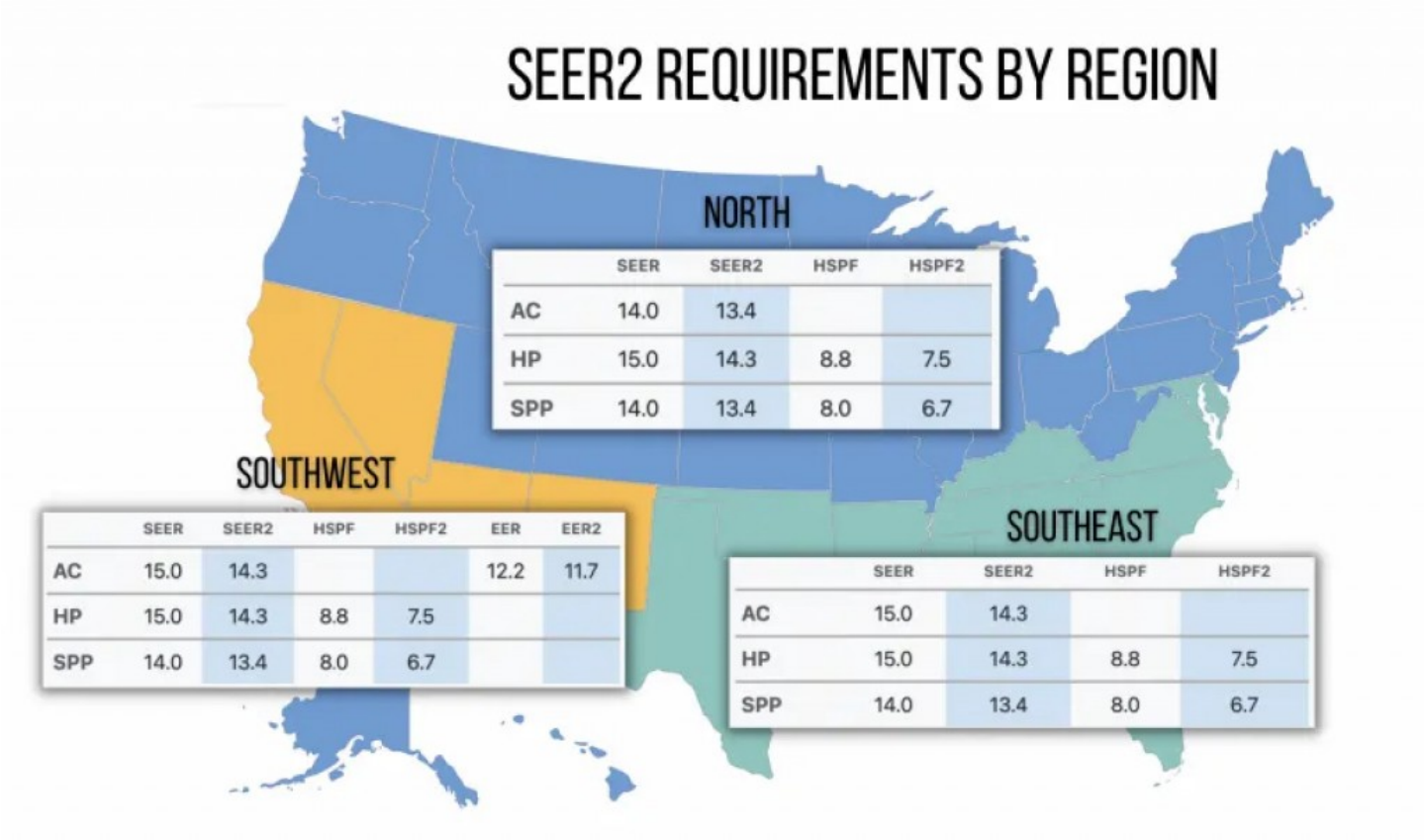
Air Conditioning and SEER2, the new Energy Efficiency Standard



NORTH	SEER	SEER2	HSPF	HSPF2
AC	14.0	13.4		
HP	15.0	14.3	8.8	7.5
SPP	14.0	13.4	8.0	6.7

SOUTHWEST	SEER	SEER2	HSPF	HSPF2	EER	EER2
AC	15.0	14.3			12.2	11.7
HP	15.0	14.3	8.8	7.5		
SPP	14.0	13.4	8.0	6.7		

SOUTHEAST	SEER	SEER2	HSPF	HSPF2
AC	15.0	14.3		
HP	15.0	14.3	8.8	7.5
SPP	14.0	13.4	8.0	6.7

Birmingham, Alabama Jan 31, 2023 (Issuewire.com**)** - When installing your new air conditioning system, you might remember your technician discussing the Seasonal Energy Efficiency Ratio (SEER) rating. This SEER number is also visible on the energy guide printed on every air conditioning system, with higher SEER numbers representing more efficient systems. SEER has been used as a measure of air conditioning efficiency since 1992. Now, more than 30 years later, big changes have come with the introduction of SEER2. This article will discuss some of the implications of SEER2 to help homeowners navigate the new environment.

What's SEER and how is it measured?

SEER measures the efficiency of an air conditioner by comparing the output energy in cooling during the summer (measured in BTUs) to the input energy (measured in Watt Hours). Essentially, it shows how much heat energy your AC can take out of your home given the amount of electricity it consumes in a set time frame. An AC with SEER 24 is twice as efficient as one with SEER 12.
All installed air conditioners previously underwent testing to measure the SEER in a controlled lab setting. This was done by a combined effort between the U.S. Department of Energy (DOE) and the Air Conditioning, Heating, & Refrigeration Institute.

What's Different Between SEER And SEER2?

The primary distinction between SEER and SEER2 is the testing conditions used in each rating system. SEER used controlled lab conditions to test air conditioning systems, while SEER2 now uses more real-world conditions. These differences may appear as minor tweaks, but they result in different data values and necessitate a new rating system.

Because the SEER testing parameters aimed to limit external (real-world) variables, the influence of ductwork on external static pressure was not adequately accounted for. The external static test pressure was frequently insufficient under SEER protocols to replicate real-world applications.

As a result, DOE increased the SEER2 total external static pressure testing conditions. These pressure conditions were improved to simulate the conditions a typical ducted system would encounter in the field. Because of this, it produces more accurate data values than its predecessor.

How Will New SEER2 Regulations Affect You Specifically?

Before 2023, a SEER minimum of 14 was required for new installs. As of January 1, 2023, any air conditioner installed must meet the requirements set forth by the DOE and feature a 15 SEER minimum or a SEER2 14.3 minimum in the South and Southwestern United States.

The minimum energy requirement can be further broken down by the tonnage of your system. In the South and Southwest United States, the minimum SEER2 rating is outlined below by tonnage as noted in The SEER2 Guide.

AC SYSTEMS | 2, 2.5, 3, and 3.5 ton systems = 14.3 SEER2 min; 4 and 5 ton systems = 13.8 SEER2

HEAT PUMPS | 2 ton - 5 ton systems = 14.3 SEER2

This affects both DIY installations and installations handled by a professional AC service provider.

The impact of SEER2 regulations on homeowners is two-fold: 1) Cost and 2) Energy Savings.

On the cost side, SEER2 regulations will increase the purchase price of a new air conditioner or heat pump system as manufacturers must invest in technology to meet the new standards.

However, energy savings can more than offset this cost increase over time. By replacing an old SEER 10 system with a new SEER2 15 system, homeowners can save up to 50% on their cooling costs over the life of the unit as long as they properly maintain their AC system.

In addition, many states and local utility companies offer rebates and incentives to homeowners who purchase energy-efficient systems.

Homeowners must understand these new regulations' implications and ensure their ACs are up to date to promote energy conservation efforts.

Why Does SEER2 Matter?

The SEER2 regulations are essential for a few reasons.

- These standards will help conserve energy and reduce electricity costs for homeowners over the long term.

- Meeting SEER2 standards may be eligible for rebates or financial incentives from local utility companies or the government.

By meeting these standards, homeowners can save on their energy bills while contributing to a more sustainable future.

How Much Will The SEER2 Air Conditioner Save On Utility Bills?

Calculating the percentage reduction in electric bills for a new air conditioner is pretty simple. Subtract the SEER of your current unit from the SEER of a system you're purchasing, and divide the result by the SEER of the new system.

As a rule of thumb, your energy savings can be calculated in ideal conditions by looking at your increase in SEER. For example, if you upgrade from a 12 to a 16 SEER, the calculation is 16 - 12 = 4, and 4/16 = 0.25, resulting in an estimated 25% savings on the portion of the bill for home cooling. One caveat is that these savings are only accurate if you take proper care and perform regular maintenance on your AC system to maximize its efficiency potential.

How have Manufactures Adapted to SEER2?

To meet the more stringent requirements, manufacturers have upgraded some internal components to efficient variable-frequency drives (VFDs), variable-speed compressors, high-efficiency fans, advanced controls, and more. Additionally, they have spent more on the research and development of novel AC design and system communication to further increase efficiency.

By having these components in place, the AC unit can be optimized for energy efficiency to ensure that they meet the minimum SEER2 rating requirements set out by the DOE. Although these components come with better efficiency, they come with a higher cost to the consumer.

Final Words

In order to be eligible for tax incentives, you must install a SEER2 system meeting the new federal and state requirements. The new SEER2 regulations will increase upfront costs, but this cost can be partially offset by new tax incentives, rebates, and improved system efficiency.

It is the job of your local AC company to help you comply with the new standards and provide you with information on how you can take advantage of the new tax incentives when installing a new system. Please reach out anytime to HVAC Home Pros for more information.

Source Article: https://www.hvachomepros.com/blog/seer2

SEER 2 Minimum Requirements by Tonnage for Homeowners – Split Systems		
Tonnage	AC Systems	Heat Pumps
2, 2.5, 3, and 3.5 ton systems	14.3 SEER2 Minimum	14.3 SEER2 Minimum
4 ton & 5 ton systems	13.8 SEER2 Minimum	14.3 SEER2 Minimum

Media Contact

HVAC Home Pros - Air Conditioning Repair and Installation

ramsey@hvachomepros.com

(205) 608-6970

6 Office Park Cir suite 215

Source : HVAC Home Pros

See on IssueWire