



30 May 2008

Richard H. Karney, P.E.
Energy Star Program Manager
Department of Energy, USA
Washington, DC 20585

Dear Mr. Karney,

I've reviewed the most recent proposal for modifications of future Energy Star requirements for side hinged entry doors and recommend the following changes to keep requirements consistent throughout each door's line.

The proposed Energy Star door methodology assumes the half light is 50% of the glazing of the full light, whereas NFRC ratings of steel and fiberglass doors states this as 56% instead. Using the 50% figure creates the half light as the controlling factor in door glazing. For instance, many full light doors remain Energy Star compliant while identically glazed half light doors fall below the required minimum U factors.

I recommend utilizing the full glazed and opaque U factors to determine the half light number. For a door assembly, a full light is 49% glazing and 51% core. A 22x36 half light is 28% glazing and 72% core. Using these ratios changes the 2009 U factor for a half light to **0.27** (rather than 0.25) by using the published opaque value of 0.21 and the full light value of 0.32. Using this same logic creates U factors of 0.25 and 0.23 in 2013 and 2016, respectively. More details are shown on page 2.

If any more information is required, I may be reached at dave.deblock@odl.com or 616.772.9111.

Sincerely for ODL,

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Cc: Alice Dasek, DNR, International
Jim Benney, NFRC
Jeff Burton, AMD
Ray Dill, ODL, Inc

Background:
 Calculations for half light values
 using DOE ES published opaque and full light values
 in letter of May 16, 2008

			2009	2013	2016
opaque		u factor	0.21	0.19	0.16
36 x 80 = 2880			604.8 si btu	547.2 sib	460.8 sib
36 x 80 = 2880	fl	u factor	0.32	0.30	0.28
minus core			921.6	864.0	806.4
			308.4	279.0	235.0
22 x 64 = 1408	49 %		613.2	585.0	574.4
		glass	0.436	0.415	0.408
36 x 80 = 2880	72.5%	core	438.5	396.7	334.1
22 x 36 = 792	27.5 %	glass	345.3	328.7	323.1
			783.8	725.4	657.2
Proposed half light u factor			0.27	0.25	0.23