

**Summary of Comments, EPA Responses, and Resulting Policy Changes Regarding
Proposals for ENERGY STAR Single-Family New Homes (SFNH) National Version 3.3
and ENERGY STAR Multifamily New Construction (MFNC) National Version 1.3 Program Requirements**

The EPA has posted on its website a compilation of all comments received during the comment period on the proposals for ENERGY STAR Single Family New Homes (SFNH) National Version 3.3 and ENERGY STAR Multifamily New Construction (MFNC) National Version 1.3.

The comment period was open from October 24, 2024, to November 21, 2024. This document contains a summary of the comments received, along with the EPA's responses and resulting policy changes, if any.

Where similar comments were received from multiple respondents, the EPA consolidated these ideas into a single summary bullet. However, the EPA has attempted to retain all unique comments received, including those submitted by a single respondent.

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

Table of Contents

General..... 3
Definition of more stringent performance targets in new versions 5
Thermal backstop in new versions 7
More stringent infiltration backstop for the new version of the SFNH program 9

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

ID	Comment Summary	The EPA's Response
General		
1	Two commenters expressed general support for the proposal as presented, with the remaining commenters suggesting one or more changes to the proposal.	<p>The EPA thanks all commenters for their feedback and has attempted to address each comment received below. In summary, the EPA is finalizing the new versions of the program requirements with two notable adjustments from the original proposal in response to comments and additional analysis:</p> <ul style="list-style-type: none"> • First, the thermal backstop will be aligned with the 2024 IECC performance paths, rather than the prescriptive path, to provide additional design flexibility while still meeting the program's overall savings goals. • Second, a temporary infiltration target of 4 ACH50 will be allowed for single-family homes permitted prior to 1/1/27 to provide a transition period towards the long-term performance goal of 3.5 ACH50. Further details are provided below.
2	<p>One commenter requested that implementation timelines be calibrated to provide sufficient lead time, especially in the multifamily sector where design typically precedes construction by several years.</p> <p>Another commenter raised a related concern about preparation time for those projects pursuing the §45L Tax Credit.</p>	<p>The EPA anticipates that implementation timelines for these new versions will be similar to prior versions.</p> <p>For certification purposes, these versions are not required at this time but are available for optional use, and the EPA will work with rating software providers to add support. In the future, the EPA will establish transition schedules for these new versions in states that adopt the 2024 IECC, or an equivalently stringent code. The earliest date that the EPA anticipates mandating the new versions for certification in any state are January 1, 2028, for the Single-Family New Homes (SFNH) program and January 1, 2029, for the Multifamily New Construction (MFNC) program, based on permit date.</p> <p>Separately, the EPA notes that timelines for § 45L Tax Credit eligibility are prescribed within the tax code and are not subject to the EPA's discretion. Based on the date these program requirements are being finalized, the EPA anticipates the new versions will become the minimum eligible versions for the § 45L Tax Credit for qualifying residences acquired in 2028 (for the SFNH program) and 2029 (for the MFNC program).</p>
3	Two commenters raised concerns with the pace of change in the program, with one expressing an opinion that this version follows too closely after ENERGY STAR SFNH Version 3.2's release.	<p>The EPA recognizes that the residential new construction industry is experiencing changes from several sources and will remain cognizant of this fact when weighing future program adjustments. In this case, the EPA believes it is necessary to develop a new version of the program requirements in response to the finalization of the 2024 IECC to maintain 10% energy savings in states that adopt the new code. The EPA notes that the pace of new ENERGY STAR program versions is determined by the IECC model code development cycle.</p> <p>The EPA emphasizes that, while these program requirements are now finalized and available for immediate use, the industry will have approximately three years (or more) to prepare before the new versions are mandated for certification in any states or for § 45L Tax Credit eligibility (see above for details).</p>

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

4	<p>Six commenters addressed cost and affordability, as follows:</p> <ul style="list-style-type: none"> • One commenter expressed a belief that the proposal was achievable, citing the illustrative results shared by the EPA showing net positive cash. • Two commenters expressed a general concern about cost and affordability of the proposed requirements. • One commenter expressed concern with multifamily affordability, in particular. • Three commenters noted concerns about costs specifically related to the proposed thermal backstop. • Three commenters requested more detailed information on the cost and savings estimates presented, including the methodology used. • Another commenter suggested that, as an alternative to publishing a detailed analysis, the EPA remove all reference to cost-effectiveness. • One commenter noted a potential error in the data presented during the proposal webinar, based on their reading that utility bill savings exceeded monthly costs. 	<p>The EPA appreciates this feedback and gives great weight to cost and affordability considerations.</p> <p>The EPA acknowledges that cost analyses can vary according to many factors. For policy development purposes, the EPA produced an illustrative analysis finding a cost range of \$1,111 to \$2,072 to upgrade a single-family home from the 2024 IECC code to the proposed new ENERGY STAR SFNH National Version 3.3 requirements. This upgrade cost range is in line with prior Versions of the program.</p> <p>The EPA presented illustrative costs and savings for both the single-family and multifamily sectors and found net positive cash flow in both cases.</p> <p>The EPA acknowledges the comments on the connection between affordability and the thermal backstop policy, which it addresses in a following section of this document.</p> <p>The EPA intends to prepare and post a full “Cost & Savings” document on its website in the “Additional Resources” section of its program requirements webpages, similar to those currently available for earlier Versions of the program. As usual, this document will detail the methodology and assumptions used, which are aligned with the U.S. Department of Energy’s “Methodology for Evaluating Cost-Effectiveness of Residential Energy Code Changes”. The EPA welcomes continued stakeholder engagement on the published assumptions and methodologies underpinning these analyses.</p> <p>With regards to the presented data, the commenter’s note does not appear to be accurate and may represent a misreading of the table. As presented, the projected monthly utility cost savings range from 13-21% for single-family homes and 11-24% for multifamily buildings, which is within the expected range.</p>
5	<p>One commenter suggested that the proposal requires particular types of ventilation equipment to be used.</p>	<p>The proposal did not include any changes to ENERGY STAR’s mandatory whole-house ventilation requirements, which will continue to permit a variety of system types.</p>
6	<p>One commenter noted that the DOE had not, at the time of comment, made a final determination on the code.</p>	<p>On December 20, 2024, after this comment was submitted, the DOE issued a determination on the updated model energy code for residential buildings, the 2024 International Energy Conservation Code (IECC). More information is available at www.energycodes.gov/determinations.</p>
7	<p>Several commenters addressed topics related to separate policy proposals from the EPA regarding (1) the program revision and (2) enhancements to quality assurance and quality control requirements:</p> <ul style="list-style-type: none"> • Two commenters expressed their preference that Track B (HVAC credentialing) be maintained as an option. • Another commenter relayed difficulty locating a credential HVAC contractor under Track B and requested an alternative compliance path. 	<p>The changes regarding Track B (HVAC credentialing) were included in the program revision proposal, and the final policy is addressed in the “Summary of Comments, EPA Responses, and Resulting Policy Changes Regarding Key Proposals for Revision 14 of the ENERGY STAR Single-Family New Homes (SFNH) and Revision 05 of the ENERGY STAR Multifamily New Construction (MFNC) Program” posted on the EPA’s website. In summary, Track B will be maintained as-is for the time being.</p> <p>The EPA emphasizes that the ENERGY STAR SFNH and MFNC programs already include an alternate compliance path, called Track A (HVAC Grading), in which the Rater assesses the HVAC equipment installation using the ANSI / RESNET / ACCA / ICC 310 standard, with no requirement for the contractor to be credentialed. The EPA</p>

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

	<ul style="list-style-type: none"> One commenter suggested that an annual Rater training be made available through HCO training portals. 	<p>appreciates this commenter’s interest in the program and recommends that they explore this option with their Rater for future homes.</p> <p>The EPA agrees that the Rater community would benefit from an annual training module. This concept was finalized as part of last year’s Quality Assurance and Quality Control updates, and the EPA is currently coordinating with HCOs on rollout of the training, with more details expected soon.</p>
--	---	--

Definition of more stringent performance targets in new versions

<p>8</p>	<p>Most commenters were generally supportive of the proposed performance targets, and one commenter recommended a lower stringency:</p> <ul style="list-style-type: none"> Five commenters were supportive of the performance target ranges as proposed. Two commenters offered measured support for the targets, with the caveat that they felt achieving these performance targets would depend on the amount of flexibility provided in the thermal backstop. One commenter suggested that the performance targets be made less stringent and calibrated more consistently to the program’s stated minimum goal of 10% savings. In part, this commenter argued that the EPA’s approach in partially accounting for future changes to federal minimum appliance standards was not appropriate, given that certain projected updates are subject to uncertainty. 	<p>The EPA appreciates commenters feedback and is reassured by commenters’ general consensus that the performance targets themselves are expected to be achievable, reflect the modest improvement of the 2024 IECC over its predecessor, and are in line with program precedent.</p> <p>The EPA appreciates that achievability of the performance targets is intertwined with the issue of the thermal backstop, which it addresses separately below.</p> <p>The EPA acknowledges that the savings from its performance targets vary across sector (single-family vs. multifamily), climate zone, heating fuel type, and other parametric factors and, in many cases, exceed the minimum 10% savings goal. The proposed reference designs were balanced to create equivalency across single-family and multifamily building type, with a consistent set of measures and coherent progression across climate zones. As it is, the worst-case illustrative permutation, which happens to be a multifamily dwelling unit, is at 11% savings, only barely above the minimum goal of 10%. As to the idea that “overperforming” permutations (for example, those in the 15-20% savings range) could be recalibrated in isolation, the EPA is not able to identify options to achieve the suggested result without introducing inconsistent measures in a fragmentary set of climate zones that would undermine the coherency of the overall reference design tables.</p> <p>The EPA also appreciates the stakeholder’s perspective on the uncertainty of federal appliance standards with future implementation dates. While there is always uncertainty about the future, the EPA believes it is nevertheless necessary to make reasonable projections given that the program versions in question will not begin to be superseded until 2030-2031 at the earliest. Therefore, the EPA believes it is appropriate to consider appliance standards updates within this timeframe as one factor among many, especially in cases where rulemakings are complete.</p> <p>For these reasons, the EPA is finalizing the performance targets as proposed.</p>
<p>9</p>	<p>One commenter suggested adding an alternative compliance path based on meeting an ERI target 10% better than those in the 2024 IECC Section R406 Energy Rating Index Alternative.</p>	<p>The EPA appreciates this suggestion and acknowledges that a 10% reduction from the ERI targets specified in the 2024 IECC Energy Rating Index Alternative path results in a similar range of targets as the proposed performance targets. While this idea suggests some benefits in terms of alignment with code, the EPA also foresees risks. For example, whereas factors like home size and orientation are largely normalized with ENERGY STAR’s current reference design approach, those types of factors will affect the absolute ERI score and complicate predictable compliance under a static ERI</p>

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

		<p>standard. For these reasons, the EPA is not prepared to adopt a static ERI target at this time but is open to exploring alternative approaches like this during future program version development cycles.</p>
<p>10</p>	<p>One commenter inquired about the reason for the more stringent reference design features in Climate Zone 4C compared to the others.</p>	<p>Additional measures were needed in this zone to achieve the requisite 10% savings. Given that Climate Zone 4C is relatively temperate, the proportion of energy expended on water heating is higher than in other climate zones. As a result, measures that improved water heater equipment and distribution efficiency were selected over the space heating upgrades that were specified in most other locations.</p>
<p>11</p>	<p>One commenter offered the following feedback on the water heater specifications in the proposed reference design:</p> <ul style="list-style-type: none"> • A suggestion that a lower efficiency gas water heater be specified in the reference design, reflecting a storage-type water heater. • A recommendation to alter the proposed reference design's electric water heater tank capacity from 60 gallons to as much as 120 gallons. <p>The commenter also requested confirmation that a compliance pathway exists for gas-fired boilers.</p>	<p>The EPA balances multiple factors when creating the reference design. Water heater efficiency is often a logical measure because it has limited interactive effects with other end-uses, and has savings potential across the spectrum of fuels, building types, and climate zones. The EPA emphasizes that the reference design measures are not mandatory, and builders always have the option of installing different measures, such as different types or efficiencies of water heaters, so long as the home's confirmed ERI score achieves the ENERGY STAR ERI target.</p> <p>For the sake of cross-program alignment, the proposed water heater efficiencies are generally based on Version 5.0 of the ENERGY STAR product specification for residential water heaters. For electric water heaters, a value of 2.20 UEF was selected for most configurations, reflecting the requirements in the ENERGY STAR product specification for a split-system heat pump water heater. Higher efficiencies were selected for Climate Zone 4C in the SFNH program and for all climates in the MFNC program to achieve the overall programmatic savings target. In the case of homes with gas-fired water heaters, the instantaneous category was selected for its savings potential. The EPA will maintain this specification as proposed because it is not able to identify an alternative measure that balances savings results as effectively.</p> <p>The electric water heater in the reference design is sized at 60 gallons based on product availability, as well as continuity with the prior program version, which also used a 60-gallon capacity. Based on a search of the AHRI database, only 16% of listed residential water heater products have a capacity greater than 60 gallons. For these reasons, the EPA is maintaining the reference design capacity as proposed but notes, again, that this only affects the reference design and there is no prohibition against using larger water heaters in a home or multifamily building.</p> <p>The EPA confirms that gas-fired boilers may be installed, and the impact on the energy model will depend on the efficiency of the equipment installed.</p> <p>In case it was a point of confusion, the EPA emphasizes that the policies in question regard the ENERGY STAR residential new construction whole-home labeling program, which is separate from, and has no direct bearing on, specifications for the labeling of water heater products.</p>

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

12	One commenter noted their support, specifically, for increasing the reference design's fan efficiency of supply ventilation system in Climate Zones 1-4 and adjusting the whole-home ventilation system type in Climate Zones 6-8 from an exhaust-only type to an ERV or HRV.	The EPA appreciates this feedback and will proceed with the reference design as proposed.
13	One commenter raised concerns with inconsistent implementation of the ENERGY STAR ERI Targets across software programs.	The EPA acknowledges this feedback and is supportive of ongoing industry software consistency efforts. While it is ultimately the responsibility of the EPA-recognized Home Certification Organizations (HCOs) to approve software tools for use in their certification programs and ensure compliance of those tools with program requirements, the EPA is planning to develop more robust supplemental resources, such as a standardized software approval form, to assist HCOs in the review and approval process.
14	One commenter, while offering support for this version's targets, expressed concerns about the diminishing potential for more stringent targets in future versions and suggested exploring alternative metrics or measures including decarbonization, water efficiency, or material selection.	The EPA appreciates this feedback and will consider these issues during future version development and strategic planning activities.

Thermal backstop in new versions

15	<p>Commenters expressed a range of views on the proposal to align the thermal backstop with the 2024 IECC prescriptive path. Of those who provided feedback on this topic:</p> <ul style="list-style-type: none"> • Two commenters supported the thermal backstop proposal as presented. • Two commenters suggested more stringent backstops, either by maintaining levels at the 2021 IECC prescriptive path or by adopting an approach to hold each assembly type (walls, ceilings, etc.) to an individual maximum U-value, rather than allowing tradeoffs via the "Total UA / TC" calculation approach. In aggregate, these commenters' rationales included: <ul style="list-style-type: none"> ○ The contribution of a well-insulated building envelope to occupant comfort, lower HVAC loads, passive resiliency, and other benefits. ○ Insulation's longer service life compared to some other efficiency measures. ○ A concern about adopting a less-stringent thermal backstop in the latest program versions compared 	<p>The EPA appreciates stakeholders' extensive feedback on this topic and acknowledges rationales across the spectrum of viewpoints. On balance, based on the weight of stakeholder feedback provided on its original proposal, anecdotal feedback gained during routine partner engagement, and additional analysis, the EPA believes more design flexibility is warranted compared to its original proposal, and that such flexibility can be provided while meeting the program's overall savings goals and remaining consistent with the model IECC code's envelope requirements.</p> <p>For these reasons, the EPA will align the thermal backstop with the 2024 IECC performance path in SFNH National Version 3.3 and the MFNC National Version 1.3 ERI and ASHRAE compliance path residential options. Specifically, the backstop will be:</p> <ul style="list-style-type: none"> • In CZ 1-2, ≤ 108% of the total TC per 2024 IECC Table 402.1.2 • In CZ 3-8: ≤ 115% of the total TC per 2024 IECC Table 402.1.2 <p>With this adjustment, builders will have more flexibility on thermal envelope design, but must still meet the more stringent SFNH National v3.3 / MFNC National v1.3 performance targets discussed above. This ensures that the program will continue to recognize homes and apartments that are at least 10% more energy efficient than code and include a thermal envelope consistent with the latest model code.</p>
----	--	--

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

<p>to SFNH National Version 3.2 / MFNC National Version 1.2.</p> <ul style="list-style-type: none">○ An opinion that builders support the 2024 IECC prescriptive U-values, in part because the biggest sticking point in the prior edition of the code – the attic insulation in cold climates – was reduced from R-60 to R-49.○ A note that the 2024 IECC's new Appendix RF provides prescriptive options for additional assembly designs.○ A note that Version 2 of the DOE's Zero Energy Ready Home (ZERH) program requirements align with the 2021 IECC prescriptive path level.● Seven commenters suggested adding at least some degree of additional flexibility to the thermal backstop, with two suggesting tradeoff allowances for specific design measures; three suggesting aligning with the 2024 performance paths (rather than prescriptive path); one suggesting that tables with alternative assemblies that have equivalent U-factors be provided; and one expressing a general request for more flexibility. In aggregate, these commenters' rationales included:<ul style="list-style-type: none">○ An argument that prescriptive measures, in general, reduce flexibility, which may result in lower efficiency performance for a given investment.○ Concerns that the limited flexibility of the proposed backstop may create a barrier to program participation.○ Recognition that the 2024 IECC's various performance paths include a more flexible backstop, which received attention in this code development cycle and, as a change from prior editions, is now consistent across those code performance paths.○ A desire to align with the code's performance path requirements to streamline compliance when applicable.○ Concerns that the limited flexibility of the proposed backstop may disincentivize certain building-
--

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

	<p>science-based strategies, such as bringing ducts into conditioned space by insulating the roof deck.</p> <ul style="list-style-type: none"> ○ Suggestions that additional flexibility may help address regional or climate-zone specific design considerations. 	
16	<p>One commenter suggested eliminating the thermal backstop in conjunction with a proposal for an alternative compliance path based on the 2024 IECC Section R406 Energy Rating Index Alternative.</p>	<p>The suggestion to adopt alternative performance targets is addressed in the prior section. With respect to eliminating the thermal backstop, the EPA notes that the referenced code “ERI Alternative” pathway itself includes a thermal backstop (see 2024 IECC R406.3). For this reason, the EPA will maintain a thermal backstop, at the levels discussed above.</p>
17	<p>One commenter expressed a concern that the thermal backstop may require compliance with the IECC’s Energy Rating Index compliance path.</p>	<p>The EPA emphasizes that the thermal backstop does not require the use of any specific code compliance pathway. Specifically, the thermal backstop program requirement does not require (nor does it preclude) compliance with the “Energy Rating Index” compliance path in the 2024 IECC model code.</p>
18	<p>One commenter suggested that, for the ENERGY STAR Multifamily New Construction (MFNC) program, the thermal backstop should be aligned with the commercial provisions of the 2024 IECC.</p>	<p>The EPA notes that the MFNC program’s thermal envelope requirements provide options aligned with both the residential and commercial chapters of code. Projects may choose between either the ‘residential option’ or the ‘commercial option’ and, in some cases, may mix-and-match options between residential spaces and common spaces.</p> <p>To be clear, the adjustment noted above regarding additional flexibility for the SFNH and MFNC ERI/ASHRAE “residential option” thermal backstop does not apply to MFNC’s Prescriptive path and/or “commercial option” thermal backstops, which will require ≤ 100% of the total TC relative to the ENERGY STAR Multifamily New Construction Reference Design, 2024 IECC R402.1.2, or 2024 IECC C402.5, depending on the compliance path, space type, and component.</p>

More stringent infiltration backstop for the new version of the SFNH program

19	<p>Commenters expressed a range of views on the proposal to set an infiltration backstop for single-family homes at 3.5 ACH50. Of those expressing an opinion:</p> <ul style="list-style-type: none"> • Four commenters supported the infiltration backstop as proposed. • Five commenters did not support the proposed infiltration backstop, offering the following feedback: <ul style="list-style-type: none"> ○ Two suggested keeping the infiltration as a measure that contributes to meeting the ERI Target, without enforcing a mandatory limit. 	<p>The general concept of adding an infiltration backstop was proposed as part of a separate stakeholder feedback process on the annual program revision. The EPA emphasizes that its focus on mandatory air sealing measures has been a cornerstone of the program since Version 2 was introduced in 2006. As with other elements on the short list of mandatory measures, the EPA believes that air-sealing has substantial building science benefits related to, but separate from, the energy savings captured in an ERI model. The EPA is now proceeding with the addition of the infiltration backstop, as a general matter, because it believes that there are significant quality assurance benefits to pairing an objective performance test limit with the longstanding list of prescriptive air-sealing measures. More information is available on the program’s website, in a document titled Summary of Comments, EPA Responses, and Resulting Policy Changes Regarding Key Proposals for Revision 14 of the ENERGY STAR Single-</p>
----	---	---

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

	<ul style="list-style-type: none"> ○ Two noted their experience that infiltration has only a small impact on the energy modeling ERI result. ○ One expressed an opinion that there was limited value to this requirement, given the infiltration limits already included in the 2024 IECC model code. ○ One large Rating Provider cited internal data showing an average infiltration above 3.5 ACH50 in 56% of their markets. ○ One suggested setting the backstop at 4.0 ACH50 across SFNH Versions (v3.1/v3.2/v3.3). 	<p>Family New Homes (SFNH) and Revision 05 of the ENERGY STAR Multifamily New Construction (MFNC) Program.”</p> <p>At issue in this development process is the proposal to set the backstop level in National Version 3.3 of the ENERGY STAR SFNH program at 3.5 ACH50. Data from 2023 indicate that the average infiltration of ENERGY STAR certified single-family homes with a confirmed rating was 3.3 ACH50, with 55% of certified homes being 3.5 ACH50 or tighter. Based on this data, the EPA believes a long-term target of 3.5 ACH50 is achievable using means and methods that have been demonstrated in the market.</p> <p>For these reasons, the EPA will set the infiltration backstop at 3.5 ACH50 for National Version 3.3 of the ENERGY STAR SFNH program, as proposed. However, to provide sufficient time for the market to prepare for this level of performance, a temporary infiltration target of 4.0 ACH50 will be allowed for single-family homes permitted prior to 1/1/27.</p>
20	<p>Commenters provided the following feedback on the alternative metric limit of 0.30 CFM50 per ft² of enclosure area proposed for dwellings ≤ 1,500 sq. ft. of conditioned floor area, Townhouses, and attached Dwelling Units:</p> <ul style="list-style-type: none"> ● One commenter noted that the proposal is less stringent than the value of 0.27 used in code, and recommended using a value of 0.24 instead, which would represent a 10% improvement over code. ● One commenter requested the alternative metric be permitted to be used with attached single-family dwellings. ● One commenter suggested that the alternative metric be available to all homes. 	<p>The EPA considered the value of 0.27 from the 2024 IECC but ultimately believes that partners will find more benefit in alignment with the ENERGY STAR Multifamily New Construction (MFNC) program, which has long used a limit of 0.30, predating the latest code development cycle. The EPA acknowledges that synchronizing both programs with code’s latest value would create benefits (as well as challenges) and may consider this type of adjustment in the future.</p> <p>With respect to applicability, the EPA emphasizes that the original proposal was to allow attached single-family dwellings (in addition to dwellings ≤ 1,500 sq. ft. of conditioned floor area and Townhouses) to use the alternative metric, if preferred.</p> <p>The EPA acknowledges the request to permit the alternative metric to be used in all homes but notes that a specific need was not identified. The EPA believes that an ACH50 metric is appropriate for most homes, and proposed the more lenient enclosure-area metric as an alternative for specific scenarios where there is a demonstrated need and rationale. For these reasons, the EPA is proceeding with its proposal to limit the alternative metric to dwellings ≤ 1,500 sq. ft. of conditioned floor area, Townhouses, attached Dwelling Units. However, the EPA may consider broadening this allowance’s applicability in the future, should a specific scenario with demonstrated need be presented.</p>
21	<p>One partner requested information on the costs and benefits of the proposed infiltration backstop level.</p>	<p>As noted above, the EPA intends to prepare and post a full “Cost & Savings” document on the “Additional Resources” section of its program requirements webpages, similar to those currently available for earlier Versions of the program.</p> <p>This analysis will detail projected costs for meeting the reference design infiltration, which is more stringent than the infiltration backstop. While the EPA does not report savings for individual measures, infiltration will be included as one factor in the reported aggregate savings. The EPA also believes that air-sealing is an important building science measure that, like other mandatory measures, brings additional benefits beyond energy savings, some of which are discussed above.</p>

Proposals for ENERGY STAR SFNH National Version 3.3 and ENERGY STAR MFNC National Version 1.3

22	Two commenters suggested setting differentiated infiltration targets according to climate zone, without specifying recommended values.	The EPA acknowledges that the 2024 IECC sets differentiated targets according to climate zone. However, the EPA believes there are substantial building science benefits to reducing infiltration in both cold and warm climates, including humidity control. Further, the EPA believes that a single national value reduces complexity. For these reasons, the EPA will proceed with its original proposal to set a single 'national' infiltration target per program Version.
23	A commenter expressed the opinion that the proposed infiltration targets are only achievable with certain insulation products, such as spray-foam insulation.	No data were presented to support the conclusion that the proposed limit would require or exclude certain categories of insulation products. The EPA believes that 3.5 ACH50 can be achieved with a variety of insulation products, including batt insulation, if appropriate attention is given to key leakage locations such as the attic floor. RESNET registry data for ENERGY STAR single-family new homes certified in 2023 with confirmed ratings indicates that over 80% of homes in CZ 3-7 already achieve the proposed target of 3.5 ACH50. The EPA's understanding is that insulation products of all types are used by partners in all climate zones, suggesting that such rates are being achieved without exclusive use of foam insulation.
24	A commenter suggested that slab-on-grade homes pose a unique challenge to meeting the proposed infiltration levels.	The EPA was not previously aware of air-sealing challenges specific to slab-on-grade construction and has not received any data demonstrating otherwise. It anticipates that the air leakage limits will be achievable for all foundation types using standard sealing techniques. If other data become available, the EPA can reassess the policy at that time.
25	One commenter raised concerns about cases where a test result fails but is close to the limit.	With any performance test, it is expected that test results will be distributed across a range, and that there will be instances of failures, despite best efforts. In this case, the EPA recommends that project teams target an average infiltration result of approximately 3-3.25 ACH50 to create a likelihood that most homes will fall under 3.5 ACH50. To the extent that a test failure occurs, it may indicate an installation error that would otherwise go unnoticed. When correction is necessary, the EPA believes there is typically air-sealing potential even at a final construction stage, as indicated, in part, by industry experience with existing home weatherization programs.