

INTERIM PROJECT REPORT  
FEBRUARY 2024

# BUILDING IT GREEN



WITH CANADA'S BUILDING TRADES UNIONS

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CLIMATE LITERACY TRAINING FOR TRADESPEOPLE, BY TRADESPEOPLE





# CBTU SMCC

CANADA'S BUILDING TRADES UNIONS  
LES SYNDICATS DES MÉTIERS DE LA CONSTRUCTION DU CANADA  
Value on Display. Every Day. Valeur sûre à tous les jours.

As Canada grapples with implementing systems and solutions to help support their aspirational goals of achieving a net-zero society by 2050, the Government of Canada is seeking projects to help move our national ambitions forward.

Research has identified that buildings and construction are among the three primary sources of greenhouse gas emissions, and as a result industry has been tapped to identify methods which can be implemented to achieve higher climate standards.

For Canada's Building Trades Unions, transitioning Canada's workforce to net-zero means bringing workers along for the journey and ensuring they receive the skills required to lead the change, without losing jobs critical to our economy.

Public policy is often the driving force for sustained change and we are proud to support this initiative as industry leaders to adopt high-performance environmental practices and bolster the skills required to lead the transition to net-zero.



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# Introduction

In 2021, Canada’s Building Trades Unions (CBTU) launched a four and a half-year long national project that integrates climate literacy into the skilled construction trades education and training. Funded by Employment and Social Development Canada’s (ESDC) Union Training and Innovation Program (UTIP), Building It Green is a national training program to strengthen the construction industry’s ability to support journeypersons, apprentices, and trades instructors as they manage the emerging and pressing needs of climate change. As Canada sets out to achieve its sustainability goals, Building It Green will play an integral role in bringing our country’s tradespeople along the journey.

The objective of this interim report is to provide an overview of the work completed on the Building It Green project from 2021 to 2023.

Building It Green will be available through CBTU’s 200 union training centres across Canada and disseminated to support our associated employer and contractor partners.



Funded in part by the Government  
of Canada’s Union Training and  
Innovation Program





# Building It Green Commitment

Working alongside our Advisory Committee comprised of Canada's Building Trades Unions' National Training Directors across Canada, Building It Green is the first climate literacy program of its kind to have been developed by tradespeople for tradespeople.



Ongoing collaboration with the union construction industry to develop and implement customized vocational education and training programs that address gaps in climate literacy and on-the-job skills related to sustainability.



Measuring the impact of climate literacy training for apprentices, journeypersons, and instructors on the application of green building practices, workplace performance, and culture.



Developing climate literacy training best practices that can be implemented to educate the construction industry across Canada.





# Our Team

Climate experts, trades trainers, industry professionals, and academics have combined their experience to develop content to support the construction and trade industries' workforce as they transition their skills to support low-carbon infrastructure projects.

## Canada's Building Trades Unions (CBTU)

### PROGRAM FACILITATOR AND PROJECT MANAGER

Canada's Building Trades Unions represents 14 affiliated national building trades unions, and over 600,000 tradespeople from coast to coast. Since its inception in 1908, CBTU has worked closely with industry stakeholders, employer partners, government, training institutions, and community organizations to recruit and train the most skilled craft workers found anywhere in the world.

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### NATIONAL TRAINING DIRECTORS – ADVISORY COMMITTEE

The project's Advisory Committee includes affiliate members of Canada's Building Trades Unions' and national training directors from coast-to-coast. Our Advisory Committee will act as expert advisors to guide and validate findings uncovered through research and provide input on curriculum development for trade-specific training.

### EXPERTS ON THE COMMITTEE INCLUDE REPRESENTATIVES FROM:

- Laborers' International Union of North America (LiUNA) Canadian Tri-Fund
- International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers
- International Association of Heat & Frost Insulators & Allied Workers (IAHFIAW)
- Sheet Metal, Air, Rail and Transportation Workers (SMART)
- International Union of Bricklayers & Allied Craftworkers (BAC)
- International Union of Operating Engineers (IUOE)
- National Electrical Trade Council (NETCO)/ International Brotherhood of Electrical Workers (IBEW)
- United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada (UA)
- Operative Plasterers' and Cement Masons' International Association of the United States and Canada (OPCMIA)
- International Union of Painters and Allied Trades (IUPAT)



# The Project Team

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## **THE CLIMATE INDUSTRY RESEARCH TEAM (CIRT) - PROVIDES THE ACADEMIC RESEARCH**

CIRT's academic researchers are from English Canada, Quebec, the United States, and Europe, with expertise in climate science, labour relations, apprenticeship, trades training, and low carbon construction. They draw on an extensive network of academic, government, employer and labour contacts to support the research program.

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## **SKILLPLAN - PROGRAM DESIGN AND DEVELOPMENT**

SkillPlan is a nationally recognized leader in workforce development programming. With over 30 years of experience, SkillPlan designs customized workforce development solutions to suit all needs, with assistance and supports from start to finish. SkillPlan serves 14 international building trades unions and their affiliated contractors and training providers, and numerous private and public technical training institutions.

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## **SOCIAL RESEARCH AND DEMONSTRATION CORPORATION (SRDC) - PROGRAM EVALUATORS**

SRDC is a not-for-profit research organization, with offices in Ottawa, Toronto and Vancouver, created specifically to develop, field test, and rigorously evaluate social programs. SRDC will be evaluating the effectiveness of implementing these national climate literacy tools within apprenticeship programming and journey person training.

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## PHASE 1

# Environmental Scan & Literature Review

Led by: Climate Industry Research Team (CIRT)

Phase 1 focused on assessing the current state of climate literacy in vocational education and training programs in trades schools across Canada, the United States, and Europe.

CIRT conducted interviews with groups responsible for overseeing and delivering training programs within their unions, including trainers, training directors, labour leaders, and organizers at all levels to gather insights around specific challenges experienced by the industry with regards to integrating climate literacy in vocational training.

Additional research has been conducted to better understand how countries outside of Canada have incorporated climate literacy into their curriculums for building workers within their jurisdictions. This has included background research, site visits to training facilities and discussions with unions, employers, government officials, and training instructors.

In addition to documenting the findings in each jurisdiction, CIRT has written specific research papers on a variety of issues including: defining climate literacy; providing examples of climate curriculum used in VET programs in Canada and internationally; analyzing the different approaches to VET in Europe, the U.S., and Canada; documenting one union's innovative energy audit program; outlining the critical role of the building trades in implementing net zero; and analyzing climate related material in the Red Seal Program.





# Public Policy and Research Are Driving Change

It is the findings of climate scientists that is driving public policy in Canada through climate related modifications to building and energy codes.

We identified several prominent themes during Phase 1:

- 1 ADDITIONAL EDUCATION AND TRAINING IS NEEDED** In most cases, climate literacy is either completely absent or included as a passing-mention within current curriculums.
- 2 CONNECTING THE DOTS** The climate-trade connection must be made much clearer so tradespeople can learn and incorporate climate informed knowledge, skills and competencies. Building It Green marries the ‘how’ of sustainable building with the ‘why’, to make this climate connection clear.
- 3 TRAINING AND EDUCATION ARE VEHICLES FOR CHANGE** Education and training play key roles in ensuring tradespeople are prepared for their role in the future low-carbon construction system. Getting the workforce ready for change is imperative.

## “We are teaching the how, but not the why”

During CIRT's research, a Trade Instructor highlighted that the current system provides apprentices and journeypersons with the knowledge, skills, and competencies for net-zero construction. However, the current training does not adequately link trades peoples role in addressing the climate crisis.



## PHASE 2

# Needs Analysis and Evaluation Framework

Led by: Social Research and Demonstration Corporation (SRDC)

Phase 2 of the project identified current and future needs for climate literacy training from the perspectives of various stakeholders.

The purpose of the needs analysis was to help shape and target the development of the content and delivery of the Building It Green training in Phase 3.

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We conducted the needs analysis in two stages:

### STAGE 1

#### "SUPERGREENS", APPRENTICES, AND JOURNEYPERSON

Leaders in the field of net-zero and sustainable construction, or “Supergreens”, were interviewed to better understanding the range of skills trades workers need for net-zero construction/high-performance building.

Focus groups with apprentices and journeypersons were conducted to assess the awareness, knowledge, and perceived relevance of climate change from the perspective of trades workers.

### STAGE 2

#### TRADES TRAINING DIRECTORS AND TRAINER INTERVIEWS

Our project team interviewed trades training directors and trainers to validate draft curriculum topics, identify effective delivery approaches, and gain a deeper understanding of the soft skills (e.g., collaboration and problem-solving) that trades workers need to be effective in implementing climate change-related knowledge and skills.





## We identified three prominent themes during Phase 2:

The themes identified have informed the Building It Green curriculum that will meet the evolving needs of our multi-generational workforce.

- 1 INTEREST IN CLIMATE KNOWLEDGE** The trades workers that we interviewed expressed an interest in learning more about how the construction sector can play a positive role in addressing climate change; however, it was recognized that the Building It Green training will need to apply a regional-lens to meet the diverse needs of our Canadian workforce.
- 2 HYBRID-DELIVERY MODEL** Our research identified that while in-class training is optimal, a hybrid learning model would allow for greater flexibility to meet the needs of the variety of different trades training models and approaches.
- 3 CONTEXTUALIZED LEARNING** The discussions made clear the importance of ensuring that the Building It Green training is grounded in the particular needs and context of each trade and that the material is integrated within the current trades training curriculum.

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## Evaluation Framework

SRDC has developed an evaluation framework which outlines a plan for understanding what is working well with program implementation and what can be improved, as well as the extent to which Building It Green has been successful in achieving its objectives. More specifically, the evaluation will examine how Building It Green contributes toward improved knowledge, skills, and attitudes related to climate change, and how these changes contribute toward greater culture change, employability, and climate consciousness in the construction sector (see figure 1).

The evaluation is structured around the following three evaluation criteria:

**IMPLEMENTATION** The extent to which program activities have been implemented as well as the quality, design, and management of the implementation of the project.

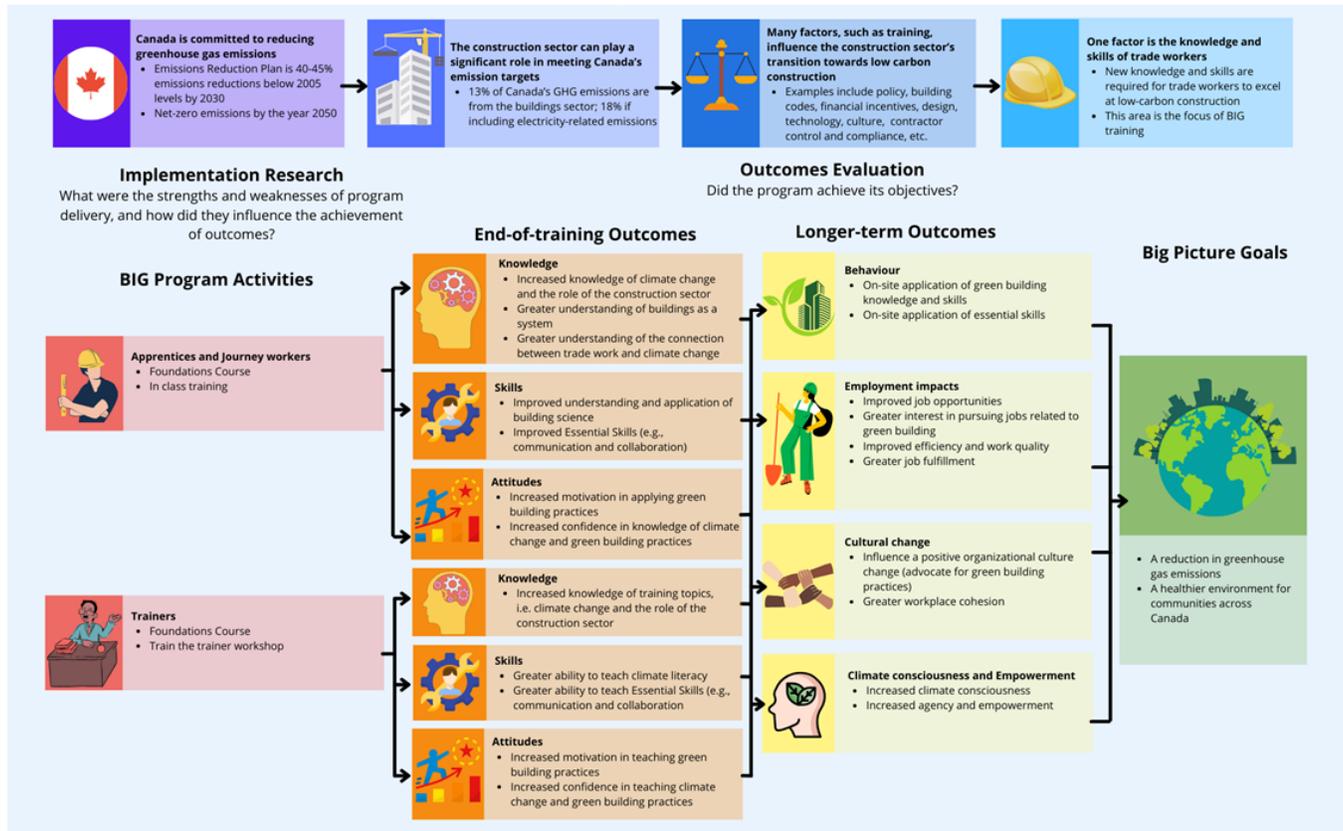
**REACH AND ENGAGEMENT** How well the project reached its desired population and the level of participation and engagement.

**ACHIEVEMENT OF OUTCOMES** Extent to which short and long-term results were achieved.



SRDC will be using a Theory of Change to identify indicators that will be used to measure progress towards the desired outcomes and long-term goals (see figure 1).

**FIGURE 1: THEORY OF CHANGE**



Methods to collect data will incorporate both qualitative and quantitative approaches.

**QUALITATIVE DATA** The qualitative data collection will involve discussions with training partners (i.e., unions and employers) and program participants (trainers, apprentices, and journeypersons) on what is working well and what could be improved in terms of how the training is being implemented. It will also aim to understand what participants have learned through their participation in the Building It Green training and how this may change the way they approach their work.

**QUANTITATIVE DATA** The quantitative data collection will focus on measuring trade workers' change in knowledge, skills, attitudes, and behaviours related to climate change.

**THESE FINDINGS WILL BE SUMMARIZED IN A PUBLICLY AVAILABLE FINAL REPORT.**



## PHASE 3

# Curriculum Development

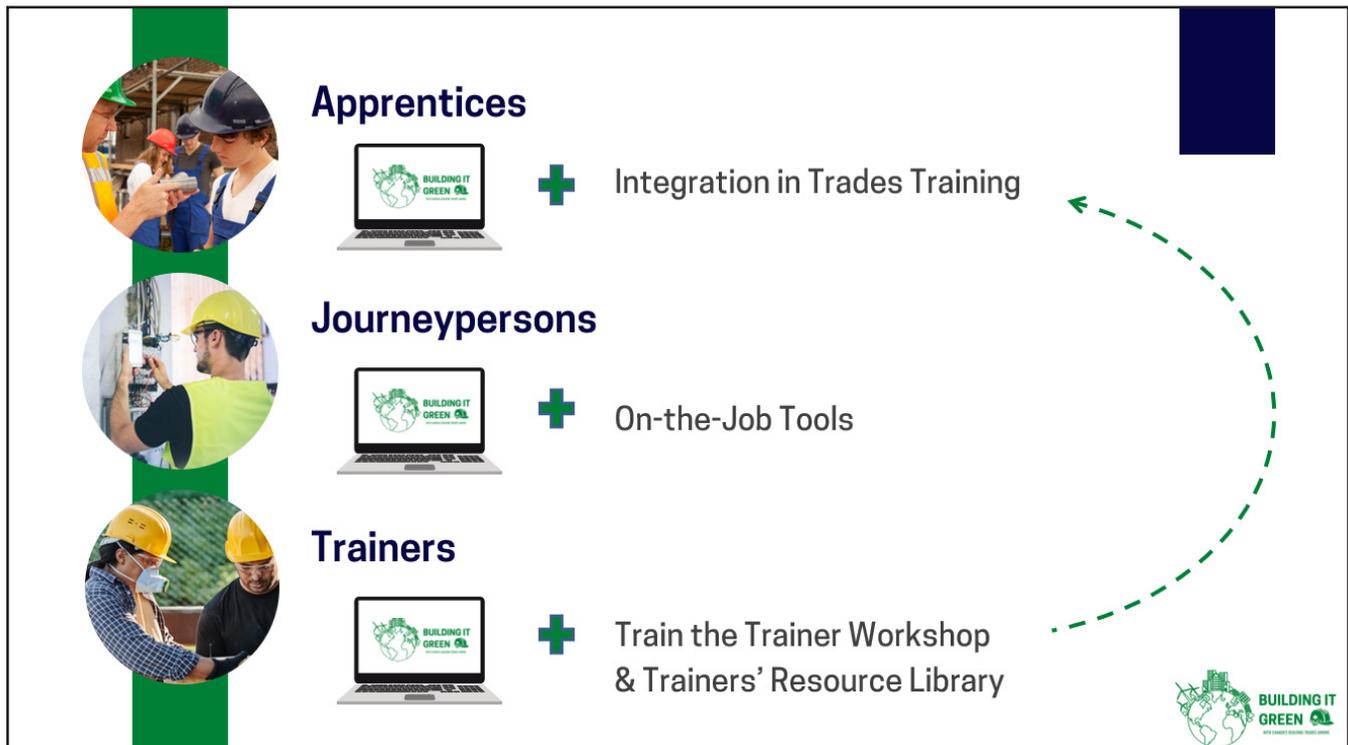
Led by: SkillPlan

Phase 3 focused on developing a climate-awareness module contextualized for the construction industry with additional trade-specific material. Combining key findings uncovered during Phase 2, trades trainers were identified as the ideal candidates to deliver this training to apprentices and journeypersons.

To ensure that trainers are equipped to deliver this content, SkillPlan designed a delivery model that lays a strong foundations of climate-awareness to all learners and connects the material to each trade.

Following the completion of our Foundations Course, trainers will take part in a Train-the-Trainer Workshop that will identify the various ways they can integrate climate literacy into their teaching (see figure 2), and finally, the curriculum will include On-the-Job Support to reinforce real-world application out of the classroom.

**FIGURE 2: PROPOSED DELIVERY METHOD**



Building It Green's training includes a Foundations Course, Train-the-Trainer Workshop where trainers will be provided with trade-specific resources for their classroom, and On-the-Job tools.



# Foundations Course

## 2.5HR - ONLINE SELF-DIRECTED

Developed by training instructors and directors across trades from coast-to-coast, this is an interactive online climate literacy course contextualized for the construction trades. Validated by the Advisory Committee, the Foundations Course lays the bedrock for what apprentices, journeypersons, and trainers need to know for sustained delivery on high-performance construction projects.

### KEY FEATURES INCLUDE:

- + Interactive questions, activities and videos
- + Workplace scenarios incorporating green building practices
- + Pop-up definitions for key terms
- + Links to references, follow-up information and research sources
- + Module quizzes and a final assessment
- + Certificate on completion

# Train-the-Trainer Workshop

## SINGLE DAY IN-PERSON WORKSHOP

Trades trainers will be given the tools they need to integrate climate literacy into their apprenticeship training modules to pass down sustainable skills required to support future tradespeople. Trainers will have the option to have a trade-specific focused workshop, or can deploy a flexible, mixed training model.

A library of trade-specific learning modules will be available for trainers to support their in-class delivery, including presentation slides, trainer notes, suggested activities and additional resources.

### IN THESE WORKSHOPS TRAINERS WILL:

- + Consolidate and deepen their knowledge of climate change
- + Build their awareness of green building practices in their trade
- + Identify areas to integrate climate literacy in apprenticeship training
- + Develop and practice strategies for teaching climate literacy in their lessons
- + Get tips for discussing climate change issues

# On-the-Job Support

## ONGOING, TRADE-SPECIFIC TRAINING

Support for those already working on a job site, including toolbox talks, job aids, and additional resources.

**NOTE: VALIDATION OF THIS MATERIAL IS TAKING PLACE WITH OUR ADVISORY COMMITTEE MEMBERS REVIEWING THE TRADE-SPECIFIC MATERIAL FOR ACCURACY AND CLARITY.**



# Next Steps

Materials are currently being developed to support an external launch of the project, slated for February 2024. A media announcement to amplify the project and highlight the first-of-its-kind holistic approach to sustainability training will be supported by the first public webinar to recruit union organizations interested in piloting the curriculum.

Following that, a second webinar will be hosted for organizations who express an interest in piloting Building It Green within their training.

And, towards the end of the project cycle – currently slated for September 2025 – a wrap-up report will be published which outlines project scope, results achieved, and a full assessment of the project’s intended goals.





## Conclusions

Our research identified a clear desire by the construction industry to gain a deeper understanding of how their work is critical to the greater sustainability cause. At the core of our training, we want to draw the linkage between the ‘how’ and the ‘why’ for our tradespeople with the intention of increasing job satisfaction, growing recruitment and retention efforts, and upskilling the unionized workforce.

The Building It Green training program will prepare tradespeople for current and future net-zero projects and will support through an evolution of practices designed to protect the environment help Canada build a sustainable future.

**THANK YOU**

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**CANADA'S BUILDING TRADES UNIONS (CBTU)**

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Visit our website to learn more!

[https://buildingtrades.ca/  
workforce-dev/building-it-green/](https://buildingtrades.ca/workforce-dev/building-it-green/)

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