



Setting the Standards for
Home Energy Efficiency

Final Standard Revision

MINHERS Addendum 41f Puerto Rico & US Virgin Islands, Living Space & Tropical Climate Zone

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Effective Date:	July 1, 2019 (replaces Addendum 41i)
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Transition Period End Date:	None (replaces Addendum 41i)
Proponent:	Standard Development Committee 300
Organization:	RESNET

Purpose:

This addendum provides guidance on how to model homes that have no heating system and for which less than half of the floor area is served by a cooling system. These homes are often located in the Tropical Climate Zone. The addendum also provides a temporary exemption from infiltration testing for homes in Puerto Rico and the US Virgin Islands.

HUD is tying recovery funds on these islands to efficiency programs, which creates an opportunity for RESNET to increase HERS ratings on these islands. However, because the rating infrastructure on the islands is in its infancy, blower doors are an expensive investment. Furthermore, the cost of testing each home outweighs its value in many cases. Due to the extremely temperate weather in these locations, the infiltration rate has a negligible impact on the HERS rating. For example, in one home in Puerto Rico, the HERS impact of increasing infiltration from 3 to 10 ACH50 was 1 HERS point. To overcome this obstacle, this addendum authorizes an exception to the MINHERS standard allowing Raters doing HERS ratings in Puerto Rico and the US Virgin Islands to use a very high default infiltration rate of 10 ACH50 in lieu of testing for a limited period of time.

A home that has no heating system and limited to no cooling system has a Conditioned Floor Area and Conditioned Space Volume, per ANSI/RESNET/ICC Standard 301, of either zero or substantially less than the occupiable space of the home.

While the definitions of Conditioned Floor Area and Conditioned Space Volume intentionally exclude portions of a home that are not conditioned (e.g., an unconditioned basement, vented attic, or vented crawlspace), these definitions did not anticipate an entire home that lacks both space heating and cooling. Such homes are rare in the US mainland, but are common in tropical regions, where there is no heating load, cooling is often achieved through passive strategies, and occupants have an expectation of higher space temperatures.

Because ANSI/RESNET/ICC Standard 301 uses the Conditioned Floor Area to determine several characteristics of the reference and/or rated home, such as window area, ventilation rates, residual MELs, interior/exterior lighting, and hot water pipe length, inaccurate values will be produced for these parameters in a home with no Conditioned Floor Area.

To address this issue, the addendum modifies Standard 301 as it applies to the RESNET HERS to allow occupiable space of such a home be modeled as its Conditioned Floor Area and the volume of the occupiable space to be modeled as its Conditioned Space Volume.

The 2018 IECC uses criteria related to climate zone and space conditioning to differentiate homes like this from standard homes. R401.2.1 states that “residential buildings in the tropical zone at elevations less than 2,400 ft above sea level shall be deemed to be in compliance with this chapter provided that the following conditions are met:

- Not more than one-half of the occupied space is air conditioned.
- The occupied space is not heated..”

Notes:

This Addendum is written to conform to the language of Addendum 42. Between the April 12, 2019 approval date of this “interim” Addendum 41i-2 and the Effective Date of Addendum 42 the Exception it modifies is section 303.1 “Exception 4”. After the Effective Date of Addendum 42 this Addendum modifies “Exception 1” as shown herein.

Addendum 41i-2 is a companion amendment to and works with previously approved Addendum 41i.

Modifications to Chapter 3 and Appendix B are shown below in underline/strikeout red text format

Chapter Three RESNET Standards

303 Technical Requirements

303.1 Applicable Standards

All RESNET Home Energy Ratings conducted in accordance with this Standard shall comply with the provisions of ANSI/RESNET/ICC 301, “Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units using an Energy Rating Index.”

Exception 1: RESNET Home Energy Ratings conducted in Puerto Rico and the US Virgin Islands shall comply with the provisions of ANSI/RESNET/ICC 301, except that Ratings of homes with a permit date prior to January 1, 2022 are permitted to use a default infiltration rate of 10 ACH50 in lieu of conducting an airtightness test in accordance with Standard ANSI/RESNET/ICC 380. In addition, for a home in the Tropical Climate Zone for which its Living Space is not serviced by a space heating mechanical system and not more than one-half of its Living Space is serviced by a space cooling mechanical system, the Conditioned Space Volume shall be defined as the volume of its Living Space and the Conditioned Floor Area shall be defined as the floor area of its Living Space.

Appendix B- Glossary of Terms Glossary of Terms

Living Space - Any enclosed space inside the primary air enclosure boundary separating indoor and outdoor air and intended for continual human occupancy, including but not limited to living, sleeping, dining, and cooking; or intended for human activities, including but not limited to toilets, closets, halls, storage and utility areas, and laundry areas.

Tropical Climate Zone - Hawaii, Puerto Rico, Guam, American Samoa, US Virgin Islands, Commonwealth of Northern Mariana Islands, and islands in the area between the Tropic of Cancer and the Tropic of Capricorn.