



LEEP Technology Forums

MANUFACTURER CALL FOR APPLICATIONS

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1.0 Project Background

Who We Are.

Since 1943, the Canadian Home Builders' Association (CHBA) has been “the voice of Canada’s residential construction industry.” Representing one of the largest industry sectors in Canada, our membership is made up of some 8,500 companies – including home builders, renovators, land developers, trade contractors, product and material manufacturers, building product suppliers, lending institutions, insurance providers, and service professionals.

What We Do.

CHBA seeks a strong and positive role for the housing industry in Canada’s economy and in the life and development of our communities. In addressing this goal, we support the business success of our members. We work to ensure Canadians have access to homes that meet their needs at a price they can afford to pay, and that the interests of homebuyers and homeowners are understood by governments. And we provide information to Canadians to help them become more informed and confident when they buy a new home or hire a renovator to improve their existing one.

How We Work.

CHBA is one association working at three levels – nationally, provincially, and locally. Our members join a Local Home Builders' Association, and automatically become members at the provincial and national levels of the Association. Each level of the Association works with the government at their level. And because many housing issues involve multiple levels of government, we frequently collaborate to ensure a consistent approach towards real solutions that will benefit consumers.

CHBA is a federal not-for-profit organization governed by an elected Board of Directors and a volunteer executive, supported by our professional staff. At the national level, our system of Committees' and Councils brings together builders and industry experts from across the country to share information and ideas, and to formulate recommendations to governments to improve the quality and affordability of homes for Canadians.

What is LEEP?

Local Energy Efficiency Partnerships (LEEP) accelerates energy efficient construction by enabling builders and renovators to reduce their time and risk identifying, exploring, and adopting innovations in the residential construction industry. Initiated by Natural Resources Canada (NRCan) years ago, LEEP assists with bringing innovation into the market in a well thought-out and responsive way. LEEP is delivered regionally with the intention of establishing an ongoing critical mass of builders and renovators that can identify the best innovations suited to their region which can, in turn, pull through a responsive supply chain.

The results include:

- Energy savings for homeowners
- Competitive advantage for participating builders, renovators, and manufacturers
- Builder and renovator driven enhancement to local building practice

Builders and Renovators use LEEP to:

- reduce their time and risk in finding and trying innovations that can help them build/renovate homes to higher levels of performance - better, faster, and more affordably,
- use federal research results to inform their technology decision making, and
- pool their buying power regionally to make it worthwhile for manufacturers to address specific issues for builders and renovators.

CHBA'S Role in LEEP.

The CHBA has been supporting LEEP for more than 10 years and encourages its expansion because of its exceptional success in accelerating adoption and deployment of emerging technologies through its builder- and renovator-led model. It drives manufacturers to meet high-performance housing needs, helps local experts expand

their knowledge and share best practices, and brings regional builders, renovators, trades, energy advisors and building officials together to review options and streamline implementation of innovation.

The CHBA wanted to expand LEEP from an ad-hoc approach to a coordinated national delivery that included strategic markets across Canada. We now have an agreement with NRCan to deliver ‘best of’ LEEP Forums including those that take deep dives into specific technologies. The CHBA will be working closely with local and provincial Home Builders’ Associations to deliver this initiative. These events will include refinements to address local building conditions related to climate, construction practices, and codes. CHBA is also uniquely positioned to disseminate the results across the Canadian home building and renovation industries and will do so through its expansive network and communication channels.

More information can be found at www.chba.ca/LEEP.

2.0 Technology Forums

Codes and the way we build homes are changing; achieving higher performance levels, including net zero, requires new technologies and new design strategies. As provinces harmonize with the National Building Code, there are many questions that builders have around best practices and the building science related to the next frontier of energy efficiency and emissions. LEEP Technology Forums and Workshops are designed to provide builders with the critical information they require to reduce risk, innovate, and manage their time and cost investments.

These forums and technical workshops address specific industry challenges that are of interest to builders and renovators. They bring together industry experts, manufacturers, technical experts, and builders and renovators to analyze and explore technologies in real-time. Through these forums, builders and renovators will have access to manufacturers, identify opportunities to optimize their construction process, identify technologies that they would like to trial, and work with industry and technical experts to innovate and advance the industry.

The LEEP forums and workshops:

- 1) drive manufacturers to meet high-performance housing needs,
- 2) help local experts expand their knowledge and share best practices, and
- 3) bring together regional builders, renovators, trades, energy advisors and building officials to review options and streamline the implementation of innovative efforts.

Benefits to the construction industry

Changing codes affect the way builders and renovators design and construct homes. LEEP sessions showcase best practices to meet the changing codes with available technologies and products with industry subject matter experts.

- Technology Forums sessions bring critical decision makers, industry experts, and manufacturers together to accelerate knowledge transfer and facilitate innovation in an open and safe environment.
- Technology Forums put builders and renovators in the drivers’ seat for innovation by providing them with turn-key solutions to meet codes and voluntary programs.
- Challenges addressed through LEEP Technology Forums are generated and prioritized by builders and renovators; they’re designed to respond to industry concerns.

Manufacturer benefits from participation

Manufacturers that have been invited to participate in the forums to date, have:

- gained the attention of a room full of leading regional builders for 30-45 minutes (as they are talking about an application of their products that was selected by builders in the local HBA as being a particularly high priority)
- gained insight into what the broader home building industry specifically wants from the types of products and systems they produce
- developed presentation material that they have gone on to use with the broader market to better inform them of their services
- made modest innovations to products or support services to enable greater market pull through of their products immediately post events (some have managed to use LEEP to open new markets)

- used this concentrated industry feedback to enhance and de-risk their innovation plans.

When NRCan ran precursor LEEP Technology Forums on ad hoc basis, more than 20 manufacturers were invited to develop presentations and present at these events. All took up this opportunity, including many on a repeating basis. One manufacture declined the first time they were asked due to staff constraints but has since participated in 4 or 5 events.

Format

LEEP Technology Forums are designed to meet the expectations of the local industry while providing a platform that supports education, knowledge transfer, and industry networking. Technology Forums:

- are “big tent” events that bring home builders, renovators, energy advisors, technical experts and consultants, local authorities having jurisdiction, energy utilities, provincial agencies, and manufacturers together to review best practices and technical solutions.
- can be stand-alone (half or full day depending on the session) and can be modular (envelopes and mechanicals can be on the same day or split up).
- have networking opportunities built into the agenda to enable more engagement and conversations amongst attendees and participants.
- have attendance varying from 30 to over 100 participants. This is highly dependent on the participating HBA and region. In some instance some HBAs have combined efforts with surrounding regional HBAs to gather critical mass for attendance and to help where there’s limited capacity to deliver these forums.

Due to the emergence and introduction of supplier products, manufacturers invited to present at these events are encouraged to setup tables with additional literature and material samples to provide more information for the attendees, and this serves as an opportunity to setup further conversations.

Content

Content delivered through LEEP Technology Forums are primarily focused on solutions for building envelope and mechanicals, building science, and best practices.

Building Envelope Workshop Content

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| <ul style="list-style-type: none"> • Brief presentation positioning building envelopes within the evolving landscape of codes and programs. This presentation will introduce a regional base case home, and various energy performance scenarios to achieve tiers 3 and 4 of the NBC as well as voluntary programs such as CHBA's Net Zero Home Labelling Program. • NRCan high performance wall system building science and best practices presentation deck, presented by a regionally recognized envelope consultant, or building science expert. • Pre-vetted builder selected envelope manufacturer presentations focused on a best practice case study home application that has been costed and responds to a specific challenge set for manufacturers by builders representing HBAs across the country. | <ul style="list-style-type: none"> • Brief presentation positioning building envelopes within the context of energy efficient renovations and programs. This presentation will introduce a regional base case home, and various energy performance scenarios to achieve varying levels of energy reduction as well as voluntary programs such as CHBA's Net Zero Home Labelling Program. • NRCan high performance wall system building science and best practices presentation deck, presented by a regionally recognized envelope consultant, or building science expert. • Pre-vetted renovator selected envelope manufacturer presentations focused on a best practice case study home application that has been costed and responds to a specific challenge set for manufacturers by renovators representing HBAs across the country. |
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Mechanicals Workshop Content

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| <ul style="list-style-type: none"> • Brief presentation positioning the transition to low carbon HVAC within the evolving landscape of codes and programs. This presentation will introduce a regional base case home, and various energy performance scenarios and subsequent Heat Loss/Heat Gain (HL/HG) impacts of tiers 3 and 4 of the NBC as well as voluntary programs such as CHBA's Net Zero Home Labelling Program. • NRCan best practices presentation on low carbon HVAC sizing and design, presented by a regionally recognized HVAC design professional. • Pre-vetted builder selected HVAC manufacturer presentations focused on a best practice case study home application that has been costed and responds to a specific challenge set for manufacturers by builders representing HBAs across the country. <i>(Design parameters and load calculations will be provided to participating manufacturers in preparation for the forums.)</i> | <ul style="list-style-type: none"> • Brief presentation positioning the transition to low carbon HVAC within the evolving landscape of codes and programs. This presentation will introduce a regional base case home, and various energy performance scenarios and subsequent Heat Loss/Heat Gain (HL/HG) impacts of tiers 3 and 4 of the NBC as well as voluntary programs such as CHBA's Net Zero Home Labelling Program. • NRCan best practices presentation on low carbon HVAC sizing and design by a regionally. presented by a recognized HVAC design professional. • Pre-vetted renovator selected HVAC manufacturer presentations focused on a best practice case study home application that has been costed and responds to a specific challenge set for manufacturers by renovators representing HBAs across the country. <i>(Design parameters and load calculations will be provided to participating manufacturers in preparation for the forums.)</i> |
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3.0 Focus Technologies for This Year

When HBA led builder groups across the country selected the technologies they most wanted to focus upon at their LEEP forums, every one of them selected wall systems and mechanical systems. Interest in these two technologies far outpaced that for any others. As the CHBA expands ‘best of’ delivery, we are starting with these two areas of focus. As the market continues to change, we’re also bringing some new elements to them.

Wall Systems – New Housing

Builder groups across the country have wanted to focus on high performance wall systems that improved their thermal envelope, addressed potential moisture related issues, and local trades capacity. Builders must make substantive effort to adapt or change their wall system design and construction. Builders want to carefully select wall systems that they will want to continue using over time and that are adaptable to varying performance specifications.

Over the past 5 years, HBA led builder groups’ most requested presentations have been for split wall systems. For the two comparative manufacturer presentations at forums, they typically have wanted to compare an approach that includes a layer of exterior foam insulation with one that includes a layer of exterior mineral wool insulation.

They are interested in working with manufacturers that have thought through their full approach including moisture control, window installation, air sealing, and cladding attachment to name but a few.

To be eligible for the next stage of the selection process, manufacturers must make an exterior insulation product as part of their proposed solution. The product sold must be part of a system that the manufacturer supports that addresses issues like those mentioned above. The insulation itself can come in a form where it is applied alone or is already built into a sheathing product. The insulation product itself must comply with the CHBA Net Zero Home Labelling Program Technical Requirements.

Wall Systems – Retrofit Housing

HBA led renovator groups in London and British Columbia have wanted to focus their LEEP Forums on exterior retrofit solutions. These have again been split wall systems with a focus on foam and mineral wool sheathed approaches. They have also considered systems that included pre-sheathed exterior insulated panels.

To be eligible for the next stage of the selection process, manufacturers must provide an exterior insulation product as part of their proposed solution.

Mechanical Systems – New Housing

Builder groups across the country have wanted to focus on mechanical systems. In the past, large and spacious bungalows were a popular choice. Narrow single-family houses and stacked townhouses have since become more common. Taller homes with greater stack effect along with greater customer expectations can lead to comfort complaints. Revisions to the CSA F280-12 design standard made it clear that traditional heating equipment was not coming in small enough sizes to address market needs.

Builder groups across the country want to consider how best to adapt the traditional approach to distributing conditioned air. They also want to compare traditional market dominant and upwardly trending heating system equipment options. For this intake process, manufacturers must provide one or more of the following systems:

- hybrid furnace and heat pump
- hybrid combo system and heat pump
- heat pump

These choices are based on builder group selections through previous LEEP initiatives. In areas of the country not served by gas, all HBA lead builder groups have chosen to focus on centralized cold climate air source heat pumps. Builders felt that they already know enough about mini split options and wanted to use their LEEP events to better understand how they could best make use of centrally ducted systems.

In areas of the country served by gas, previous LEEP sessions have enable builders to compare furnaces and combination systems for a specific application. As the systems are built out, builder groups are more interested in learning about hybrid systems that also include a heat pump rather than hearing about air conditioners that they're already much more familiar with.

Mechanical Systems – Retrofit Housing

We're looking for the same range of solutions for retrofit housing. For the first stage of the manufacturer selection process, we're not differentiating between new and retrofit housing. The differences will become clear in the presentation challenges set for each during stage two of the selection process.

4.0 Application Guidelines

CHBA is currently accepting applications for manufacturer participation in LEEP Technology Forums.

The purpose of this call for applications is to solicit interest from various manufacturer member organizations, conduct a fair and extensive evaluation based on criteria listed herein, and select manufacturers who best meet the criteria and technology representation for participation in the LEEP Technology Forums being delivered across Canada.

This call for applications provides for an open and competitive process. The evaluation process will be fair and impartial, and all criteria will be carefully considered before selecting manufacturers for participation.

After this initial call, applications will be accepted on an on-going basis, with evaluations taking place annually.

All applications must be signed by an official agent or representative of the company submitting the application.

If the organization submitting an application must outsource or contract any work to meet the requirements contained herein, this must be clearly stated in the application, including a name and description of the organization(s).

The following schedule will be followed:

Aug 23 @ midnight ET	Applications are due <i>Email applications in PDF format to khadijah.parkes-blanc@chba.ca.</i>
Sep 3-13	Applications will be evaluated <i>Members of the LEEP Advisory Committee, Net Zero Council (NZC) Management Committee (MC), and the Technical Research Committee (TRC) Management Committee (MC) will participate in the evaluation process. If additional information is needed, the manufacturer will be notified during this timeframe.</i>
Sep 16-19	Manufacturers will be notified <i>Upon notification, CHBA will begin working with selected manufacturers to confirm participation in up-coming LEEP Technology Forum sessions. See Appendix A for schedule of LEEP Technology Forums for reference.</i>

Participation Costs

Manufacturers will self-fund their efforts preparing for and participating in the workshops. All applications must clearly describe/explain and itemize any costs/fees to participate in the LEEP Technology Forums and will be considered as in-kind considerations to the LEEP program.

Applications may be submitted for an individual LEEP Technology Forum or multiple LEEP Technology Forums. Participation will, however, be evaluated on an individual basis with regional and local builder/renovator preference.

Manufacturer Qualifications

The CHBA LEEP program is seeking manufacturers with a proven track record in market penetration, scalable technologies, and regional presence for the residential construction industry.

Must Haves:

- membership with a CHBA local, provincial or national association.

Experience in the following areas is considered an asset:

- have worked with related key stakeholders in this field (i.e., builders, renovators, energy advisors, service organizations, and for some manufacturers, utilities).
- have developed content-rich training, professionally branded slide decks and supplemental materials.
- have worked on efforts to increase industry adoption of energy efficient technologies and solutions.
- experience and participation in the LEEP program.

Manufacturers should provide the following items as part of their applications for consideration:

- description of experience in industry presentations. (List examples developed by your organization.)
- anticipated resources you will assign to this project. (Number of staff, roles/titles, experience.)
- project management methodology and any anticipated concerns with the project timelines.
- testimonials from past clients in related field of work.
- any additional suggestions/recommendations for the project based on your experience.

Application Evaluation Criteria

CHBA will evaluate all applications based on the following criteria. To ensure consideration, your applications should be complete and include all the following criteria:

Overall Suitability	Energy efficient technologies and solutions must meet the CHBA Net Zero Home Labelling Program Technical Requirements and be presented in a clear and organized manner.
Organizational Experience/ Previous Work	Include examples of their previous work pertaining to advancing energy efficiency, as well as industry training, market presence, and reliability/stability of the organization.
Track Record and Reputation	Past performance, client references, and reputation within the industry will be considered to gauge the manufacturer's credibility.
Staff Expertise and Experience	Manufacturers must provide descriptions and documentation of staff expertise and experience.
Ease of Adoption	How easily builders/renovators (from industry leaders to industry laggards) are able to adopt their energy efficient technologies and solutions, as well as end-user ease-of-use.
Product Quality and Innovation	Quality and innovation of the manufacturer's products. Include unique features, technological advancements, how well the products meet market demands, wow-factor.
Manufacturing Capabilities	Manufacturer's production capacity, scalability, availability, and ability to meet potential demand while maintaining product quality.
Compliance and Certifications	Include adherence to relevant industry standards, certifications, and regulatory requirements to ensure the products meet all necessary legal and safety guidelines.
Cost Competitiveness and Value	The proposed pricing will be compared with industry standards and competitor offerings to ensure it is competitive while maintaining adequate profit margins.
Supply Chain and Logistics	Efficiency in managing the supply chain, handling logistics, and ensuring timely delivery to guarantee smooth operations.
Sustainability and Environmental Impact	Commitment to sustainable practices, eco-friendly materials, and efforts to reduce environmental impact.
After-Sales Support/ Service and Warranty	Commitment to providing excellent after-sales support, warranties, and customer service.

Financial Stability	The financial stability and viability of the manufacturer will be considered to ensure long-term collaboration.
Fit with Market Requirements	How well the manufacturer's products align with the specific requirements of the targeted markets.
Capacity for Customization	The ability to accommodate customization requests from potential customers will be evaluated, as this can be a significant differentiator in certain markets.
Innovation Pipeline	Manufacturer's future plans for product development and innovation to gauge their long-term potential for collaboration.

Manufacturer Snapshot

Potential focus technologies in the future: The CHBA is using LEEP to support builders and renovators as they consider how best to move towards affordable, resilient lower energy construction. While the technologies for this year have been set as discussed below, manufacturers can propose other technologies for future consideration using a form provided as part of this package. We will bring your ideas together with those technologies suggested by member builders and renovators to support our industry in deciding where they most want to next focus our efforts through LEEP.

Focus technologies this year: This year's call for applications is specifically for manufacturers of 1) insulation and air sealing systems used in split wall assemblies for new and retrofit housing, 2) windows, and 3) furnaces, combined space and water heating systems, and air source heat pumps. Specifications for each type of system are contained in the Net Zero Home Labelling Program Technical Requirements Guide. The CHBA is starting with these technology areas as these are where HBA lead builder groups have repeatedly chosen to focus their collaborative efforts across the regions. The rationale for this is discussed further in Section 3.0, Focus Technologies for This Year.

Benefit of Selection: Builders and renovators use LEEP to make decisions on what they want to trial. In the past, manufacturers that have participated have felt it has helped them improve their craft and often want to participate again. Builders and renovators have collectively selected the challenges they most want to focus upon at their LEEP Technology Forums and need manufacturers to present their solutions. Manufacturers selected through this process will be placed in a pool from which local HBAs will select those they most want to present at their events.

Selection Process: The CHBA wants to make this simple. Read this backgrounder document. Complete the 2-page form provided to both prove eligibility and start discussing a few of your strengths. Once we have reviewed these, all that comply will be given a presentation template to respond to a common market challenge for builders or renovators, and a related rubric upon which you will be judged. You will also be invited to a web meeting where we can respond to any questions you may have. You will then have approximately six weeks to develop your presentation prior to delivering it to a panel of leading CHBA builders and/or renovators. This will be a friendly process and all manufacturers will receive constructive feedback. The top presenters will be placed in the pool from which local HBAs can draw.

Events this Fiscal Year: Builders and renovators and their HBAs want to proceed with events this fall. These events will go ahead with the inclusion of manufacturers that have previously presented at LEEP events based upon past ad hoc local HBA selection. As the CHBA scales up delivery of LEEP, we will be putting this more structured approach in place and will use the new short list of manufacturers for invitations to events thereafter.

Appendix A: LEEP Program Schedule

This fiscal year (April 1, 2024, to March 31, 2025), a minimum of 40 workshops will be delivered across Canada in collaboration with CHBA's local and provincial HBA's. The current schedule has been listed below; however, scheduling is subject to change. Any changes will be notified to you by CHBA's LEEP team.

HBA	Location	Session	Topic	Status	Planned Date
CBHA National	Mono, ON	Windows	New Build, Renovations	Delivered	17-Apr-24
HAVAN	Vancouver, BC	ASHP	New Build, Renovations	Delivered	10-Jun-24
GOHBA	Ottawa, ON	ASHP	Renovations	Delivered	18-Jun-24
Manitoba	Winnipeg, MB	Topic Pending	New Build, Renovation	Planning	Sep-24
Central Okanagan	Kelowna, BC	IDP and Code	Renovation	Planning	Oct-24
Nanaimo	Nanaimo, BC	ENV + MECH	Renovation	Planning	Oct-24
Yukon	Yukon	IDP	Renovation	Planning	Oct-24
Yukon	Yukon	IDP	Renovation	Planning	Oct-24
Sudbury	Sudbury, ON	Topic Pending	New Build, Renovation	Planning	Oct-24
Newfoundland & Labrador	St. John, NFL	Topic Pending	New Build, Renovation	Planning	Oct-24
Charlottetown	Charlottetown, PEI	Topic Pending	New Build, Renovation	Planning	Oct-24
Edmonton Region	Edmonton, AB	ENV + MECH	Renovation	Planning	Nov-24
Calgary Region	Calgary, AB	ENV + MECH	Renovation	Planning	Nov-24
Manitoba	Winnipeg, MB	ENV + MECH	New Build	Planning	Nov-24
Saskatoon	Saskatoon, SK	ENV + MECH	Renovation	Planning	Nov-24
Regina	Regina, SK	ENV + MECH	Renovation	Planning	Nov-24
Durham Region	Durham, ON	ENV + MECH	Renovation	Planning	Dec-24
Lethbridge	Lethbridge, AB	ENV + MECH	Renovation	Planning	Jan-25
Lethbridge	Lethbridge, AB	ENV + MECH	Renovation	Planning	Jan-25
Central Okanagan	Kelowna, BC	Embodied Carbon	New Build, Renovation	Planning	Jan-25
London	London, ON	ENV + MECH	Renovation	Planning	Jan-25
Wellington	Wellington, ON	ENV + MECH	Renovation	Planning	Jan-25
BILD GTA	Toronto, ON	ENV + MECH	Renovation	Planning	Jan-25
Durham Region	Durham, ON	ENV + MECH	Renovation	Planning	Jan-25
Manitoba	Winnipeg, MB	Topic Pending	New Build, Renovation	Planning	Jan-25
Manitoba	Winnipeg, MB	Topic Pending	New Build, Renovation	Planning	Feb-25
London	London, ON	Topic Pending	New Build, Renovation	Planning	Feb-25
Central Okanagan	Kelowna, BC	Topic Pending	New Build	Planning	Mar-25
Lethbridge	Lethbridge, AB	Topic Pending	New Build	Planning	Mar-25
New Brunswick	New Brunswick	Topic Pending	New Build	Planning	Mar-25
New Brunswick	New Brunswick	Topic Pending	New Build	Planning	Mar-25

Appendix B: CHBA Net Zero Home Labelling Program Technical Requirements

1. Technical Requirements: [CHBA-Net-Zero-Technical-Requirements-v1.4-Amended.pdf](#)
2. Indoor Air Quality Guidebook: <https://st.chba.ca/CHBADocs/CHBA/HousingCanada/NZE/CHBA-Net-Zero-Technical-Requirements-v1.4-Amended.pdf>

Appendix C: Challenge to Manufacturers: LEEP Technology Forum Presentation Content

Challenges will be issued to manufacturers as part of their application. Challenges for mechanical workshops will be developed in collaboration with NRCan and HVAC DC. Currently, there are two existing challenges that can be found [here](#).

Appendix D: Stage 1 Manufacturer Application

An application form must be completed with your submission. The application form can be located [here](#).