Amendment: Correction to Chapter 8 calculation of Specific Leakage Area (SLA)

Proponent:

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Applies to:

2006 Mortgage Industry National Home Energy Rating Systems Standards

Section 802.8.2 Other Leakage Metrics

Proposed Amendment

ELA may be calculated by: $ELA = 0.055 \times CFM50$ Where ELA is in square inches

ACH50 = corrected CFM50 x 60 / building volume (in cubic feet)

Specific Leakage Area may be calculated by:

SLA = 69.40.00694 x ELA/ building floor area (square feet) Where ELA (Effective Leakage Area) referenced to 4 Pa is in square inches ELA is in square inches

Effective Date:

The amendment will go into effect thirty days of the amendment's adoption by the RESNET Board.

Background/Rationale:

The formula for SLA in the November 2011 version of the RESNET Standard is 4 orders of magnitude too large. The multiplier is a unit conversion that is supposed to convert the denominator's units of square feet to square inches, so as to cancel out the units of square inches in the numerator. Since there are 144 square inches per square foot, multiplying the denominator by 144 would convert the overall formula to a unitless parameter. Since $1/144\approx0.00694$, the formula's multiplier should be 0.00694.