

# Agenda

*Presented by David Horton*

## 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 local climates  
Case studies: in the planning process, under construction and finished projects

### Can't Attend? Order the Webinar as a Self-Study Package!

Recordings of this webinar are available for purchase. See registration panel for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

## Passive House: Planning and Design

Online - Tuesday, February 23, 2021



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## Learning Objectives

### You'll be able to:

**Identify** Passive House certifying agencies in the US, and be able to describe Passive House design principles for energy efficiency, indoor air quality, indoor comfort and durability.

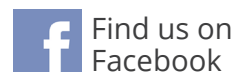
**Perform** energy calculations during the Passive House design process.

**Describe** architectural elements of Passive Houses, including siting, sizing and orientation.

**Identify** energy-conserving features common to Passive Houses, including super-insulated envelopes, doors and windows, and efficient ventilation systems.

**Select** mechanical systems for Passive Houses.

**Consider** building both single-family and multi-family projects to the Passive House Standard.



## HalfMoon Education Online Learning

# Passive House: Planning and Design

Live, Interactive Webinar - Tuesday, February 23, 2021



**Understand** the energy efficiency of conventional construction

**Identify** the purpose, principles, and development of Passive House

**Examine** the architectural elements of Passive Houses

**Learn** about mechanical and electrical systems in Passive Houses

**Explore** Passive House case studies

**Consider** Passive House design for single and multifamily projects

### Continuing Education Credits

**Professional Engineers**  
6.5 PDHs

**Architects**  
6.5 HSW CE Hours

**AIA**  
6.5 LU | HSW

**International Code Council**  
.65 CEUs (Sustainability)



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# Faculty

**David Horton** has been involved in construction since his teenage years. Spending 25+ years as a carpenter, Mr. Horton learned a lot about how buildings can be flawed. Seeking to correct these flaws, particularly with respect to energy efficiency, he sought out training. Mr. Horton received training from nationally recognized organizations, such as BPI, RESNET, GBCI, NCI and PHIUS. This training includes all of the PHIUS+ professional credentials, CPHC (Certified Passive House Consultant), CPHB (Certified Passive House Builder), PHIUS+ Verifier, PHIUS+ Rater.

Mr. Horton's training in high performance construction, coupled with prior experience served him well. He was able to perform different roles on various high performance construction projects. These roles include air sealing & insulation, performance testing, HVAC load calculations, design and more. These projects include deep energy retrofits, new construction, single family and multifamily. In addition to custom designed approaches, many of these projects sought green building certifications such as Energy Star, LEED, PHIUS+ and more. This totals hundreds of certified projects, and thousands of units.

Mr. Horton has shared what he has learned on these projects through presentations at local, regional, and national conferences. He has also delivered this information through a number of seminars and online resources. Mr. Horton also shares this information with emerging professionals that attend HERS Rater classes he teaches.

Mr. Horton is also a husband, father, coach, and desperately fighting off father time. He is a mediocre powerlifter and an even worse jiu-jitsu player. Mr. Horton hopes to leave the world a better place than he found it, for all the generations to come.

# Webinar Information

Log into Webinar 8:00 - 8:30 am CST	Break 11:45 am - 12:45 pm CST
Morning Session 8:30 - 11:45 am CST	Afternoon Session 12:45 - 4:30 pm CST

## Tuition

**\$289** for individual registration  
**\$199** for three or more registrants from the same company at the same time.  
**Included with your registration:** PDF seminar manual.

## How to Register

- Visit us online at [www.halfmoonseminars.org](http://www.halfmoonseminars.org)
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

Webinars are presented via GoToWebinar. Instructions and login information will be provided in an email sent close to the date of the webinar. For more information, please visit our FAQ section of our website, or visit [www.gotowebinar.com](http://www.gotowebinar.com).

**Cancellations:** Cancel at least 48 hours before the start of the webinar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another webinar or the self-study package. You may also authorize another person to take your place.

# Additional Learning

## Foundation Damage and Repair: Science, Materials and Techniques

- Wed., Feb. 3, 2021 | 9:00 am - 4:30 pm CST

## Architectural Application for Means of Egress in 2018 IBC

- Thurs., Feb. 11, 2021 | 8:30 am - 5:00 pm CST

## 2021 International Residential Code: Fundamental Provisions, Concepts, and Existing Buildings

- Fri., Feb. 12, 2021, 11:00 am - 3:30 pm CST

## Construction Project Management

- Fri., Feb. 12, 2021 | 11:00 am - 3:15 pm CST

## Important Ingredients for a Successful Solar PV Project: Best Practices and Lessons Learned

- Fri., Feb. 12, 2021 | 8:30 am - 4:00 pm CST

## Handling Ethical Issues in Construction Contracting

- Tues., Feb. 16, 2021 | 9:00 - 10:00 am CST

For more information and other online learning opportunities visit: [www.halfmoonseminars.org](http://www.halfmoonseminars.org)

## Continuing Education Credit Information

This webinar offers 6.5 PDHs to professional engineers and 6.5 HSW continuing education hours to architects licensed in all states.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 5554646), Indiana (License No. CE21655559), Maryland, New Jersey (Approval No. 24GP55555655), North Carolina (S-5135), and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2) and §69.6(i)(2)). Other states do not preapprove continuing education providers or courses.

The American Institute of Architects Continuing Education System has approved this course for 6.5 LU | HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .65 CEUs in the specialty area of Sustainability (Preferred Provider No. 1232).

Completion certificates will be awarded to participants who complete this event, respond to all prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

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# Registration

## Passive House: Planning and Design

Live, Interactive Webinar - Tuesday, February 23, 2021

How to Register		Registrant Information
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<b>Phone:</b> 715-835-5900	<b>Fax:</b> 715-835-6066	<b>Additional Registrants:</b> Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____
<b>Mail:</b> HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278		<b>Complete the entire form.</b> Attach duplicates if necessary.
		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 webinar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$199.00** each.
- ( ) **I am not attending.** Please send me the webinar recording:
- Streamable MP4 Video/PDF Manual for **\$299.00**.
- USB Video/PDF Manual for **\$299.00**.

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