

**Heating and Cooling Study Group
First Meeting Summary
Date: June 23, 2025
Location: Virginia Housing Center
Time: 10:33 AM – 1:27 PM**

Attendees:

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

- **Jeff Brown** – Deputy Director, Division of Building and Fire Regulation
- **Florin Moldovan** – Code and Regulation Specialist, State Building Codes Office
- **Paul Messplay** – Code and Regulation Specialist, State Building Codes Office
- **Chris Scott** – Code and Regulation Specialist, State Building Codes Office
- **Andrew Malloy** – Policy Analyst

Study Group Members:

- **Delegate Elizabeth Bennett-Parker** – Virginia House of Delegates 2025, 5th District
- **Shahriar Amiri** – Arlington County
- **Steve Shapiro** – Virginia Apartment Management Association, Apartment & Office Building Association of Metropolitan Washington
- **Mike O'Connor** – Virginia Petroleum and Convenience Marketers Association, Virginia Propane Gas Association
- **Earl Weaver** – Virginia Building and Code Officials Association, Virginia Property Maintenance Code Committee
- **Dennis Hart** – Virginia Plumbing and Mechanical Inspectors Association
- **Gregg Fields** – City of Alexandria
- **Andrew Clark** – Home Builders Association of Virginia

Purpose:

The Heating and Cooling Study Group brought together local building officials, property managers, code officials, DHCD staff, and legislators to review possible updates to Virginia's Property Maintenance Code. The discussion centered on heating and cooling

requirements for multi-unit residential buildings, including seasonal transition dates and system constraints with an emphasis on dwelling units intended to be rented, leased or let on terms, either expressed or implied, to furnish heating or cooling to the occupants thereof.

Background Discussion

- **Florin** provided background on the study group's formation and the relevant code history.
- **Background Discussion Points:**
 - **Enforceability:** Generally, the Virginia Property Maintenance Code (VPMC) requires buildings to be maintained as constructed, but there's complexity with the enforcement of heating and cooling provisions. There are disconnects between the construction requirements in the Virginia Construction Code (VCC) and the Virginia Mechanical Code (VMC), and the maintenance requirements in the VPMC.
 - Shahriar – Do we have temperature settings in the [Virginia Residential Code]?
 - Florin – Yes.
 - Shahriar – What would [those] be?
 - Florin – I believe 68 degrees (F). We have the model codes and then the [Virginia] amendments for those [buildings] that are leased, rented, or let.
 - Florin – There are a lot of considerations, for instance the unenforceability of the construction requirements. From a building official perspective, an R2 building is an R2 **building** – [the regulation] doesn't mention an R2 **apartment**, nor does it differentiate between condominiums, which are normally owned by the occupants, or apartments, which are normally rented by the occupants. Thus, it is difficult to determine at the time of plan review whether a proposed building is to be rented or owned.
 - Shahriar – You can enforce the temperature requirements at the time of construction and you can look at the design temperatures when [the system] is installed.
 - Florin – Once a Certificate of Occupancy (CO) is issued, the building could automatically be out of compliance with the VPMC.
 - **(Staff Note:** See slides 11 and 12 of the background PowerPoint)

- Shahriar – That should be brought up.
- **Energy Code Considerations:** Any temperature changes could affect building efficiency; must be considered. Staff noted that any changes made here could affect provisions in the Virginia Energy Conservation Code (VECC).
 - Gregg – How do the energy code requirements play-in?
 - Florin – There are a lot of related provisions. Any changes we make here could affect the VECC. If you increase the temperature from what it is now, the building may be less efficient.
- **Legislative Intent:** Recent legislation aimed at convening a stakeholder study group to review and assess regulations regarding the mandated dates for when heating or cooling must be supplied to a dwelling unit.
 - Gregg – This past legislative season, can you go over the concerns or what they were trying to accomplish
 - Florin – Jeff or Andrew may be able to provide more information. As far as I know, the intent was to convene a Stakeholder Group to review these issues, but there are no specifics on how this should be addressed. The Virginia Building and Code Officials Association (VBCOA) may have worked with legislators as part of the code development process and may have additional insight.
 - Andrew – To consider changing the dates [in the regulation].
- **Operational Challenges:** Two-pipe systems (common in older apartments) make it difficult to maintain required temperatures during seasonal transitions due to system limitations (e.g., draining boilers before switching to cooling).
 - Shahriar – We are receiving a lot of phone calls [about this issue]. The minimum should be rolling the end date back by two weeks. The temperature are based off the design temperature – trying to maintain 78 degrees (F) with a 95-degree (F) design temperature is difficult. The criteria appear to be outdated... Two pipe systems require draining the boiler before being able to turn on the chiller. There are millions of systems like this in older apartments.
 - Gregg - That's our biggest issue.
 - Jeff – Those systems are the ones we hear most about.
 - Shahriar – You can't have a common air system in a residential system, right? So, the two-pipe systems were very prevalent up to the mid 1990's.

- Gregg – In addition, that’s the biggest issue we deal with. [I] have no problem issuing a modification, but the difficulty lies with the owners having to switch back and forth between heating and cooling due to temperature fluctuations.
- **Communication Issues:** Building management often misinforms renters about code requirements regarding cooling.
 - Shahriar – The management tells the renters that they aren’t allowed to turn on the cooling, which isn’t what the code says. The problem (with two-pipe systems) is that it can’t be efficiently switched back and forth.

Key Issues Discussed:

- **Proposal Review:**

- The group reviewed a code change proposal (PM602.2-24) that would remove date restrictions and set temperature requirements. Concerns were raised about enforceability, regional climate differences, and practical challenges for building owners and tenants.
 - Jeff – Opened the floor for general discussion. Reminds group of correlation issues presented earlier. Bills weren’t addressing temperatures, just the dates. Provides overview of code change proposal PM602.2-24 in cdpVA.
 - Shahriar – Provides recommendation of having some dates modified. The 75-degrees threshold is problematic, particularly with larger buildings with multiple units. You have to define the summer temperature for cooling, right?
- **Specific Discussion Regarding PM602.2-24:**
 - Shahriar – The technical requirements are flawed because you have to establish temperature baselines for seasons. The winter design temp (Northern to Central VA) is about 20 degrees (F) and the summer is 95 degrees (F). Today has a heat index of over 100, so good luck meeting the 77 degrees (F) requirement.
 - Florin – Clarifies that the underline portion of the text referencing the IECC for the summer design temperature, is not new - nothing is changing compared to the current requirements. Referencing Appendix D in the [International Plumbing Code (IPC)] and the design

temperature in the IECC may create a problem based on how the design temperatures are determined. Most designs are based on the current ASHRAE, which don't jive with the temperatures in Appendix D of the IPC, which are based on the 1985 edition of ASHRAE Handbook, Fundamentals Volume.

- Shahriar – You could reference the current ASHRAE because clearly there is an environmental change, but the other thing to think about is putting an excerpt from ASHRAE in the code because no one is going to pay for the standard for one line out of the standard. You could pull the table for VA [from the ASHRAE standard] – but not every locality is accounted for.
- Steve – Why use Appendix D of the IPC for winter and the IECC for summer?
- Florin – Good question. The proposal itself carries forward the existing requirements...The IECC contains some design temperatures, but when it was first referenced in the code you would not be able to find the relevant information.
- Shahriar – Recommends referencing the ASHRAE fundamentals for both summer and design temps
- Florin – Most buildings are going to be designed under current ASHRAE criteria, but that is not the case for older existing buildings. Consideration should be given to this when drafting a proposal and perhaps use different criteria for existing and new buildings.
- Shahriar – This will be one of those oddball ones. If the building was built in 1990 it doesn't mean it was designed in accordance with the fundamentals. We should look back to what it was then (1990's) and what it is now to make a decision. Let's assume you leave the proposal alone.... Do you want to change the dates? Do we want to correlate between the codes?
- Jeff – If this doesn't work for the two-pipe systems then maybe an exception could be added for those systems due to the delay in switching between heat and cooling.

- **Local Flexibility:**

- There was broad agreement that a “one size fits all” approach does not work for Virginia's diverse climates. The group supported allowing local building

officials discretion and a defined transition window (e.g., a two-week period) to accommodate system changeovers.

- Gregg – What if it's 15 days or 16 days? I think it's the building official's discretion. What are we trying to solve here? It should be up to the locality.
- Jeff – That is one thing we could build in [to the proposal]. We'll make a list of things to go in the proposal.
- Earl – Are we rewriting this proposal? (Referencing PM602.2-24)
- Jeff – We are just discussing it. The group may end developing their own proposal based on what is discussed. We can reach out to the proponent to let him know what the group discusses and if the group develops an alternative proposal. So, he can decide if he wants to continue with his [proposal].
- Gregg – Commends proponent on thoroughness of the proposal.
- Florin – Shares code change proposal from the 2012 cycle that was considered on behalf of VBCOA administrative committee, which is where the 14-day leniency was considered. Temperatures across the state are not the same so the building official should have some time to make a determination based on local conditions.
- Shahriar – That's not being changed, right?
- Florin – I am just providing this information for context.
- Jeff – [This group] did talk about taking out the 14 days and saying something like, "Shared systems can be switched over before or after [the dates in the regulation]." Asks Shahriar to take the lead on developing proposal.
- Shahriar – Wants to submit several proposals to address correlation issues.
- Gregg – Any reason for leaving it in the construction code?
- Florin – Some localities don't enforce the property maintenance code. Maybe add something to the administrative section similar to the unsafe structures provisions of the maintenance code in Section 104.1.
- Florin – 104.1 of VCC provides the framework for giving the building official the authority to enforce those specific requirements.
- Jeff – One solution might be to update the property maintenance code to clarify that not providing cooling or heating is an unsafe/unfit condition. This would give the building official [under VCC Section 104.1] the authority to enforce [the VPMC heating and cooling

requirements] regardless of whether the locality has a maintenance official.

- Dennis – The VCC doesn't require cooling, the VMC doesn't require cooling, and the VPMC does? Is that the right way? [Cooling] should be added to the code.
- Florin – Great point. That's what was highlighted during the background discussion. You can get a [certificate of occupancy] and immediately get a violation for being out of compliance with the VPMC.
- Gregg – The building code doesn't require cooling?
- Florin – [The VCC and the VMC] do not [require cooling; they require heating and ventilation but not cooling].
- Gregg – What about [the] energy [code]?
- Dennis – Would order of precedence kick in and not require energy code compliance?
- Florin – For [the] residential [code] you have specific requirements for sizing the [cooling] unit based on standards. For [the VCC], the unit still has to be designed accordingly, but that's if you provide it. Nowhere does it say [it must be provided]. Heating, on the other hand, is required by the VCC and the VMC for all buildings, with some exceptions, unless they are rented, leased, or let, in which case there are additional requirements.

- **Best Practices & Research:**

- The need to review what other states do—especially those with similar climates and older building stock—was identified as a next step.
 - Gregg – Steve mentioned other states. Do we know what they do?
 - Jeff – Staff can do some research
::later discussion::
 - Dennis – I'm still curious what other states are doing.
 - Jeff – Staff will follow up.
 - Steve – Especially ones in close proximity.
 - Shahriar – Home rule states shouldn't be considered.

- **Tenant & Owner Education:**

- Participants agreed that better communication and education around code requirements and transition periods would help reduce confusion and complaints.
 - Gregg – How many days to comply? 30?
 - Shahriar – [Arlington] puts them on an emergency notice and doesn't give 30 days to comply. [The landlord] gets it straight in 3-7 days. One thing we don't do very well is educating the people who are affected by this.
 - Gregg – [Alexandria] provides education and does so every year. Agrees that education is a big part.
- **Consensus Outcome:**
 - There was general agreement to move the required cooling date earlier (to May 1st), retain a transition period, and allow flexibility for localities. The group also discussed possibly aligning code language more closely with national standards and ensuring all related codes are correlated.
 - Jeff – Consensus seems to be that moving dates back a couple of weeks will resolve most of the concerns that we have heard. If this solution is implemented and there are additional concerns, it can be revisited during the next code update.

Next Steps:

- Shahriar will draft a revised code change proposal reflecting the group's recommendations and circulate it to staff within two weeks
- Staff will research and report on how other states address similar issues.
- Staff will prepare and distribute a summary of the meeting to participants.
- Further meetings may not be necessary if consensus is reached electronically.

Next Meeting:

- Jeff – We may not need another meeting if we can handle all of this electronically.
- Adjourned 1:27pm