

## EPA Energy Star 2006 Proposed Changes

NAHB Comments (supplementary to previous NAHB comments submitted to date on updates to proposed versions of Energy Star, taking a broader look at your entire program)

1. The baseline of the 2004 IECC is questionable at best, since the '04 Supplement, according to the DOE, does not meet its criteria for determination as an energy code, nor is it an official version of the triennial energy code, published by ICC (hence the term supplement). Moreover, just because the ICC published the '04 Supplement, funded by energy interests, as a stand alone document, does not mean that states will adopt it. Most states, for reasons both legislative and economic, will wait for the next official version. The 2006 IECC will differ from the '04 version, both in scope and intent. Further to the point, RESNET has pegged the update to its HERS standard as the '04 RICC, as proposed by DOE, a document that is now vastly different from the '04 Supplement or what will be the '06 IECC.
  - a. The 2004 IECC calls for R-8 ducts. What impact does this have on the builders, performance, etc.?
  - b. The 14 SEER requirement should be delayed while the builders and the HVAC manufacturers and installers adjust to the significant changes (13 SEER in Jan '06) already in place. To do so otherwise would be to put burdens on the channel that threatens participation levels from those who would otherwise participate.
  - c. We see the score issue as the major thrust of what we should be working to establish and confirm the value of --not necessarily the implementation date of the EPA proposal. Eliminate scores as a central element and you eliminate the basic tool to verify.
2. The recommendation and "creeping in" language for builders to use a whole house ventilation standard, ASHRAE 62.2, violates the assertions that we have received from your office that your IAQ module is still being developed, may not be included in Energy Star, and if it is, will be an optional module, not to supersede existing requirements. We feel that the inclusion of so many "options" for builders to use goes against the EPA mandate, establishing Energy Star as an efficiency program. Any mission creep to the contrary would turn Energy Star into a green building program, and prove too onerous for builders, both in terms of logistics and affordability.
  - a. The current version of ASHRAE 62.2 is opposed by NAHB and the statement that most green building programs reference it for ventilation is erroneous. We need look no further than our own Model Green Home Building Guidelines to see that there are alternatives to ASHRAE 62.2-2004 (e.g.: ASHARE 62.2-1989) or even the ventilation requirements currently found in the International Residential Code.

- b. The cost and effectiveness of 62.2 is of question as well. It is currently still under administrative appeal by the American Gas Association with ANSI.
- c. **The standard will add more than \$700.00 to the cost of a 1200-square foot house or apartment** with three bedrooms, two bathrooms, natural draft furnace, water heater, fireplace or wood stove, the required vented range hood and a clothes dryer.
  - 1. \$113 extra for a 60-cfm 1-sone whole-house ventilation fan in one bathroom
  - 2. \$28 extra for a 3-sone 50-cfm bath fan
  - 3. \$244 extra for a 3-sone ducted range hood with 16 feet of duct, additional elbow, and wall cap (excludes any cost for boxing-in the duct)
  - 4. \$350 or more for back drafting tests on the furnace, water heater and fireplace
  - 5. If the back drafting test fails, add \$350 to install a vent hole in the wall and test again.
  - 6. In hot, humid climates, add \$1500-\$2500 for dehumidification of outside air drawn into the house.
  - 7. Costs do not include heat exchangers and air distribution systems that will add more than \$3,000.00.
- ii. **62.2 requires whole-house mechanical ventilation** in most of the country even though the need has never been substantiated by large-scale random studies of moisture and pollutant levels in homes. Pollutant levels in homes have decreased with the advent of low-formaldehyde wood products, water-based paints and varnishes, and low-VOC floor coverings, and moisture has decreased with use of vapor barriers under concrete slabs and on ground in crawl spaces. Houses today are tighter than they used to be, but are 60% larger than in 1970, so that other things being equal, they receive 60% more outside air from infiltration. The standard permits whole-house ventilation with bathroom exhaust fans, which nearly every house already has.
- iii. **62.2 wastes energy** by permitting 174 cubic feet of outside air to be blown into an average house every minute -- including hot, humid air that must be dehumidified and conditioned, and frigid air that must be heated. If continuous kitchen ventilation or downdraft range fans are used and the kitchen is open to large areas of the house, the standard can require such ventilation to exceed 1,000 cubic feet every minute. In addition, the possibility of failing the back drafting test will encourage leaky construction.
- iv. **62.2 requires quieter low-sone fans** to encourage their use, with no scientific studies showing that they do.

- v. **62.2 requires vented kitchen range hoods** even though they are ineffective in collecting moisture from dishwashers and sinks, and odors from cooking with microwave ovens, electric frying pans and other portable appliances. Cooking has declined with smaller family size and increases in two-career families, eating out, and microwave cooking. Venting range hoods is especially expensive in apartments and townhouses where the kitchen is located on an inside wall.
- vi. **62.2 requires back drafting testing** even though 1) the frequency of furnace back drafting has never been documented by broad-based studies, 2) short-term back drafting tests have been shown to be unreliable predictors of back drafting, and 3) the test required is a modified, untested version of an NFPA test that was never meant to be mandatory. The testing, done when the house is finished, may delay COs and closings.
- vii. **62.2 uses permissive language**, such as “Any suitable procedure may be used”, **references non-consensus standards** such as AMCA 300-96, ASHRAE 55-1992, and HVI 920-01, **permits use of factory tests** (UL 127 *Standard for Factory-Built Fireplaces* or UL 1482 *Standard for Solid Fuel Type Room Heaters*) for testing fireplaces in houses, **uses an undefined term**, “sone”, for which many definitions exist, **permits any method for calculating sones**, and **incorrectly defines “kitchen”** as a room (a partitioned part of the interior of a building) even though most kitchens today are areas open to large portions of the home.