

### **Intro to Houses That Work – New Construction (half-day session)**

This is a half-day workshop that is the “lite” version of the full day Houses That Work program. This shorter version is often used in conjunction with other half-day sessions or at conferences as an introductory piece to give participants the basics of building science and how it is applied to create high performance homes. The session will cover the elements that are part of high performance homes and the industry conditions that create a need for us to build them. The fundamentals of building science - air, heat and moisture flow – will be outlined and applied in helping participants make better choices with respect to construction materials and methods. By the end of the session participants will have a better understanding of how to build better attics, walls and foundations and how to choose HVAC systems that integrate properly into their homes.

#### **Who Should Attend**

- New home builders and remodelers and their site supervision staff
- Designers and architects
- Estimators and contract managers of builders
- Building industry suppliers and manufacturers representatives of building products
- Trade contractors who want to know more about how their work affects performance
- Utility and housing program officials.
- Government housing officials
- New home sales agents
- Energy Raters

#### **Relevance to Attendees**

- Learn the elements of high performance homes and how they help respond to the many changes in the residential construction industry and consumer expectations.
- Learn the fundamentals of air, heat and moisture flow and see how they can be applied to make better material and methods decisions
- Apply the building science to attics, walls, windows, foundations and HVAC decisions to create high performance homes.
- Identify the building process changes needed to cost effectively implement high performance homes
- Learn about the successes of other builders who have benefited from implementing high performance home strategies.

#### **Note:**

The workshop will be adapted to the climate zone and building practices of the local area where it is being presented to ensure it is relevant to participants.

## Agenda

Session Segment	Activity Plan Notes/Requests	Timing
<p><b><u>Introduction to EEBA and its Sponsors</u></b></p> <ul style="list-style-type: none"> <li>• What EEBA does</li> <li>• Relevance of the Houses that Work Program</li> <li>• EEBA publications and education</li> <li>• The EEBA Conference</li> <li>• Introduction of speaker and sponsors</li> </ul>		10 minutes
<p><b><u>What is a High Performance Home and Why We Need Them</u></b></p> <p>A short review of building science basics – air, heat and moisture flow as it relates to insulation and air sealing, house-as-a-system issues and how small changes can have important impacts.</p> <ul style="list-style-type: none"> <li>• Designs and Materials</li> <li>• Methods and Techniques</li> <li>• Customer expectations</li> <li>• The complicated business of building</li> </ul>		20 minutes
<p><b><u>Fundamentals of Building Science</u></b></p> <p>How air, heat and moisture flow and why every builder and trade contractor needs to know it</p> <p>Finding important opportunities and avoiding risks using a building science approach</p>		30 minutes
<p><b><u>Applying Building Science to Construction Elements</u></b></p> <ul style="list-style-type: none"> <li>• Using building science to make better: <ul style="list-style-type: none"> <li>○ Attics</li> <li>○ Walls and windows</li> <li>○ Foundations</li> </ul> </li> <li>• Managing moisture to avoid defects and make healthier longer lasting buildings</li> <li>• Innovative materials and methods that can be used to improve overall performance</li> </ul>		90 minutes
<p><b><u>Choosing Better HVAC Systems</u></b></p> <ul style="list-style-type: none"> <li>• Important decisions on choosing appropriate HVAC Systems that are most cost-effective and integrate better into the building envelope to create more comfortable homes</li> <li>• Opportunities for better air quality using ventilation, filtration and proper dehumidification strategies <ul style="list-style-type: none"> <li>○ Critical details behind tubs, fireplaces, bulkheads, garage interfaces</li> </ul> </li> </ul>		30 minutes

<p><b>Process Changes for Implementing High Performance Elements</b></p> <ul style="list-style-type: none"> <li>Identifying what process changes builders need to employ to be successful with new materials and technologies</li> <li>Engaging and training staff, trades and sales agents</li> <li>Identifying the scopes of work that need to change</li> <li>Identifying building science associates and energy raters to work with</li> </ul>		15 minutes
<p><b>Examples of Builders Who Have Effectively Implemented High Performance Construction</b></p> <ul style="list-style-type: none"> <li>Case studies of builders working within the Building America and ENERGY STAR program that have benefited from a building science approach</li> <li>Resources available to assist with building and marketing high performance homes</li> </ul>		15 minutes
<p><b>End of Workshop</b></p>		

**Training Time and CEUs/Professional Development Credits**

3.5 Hours of Educational and Training Time

This Seminar qualifies for CEUs/Professional Development Credits from the following accreditation organizations:



**Pricing**

The hosting fee for this seminar is \$6500 (and may be combined with another half-day session).

The registration fee for this seminar is \$65 (online registration) or \$70 (on-site registration)\*

\* The registration fee includes lunch when two half-day sessions are combined for a full day.

### Reading Material and Online Resources

The reading material for the course consists of documents, publications and online resources relating to each educational and training seminar. You are welcome to order, view or print the resources if you choose. You can find them by following the links below to the EEBA, Department of Energy and EPA/IAQ websites.

#### Link / Purchase / Download

##### Climate Specific Builders Guides

[Builder's Guide to Cold Climates](#)

[Builder's Guide to Hot-Dry / Mixed-Dry Climates](#)

[Builder's Guide to Hot-Humid Climates](#)

[Builder's Guide to Mixed-Humid Climates](#)

[Online bookstore with EEBA Publications, issue-specific guides, software and tools](#)

##### Software Resources

[Building Better Homes DVD](#)

##### Online Resources

[National Residential Efficiency Measures Database](#)

[DOE Building Technologies Program](#)

[Building Energy Optimization Software](#)

[EEBA National Education Partner Resources & Information](#)