

EPA Responses to Comments on Proposed Merged Multifamily New Construction Specification

This document contains a summary of comments received during the third comment period for the Merged Multifamily New Construction Specification, which ended June 4, 2018. EPA's response to each new point raised and the resulting policy change, if any, are also included. EPA consolidated similar ideas into single comments. This document does not respond to all comments received, but rather gives a summary of the most common feedback topics.

*The Environmental Protection Agency
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<i>General</i>			
1	<ul style="list-style-type: none"> Many respondents suggested alternative wording and formatting corrections that improved the clarity of a requirement or the flow of the checklist. 	<ul style="list-style-type: none"> EPA accepted many, but not all, of the proposed edits to wording and formatting. 	<ul style="list-style-type: none"> All checklists have been revised.
2	<ul style="list-style-type: none"> One respondent asked whether a certification eligibility flow chart between the new construction programs would be provided. 	<ul style="list-style-type: none"> EPA has developed an eligibility flow chart and has posted to the program website. 	<ul style="list-style-type: none"> Website has been updated.
3	<ul style="list-style-type: none"> One respondent commented that EPA should take steps to reduce the paperwork required to document compliance with the program requirements and move toward an online platform that enables data upload. In the short term, the respondent suggested form-fillable PDF's that can be completed electronically, rather than printed and completed. 	<ul style="list-style-type: none"> All checklists are now provided in form-fillable PDF versions. In addition, the Multifamily Workbook (formerly referenced as the Multifamily Testing & Verification Worksheets), are an Excel based alternative to the PDFs. 	<ul style="list-style-type: none"> No policy change.
4	<ul style="list-style-type: none"> More than one respondent suggested removing the 'recommended' items from the Checklists, as they are not enforceable and most project teams just skip them. 	<ul style="list-style-type: none"> While EPA agrees that the recommended items increase the overall length of the checklists, these items provide additional guidance to Partners for best practices that EPA wants to emphasize even if they are not requirements. 	<ul style="list-style-type: none"> No policy change.
5	<ul style="list-style-type: none"> One respondent requested that the language be more clear about the requirements and footnotes related to parking garages. 	<ul style="list-style-type: none"> EPA agrees that the language could be improved to indicate where parking garages impact eligibility and what requirements, such as ventilation and lighting power density, apply to parking garages. 	<ul style="list-style-type: none"> All checklists have been revised.
<i>National Program Requirements/Reference Design</i>			
6	<ul style="list-style-type: none"> One respondent asked whether the Sampling requirements described in the RESNET <i>Guidelines for Multifamily Energy Ratings</i> were considered a RESNET-approved Sampling protocol, as noted in Footnote 5. 	<ul style="list-style-type: none"> EPA agrees that where Chapter 6 of the RESNET Mortgage Industry National HERS Standards do not sufficiently describe sampling methodology for multifamily buildings/projects, the sampling guidelines in the <i>Guidelines for Multifamily Energy Ratings</i> should be used. 	<ul style="list-style-type: none"> Footnote 5 of the National Program Requirements was revised to provide this clarity.

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7	<ul style="list-style-type: none"> One respondent asked why the Reference Design was not addressing recirculation systems which occur often with central DHW in multifamily. 	<ul style="list-style-type: none"> While EPA agrees that energy loss from recirculation systems is important and should be addressed in future program versions, EPA reaffirms its intent that overall, the initial merged program does not increase the stringency beyond the current program requirements. 	<ul style="list-style-type: none"> No policy change.
8	<ul style="list-style-type: none"> One respondent indicated that the new electric water heater efficiencies for larger tank sizes might lead teams to specify heat pump water heaters in situations where they will not perform according to rated efficiencies and suggested guidance or limitations on those installations. 	<ul style="list-style-type: none"> EPA agrees that proper design and installation is critical to achieving the rated efficiencies reported by heat pump water heater manufacturers and will consider developing guidance to address this in the future. 	<ul style="list-style-type: none"> No policy change.
9	<ul style="list-style-type: none"> Multiple respondents indicated that the section on eligibility was confusing. 	<ul style="list-style-type: none"> EPA agrees and has made edits to clarify the intent. 	<ul style="list-style-type: none"> National Program Requirements have been revised.
10	<ul style="list-style-type: none"> One respondent noted that referencing EF instead of UEF in the Water Heater section may be confusing. 	<ul style="list-style-type: none"> EPA agrees and has provided corresponding UEF values in addition to EF values for Prescriptive Path projects to reference. 	<ul style="list-style-type: none"> National Program Requirements have been revised.
11	<ul style="list-style-type: none"> One respondent questioned why the radiant barrier requirement was present in Version 1 where some ducts are in an unconditioned attic, but not 1.1. 	<ul style="list-style-type: none"> Unlike Version 1, in the Version 1.1 Reference Design, there are no ducts in unconditioned attics. 	<ul style="list-style-type: none"> No policy change.
<i>Rater Design Review Checklist</i>			
12	<ul style="list-style-type: none"> One respondent suggested making the 'recommended' Construction Document review section a requirement, rather than a recommendation. 	<ul style="list-style-type: none"> While EPA agrees that the construction document review process is critical to the success of a project, EPA chose to make this section optional since some projects enter the program after construction documents are complete and are still able to comply with the requirements. 	<ul style="list-style-type: none"> No policy change.

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<i>Rater Field Checklist</i>			
13	<ul style="list-style-type: none"> One respondent noted that footnote 3, that permits the builder or developer to verify a limited number of items, needs to specify whether this includes members of the 'design team' or someone explicitly employed by the builder or developer's company. While the architect is frequently on-site and would be able to verify many of the items, they seem to be specifically excluded. 	<ul style="list-style-type: none"> EPA already states that this allowance is per the discretion of the Rater and that any corrective action is their responsibility to facilitate. EPA agrees that in multifamily projects, it is possible that the Partner may opt to designate a member of the design team to verify the items, and this is permitted, at the discretion of the Rater. 	<ul style="list-style-type: none"> Rater Field Checklist Footnote 3 has been revised.
14	<ul style="list-style-type: none"> One respondent commented that the paper-faced insulation requirement for heated plenums was a bad practice from a moisture management standpoint. 	<ul style="list-style-type: none"> While EPA agrees that heated plenums are not necessarily the most energy efficient practice, requirements were added to mitigate their energy use. 	<ul style="list-style-type: none"> No policy change.
15	<ul style="list-style-type: none"> One respondent suggested a prescriptive approach for systems with non-ducted returns, since it can be challenging to design a closet to meet a pressure differential test. One respondent suggested that larger air handlers would find the 5 Pa more challenging to meet than smaller air handlers. Another respondent suggested that the pressure test criteria during the blower door test from the RESNET <i>Guidelines for Multifamily Energy Ratings</i> added value and should have been part of the requirement. 	<ul style="list-style-type: none"> While EPA agrees that it can be challenging to meet performance test requirements, this test is similar to the test required for pressure balanced bedrooms. While that requirement does suggest prescriptive measures that can be used to meet the pressure differential test, the test itself is still required. For that reason, this test remains and project teams have the flexibility to determine how to meet the target. EPA has modified the target, to allow a higher pressure differential for larger capacity air handlers and has added the test from the <i>Guidelines for Multifamily Energy Ratings</i> for closets adjacent to unconditioned space. 	<ul style="list-style-type: none"> Rater Field Checklist Item 4.10 and 6.4 and HVAC Design Report footnotes 41 and 42 have been revised.
16	<ul style="list-style-type: none"> One respondent suggested adding verification requirements to ensure that lighting controls in common spaces are operating properly. 	<ul style="list-style-type: none"> EPA agrees that this would be a good clarification. 	<ul style="list-style-type: none"> Rater Field checklist section 12.1 has been updated.

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17	<ul style="list-style-type: none"> One respondent noted that field verification of ENERGY STAR certified fixtures and lamps tends to be very challenging for a number of reasons, including the difficulty in having builders retain packaging that indicates certification, the effort required to individually verify lamps and fixtures and, the rapid rate of change in the marketplace that makes it difficult to determine the eligibility of a fixture or bulb using online tools. 	<ul style="list-style-type: none"> EPA understands the challenges this can cause and has added language to clarify that the Rater is only required to verify that the light fixtures/bulbs are Tier I or Tier II. 	<ul style="list-style-type: none"> Rater Field Checklist footnote 68 had been revised.
18	<ul style="list-style-type: none"> One respondent noted that while the ENERGY STAR Multifamily Reference Design requires Water Sense certified bathroom faucets or aerators, the Water Sense program specifically does not certify faucets for public use or metered faucets, which are popular in common area bathrooms in multifamily buildings. 	<ul style="list-style-type: none"> EPA acknowledges this conflict in its current requirement and has revised the requirement such that those fixtures not eligible for certification shall be exempt. 	<ul style="list-style-type: none"> Rater Field Checklist footnote 69 had been revised.
19	<ul style="list-style-type: none"> One respondent noted the sampling procedure specific to central duct leakage testing was not clear. Another respondent requested that guidance be developed on the specific test procedure. 	<ul style="list-style-type: none"> EPA agrees that a clear sampling policy is needed and has developed a minimum requirement based on linear feet of ductwork that must be tested, and how that increases based on failures. The footnote has been updated to reference the sampling procedure described in the RESNET <i>Guidelines for Multifamily Energy Ratings</i>. This is also the sampling procedure that exists in the current MFHR program. EPA will consider developing a future standalone document with this test procedure. 	<ul style="list-style-type: none"> Rater Field Checklist footnote 46 had been revised.
20	<ul style="list-style-type: none"> One respondent requested that guidance be added on the specific verification procedure for verifying that the freeze protection and snow melt controls in item 5.8 and 5.9 operate as intended. 	<ul style="list-style-type: none"> EPA agrees and has revised the language to make it more clear that the controls are verified to operate rather than just verified to be installed. 	<ul style="list-style-type: none"> Rater Field Checklist Items 5.8 and 5.9 have been revised.

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21	<ul style="list-style-type: none"> One respondent noted that there was guidance missing regarding how to test outdoor air flow for compliance with designer ventilation rates when the supply airflow is a mix of return air and outdoor air. 	<ul style="list-style-type: none"> EPA agrees that a clear test procedure is needed and has developed an approach where the percentage of OA supplied to each register can be based on the ratio of the OA supplied to the air handler and the total supply airflow of the air handler. 	<ul style="list-style-type: none"> Rater Field Checklist footnote 48 has been revised.
22	<ul style="list-style-type: none"> One respondent questioned the intent of Rater Field Checklist Item 14.1, Whole-building Energy Consumption Data Acquisition and what ENERGY STAR intends to do with the data. Another respondent indicated that the data submission process is unclear related to this requirement. The respondent noted that the Checklist item does not include requirements for the frequency in which the data is to be submitted, nor does it specify the party(ies) for whom to submit the data, or specify any requirements related to maintenance or education for the property manager. The respondent questions whether the costs of a monitoring system are justifiable, if ENERGY STAR does not intend to require that the data be reported. 	<ul style="list-style-type: none"> While EPA agrees that not all property owners will follow-through on benchmarking activities and that energy monitors may require up front cost, maintenance and proper education, the intent of this requirement is to enable building owners to easily access whole-building energy data, should they choose to benchmark in the future. EPA does not intend to require the building energy data to be submitted. While installing a dedicated meter or monitor can incur a cost, the alternative also listed a few no-cost options. EPA re-organized the wording of the requirement and added text that requires the developer to provide the building operator with any related owner's manuals. 	<ul style="list-style-type: none"> No policy change, but Rater Field Checklist Item 14.1 and footnote 70 has been revised.
23	<ul style="list-style-type: none"> Another respondent questioned why the building size was based on number units rather than square footage, like other benchmarking ordinances in place across the country. 	<ul style="list-style-type: none"> Based on this feedback, EPA looked at other benchmarking policies in place and determined it could align with those policies, which frequently reference buildings 50,000 ft² or larger. Additionally, with many policies shifting toward requiring benchmarking for buildings larger than 25,000 ft², EPA will recommend, but not require, a strategy be implemented in those buildings. 	<ul style="list-style-type: none"> Rater Field Checklist item 14.1 has been revised.

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<i>Multifamily Workbook (formerly Testing & Verification Worksheets)</i>			
24	<ul style="list-style-type: none"> Many respondents submitted specific improvements to the Draft Multifamily Testing & Verification Worksheets, which will reduce rater data-entry effort and improve functionality. 	<ul style="list-style-type: none"> EPA incorporated many, but not all, of the proposed improvements. While the Worksheets form the basis of a template for MRO's to use as they review ASHRAE and Prescriptive Path projects for compliance with the requirements, with EPA approval, MRO's can develop or accept alternative submissions from project teams. 	<ul style="list-style-type: none"> Multifamily Workbook has been revised.
25	<ul style="list-style-type: none"> One respondent noted that the Excel version of the Rater Checklists facilitates rating multiple units in one place, but also appears to include multiple worksheets to demonstrate compliance with specific requirements, that could be accomplished in alternative ways. Another respondent questioned the need for having the file at all. 	<ul style="list-style-type: none"> EPA developed Excel based Checklists based on feedback received from potential program participants. In addition, EPA created an Excel based template for documenting testing results and verifying compliance with specific checklist items based on feedback from MROs. The Excel file provides an alternative to the PDF checklists, which enables greater functionality and the ability to sort and filter requirements that are relevant to a project/path. For project teams without a template to document testing results that are required for compliance, the file offers a template that may be used. The other worksheets facilitate the review of a project for compliance with certain requirements, like U-values and lighting power density, which are hard to verify with a simple checkbox. This file is optional for projects following the ERI path and with approval from EPA, MRO's can develop alternative methods that suit their project teams better. 	<ul style="list-style-type: none"> Multifamily Workbook has been revised.
<i>Water Management System Requirements</i>			
26	<ul style="list-style-type: none"> One respondent noted that the requirement to slope walks 0.25 in per ft for 10 ft from the building, for zero lot line buildings with adjacent sidewalks, is not ADA/accessibility compliant. 	<ul style="list-style-type: none"> As noted in the EPA's National Program Requirements, it has always been ENERGY STAR policy that where overlapping requirements exist with other code requirements, the conflicting requirement need not be met if no equivalent solution exists. The project team would need to submit the specific ADA reference that contains the conflicting requirement for review. 	<ul style="list-style-type: none"> No policy change.

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27	<ul style="list-style-type: none"> One respondent suggested that a separate checklist for multifamily would be better and that the responsibility should be assigned to the Design team rather than the Developer. 	<ul style="list-style-type: none"> EPA agrees that a separate checklist would be better and has created a multifamily specific version. While EPA agrees that the design team is a critical part of ensuring that the requirements are implemented, in keeping aligned with Certified Homes, these requirements are the responsibility of the Builder/Developer Partner. 	<ul style="list-style-type: none"> WMS Requirements have been revised.
<i>Functional Testing</i>			
28	<ul style="list-style-type: none"> One respondent requested an additional test be required to verify that designers utilizing non-condensing boilers don't specify temperatures in the boiler loop reset schedule lower than OEM-specified minimum discharge temperatures. Additionally, they suggested that ENERGY STAR stipulate the specific WWSD temperature range. 	<ul style="list-style-type: none"> While EPA appreciates the value these requirements could bring in terms of system durability/performance, they would not be appropriate in a Functional Testing checklist, but rather would be more appropriate in the HVAC Design Report. EPA reaffirms its intent that overall, the merged program mandatory items do not increase the stringency beyond both initial program requirements, and therefore will not be adding them to the HVAC Design Report either. 	<ul style="list-style-type: none"> No policy change.
29	<ul style="list-style-type: none"> One respondent requested that if the FT Agent is a credentialed contractor, that they be asked to list their H-QUITO ID number on the checklist. 	<ul style="list-style-type: none"> EPA agrees that this information could be useful and has added it to the checklist. 	<ul style="list-style-type: none"> Functional Testing checklist has been revised.
30	<ul style="list-style-type: none"> One respondent inquired why certain items requested values to be entered and certain items simply required a checkbox to be marked. 	<ul style="list-style-type: none"> EPA is trying to balance the burden of entering data into the checklist and therefore limits the reported data to the specific data points that are deemed essential to collect or report. 	<ul style="list-style-type: none"> No policy change.
31	<ul style="list-style-type: none"> One respondent requested that the checklist be organized more like a tool, such that notes and deficiencies, and even comments on poor design/sequences, can be noted. 	<ul style="list-style-type: none"> While EPA appreciates this feedback and will consider these features in future iterations, the current checklist will not be modified, although project teams can use them to create tools that will enable this functionality and EPA plans to create an Excel based version. While there are many aspects of design that could benefit from stricter oversight, EPA is not intending to add additional requirements at this time. 	<ul style="list-style-type: none"> No policy change.

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32	<ul style="list-style-type: none"> One respondent commented that item 6.1.3 to measure line-set lengths has value, but only if reported or required to be made available upon request. 	<ul style="list-style-type: none"> EPA agrees that the line-set lengths should be made available upon request. 	<ul style="list-style-type: none"> Functional Testing checklist Item 6.1.3 has been updated.
33	<ul style="list-style-type: none"> One respondent noted that there is likely to be confusion regarding mini-split and multi-split unless specific examples or definitions are provided. 	<ul style="list-style-type: none"> EPA agrees and has provided clarifying language from the Certified Homes Policy Record, 00652. 	<ul style="list-style-type: none"> Functional Testing Checklist has been updated.
34	<ul style="list-style-type: none"> One respondent inquired whether the VRF refrigerant charge testing had to be conducted by the manufacturer's representative or if another FT Agent could do the test. If the latter, under what conditions? 	<ul style="list-style-type: none"> Since typical practice suggests that this test is usually conducted by the manufacturer's representative, EPA is requiring the test to be done by that representative, rather than the FT Agent. 	<ul style="list-style-type: none"> No policy change.
35	<ul style="list-style-type: none"> One respondent indicated that "large enough heating/cooling demand" in items 7.2.5 and 9.2.2 was too vague and needed improved wording. 	<ul style="list-style-type: none"> EPA agrees and has revised the language to indicate that the test simply needs to enable observation of operation, whether it is simulated using available controls, or by manually enabling enough systems, such that the systems operate. 	<ul style="list-style-type: none"> Functional Testing Checklist has been updated.
36	<ul style="list-style-type: none"> One respondent suggested adding a requirement that the minimum water flow (per OEM spec) through the chiller and boiler is met, especially when VFD pumps are used. 	<ul style="list-style-type: none"> EPA agrees and has revised the language to add this requirement. 	<ul style="list-style-type: none"> Functional Testing Checklist has been updated.
37	<ul style="list-style-type: none"> One respondent suggested editing Items 8.3.1 and 7.2.6 to have specific instructions for the number of times equipment was cycled on/off to verify compliance. 	<ul style="list-style-type: none"> EPA agrees that this specificity would be useful and has added language such that boilers and pumps be cycled three times prior to confirming compliance. 	<ul style="list-style-type: none"> Functional Testing checklist Items 7.2.6 and 8.3.1 have been updated.
38	<ul style="list-style-type: none"> One respondent noted that in item 7.2.8, recording the design or OEM return water temperature along with the measured temperature would be beneficial. 	<ul style="list-style-type: none"> EPA agrees that this would be beneficial and has added a space to report this temperature. 	<ul style="list-style-type: none"> Functional Testing checklist Item 7.2.8 has been updated.

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39	<ul style="list-style-type: none"> • One respondent suggested articulating how electric resistance heaters in non-dwelling units need to be tested for proper on/off controls and that thermostats turn them off at the right temp. 	<ul style="list-style-type: none"> • Item 5.2.2 of the Functional Testing checklist, while not specific to electric resistance heaters, includes those systems. As there is no requirement for what temperature to use as the setpoint, the FT Agent just verifies that the heating element operates. There is no requirement for the FT Agent to test when the room is at a cold enough temperature for the heater to turn on. 	<ul style="list-style-type: none"> • No policy change.
<i>Issues Formerly Under Review</i>			
40	<ul style="list-style-type: none"> • Multiple respondents asked previously whether eligibility would be expanded to dorms and assisted living projects. 	<ul style="list-style-type: none"> • EPA assessed expanding eligibility to these sectors and determined that they will not be eligible for the Multifamily New Construction program. 	<ul style="list-style-type: none"> • No policy change.
41	<ul style="list-style-type: none"> • One respondent suggested previously that a low-rise building, pursuing the ASHRAE Path, where the Baseline walls are modified to reflect wood-frame construction, the windows should be modified to reflect non-metal framed windows. 	<ul style="list-style-type: none"> • EPA agrees that modifying the window frame material is consistent with the rationale for modifying the ASHRAE Baseline walls for low-rise buildings. 	<ul style="list-style-type: none"> • Simulation Guidelines will be revised.