

Net Zero Builder Training

Course Syllabus

Successfully completing the CHBA Net Zero Builder Training is a requirement for Builders, Renovators and Energy Advisors participating in the CHBA Net Zero Home Labelling Program.

Participants of this course are required to have a copy of the CHBA Builders' Manual to reference the Building Science details. This manual can be obtained by clicking here. Please allow sufficient time for delivery of manual before commencing the training.



For those who need to know how to build homes in one of the toughest climates on earth, the CHBA Builders' Manual is the most authoritative guide you will find for building superior energy-efficient housing.

Order this bestseller at www.chba.ca/buildersmanual.

Overview & Learning Objectives

Are you interested in offering your clients homes that are 'the ultimate in comfort and efficiency'?

The products/materials/equipment to achieve Net Zero/Ready are now more widely available across Canada, and more CHBA Qualified Net Zero Energy Advisors are ready and able to help builders design climate specific packages to address each projects' needs.

In this course participants learn the latest developments on approaches to Net Zero/Ready Homes focused on *optimizing performance and costs*. Attendees will gain insight on Net Zero/Ready design principles, equipment options, emerging technologies, and construction practices. This course reflects the advancements in technology and innovations in the Canadian housing industry. By the end of this course, participants will:

- Discover the history of energy efficiency and Net Zero Energy housing in Canada.
- Identify factors that are driving the Canadian housing market toward higher levels of energy performance.
- Know the various definitions of Net Zero including the CHBA's definition of Net Zero and Net Zero Ready Homes.
- Understand how to earn the CHBA Qualified Net Zero Builder designation.
- Learn how an integrated design process and other optimization and costing tools together with HOT2000 energy modeling can help project teams reduce costs.
- Know how to design and build Net Zero/Ready Homes that meet the program Technical Requirements using cost effective, off-the-shelf technologies.
- Understand the key Building Science principles behind Net Zero best practices.

- Hear how occupant loads (the largest energy loads in a Net Zero/Ready Home) may or may not impact a builders' design and construction choices.
- Understand how Net Zero/Ready Homes are designed to deliver excellent indoor air quality, helping to keep occupants healthy

 a great selling feature with occupants now spending more time at home.
- Learn the construction technology and techniques behind Net Zero and Net Zero Ready Homes, including:
 - Using modelling, find the balance between energy efficiency and renewable energy with cost effectiveness as a key factor.
 - Best practices for the building envelop, including comfortable basements, above grade walls and exposed floors, super-efficient windows and doors, effective roofing, and ceiling insulation.
 - Best practices for mechanical systems, including space heating and cooling, ventilation, and water heating.
 - Best practices for Solar PV design, sizing, orientation, integration, and installation.
- Reference Net Zero/Ready Home case studies for each Canadian climate zone.

An exam at the end of the course is designed to confirm that participants have learned the key Net Zero and Net Zero Ready Home learning objectives. A passing grade is 75%.

Audience

Successfully completing the CHBA Net Zero Builder Training is a requirement for Builders, Renovators and Energy Advisors participating in the CHBA Net Zero Home Labelling Program. For more information see the Program Requirements.

Qualified Net Zero Builders and Renovators must have at least one trained person on staff to maintain their designation. For Builders, the person must successfully complete the Net Zero Builder Training and the Building Science Training prerequisite. For Renovators, the person must successfully complete the Net Zero Renovator Training as well as the Building Science Training and Net Zero Builder Training pre-requisites. Participation in on-going CHBA Net Zero Training is required, at least every 3 years.

Any successfully completed Net Zero training is "tied to" the person who took the training, not the organization that they were employed with at the time of training. Should the trained person change employment and go to work for a different builder/renovator, they take their training "certificates of completion" with them and the builder/renovator must ensure they have another trained employee on staff.

This course is also recommended for designers such as Architectural Technologists, Architects, Engineers, HVAC Designers, as well as Building Officials, and Trades.

Pre-Requisites

Eligible pre-requisite Building Science courses (in-person, online, or asynchronously) must be delivered based on the concepts within the CHBA Builders' Manual. The course is available on CHBA's e-Learning platform or delivered via a Qualified Net Zero Service Organization and have an exam to confirm the students understanding of the course learning objectives. It is up to the discretion of CHBA and/or the CHBA Qualified Net Zero Service Organization, to determine if the pre-requisite is met at time of student's registration in the Net Zero Builder Training course.

CHBA Builder Members who successfully complete this training, have labelled their first home under the CHBA Net Zero Home Labelling Program, and have registered with the CHBA, can promote themselves as a CHBA Qualified Net Zero Builder and will be promoted to home buyers at www.NetZeroHome.com. Upon successful completion of the Net Zero Builder Training or Net Zero Renovator Training, builders can promote themselves as Trained Net Zero Builder and or Renovator as they work towards receiving the "Qualified" designation.

The Net Zero Builder Training is an advanced level course. Understanding Building Science is a necessary foundation for participants to succeed in this course.

When / Where / Cost

This course is available through CHBA's National e-Learning platform 24/7/365 or through a CHBA Qualified Net Zero Service Organization (SO).

Training dates, locations, costs, rebates and registration links are posted at www.chba.ca/net-zero-training

Questions?

Contact <u>Colin Bayne</u>

For more information on the Net Zero Home Labelling Program visit www.chba.ca/nze.

For more information on all Net Zero training and events visit www.chba.ca/net-zero-training/