

**INTERPRETATION IC 90.1-2013-22 OF  
ANSI/ASHRAE/IES STANDARD 90.1-2013  
Energy Standard for Buildings Except Low-Rise Residential Buildings**

**Date Approved:** March 24, 2021

**Request from:** Darcy Gray, Weekes Engineering Inc., 130 Ferguson Ave. N, Hamilton, Ontario L8R1L7.

**Reference:** This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IES Standard 90.1-2013, Sections 5.5.4.3 and 5.8.2.3, regarding U-factor of the fenestration for the actual fenestration size versus standard reference size per NFRC 100.

**Background:** Section 5.5.4.3 states: “Fenestration shall have a U-factor not greater than that specified in Tables 5.5-1 through 5.5-8.”. Section 5.8.2.3 states: “U-factors shall be determined in accordance with NFRC 100.”. NFRC 100 provides a rating for the fenestration at a standard reference size. This may vary from the performance at the actual fenestration size.

**Interpretation:** The U-factor of the fenestration at the actual fenestration size shall comply with the requirements of Section 5.5.4.3.

**Question:** Is this interpretation correct?

**Answer:** No.

**Comments:** The prescriptive U-factor requirements in Section 5.5.4.3 and Tables 5.5-1 through 5.5-8 are established in accordance with the standard reference sizes and conditions from NFRC 100. Section 5.8.2.3 requires compliance using U-factor determined in accordance with NFRC 100, including at standard size.

Note that NFRC 100 does provide methods to calculate project specific U-factors at nonstandard sizes, but these are for informational purposes only such as HVAC sizing or more accurate assessment of whole building energy use (See Section 5.9.6 and Appendix A of NFRC 100).