R410A REFRIGERANT PHASE OUT:

Responses to questions not addressed during the 2/27/ 2025 Webinar

ID	Webinar Question/Comment	Response
1	What permit is being referred to? New building permit, mechanical permit, or something else?	See response below.
2	Can you clarify what "permit" is defined as? Is it approved NB drawings or an pulled permit for construction?	Per DOB & DEC: We're still finalizing the official DOB guidance on how building permit, exemption and variances will be defined within the context of the DEC regulations. We're working closely with DEC to ensure a smooth transition for the industry. While we're not able to share definitive details yet, we're looking at defining "building permit" to include: •Â building permit that encompasses the system and refrigerant, such as the main permit or mechanical permit. •Â pre-permit approval, such as approved construction drawings, that specifies the system and refrigerant. The final interpretation may differ. We'll provide full clarity in the official DOB guidance.
3	can you talk to your slide that says there may be need for licensed operating engineer!	Potential FDNY Table FC 606.1 revisions are not finalized, but this could be required for buildings with 4+ Large VRFs (>50lbs)
4	Does the blanket variance contemplate inclusion of MIH / 421a projects? For how long would the variance extend the installation date?	This variance request would allow subject buildings extra time to pull a permit so that they have through 2027 to complete projects. This is for HPD-funded projects only, not 421a.
5	it appears ashrae 15.2 (for single unit to single apartment) does not have the same restrictions on 20' from windows and 15' above ground. and ashrae 15 references 15.2 would only be applicable if a single outdoor unit serves a single dwelling unit. https://www.ashrae.org/technical-resources/standards-and-guidelines/read-only-versions-of-ashrae-standards	Yes! **ASHRAE 15.2 applies for Heat Pumps serving a single Apt and it is more lenient.** **This was not discussed in the Webinar** but worth consideration. Under 15.2: Shaft Ventilation can be avoided if no joints are used in the shaft. When ventilation is required: Natural Ventilaiton is a more possible solution, because the Exterior Relief Discharge Restrictions of ASHRAE 15 9.7.8.2 do not apply. However, there is an opportunity for condensation to occur if proper insulation and air sealing is not used. Please coordinate this shaft ventilation decision closely with the Architect of Record.
6	Kevin can you elaborate on the strategies to avoid venting in multifamily and fire rating requirements for the shafts?	There is no practical way around this in our estimation for VRFs that serve more than 3 separate Apts. A narrow path exists for Resi VRFs with 5-13 lbs charge serving studios in ASHRAE 15. **For Mini/Multi-splits serving a single Apt, ASHRAE 15.2 8.5.2.2 applies and ventilation of the shaft can be avoided if there are no joints in the shaft (i.e. soft copper). (thanks Brian McDonough for this cach!)** On further analysis, undercut bedroom doors have insufficient Free Area to consider the Apt in the volume calculation (ASHRAE 15 7.2.3.2.2). A 3-5 SF door louver is needed and generally impractical.

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7	Sean, the design considerations are specifically referencing VRF systems. Are there any specific additions to these considerations for PTHPs?	No. PTHP refrigerant charges are below the thresholds and therefore exempt from all the discussed safety requirements. PTHPs are available in R32&R454B and these options should be used. The Electrification Pilot Team will contact NEEP to confirm timelines for NEEP listing of these models (i.e. ephoca, Ice Air, etc.) ...10 more points to PTHPs in terms of simplicity.
8	Which spaces in the building particularly residential that installation of A2L leak detector will be installed?	1. Factory installed in the indoor FCU on A2L Heat Pumps (to control piping solenoids that mitigate the amount of refrigerant released in catastrophic failure) 2. The bottom of a mechanically ventilated refrigerant shafts 3. ASHRAE 15 allows for refrigerant sensors in teh occupied space, but this is an unlikely compliance path.
9	Instead of runnng refrigerant piping through a fire rated shaft, is it more feasible to run the refrigerant piping outdoor or at the exterior wall?	Yes. An enclosure like Line-Hide is recommeded for UV protection; and required by 1107.3 for soft copper.
10	Is there any conversation/timeline expected for when FDNY will publish requirements for fire protection for A2L systems?	Unknown by HPD at this time. We will inquire.
11	oh here's a good one. RIP soft copper? *NYCMC 1107.3:* *Rigid or flexible metal enclosures or pipe ducts shall be provided for soft, annealed copper tubing used for refrigerant piping erected on the premises and containing other than Group A1 refrigerant. Enclosures shall not be required for connections between condensing units and the nearest riser box(es), provided such connections do not exceed 6 feet in length.*	This is to protect soft coiled copper from physical damage. When outside, it is otherwise needed to protect insulation from UV damage. With heat pumps serving a single Apt shaft ventilation can be avoided with soft copper; ASHRAE 15.2 8.5.2.2 applies in that case and shaft ventilation is not required if a *jointless* run of soft copper is used.
12	If a project has a permit but passed the 1/8/25 date, can only finish the installation in fall 2026- can a waiver be issued by HPD?	If the permit was approved AFTER 1/8/2025, then Yes an impossibility waiver should be pursued. Please submit your info to HPD as requested.
13	1. Does the leak detector sensing the leak need to be connected to a fire alarm system, or should it have its own local alarm system? Should the fan be tied to the Fire Alarm just like a stair purge system?	No - it does not need to be tied to a fire alarm system per Chapter 11 or ASHRAE 15 requirements. Look at ASHRAE 15: 7.6.2.5: Mitigation Action Requirements, which refers to 7.7.3.4
14	2. If the shaft is mechanically ventilated, does the placement of the fan and the makeup air intake matter (e.g., if the fan is on top of the shaft and the makeup air intake is at the bottom)?	Please review the Discharging Locations Exterior to the Building restrictions in Section 9.7.8.2 from ASHRAE 15-2022. It is better to have flow go out bottom because refrigerant is heavy and naturally sinks, but it is not explicitly required. If you can not safely meet the restrictions of Section 9.7.8.2 then discharge at the top is allowable, the sensor however, must be at the bottom of the shaft.

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15	3. If the shaft relies on natural ventilation and the building is very tall, can it still rely on natural ventilation, or would mechanical ventilation be necessary?	Natural Ventilation is allowed by Mech Code, however it is important to understand that this shaft will be considered outside the thermal envelope. **There is an opportunity for condensation to occur if proper insulation and air sealing is not used.** Please coordinate this decision closely with the Architect of Record.
16	4. If the shaft is 100 feet away from the unit (refer to the sketch below), should I provide valves both at the unit and at the shaft to minimize leak exposure?	We do not see that as a requirement in ASHRAE 15, but the VRF manufacturer should assess stop valve locations that satisfy the refrigerant concentration requirements by having a small enough releasable charge in the event of a leak detected by a FCU or shaft refrigerant sensor. **All refrigerant valves should be indicated on clear refrigerant piping shop drawings with notes on sensor locations as well.**

[R410-A Refrigerant Phase-Out and HPD Projects - YouTube]