

ANSI/RESNET/ICC 301—2022
Standard for the Calculation and Labeling of the Energy Performance
of Dwelling and Sleeping Units using an Energy Rating Index

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SPECIAL NOTE

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RESNET obtains consensus through participation of its national members, associated societies, and public review.

The initial publication of the first edition of this Standard was designated and titled ANSI/RESNET 301—2014 Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using the HERS Index. The designation and title were changed to ANSI/RESNET/ICC 301—2014 Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index as noted in the amendment proceeding for ANSI/RESNET/ICC 301—2014 Addendum B-2015. The second publication of the Standard first edition incorporated the designation and title changes and other non-substantive editorial changes to the first publication. The second edition of the standard was ANSI/RESNET/ICC 301—2019 Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units using an Energy Rating Index. The 2019 edition expanded the scope of the standard to include Dwelling Units and Sleeping Units in multi-family buildings of all heights and added normative appendices on inspections for grading insulation installation and inspections for minimum rated features used in determine the Energy Rating Index. This third edition, *ANSI/RESNET/ICC 301—2022 Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units using an Energy Rating Index*, Republished April 1, 2022, includes revisions approved in the triennial update proceeding and the addenda to the 2019 edition of the Standard that established criteria for consideration of HVAC systems installation quality in home energy ratings and established a rating index for home energy use related carbon dioxide emissions.

This Standard is under continuous maintenance in accordance with Section 10.9 of the *RESNET Standard Development Policy and Procedures Manual*. Continuous maintenance proposals should be submitted to the Manager of Standards via the online form on the RESNET website. The Manual and online form can be accessed from the website at <https://www.resnet.us/about/standards/>.

The Manager of Standards should be contacted for:

- Interpretation of the contents of this Standard
- Participation in the next review of the Standard
- Offering constructive criticism for improving the Standard
- Permission to reprint portions of the Standard

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ANSI/RESNET/ICC 301—2022

Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units using an Energy Rating Index

Foreword (Informative)

This Standard provides a consistent, uniform methodology for evaluating and labeling the energy performance of Dwelling Units and Sleeping Units, including all detached and attached housing types. The terms Dwelling Unit and Sleeping Unit are interchangeable with the term home, except where specifically noted. The methodology compares the energy performance of an actual home with the energy performance of a reference home of the same geometry, resulting in a relative Energy Rating called the Energy Rating Index (ERI). Where the energy performance of the actual home and the reference home are equal, the Energy Rating Index is 100 and where the actual home requires no net Purchased Energy annually, the Energy Rating Index is 0 (zero).

The Energy Rating Reference Home used for this comparative analysis has the energy attributes of the 2006 *International Energy Conservation Code (IECC) Standard Reference Design*. Thus, the Energy Rating Index is relative to the minimum building energy efficiency requirements of the 2006 IECC. As a result, the Energy Rating Reference Home performance will not comport with state or local building codes that differ in stringency from the 2006 IECC. Where local building energy codes are less stringent than the 2006 IECC, the Energy Rating Index for the local standard will be greater than 100 and where local building energy codes are more stringent than the 2006 IECC, the Energy Rating Index for the local standard will be less than 100. Because the Energy Rating Index accounts for all lighting, appliances and Miscellaneous Energy Loads, there is never a 1-to-1 correspondence between code compliance (even under the 2006 IECC) and an Energy Rating Index of 100.

This standard does not provide a methodology for the calculation of an ‘Energy Rating Index’ for a whole building that contains more than one Dwelling Unit or Sleeping Unit. Section 7.1.5 provides a method to calculate a ‘composite Energy Rating Index’ substitute that is allowed to represent the residential portions of a single building that contains more than one Dwelling or Sleeping Unit or a group of multiple Detached Dwelling Units.

This Standard contains both normative and informative material. The body of the Standard is normative and must be complied with to conform to the Standard. Informative materials are not mandatory and are limited to this foreword, footnotes, references and annexes, all of which are clearly marked as informative.

The designation and title of the first edition of this Standard were revised effective November 17, 2015. The original designation, “ANSI/RESNET 301—2014,” was revised to “ANSI/RESNET/ICC 301—2014.” The title, “Standard for the Calculation and Labeling of Low-Rise Residential Buildings using the HERS Index,” was revised to “Standard for the Calculation and Labeling of Low-Rise Residential Buildings using the Energy Rating Index.” All references to “HERS” within the Standard were revised to “Energy Rating.” The change in designation adds recognition of the International Code Council (ICC) as a sponsor of the Standard. Non-substantive editorial changes to ANSI/RESNET 301-2014 noted in the amendment proceeding for ANSI/RESNET/ICC 301—2014 Addendum B-2015 and in the “Special Note” above were published in that edition.

The first major Update of the Standard was the 2019 edition which changed the title and scope to cover Dwelling Units and Sleeping Units in buildings of any height. The terminology of the title and scope were revised for consistency with the International Code Council model building codes.

This is the third edition of the Standard and was developed on the three year cycle RESNET adopted for its ANS. It is designated BSR/RESNET/ICC 301—202x.