 225. Erik Bedell seconded the motion. The motion carried by voice vote with one opposing vote.</p>
<u>24-GP1-230</u>	<p>Jeff Giffin presented a petition allowing a path for the use of modeling data when new thermal energy systems are still in the process of being set up to serve a project. You need to have both the network and the building or development to accept that energy.</p> <p>The TAG discussed the proposal. There were concerns about basing credits on a promise. It was suggested that the exception in the C406 sections be moved to the main body of the section and add a requirement tying the modeler qualifications to those required by energy modeling in Section C407.3. The same language was also added to the C407 sections.</p>

	<p>Motion: Erik Bedell moved to accept 230 as modified. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
24-GP1-202	<p>Gregory Johnson introduced a petition to allow energy storage count for up to a third of the solar requirement. This allows you to shift solar generation to peak solar hours, which may not be a building's peak usage hours. This helps with efficiency and carbon emissions.</p> <p>The TAG discussed what the actual footprint of the storage system would be. They also suggested some editorial changes to the language for style consistency.</p> <p>Motion: Kevin Duell moved to approve 202 as modified. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
24-GP1-235	<p>Duane Jonlin presented the PNNL petition that reduces the minimum capacity for electrical energy storage to achieve load management credits. It makes those credits much more attainable and reasonable. The credit amounts are then decreased by 80% to align with the reduced threshold. It also makes some editorial changes to the language and updates the formula for prorating credits.</p> <p>The TAG discussed the changes to the formula and why the capacity would be divided by 1, which wouldn't have any effect and is still essentially the same as the existing equation. It was also suggested that it should include some form of thermal energy storage in addition to electrical energy storage.</p> <p>Motion: Kevin moved to postpone 235 to allow for development of a thermal energy storage path. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
24-GP1-228	<p>Jeff Giffin presented a petition that would award load management credits for buildings connected to a thermal energy network in acknowledgement of the benefits to the grid provided by thermal energy networks. The points provided are in alignment with those for thermal energy storage water tanks.</p> <p>Motion: Kevin Duell moved to approve 228, with the caveat that PNNL calculate the points. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
Section C403	
24-GP1-250	<p>Eric Vander Mey introduced his petition to clarify exception 1 to the economizer requirements. The 2021 modifications to exceptions 1a and 1b have caused some confusion as to whether radiant beams can follow the DOAS path or not. This clarifies that if you don't have a zonal fan you can still use the DOAS path.</p> <p>Motion: Kevin Duell moved to approve 250 with a minor editorial modification. Greg Johnson seconded the motion. The motion carried by voice vote.</p>
24-GP1-262	<p>Not addressed as the proponent or representative was not present.</p>

<p><u>24-GP1-196</u></p>	<p>Duane Jonlin said this petition is based on a change in the Seattle code requested by engineers, specifying that when activated by sensors the ventilation bumps up to the full required ventilation rate.</p> <p>The TAG discussed the section wording and determined the “operate continuously” should have been stricken as it is not part of the 2021 language. The TAG also suggested specifying that the full ventilation rate is out of the IMC.</p> <p>Motion: Greg Johnson moved to approve 196 as modified to read “Ventilation systems for enclosed parking garages shall be activated by gas sensors to the required ventilation rate in accordance with Section 404 of the International Mechanical Code.” Kevin Duell seconded the motion. The motion carried by voice vote.</p>
<p><u>24-GP1-273</u></p>	<p>Duane Jonlin’s next petition increases the minimum sensible heat recovery effectiveness requirement for Group R-2 from 60% to 67%. These are very common units and there is no known cost difference. It also fixes the table numbering associated with this section.</p> <p>The TAG had some questions on Duane’s editorial changes to the exceptions in C403.7.6.2, and the consensus was to not amend any of those exceptions.</p> <p>Motion: Kevin Duell moved to approve 273 as modified, with the changes in the exceptions to Section C403.7.6.2 removed. Duane Jonlin seconded the motion. The motion carried by voice vote.</p>
<p><u>24-GP1-251</u></p>	<p>Eric Vander Mey introduced his petition regarding ERVs. This proposal returns the language closer to that in ASHRAE 90.1, since most standard ERVs don’t have bypass dampers on both the outdoor air and exhaust air. This would eliminate the need for custom built units. The rest of the changes are just clarifications, most of which are from the Seattle code.</p> <p>The TAG discussed the editorial changes and suggested that the title of Section C403.7.7.2 be modified to match the changes within the body of the paragraph.</p> <p>Motion: Kevin moved to approve 251 as modified, to include “fume” in the title of Section C403.7.7.2. Duane Jonlin seconded the motion. The motion carried by voice vote.</p>
<p>5. Meeting Schedule</p>	<p>The next meeting will be Friday, March 14, at 8:30 am. Krista noted the March 14 meeting will end earlier to accommodate an MVPE Committee meeting that afternoon.</p>
<p>6. Other Business</p>	<p>Not addressed due to lack of time.</p>
<p>7. Adjourn</p>	<p>The meeting was adjourned at 2:59 p.m.</p>