

Agenda

Presented by David Horton & Sanyog Rathod, AIA, LEED AP

Understanding the Energy Efficiency of Conventional Construction

Facts and figures on residential energy use
History of energy-conserving residential construction
Building code requirements
Energy conservation incentives

Passive House Standard: Purpose, Principles and Development

History of certifying agencies in US: PHI and PHIUS
Passive House Standard: voluntary performance-based building envelope energy standard
Energy calculations: how and when to perform them
Energy calculation tools: an introduction to tools and their functionality
Assembling a team to ensure quality and performance
Examining common design features of Passive Houses

Architectural Elements of Passive Houses

Siting, sizing and orientation
Super-insulated envelope with minimized thermal bridging
Efficient ventilation
Ultra-efficient lights, fixtures and appliances
Summer shading and cooling strategies
Winter solar gain and heat retention strategies
Integrating renewable energy technologies

Mechanical Systems in Passive Houses

Optimizing heat gains
• Passive solar heat gains
• Indoor environmental heat gains

Heat exchanger
Supplemental heating
Renewable energy system integration
Energy-efficient appliances

Evaluating Passive House Case Studies

Adapting Passive House for the Midwest
Case studies: in the planning process, under construction and finished projects

Passive House: Planning and Design
Lombard, IL - Tuesday, January 23, 2018

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Learning Objectives

You'll be able to:

Explore the history of energy-conserving residential construction.

Study the Passive House Standard and discuss the certification process.

Understand when and how to perform energy calculations.

Examine key architectural elements of Passive Houses.

Evaluate mechanical system options, as well as ultra-efficient lights, fixtures and appliances.

Discuss how to integrate renewable energy technologies into Passive Houses.

Review Passive House case studies.



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Understand the energy efficiency of conventional construction

Identify the purpose, principals and development of Passive House Standard

Examine the architectural elements of Passive Houses

Learn about mechanical systems in Passive Houses

Explore siting, sizing and orientation

Discuss Passive House case studies

Continuing Education Credits

Architects

6.5 HSW Contact Hours
6.5 AIA HSW Learning Units

Professional Engineers

6.5 PDHs

Contractors

Non-Credit Continuing Ed.



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Faculty

David Horton
Director of Green Certifications, Sol Design + Consulting
Mr. Horton is a skilled tradesman turned energy geek. He began his journey retrofitting historic buildings. As Mr. Horton saw the care required to restore historic buildings, he hoped to be able to modernize their performance. Through training provided by PHIUS, GBCI, RESNET and other building performance-oriented organizations, he acquired the necessary skills to guide project teams to the highest performing building approach possible. Mr. Horton has done this by working on hundreds of Energy Star homes, more than 300 LEED projects, and Passive House projects spread out across six states. As one of the founding members of Passive House Alliance Kentucky, he aims to bring Passive House and other high-performance building approaches to the mainstream. Mr. Horton has been the CPHC or PHIUS+ Rater on projects in Indiana, Cincinnati, Ohio, Kentucky and Missouri. He provides consulting support on multifamily PHIUS+ projects in central and western Pennsylvania, Ohio and Kentucky. He has been the green rater and HERS rater on 300+ LEED projects totaling thousands of units and has acted as field quality assurance for Raters under HERS Providers for multiple years. Mr. Horton has created solutions to a plethora

Seminar Information

Hyatt Place Chicago - Lombard/Oak Brook
2340 South Fountain Square Drive
Lombard, IL 60148
(630) 932-6501

Registration
8:00 - 8:30 am
Morning Session
8:30 - 11:45 am
Lunch (on your own)
11:45 am - 12:45 pm
Afternoon Session
12:45 - 4:30 pm

Tuition
\$279 for individual registration
\$259 for three or more registrations.
Each registration includes a complimentary continental breakfast and printed seminar manual.

How to Register

- Visit us online at www.halfmoonseminars.org
- Mail-in or fax the attached form
- Call customer service at 715-835-5900

Cancellations: Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the CD/manual package. You may also send another person to take your place.

of problems in old buildings, with respect to energy efficiency, and has been part of teams that constructed multiple different building types with multiple uses. Mr. Horton holds CPHC, PHIUS+ Rater, HERS Rater/QAD/Trainer, LEED AP Homes and LEED Green Rater/QAD certifications.

Sanyog Rathod, AIA, LEED AP
Founder and CEO, Sol Design + Consulting
Mr. Rathod is a licensed architect with a Master’s degree in Architecture, and brings 25 years of international design and construction experience of working on large complex projects. He maintains the highest standards of global knowledge, experience and leadership in sustainable design through active involvement in the profession, academia and community. Sol Design + Consulting is a Cincinnati-based firm which provides sustainability consulting and green building certification services. As an Enterprise Green Communities and LEED provider and verifier, Mr. Rathod has certified over 5,000 residential and commercial units in over 15 states and globally. Sol certified the nation’s first LEED for Homes Midrise Platinum housing for the homeless in 2010, and has recently certified the first international Platinum LEED for Homes project in all of the Middle East.

Continuing Education Credit Information

This seminar is open to the public and offers 6.5 HSW contact hours to architects and 6.5 PDHs to professional engineers in all states, except Florida architects. Educators and courses are not subject to preapproval in Illinois.

The American Institute of Architects has approved this event for 6.5 HSW Learning Units (Sponsor No. J885). Only full attendance can be reported to the AIA/CES.

HalfMoon Education is deemed an approved architect continuing education sponsor in New York. HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana, Louisiana, Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 35), North Carolina, and North Dakota.

This seminar also offers a non-credit continuing education opportunity to construction contractors. It has not been submitted to any state contractor licensing board for continuing education approval.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Additional Learning

January Webinar Series

Technical Writing

- **Technical Writing Basics**
Tues., Jan. 9, 2018, 11:00 AM - 1:00 PM CST
- **Planning Documents**
Tues., Jan. 9, 2018, 1:30 - 3:30 PM CST
- **Writing Documents**
Wed., Jan. 10, 2018, 11:00 AM - 1:00 PM CST
- **Revising and Editing Documents**
Wed., Jan. 10, 2018, 1:30 - 3:30 PM CST

Masonry Design and Construction

- **Introduction to Masonry Materials and Requirements**
Thurs., Jan. 11, 2018, 11:00 AM - 1:00 PM CST
- **Masonry Construction Techniques**
Thurs., Jan. 11, 2018, 1:30 - 3:30 PM CST
- **Quality Control and Sampling**
Fri., Jan. 12, 2018, 11:00 AM - 1:00 PM CST
- **Masonry Inspections and the Masonry Standards Joint Committee (MSJC) Code**
Fri., Jan. 12, 2018, 1:30 - 3:30 PM CST

Deep Foundations

- **Deep Foundation Site Evaluation**
Wed., Jan. 17, 2018, 11:00 AM - 12:00 PM CST
- **Overview of Deep Foundations**
Wed., Jan. 17, 2018, 12:30 - 2:00 PM CST
- **Deep Foundation Pile Design**
Thurs., Jan. 18, 2018, 11:00 AM - 12:30 PM CST
- **Deep Foundation Installation and Testing**
Thurs., Jan. 18, 2018, 1:00 - 2:00 PM CST

Designing Solar Roofs and Community Solar

- **Design Your Solar Roof**
Wed., Jan. 24, 2018, 11:00 AM - 2:15 PM CST
- **Community Solar**
Wed., Jan. 31, 2018, 11:00 AM - 2:15 PM CST

For more information visit:
www.halfmoonseminars.org/webinars/

Can’t Attend? Order the CD/Manual Package:
An audio recording of this seminar is available for \$289 (including shipping). Allow five weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration

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How to Register	
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Complete the entire form. Attach duplicates if necessary.	
Registrant Information Name: _____ Company/Firm: _____ Address: _____ City: _____ State: _____ Zip _____ Occupation: _____ Email: _____ Phone: _____ Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____ Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred. () I need special accommodations. Please contact me.	

Tuition () I will be attending the live seminar. Single Registrant - \$279.00 . Three or more registrants from the same company registering at the same time - \$259.00 each. () I am not attending. Please send me the CD manual package for \$289.00 . (S&H included. Please allow five weeks from seminar date for delivery)
Checks: Make payable to HalfMoon Education Inc.
Credit Card: <i>Mastercard, Visa, American Express, or Discover</i> Credit Card Number: _____ Expiration Date: _____ CVV2 Code: _____ Cardholder Name: _____ Billing Address: _____ City: _____ State: _____ Zip: _____ Signature: _____ Email: _____