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From: Graham Wright <gwright@phius.org>
Sent: Thursday, March 31, 2022 9:54 PM
To: windows@energystar.gov
Subject: Draft 2 of Energy Star 7.0

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To whom it may concern,

At Phius we will shortly be updating our product certification criteria for windows as follows:

Zone	Max Whole window U	Max Whole window SHGC
8	0.11	-
7	0.12	-
6	0.13	-
5A,B	0.16	-
4A,B	0.19	0.4
4C,5C	0.24	-
3A	0.23	0.25
3B	0.29	0.25
3C	0.29	0.3
0,1,2	0.29	0.25

The rationale for the SHGC limits is to align with DOE ZERH.

The rationale for the U-value limits is a local discomfort criterion for cold draft at ankle level.

This was evaluated for a window height of ten feet (stress case), for about 1000 US/Canada climate locations, and the chosen numbers represent the median required values over the zones.

The formula for the project-specific maximum U-value depends on window height and 99% design temperature - see Phius Certification Guidebook v3.02 Appendix N-4 for details.

Our corresponding [online calculator](#) for this was based in turn on results from an online calculator for ankle draft discomfort published [by Payette](#), based in turn on published data from psychophysical experiments.

Hope this helps and is not too late

Regards,
Graham

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