# **Agenda**

# Presented by Jason LaFleur

# **Net-Zero Energy Home Design Workshop Day One**

Tuesday, April 6, 2021 | 11:00 am - 2:15 pm CDT (including a 15-min. break)

#### **Residential Energy Efficiency Requirements**

Reviewing residential provisions of the

International Energy Conservation Code (IECC)

To seek (or not to seek) sustainable certifications

Helpful resources

Software for energy modeling and energy-efficient design

### Introduction to Project: Net Zero Energy Home

Integrated approaches

Customer considerations

Sizing, orientation and preliminary plans

Energy modeling and HVAC design

# **Net-Zero Energy Home Design Workshop Day Two**

Wednesday, April 7, 2021 | 11:00 am - 2:15 pm CDT (including a 15-min. break)

### Workshop: Designing an Energy-Efficient Envelope

R-values and U-factor alternatives

Foundation, roof and exterior walls

Thermal and vapor barriers

## Workshop: Choosing Windows and Doors

R-values and U-factor alternatives

Prescriptive fenestration

Envelope testing for net zero success

# **Net-Zero Energy Home Design Workshop Day Three**

Friday, April 9, 2021 | 11:00 am - 2:15 pm CDT (including a 15-min. break)

# **Workshop: Designing Heating and Cooling Systems**

HVAC systems for Zero Energy homes

Ductwork and distribution

Service hot water systems

Thermal systems

Mechanical ventilation systems

Self-powered HVAC

# Workshop: Electrical Systems and Distributed Energy Resources

Electrical and lighting systems

Electric vehicle infrastructure

Solar photovoltaic energy systems

On-site power generation and energy storage

**Project Wrap-Up** 



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# **Learning Objectives**

#### You'll be able to:

*Identify* residential provisions of the International Energy Conservation Code (IECC).

**Do** energy modeling to meet and exceed IECC requirements.

**Use** home sizing and orientation information to create the preliminary design.

**Conduct** envelope testing for net-zero success.

**Select** the appropriate heating, cooling and distributed energy systems for net-zero energy

**Design** energy efficient electrical and lighting systems.



# **HalfMoon Education Online Learning**

# **Net-Zero Energy Home Design Workshop**

Live. Interactive Webinar Series Tuesday, April 6, Wednesday, April 7 and Friday, April 9, 2021



**Design** a net-zero energy workshop

**Take** a project from preliminary plan to final design

**Choose** windows, doors and materials that maximize the energy-efficiency of the building envelope

**Select** heating, cooling and home in this interactive online distributed energy systems for resilience

> **Learn** how to incorporate solar PV systems, onsite energy storage and electric vehicle infrastructure into your design

# **Continuing Education Credits**

**Professional Engineers** 9.0 PDHs

**Architects** 9.0 HSW CE Hours AIA 9.0 LU|HSW

International Code Council

.9 CEUs (Energy)







# **Faculty**

Jason LaFleur Sr. Program Manager, GTI Energy

Mr. LaFleur joined GTI in 2017 as a program manager for the Emerging Technologies team, and he manages emerging technology programs, working with clients such as the Department of Energy's Building America program and the Department of Defense to improve energy efficiency and create resilient energy systems and infrastructure. Prior to joining GTI, he founded Eco Achievers, a nationally-active Zero Energy consulting firm. He has extensive experience working with emerging technologies in the building sector, helping project teams through design, construction and delivery of several Zero Energy buildings and dozens of high-performance single- and multi-family buildings. He has certified hundreds of homes to LEED, ENERGY STAR, and Passive House standards. Mr. LaFleur is a voting member of ASHRAE 227 Passive Building Standard.

# Webinar Information

Day One: Tuesday, April 6, 2021

11:00 am - 2:15 pm CDT (including a 15-min, break)

Day Two: Wednesday, April 7, 2021

11:00 am - 2:15 pm CDT (including a 15-min. break)

Day Three: Friday, April 9, 2021

11:00 am - 2:15 pm CDT (including a 15-min. break) (please log into the webinar 15 - 30 minutes before start time)

#### Tuition

**\$389** for individual registration

\$299 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
- 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 FAO section of our website, or visit 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**

Complying with Fire, Building and **Mechanical Codes: Focus Fire Rated Ducts & Enclosures** 

- Wed., Mar. 10, 2021 | 7:30 am - 2:50 pm CST

#### **Architectural Acoustics -Design and Construction**

- Thurs., Mar. 11, 2021 | 8:30 am - 4:30 pm CST

#### **Pumping and Piping Systems**

- Fri., Mar. 12, 2021 | 11:00 am 2:15 pm CST

#### How to Build a Sustainable Future

- Thurs, Mar. 11, 2021 | 11:00 am - 2:15 pm CST Uncertain Climate

## **SketchUp for Building Professionals**

- Fri., Mar. 12, 2021 | 11:00 am 2:45 pm CST

### 2021 International Residential Code: **Residential Structural Design**

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

#### **Introduction to Green Infrastructure**

- Wed., Mar. 17, 2021 | 11:00 am - 2:30 pm CDT

- Thurs., Mar. 18, 2021 | 11:00 am - 2:30 pm CDT

#### **Bioretention System Design**

- Fri., Mar. 19, 2021 | 10:00 am - 12:00 pm CDT

#### **Considerations for Acquiring and Developing Brownfields Properties in** the U.S.

- Thurs., Mar. 11, 2021 | 11:00 am - 2:15 pm CST - Tues., Mar. 23, 2021 | 1:00 - 4:00 pm CDT

# Gray vs. Green: Deep Dive into the Role of Green Infrastructure in the Face of an

- Wed., Mar. 24, 2021 | 10:00 am - 12:00 pm CDT

#### - Thurs., Mar. 11, 2021 | 11:00 am - 2:45 pm CST Designing for Climate Resilience

- Thurs., Mar. 25, 2021 | 11:00 am 2:45 pm CDT
- Fri., Mar. 26, 2021 | 11:00 am 2:45 pm CDT

#### Threats to Trees

- Fri., Mar. 26, 2021 | 9:00 am - 4:30 pm CDT

For more information and other online learning opportunities visit: www.halfmoonseminars.org

## **Continuing Education Credit Information**

This webinar offers 9.0 PDHs to professional engineers and 9.0 HSW continuing education hours to architects licensed in all states.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina (S-0130), 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 9.0 LU | HSW (Sponsor No. |885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .9 CEUs in the specialty area of Energy (Preferred Provider No. 1232).

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

# 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.

# Registration

Billing Address:

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# **Net-Zero Energy Home Design Workshop**

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Online - Tuesd	ay, April 6, Wed	nesday, April 7, ar	nd Friday, April 9,	2021
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Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278  Complete the entire form. Attach duplicates if necessary.		Occupation: Email: Phone: Name: Occupation: Email:		
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