

EPA Responses to Comments on Puerto Rico ENERGY STAR Certified Homes Guidelines, Version 3

EPA previously posted a compilation on its web site of all comments received during the comment period for its proposed Puerto Rico Version 3 ENERGY STAR Certified Homes guidelines, which ended May 22, 2011.

This document contains a summary of these comments, along with EPA's response to each point raised and the resulting policy change, if any.

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

*The Environmental Protection Agency
is not responsible for any typographical errors or omissions.*

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ENERGY STAR Guidelines for Puerto Rico

ID	Comment Summary	EPA's Response	EPA's Policy Decision
General			
1	<ul style="list-style-type: none"> One respondent asked if the proposed guidelines could be used in the U.S. Virgin Islands due to the similar climate zone, or if there will be separate specifications developed for the U.S. Virgin Islands. 	<ul style="list-style-type: none"> EPA is considering whether to extend the use of these guidelines to the U.S. Virgin Islands, but that extension has not been granted at this time. It is EPA's understanding that the housing market in the U.S. Virgin Islands is substantially different than in Puerto Rico and further assessment is required. Therefore, these guidelines are currently not applicable to the U.S. Virgin Islands. 	<ul style="list-style-type: none"> No Policy Change
2	<ul style="list-style-type: none"> One respondent noted that any new construction should be in compliance with codes developed by Puerto Rico Energy Affairs Administration, ASHRAE, and local jurisdictions. 	<ul style="list-style-type: none"> EPA notes that compliance with ENERGY STAR guidelines is not intended to imply compliance with all local code requirements that may be applicable to the home. All new homes, regardless of their participation in the ENERGY STAR Certified Homes program, should be in compliance with the relevant code requirements of their local jurisdiction. 	<ul style="list-style-type: none"> No Policy Change
3	<ul style="list-style-type: none"> One respondent suggested that the ENERGY STAR Certified Homes guidelines should be applicable to existing construction as well as to homes across economic levels. 	<ul style="list-style-type: none"> EPA's ENERGY STAR Certified Homes program is primarily designed to promote the construction of efficient new homes in a cost-effective manner. EPA does allow existing homes to earn the ENERGY STAR under the new homes program if all requirements of the guidelines have been met, though EPA recognizes that this will be more challenging under Version 3 of the program. EPA is assessing for the national program whether there are alternate compliance options that would meet the intent of the current requirements and allow homes undergoing a "gut rehabilitation" to be ENERGY STAR certified. Upon completion, this assessment may also be beneficial to homes being certified using the guidelines for Puerto Rico. Note that the goal is not to develop a separate label, but rather to allow these homes to more easily demonstrate that they meet the same intent as new homes that have earned the label. 	<ul style="list-style-type: none"> No Policy Change
4	<ul style="list-style-type: none"> One respondent suggested that EPA develop educational courses on performing residential audits or ratings that are specific to the climate and structural conditions in Puerto Rico. 	<ul style="list-style-type: none"> EPA regularly provides educational opportunities and answers questions in support of its guidelines. However, EPA does not typically have the resources to develop general training on performing residential audits and ratings and instead relies upon industry groups, such as RESNET, to meet such training needs. 	<ul style="list-style-type: none"> No Policy Change

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ENERGY STAR Reference Design for Puerto Rico			
5	<ul style="list-style-type: none"> Multiple respondents suggested that the requirement for heating equipment be eliminated from the proposed program requirements due to the hot climate. 	<ul style="list-style-type: none"> EPA does not require the installation of heating equipment in an ENERGY STAR certified home. Rather, the Prescriptive Path only defines how efficient the heating equipment must be <i>if</i> heating equipment is installed in the home. In addition, the Performance Path only defines how efficient the heating equipment is in the Reference Design, which is used to determine the ENERGY STAR HERS index target. Partners using the Performance Path can use heating equipment of any efficiency, or no heating equipment at all, as long as they select a combination of measures that produce a HERS index equal to or lower than the ENERGY STAR HERS index target. 	<ul style="list-style-type: none"> EPA has updated the Heating Equipment section of the Program Requirements for Hawaii and Puerto Rico to state "Heating equipment, where provided, meets one of the options..." to clarify that the installation of heating equipment is not required.
6	<ul style="list-style-type: none"> Multiple respondents expressed concern that the requirement for air conditioning equipment in the proposed program requirements would be costly to both install and operate. They pointed out that low income housing would have the most difficulty including these systems due to these costs. 	<ul style="list-style-type: none"> EPA does not require the installation of cooling equipment in an ENERGY STAR certified home. Rather, the Prescriptive Path only defines how efficient the cooling equipment must be <i>if</i> cooling equipment is installed in the home. In addition, the Performance Path only defines how efficient the cooling equipment is in the Reference Design, which is used to determine the ENERGY STAR HERS index target. Partners using the Performance Path can use cooling equipment of any efficiency, or no cooling equipment at all, as long as they select a combination of measures that produce a HERS index equal to or lower than the ENERGY STAR HERS index target. Also note that if cooling equipment is not installed, the home shall be exempt from compliance with all items of the HVAC System QI Contractor Checklist and Sections 1 through 7 and Section 11 of the HVAC System QI Rater Checklist per Footnote 20 in the Program Requirements. 	<ul style="list-style-type: none"> No Policy Change
7	<ul style="list-style-type: none"> One respondent suggested that the efficiency requirement for cooling equipment be defined using EER instead of SEER because it is a better indicator of annual energy use in Puerto Rico due to very little seasonal temperature fluctuation. Additionally, the respondent suggested that inverters or a minimum efficiency of 10.5 EER be required for mini-split equipment and a minimum efficiency of 11.0 EER be required for wall-mounted equipment. 	<ul style="list-style-type: none"> The metric used to define the minimum required efficiency for each type of cooling equipment was selected based upon commonly available rating information. Therefore, central AC systems are defined in terms of SEER and EER. EPA agrees that other cooling equipment types should be included in the Prescriptive Path. 	<ul style="list-style-type: none"> EPA has expanded the system types listed in the Cooling Equipment section of the Program Requirements for Hawaii and Puerto Rico to include Room AC's and Packaged Terminal AC's (i.e., PTAC's). Both of these system types are commonly rated using the EER metric and the

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			minimum required efficiency for these system types are defined as such.
8	<ul style="list-style-type: none"> One respondent noted that heat pumps are not used in Puerto Rico, so it could be difficult to justify their use as an energy efficiency measure. 	<ul style="list-style-type: none"> EPA does not require the installation of heating equipment in an ENERGY STAR certified home. Rather, the Prescriptive Path only defines how efficient the heating equipment must be <i>if</i> heating equipment is installed in the home. In addition, the Performance Path only defines how efficient the heating equipment is in the Reference Design, which is used to determine the ENERGY STAR HERS index target. Partners using the Performance Path can use heating equipment of any efficiency, or no heating equipment at all, as long as they select a combination of measures that produce a HERS index equal to or lower than the ENERGY STAR HERS index target. 	<ul style="list-style-type: none"> No Policy Change
9	<ul style="list-style-type: none"> One respondent noted that attics and thermal insulation are not typically used in Puerto Rico. They suggested that homes have a light colored roof or cool roof to reduce solar heat gain in lieu of ceiling insulation requirements. 	<ul style="list-style-type: none"> EPA understands that ceiling insulation is not a standard practice in Puerto Rico. However, EPA has identified ceiling insulation as an achievable improvement that can reduce the energy consumption of a home relative to standard practice. While it is true that the Prescriptive Path requires ceiling insulation to be installed, a home certified using the Performance Path may use as much or as little ceiling insulation as the builder desires, as long as a combination of measures has been selected that produces a HERS index equal to or lower than the ENERGY STAR HERS index target. 	<ul style="list-style-type: none"> No Policy Change
10	<ul style="list-style-type: none"> One respondent suggested that all residential solar water heaters be OG-300 certified and all solar water heaters in industrial facilities be OG-100 certified. 	<ul style="list-style-type: none"> EPA agrees with the respondent that all residential solar water heaters used in ENERGY STAR certified homes should be OG-300 certified. Footnote 14 of the Program Requirements for Hawaii and Puerto Rico includes this requirement. The ENERGY STAR Certified Homes program is not applicable to industrial facilities. Therefore, the guidelines do not address efficiency requirements for solar water heaters used in such facilities. 	<ul style="list-style-type: none"> No Policy Change
11	<ul style="list-style-type: none"> One respondent suggested requiring that all electrical appliances such as refrigerators, dishwashers, ceiling fans, and air conditioners, be ENERGY STAR certified. 	<ul style="list-style-type: none"> EPA designed the Prescriptive Path to require that refrigerators, dishwashers, ceiling fans, and exhaust fans be ENERGY STAR certified if such appliances are installed. However, a home certified using the Performance Path may use any efficiency upgrades, including ENERGY STAR certified appliances, as long as a combination of measures has been selected that 	<ul style="list-style-type: none"> No Policy Change

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		produces a HERS index equal to or lower than the ENERGY STAR HERS Index Target.	
12	<ul style="list-style-type: none"> One respondent suggested that only CFL's or LED's should be permitted to be used. 	<ul style="list-style-type: none"> EPA designed the Prescriptive Path to require that ENERGY STAR certified light bulbs or fixtures be used in 80% of RESNET-defined Qualifying Light Fixture Locations. ENERGY STAR certified lighting products include both CFL and LED light sources. A home certified using the Performance Path may use any efficiency upgrades, including more or less than 80% efficient lighting, as long as a combination of measures has been selected that produces a HERS index equal to or lower than the ENERGY STAR HERS Index Target. 	<ul style="list-style-type: none"> No Policy Change
Inspection Checklists			
13	<ul style="list-style-type: none"> One respondent suggested that bathrooms should be allowed to meet the local mechanical exhaust requirements through natural ventilation instead of the use of mechanical exhaust fans. 	<ul style="list-style-type: none"> EPA intends to align the local exhaust requirements with ASHRAE 62.2-2010, which does not provide an option to use natural ventilation in bathrooms and kitchens. Of course, builders are free to include natural ventilation options in addition to the local mechanical exhaust that is required by the program. 	<ul style="list-style-type: none"> No Policy Change
14	<ul style="list-style-type: none"> One respondent asked if the proposed program requirements required the inspection of equipment on a periodic basis after construction has been completed to ensure that the requirements are still met. They specifically had concerns with homeowners replacing equipment with less efficient models. 	<ul style="list-style-type: none"> Since its inception, the primary goal of the ENERGY STAR Certified Homes program has been to recognize new homes that are designed and constructed to be meaningfully more efficient than non-labeled homes. The cost and logistics of certification must be commensurate with the goals of a voluntary market transformation program. Therefore, the certification occurs at the time of construction and the program does not require inspections after this time. 	<ul style="list-style-type: none"> No Policy Change
15	<ul style="list-style-type: none"> One respondent recommended that electric dryers be required to use rigid ducts instead of flexible ducts in order to maximize efficiency. 	<ul style="list-style-type: none"> EPA agrees that rigid dryer ducts may lead to higher efficiencies and increased durability. While builders are free to use rigid ducts in certified homes, they will not be a mandatory requirement at this time. 	<ul style="list-style-type: none"> No Policy Change
16	<ul style="list-style-type: none"> One respondent suggested that all homes be required to have non-electric smoke detectors. 	<ul style="list-style-type: none"> The primary goal of the ENERGY STAR Certified Homes program is to recognize new homes that are designed and constructed to be meaningfully more efficient than non-labeled homes. Requirements related to smoke detectors are outside of the scope of the ENERGY STAR Certified Homes program. Instead, EPA defers to local code requirements, which are applicable to all homes. 	<ul style="list-style-type: none"> No Policy Change
17	<ul style="list-style-type: none"> One respondent noted that if natural ventilation is to be promoted, then there should not be any limitations on the window to floor area ratio. 	<ul style="list-style-type: none"> There are currently no limitations on the window to floor area for homes constructed in Puerto Rico using these guidelines. Instead, the Thermal Comfort System Rater 	<ul style="list-style-type: none"> No Policy Change

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		Checklist requires that an improved SHGC be used in homes without overhangs that have a window area to floor area ratio that exceeds 15%. This requirement is important for managing the solar gains into the home.	
<i>ENERGY STAR HERS Index Target Procedure for Puerto Rico</i>			
18	<ul style="list-style-type: none"> One respondent commented that there is not a HERS rating system established in Puerto Rico, but that they do have certified Raters. 	<ul style="list-style-type: none"> EPA notes that the HERS rating methodology is applicable to homes in Puerto Rico. In addition, several HERS Raters already provide rating services in Puerto Rico and the development of these guidelines is expected to create additional demand for such services. 	<ul style="list-style-type: none"> No Policy Change