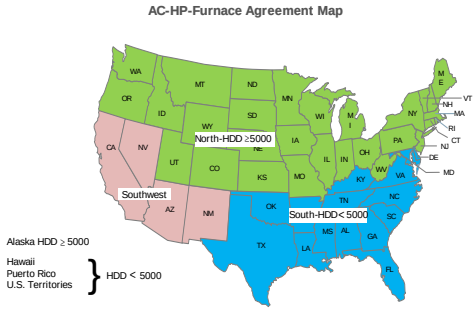
Appliance Standards Awareness Project

# Efficiency Standards Fact Sheet
# Residential Gas Furnaces

Updated energy efficiency standards for residential gas furnaces are part of a consensus agreement submitted to Congress and the Department of Energy (DOE) in early 2010 by a coalition of energy efficiency proponents and air conditioner and furnace manufacturers, the latter represented by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI). The groups agreed to jointly support the first-ever regional standards for furnaces and central air conditioners, reflecting the differing needs for heating and cooling efficiency.




**What is the proposed standard?**
For non-weatherized gas furnaces, the proposed standard in the South and Southwest is 80% annual fuel utilization efficiency (AFUE); for the North (states with greater than or equal to 5000 heating degree days) the proposal is 90%. The current national standard, established in 1987, is 78% AFUE.

**What are the national savings and benefits from the proposed new standards?**
The furnace standards account for 100% of the gas savings from the package of recommended standards and about one-third of the total savings at just over one quad of energy. The proposed furnace standard will save about 46 trillion btus gas annually by 2020 growing to about 108 trillion btus annually in 2030, or roughly enough to heat more than two million typical homes for one year. In 2030, the annual greenhouse gas emissions reductions are estimated at 5.6 million metric tons or the equivalent annual emissions of more than 1 million cars.

**How prevalent are the furnaces now?**
Nearly all furnaces sold today meet or exceed 80% AFUE. About one-third of current sales on a national basis are 90% AFUE or better. In just the past ten years alone about 7.5 million condensing furnaces went into replacement installations in the U.S.

**What are the key issues?**
Furnaces with 90% or greater AFUE are known as “condensing” products because they condense water out of flue gases to recoup heat to warm the home that would otherwise be vented up the chimney. In replacement installations, a venting system upgrade is often required when replacing an old furnace with either an 80% or 90% model. There can be some additional costs associated with the 90% model such as installing a small pump to remove condensate. On an annual basis, a 90% furnace will save a consumer about 11% on their heating bill relative to an 80% product. Taking into account all the added costs of 90% furnace, DOE calculates that 90% AFUE furnaces would save consumers an average of $175 over the life of the product.

The consumer benefit from furnace standards is even larger in low income households because they are disproportionately renters, not homeowners. The property owner, not the tenant, makes the decision on which furnace to buy, and, in the absence of strong regional standards, owners even in cold climates will often buy lower efficiency furnaces because the tenants will bear the higher energy bills resulting from installation of an inefficient unit.

**Why submit the consensus agreement to both Congress and DOE?**
Standards can be set through legislation or through a DOE rulemaking process. Submitting to both branches of the government increases the likelihood of enactment. If Congress passes the legislation, they will direct DOE to codify the standards. If DOE adopts the standards in the consensus agreement, Congress will not need to act on the agreement.

**What is the timeline for the furnace standard?**
Under the terms of a court settlement, DOE must publish new furnace efficiency standards by May 1, 2011. Congress is considering energy legislation currently, and the furnace standard could be included. Either way, the supporters of the regional standards have recommended the new standards take effect on May 1, 2013.

Link to Fact Sheet on Overall agreement:
http://aceee.org/buildings/1009hvac_fact.pdf

Link to DOE Furnace Rulemaking Analysis Plan:
http://www1.eere.energy.gov/buildings/appliance_standards/residential/furnaces_nopm_rulemaking_analysis.html

ASAP
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