

## Energy Sub-Workgroup Meeting

April 11, 2022 9:00 a.m.

Virtual Meeting: <https://vadhcd.adobeconnect.com/va2021cdc/>

### ATTENDEES:

#### **VA Department of Housing and Community Development (DHCD) Staff:**

**Richard Potts:** *Code Development and Technical Support Administrator, State Building Codes Office (SBCO)*

**Paul Messplay:** *Code and Regulation Specialist, SBCO*

**Florin Moldovan:** *Code and Regulation Specialist, SBCO*

**Jeanette Campbell:** *Administrative Assistant, Building and Fire Regulations (BFR)*

#### **Sub-Workgroup Members:**

**Andrew Clark:** *Homebuilders Association of Virginia (HBAV)*

**Chelsea Harnish:** *Virginia Energy Efficiency Council*

**Eric Lacey:** *Responsible Energy Codes Alliance (RECA)*

**Jeff Mang:** *Polyisocyanurate Insulation Manufacturers Association*

**Jim Canter:** *Virginia Building and Code Officials Association (VBCOA)*

**K.C. Bleile:** *Viridiant*

**Steve Shapiro:** *Apartment & Office Building Association (AOBA), Virginia Apartment Management Association (VAMA)*

**William Penniman:** *Sierra Club*

#### **Other Interested Parties:**

**David Owen:** *HBAV.*

**Craig Toalson:** *HBAV*

**Dawn Oleksy:** *Richmond Office of Sustainability*

**Ellen Eggerton:** *Alexandria Sustainability Coordinator and VBCOA*

**Laura Baker:** *RECA*

**Linda Baskerville:** *Arllington County*

**Mike Hamilton:** *Arllington County*

**Mike O'Connor:** *Virginia Petroleum and Convenience Marketers Association (VPCMA)*

**Petrina Jones**

**Ross Shearer**

**Sean Farrell:** *Prince William County, member of VBCOA, member of BHCD*

#### **Sub-Workgroup Members not in attendance:**

**Andy McKinley:** *American Institute of Architects (AIA), Virginia*

**Bettina Bergoo:** *Virginia Department of Energy*

**Brian Clark:** *Habitat for Humanity*

**Corey Caney:** *International Association of Electrical Inspectors (IAEI), Virginia*

**Ellis McKinney:** *Virginia Plumbing and Mechanical Inspectors Association (VPMIA)*

**Maggie Kelley Riggins:** *Southeast Energy Efficiency Alliance*

## **Welcome & Introductions:**

Richard Potts: Welcomed participants. He quickly reviewed the microphone feature of Adobe Connect meeting space. He introduced DHCD staff and allowed participants to introduce themselves. He then gave an overview of the Energy Sub-Workgroup purpose and function.

Andrew Clark: Introduced himself and asked Richard about the timeline and if they needed to have all proposals completed prior to the Energy Workgroup meeting, or if they could continue to work on them until prior to the BHCD meeting.

Richard: The General Workgroup for energy proposals will meet this Thursday and will hear all proposals from this meeting. If more time is needed, the proponent can continue to work on their proposal until May 1<sup>st</sup>, in order to be discussed at June General Workgroup meeting.

Andrew: Representing the home builders, they are willing to continue to work towards consensus for any proposals.

Richard: This group does have a new proposal to review today. Other proposals carried over from last meeting will also be reviewed, to determine if the proponent wants to continue to work on those proposals or push through to the General Workgroup meeting. He did receive a proposal from Eric with revised language which will be discussed later.

Laura Baker: Wants to make sure that she understands the process. If the group agrees on a proposal do they have until May 1<sup>st</sup> to present at the next General Workgroup meeting on June 9<sup>th</sup>, or is that only for new proposals?

Richard: The goal is to send the General Workgroup meeting agenda out about a month ahead of the meetings. The proposals should be in their final state by that time, so that there are no unexpected changes made after the agenda has been sent. So, any proposals going to the June Workgroup meeting should be finalized no later than May 7<sup>th</sup>.

Andrew: If there's a proposal submitted by May 1<sup>st</sup>, can this group can still work on amendments prior to the June meeting, and even into September?

Richard: There's not a hard set cutoff to work on amendments. However, there could be a concern raised if changes are made after being submitted on the agenda, and stakeholders not having a chance to review them prior to the meeting.

## **Proposals:**

### **EC-C402.4-21**

Eric Lacey: This is a commercial energy code proposal. Chapter 13 of the VCC lists amendments to the model codes that Virginia has adopted over the years and carries them forward unless they are changed or removed. This proposal identifies 3 amendments that should be eliminated. Sub Sections 2 and 4 deal with the fenestration solar heat gain coefficient for commercial and multi-family buildings. This amendment was put in a few cycles ago because the Virginia SHGC was better than the model code. Since then, the IECC caught up with Virginia. It simplifies the way that SHGC and projection factors are treated. For the first time in a few cycles, IECC requires the same fenestration and SHGC factors as Virginia. It makes sense now to delete Sub Sections 2 and 4, both of which tweaked the fenestration SHGC requirement of Virginia. Sub Section 3 deals with maximum skylight area. There used to be a 5% cap on skylight area and now the 2021 IECC allows 6%. If this is deleted from the Virginia code, it bumps the area from 5 to 6%. These amendments don't seem to be necessary any longer.

Steve Shapiro: If these first two changes are made, they would not be any more restrictive in Virginia than they have been. Is that correct?

Eric: Not by much. The current SHGC requirement for commercial windows in Virginia doesn't differentiate between fixed and operable fenestration. It's set at .36. The 2021 IECC applies .36 to fixed fenestration and .33 to operable fenestration. If there's more frame area, the SHGC comes down naturally. The other 2021 ICC change is the same as Virginia. The 2021 IECC pre-calculates the projection factor adjustment and lists it in a table instead of giving a formula to be calculated manually. It comes out with roughly the same number either way. The intent is not to change the stringency of the Virginia code, but to align it with the IECC.

Steve: Wanted to make sure that it's not any more stringent than it already was in Virginia.

Eric: Virginia didn't adopt the orientation specific SHGC from the 2015 edition, because it would have made it a little higher. There's a lower SHGC that applies to operable fenestration – it's at .33 instead of .36. But in reality, operable fenestration has a larger frame area, so it shouldn't be more restrictive.

Richard: Asked if there was any further discussion. Seeing none, he asked the group members to vote thumbs up or down. All thumbs up. Vote on proposal resulted in Consensus for Approval.

Richard: The remainder of the proposals on the agenda were discussed and carried over from the last meeting. If no progress has been made to these, the proponents may either move the proposals forward as they are, or carry them over to the next meeting, in order to have more time to work towards consensus before the group votes.

#### **EC-C407.6-21**

William Penniman: There were questions raised in the last meeting about whether it's appropriate to tie a standard to how a building is marketed and how an inspector would know. He thought about it, and wants to modify the proposal to say that if a builder wants to sell something as a zero energy building, a statement would need to be submitted to the building inspector, so the inspector knows what testing should be done. If the building is confirmed as a zero energy building, there would be a permanent certificate issued stating that it's in compliance with the appendix. This also activates an appendix, which otherwise sits in the code with no purpose. He does want the time to be able to amend this proposal as indicated before submitting. He's willing to answer any questions and speak with anyone to move this further.

Andrew: Would the phrase "subject to any equivalent claim" open up a very broad description of the type of building? Should it be limited to zero energy and net zero energy building claims?

William: He thinks that if someone says "this uses no energy" that would be an equivalent claim. If it doesn't have the exact phrase, it's a work around.

Richard: Anything that would be a rehabilitation, would be in the existing building code. The wording might be readdressed differently in the VEBC. This proposal can be carried over until the next meeting to continue to work on the language.

Steve: He's not sure why this should be in the building code. It seems to be about selling, leasing and advertising.

William: With the standard set forth in the appendix, the building official would know if leakage based on the testing provided meets the standard. This will ensure that it's activated in a way that's useful for developers and buyers.

Richard: Asked William if he would be at the Energy Workgroup meeting.

William: Yes and he would be happy to discuss the proposal at that time to get feedback so that he can modify the proposal.

Richard: This will be Carried Over.

#### **REC-R402.1.2 (1)-21**

Laura: This is an insulation proposal and it's still being worked on to find common ground and get agreement from group members. She will continue to work on it and carry over.

Richard: Carried Over

#### **REC-R402.1.2 (2)-21**

William: Continuing to work on this with Andrew and others.

Richard: Carried Over.

#### **REC-R402.2-21**

William: This proposal is for EV charging readiness in residential construction. There were some comments made in the last meeting, so there was further discussion since then with Andrew and Richard Grace around technical issues and a definition that was dropped. He would like to have further discussion with group members, and he wants to carry over until the next meeting.

Richard: Carried Over. He noted that Richard Grace has new contact information, and will send it to William.

#### **REC-R402.4-21**

William: This is about air leakage and attempts to bring the code in line with the 2021 IECC. It is technically feasible and not uncommon to reach a 3 ACH. In the interest of further discussions, he's willing to carry over. He does want something to be submitted to the June Workgroup meetings.

Richard: Carried Over.

#### **REC-R402.4.1.2-21**

Laura: Air leakage proposal with 2021 language. Happy to continue to discuss with anyone and to carry over.

Richard: Carried Over

#### **REC-R403.3.3-21**

Richard: Eric provided a document with revisions (included in the file pod).

Eric: There was good feedback from the last Energy Sub Workgroup meeting, so he made some changes. He thought it would be helpful to recast this as amendments to the 2021 IECC. He had some trouble using the base documents as a starting point, so he started with the 2021 IECC language and asked what changes Virginia would want to make. He doesn't think any of them would be controversial. He highlighted several sections. The first is a test procedure for duct testing, and there was a reference added. The second change is an exception to the code for systems that aren't connected with the HVAC systems. The third is Virginia-specific language to the VCC. This is from the 2015 cycle, when duct testing was first added to the Virginia code. He doesn't think the language is necessary, so he's proposing that it be eliminated. For the next highlighted section, everything is 4.0 now. The next one is #3 testing for ducts in thermal envelope. It requires a test of all duct systems if they are in conditioned space or not. As mentioned on the last call, it's there to ensure that conditioned air is getting to the intended parts of the building. This is a change to the current code. It allows twice as much leakage as if the ducts were outside of conditioned space; 8.0 cubic feet per minute. The final change is if framing cavities are used as ducts or plenums, (which is not allowed in the IECC), they comply with VRC Section M1601.1.1. It would be helpful and useful to include a pointer to that section of the mechanical code.

Ellen: Thinks that item 3 is a direct reflection of a survey done in Virginia when random test of ducts found leak problems. This would benefit the homeowner.

Andrew: Asked Eric to send the document to him via email. Eric said he would send him an annotated version of the document. William asked for one as well. Eric will send them.

Richard: Asked Eric if he wanted to carry over or vote.

Eric: He is fine with carrying over until the next meeting.

KC Bleile: Sees a potential compromise between the builder association and energy advocates for moving this forward, especially with additional discussion around the use of plenums.

Richard: Carried Over.

#### **Assignments & Next Steps:**

Richard: Continue to work on these proposals outside of the group, and bring back to the next meeting. These will be heard at the upcoming General Workgroup. DHCD will get a summary out as soon as possible. Richard will look for a time for the next meeting to review the carried over proposals, and any new proposals. He thanked everyone for participation and reminded the group members that they could reach out to DHCD staff with any questions.