



## FOR IMMEDIATE RELEASE

### CONTACT:

Michael Knezovich, PHIUS  
312.213.0507  
[mknezo@passivehouse.us](mailto:mknezo@passivehouse.us)

Mark Miller, Executive Director  
Passive House Alliance US  
[mark.miller@phaus.org](mailto:mark.miller@phaus.org)

### **PHIUS Launches Certified Data for Window Performance Program**

Program launched to streamline passive house design process and expand domestic market for passive house windows

**San Francisco, CA – November 13, 2012** – At Greenbuild 2012, PHIUS is rolling out the first phase of the domestic (North American) passive house window certification program, which was announced at the 7<sup>th</sup> Annual North American Passive House Conference in Denver.

The initial goal is to calculate and make available valid thermal performance parameters for US windows so that designers will have more choices and can do building energy models with more confidence in their accuracy. PHIUS is inviting high-performance window manufacturers to participate in the Certified Data Program for Window Performance.

- Doing so benefits manufacturers and their customers, and can aid passive house adoption in the United States and Canada
- The program is intended to simplify and grow the North American market for high-performance windows, giving passive house designers, construction professionals, and their clients a wider range of confident choices of windows.

Manufacturers who wish to submit a product for the program can download a full description of the program and application at:

<http://www.passivehouse.us/passiveHouse/PHIUSWindowProgram10.18.12.pdf>

If you have questions, please contact Graham Wright, Senior Scientist and Chair of the PHIUS Technical Committee, [graham@passivehouse.us](mailto:graham@passivehouse.us)

## The Need for a North American Program

Energy modeling a passive house project using the Passive House Planning Package (PHPP) requires a particular set of performance numbers for each type of window used. It's a more detailed set of specification than found on National Fenestration Rating Council (NFRC) labels for windows, which list only a whole-window U-value and solar heat gain coefficient for a standard-sized window.

For more accurate calculations of windows of varying size and shape, it's necessary to separately account for the heat losses through the glass, the frame, and the spacer. For some time, PHPP-compatible sets of values were only available for PHI-certified windows. More recently some manufacturers have had their windows calculated to the European protocols (EN 673, ISO 10077). PHIUS has been accepting this kind of data, but the provenance and independence of the calculations is not always clear, or as clear as we'd like. Moreover, these windows are also all imported.

Earlier this year the PHIUS Technical Committee investigated how window performance values are to be calculated for use in PHPP and how that could be done using the freely available WINDOW and THERM software. The Committee published a report (based on documentation from PHI and LBNL) with a view to demystifying the process and enabling other people to make these calculations.

In the process we discovered that the NFRC labels have been holding out on us - embedded within a whole-window database entry in the WINDOW software are separate parameters accounting for center-of-glass, frame, and spacer effects. With that level of detail, it appeared that a straightforward translation to a PHPP-compatible data set was possible. This could be a huge timesaver if it pans out. However, because of technical differences between the calculation NFRC and EN/PHI protocols, we decided to proceed cautiously with a pilot program of collecting crossover data from both protocols for comparison.

PHIUS is in the process of qualifying new WUFI Passive software for building energy modeling (in addition to PHPP). This WUFI-plus -based program has a static mode like PHPP but also a fully dynamic mode. For the dynamic mode there is the possibility to set up the window calculations to accept NFRC window data directly. We are looking into this.

Right four members of the PHIUS Technical Committee are serving as Window Simulators. (Most of them are US citizens although we do have a token Canadian.) All calculations will be peer-reviewed by at least one fellow Simulator.

We've also given some thought to how the installation thermal bridge calculations get done. This requires access to the THERM models of the windows, so we are offering the manufacturers three options: they may elect to

- a) disclose the THERM models for use by CPHCs and other 3rd parties, or
- b) offer psi-install calculations as a tech support service, or
- c) delegate it back to a qualified Window Simulator.

Finally, PHIUS expects to eventually add quality and performance criteria to the window program.

# # #