



Technical Bulletin: Index Adjustment Factor's Limited Effect on ENERGY STAR

August 15, 2018

Earlier this year, RESNET added an Index Adjustment Factor to the ANSI/RESNET/ICC 301-2014 Standard. While the Index Adjustment Factor (IAF) sounds a lot like ENERGY STAR's Size Adjustment Factor (SAF), it actually serves a different purpose:

- ENERGY STAR's Size Adjustment Factor is designed to require better energy efficiency in large homes with few bedrooms, because these homes use more energy per capita.
- RESNET's Index Adjustment Factor, in contrast, is meant to help equalize the HERS Index for homes configured with consistent efficiency features, regardless of size, stories, foundation, and bedrooms.

The Index Adjustment Factor will shift the absolute HERS Index for many homes. However, because the IAF is applied to both the confirmed HERS Index and the ENERGY STAR HERS Index Target, it will result in little to no change to ENERGY STAR's overall stringency.

ENERGY STAR's Size Adjustment Factor (SAF)

The Size Adjustment Factor originated with ENERGY STAR Version 3.0 and was designed to ensure that large homes with few bedrooms include additional energy efficiency measures compared to their counterparts. For homes whose conditioned floor area exceeds the Benchmark Home size, the SAF modifies the ENERGY STAR HERS Index Target to slightly increase stringency.

To address challenges Partners in some areas had in meeting the Version 3.1 ENERGY STAR HERS Index Target, the Size Adjustment Factor was eliminated from Version 3.1 of the National Program Requirements on September 1, 2017. Effectively, this slightly reduced ENERGY STAR's stringency for this class of homes under Version 3.1. To take advantage of this change, simply use the latest versions of accredited rating software.

Note that the Size Adjustment Factor remains in place and unchanged in Version 3.0.

ANSI/RESNET/ICC Standard 301's Index Adjustment Factor

The Index Adjustment Factor (IAF), which applies to all HERS ratings, addresses concerns that homes configured with consistent efficiency features get a wide range of HERS Index scores, depending on the house size, number of stories, foundation type, and number of bedrooms. The IAF methodology adjusts for size and configuration so that homes with the same set of efficiency measures will achieve more similar energy rating index values.

While the IAF will change the HERS scores of many ENERGY STAR certified homes, it will also be applied to the ENERGY STAR HERS Index Target so there will be little to no overall change to ENERGY STAR's stringency. In a minority of cases, stringency may shift by one point due to rounding. Therefore, a home that achieves the ENERGY STAR HERS Index Target before the IAF is applied is very likely to meet the Target after the IAF is applied. This is demonstrated in the following example.

Illustration of Change in HERS Index Due to IAF For Slab-on-Grade Home in Houston with Heat Pump

Home Configuration			ENERGY STAR v3.1 HERS Target			HERS Index of Rated Home with ES v3.1 Ref. Design Features			Delta Between Rated Home and ES Target	
			Before IAF	After IAF	Delta	Before IAF	After IAF	Delta	Before IAF	After IAF
1,200	One	One	65	62	3	65	62	3	0	0
3,600	Two	Five	61	60	1	61	60	1	0	0
Delta			4	2	-	4	2	-	-	-

HERS values drop after IAF

Range in HERS values
shrinks after IAF

Stringency of ENERGY
STAR Target is the same

HERS Raters may begin voluntarily using the IAF immediately and will be required to use IAF-compliant software on homes that are issued a building permit on or after January 1, 2019.

Learn More

Learn more about the adopted Index Adjustment Factor amendment on [RESNET's site](#).

View a RESNET [webinar recording](#) on the amendment.

Review ENERGY STAR Policy Record #00621 in the [Current Policy Record](#) for more details on the elimination of the Size Adjustment Factor in Version 3.1.

View past editions of the ENERGY STAR Certified Homes Technical Bulletins [here](#).

Questions? Email us at energystarhomes@energystar.gov.

Best regards,

The ENERGY STAR Certified Homes team

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