

# PHRC News



## Getting in touch

Contact us to find out more about the PHRC or to seek assistance.

[www.engr.psu.edu/phrc](http://www.engr.psu.edu/phrc)

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PENNSSTATE



## PHRC Sets Record

The PHRC's 9<sup>th</sup> annual PA Housing Conference was an overwhelming success. The program *The New Statewide Building Code: Who ~ What ~ When* was initially scheduled at two locations (Monroeville, February 21 and Harrisburg, March 7); however, interest in the program quickly outstripped the space available and a third session was offered (New Cumberland, March 15).

The program focused on the changes in regulations and some of the technical issues that may be encountered in complying with Pennsylvania's new Uniform Construction Code. Over 550 builders, developers, code officials, and government representatives were present at the three sessions. This is a record attendance for the PHRC Annual PA Housing Conference.

We would like to thank all of our supporters (speakers, sponsors and attendees) who helped make this year's program such a spectacular success.

## Kick-off of Building Code Training

The PHRC, with support from the Pennsylvania Builders Association (PBA) and others, has developed a series of building code training programs for builders, remodelers, contractors, and code officials across Pennsylvania. The three programs are:

1. **Comprehensive International Residential Code 2000 Program— 2 days**
2. **CABO / BOCA Transition Program — 1 day**
3. **Applying the New Energy Code in PA — ½ day**

These programs are being offered through local home builders associations across the state. The PHRC has already held six programs across the Commonwealth, resulting in rave reviews. For a list of programs scheduled at the time this newsletter went to print, please see the calendar included in the newsletter.

Comments from program participants include:

*I found the course and the manual to be very comprehensive. Builder*

*Very relevant information that will affect my day-to-day business. Builder-developer*

*One of the best training programs I have ever attended. Architect*

## PHRC PA-Alternative Energy Code

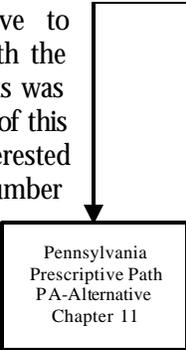
As you probably know, in November 1999 the Pennsylvania Legislature passed into law ACT 45, known as the Uniform Construction Code (UCC), mandating a statewide building code for Pennsylvania. Act 45 requires the Pennsylvania Department of Labor and Industry (DLI) to promulgate regulations to implement the requirements of the legislation. In addition, DLI was 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) 2000 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 PHRC to develop an alternative version of Chapter 11 for use in Pennsylvania.

The PHRC has developed an alternative, prescriptive version of Chapter 11 of the IRC 2000 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 2000), and
- independent, as far as possible, of other documents - specifically the IECC, the IBC, and other reference documents

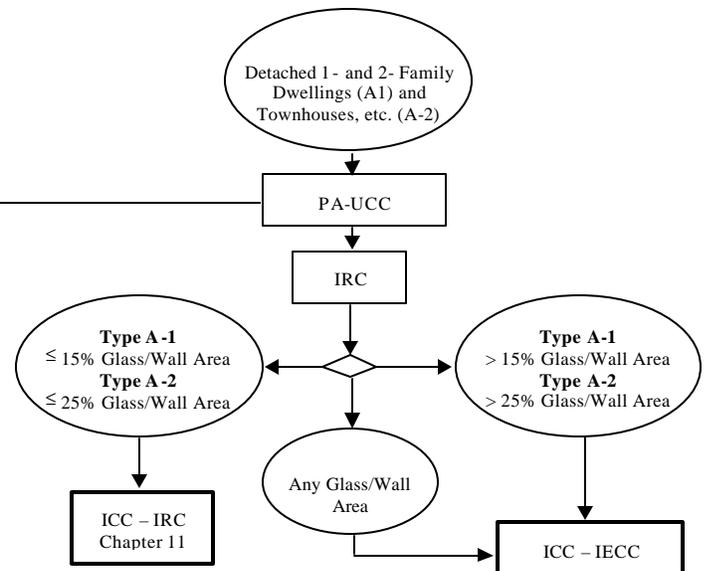
A draft of the Pennsylvania Alternative to Chapter 11 of the IRC 2000 together with the draft versions of six supplementary reports was submitted to DLI in May 2000. Copies of this draft were also made available to other interested parties for review and comment. A number of improvements have been made since then. In May 2001, the *Code for the Conservation of Space Conditioning Energy for Housing in Pennsylvania* was published. This code has still to be formally adopted by the Department of Labor and Industry. The flowchart below illustrates how this proposed alternative path fits into the overall regulatory structure for Pennsylvania's UCC.



## NDS Training Program

The PHRC will hold a 2-day, hands-on program on "Wood Frame Design for Buildings (NDS-97 Based)" on August 14 and 15 in State College. The program will provide an overview of the basic principles and an opportunity to take part in problem-solving activities. This program is intended for design professionals (architects and engineers), engineering staff from modular and manufactured housing, and building code officials, as well as others with an engineering and engineering technology background.

Most model building codes are of limited applicability to wood frame construction. Any deviation from a simple design, such as cantilevers, goes beyond the scope of the code and references the *ANSI/AF & PA National Design Specification (NDS) 1997 for Wood Frame Construction*. This has special application as the Commonwealth of Pennsylvania moves toward adopting a statewide building code. For additional information about this program, please contact Tracy Desoto at (814) 865-2341 or at PHRC@psu.edu.



**Flowchart showing the various Regulatory Paths for Space Conditioning Energy Compliance**

## Calendar of Events

Date	Meeting/Course/Workshop	Location	Contact Information
July 18-19	MHRC <sup>1</sup>	Holiday Inn - Monroeville, PA	PCT <sup>5</sup> -(570)327-4768
July 24-26	WTC <sup>2</sup> - Introduction to Heat	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
July 25	CTC <sup>6</sup> Meeting		PHRC <sup>4</sup> -(814)865-2341
August 7-10	WTC <sup>2</sup> - Combustion Analysis and Ret-	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
August 14-15	NDS Training Program		PHRC <sup>4</sup> -(814)865-2341
August 14-15	Comprehensive IRC Program	HBA of Chester and Delaware Counties	PHRC <sup>4</sup> -(814)865-2341
August 14-16	WTC <sup>2</sup> - Basic Residential Electricity	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
August 21-22	MHRC <sup>1</sup>	Ramada Inn - Wilkes-Barre, PA	PCT <sup>5</sup> -(570)327-4768
August 24-25	Comprehensive IRC Program	Indiana-Armstrong BA - Indiana, PA	PHRC <sup>4</sup> -(814)865-2341
August 28-31	WTC <sup>2</sup> - Diagnostic Approaches to	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
September 10-14	WTC <sup>2</sup> - Weatherization Tactics	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
September 11-12	Comprehensive IRC Program	Greater DuBuis BA	PHRC <sup>4</sup> -(814)865-2341
September 17 & 24	Comprehensive IRC Program	HBA of Chester and Delaware Counties	PHRC <sup>4</sup> -(814)865-2341
September 19-20	MHTI <sup>3</sup>	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
September 19-20	MHRC <sup>1</sup>	Holiday Inn - Meadville, PA	PCT <sup>5</sup> -(570)327-4768
September 20-21	Comprehensive IRC Program	Blair County HBA	PHRC <sup>4</sup> -(814)865-2341
September 25	BOCA/CABO Transition Program	HBA of Chester and Delaware Counties	PHRC <sup>4</sup> -(814)865-2341
September 26	Energy Code Training	Berks County HBA	PHRC <sup>4</sup> -(814)865-2341
September 27, October 4	Comprehensive IRC Program	Lehigh Valley HBA	PHRC <sup>4</sup> -(814)865-2341
October 3-4	MHTI <sup>3</sup>	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
October 9-10	Comprehensive IRC Program	HBA of Chester and Delaware Counties	PHRC <sup>4</sup> -(814)865-2341
October 9-12	WTC <sup>2</sup> - Combustion Analysis and Ret-	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
October 10-11	MHRC <sup>1</sup>	Holiday Inn - West Chester, PA	PCT <sup>5</sup> -(570)327-4768
October 11-12	Comprehensive IRC Program	Lehigh Valley HBA	PHRC <sup>4</sup> -(814)865-2341
October 17	CTC <sup>6</sup> Meeting	Mechanicsburg, PA	PHRC <sup>4</sup> -(814)865-2341
<b>October 18</b>	<b>PHRC<sup>4</sup> Fall Meeting</b>	<b>Harrisburg, PA</b>	<b>PHRC<sup>4</sup>-(814)865-2341</b>
October 16 & 23	Comprehensive IRC Program	Building Industry Assn. of Northeastern PA	PHRC <sup>4</sup> -(814)865-2341
October 23-26	WTC <sup>2</sup> - Diagnostic Approaches to	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
October 24 & 31	Comprehensive IRC Program	HBA of Metro Harrisburg	PHRC <sup>4</sup> -(814)865-2341
October 25	BOCA/CABO Transition Program	Berks County HBA	PHRC <sup>4</sup> -(814)865-2341
October 30-31	MHTI <sup>3</sup>	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
November 5-9	WTC <sup>2</sup> - Weatherization Tactics	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
November 6 & 13	Comprehensive IRC Program	Washington County BA	PHRC <sup>4</sup> -(814)865-2341
November 7 & 14	Comprehensive IRC Program	BIA of Lancaster County	PHRC <sup>4</sup> -(814)865-2341
November 13-14	MHRC <sup>1</sup>	Holiday Inn - Lancaster, PA	PCT <sup>5</sup> -(570)327-4768
November 15-16	MHTI <sup>3</sup>	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
November 16 & 17	Comprehensive IRC Program	HBA of Northwestern PA	PHRC <sup>4</sup> -(814)865-2341
November 27-28	WTC <sup>2</sup> - Diagnosing Moisture Problems	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
December 4-7	WTC <sup>2</sup> - Home Energy Auditing	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
December 7 & 8	Comprehensive IRC Program	HBA of Northwestern PA	PHRC <sup>4</sup> -(814)865-2341
December 11-12	MHRC <sup>1</sup>	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
December 11-12	MHTI <sup>3</sup>	Pennsylvania College of Technology	PCT <sup>5</sup> -(570)327-4768
December 12	BOCA/CABO Transition Program	BIA of Lancaster Co.	PHRC <sup>4</sup> -(814)865-2341

<sup>1</sup>MHRC—Modular Housing Resource Center

<sup>2</sup>WTC—Pennsylvania Weatherization Training Center

<sup>3</sup>MHTI—Modular Housing Training Institute

<sup>4</sup>PHRC—Pennsylvania Housing Research Center

<sup>5</sup>PCT—Pennsylvania College of Technology

<sup>6</sup>CTC—Code Training Consortium



## Manufactured Housing Resource Center Opens

In January of this year, The Manufactured Housing Resource Center (MHRC) opened its doors to the manufactured housing industry. The mission of the MHRC is to elevate the status of the manufactured housing industry through the development of educational programs for those involved in the on-site completion of manufactured houses.

The training program that has been developed is the result of two years of research and development by Penn College working in conjunction with its partners, the Pennsylvania Manufactured Housing Association, Department of Community and Economic Development, and the PHRC. For its part, the PHRC provided assistance during the development phase of the program and published two technical briefs (*Soil Frost Depth Guide for Manufactured Housing in PA*, and *Site Design Considerations for Manufactured Housing*) for use in the program. During the curriculum development phase, Penn College also drew upon the expertise of George Porter of Manufactured Housing Resources and Paul Hancher, Housing and Building Technology at NCSBCS.

The two-day program discusses the HUD Code Program and the on-site completion of manufactured houses. The focus is upon site and foundation preparation, support, anchoring and stabilization. Unlike many other excellent courses currently available that focus primarily on the "how-to", the MHRC course is unique in that it emphasizes an understanding of the HUD Code Standards and the manufacturer installation instructions. Participants who have successfully completed the course earn a certificate of completion and may have their name and company affiliation published on the MHRC web site.

To date nearly 100 participants, including retailers, manufacturers, community owners, and installers have attended the program across the Commonwealth. Participant feedback has been excellent. For additional information and the current course schedule, please visit the MHRC website at [www.pct.edu/mhrc](http://www.pct.edu/mhrc) or call (570) 327-4768 ext 3301.



*First MHRC graduating class  
January 2001*

## Career Opportunities

Over the last few years the PHRC's activities, responsibilities and funding have grown. We are at the point where we need to add three full-time professionals to take up staff positions that offer real opportunities for professional growth and career development.

We have identified three positions that need to be filled, namely:

- A person to coordinate and fulfill our technology transfer and training activities; specifically those related to the new Uniform Construction Code. This individual should have experience in the construction industry and at least three years' experience in code enforcement. Strong writing and oral presentation skills are required.
- A person who would like to focus on industrialized or factory-built housing: its production, assembly and performance. This individual should have at least 3 years' experience in the factory-based housing industry as well as an engineering background. Strong writing and oral presentation skills are required.
- A person to focus on the evolution, deployment and impacts of computer-based developments for the residential building industry, specifically e-business, information technology, and technology transfer. This position will be responsible for the development and delivery of training and technical assistance to the residential construction industry on the integration of existing and emerging computer technology (hardware and software). This may include accounting, payroll, inventory, design, estimating, and scheduling, as well as other applications software. This person should have not only the necessary experience of computing and the computing business but also the desire to evaluate, educate, and even develop software for the building business.

This outline of our needs and the opportunities they represent will, we hope, spark the interest of individuals who might qualify for these positions. If you would like to discuss these opportunities, contact Mark Fortney or Eric Burnett as soon as possible.

## Instructional Specialist

The Weatherization Training Center at Pennsylvania College of Technology is seeking an individual to teach WTC courses and provide training in topics such as HVAC, building shell diagnostics and general energy retrofit skills. This individual must have qualifying experience and a thorough knowledge of residential construction technology. A candidate must be able to demonstrate good speaking and writing skills.

For further information on this position, contact Human Resources at Penn College, Phone: 570-327-4770 or Bill Van der Meer, Phone: 570-327-4768, Web site: [www.pct.edu/wtc](http://www.pct.edu/wtc).

## Publications Reports and Software

The PHRC offers a series of reports and publications to the general public. The following is a brief list of some of our recent reports:

<b>Reports</b>		
<b>Report Number</b>	<b>Title</b>	<b>Price</b>
	Code for the Conservation of Space Conditioning Energy for Housing in PA: <i>The PHRC Alternative to Chapter 11, Energy Efficiency, of the IRC 2000 for use in PA</i>	\$12.00
 72*	Energy Code Provisions for the use of Light-Gauge Cold Formed Steel Framing	\$25.00
 71*	Evaluation of Energy Code Trade-offs for Pennsylvania	\$25.00
 70*	Thermal Envelope Assessment of Energy Code Provisions for Pennsylvania	\$25.00
 69*	Climate Zones for Energy Conservation in Pennsylvania	\$25.00
 68*	Glazing Proportions for New Housing in Pennsylvania	\$25.00
66	Residential Site Improvement and Subdivision Design Standards: A Review	\$25.00
65	Training and Education Needs Assessment for the Home Building and Remodeling Industry in Pennsylvania	\$25.00
62	Marketing Modular	\$25.00
61	Building Code Training Needs in Pennsylvania	\$25.00
59	The Use of Housewrap in Walls: Installation, Performance and Implications	\$25.00
58	Steel-Stud-Framed Wall Systems	\$25.00
56	The Importance of Modular Housing in Pennsylvania	\$25.00
55	Economic Assessment of Basement Insulation	\$25.00
53	Flood Damage to Basements: a Starting Point	\$25.00
52	A Builder's Guide to Modular Housing	\$25.00
51	Foundation Wall Systems for Houses	\$25.00
50	Below-Grade Construction: Issues and Needs	\$25.00
<b>Briefs</b>		
BB0199	Builder Brief — New and Improved Basement Wall System	FREE
RB0199	Research Brief — Composite Action and Floor System Stiffness	FREE
 BB0201	Builder Brief — Blower Door Testing	FREE
 TB0101	Technical Brief — Soil Freeze Depth Guide for Manufactured Housing in PA	FREE
 TB0201	Technical Brief — Site Design Considerations for Manufactured Housing	FREE
<b>Software</b>		
54	Evaluating the Costs of Modular and Stick-Built Construction Using ACE (includes a copy of Report #52 - A Builder's Guide to Modular Housing)	\$125.00

\* Reports will be available in August 2001.

For a complete list of PHRC reports and publications, visit our web site at [www.engr.psu.edu/phrc](http://www.engr.psu.edu/phrc). Executive summaries of each of the reports are also available on-line for your review. These reports can be ordered by calling (814) 865-2341. Payment methods include Master Card, Visa, or company or personal check.

**We're on the Web**  
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University Park, PA 16802  
Phone: 814-865-2341  
Fax: 814-863-7304

### **Building Code Training Website Opens**

The PA Code Training Consortium's (CTC) website ([www.engr.psu.edu/ctc](http://www.engr.psu.edu/ctc)) is up and operational. It provides a database of all building-code-related training that is available in and around Pennsylvania. It allows anyone to perform a quick search on building code training by region of the state or by target audience.

*[www.engr.psu.edu/ctc](http://www.engr.psu.edu/ctc)*

## **Membership**

A portion of the financial support for the PHRC is obtained from membership fees. Financial and other forms of support for the PHRC are very important. Industry-based funding, individual or corporate or association, is critical for our continued operation. We warmly welcome the new members of the PHRC. We thank new and existing members for their support of the PHRC and its efforts to serve the home building industry in PA.

### **New Members**

Glunt Building Company, Inc. ~ Greater Dubois Builders  
Lebanon County Planning Department ~ Nolen Companies, Inc.  
Middle Department Inspection Agency

### **Current Members**

Blair County Builders Association  
Builders Association of Central PA  
Cedar Knoll Associates  
Celotex Corporation  
CertainTeed Corporation  
Comfort Home Corporation  
Curtis E. Schneck, Inc.  
Dow Chemical Company  
DuPont Nonwovens  
Franklin County Builders Association  
HBA of Chester and Delaware Counties  
HBA of Metro Harrisburg  
Lackawanna Home Builders Association

Lebanon County Builders Association  
Lehigh Valley Builders Association  
Liberty Homes Custom Builders  
PA Concrete Masonry Association  
PA Dept of Community & Economic Development  
PA Manufactured Housing Association  
Pennsylvania Builders Association  
Pocono Builders Association  
Ryland Group, Inc.  
S&A Custom Built Homes, Inc.  
Trus Joist  
York County Builders Association