

Fact Sheet on Air Conditioner, Furnace, and Heat Pump Efficiency Standards Agreement

The nation's leading manufacturers of residential central air conditioners, furnaces, and heat pumps today signed an agreement with the nation's leading energy efficiency advocacy organizations that will establish new federal standards for those products.

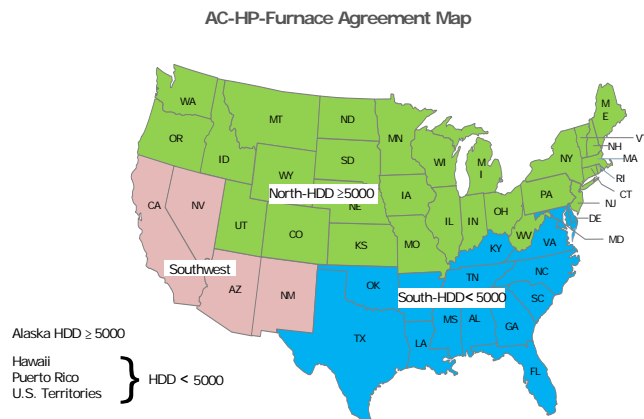
The agreement, which involved months of intense negotiations, was signed by executives of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), American Council for an Energy-Efficient Economy (ACEEE), Alliance to Save Energy (Alliance), Natural Resources Defense Council (NRDC), Northeast Energy Efficiency Partnership (NEEP), Appliance Standards Awareness Project (ASAP), and the California Energy Commission (CEC).

This momentous agreement strikes a balance between the desire for greater state and regional flexibility and the need for a uniform marketplace. It also accounts for the long-term energy future of the nation by allowing for more efficient systems to be installed in new homes, which will last for many decades to come. The parties that reached this consensus agreement recognize that the time has to come to change the status quo with regard to energy efficiency in the residential built environment and believe this proposal represents a tremendous leap forward towards a more energy-efficient future.

The signatories agreed to jointly submit this proposal to Congress and support its inclusion in the energy legislation currently under consideration. The groups will also recommend that the Department of Energy promulgate a rule adopting the agreed-upon regions and efficiency standards, as authorized in current law.

Creating Regions

Under the agreement, the U.S. is divided into three regions: (1) the North, comprised of states with population-weighted heating degree days (HDD) equal to or greater than 5,000; (2) the South, comprised of states with population-weighted HDD less than 5,000; and (3) the Southwest, comprised of Arizona, California, Nevada, and New Mexico. The regions are shown on the map. The federal minimum energy efficiency standards are shown in Table



1 below. In the North, most furnaces will be required to have an efficiency of 90% or more, essentially requiring condensing furnaces. This is an improvement from the current national standard of 78%. In the South, central air conditioners will be required to have a SEER of 14, up from the present national requirement of SEER 13. Heat pump and oil furnace standards will rise on a nationwide basis. The standards apply to residential single-phase air conditioners and heat pumps less than 65,000 Btu/h of

cooling capacity (except through-the-wall and small duct high velocity products) and single-phase weatherized and non-weatherized forced-air furnaces (including mobile home furnaces) below 225,000 Btu/h heat input.

For split air conditioners, minimum EER values (energy demand on a very hot day) also are specified for the states of Arizona, California, Nevada, and New Mexico.

Table 1: Minimum Federal Standards (Retrofits)

| System Type | ≥ 5,000 HDD | < 5,000 HDD | CA/AZ/NM/NV |
|--------------------------------|-------------------|-------------------|--|
| Split A/C | 13 SEER | 14 SEER | 14 SEER /12.2 EER <45,000 Btu/h 14 SEER /11.7 EER ≥45,000 Btu/h |
| Split HP | 14 SEER /8.2 HSPF | 14 SEER /8.2 HSPF | 14 SEER /8.2 HSPF |
| Package A/C | 14 SEER | 14 SEER | 14 SEER/11 EER |
| Package HP | 14 SEER/8 HSPF | 14 SEER/8 HSPF | 14 SEER/8 HSPF |
| Gas-Pack (weatherized) | 14 SEER/81% AFUE | 14 SEER/81% AFUE | 14 SEER/81% AFUE |
| Gas Furnaces (non-weatherized) | 90% AFUE | 80% AFUE | 80% AFUE |
| Oil Furnaces (non-weatherized) | 83% AFUE | 83% AFUE | 83% AFUE |

Note: SEER = seasonal energy efficiency ratio; EER = energy efficiency ratio; HSPF = heating seasonal performance factor; AFUE = annual fuel utilization efficiency.

In addition, under the agreement, DOE would be required to publish a final rule not later than June 30, 2011 to determine whether standards for through-the-wall and small duct high velocity air conditioners and heat pumps should be amended. New standards would apply to products manufactured on or after June 30, 2016.

Building Codes

The agreement would amend the Energy Policy and Conservation Act (EPCA) to allow building codes to provide for building energy budgets and baseline building designs to include covered equipment having an efficiency greater than the federal minimum standard, up to specified levels, as long as at least one option is made available to meet the code through the use of covered equipment at the federally established minimum level. The agreement sets new construction/major renovation standards for each region that states may incorporate into their building codes. These are summarized in Table 2.

Table 2: Energy Efficiency Standards for Performance-Based Building Codes (for New Construction and Significant-Upsizing Only)

| System Type | ≥ 5000 HDD | < 5000 HDD | CA/AZ/NM/NV |
|-------------------------------|-------------------|-------------------|--|
| A/C | 14 SEER | 15 SEER | 15 SEER/12.5EER<45,000 Btu/h 15 SEER/12 EER ≥45,000 Btu/h |
| HP | 15 SEER /8.5 HSPF | 15 SEER /8.5 HSPF | 15 SEER /8.5 HSPF |
| Gas Furnaces | 92% AFUE | 90% AFUE | 92% AFUE |
| Oil Furnace (non-weatherized) | 85% AFUE | 85% AFUE | 85% AFUE |

Note: Performance-based codes will also allow 14 SEER/8 HSPF packaged systems and 81% AFUE weatherized gas furnaces, provided additional efficiency measures are installed to compensate for the difference in energy use between these systems and the corresponding values for the region in Table 2.

These requirements would not apply to simple one-for-one replacement of products in existing buildings as long as the replacement would not result in an increase in capacity of more than 12,000 Btu/h for central air conditioners/heat pumps or more than 20 percent for other covered products.

Implementation Timetable

The new standards will take effect in 2013 for non-weatherized furnaces and in 2015 for air conditioners, heat pumps, and weatherized furnaces.

The effective date for standards that follow the standards in the above paragraph will be:

- January 1, 2019 for non-weatherized furnaces
- January 1, 2022 for air conditioners/heat pumps and weatherized furnaces (gas-packs).

Multiple Metrics

The agreement allows DOE in the future to use more than one efficiency metric for a product. However, in the case of air conditioners and heat pumps, the stakeholders agreed to work together to try to negotiate future efficiency metrics, and DOE can act on its own to establish new metrics only if the stakeholders cannot reach agreement after a year of discussion.

Energy Equivalents

Between now and 2030, the agreement will save 3.7 quadrillion Btu of energy, or enough to meet the energy needs of the Commonwealth of Virginia or the states of Georgia, Massachusetts, Michigan, Missouri, or North Carolina for a year.

Monetary Saving

The monetary savings amount to an average of about \$100 per U.S. household through 2030.