

April 29, 2005

To Whom It May Concern:

I am writing on behalf of the North American Insulation Manufacturers Association (NAIMA) to provide comments regarding the proposed revisions to the Energy Star Homes criteria. NAIMA is the trade association that represents the manufacturers of fiber glass, rock and slag wool insulation in North America.

NAIMA strongly supports the *2004 International Energy Conservation Code (IECC)* as the basis for your program. We have reviewed this latest version of the code and believe that using an enhanced version of the *2004 IECC* as the basis for Energy Star Qualified New Homes is the minimum acceptable level for the program. Simply put, if the Energy Star program is not better than the current code - it would not provide any additional benefit to the new home buyer than the current code.

The R-Value requirements in the *2004 IECC* are a significant reason to cite this document as the basis for Energy Star Qualified Homes. The benefits of installing optimum levels of insulation in a home at the time of construction are numerous. Insulation reduces pollution and greenhouse gas emissions as well as saves homeowners money from the day it is installed until the building is razed. Fiber glass and rock wool insulation do not require any maintenance and will not lose effectiveness over time like other energy efficiency components in a home. Most importantly there is no better time (from a cost and practicality standpoint) to install insulation than when a home is built.

We recommend the following revisions to the Energy Star Home program to ensure a higher level of energy efficiency:

1) On page 1, item number 3 under the Performance Path Instructions add that the opaque envelope criteria shall not be less than the R-values contained in the following table. This will prevent trading off the envelope R-values below levels that will ensure a reasonable level of energy efficiency and occupant comfort. This is concept that the IECC Committee has been generally supportive of but has not been able to agree on the exact details. The IECC currently contains maximum U-values but not minimum R-values. This table reflects input from the latest code hearings.

MINIMUM BUILDING ENVELOPE INSULATION R-VALUES

<u>CLIMATE ZONES</u>	<u>CEILING</u>	<u>WOOD FRAME WALL R-VALUE</u>	<u>MASS WALL R-VALUE</u>	<u>STEEL FRAME WALL R-VALUE</u>	<u>FLOOR R-VALUE</u>	<u>BASEMENT WALL R-VALUE</u>	<u>SLAB R-VALUE AND DEPTH</u>	<u>CRAWL SPACE WALL R-VALUE</u>
Zones 1-3	<u>30</u>	<u>13^(a)</u>	<u>0^(a)</u>	<u>0</u>	<u>13</u>	<u>0</u>	<u>0</u>	<u>0</u>
Zones 4-6	<u>30</u>	<u>13^(a)</u>	<u>5^(a)</u>	<u>11+2^(a,d)</u>	<u>19</u>	<u>10/13^(a,c)</u>	<u>0</u>	<u>5^(a,c)</u>
Zones 7 and 8	<u>38</u>	<u>19^(a)</u>	<u>13^(a)</u>	<u>11+2^(a,d)</u>	<u>30^(b)</u>	<u>10/13^(a,c)</u>	<u>10, 4ft</u>	<u>10/13^(a,c)</u>

- a. The sum of the thermal resistance of cavity insulation plus insulating sheathing (if used) shall meet or exceed the required R-value in the table.
- b. Or insulation sufficient to fill the framing cavity, R-19 minimum
- c. The first R-value applies to continuous insulation , the second to framing cavity insulation; either insulation meets the requirement.
- d. Cavity insulation R-value is listed first, followed by continuous insulation R-value.

2) On page 2, item number 11 under Specification Notes - change the maximum glazing percentage from 21 to 18%. A home with 21% glazing is greater than the “average” assumed glazing used to develop the 2004 IECC tables. Also consider changing the window to "floor" area ratio to window to "wall" area ratio as this is more closely related to the energy performance of the home.

3) On page 3, change items 2 and 5 of the "Thermal Bypass Inspection Checklist" to read, "Floor framing is completely filled with insulation and insulation is snug against the sub-floor." The requirements currently state that it be, "filled with insulation or insulation is snug against the sub-floor".

The advantage of the prescriptive path in the proposal is that it establishes a simplified method of building an Energy Star Home but it is important not to allow any reduction in energy efficiency by going to a simplified standard. To prevent that, NAIMA urges that EPA require that Energy Star homes at a minimum meet or exceed all of the requirements of the 2004 IECC. This will ensure that homes are not built that qualify as Energy Star homes, but do not even meet the national model code.

It is important that all energy efficiency components be installed correctly in order to deliver their intended benefits. NAIMA supports efforts to train insulation installers on the proper installation of its member’s materials by supporting training classes and producing installation guidelines. We encourage EPA to use that information when developing any additional guidance or inspection requirements and to consult with us to help in that effort. Additionally we request that all insulation materials and for that matter, all components affecting energy efficiency be held to the same high standards. There is not any building material or system that is immune from substandard installation.

We appreciate the opportunity to comment on the Energy Star Qualified Homes program. Please contact me if you have any questions or comments or would like us to provide further information.

Sincerely,

Charles C. Cottrell

Vice President, Technical Services