

Agenda

Presented by Christina Snyder and Lisa White

Understanding the Energy Efficiency of Conventional Construction

- Facts and figures on residential energy use
- History of energy-conserving residential construction
- Climate considerations
- State and local building code requirements
- Energy conservation incentives
- Development of PHI's Passive House Standard and Phius 2021 design standard

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
- Passive House principles: insulation, airtight envelope, recovery ventilation
- 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 mechanical ventilation systems
- Ultra-efficient lights, fixtures and appliances
- Summer shading and cooling strategies
- Winter solar gain and heat retention strategies
- Integrating renewable energy technologies

Mechanical and Electrical Systems in Passive Houses

- Optimizing heat gains
- Passive solar heat gains
- Indoor environmental heat gains
- Heating and cooling loads
- Space conditioning
- Renewable energy system integration
- Energy-efficient appliances
- Path to net-zero or net-positive performance

Evaluating Passive House Case Studies

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

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Passive House for the Great Lakes Region

Live, Interactive Webinar - Thursday, June 9, 2022

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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.

Examine some energy calculations made 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 Live Webinars

Passive House for the Great Lakes Region

Live, Interactive Webinar - Thursday, June 9, 2022



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

International Code Council
.65 CEUs (Energy)

Architects
6.5 HSW CE Hours
6.5 AIA LU | HSW

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Faculty

Christina Snyder *Architect, Builder, Phius, CPHC, PHI-accredited Certifier; Owner, Equilibrium Energy Spaces, Michigan*
Ms. Snyder attended Phius' inaugural class in 2008 and became a CPHC in 2009, continuing a career focused on sustainable design, both in practice and education. A residential builder, an architect and sole proprietor since 2002, she also instructed architecture students as an adjunct professor, coaching them through winning the first and second Michigan Zero Energy Home competitions, as well as competing in the 2007 Solar Decathlon in Washington DC. She has also published a paper on zero energy homes utilizing seasonal heat storage systems. Ms. Snyder has been a partner in a renewable energy system installation business, Sustainable Systems, before starting her own architectural practice. She has volunteered on natural building projects including strawbale, cob, cordwood, and thatched structures; and has lectured throughout the Midwest on energy efficiency and zero energy homes. Most recently Ms. Snyder has taught continuing education classes for professionals on passive houses. She is also walking her talk; she's almost completed a new passive house on her rural southern Michigan homestead using an innovative foundation system of glass-fiber reinforced concrete structural insulated panels. Ms. Snyder has certified passive houses and provided PHPP assistance since 2015 as a founding member of CertiPHlers Cooperative.

Lisa White *Associate Director and a technical lead for Phius (Passive House Institute US)*
Ms. White has been with Phius for 10 years. She led the building certification review team for 7 years and is an instructor for Phius Certified Consultant (CPHC) training and WUFI® Passive energy modeling software training. Ms. White holds a degree in Environmental Sustainability with a minor in Architecture from the University of Illinois at Urbana-Champaign, and a Master's in Energy Engineering from the University of Illinois at Chicago.

Webinar Information

Log into Webinar 8:00 - 8:30 am EDT	Break 11:40 am - 12:10 pm EDT
Morning Session 8:30 - 11:40 am EDT	Afternoon Session 12:10 - 3:50 pm EDT

Tuition
\$319 for individual registration
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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.

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Additional Learning

Site Design: Grading and Drainage
- Fri, May 20, 2022 | 8:30 am - 4:30 pm CDT

Designing a Smarter Home
- Mon,, May 23, 2022 | 8:00 am - 4:00 pm CDT

How to Design a Stormwater Management System for Residential Sites
- Tues, May 24, 2022 | 2:00 - 4:00 pm CDT

Flood-Resistant Design and Construction
- Wed, May 25, 2022 | 11:00 am - 2:00 pm CDT
- Thurs, May 26, 2022 | 11:00 am - 3:00 pm CDT

Universal Residential Design
- Wed, May 25, 2022 | 8:30 am - 4:30 pm CDT

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Continuing Education Credit Information
This webinar is open to the public and offers 6.5 PDHs to professional engineers and 6.5 HSW continuing education hours to licensed architects in Michigan and other midwestern states. Engineers and architects seeking continuing education credit in most states will be able to claim the hours earned at this webinar. Refer to specific state rules to determine eligibility.

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

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

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

Added Value:
Enhance your learning - a recording of this webinar will be available for attendees to stream online for two weeks after the program date.
(Must attend live webinar to earn live webinar credits)

Registration

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