INTERNAL

CAHPI Conference

November 14 – 16, 2025

TRAINING SESSION – Friday Nov. 14th, 2025
9:00 am – 12:00pm

Understanding insulation and air sealing is critical for identifying energy efficiency opportunities, spotting potential issues, and communicating value to clients. In this 3-hour interactive session, Andy Cockburn, Senior Director of Education and Impact at NAIMA Canada, will walk you through the key components of high-performance building envelopes, drawing from NAIMA Canada's national flagship training program.

Tailored for property and home inspectors, this session will enhance your knowledge of:

- *Modern insulation practices,*
- *Energy retrofit and renovation,*
- *Common installation errors, and*
- *How insulation and air sealing contribute to building durability, occupant comfort, and energy performance.*

This interactive session will include access to NAIMA Canada resources and training.

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LESSON OVERVIEW:

THE STORY: Taking Canada's new and existing buildings to high-performance energy efficiency.

PART 1: History of Residential Buildings – How did we get to where we're at now? (40 MIN)

PART 2: Building Science 101 (40 MIN)

BREAK: 15 minutes (*Break into 5-minute pauses between each section?*)

PART 3: Modern application of Insulation – Code and Beyond (40 MIN)

PART 4: Resilience and Carbon (40 MIN)

RESOURCES:

- NAIMA Canada pictures and drawings, notes from online courses and teaching materials – Andy Cockburn
- CHBA Renovator's Manual – Gary Sharp
- Cold Climate Building – Joe Lstiburek

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LESSON PLAN

THE STORY: Taking Canada's new and existing buildings to high-performance energy efficiency – What, Why, How and When did we get where we are today?
THEME: How will these changes affect building inspectors and the industry?

PART 1: History of Residential Buildings (40 MIN)

Styles, materials and elements of construction common to each era.

- PRE-1940's
- POST-WAR – 1940's – 1970's
- OIL CRISIS – 1970's – 1980's
- UP TO MODERN – 1980's to Present

PART 2: Building Science 101 (40 MIN)

- Three focal points – HEAT, AIR and MOISTURE
- Physics - Behaviour of heat, air and moisture in buildings – how they move and what affects their movement
- Problems with poorly managed heat, air and moisture
- Programs to standardize the application of building science – R2000, Energy Star, Passive House and Net Zero.
- Energy Retrofits

BREAK: 15 minutes (*Break into 5-minute pauses between each section?*)

PART 3: Modern application of Insulation – Code and Beyond (40 MIN)

- Crash course on codes – from National to Provincial and Municipal
- Energy Efficiency in Code – Prescriptive and Performance
- Climate Data and Thermal Requirements Tables
- Effective R-Value of assemblies
- Future of Codes? Energy Tiers

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PART 4: Resilience and Carbon (40 MIN)

- Climate Events and Resilient Buildings / Infrastructure
- Operational Carbon and Embodied Carbon – measurement of carbon in buildings, reduction of emissions
- Where to find information on carbon? MCE^2 (NRCan), BEAM Estimator (BFCA), EPD's, Life Cycle Assessments
- Carbon Steps in Building Code

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