



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

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

MECHANICAL, VENTILATION and ENERGY CODES COMMITTEE SUMMARY MEETING MINUTES

LOCATION: DES Conference Center, Room 2320
1500 Jefferson St SE
Olympia WA 98501

MEETING DATE: June 13, 2019

Agenda Items	Committee Actions/Discussion
1. Welcome and Introductions	<p>Meeting called to order at 10:03 a.m. by Eric Vander Mey.</p> <p>Members in Attendance: Eric Vander Mey, Chair; Andrew Klein, Vice Chair; Doug Orth; Kjell Anderson; Diane Glenn</p> <p>Other Council Members in Attendance: Micah Chappell</p> <p>Staff In Attendance: Richard Brown; Krista Braaksma; Ray Shipman, Carrie Toebbe</p> <p>Visitors Present: Al Audette, Mike Baranick, Dave Baylon, Paul Cook, Mike Lubliner, Chuck Murray, David Nehren, Nick O'Neil, Kathleen Petrie, Jonathan Sargent, Louis Starr, Poppy Storm, Shilpa Surana, Amy Wheelless, Graham Wright</p>
2. Review and Approve Agenda	The agenda was approved as written.
3. Review and Approve Minutes	The minutes of the April 25, 2019 meeting were approved as written.
4. TAG Reports <i>IMC</i>	<p>Eric Vander Mey stated the Council received 36 proposals for the TAG to review, including proposals that modified the mechanical provisions of the IRC. The TAG met 3 times and had a quorum at all meetings. Three of the proposals were withdrawn, five were recommended for disapproval, 14 for approval as submitted, and the remaining recommended for approval as modified. The bulk of the work was on residential ventilation and especially proposal IMC32, which was ultimately split into two portions—one addressing the IRC provisions and one the IMC provisions. The proposal requires a supply air ventilation system and filtration and eliminates using a whole house exhaust system for ventilation. He also commented on proposals IMC17 and 18, which adopts the 2019 editions of ASHRAE 15 and UL 60335-2-40 for mildly flammable refrigerants. The TAG recommends this move forward but should only be adopted if the standards in development are issued in time for adoption. Andrew Klein noted Jim Tidwell suggested a further modification of the proposals; Sections 1101.2 and 1101.6 both reference refrigeration systems and should include these standards—UL 60335 in 1101.2 and an exception for ASHRAE 15 A2L systems in 1101.6. Andrew noted this was important to move forward towards using these A2L low global warming refrigerants.</p>

Public Comment

Diane Glenn asked if the proposals that were disapproved were consensus items, or just majority recommendations. Eric stated he did not recall the votes and would need to go back through the records. He said that several of them—01, 09 and 14—were recommended for disapproval because the TAG preferred the language in similar proposals. The other two were addressing the same issue in the IRC and IMC, essentially disallowing recirculating range hoods in new construction, and were recommended for disapproval partially because they could impact some highly efficient building designs.

Andrew Klein: [IMC]17 is something I submitted representing Chemours and ASHRAE submitted an equivalent one. What that does is update ASHRAE 15 to the 2019 edition, which permits the use of A2L which are mildly flammable refrigerants. The reason why they're important is that they're low global warming potential refrigerants and the industry is moving in that direction. So we need codes and standards that regulate them. By updating to ASHRAE 15-2019 ahead of time, which is what the 2021 codes did, that provides regulations for the use of A2Ls in systems. What UL 60335-2-40 does, that's for factory built equipment and listing standards for those. So that will also be updated in the 2019 edition. That's pending publication right now and should be published by the end of the year, which is what updating that standard in our code is contingent upon. Also, it must be updated by next year in order to go into the 2021 codes. The 2021 IMC changed slightly around Section 1101.2, Factory built equipment and appliances, which states that appliances tested and listed with UL 207, 412, 471 and 1995 are deemed to meet the design and requirements of the code. So I would also like to put in UL 60335-2-40 into there. Then in Section 1101.6, General, I think the easiest thing to do there, since this code doesn't address A2L refrigerants, would be to add an exception in there stating the use of A2L refrigerants compliant with ASHRAE 15.

Kjell Anderson asked if this would be controversial in any way. Andrew replied that there was one industry player against it but all of the other industries have come together and are moving forward on this.

Eric noted the proposal is contingent upon the UL standard being published, so the Council will need to deal with that if it's not published by November. It could have a delayed implementation date or something else to address this issue.

Diane Glenn: This is in regards to all of the proposals. I just wanted to clarify, since I chaired the IRC TAG, we did not deal with the mechanical section of the IRC and the only way we addressed these proposals through the IRC TAG, which is a stand-alone TAG, is if one was referred one because it interfered, conflicted or had something to do with the main body of the IRC. I just wanted to make that clear.

Kjell asked if any of these proposals would affect the energy code. Eric said the biggest one would be the residential ventilation modifications. The new requirements coming out of IMC32 are helping to build towards efficient ways to ventilate a residence that work well with the energy

code, especially with the heat/energy recovery requirements for multi-family.

Dave Baylon: It is true that the whole idea of the 403.8 is to bring our ventilation code to something we can use further into the process of making the buildings tighter and more energy efficient as we move towards to 2031 goal. As it is written now, that probably would apply for the foreseeable future, at least through the next couple of code cycles. It is true also that in our current code, the use of exhaust ventilation in detached single family buildings is probably still appropriate as long as the air leakage goes above 3 ach 50, which is allowed in our prescriptive code and in one of our options. That said, a supply ventilation system is much more relevant as you make it increasingly tight. For multi-family buildings, it's actually pretty egregious right now. We have our exhaust only systems that are typical in virtually all of our multi-family construction that are actually just not able to handle with trickle vents and attending bath ventilation and dryers are not able to handle the pressure differences that are actually appearing in these residences. It's actually a fairly serious problem. We've measured delta pressures of half an inch or more that are the typical operation of intermittent ventilation fans and/or whole house ventilation fans. In our mind, this was a pretty significant improvement in the ventilation code and it basically reflects the goals of both the energy code option table and the commercial code mandates from the energy code TAG last year.

Chuck Murray: I just want to comment that I'm primarily a sponsor of this simply because several years ago we recognized these systems were not operating as well as we thought they needed to. While many of worked, there is a great deal of uncertainty with respect to exhaust only systems and we want to eliminate that uncertainty. We put together a good team, with Dave Baylon taking the lead. We also consulted with the Department of Health and WSU, and Eric provided a lot of help. I just want to recognize that this was a team effort and the results show the good work all those folks did.

Mike Lubliner: I want to echo both David and Chuck's feedback. I've been working with the residential ventilation since the 1980's, with the '86 energy code, and I've been working with ASHRAE 62.2 for over 20 years. I think we've taken the best of what we've learned over the years in the, as well as nationally, and we've integrated it and made it more consistent with the commercial energy code in the state. I think it's going to have some profound improvements in indoor environment and energy efficiency. Thank you.

Eric asked if any written comments have been received on the mechanical code. Staff replied that none has been received to date.

IMC Motions:

Andrew Klein moved to modify IMC17 to reference UL 60335-2-40 and ASHRAE 15 in Sections 1101.2 and 1101.6, as noted above. Kjell Anderson seconded the motion. The motion carried.

Diane Glenn moved to recommend moving forward all change proposals pertaining to the 2018 IMC and the mechanical sections of the 2018 IRC receiving a recommendation from the IMC TAG for approval or approval

as modified, including IMC17 as modified by the committee. Andrew Klein seconded the motion. The motion carried.

WSEC-R

Kjell Anderson reported the Energy TAG spent about 21 hours reviewing the 36 residential energy code proposals received. Most were unanimous, or near unanimous, votes. Those that were not unanimous are listed in the TAG report. Keeping in mind the Council has been directed to advance the energy code more quickly in accordance with Executive Order 14-04, there were two proposals that made significant progress towards that goal—WSEC-R23 and WSEC-R31. Both expand the R406 table for additional energy credits. R-2 buildings were separated out into a separate column, since they tend to be larger and use energy differently. They also set a threshold of 600 kWh savings per year per half credit to more easily assess the credits assigned to each option. R23 increased the number of credits required per dwelling unit, and R31, which further increased those requirements, was voted on after that and the TAG voted to bring only those values forward to the Council. There were other substantial comments on some of the gas fireplace proposals and fireplace efficiency.

Andrew Klein asked if an economic analysis was done with the increase of credit requirements. Kjell responded that they were done as part of the proposal. Most of them were cost neutral, with the increased cost being offset by savings on energy bills.

Chuck Murray, Commerce: At the end of the TAG process there is always a question of where we ended up relative to our goals. They [Ecotope] rebuilt [this graph](#), which was built for R23, as a bottom up analysis of the 2006 energy code compared to the R23 proposal. This is a modified version of that proposal which incorporates the additional credit that is featured in R31, which was eventually passed as a majority proposal by the TAG. Everybody always want to know the answer to this question. This is our best estimate at this time. I have to say this is a great overall assessment but there are details that if they were included in the whole package the numbers would change.

Kjell commented that the blue line is the goal; it's about the same percentage reduction in every code cycle. The red line would be if we reduce the same amount of energy use in each code cycle, but that would result in large changes in the last two code cycles before 2030. With the proposals the TAG is recommending, we would be exactly on track for the percentage reduction from the previous code.

Diane asked to look at the changes to the table and the additional options added. Kjell recommended the Committee look at the proposed revised version of [Table R406.2](#), which incorporates all the new options and formatting.

Andrew asked why the renewable energy option was capped at 3 credits. Eric said that the thought was to drive towards a more efficient building and not just rely solely on renewables. Andrew and Diane felt that the base code would accomplish that. Kjell commented that the table incentivizes options that have a longer life span within the building, and when you consider the energy retrofits included in the clean energy bill, it would be more difficult later for people who just install PV to increase

efficiency. Chuck Murray commented that solar system in the Pacific Northwest are not aligned with our capacity requirements. They generate the most energy when we need it the least. All the other things we're doing here through code do a fairly nice job of impacting our capacity requirements fairly directly. Our capacity is driven largely by winter peaking; our river system is operating the worst at the end of the fall and winter. We're not getting a lot out of our solar systems during that time period. So it's trying to address our capacity needs by making sure we get more of the elements in the building that actually address that part of the system needs.

Diane asked why so options are N/A for R-2. Dave Baylon, as the proponent of most of the options, noted there were two reasons why things got to be N/A in multi-family applications. The most important was that when we could not get a half a point with the savings, we took it out of the multi-family scenario. That happened in at least one of the envelope measures and some of the other measures. This particular measure, Option 4.2, the ducts inside measure is N/A because there isn't a place to put the ducts in multi-family that isn't inside. And you almost never have a ducted system. Diane disagreed with that statement, stating that it can be done and you should get credit for it. Dave noted that a ducted system is less efficient than a zonal system, so you would be making the building less efficient to put in a measure for the points, so it would not be appropriate to encourage ducts in this occupancy.

Diane asked if there was an option for innovation. There is a lot of progression on different materials and systems and there should be a way for builders to take credit for those things, or if they come up with some very energy efficient way of doing things, especially if it's cost efficient. Eric said there were no proposals along those lines. Builders would need to submit under alternate means and methods and somehow quantify the savings. It was noted that they could still go through the modeling and do it that way. Kjell noted the 600 kWh metric is not outlined in the code language.

Public Comment

Kathleen Petrie, King County: I just appreciate the conversation that's happening today and the points that are being brought up and the negotiation that is going on. King County represents 30% of the state population. We have carbon reduction goals that we have to hit—50% by 2030 and 80% by 2050. As we all know, the limitations of small residential energy—we have no means of getting there. With the inclusions of these two proposals in particular, we can take strides with this code. So we appreciate the support for our goals. Thank you.

Dave Baylon, Ecotope: Along those lines, I'd like to bring up another point. The TAG passed, by a noticeably stronger majority, a carbon accounting systems that was parallel to this table but added a couple of features and changed one or two of the measure points based on relative emissions rather than relative energy. That's proposal WSEC-R36. Its principle differences, I don't know if this has been posted yet, are shown in a memo Chuck and I wrote earlier in the week. The main thing is that this particular proposal reflects a more direct assessment of carbon emissions as a basis for doing these

savings. The proposal was designed to essentially deliver comparable, or similar, or even identical energy savings in different combinations under certain circumstances. And it was designed to take into account the fact that our base building types—our base heating system types—deliver different savings as you move from gas to electric to high efficiency electric. We do not, in the current system, take into account this difference. A gas furnace uses more energy because it's a less efficient system, but it's a much less expensive system so it ends up being, in our current table, equivalent. We used weighting systems that are explained in the memo to more or less equalize all those things outside of the code. This was an effort to make it inside the code by using a separate option table that assigns initial option points associated with the individual heating systems. In actual fact, the final votes from the TAG tended to favor this approach. It does not affect any of the components of the option table as far as how it's defined; except in two categories, hot water and space heating, it does not affect the points for any of those things either. I don't know exactly how to look at that, because I hope this would be passed on to the Building Code Council if not actually approved as the primary assessment of the option table as debated by the Energy TAG.

Eric asked the committee how they would like to wrap up this discussion on R36. Kjell noted it was approved by the TAG 10 to 2, with one abstention so this is in this base package the TAG recommends moving forward to public hearing.

Chuck Murray: I submitted [two document](#). I'd like to start with the one called discussion on the buried duct credit [Note: in the attached it is titled "Discussion WSEC R15"] I have some written documents we can share here. [Eric noted this is posted online in the testimony on Group 2 code changes] The TAG, in their zeal to add additional credits to give people more options, approved this. I think the analysts were worried about this because it granted credits and is questionable if it saves any energy at all. The second note is, if indeed you do choose to include that, I think we can improve it, if folks feel compelled to continue through with the TAG recommendations, with a small modification. My main concern is that this encourages people to put duct systems in the attic. Duct systems in the attic are not a good practice. Unlike duct systems in the crawlspace, where you can actually anticipate that any heat losses, some of those get recovered into the building, duct losses in the attic are lost because of the high ventilation rate. The way this is worded, it encourages you to put the whole system in the attic, which I think is bad practice in respect to energy efficiency. First, I'm recommending that this not move forward. But second, if indeed the MVE Committee believes it should move forward, I'd recommend the modification where we're only specifying the ducts located in the attic be deeply buried rather than all ducts be in the attic.

Mike Lubliner, WSU, asked Chuck: Is it your intent to have the air handling system, which represents the biggest component to air leakage and conduction be specifically not allowed in the attic. That's my concern. I think the model assumes that any leak is the same, whether it's at the end of the ductwork, say in the attic, or at the

plenum itself. We know that the temperatures are more severe at the plenum end and at the equipment, so I was feeling that it may be appropriate to allow some ductwork but not the air handler itself in that space. I was trying to be clear as to...

Chuck Murray replied: This is explicitly addressing the fact that we've awarded half a credit for this practice. And it doesn't say anything about the air handler. I'm simply addressing the language that's before us, the fact that we're awarded it half a credit.

Mike Lubliner: So, Chuck, would you think that if we were specific in not allowing the air handler in that space, would that address a lot of your concerns?

Eric asked Chuck if it was intended that all local exhaust ducts are buried under the insulation. Chuck replied this would only address HVAC equipment.

Louis Starr, Northwest Energy Efficiency Alliance: A lot of times we support analysis of different things that people come up with just to support the process. This particular one got developed before we were able to do our analysis. I think it was Ecotope who did some analysis on this and it kind of alluded to what Chuck said—that there wasn't the same amount of credits. So just on that basis I'm not too excited about an option that doesn't really have the credit worthiness that it needs to in order to be an appropriate spot. I think Chuck's alluding to a solution. One of the things that we would have done as a group was come up with way to make a modification that would make this appropriate for the point system. I don't know if we can necessarily handle it that way. But currently as this is written, it's going to...it's kind of a loophole. And if you get too many loopholes it makes it problematic for those credits doing what you're trying to get them to do. I didn't have time to ask Chuck—did you have a proposal that's a modification to it? Or just blanket that this doesn't cut the mustard?

Chuck Murray: My first priority would be to say that this isn't credit worthy and you shouldn't put it in there at all. If this committee wants to move forward with the TAG recommendation, I'm recommending that you simply modify the text a little. I've given the committee a couple of things to think about.

Louis Starr: So what you're proposing is this piece of paper [Discussion WSEC R15].

Dave Baylon: The TAG approved this but the analysis that went with that approval was not actually done before it was voted on. We did do that in the subsequent week after this was originally discussed, and there are suggestions that Mike Lubliner made and a set of analyses that we did subsequently. The main problem here is that when you bury the ducts in the attic, and that's all that you do—you don't foam them—you preserve precisely that same leakage rate you had to begin with, because the attic insulation is highly porous and any leaks in the ducts will migrate to the attic and out. In order to get half a point, you need to actually reduce the duct leakage substantially. If you move the air handler into the heated space and then perhaps you could allow as

much as three percent, or 3 cfm per 100 square feet, which would be about 25% better than our current code and get the half point. This proposal, as it sits, unless someone actually comes in and says we're going to do these things to the ducts in the attic and not just throw a bunch of cellulose insulation over the top of it, unless that happens, this is essentially a complete giveaway. It's just a free half a point that gets no particular energy credit as it sits.

Louis Starr: I think there's really two issues here. If you look at what Chuck is doing, he's marking out three words here which will keep people from putting ducts in the attic, which I think we can all agree that that makes a lot of sense. Right? The second part Dave talked about I think is pretty accurate. I think the nature...I forget how many proposals in the TAG we had to go over—there were a lot of them—so sometimes in the interest of speed things get approved with the analysis. One of the things I particularly tried to do in the TAG was to pay so that we could do that analysis that Dave Baylon just talked about. That process is a process and it's not perfect. I would submit that both kind of what Dave said is true and what Chuck said is also very true. I think Chuck's is, from a market effect, his point is really important. I would say Dave's is important too, but I think what Chuck's asking for here is not too much.

Kjell asked what the calculated energy savings was for this measure. Dave Baylon replied that he thinks the results were distributed via email with the modifications necessary to achieve the half point credit. Louis Starr said that you would have to tighten up the leakage to get to that level of energy savings.

Mike Lubliner: My feeling on this is that we do have a market transformation commitment to 2030. Long term, that's trying to get us and the builders and the industry to move ducts into the conditioned space because we'll never get to that lower metric until we do that. My pragmatic approach working the hotline for a year and a half, hearing people talk to me—How do I get the ducts inside—and understanding the limitation of the modeling, is to say the most important thing is the air handler; that's where you're really going to get the savings. I think what David is suggesting, we make the ducts that are allowed in the attic buried to be tighter than the four percent. We bring them down to three percent. That's doable in the HERS raters and in the programs that we work with on. And then require the air handler, which has that highest pressure and the highest temperatures, be located in the conditioned space. Once you do that, you're forcing people to move that air handler inside; out of the garage, out of the basement, out of the attic. You're doing profound...I think you are going to get at least half a credit for that. So I think there's some work that could be done easily to make this clear that it would require that the HVAC be in the conditioned space, three percent leakage, and the half point would be adequate. I'm not sure if that's consistent with Chuck's language.

Amy Wheelless, Northwest Energy Coalition: I'm on the TAG. I did vote for this proposal. I think with the analysis that Dave and Ecotope

and others brought forward, I would not have voted for it at the meeting. I hope that better, improved proposal would come forward in the next meeting, to get to a point where we could all agree to it. But it never did. I just wanted to state that I probably would have changed my vote with the analysis on the table, that we've been discussing so far.

Diane believed this would be a worthwhile option and didn't feel that something recommended by the TAG should be disapproved. The Committee discussed possible modifications to WSEC-R15. They ultimately settled on adding Chuck Murray's "located in the attic" in the first sentence, Mike Lubliner's prohibition on locating the air handler in the attic, and Dave Baylon's reduction of duct leakage to 3 cfm per 100 square feet of conditioned floor area.

Chuck Murray: I have another detail I'd like to bring up, with respect to the carbon proposal, WSEC-R36. Once again I have some written documents. The normalized fuel emissions credits contained in the original proposal didn't describe completely the options that are available in heating system types. To ensure that, regardless of what type of heating system folks install, they know how to apply this table. For example, The A column originally said a gas furnace with a minimum AFUE when, in fact, it should apply to all combustion heating equipment meeting the federal efficiency standard listed in those tables. It simply allows oil, as well as boilers, furnaces. The commercial tables also include all the small equipment we see in residential structures, so that's appropriate. The heat pump, I also provided the reference table for the types of heat pump this item is targeted for, which are the split system heat pumps. Zonal electric I haven't modified. I've modified D to include ductless mini-split system, because that's the term used in our code. Finally, at the bottom I put all other heating systems. There are a bunch of small, pretty inefficient equipment allowed by federal standards. For example, you could buy a wall heater that's gas powered with below 60 percent AFUE allowed. I'm recognizing the system efficiency as well as the fuel choice. The one that may seem a little unfair here that I'm going to bring up so folks can talk about it. I think PTACs fit in that E column as well. They don't have particularly good low temperature response and in a well-insulated house they only run in electric resistance heating mode. Eric asked if this would be a PTAC or PTHP. Chuck replied it would be both; they just don't have good low temperature COP. At any rate, the point here is that with that description, now all system types know what to do.

The Committee members discussed Chuck's proposed modifications and [made some adjustments](#) to include additional equipment types.

WSEC-Res Motions:

Diane Glenn moved to modify WSEC R15 as noted above and recommend approval. Kjell Anderson seconded the motion. The motion carried.

Kjell Anderson moved to modify the fuel normalization table as noted above. Eric noted he would prepare the final language for PTHP units for

	<p>the Council meeting tomorrow. Andrew Klein seconded the motion. The motion carried with one abstention.</p> <p>Kjell Anderson moved to forward the TAG recommendations to the Council, along with the modifications to WSEC-R15 and R36 voted on earlier. Andrew Klein seconded the motion. The motion carried.</p>
5. Staff Report	<p>Richard Brown briefed the committee on the steps in the code adoption process. The committees will be making their recommendations to the Council tomorrow on which proposals will move forward to public hearing. The public hearings for the Group 2 codes are scheduled for September 13 and 27, with final adoption in October or November of this year.</p> <p>Richard also reported that the formal public hearing for the Group 1 codes is scheduled for July 12, with the final Council vote scheduled for July 26.</p>
6. Other Business	None.
7. Adjourn	Meeting was adjourned at 12:09 p.m.

Group 2 Code Change Proposals - 2019

Date Received	Proponent	Code	Section	Subject	Log Number	Notes	TAG Action	Committee Action	Council Action
5/18/2018	WABO/Lee Kranz	IMC	1402.8.1.2	Rooftop solar collectors	19-IMC01		Dissapprove	TAG Recommendation	
5/22/2018	WABO/James Tumelson	IMC	1402.8.1.2	Rooftop solar collectors	19-IMC02		Approved as submitted	TAG Recommendation	
2/19/2019	City of Cheney/Shane Nilles	IMC	1209.5	Snow melt systems	19-IMC03		Approve as modified	TAG Recommendation	
4/6/2019	Robby Oylear	IMC	403.1.1.2.3	Multi-zone recirc systems	19-IMC04		Approved as submitted	TAG Recommendation	
4/6/2019	Robby Oylear	IMC	403.2.1	Recirculation of air	19-IMC05		Withdrawn	TAG Recommendation	
4/10/2019	Mike Moore/Broan	IMC	401.4/501.3.1	Air intake/exhaust outlets	19-IMC06		Approve as modified	TAG Recommendation	
4/10/2019	Mike Moore/Broan	IRC/M	M1504.3	Exhaust openings	19-IMC07		Approved as submitted	TAG Recommendation	
4/10/2019	Mike Moore/Broan	IRC/M	M1503.3	Exhaust discharge	19-IMC08		Dissapprove	TAG Recommendation	
4/10/2019	Mike Moore/Broan	IRC/M	M1501.1/M1505.4.3	Mech ventilation rate	19-IMC09		Dissapprove	TAG Recommendation	
4/10/2019	Mike Moore/Broan	IRC/M	M1507.3.2	Control & operation	19-IMC10		Approved as submitted if IMC-32 Fails	TAG Recommendation	
4/10/2019	Mike Moore/Broan	IRC/M	M1507.3.3.1	Ventilation rate test	19-IMC11		Approve as modified	TAG Recommendation	
4/10/2019	Mike Moore/Broan	IMC	403.3	Ventilation rate test	19-IMC12		Approved as submitted if IMC-32 Fails	TAG Recommendation	
4/10/2019	Mike Moore/Broan	IMC	501.3	Exhaust discharge	19-IMC13		Disapprove	TAG Recommendation	
4/10/2019	Mike Moore/Broan	IMC	Ch. 4	Ventilation simplification	19-IMC14		Disapprove	TAG Recommendation	
4/5/2019	Bellevue/Valerie Graber	IMC	T 403.3.1.1	Kitchenettes	19-IMC15		Withdrawn	TAG Recommendation	
4/5/2019	Jonathan Sargeant/Omegaflex	IRC/IFGC	Reference Stds.	Updated standard	19-IMC16		Approved as submitted	TAG Recommendation	
4/15/2019	Chemours/Andrew Klein	IRC-M/IMC/IFC	Reference Stds.	Updated standard	19-IMC17	Committee Mod	Approved as modified	Approve as further modified	
4/15/2019	ASHRAE/Stephanie Reiniche	IRC-M/IMC/IFC	Reference Stds.	Updated standard	19-IMC18		Approved as submitted (same as IMC-17)	TAG Recommendation	
4/15/2019	Mike Moore/Broan	IMC	C403.8.2	Control & operation	19-IMC19	More Information coming from Mike Lubliner	Approved as submitted if IMC-32 Fails	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	202	Relief air	19-IMC20		Approved as modified	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	202	Replacement air	19-IMC21		Approved as modified	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	401.4	Intake openings	19-IMC22		Approve as submitted	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	403.2.1	Recirculation of air	19-IMC23		Approve as modified	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	T 403.3.1.1	Kitchenettes	19-IMC24		Approve as modified	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	403.1.1.1	Outdoor air distribution	19-IMC25		Approved as submitted	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	403.3	Airflow rates	19-IMC26		Approved as modified	TAG Recommendation	

Date Received	Proponent	Code	Section	Subject	Log Number	Notes	TAG Action	Committee Action	Council Action
4/15/2019	Eric Vander Mey	IMC	403.8	Whole house ventilation	19-IMC27		Withdrawn	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	501.3.1	Exhaust outlet	19-IMC28		Approved as modified	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	501.4	Pressure equalization	19-IMC29		Approve as modified	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	510	Waste chute vent	19-IMC30		Approved as submitted	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	605.1	Air filters	19-IMC31		Approved as submitted	TAG Recommendation	
4/15/2019	Commerce/Chuck Murray	IMC	403.8	Whole house ventilation	19-IMC32	Mods for IRC Mods for IMC	approved as modified	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	506.3.2.4	Vibration Isolation	19-IMC33		Approved as submitted	TAG Recommendation	
4/15/2019	Eric Vander Mey	IMC	601.2	Air movement in corridors	19-IMC34		Approved* Correlation Req.	TAG Recommendation	

Group 2 Energy Code-Residential Proposals - 2019

Proponent	Code	Section	Subject	Log Number	Notes	TAG Action	Committee Action	Council Action	Economic Impact
Bellingham/Jim Tinner	WSEC-R	R202	Def: Res Bldg	19-WSEC-R01					
City of Cheney/Shane Nilles	WSEC-R	R202	Def: Res Bldg	19-WSEC-R03	Merged into one proposal Vote: 14-1	As Modified 5/10	TAG Recommendation		No
Robert Hitchner	WSEC-R	R403.5.4/R406	Drain water heat recovery	19-WSEC-R02	Vote: 13-0	As Submitted 5/17	TAG Recommendation		No
City of Cheney/Shane Nilles	WSEC-R	R403.5.5	Water heater Insulation	19-WSEC-R04	Vote: 14-0	As Modified 5/31	TAG Recommendation		Yes
David Mann, ACC	WSEC-R	Table R402.1.1	Wall R-value	19-WSEC-R05	Vote: 14-0	Disapproval 5/31	TAG Recommendation		Yes
Gary Heikkinen	WSEC-R	R403.1.1	Programmable Therm	19-WSEC-R07	Vote: 12-1	As Modified 5/31	TAG Recommendation		Yes
Mike Moore/Broan	WSEC-R	R401.3	Certificate	19-WSEC-R08	Vote: 14-0	As Submitted 5/31	TAG Recommendation		Yes
Gary Heikkinen	WSEC-R	R403.7.1	elec resistance thermo	19-WSEC-R09	Vote: 12-1	Disapproval 5/31	TAG Recommendation		Yes
Alan Nolan/SHBA	WSEC-R	Table R406.2	Advanced framing	19-WSEC-R10	Vote: 14-0	As Modified 5/31	TAG Recommendation		Yes
Seattle/Jennifer Gilliland	WSEC-R	R403.1.1	Programmable Therm	19-WSEC-R11	Vote: 13-0	As Modified 5/31	TAG Recommendation		Yes
WSU/Mike Lubliner	WSEC-R	Table R402.1.1	Existing slab insulation	19-WSEC-R12	Vote: 13-0	As Modified 5/31	TAG Recommendation		No
WSU/Mike Lubliner	WSEC-R	R401.3	Certificate	19-WSEC-R13	Vote: 13-0	As Submitted 5/31	TAG Recommendation		No
Alan Nolan/SHBA	WSEC-R	Table R406.2	Buried attic ducts	19-WSEC-R15	Vote: 6-4-3	As Submitted 5/17	Committee Mod		Yes
Alan Nolan/SHBA	WSEC-R	Table R406.2	High efficacy lighting	19-WSEC-R16	Vote: 6-5	Disapproval 5/10	TAG Recommendation		Yes
Commerce/Bill Kraus	WSEC-R	R202	Ductless mini split	19-WSEC-R17	Vote: 15-0	As Modified 5/10	TAG Recommendation		No
Commerce/Bill Kraus	WSEC-R	R403	Performance requirements	19-WSEC-R18	Vote: 14-0	As Submitted 5/31	TAG Recommendation		No
Commerce/Bill Kraus	WSEC-R	R202	High efficacy lamps	19-WSEC-R19	Vote: 12-0	As Modified 5/10	TAG Recommendation		Yes
Commerce/Chuck Murray	WSEC-R	R402.4.1.2	Air leakage test	19-WSEC-R20	Vote: 9-6	As Submitted 5/10	TAG Recommendation		Yes
Commerce/Bill Kraus	WSEC-R	R402	Reorganization	19-WSEC-R21	Vote: 8-2-3	As Modified 5/31	TAG Recommendation		No
Commerce/Bill Kraus	WSEC-R	Table R402.1.1	Log walls	19-WSEC-R22	Vote: 13-0	As Submitted 5/31	TAG Recommendation		Yes
Commerce/Chuck Murray	WSEC-R	R406	Credit updates	19-WSEC-R23	Vote: 9-5	As Modified 5/10	TAG Recommendation		Yes
Nick O'Neil	WSEC-R	R402.4.2.1	Gas fireplace efficiency	19-WSEC-R27	Vote: 9-5	As Submitted 5/31	TAG Recommendation		Yes
Nick O'Neil	WSEC-R	R403.1.3	Pilot lights	19-WSEC-R28	Vote: 8-6	As Submitted 5/31	TAG Recommendation		Yes

Env. WA/Chris Connolly	WSEC-R	R403.13	Required PV	19-WSEC-R30	Vote: 13-0	Disapproval 5/31	TAG Recommendation	Yes
Seattle/Duane Jonlin	WSEC-R	R402.4/ R403.3.7 /	Air leakage/ducts/add'l credit	19-WSEC-R31	Vote: 7-6	As Submitted 5/17, credits needed only, for Council consideration	TAG Recommendation	Yes
Shift Zero/Graham Wright	WSEC-R	R408	Passive House compliance	19-WSEC-R32	Vote: 9-1-2	As Modified 5/31	TAG Recommendation	Yes
Shift Zero/Poppy Storm	WSEC-R	R404.2	Electric ready	19-WSEC-R33	Vote: 7-6-2	As Modified 5/31	TAG Recommendation	Yes
Energieo/Tyler Kafentzis	WSEC-R	R402.4.1.1/ R403.3	Unvented crawlspace	19-WSEC-R34	Vote: 14-0	Disapproval 5/31	TAG Recommendation	Yes
Dave Baylon	WSEC-R	New appendices	Tri-level code	19-WSEC-R35	Vote: 12-1	As Modified 5/17	TAG Recommendation	Yes
Dave Baylon/Chuck Murray/ Pt	WSEC-R	R402.4/R403.3.7/ f	Air leakage/ducts/add'l credit	19-WSEC-R36	Vote: 10-2-1	As Modified 5/17 R36 AM 3/31 ↑	Committee Mod	Yes
David Mann, ACC	WSEC-R	R402.4.1.2	Air leakage rate	19-WSEC-R06	Withdrawn by proponent, 4/22/19			
WSU/Mike Lubliner	WSEC-R	R402.1.2	R-value computation	19-WSEC-R14	Withdrawn by proponent, 5/31			
Alan Nolan/SHBA	WSEC-R	Table R406.2	Air Leakage/Ventilation	19-WSEC-R24	Withdrawn by proponent, 5/30/19			
Patrick Hayes	WSEC-R	R402.1.4	REScheck	19-WSEC-R25	Withdrawn by proponent, 5/31			
Patrick Hayes	WSEC-R	Table R406.2	Efficient building envelope	19-WSEC-R26	Withdrawn by proponent, 5/17/19			
Alan Nolan/SHBA	WSEC-R	Table R406.2	Building envelope	19-WSEC-R29	Withdrawn by proponent, 5/15/19			