

Pennsylvania's Alternative Residential Energy Provisions

The PHRC Alternative to Chapter 11, Energy Efficiency, of the International Residential Code (IRC) for use in Pennsylvania

Developed by: Pennsylvania Housing Research Center

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Preface

In November 1999, the Pennsylvania Legislature passed ACT 45, known as the Uniform Construction Code (UCC), into law mandating a statewide building code across Pennsylvania. Act 45 requires the Pennsylvania Department of Labor and Industry (DLI) to promulgate regulations to implement the requirements of the legislation and, in addition, to consider the development of alternative prescriptive methods for energy conservation that account for the various climatic regions within the Commonwealth. In deriving these energy standards, the DLI was to seek to balance energy savings with initial construction costs.

It was evident that the International Code Council's International Residential Code (IRC) is to be adopted as the statewide code for low-rise housing in PA. The energy provisions are covered in Chapter 11, **Energy Efficiency**. In December 1999, members of the PHRC Advisory Committee asked the Pennsylvania Housing Research Center (PHRC) to develop an alternative version of Chapter 11, **Energy Efficiency**, in the IRC 2000 for use in Pennsylvania.

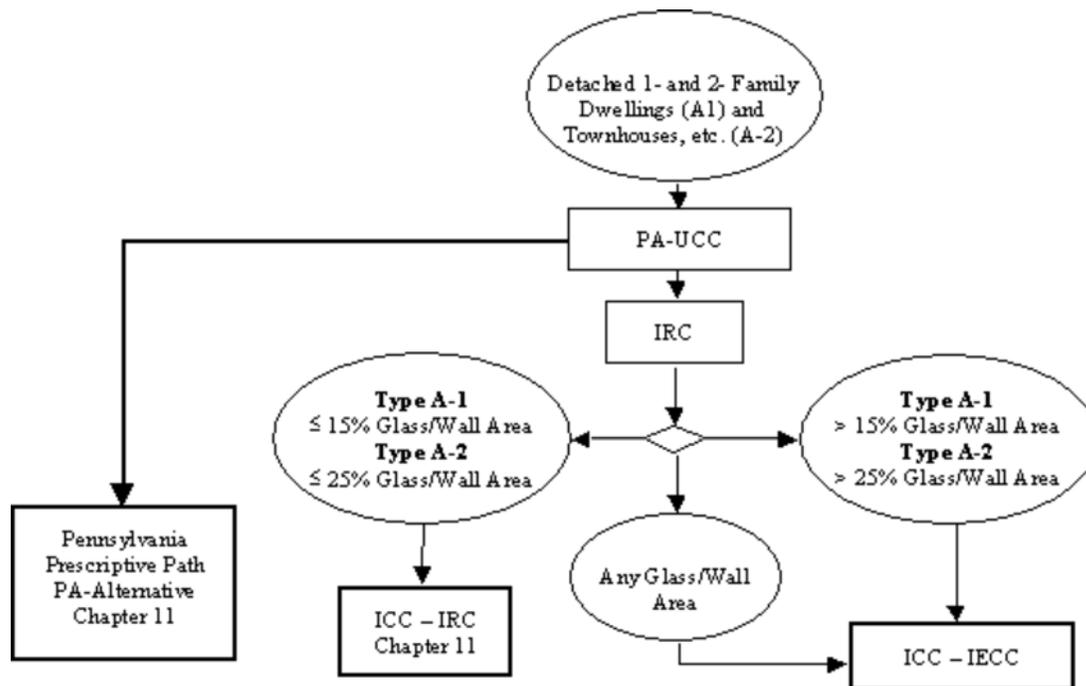
The PHRC developed an alternative prescriptive version of Chapter 11 of the IRC that is:

- simpler
- more rational
- more flexible
- focused on Pennsylvania in terms of climatic and other conditions,
- equivalent to the provisions of the International Energy Conservation Code (IECC), and
- independent, as far as possible, of other documents - specifically the International Energy Conservation Code (IECC), the IBC and other reference documents.

A draft of the Pennsylvania Alternative to Chapter 11 of the IRC together with the draft versions of six supplementary reports was submitted to DLI in May 2000. Copies of this draft, initially called the Code for the Conservation of Space Conditioning Energy for Housing in Pennsylvania, were also made available to other interested parties for review and comment. A number of improvements have since been made.

The development and publication of the IRC is a very significant initiative for both building codes and housing in the US. Its state-wide adoption in Pennsylvania is another important advance for housing. This alternative version of Chapter 11 of the IRC document is just that: an alternative to one chapter of the IRC. It is intended to supplement the IRC and, as far as possible, to be consistent in format and general intent. The scope and definitions used in the IRC apply. The flowchart that follows illustrates how this proposed alternative path fits into the overall regulatory structure for Pennsylvania's UCC. It is important to note that a choice needs to be made between the IRC, the PA-Alternative and, if so desired, the IECC.

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Flowchart showing the various Regulatory Paths for Space Conditioning Energy Compliance

Both before and after the development of the first draft, we received assistance, advice and feedback from numerous individuals, companies and associations. In particular, we would like to thank the following organizations:

- the Pennsylvania Department of Labor and Industry (DLI)
- the Pennsylvania Builders Association (PBA)
- the North American Steel Framing Alliance (NASFA)
- the Building Codes Assistance Project (BCAP)
- the Pacific Northwest National Laboratory (PNNL)
- the members of the PHRC Advisory Council

In addition, the U.S. Department of Energy-funded report, "Assessment of the Pennsylvania Housing Research Center Alternative Code" (February 2001) by the Pacific Northwest National Laboratory, was of considerable value. While we acknowledge with gratitude the assistance we received, it should be understood that none of these parties are responsible for, nor are they necessarily in agreement with, the intent and all the content of this PHRC Alternative Code Chapter.

This alternative chapter was developed by the PHRC as a service to DLI on behalf of all the consumers of housing in Pennsylvania.

Eric Burnett

Director