

EnergyGauge USA to accommodate new HVAC test standards and Labeling: SEER2, EER2, HSPF2

July 20, 2022

Beginning Jan. 1, 2023 new equipment shown below will have to be tested to a new U.S. Department of Energy standard. The main change in the new standard is a different test pressure for the air handler. The new test will use 0.5 in. of water pressure instead of what was typically 0.1 in. of water. BECAUSE THE NEW TEST PROCEDURE IS DIFFERENT THERE IS NO DIRECT EQUIVALENCY FOR OLDER EQUIPMENT. ANY EQUIPMENT MANUFACTURED ON OR AFTER JAN. 1, 2023 HAS TO APPLY THE NEW LABELING.

Additionally, **the new standard applies to all installations of central and packaged Air Conditioner Systems (not heat pumps) installed in the Southeast or Southwest on or after January 1, 2023.** This is federal law and distributors or contractors installing lesser equipment could receive fines from the federal government. So leftover inventory of these systems cannot be installed in these regions.

We expect to release a version of EnergyGauge USA with the new entry and reporting capabilities before the end of September 2022.

IECC Code Compliance Stringency Impacts: For those modelers in states complying with IECC there will typically be very small changes to *Performance* compliance as the *IECC Standard Reference Design* always has the same equipment as the *Proposed Design*. Because *Performance* code compliance considers heating, cooling and hot water, any change to the efficiency of one piece of equipment may change the ratio of heating to cooling or water heating and alter the result slightly.

Florida Code Compliance Stringency Impacts: The Florida Building Commission has issued a 2022 supplement to the 7th Edition (2020) code that in part requires the Florida *Performance* compliance *Standard Reference Design* to incorporate the new federal requirement for split air conditioner systems and single package units. This may impact compliance of Florida homes using those systems, particularly those that were using upgrades in cooling efficiencies to comply with the code. The same ratio of installed SEER2 to baseline SEER2 will likely be required as was the SEER installed to SEER baseline ratio for homes complying by the pre-2022 supplement code. Because the *Performance* code consists of many factors the result may still differ a little. The Florida 2022 supplement code calculation will be available in the new EnergyGauge USA release under a new 2022 supplement *Calculate* menu item. The 2022 supplement code will be mandatory for homes built on or after Jan. 1, 2023. Regardless of code permit date, the federal law of installation date will apply to split cooling and single package systems.

Prescriptive Compliance: For those complying with IECC or Florida 2022 supplement to the 7th Edition (2020) *Prescriptive R-value* or *Prescriptive Total UA Alternative Method*, there will be no change in stringency other than the central and packaged Air Conditioner Systems (not heat pumps) equipment will have to meet the minimum standard if installed in the Southeast or Southwest on or after Jan. 1, 2023. Any heat pump equipment entered in the software with new labeling will have to meet the new manufactured standard [we don't anticipate manufacturers will sell anything less with new labeling so this should not be an issue].

Please read to the end of this document. The following is from the federal standard:

<https://www.ecfr.gov/current/title-10/chapter-II/subchapter-D/part-430/subpart-C/section-430.32>

5. Central air conditioners and central air conditioning heat pumps manufactured on or after January 1, 2023, must have a Seasonal Energy Efficiency Ratio 2 and a Heating Seasonal Performance Factor 2 not less than:

Product class	Seasonal energy efficiency ratio 2 (SEER2)	Heating seasonal performance factor 2 (HSPF2)
(i)(A) Split systems - air conditioners with a certified cooling capacity less than 45,000 Btu/hr	13.4	
(i)(B) Split systems - air conditioners with a certified cooling capacity equal to or greater than 45,000 Btu/hr	13.4	
(ii) Split systems - heat pumps	14.3	7.5
(iii) Single-package units - air conditioners	13.4	
(iv) Single-package units - heat pumps	13.4	6.7
(v) Small-duct, high-velocity systems	12	6.1
(vi)(A) Space-constrained products - air conditioners	11.7	
(vi)(B) Space-constrained products - heat pumps	11.9	6.3

6. (i) In addition to meeting the applicable requirements in [paragraph \(c\)\(5\)](#) of this section, products in product classes (i) and (iii) of [paragraph \(c\)\(5\)](#) of this section (i.e., split systems - air conditioners and single-package units - air conditioners) that are installed on or after January 1, 2023, in the southeast or southwest must have a Seasonal Energy Efficiency Ratio 2 and a Energy Efficiency Ratio 2 not less than:

Product class	Southeast *	Southwest **	
	SEER2	SEER2	EER2 ***
(i)(A) Split-systems - air conditioners with a certified cooling capacity less than 45,000 Btu/hr	14.3	14.3	11.7/9.8 †
(i)(B) Split-systems - air conditioners with a certified cooling capacity equal to or greater than 45,000 Btu/hr	13.8	13.8	11.2/9.8 ††
(iii) Single-package units - air conditioners			10.6

* “Southeast” includes the States of Alabama, Arkansas, Delaware, Florida, Georgia, Hawaii, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virginia, the District of Columbia, and the U.S. Territories.

** “Southwest” includes the States of Arizona, California, Nevada, and New Mexico.

*** EER refers to the energy efficiency ratio at a standard rating of 95 °F dry bulb outdoor temperature.

† The 11.7 EER2 standard applies to products with a certified SEER2 less than 15.2. The 9.8 EER2 standard applies to products with a certified SEER2 greater than or equal to 15.2.

†† The 11.2 EER2 standard applies to products with a certified SEER2 less than 15.2. The 9.8 EER2 standard applies to products with a certified SEER2 greater than or equal to 15.2.

(ii) Any outdoor unit model that has a certified combination with a rating below the applicable standard level(s) for a region cannot be installed in that region. The least-efficient combination of each basic model must comply with this standard.