



Skylights

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Your reference
March 11, 2009 Revised Criteria

Our reference
29-0

Date
March 23, 2009

Subject: Proposed ENERGY STAR[®] Skylight and TDD Criteria Changes

Dear ENERGY STAR Leaders:

We at VELUX have truly been impressed with the process you have put in place and executed for updating the criteria, and greatly appreciate the many opportunities afforded to us for providing input. We trust our efforts have been helpful.

In order to insure that the American public will benefit as much as possible from the use of truly energy efficient fenestration options, we will take this final opportunity to offer comments we are convinced serve that intent. We will limit them to those products we know best, skylights and tubular daylighting devices (TDDs), and let door and window-oriented manufacturers and trade associations do the same for their market segments.

1. Our prior comments regarding TDDs were focused on encouraging an unconventional set of criteria that would give proper emphasis to the significant and unique energy-saving attributes of these products. The Revised Draft Criteria, by suspending this subset of toplighting products on the basis of traditional window-driven U-factor and SHGC criteria only, makes clear that ENERGY STAR is not ready to depart from their reliance solely on heating and cooling energy impacts of fenestration. We respect that reluctance to break new ground and apply the prescriptive criteria we have proposed, especially since doing so would put a new wrinkle in the program's administration activities. Perhaps these more appropriate measures of long term TDD energy performance can be given a proper analysis for the next phase of changes.

While it is under question as the most accurate means to determine U-Factor for TDDs, the simulation method is in fact the one used for all currently certified residential TDD NFRC listings. Those U-Factor listings have not been decertified by NFRC, even though that body has approved a "physical test" method for TDD U-Factors. As it stands today, there is no certified data from residential units that have undergone this test method. NFRC, therefore, cannot verify that it is any more or less accurate than the method it replaces. Since only one testing laboratory has constructed and had accredited the necessary apparatus for performing this testing, a "round-robin" type comparative process is not yet possible and the test method's

hoped-for higher accuracy cannot be proven. In addition, NFRC has been formally petitioned to allow the simulation method to also be used for ratings, for some transition period during which more test data can continue to be obtained and analyzed. We await their concurrence with that request. If ENERGY STAR has assumed the test method has replaced the simulation method, we submit that this assumption needs to be reevaluated.

Since the reason given for suspension of TDDs from ENERGY STAR starting in 2010 was insufficient test data, we submit that there is just as much data (currently certified ratings) as there was during the last few years of applying skylight criteria to TDDs using the simulation-derived ratings that are still certified by NFRC. If ENERGY STAR merely continued the current practice of qualifying TDDs to the skylight criteria after January 1, there would continue to be the same level of accuracy in the ratings as we have had for the last few years. This gave the market the correct signals regarding the most efficient and cost-effective daylighting solution for many applications.

Thus, we have one request for a change: when the final criteria are announced in a few days, we ask that ENERGY STAR continue to qualify any TDD product that achieves the skylight criteria when measured as a TDD with insulation at the ceiling. It would also be advisable to require the air leakage to be certified as complying with the latest version of AAMA/WDMA/CSA 101/I.S.2/A440, which would enhance the effective efficiency considerably.

2. We had originally (September 2007) proposed slightly more stringent skylight U-Factor criteria in some zones, and slightly less stringent SHGC in others. As a whole, we are in agreement with the overall levels in the Revised Draft, and believe the chances are good that more consumers will be inclined to replace highly inefficient units at reasonable cost, particularly if the ARRA can be rationalized or amended to let at least some skylights be covered by the building efficiency tax credit. We also commend ENERGY STAR for rationalizing the zone map closer to IECC climate zone boundaries and eliminating special treatment for one subzone.

VELUX will continue to be a committed ENERGY STAR partner, as indicated by our ongoing product improvement efforts, our assistance in driving affordable skylight energy performance as low as the available technology permits, and our active participation in the criteria analysis process. If there is a need for clarification of any of the above, please contact me at your convenience.

Thank you again for the opportunity to offer these comments.

Best regards,



Roger LeBrun
Product Certification Engineer

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VELUX America Inc.

March 23, 2009

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