

Comments Via E-mail From Janet McIlvaine, Florida Solar Energy Center

Thank you for the opportunity to comment on the revised EPA proposed guidelines for New Energy Star Homes.

The language in the National BOP note #5 states:

Ducts must be sealed and tested to 4 cfm to outdoors / 100 sq. ft. of conditioned floor area and 9 cfm total / 100 sq. ft. Duct leakage testing can be waived if the ducts are located in conditioned space AND the envelope leakage has been tested to be at or below 3 ACH50 OR at or below 0.25 cfm50 per square foot of the building envelope. Duct leakage must be determined and documented by a RESNET-certified rater using a RESNET-approved testing protocol.

Comment 1:

I recommend changing the term

"...waived if the ducts are located in conditioned space.." to

"...waived if the ducts AND AIR HANDLERS are located in conditioned space.."

Discussion: In conducting a study on interior duct systems for the U.S.Department of Energy

(http://www.fsec.ucf.edu/bldg/baihp/pubs/interior_ducts.pdf) ,we found that builders often do not think of the air handler (the very heart of the duct system) as part of the "duct" system because technically, it's a piece of equipment and not a piece of duct work. If air handlers were all airtight, this would not be much of an issue, but a random sample of 30air handlers in new Florida homes showed average CFM25total,ahu=30 cfm

(<http://www.fsec.ucf.edu/bldg//pubs/cr1357/index.htm>).

Comment 2:

I recommend changing the term

"...waived if the ducts are located in conditioned space.." to

"...waived if the ducts are located WITHIN THE HOUSE AIR BARRIER AND THERMAL BARRIER ENCLOSING THE conditioned space..."

Discussion: In the same study of interior duct construction methods, we found that builders regularly considered standard furred down chases and floor cavities to be "in the conditioned space" even when no effort had been made to seal band joists or to provide an air barrier (such as drywall or OSB) above furred down soffits/chases adjacent to attics. Clearly, such installations do not rise to the intent of the proposed spec.

Thank you again for the opportunity to comment.