



BTZx Engagement & Action Report

Climate Training Showcase

MAY 2025



ACKNOWLEDGEMENTS

The action accelerator series is supported by funding from Nova Scotia's Department of Energy through their Training Strategy Fund and led and managed by Building to Zero Exchange (BTZx). We also acknowledge The Nova Scotia Community College for their development of the Climate Literacy curriculum



The Context

A graphic on the left side of the page features a dark green background with a lighter green, stylized illustration of several buildings of varying heights and shapes, some with rectangular windows, creating a modern architectural feel.

The Building to Zero Exchange (BTZx) is dedicated to increasing Nova Scotia's capacity for net-zero energy building through collaboration amongst the building industry, government, civil society organizations, and educational institutions.

BTZx is helping to reshape the building sector by accelerating action, building capacity, and enabling conditions. The ultimate goal is to lessen our impacts on the climate through reduced GHG emissions – with the lifetime energy affordability and green job creation benefits that comes with this form of climate action.

We are also in the midst of evolving building codes in Nova Scotia. The province adopted the 2020 National Building Code (NBC) on April 1, 2025, which also includes the National Energy Code of Canada for Buildings (NECB) 2020. This helps fulfill Nova Scotia's commitment to the Pan-Canadian Framework on Clean Growth and Climate Change.

For energy use in new buildings, there are two key code models: 1) the NECB 2020, which is the standard for commercial, institutional, and high-rise residential buildings; and 2) Section 9.36 of the NBC exclusively for low-rise houses and small buildings.

The NECB 2020 targets to be implemented in Nova Scotia are:

- ▲ **Tier 1: Adoption of NECB 2020**
- ▲ **Tier 2: 25% energy savings compared to the Tier 1 baseline**
- ▲ **Tier 3: 50% energy savings compared to the baseline**

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All current building codes focus on new construction and operate on a 'going forward' basis, meaning that structures built under old codes don't have to meet new code requirements unless they are undergoing major alterations or renovations. However, newer NBC and NECB codes are planned for release in 2025, with three key energy additions:

- **Operational GHG targets**
- **Stronger energy compliance pathway**
- **Enhanced retrofit standards for existing buildings**

When green building codes are recognized as pathways to ensuring market advantage, then we can view codes as impactful tools for an industry that is a critical part of climate change.

As the building sector prepares for these new building codes in particular – and for greener builds overall – several critical gaps have been identified. There are gaps in capacity, knowledge, and climate literacy. BTZx has a role to play in enhancing the knowledge of whole-building energy performance and strengthen the connections between buildings and climate change solutions.

Nova Scotia is fortunate that building code courses are increasingly being offered across the province, such as those offered by the Construction Association of Nova Scotia (CANS) and BTZx in collaboration with other key players in the green building space. These initiatives are in step with the Exchange's mandate to Build Knowledge and Build Capacity...in order to Build to Zero.





The Presentations

Recognizing the critical role of education in achieving sustainable building practices, BTZx has collaborated on two key training courses:

1. Training on Section 9.36 of the 2020 National Building Code – developed with the Nova Scotia Building Officials Association (NSBOA).

2. Climate Literacy for the Building Sector – a pilot course developed with the Nova Scotia Community College.


On March 19, 2025, around 20 BTZx members, stakeholders and rightsholders, and interested members of the building community came together to hear more about the NBC training and get an in-depth look into the new Climate Literacy Training course now available to professionals across the building sector.

This climate literacy training was created for architects, engineers, technicians, construction managers, tradespeople, and building managers. The training helps ensure that industry professionals understand the implementation of sustainable building techniques, reduce emissions, and adapt to evolving regulations.

National Building Code Section 9.36 Training – NSBOA and BTZx

This is a three-day, nine-module ‘micro-credential’ course (with exam) that aims to help the building sector including building officials confidently navigate new energy standards and ensure compliance.

Created and facilitated by industry experts with teaching and code compliance experience, the well-received in-person training was offered in seven locations across Nova Scotia between January and March 2025. An on-demand, asynchronous, online version of the course will soon be available through NSBOA’s website.



Each module features real-world scenarios and common problems, allowing the participants to apply the course concepts to their day-to-day responsibilities. The course includes a review of compliance checklists and quick check tools customized to Nova Scotia's context, featuring examples drawn from the region's unique architectural styles and vernacular.

The nine modules are:

- | | |
|-------------------------------------|---|
| 1. Building Code basics | 6. Mechanical and electrical |
| 2. Compliance paths | 7. Trade-offs |
| 3. Envelope building science | 8. Energy Models and performance path |
| 4. Thermal requirements | 9. Tiers and the evolution of the National Model Codes |
| 5. Air tightness | |

Climate Literacy for the Building Sector – NSCC and BTZx

Originally created by the Nova Scotia Community College in collaboration with BTZx, BTZx is now expanding this training for the broader building industry. The four learning outcomes for the course include:

- 1. Outline how our climate will change in the coming decades.**
- 2. Identify how climate change affects people at home and at work.**
- 3. Explain how the construction industry contributes to climate change based on national guidelines for whole-building life cycle assessment.**
- 4. Explain how the construction industry is adapting to climate change based on national model codes and high-performance building standards.**

The outline of the course – and some key info – was presented in a test form on March 19 to the participants of the BTZx action accelerator event. The course explores both mitigation (actions that reduce emissions) and adaptation (action that manage the risks of climate change impacts).



Other key topics covered in the course include:

- ▲ Impacts of climate change on the built environment - *Nova Scotia has some of the oldest infrastructure in the country, and we will see damage to older infrastructure (e.g., roads, houses, power generation stations), as well as coastal infrastructure.*
- ▲ Financial impacts of climate change
- ▲ Buildings and climate change - *the built environment generates 40% of annual global CO2 emissions.*
- ▲ Embodied carbon
- ▲ Whole building life-cycle assessments
- ▲ Nova Scotia's climate change plan
- ▲ High performance buildings
- ▲ Changes to National Building Codes – *including an in-depth look at the difference between building codes and energy codes*
- ▲ Prescriptive vs Performance pathways to energy code compliance
Voluntary building standards – *R-2000, Zero Carbon Building, Passive House, LEED*



The Conversation

Climate Literacy for the Building Sector – NSCC and BTZx

Following the presentations, the guests were invited to offer feedback and answer a few strategic questions. Key points are listed under each question below:

1. *What's needed for industry uptake and buy-in for this type of training?*

Better marketing and promotions: Targeted promotional messaging to different audiences. Some audiences are enticed by the environmental angle, while others by the affordability and saving money arguments.

Industry Champions: Find and support champions in the industry committed to advancing this work.

Training Requirements: Encourage green building tendering entities to request that applicants have participated in climate literacy training.

Training Integrating: Collaborating with other educators in adapting climate literacy training into other training opportunities. This includes sector-related opportunities such as those offered by CANS, HRAI, CEIT, ASHRE, etc., as well as some outside of the building or environmental sectors (e.g. Impact Organizations of Nova Scotia).

Indigenous Collaboration: Work with specialist to adapt training to cultural context of Indigenous communities.

Expand Reach:

- Offer training to civil society groups outside of the building industry (e.g., Seniors for Climate, Clean Leaders program, etc.).
- Expand the definition of building sector and offer adapted versions of training to related industries (e.g. real estate industries' professional development).
- In partnership with Efficiency Nova Scotia, offer this training to organizations already accredited with them as Efficiency Preferred Partners (EPP).

2. Who is missing from the key audiences we want to deliver training to?

In general, the makeup of the 'building sector' is well known. Participants at the BTZx action accelerator event were asked 'who might be missing?'

- HRM's building team.
- Housing co-ops.
- Atlantic Concrete Association.
- Managers and staff of the provincial department of public works
- Indigenous organizations (such as UNSM, CMM and Native Council of NS).
Building operators.
- Building designers and architects.
- Financiers (as one person said, "We can dream big, but I've seen lots of sustainability projects fall apart once the finance guys show up.").
- Real Estate agents.
- Landlords.
- Asset managers.
- Banks and Credit Unions.
- CEO Climate Charter participants.

3. What does success look like for this training?

- Positive exit surveys and evaluations.
- 6-month or 1-year follow-up surveys – what has changed, has there been shifted perspectives.
- Voluntary uptake of higher energy tiers ahead of NS schedule.
- Invitations to offer training at more events and through more channels.



4. What are we missing in terms of topics to discuss through education?

Finally, participants were asked if we are missing any key elements that should be explored through training opportunities.

- We need to spend more time developing plain language – what does net zero energy really mean? What does net zero carbon mean practically? There are too many often conflicting definitions being used.
- We need to build better understanding of ‘embodied carbon’ – how do we really pick better materials with less embodied carbon?
- We need a better understanding of the risk the affordability crisis has on both climate change and greener homes. We should better frame high performance buildings as a way to save substantial money over time.
- We need to tell better stories, offer more case stories (including on the projects that didn’t work), and find messaging that unlocks the interests of diverse audiences.
- Shift more of the conversations from what and how of building greener, to better include why. Why are energy codes changing in the first place? It’s more difficult to argue against the inherent why of greener builds if the underlining rationale is understood, shared, and internalized.
- Identify strategies to bridge divides in the public sector building space between the ‘construction side’ and the ‘operating side’ of new public builds. In reality two sides of the same coin, they often operate with two separate budgets and separate budget limitations.

