



U.S. Department of Energy
Energy Efficiency and Renewable Energy



Building Energy Codes

Federal Appliance Manufacturing Standards and State Residential Building Energy Codes

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- DOE issued standards for central air-conditioners and heat pumps effective January 23, 2006
- These standards preempt state and local building codes and regulations that differ from these standards
- Recommend review and updating of residential building energy codes to reflect these standards.



10 CFR 430, Subpart C – Preemption

➤ Sec. 430.33 Preemption of State regulations.

Any State regulation providing for any energy conservation standard, . . . with respect to the energy efficiency, energy use, . . . of a covered product that is not identical to a Federal standard in effect under this subpart is preempted by that standard,

[63 FR 13318, Mar. 18, 1998]



Appliance Standards

- Recommend review and updating of residential building energy codes to reflect these standards.
- Residential-sized central AC & HP manufactured or imported on or after January 23, 2006
- Increased SEER and HSPF
- Equipment manufactured before January 23, 2006 can continue to be sold
- If IECC or IRC 1998, 2000, 2003 or MEC 1995 and earlier are included in state codes – criteria are superseded by new standards



TABLE 503.2 MINIMUM EQUIPMENT PERFORMANCE

EQUIPMENT CATEGORY	SUBCATEGORY	MINIMUM ^f
Air-cooled HP Htg. mode < 65,000 Btu/h capacity	Split systems Single package	6.8 HSPF 7.7 HSPF ^{a, b} 6.6 HSPF 7.7 HSPF ^{a, b}
Gas- or oil-fired furnace < 225,000 Btu/h	—	AFUE 78% Et 80%
Gas- or oil-fired steam & hot-water boilers < 300,000 Btu/h	—	AFUE 80%
Air-cooled HP Clg. mode < 65,000 Btu/h capacity	Split systems Single package	10.0 SEER 13.0 SEER ^b 9.7 SEER 13.0 SEER ^b



Recommended Footnotes to TABLE 503.2

- b. This is used to be consistent with the National Appliance Energy Conservation Act (NAECA) of 1987 (Public Law 100-12), **as amended**.
- f. Heat pumps manufactured before January 23, 2006 may have a HSPF of 6.8 for split systems and 6.7 for single package units, and air-conditioners manufactured before January 23, 2006 may have a SEER of 10 for split systems and 9.7 for single package units. Trade-offs between equipment and other building components are not allowed for equipment that does not exceed the minimums in this table.



Compliance Manuals , Software, etc.

- Don't forget other materials that reference central air conditioning efficiency levels – update them too



TABLE 503.2 MINIMUM EQUIPMENT PERFORMANCE

EQUIPMENT CATEGORY	SUBCATEGORY	MINIMUM
Air-cooled HP Htg. mode < 65,000 Btu/h capacity	Through-the-wall split sys. Through-the-wall single pckg	7.1 HSPF^{a, b} 7.0 HSPF^{a, b}
Gas- or oil-fired furnace < 225,000 Btu/h	—	AFUE 78% Et 80%
Gas- or oil-fired steam & hot-water boilers < 300,000 Btu/h	—	AFUE 80%
Air-cooled HP Clg. mode < 65,000 Btu/h capacity	Through-the-wall split sys.^g Through-the-wall single pckg^g	10.9 SEER^b 10.6 SEER^b



Recommended Footnotes to TABLE 503.2 Added Subcategories

- g. These requirements apply to through-the-wall products with cooling capacities less or equal to 30,000 Btu/h manufactured prior to January 23, 2010.



Tools to Help

- REScheck revised to reflect the increased efficiencies.
 - <http://www.energycodes.gov/rescheck/download.stm>
- REScheck-Web
- Questions?

