



Building Science Corporation

Architecture and Building Science

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Richard H. Karney, P.E., Manager
ENERGY STAR Program
Building Technologies Program
Department of Energy
Washington, DC 20585

Dear Mr. Karney,

It is Building Science Corporation's strong recommendation that the 3-zone proposal be considered. The decreased peak load will allow for downsizing of the air conditioning equipment, providing substantial savings to the homeowner. The argument for passive solar gain relies on the occupant's dedication to optimizing interior shading. While the peak months are simple to figure out, what about the shoulder seasons? For instance, is it assumed that the homeowner will open the windows during the spring to cool the home, or will the occupant rely on conditioned, filtered air through the allergy seasons? The lower SHGC window will not force the homeowner to make this decision.

Another subject that needs to be addressed is comfort. How much passive solar gain that is redistributed throughout the home and contributes to overall comfort is not known. Consequently, this could result in more prevalent hot/cold spots and restrict full utilization of the livable area. Conversely, if windows allow less solar heat gain greater control can be achieved in the conditioned space. Energy savings will rely less on assumptions about occupant behavior and comfort can be better controlled.

Sincerely,

Joseph W. Lstiburek Ph.D., P.Eng.

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