

U.S. DOE Zero Energy Ready Home Program Public Comment Form

Multifamily National Program Requirements Version 2, DRAFT March 2023

INSTRUCTIONS: Please use the space below to provide comments, feedback, or questions regarding any of the draft Zero Energy Ready Home Program Multifamily National Program Version 2 Program Requirements. Feedback on specific items is preferred (as opposed to general sections), but do not feel obligated to comment on all the proposed requirements. Upon completion, please email this form to zerh@doe.gov with the subject "DOE ZERH MF Public Comment Response." Please submit all responses by May 15th, 2023.

Partner Type: Builder Rater/Verifier Manufacturer Organization Other Not Currently a Partner

ZERH Multifamily V2 Draft Specification Item	Comment / Feedback / Questions
Mandatory Requirements (Exhibit 1)	
1. ZERH Multifamily V2 National Rater Field Checklist	<i>Covers the mandatory items listed below.</i> DOE implementation timeline for MF v2 does not align with published 45L requirements. Recommend allowing extended ZERH v1 and align rollout to follow v2 finalized publication of ZERH MF v2. Preferably 1 year for implementation from a finalize program spec's to give software developers time to com into compliance. Given the inherent issues with working out bugs with new software versions, the 1 year timeline is still relatively short.
2. ENERGY STAR Multifamily New Construction V1.2 Prerequisite	Recommend on-demand pre-recorded training for ZERH MF v2 as to not add additional cost burden to raters and additional training for HCOs. This training could be incorporated into the ZERH member portal.
3. Envelope	
3.1 Ceiling, wall, slab, and opaque door insulation	Add exception to the 2021 IECC requirements for projects meeting/exceeding Phius annual/peak and source energy targets (only if doing Phius project – remains for all other project types)
3.2 Window performance requirements	Add exception to the 2021 IECC requirements for projects meeting/exceeding Phius annual/peak and source energy targets (only if doing Phius project – remains for all other project types) Reference home should be consistent with ENERGY STAR MFNC v1.2
4. Duct System	
4.1 Duct distribution systems for dwelling units are located within the building's thermal and air barrier boundary	
4.2 HVAC air handler is located within the building's thermal and air barrier boundary	
5. Water Heating Efficiency	

5.1 Water fixtures meet efficiency criteria	Recommend moving to gpm requirements rather than WaterSense labeling to allow for greater reach for manufacturers. There appears to be some inconsistency across documentation in this regard.
5.2 Stored volume criteria for DHW delivery systems	
5.3 On-demand controls for in-dwelling recirculation systems	
5.4 Pipe insulation for central recirculating systems	In addition to the pipe insulation thickness (inches) provided in the table under footnote 28, a minimum R-value can be used. i.e. <1.5 inch diameter can have a minimum of 1.5" thick insulation or a minimum of R-3.
6. Lighting and Appliances	
6.1 All builder-supplied and builder-installed in-dwelling refrigerators, dishwashers, clothes washers, and clothes dryers are ENERGY STAR qualified	
6.2 100% of builder-installed lighting fixtures and lamps are LEDs	
6.3 All installed bathroom ventilation and ceiling fans are ENERGY STAR qualified	Clarify footnote #16 on Rater Checklist to include central ventilation systems as being exempt as well.
7. Indoor Air Quality	
7.1 Certified under EPA Indoor airPLUS V1	Under footnote 33- clarification that after 12/31/2024 the revision to the program would allow for IAP certification under v2 BASE Program requirements rather than Gold.
7.2 Unitized or centralized energy efficient balanced ventilation (HRV or ERV) provided for dwelling units in CZs 6-8	Under footnote 34 clarify that for centralized H/ERV's the 1.2watt/CFM would be based on Rated values. Would also like to see further rationale for this requirement on central systems – many larger DOAS systems may not be able to meet this requirement.
8. Renewable Ready	
8.1 DOE ZERH PV-Ready Checklist Multifamily Version 2 measures	
9. Electric Vehicle Ready	
9.1 DOE ZERH EV-Ready Checklist Multifamily Version 2 measures	
10. Heat Pump Water Heater Ready	
10.1 Minimum electric and space requirements	Should be clarified if the dimensions can be used for a single closet-type enclosure, this may not leave enough room for proper airflow. For units that do not meet the exemption requirements, suggest alternative methods to meeting the requirement such as installation of drain water or refrigerant waste

	heat recovery systems may be allowed to make up the efficiency for situations where the 3x3x7 space would not be achievable.
10.2 Condensate drain installed	
11. Heat Pump Space Heating Ready	
11.1 Branch circuit or conduit installed for future heat pump	
Heat Pump Water Heater Installation Quality - Advisory	

DOE Zero Energy Ready Home Multifamily Target Dwelling Design (Exhibit 2)	
A. Residential Cooling Equipment	Recommend additional footnote to further define SEEReq as SEER2, EER2, HSPF2 are new to the industry with new conversion methods being utilized where software does not automatically make these conversions.
B. Residential Heating Equipment	Recommend additional footnote to further define SEEReq as SEER2, EER2, HSPF2 are new to the industry with new conversion methods being utilized where software does not automatically make these conversions.
C. Envelope Insulation Levels & Infiltration	
D. Windows & Doors	
E. Water Heater	
F. Thermostat and Ductwork	
G. Lighting, Appliances, Fixtures, and Internal Gains	
DOE Zero Energy Ready Home Multifamily ASHRAE Path Performance Targets (Exhibit 3)	
20% savings above ASHRAE 90.1-2019	Phius is conducting WUFI Energy Modeling to replicate the Energy Star MFNC Reference buildings in various climate zones to demonstrate projects meet/exceed ASHRAE 90.1 targets. We would ask that DOE provide the same consideration for DOE MF based on the results of this effort and issue a change or amendment to this requirement.
Exception for buildings certified under PHIUS CORE 2021 or PHIUS ZERO 2021 to achieve 20% less than the PHIUS CORE 2021 source energy criteria, without renewables	Object to the 20% lower than Source Energy Requirement. Phius projects should qualify based on meeting the performance requirements outlined by Phius for annual, peak and source energy targets. Phius has the same objection to the ES MFNC v3 requirement (15%) reduction on the source energy target. Phius feels that meeting the Source Energy requirement under Phius CORE (or under Phius ZERO) should be sufficient for compliance with DOE ZERH and the energy consumption is well below what is prescribed in ASHRAE 90.1.

	<p>WUFI Passive, the compliance tool used for Phius Certification, has been validated using ASHRAE 140. https://www.phius.org/wufir-passive-v3201-validation-using-ansiashrae-standard-140-2017</p>
Other Comments, Feedback, or Questions	
<p>Partnership, Training, and Credentialing Requirements:</p> <p>Raters are required to complete the DOE ZERH Orientation Training, administered by their oversight organization. This training is also available to all partners on the ZERH website, under Program Resources. Need to make sure this training remains as a no-fee on demand training.</p>	
Comments on DOE Zero Energy Ready Home Multifamily Version 2	
<i>DOE is interested in comments on the following questions:</i>	
<p>1) DOE is considering limiting projects using the ASHRAE 90.1 pathway to buildings four stories and over. Do you have feedback on this potential approach?</p>	<p>This seems to make sense so long as the intent is to ensure buildings < than 3 stories that DO NOT fall under the commercial code, but rather the residential code should not use the ASHEA path.</p>
<p>2) On a national basis, what is the market readiness of high efficiency, electric systems for central space heating and water heating applications in multifamily buildings?</p>	<p>Training requirements need to be in place for installers to avoid oversizing, poor installations of electric space heating (heat pump certified?). Additional requirements for ensuring proper locations for heat pump hot water heaters that avoid dusty conditions and allow easy access for filter cleaning.</p>
<p><i>This proposal is being issued on behalf of the Standards Committee of the Northeast Home Energy Rating System Alliance, which represents more than 260 Raters and 11 Providers from New Jersey to Maine.</i></p>	