

Current ENERGY STAR NextGen New Homes and Apartments Policy Record

How to Use This Document

EPA regularly receives partner questions and comments regarding various aspects of the program documents. This document is a record of the issues that have been received since the release of the last revision to the program documents. These issues are either pending resolution by EPA or have been resolved, sometimes resulting in modifications that will be incorporated into the next revision of the program documents. The primary purpose of this document is to allow all partners to have equal access to the latest policy issues and resolutions.

EPA intends to formally incorporate policy modifications into the next revision of the program documents. Those edits will then be enforced for homes permitted after a specified transition period, typically 60 days from the release of the revised program requirements. Partners may, at their discretion, use the determinations in this document immediately, in advance of the formal implementation dates. If they do so, they should be sure to document the permit dates of the affected homes and to include a copy of the policy record in the files retained by the Home Energy Rater. Should the need arise, this will allow partners to demonstrate that they acted with the best information available.

Definitions

Each issue listed here is classified as a Change, Clarification, Refinement, Comment, or as an Issue Under Review. These are defined as follows:

- **Change** – The addition, deletion, or modification of a program requirement. A change will typically result from a partner question or feedback indicating that EPA's original intent is not being met or from changes in relevant standards (e.g., ENERGY STAR labeled product requirements, NAECA standards, IECC codes). A change is the most significant type of edit for partners because it is likely to change the way that partners comply with the program.
- **Clarification** – The clarification of a program requirement, typically resulting from a partner question indicating confusion or ambiguity. Clarifications are not intended to significantly change the scope of the program guidelines, but rather to clarify the original intent of the requirement. A clarification is secondary in importance to a change; it should not significantly alter the way that most partners comply with the program.
- **Refinement** – A minor revision, such as an improved choice of words, a grammatical correction, or a correction to a typographical error. A refinement is the least important type of edit; it should have no impact on the way that partners comply with the program.
- **Comment** – A comment provided by EPA in response to a question, which results in no change to the program documents. This may occur, for example, if the question can be answered by referring to already established policy. Aside from the partner asking the question, such comments will typically have no impact on the way that partners comply with the program.
- **Issue Under Review** – An issue that has been submitted and that EPA is still evaluating. Once EPA has evaluated the issue, it will offer a resolution and reclassify the issue using one of the four categories above.

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ID	Log Date	Program Document	Classification	Topic
00002	11/13/2023	National Rater Field Checklist, Version 1.0	Change	Item 1.1 – California v3.4 / v1.4
				<p>Issue: The ENERGY STAR Single-Family New Homes California Program Requirements, Version 3,4, and Multifamily new Construction California Program Requirements, Version 1.4, become required for homes and apartments with permits on or after January 1, 2025 that seek to earn the ENERGY STAR. It is not clear when these new versions will be required in ENERGY STAR NextGen.</p>
				<p>Resolution: NextGen is intended to include the most advanced version of the core ENERGY STAR New Homes and Apartments certification on appropriate timelines. In this case, EPA will require the use of California Versions 3.4 and 1.4 immediately.</p> <p>Item 1.1 will be updates as follows:</p> <p><i>“California Projects-Only: <input type="checkbox"/> SFNH California Version 3-33.4 <input type="checkbox"/> MFNC California Version 4-31.4”</i></p>
00006	11/13/2023	National Rater Field Checklist, Volume 1.0	Clarification	Item 2.1 – Definition of two-speed and variable-speed heat pumps
				<p>Issue: Item 2.1 requires that all air-source heat pumps be two-speed or variable-speed. The specific product requirements that would meet this Item is unclear, since blower fans and compressors may independently have any combination of one, two and variable speeds.</p>
				<p>Resolution: To meet the requirement in 2.1 that all air source heat pumps be two-speed or variable speed, both the compressor and blower fan must be at least two speeds. EPA will clarify this requirement by adding it as a new Item in Section 2 as follows:</p> <p><i>“<u>2.3 Each air-source heat pump has two-speed or variable-speed blower fan & two-speed or variable-speed compressor.</u>”</i></p> <p>Item 2.1 will be updated as follows:</p> <p><i>“ENERGY STAR certified two-speed or variable-speed air-source heat pump(s), or ENERGY STAR certified geothermal heat pump(s); installed and sized in accordance with the HVAC Design Report.”</i></p>

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00013	02/02/2024	NextGen Rater Field Checklist (Version 1, Rev. 0)	Clarification	<p>Item 2.1 –Allowed use of dual-fuel heat pumps</p>
				<p>Issue: Partners have asked EPA to clarify that dual-fuel heat pumps are permitted under ENERGY STAR NextGen, where a dual-fuel heat pump system typically provides heating with an electric heat pump, but can utilize fuel (e.g., natural gas) to provide supplementary - or backup - heating. This confusion has occurred due to the lack of explicit language in the program documents stating that dual-fuel heat pumps are allowed, while in presentations EPA has mentioned that dual-fuel heat pumps will be permitted in ENERGY STAR NextGen.</p> <p>Resolution: EPA’s intent is that dual-fuel heat pumps are permitted to be used to satisfy the requirements of Section 2, noting that the applicable requirements in Section 2 are met (e.g., sizing). To reflect this intent a new footnote will be added to Item 2.1 as follows: “Dual-fuel heat pumps are permitted to be used to meet this requirement.”</p>
00004	11/13/2023	National Rater Field Checklist, Version 1.0	Change	<p>Item 2.2 – Connected requirement for heat pumps</p> <p>Issue: Currently, there are no EPA connected heat pumps. ENERGY STAR certified smart thermostats work for two-speed systems, but not all variable-speed heat pumps have an ENERGY STAR smart thermostat that will properly handle their advanced controls. This leaves many variable-speed air source heat pumps without a compliance option for the connected requirement.</p> <p>Resolution: The primary intent of this requirement is to have installed heat pumps be demand response capable. Until there are sufficient options for variable-speed systems to either meet EPA’s connected requirements or be controlled by an ENERGY STAR certified smart thermostat, EPA will streamline the requirement for all types of heat pumps.</p> <p>Therefore, Item 2.2 will be updated as follows: “<u>Each heat pump is controlled by a wifi thermostat or ENERGY STAR certified smart thermostat, or meets EPA’s ‘connected’ criteria.</u>” Each air source heat pump meets EPA’s ‘connected’ criteria or is controlled by an ENERGY STAR certified smart thermostat”</p>

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00009	11/13/2023	National Rater Field Checklist, Version 1.0	Comment	Item 3.1 – Geothermal desuperheater water heating requirement
				Issue: Partners have asked whether they may install an electric resistance tank water heater when combined with a geothermal system with a desuperheater, rather than an ENERGY STAR certified heat pump water heater.
				Resolution: Geothermal desuperheaters are a highly efficient supplemental water heating source, however they do not provide all of the domestic hot water load. Therefore, although they can be beneficial, ENERGY STAR NextGen will still require a heat pump water heater for the main domestic hot water tank.
00012	11/13/2023	National Rater Field Checklist, Version 1.0	Clarification	Item 3.1 – Impact of supplemental electric spot water heating on minimum tank size
				Issue: Footnote 4 allows the use of a single supplemental electric spot water heating system that serves one application or bathroom. It is unclear how this impacts the minimum rated storage volume of the heat pump water heater.
				Resolution: EPA does not want to inadvertently encourage the use of supplemental electric spot water heating systems by offering project teams the option to downsize their heat pump water heater tank if they install a spot water heating system. A supplemental electric spot water heating system has no impact on heat pump water heater tank sizing. Footnote 4 of National Rater Field Checklist will be revised as follows: “4. A single supplemental electric spot water heating system that serves one appliance or bathroom is allowed. <u>The minimum rated storage volume for the dwelling unit is not impacted.</u> ”
00001	11/13/2023	National Rater Field Checklist, Version 1.0	Clarification	Item 3.2 – Bedroom definition
				Issue: Partners have asked for the definition of a bedroom, which impacts the minimum tank capacity for a dwelling unit heat pump water heater.
				Resolution: When determining the number of bedrooms in a dwelling unit, use the definition of a bedroom as defined in ANSI / RESNET / ICC Standard 301. A new footnote shall be added to the Rater Field Checklist for item 3.2 that includes the below definition.

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				<p>“A bedroom is defined by ANSI / RESNET / ICC 301 as:</p> <p>Bedroom - For one- and two-family Dwellings and Townhouses, a room or space 70 square feet of floor area or greater, with Egress Window or skylight, and doorway to the main body of the Dwelling Unit, that can be used for sleeping. For all other Dwelling Units, a room or space that can be used for sleeping. For all Dwelling or Sleeping Units, the number of Bedrooms shall not be less than one.</p> <p>Egress Window – An operable window that provides for a means of escape and access for rescue in the event of an emergency, with the following attributes:</p> <ul style="list-style-type: none"> • Has a sill height of not more than 44 inches above the floor; and, • Has a minimum net clear opening of 5.7 sq. ft.; and, • Has a minimum net clear opening height of 24 in.; and, • Has a minimum net clear opening width of 20 in.; and, • Is operational from the inside of the room without the use of keys, tools or special knowledge. <p>For Sleeping Units, the number of bedrooms = number of beds -1.”</p>
00011	11/13/2023	National Rater Field Checklist, Version 1.0	Clarification	Item 3.2 – Calculating tank sizing from multiple water heaters
				<p>Issue: Partners have asked how homes and dwelling units meet the minimum heat pump water heater tank size requirement when multiple water heaters are installed.</p>
				<p>Resolution:</p> <p>The minimum tank capacity may be met by multiple heat pump water heaters by summing the total tank capacity of each water heater. For example, a 5 bedroom house with a minimum rated storage volume requirement of 72 gallons may comply by installing two 36 gallon heat pump water heaters.</p> <p>A footnote will be added to Item 3.2 as follows:</p> <p>“Minimum rated storage volume may be met by one or more heat pump water heaters. When installing multiple water heaters sum the total combined rated storage volume.”</p>

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00005	11/13/2023	National Rater Field Checklist, Version 1.0	Clarification	Item 3.2 – Rated tank size for heat pump water heater
				Issue: It is unclear whether nominal volume or rated storage volume should be used to determine the heat pump water heater’s storage volume.
				<p>Resolution: Nominal capacity refers to the general class size of a water heater. Rated storage volume refers to the exact amount of water stored in a water heater as defined in 10 CFR Appendix-E-to-Subpart-B-of-Part-430.1 as “the water storage capacity of a water heater, in gallons (liters), as certified by the manufacturer pursuant to 10 CFR part 429.”</p> <p>Additionally, equipment manufacturers are required to publish that rated storage volume on the yellow EnergyGuide label.</p> <p>To align with this industry standard for determining the exact storage volume of a given water heater, EPA will update language in item 3.2 as follows:</p> <p>“Each heat pump water heater has minimum <u>rated storage volume</u> tank capacity as follows:”</p>
00007	11/13/2023	National Rater Field Checklist, Version 1.0	Clarification	Item 3.3 – Unfinished basements are considered occupiable space
				<p>Issue: In the context of heat pump water heaters that will be installed in occupiable space, and subject to the sound rating limits, partners have asked if EPA considers a utility room in a single-family home’s basement occupiable space? And if so, does it matter if the basement is finished and the room is not, or if the entire basement is unfinished?</p> <p>Resolution: The intent of the maximum sound rating requirement is to install quieter heat pump water heaters anywhere that noise might be intrusive, including utility rooms in finished or unfinished basements. Therefore, EPA determined that utility rooms in a basement, whether finished or unfinished, to meet the definition of occupiable space and subject to Item 3.3.</p>
00003	11/13/2023	National Rater Field Checklist, Version 1.0	Clarification	Item 3.4 – Connected requirement for heat pump water heaters
				<p>Issue: As of October, 2023, there are only 2 EPA connected heat pump water heaters. ANSI / CTA-2045, often referred to as “EcoPort”, is a standard addressing heat pump water heaters demand-response capabilities. It is referenced in the DR Communications Protocol of the ENERGY STAR v5.0 Residential Water Heaters Specification. Allowing heat pump water heaters that include an EcoPort to be deemed compliant with the connected requirement for</p>

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				<p>heat pump water heaters would significantly increase the heat pump water heater models available that meet this Item.</p> <p>Partners have additionally asked if heat pump water heaters must also be equipped with utility plug-in modules which allows them to participate in utility-specific demand response programs.</p> <p>Resolution:</p> <p>The primary intent of the connected requirement is to have installed heat pump water heaters be demand response capable. Until there are sufficient models that are certified to meet EPA’s ‘connected’ requirement for heat pump water heaters, EPA will update the language for Item 3.4 as follows:</p> <p>“Each heat pump water heater meets EPA’s ‘connected’ criteria <u>or has an ANSI / CTA-2045 port (EcoPort)</u>”</p> <p>Installation of the EcoPort CTA-2045 allows for future connection to utility-specific plug-in modules and for future participation in utility demand response programs. EPA intent is to allow for compatibility with utility demand response programs. The utility plug-in module itself is not required.</p>
00010	11/13/2023	National Rater Field Checklist, Version 1.0	Change	Item 4.1 – Induction cooking requirement
				<p>Issue: Partners have raised concerns with the limited availability and higher cost of induction cooktops currently on the market. In addition, EPA is expected to release a new ENERGY STAR specification for residential electric cooktops in late 2023, which is likely to encompass both efficient electric and induction cooktops. Products that meet this specification are expected to become available in 2024 and 2025.</p>
				<p>Resolution: At this time, EPA will modify the requirement to allow any electric cooktop and oven. As the market evolves, EPA will evaluate options to include ENERGY STAR cooktops and ranges and / or induction cooktops in the ENERGY STAR NextGen Homes and Apartments specification.</p> <p>Item 4.1 of the Rater Field Checklist will be modified as follows:</p> <p>“Cooktops and <u>ovens are electric. Induction ranges elements / burners are recommended, but not required use induction technology, and ovens are electric</u>”</p>

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				<p>“Cooktops and ovens are electric. Induction ranges are recommended, but not required.”</p> <p>Footnote 8, which allowed government subsidized housing units to install electric resistance cooktops, will no longer be relevant with this change and will be deleted.</p>
00008	11/13/2023	National Rater Field Checklist, Version 1.0	Clarification	<p>Item 5.1.1 – Electric service panel size increase due to EV-charging</p>
				<p>Issue: Footnote 10, associated with Item 5.1.1 does not require connecting the circuit to the electrical panel if it increases the electrical service to the ‘next nominal size’ (i.e., from 200-amp to 400-amp service). Partners have asked what the definition of ‘next nominal size’ means. For example, there are 200-amp service panels and 225-amp service panels. Does EPA consider an upgrade from 200-amp to 225-amp as the ‘next nominal size’?</p>
				<p>Resolution: EPA’s intent is to only exempt homes and dwelling units from this requirement if the addition of the 40-amp electric vehicle charging branch circuit increases the electric service to 400-amp.</p> <p>Footnote 10 will be revised as follows:</p> <p>“If the addition of the 40-amp Electric Vehicle Charging branch circuit would require increasing the electrical service to the next nominal size (i.e., from 200-amp to 400-amp service), connecting the circuit to the electrical panel is not required. The Rater shall retain a copy of the electrical sizing calculations or statement from the electrical designer for their records but need not evaluate the documentation to certify the home.”</p>