
ARE YOU READY FOR THIS?

YOUR MODERATERS ARE STILL

Lynne J Strickland,
Director, Initiatives, Net Zero Energy Housing, CHBA

Andy Oding,
Vice President, Director of Building Science, Building Knowledge Canada Inc.

NET ZERO READY MURBS

Affordable, Replicable and Marketable

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Our Net Zero MURB builders have shown that Net Zero can be done for mid-density projects. So, what are the paths that have been laid and what are the obstacles still to be overcome to allow for net zero construction to scale?

- **Brett Cass**, Technical Manager for CHBA's Net Zero Housing will give an overview of an exciting development in the Net Zero Home Labelling Program - the **Alternative Compliance path** to Net Zero Ready .

- **Sneha Bernard & Andy Oding** will highlight the **key outcomes of the LEEP workshop on ASHPs** to empower builders and renovators.

- For scaling, we need data and consistency. **Dave Silburn**, SHIFT Environmental, will join **Tyler Wilson** from SAIT to discuss their **Guide to Energy Monitoring.**

- **Sonja Winkelmann** will end the session with highlights from our growing educational and marketing offerings including support through our **Codes Acceleration Fund** initiative!

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AFFORDABLE, REPLICABLE, MARKETABLE NET ZERO MURBS

SUMMARY REPORT DATE: 06.01.2024

Prepared for: Natural Resources Canada and CHBA Membership
Prepared by: Marie Hanchet and Lynne Strickland, CHBA

Eds. David Silburn SHIFT Environmental Design, Andy Oding Building Knowledge Canada, D Satnik S2E, et al.

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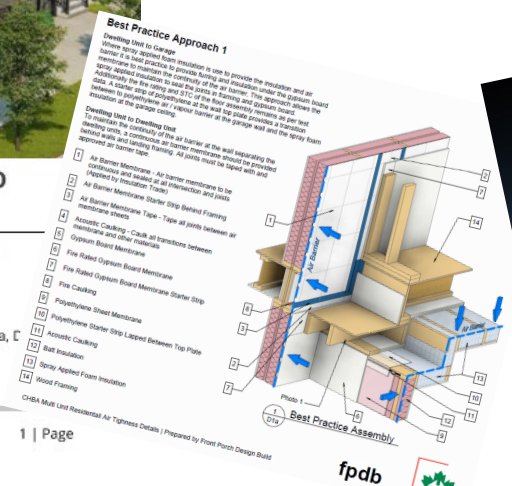
BUILDING ENERGY INC.

AIRTIGHTNESS TESTING OF ATTACHED HOUSES FOR VALIDATION OF AN ATTACHED ADJUSTMENT FACTOR

Prepared For:
CHBA

Prepared By:
MARK ROSEN, OAA, CACEA



COMING SOON JUNE 2024:

- NZ MURB Builder Profiles
- NZ MURB Final Report
- Building Energy Inc. MURB Airtightness Factors
- MURB Air Tightness Details
- MURB Data Monitoring & Analysis
- Energy Monitoring Decision Framework & Checklist
- NZ MURB Occupancy Survey

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FINAL EVENT SEPTEMBER 2024:

NET ZERO READY MURBS

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ARE YOU READY FOR THIS? What's next for scaling a Net Zero future.

Tyler Willson
Principal Investigator
Green Building Technologies

Dave Silburn
Owner
SHIFT Environmental Design

Brett Cass
Manager
CHBA Net Zero Housing

Sneha Bernard
Program Manager
BC Hydro

Sonja Winkelmann
Senior Director
CHBA Net Zero Housing

Tyler Willson
Principal Investigator
Green Building Technologies

Dave Silburn
Owner
SHIFT Environmental Design

Energy Monitoring & Net Zero Ready MURBS

Tyler Willson, David Silburn

Applied Research and Innovation Services (ARIS)

Green Building Technologies Access Centre (GBTAC)

&

SHIFT Environmental Design and Consulting Inc.

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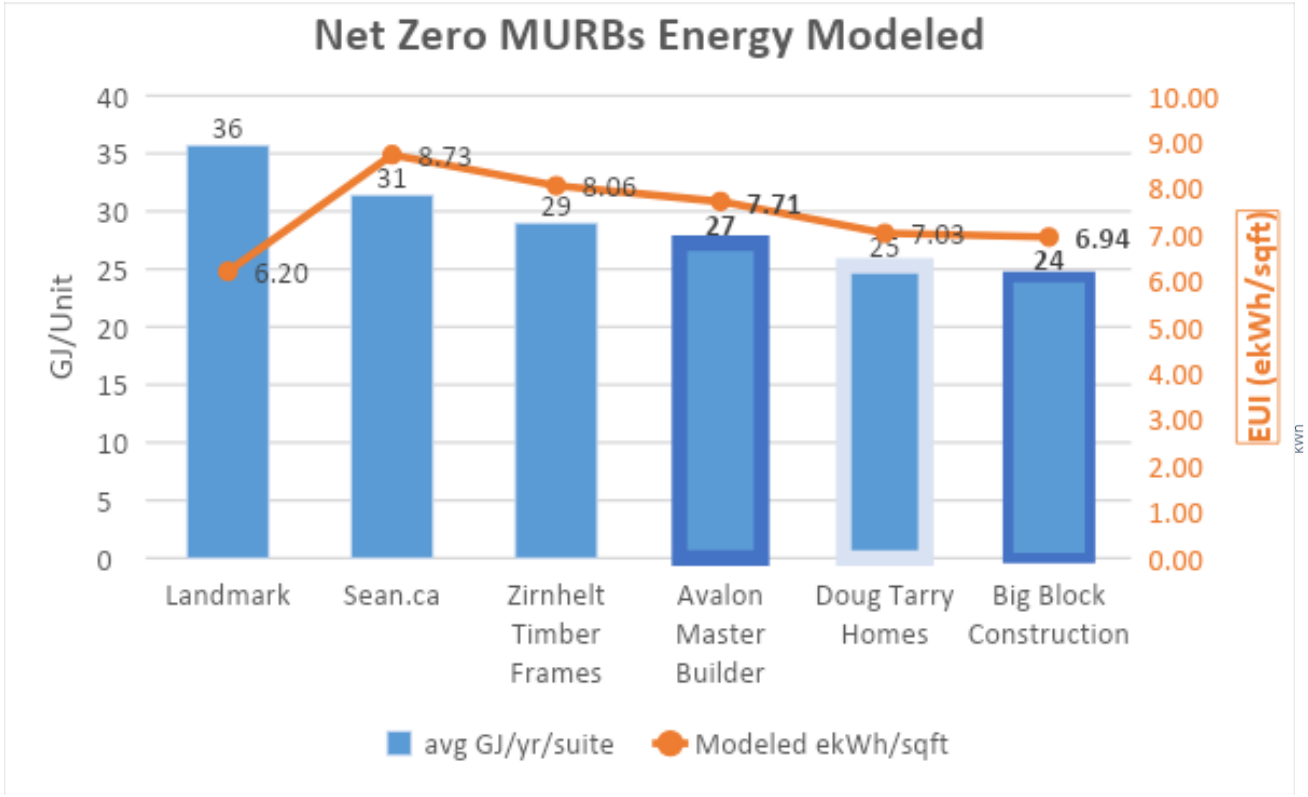

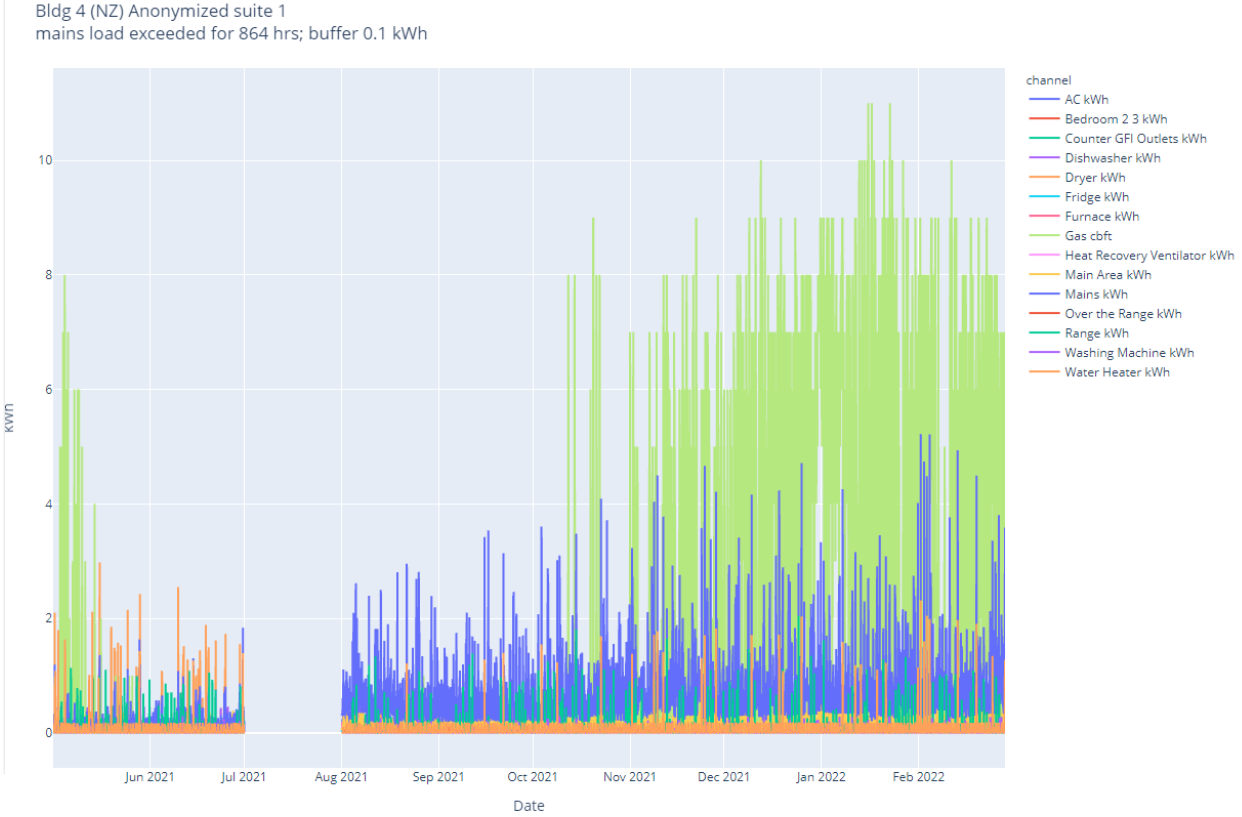

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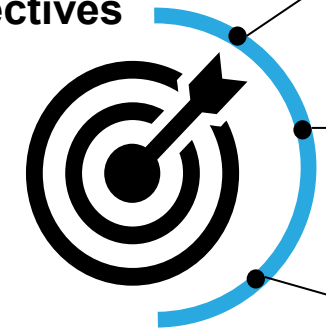
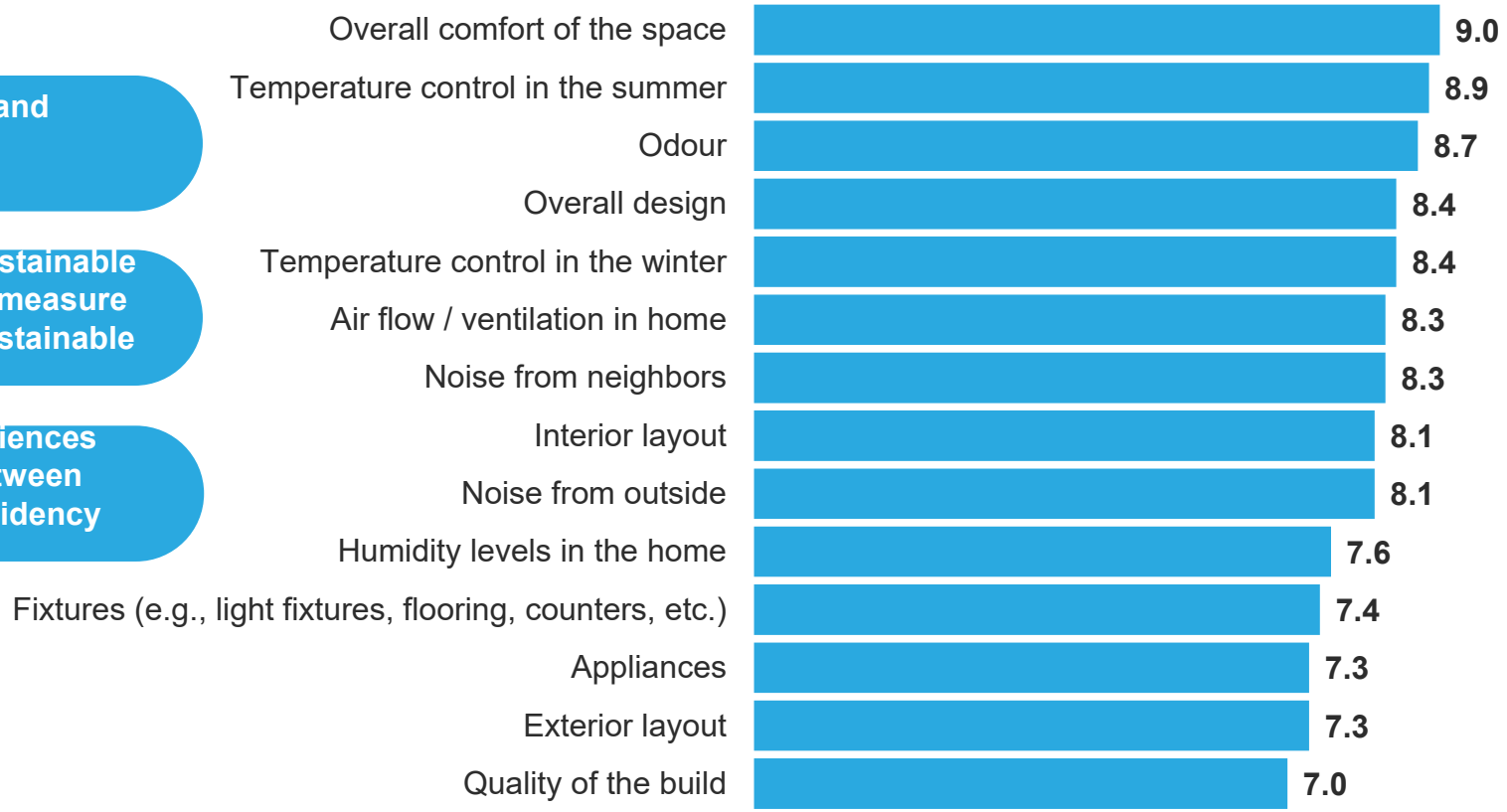
Objectives



- Conduct a survey to **understand occupant experiences and impressions** of MURBs
- Gauge the **importance of sustainable construction practices** and **measure interest in investment in sustainable technologies**
- Identify **differences in experiences and utility consumption between NZR units and previous residency units**

Unit Attribute Satisfaction Ratings (Average /10)



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Row %	Average Thermostat Set Point						
	18°C (64.4°F) or less	**18.5°C (65.3°F) - 19.5°C (67.1°F)**	**20°C (68°F) + 20.5°C (68.9°F)**	**21°C (69.8°F) + 21.5°C (70.7°F)**	**22°C (71.6°F) + 22.5°C (72.5°F)**	**23°C (73.4°F) or more**	**Do not have a set point / varies with the weather**
Summer, during the day	29%	0%	43%	14%	0%	14%	0%
Summer, at night	29%	14%	29%	0%	0%	14%	14%
Winter, during the day	14%	0%	43%	43%	0%	0%	0%
Winter, at night	29%	29%	14%	14%	14%	0%	0%

Noticeable differences between Current and Previous Home

I'm paying **smaller bills** because of solar panels.

Seems to be **cooler in the summer.**

This one **heats up faster** but takes **longer to cool down.**

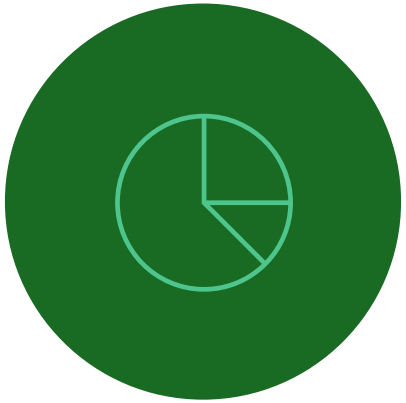
Temperature is a lot more consistent and even, **less prone to spikes and dips.**

Green Building Technologies Access Centre (GBTAC)

- *ENERGY:*
  - Renewable, alternative, and decentralized system
  - Sensor systems and building data management
  - Energy modelling
- *ENVIRONMENT:*
  - Architectural Ecology – Water conservation and management, sustainable site development
  - Environmental Science – Healthy buildings, Indoor air quality, Life Cycle Assessments (LCA)
- *BUILDING SCIENCE:*
  - Structural and thermal testing
  - Envelope design and commissioning
  - Material science
  - prototyping

Reasons for Energy Monitoring

PROGRAM

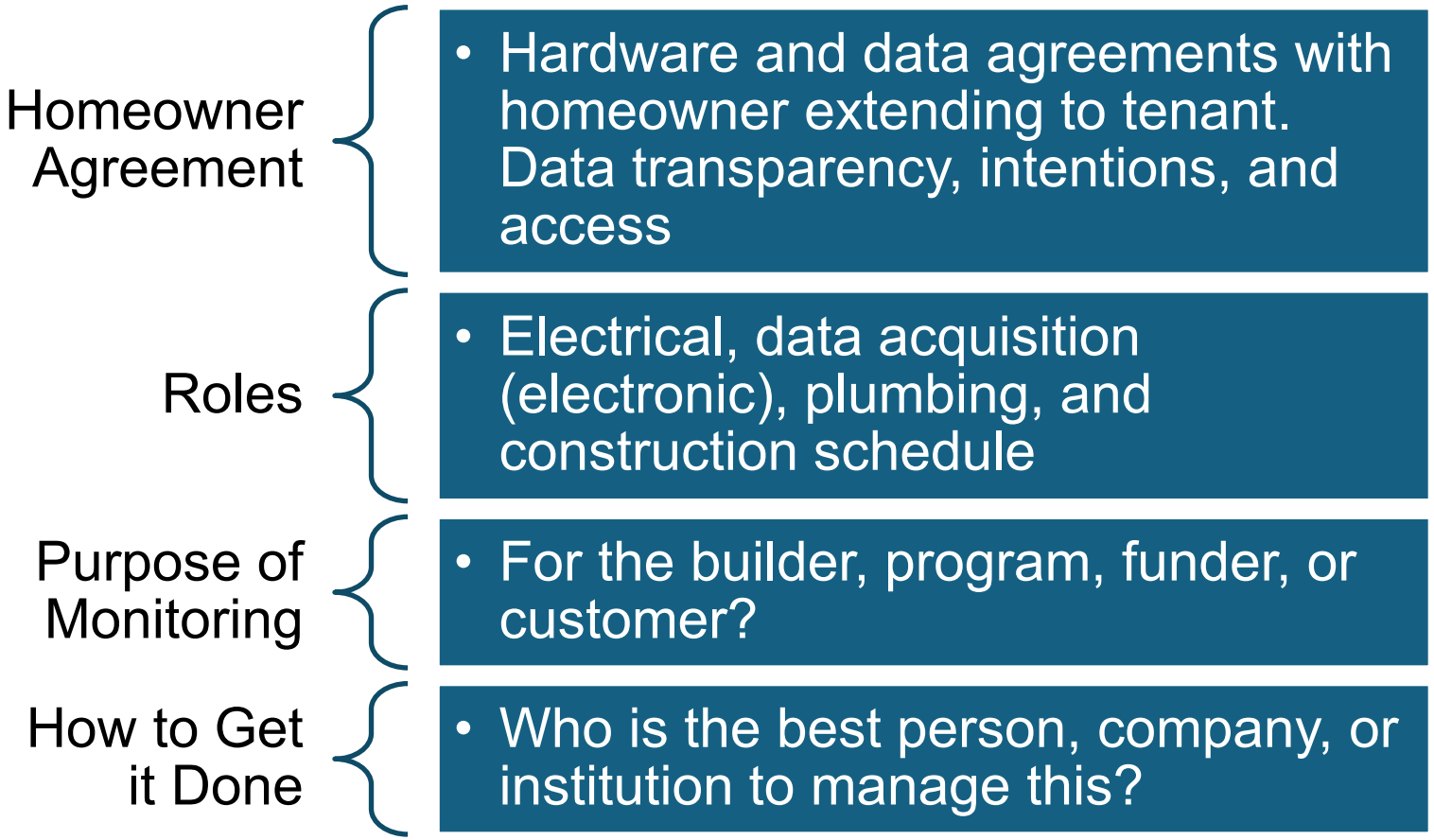


PERFORMANCE

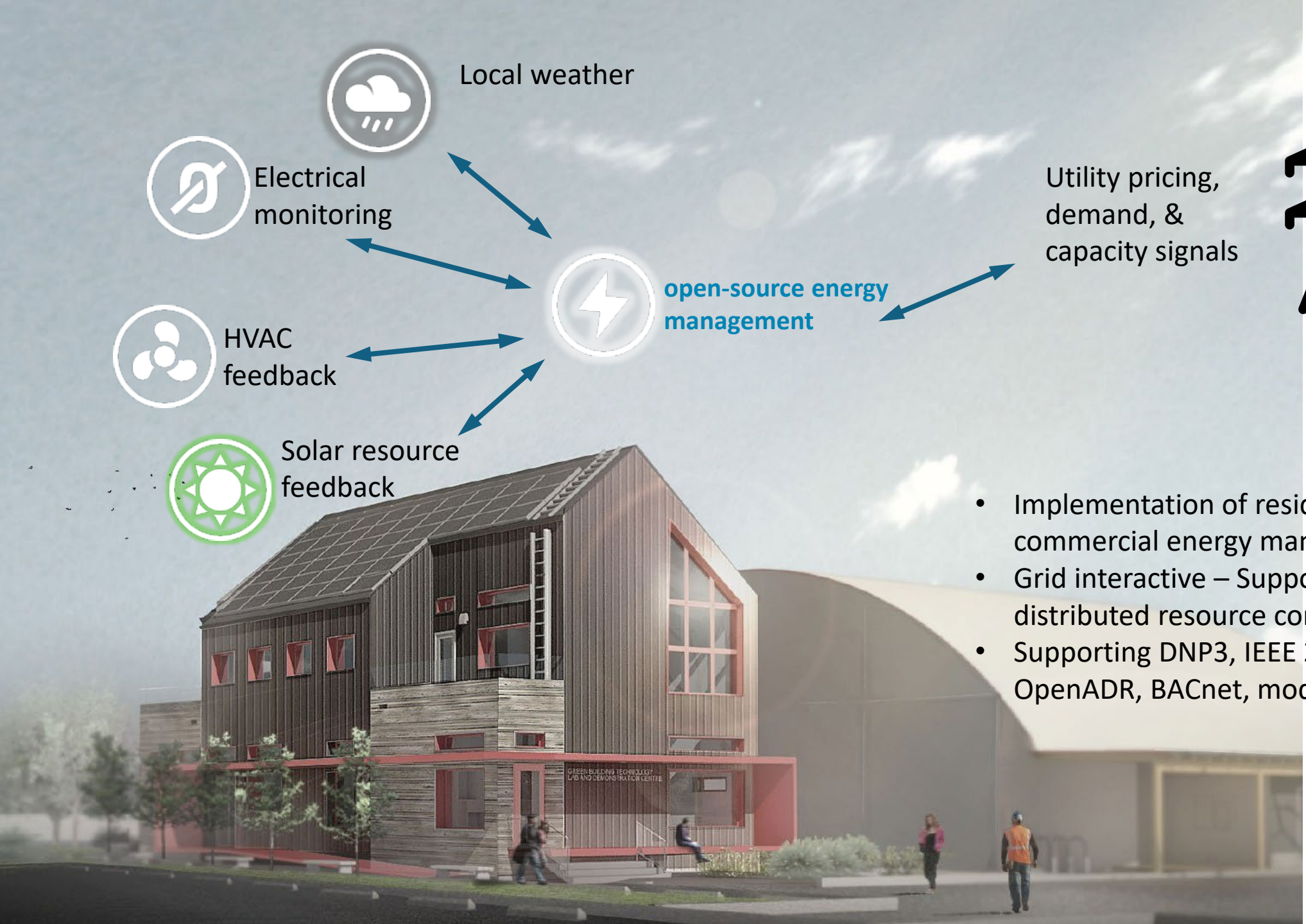
IMPROVEMENT

SAIT

Critical Path and Gaps



SAIT



- Implementation of residential and commercial energy management
- Grid interactive – Supporting distributed resource control
- Supporting DNP3, IEEE 2030.5, OpenADR, BACnet, modbus and more

Thank you

Tyler Willson, David Silburn

Applied Research and Innovation Services (ARIS)
Green Building Technologies Access Centre (GBTAC)
&
SHIFT Environmental Design and Consulting Inc.

CANADIAN HOME BUILDERS' ASSOCIATION
netzero home
LEADERSHIPSUMMIT

BRETT CASS
TECHNICAL MANAGER, NET ZERO HOUSING, CHBA

CHBA Net Zero Ready Alternative Compliance Path

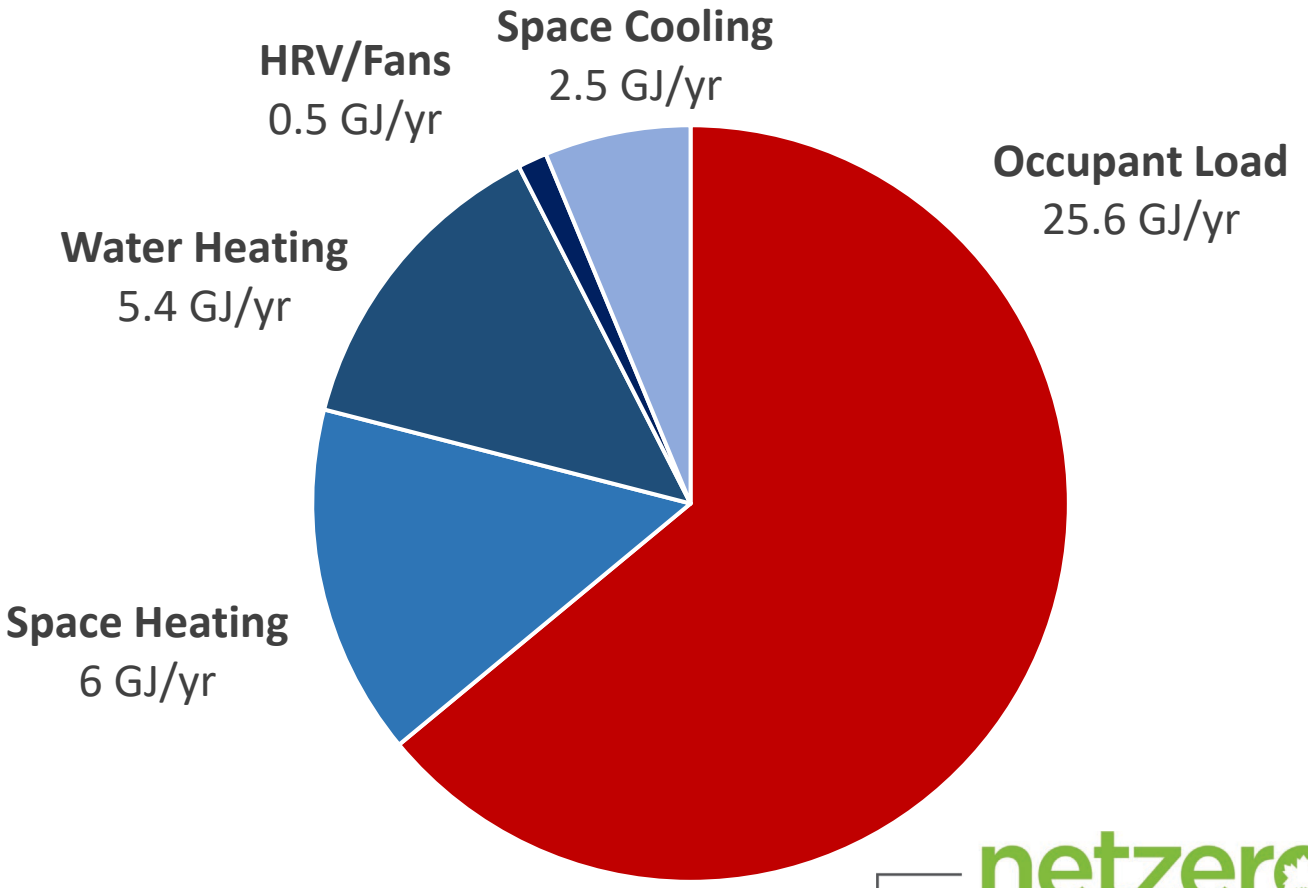
June 12, 2024

The Challenge

- Our current labelling criteria is very challenging to achieve for small, compact housing.
- The limitation today is the availability of space for on-site renewables.
- To enable the inclusion of these housing forms, an alternate approach was needed.

The Challenge: Tiny Home

- **Floor area:** 1,200ft^2 (112m^2)
- **Volume:** 11,700ft^3 (331m^3)
- **Storeys:** 1.5
- **Energy Consumption**: 40 GJ/year



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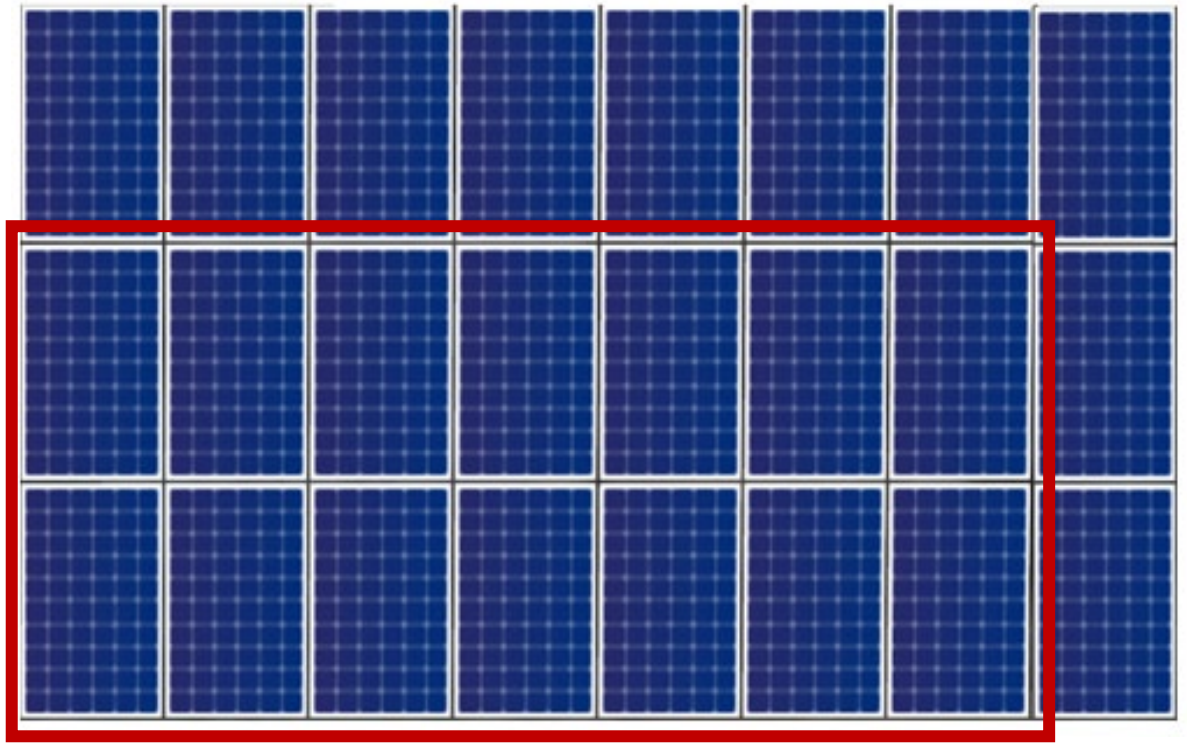
The Challenge: Tiny Home



- **Floor area:** 1,200ft^2 (112m^2)
- **Volume:** 11,700ft^3 (331m^3)
- **Storeys:** 1.5
- **Energy Consumption**: 40 GJ/year
- **Renewable Generation**: 23 GJ/year

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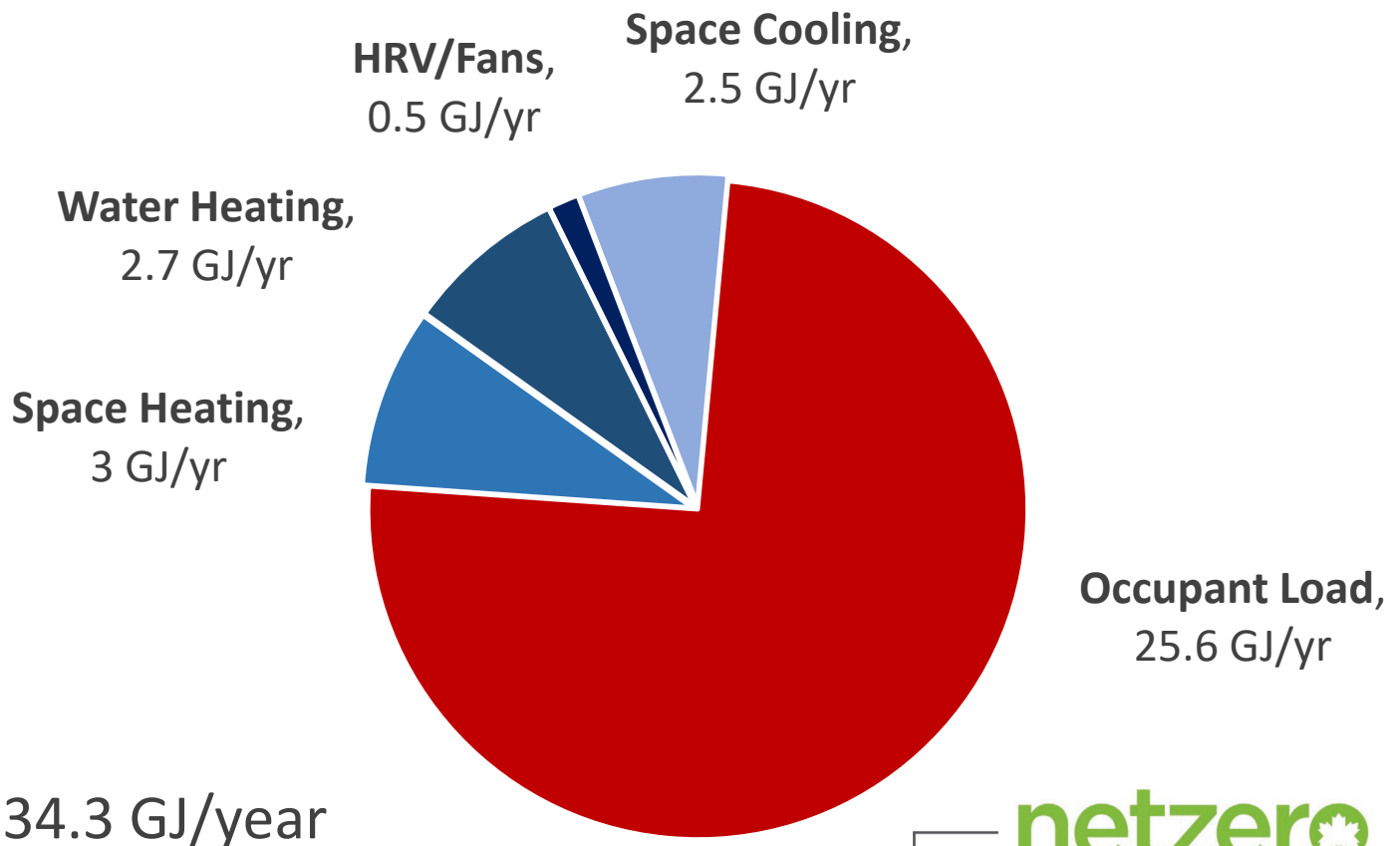
The Challenge: Tiny Home

- **Floor area:** 1,200ft^2 (112m^2)
- **Volume:** 11,700ft^3 (331m^3)
- **Storeys:** 1.5
- **Energy Consumption**: ~~40 GJ/year~~ 34.3 GJ/year
- **Renewable Generation**: 23 GJ/year



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Source: www.landmarkhomes.ca


Source: www.minto.com


Source: www.lanefab.ca


Source: www.streetsidecalgary.com


Source: www.empirecommunities.com


Source: www.activa.ca


Source: www.adaptivehomes.org


Source: www.landmarkhomes.ca


Source: www.brookfieldresidential.com

Net Zero Council Direction

Proud Member of:
Canadian Home Builders' Association
Net Zero Energy Housing Council

Develop 'Net Zero Ready' labelling criteria suitable for small, compact houses.

In doing so:

1. Maintain the technical rigour and stringency of the Program.
2. Maintain clear and concise labelling criteria.
3. Recognize and promote builders of smaller housing forms.

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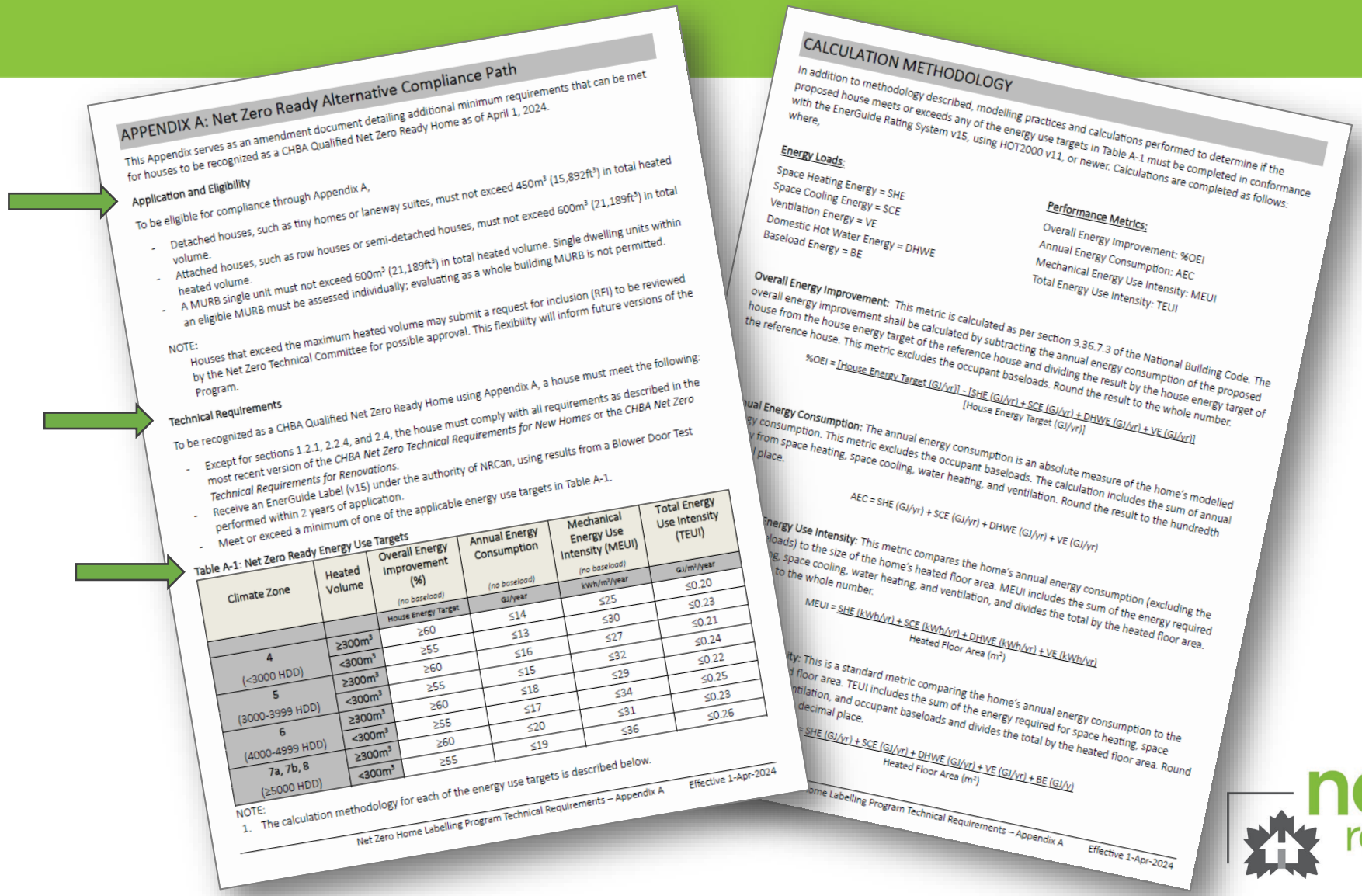
The Outcome – Appendix A



APPENDIX A: Net Zero Ready Alternative Compliance Path

This Appendix serves as an amendment document detailing additional minimum requirements that can be met for houses to be recognized as a CHBA Qualified Net Zero Ready Home as of April 1, 2024.

Application and Eligibility

To be eligible for compliance through Appendix A,

- Detached houses, such as tiny homes or laneway suites, must not exceed 450m³ (15,892ft³) in total heated volume.
- Attached houses, such as row houses or semi-detached houses, must not exceed 600m³ (21,189ft³) in total heated volume.
- A MURB single unit must not exceed 600m³ (21,189ft³) in total heated volume. Single dwelling units within an eligible MURB must be assessed individually; evaluating as a whole building MURB is not permitted.

NOTE:
Houses that exceed the maximum heated volume may submit a request for inclusion (RFI) to be reviewed by the Net Zero Technical Committee for possible approval. This flexibility will inform future versions of the Program.

Technical Requirements

To be recognized as a CHBA Qualified Net Zero Ready Home using Appendix A, a house must meet the following:

- Except for sections 1.2.1, 2.2.4, and 2.4, the house must comply with all requirements as described in the most recent version of the *CHBA Net Zero Technical Requirements for New Homes* or the *CHBA Net Zero Technical Requirements for Renovations*.
- Receive an EnerGuide Label (v15) under the authority of NRCan, using results from a Blower Door Test performed within 2 years of application.
- Meet or exceed a minimum of one of the applicable energy use targets in Table A-1.

Table A-1: Net Zero Ready Energy Use Targets

Climate Zone	Heated Volume	Overall Energy Improvement (%) (no baseload)	Annual Energy Consumption (no baseload)	Mechanical Energy Use Intensity (MEUI) (no baseload)	Total Energy Use Intensity (TEUI)
		House Energy Target	GJ/year	kWh/m²/year	GJ/m²/year
4 (<3000 HDD)	≥300m³	≥60	≤14	≤25	≤0.20
	<300m³	≥55	≤13	≤30	≤0.23
5 (3000-3999 HDD)	≥300m³	≥60	≤16	≤27	≤0.21
	<300m³	≥55	≤15	≤32	≤0.24
6 (4000-4999 HDD)	≥300m³	≥60	≤18	≤29	≤0.22
	<300m³	≥55	≤17	≤34	≤0.25
7a, 7b, 8 (≥5000 HDD)	≥300m³	≥60	≤20	≤31	≤0.23
	<300m³	≥55	≤19	≤36	≤0.26

NOTE:
1. The calculation methodology for each of the energy use targets is described below.

CALCULATION METHODOLOGY

In addition to methodology described, modelling practices and calculations performed to determine if the proposed house meets or exceeds any of the energy use targets in Table A-1 must be completed in conformance with the EnerGuide Rating System v15, using HOT2000 v11, or newer. Calculations are completed as follows:
where,

Energy Loads:

Space Heating Energy = SHE
Space Cooling Energy = SCE
Ventilation Energy = VE
Domestic Hot Water Energy = DHWE
Baseload Energy = BE

Performance Metrics:

Overall Energy Improvement: %OEI
Annual Energy Consumption: AEC
Mechanical Energy Use Intensity: MEUI
Total Energy Use Intensity: TEUI

Overall Energy Improvement: This metric is calculated as per section 9.36.7.3 of the National Building Code. The overall energy improvement shall be calculated by subtracting the annual energy consumption of the proposed house from the house energy target of the reference house and dividing the result by the house energy target of the reference house. This metric excludes the occupant baseloads. Round the result to the whole number.

$$\%OEI = \frac{[\text{House Energy Target (GJ/yr)}] - [\text{SHE (GJ/yr)} + \text{SCE (GJ/yr)} + \text{DHWE (GJ/yr)} + \text{VE (GJ/yr)}]}{[\text{House Energy Target (GJ/yr)}]}$$

ual Energy Consumption: The annual energy consumption is an absolute measure of the home's modelled gy consumption. This metric excludes the occupant baseloads. The calculation includes the sum of annual y from space heating, space cooling, water heating, and ventilation. Round the result to the hundredth l place.

$$AEC = SHE\ (GJ/yr) + SCE\ (GJ/yr) + DHWE\ (GJ/yr) + VE\ (GJ/yr)$$

nergy Use Intensity: This metric compares the home's annual energy consumption (excluding the loads) to the size of the home's heated floor area. MEUI includes the sum of the energy required g, space cooling, water heating, and ventilation, and divides the total by the heated floor area. to the whole number.

$$MEUI = \frac{\text{SHE (kWh/yr)} + \text{SCE (kWh/yr)} + \text{DHWE (kWh/yr)} + \text{VE (kWh/yr)}}{\text{Heated Floor Area (m}^2\text{)}}$$

ty: This is a standard metric comparing the home's annual energy consumption to the f floor area. TEUI includes the sum of the energy required for space heating, space ntilation, and occupant baseloads and divides the total by the heated floor area. Round decimal place.

$$= \frac{\text{SHE (GJ/yr)} + \text{SCE (GJ/yr)} + \text{DHWE (GJ/yr)} + \text{VE (GJ/yr)} + \text{BE (GJ/y)}}{\text{Heated Floor Area (m}^2\text{)}}$$

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The Requirements

APPENDIX A: Net Zero Ready Alternative Compliance Path

This Appendix serves as an amendment document detailing additional minimum requirements that can be met for houses to be recognized as a CHBA Qualified Net Zero Ready Home as of April 1, 2024.

Application and Eligibility

To be eligible for compliance through Appendix A,

- Detached houses, such as tiny homes or laneway suites, must not exceed 450m³ (15,892ft³) in total heated volume.
- Attached houses, such as row houses or semi-detached houses, must not exceed 600m³ (21,189ft³) in total heated volume.
- A MURB single unit must not exceed 600m³ (21,189ft³) in total heated volume. Single dwelling units within an eligible MURB must be assessed individually; evaluating as a whole building MURB is not permitted.

NOTE:
Houses that exceed the maximum heated volume may submit a request for inclusion (RFI) to be reviewed by the Net Zero Technical Committee for possible approval. This flexibility will inform future versions of the Program.

Technical Requirements

To be recognized as a CHBA Qualified Net Zero Ready Home using Appendix A, a house must meet the following:

- Except for sections 1.2.1, 2.2.4, and 2.4, the house must comply with all requirements as described in the most recent version of the *CHBA Net Zero Technical Requirements for New Homes* or the *CHBA Net Zero Technical Requirements for Renovations*.
- Receive an EnerGuide Label (v15) under the authority of NRCan, using results from a Blower Door Test performed within 2 years of application.
- Meet or exceed a minimum of one of the applicable energy use targets in Table A-1.

Table A-1: Net Zero Ready Energy Use Targets

Climate Zone	Heated Volume	Overall Energy Improvement (%) (no baseload)	Annual Energy Consumption (no baseload)	Mechanical Energy Use Intensity (MEUI) (no baseload)	Total Energy Use Intensity (TEUI)
		House Energy Target	GJ/year	kWh/m²/year	GJ/m²/year
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	<300m³	≥55	≤13	≤30	≤0.23
5 (3000-3999 HDD)	≥300m³	≥60	≤16	≤27	≤0.21
	<300m³	≥55	≤15	≤32	≤0.24
6 (4000-4999 HDD)	≥300m³	≥60	≤18	≤29	≤0.22
	<300m³	≥55	≤17	≤34	≤0.25
7a, 7b, 8 (≥5000 HDD)	≥300m³	≥60	≤20	≤31	≤0.23
	<300m³	≥55	≤19	≤36	≤0.26

NOTE:
1. The calculation methodology for each of the energy use targets is described below.

CALCULATION METHODOLOGY

In addition to methodology described, modelling practices and calculations performed to determine if the proposed house meets or exceeds any of the energy use targets in Table A-1 must be completed in conformance with the EnerGuide Rating System v15, using HOT2000 v11, or newer. Calculations are completed as follows: where,

Energy Loads:

Space Heating Energy = SHE
Space Cooling Energy = SCE
Ventilation Energy = VE
Domestic Hot Water Energy = DHWE
Baseload Energy = BE

Performance Metrics:

Overall Energy Improvement: %OEI
Annual Energy Consumption: AEC
Mechanical Energy Use Intensity: MEUI
Total Energy Use Intensity: TEUI

Overall Energy Improvement: This metric is calculated as per section 9.36.7.3 of the National Building Code. The overall energy improvement shall be calculated by subtracting the annual energy consumption of the proposed house from the house energy target of the reference house and dividing the result by the house energy target of the reference house. This metric excludes the occupant baseloads. Round the result to the whole number.

$$\%OEI = \frac{[\text{House Energy Target (GJ/yr)}] - [\text{SHE (GJ/yr)} + \text{SCE (GJ/yr)} + \text{DHWE (GJ/yr)} + \text{VE (GJ/yr)}]}{[\text{House Energy Target (GJ/yr)}]}$$

Annual Energy Consumption: The annual energy consumption is an absolute measure of the home's modelled energy consumption. This metric excludes the occupant baseloads. The calculation includes the sum of annual energy from space heating, space cooling, water heating, and ventilation. Round the result to the hundredth decimal place.

$$AEC = \text{SHE (GJ/yr)} + \text{SCE (GJ/yr)} + \text{DHWE (GJ/yr)} + \text{VE (GJ/yr)}$$

Mechanical Energy Use Intensity: This metric compares the home's annual energy consumption (excluding the occupant baseloads) to the size of the home's heated floor area. MEUI includes the sum of the energy required for space heating, space cooling, water heating, and ventilation, and divides the total by the heated floor area. Round the result to the whole number.

$$MEUI = \frac{\text{SHE (kWh/yr)} + \text{SCE (kWh/yr)} + \text{DHWE (kWh/yr)} + \text{VE (kWh/yr)}}{\text{Heated Floor Area (m}^2\text{)}}$$

Total Energy Use Intensity: This is a standard metric comparing the home's annual energy consumption to the size of the home's heated floor area. TEUI includes the sum of the energy required for space heating, space cooling, water heating, ventilation, and occupant baseloads and divides the total by the heated floor area. Round the result to the hundredth decimal place.

$$TEUI = \frac{\text{SHE (GJ/yr)} + \text{SCE (GJ/yr)} + \text{DHWE (GJ/yr)} + \text{VE (GJ/yr)} + \text{BE (GJ/y)}}{\text{Heated Floor Area (m}^2\text{)}}$$

SECTION

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Appendix A: Application & Eligibility

- **Detached houses**, such as tiny homes or laneway suites, must not exceed **450m³** in total heated volume.

- **Attached houses**, such as row houses or semi-detached houses, must not exceed **600m³** in total heated volume.

- **A MURB single unit** must not exceed **600m³** in total heated volume.

Appendix A: Technical Requirements

- Comply with all Technical Requirements except for solar PV and 0 GJ/yr related sections *(1.2.1, 2.2.4, 2.4)*.
- Meet or exceed a minimum of one of the energy use targets in Table A-1.
- There are 4 different energy metrics to allow flexibility:
  - Overall Energy Improvement (%OEI)
  - Annual Energy Consumption (AEC)
  - Mechanical Energy Use Intensity (MEUI)
  - Total Energy Use Intensity (TEUI)

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Energy Use Targets: Table A-1

Meet or exceed at least one of the following energy use targets.

Climate Zone	Heated Volume	Overall Energy Improvement (%) *(no baseload)*	Annual Energy Consumption *(no baseload)*	Mechanical Energy Use Intensity (MEUI) *(no baseload)*	Total Energy Use Intensity (TEUI)
		House Energy Target	GJ/year	kWh/m^2/year	GJ/m^2/year
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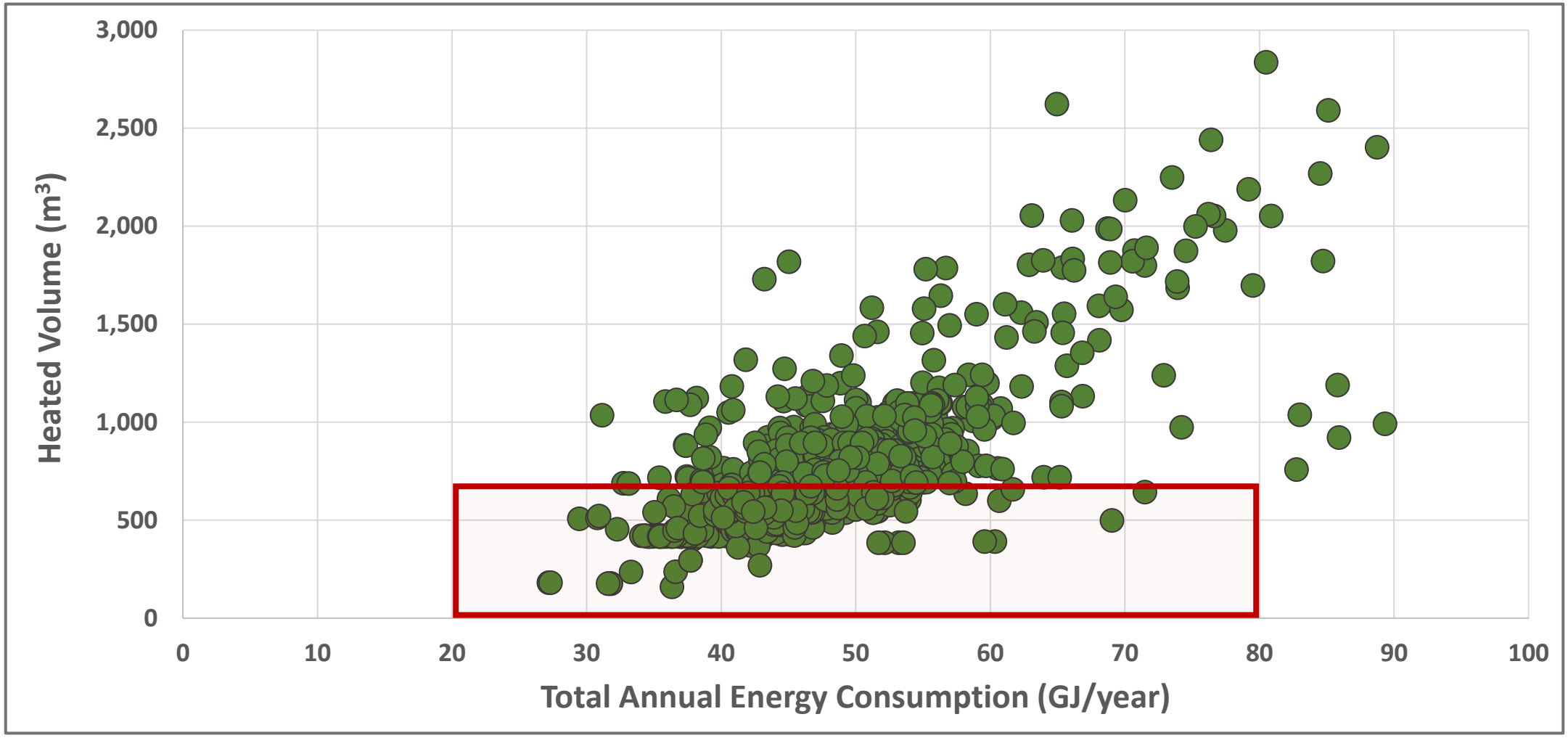
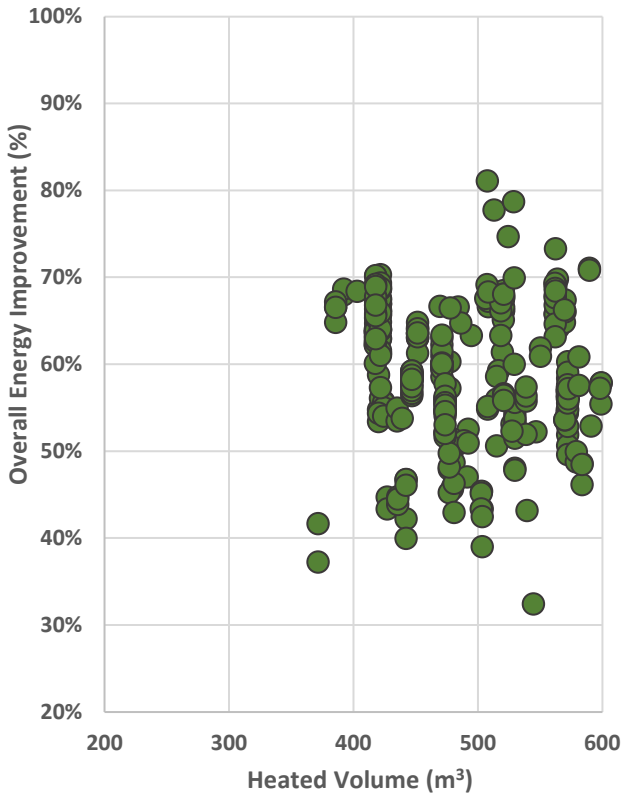
	<300m^3	≥55	≤13	≤30	≤0.23
5 (3000-3999 HDD)	≥300m^3	≥60	≤16	≤27	≤0.21
	<300m^3	≥55	≤15	≤32	≤0.24
6 (4000-4999 HDD)	≥300m^3	≥60	≤18	≤29	≤0.22
	<300m^3	≥55	≤17	≤34	≤0.25
7a, 7b, 8 (≥5000 HDD)	≥300m^3	≥60	≤20	≤31	≤0.23
	<300m^3	≥55	≤19	≤36	≤0.26

Net Zero Ready Performance?

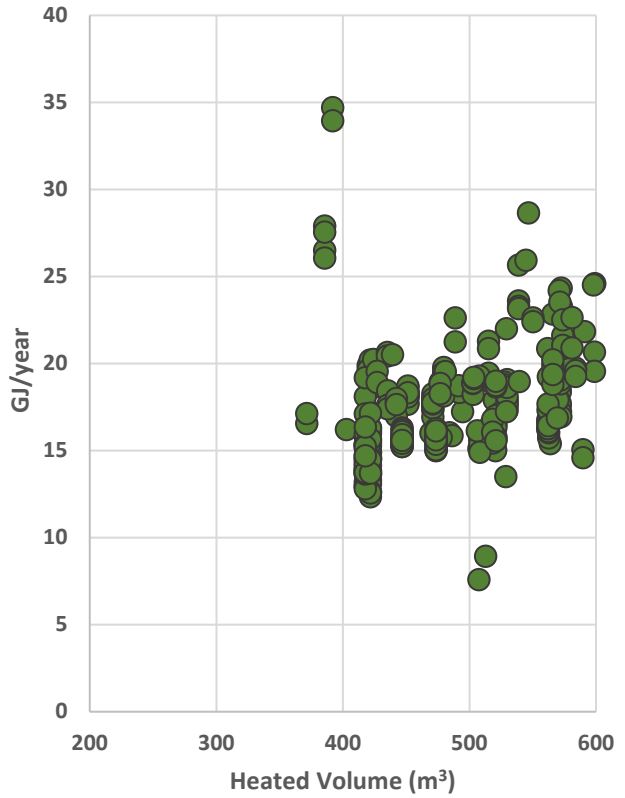


Net Zero Ready Performance?

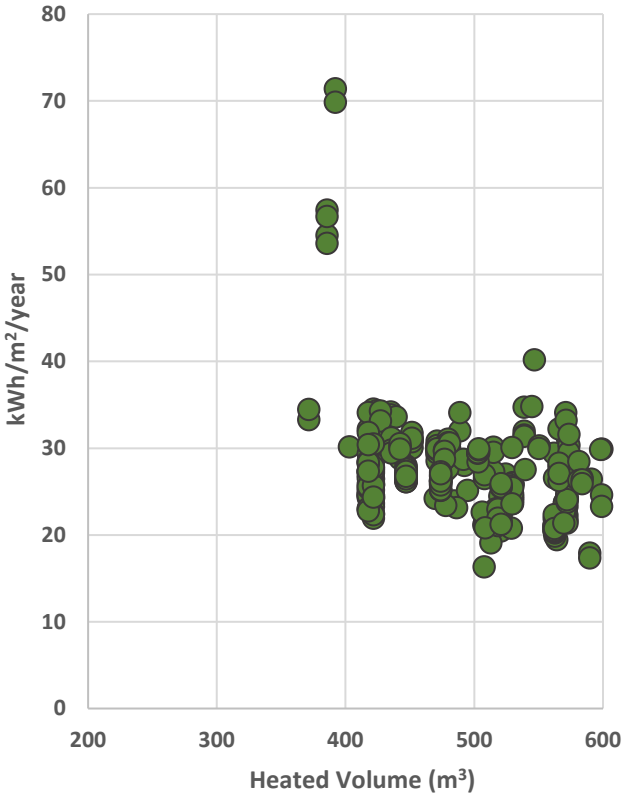
%OEI



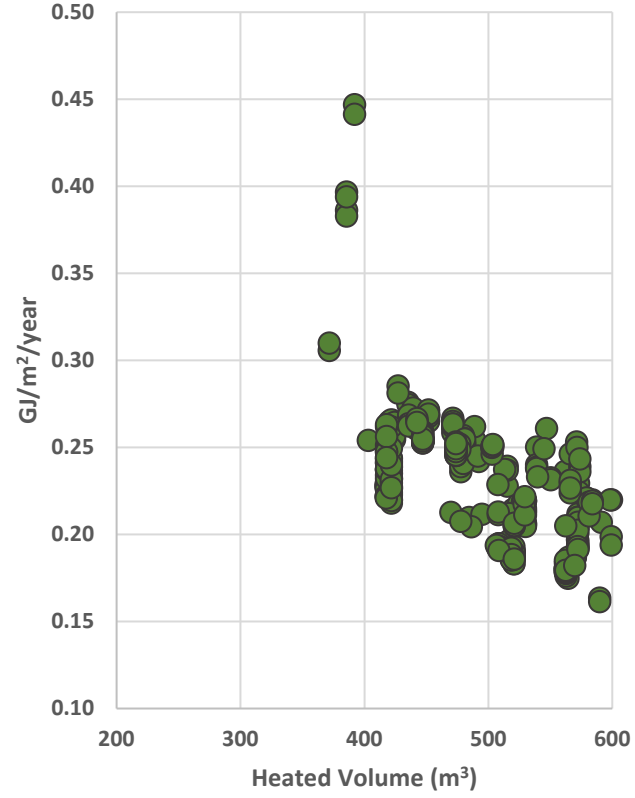
AEC



MEUI



TEUI



Flexibility of Net Zero Ready

		Energy Efficiency				Energy Generation Offset Potential
Climate Zone	Heated Volume	Overall Energy Improvement (%) *(no baseload)*	Annual Energy Consumption *(no baseload)*	Mechanical Energy Use Intensity (MEUI) *(no baseload)*	Total Energy Use Intensity (TEUI)	Annual Energy Consumption After Modelled Solar
		House Energy Target	GJ/year	kWh/m^2/year	GJ/m^2/year	GJ/year
4 (<3000 HDD)	≥300m^3	≥60	≤14	≤25	≤0.20	≤0
	<300m^3	≥55	≤13	≤30	≤0.23	≤0
5 (3000-3999 HDD)	≥300m^3	≥60	≤16	≤27	≤0.21	≤0
	<300m^3	≥55	≤15	≤32	≤0.24	≤0
6 (4000-4999 HDD)	≥300m^3	≥60	≤18	≤29	≤0.22	≤0
	<300m^3	≥55	≤17	≤34	≤0.25	≤0
7a, 7b, 8 (≥5000 HDD)	≥300m^3	≥60	≤20	≤31	≤0.23	≤0
	<300m^3	≥55	≤19	≤36	≤0.26	≤0

Net Zero & Net Zero Ready

	netzero home	netzero ready home
Better Comfort	✓	✓
Better Energy Efficiency	✓	✓
Better Indoor Air Quality	✓	✓
Lower GHG Emissions	✓	✓
Lower Energy Bills	✓	✓
3rd Party CHBA Qualified	✓	✓

netzero ready home
The ultimate in comfort and efficiency

Communications

CHBA Qualified Net Zero Ready Homes are built to the exact same efficiency requirements as Net Zero Homes, but do not yet have renewable energy systems (i.e., solar panels) installed. Net Zero Ready Homes that have sufficient on-site generation ability have been designed and constructed to easily install renewable energy systems in the future whenever the homeowner is ready.

To Learn More

SCAN ME

NEW: FOR NET ZERO READY ALTERNATIVE COMPLIANCE PATH

1) Technical Requirements - Appendix A
2) Project Registration Workbook - Appendix A

Sneha Bernard
Project Lead, LEEP, CanmetENERGY, Natural Resources Canada

Andy Oding
Vice President, Director of Building Science, Building Knowledge Canada Inc.

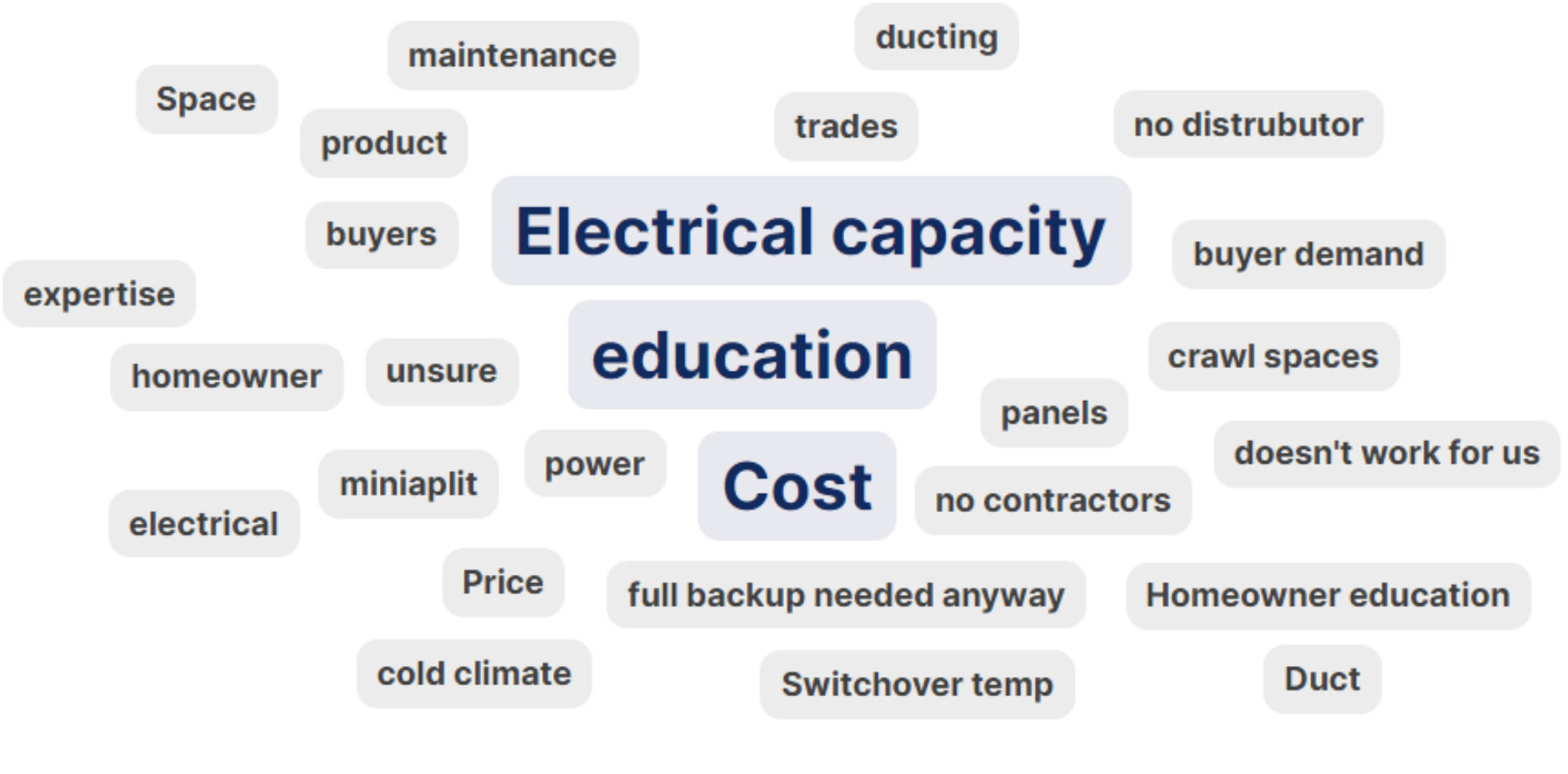

Natural Resources Canada
Ressources naturelles Canada
What's next for scaling a Net Zero future?
Local Energy Efficiency Partnerships
Air Source Heat Pumps for High Performance Homes
June 12, 2024 – Vancouver
Canada

We heard from builders…

Common barriers with HVAC design and performance:

- Keeping **costs** low to remain competitive
- Frequent **call backs** with underperforming systems
- Limited **homeowner understanding** of how to operate their new systems
- Experiencing **overheating** in shoulder seasons in some rooms
- **Placement of outdoor unit** is a challenge with noise complaints and bylaws restricting locations
- Will heat pumps work in a **cold climate**, or is this just a solution for Southern Canada?

We heard from trades…



What does the building industry need to facilitate confidence in mass adoption of heat pumps?

BUILDERS

- Confidence in screening trades, knowing what to ask for from HVAC providers
- Non-silo'd HVAC design that addresses common comfort issues
- Standards or guidance on how to differentiate between available products
- Better understanding of the factors that contribute to long term comfort

TRADES

- Certification & training to differentiate themselves and show quality assurance
- Integration into the project from the start, not simply asked to quote on a job at the very end
- Tools to effectively communicate key differences between available options
- Demonstrate strategies to limit backup heat, deliver on intended savings

Expediting ASHP uptake while delivering better comfort requires several key steps

1. Accurate Load calculations
   Do the math – don't guess!
2. Don't forget the human in the building!
   More options than ever for distribution system design
3. Equipment selection & Sizing
   One size does not fit all
4. Controls strategies and thermostats
   Should not be an afterthought
5. You don't know what you don't know
   Test and Verify (CSA SPE017 , ANSI 310)

What have we learned about successful ASHP's from studying NZR homes?

- ✗ Energy efficiency and low carbon design does not automatically result in thermal comfort or occupant health
- ✗ Lowest cost product and code minimum energy performance is the most expensive home you can deliver to your client.
- ✗ Don't assume it works: test
- ✓ Successful adoption results when developer, builder, designer and contractors collaborate
- ✓ Supplemental heating : Better design options for hybrid or all-electric systems
- ✓ Better Home Design & ASHP tech needs to be properly recognized long before Draft Plan of Subdivision

Key takeaways from the ASHP Workshop

01 **Improved collaboration and verification between builders and mechanical designers will optimize the HVAC system within the project requirements.**

02 **F280 Load Calculations:**

- Code compliant F280-12 load calculations is the foundation on which all other HVAC decisions are dependent. Builders need to take ownership of their load calculations.

03 **Control approaches can have vastly different results costing homeowners hundreds of dollars per year**

04 **NRCan's ASHP Sizing & Selection App provides data to support you selecting your mechanical systems.**

- Better data - leads to effective communication of performance
- Careful selection through discussion leads to better performance – and fewer callbacks

Thank you

Contact:
nrcan.leep.rncan@canada.ca

CANADIAN HOME BUILDERS' ASSOCIATION
netzero home
LEADERSHIPSUMMIT

SONJA WINKELMANN, SENIOR DIRECTOR, NET ZERO HOUSING, CHBA

WHAT'S NEXT?
Education & Marketing

Net Zero Home Labelling Program

Canadian
Home Builders'
Association

NET ZERO TRAINING

Canadian Home Builders' Association

UPDATE: Development of the NZHLP training courses for delivery via our Learning Management System (LMS)

- Both the **Building Science** and **Net Zero for Building Officials** courses will be piloted this Fall.
- After these two are completed, we'll be able to quickly produce the **Net Zero Builder Training**.
- **Next:** Net Zero Sales, Net Zero EA, Net Zero Trades, Net Zero Renovator.
- **Goal:** To make this content available to a larger audience across Canada to support market preparedness for the higher tiered codes.

NET ZERO TRAINING

Canadian Home Builders' Association

What would a "hybrid" course look like?

An instructor-led session at the beginning and also at the end **(this allows for time with the instructor, and peer-to-peer learning)** with the self-directed asynchronous (online) training in between.

Session 1		Virtual Instructor-led session (Zoom)	1 hour
Module 1		Self-directed eLearning + Forum	1 hour
Module 2		Self-directed eLearning + Forum	1 -1.5 hours
Module 3		Self-directed eLearning + Forum	1 hour
Session 2		Virtual Instructor-led session (Zoom)	2 hours
Final Exam		Open-book online exam	1-2 hours
Course Evaluation		Learner Feedback survey	5-15 minutes

NET ZERO TRAINING

Canadian Home Builders' Association

New NRCan project:

- Development of training on Section 9.36 for builders
- Discounts/refunds for NZHLP training courses
- Likely also training on opGHG & emGHG and resilience measures

LEEP: ACCELERATING UPTAKE OF INNOVATIVE TECHNOLOGIES IN NEW & RETROFIT HOUSING

Canadian Home Builders' Association

On March 31 we wrapped up the NRCan FY with 36 workshops/forums completed and the annual funding fully spent.

We have funding for another 40 this year and already have 17 booked! **(By March 31!)**

EOs: Take advantage of the funding to deliver LEEP in your region and empower your members as they work to adopt innovative technologies to achieve the new building codes!

Builders/Renovators: Let your HBA know your preferred event! **Learn more @ chba.ca/LEEP**

Contact Kay now to book your workshop(s) before the funding is fully allocated!

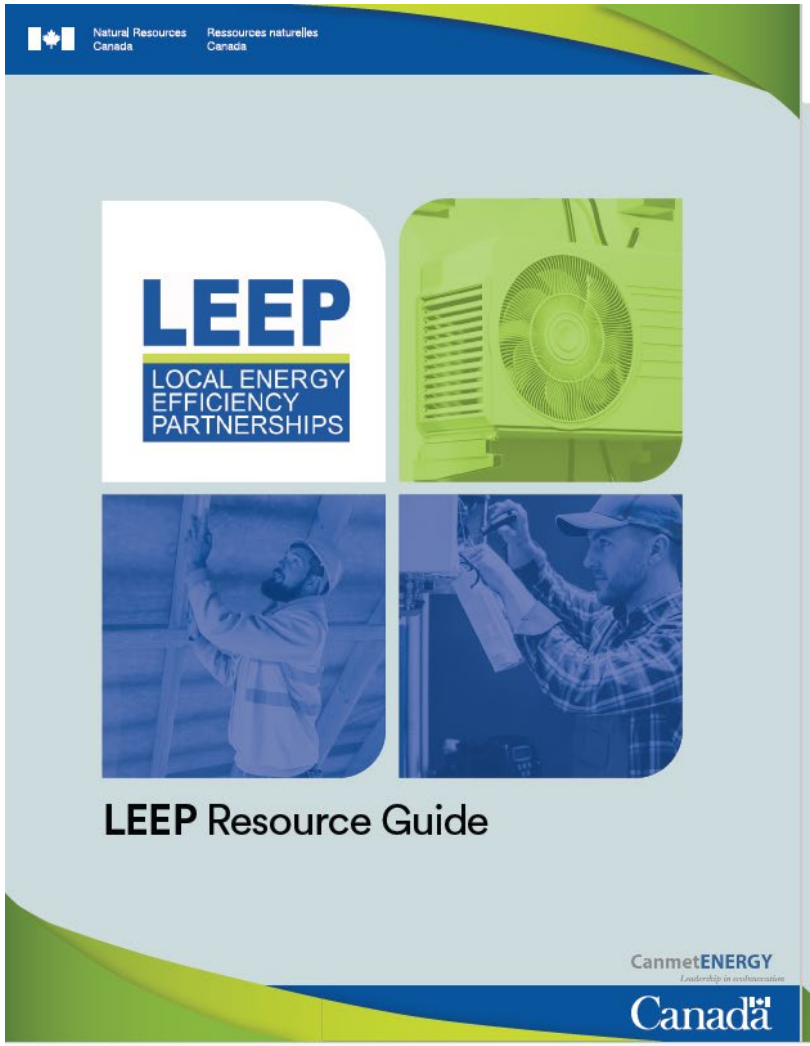
KAY PARKES-BLANC

Project Coordinator,
Local Energy Efficiency Partnerships (LEEP)
613.230.3060 x243
khadijah.parkes-blanc@chba.ca

LEEP LOCAL ENERGY EFFICIENCY PARTNERSHIPS

LEEP: ACCELERATING UPTAKE OF INNOVATIVE TECHNOLOGIES IN NEW & RETROFIT HOUSING

Canadian Home Builders' Association



New Resource Guide

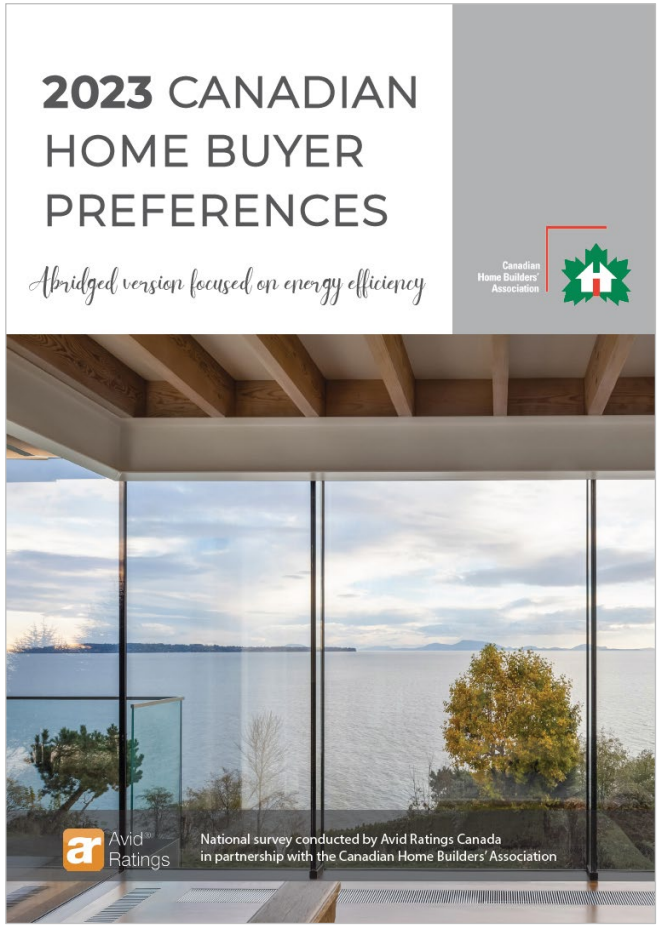
- 19 Events: Workshops, Forums, Seminars
- 12 Guides
- 6 Tools
- 32 Videos

New events!

- Windows
- ASHPs
- Resilience

2023 HOMEBUYER PREFERENCE SURVEY RESULTS

Canadian Home Builders' Association



Top 10 Most-Desired Features of 2023

The top 10 overall "Must Have" home features identified by the 2023 study participants:

1. WALK-IN CLOSETS (PRIMARY SUITE)
2. KITCHEN ISLAND
3. ENERGY-EFFICIENT APPLIANCES
4. OVERALL ENERGY-EFFICIENT HOME
5. HIGH EFFICIENCY WINDOWS
6. WALK-IN CLOSETS (INTERIOR OF HOME)
7. 2-CAR GARAGE
8. HRV/ERV AIR EXCHANGE SYSTEM
9. LINEN CLOSETS
10. KITCHEN: OPEN CONCEPT

4 of the top 10 features are focused on energy efficiency!

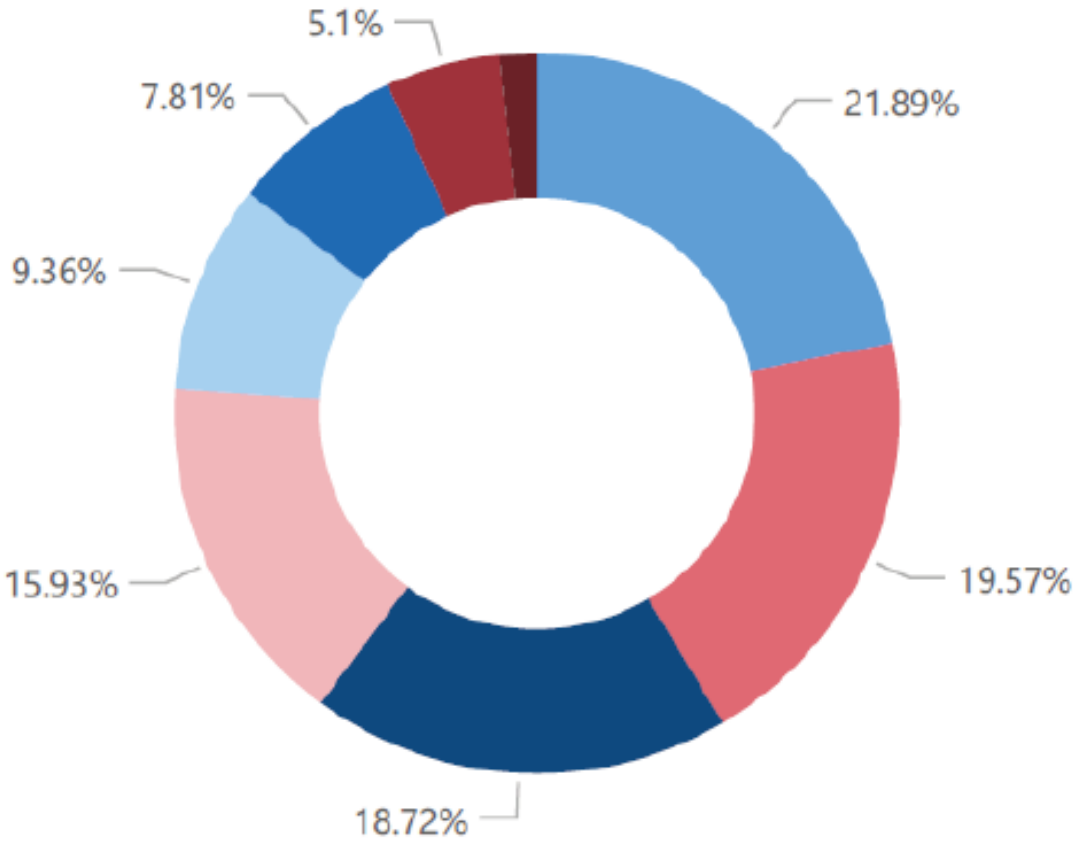
Avid® Ratings

National survey conducted by Avid Ratings Canada
in partnership with the Canadian Home Builders' Association

2023 HOMEBUYER PREFERENCE SURVEY RESULTS

Canadian Home Builders' Association

WILLING TO ACCEPT TO MAKE NEXT HOME MORE AFFORDABLE

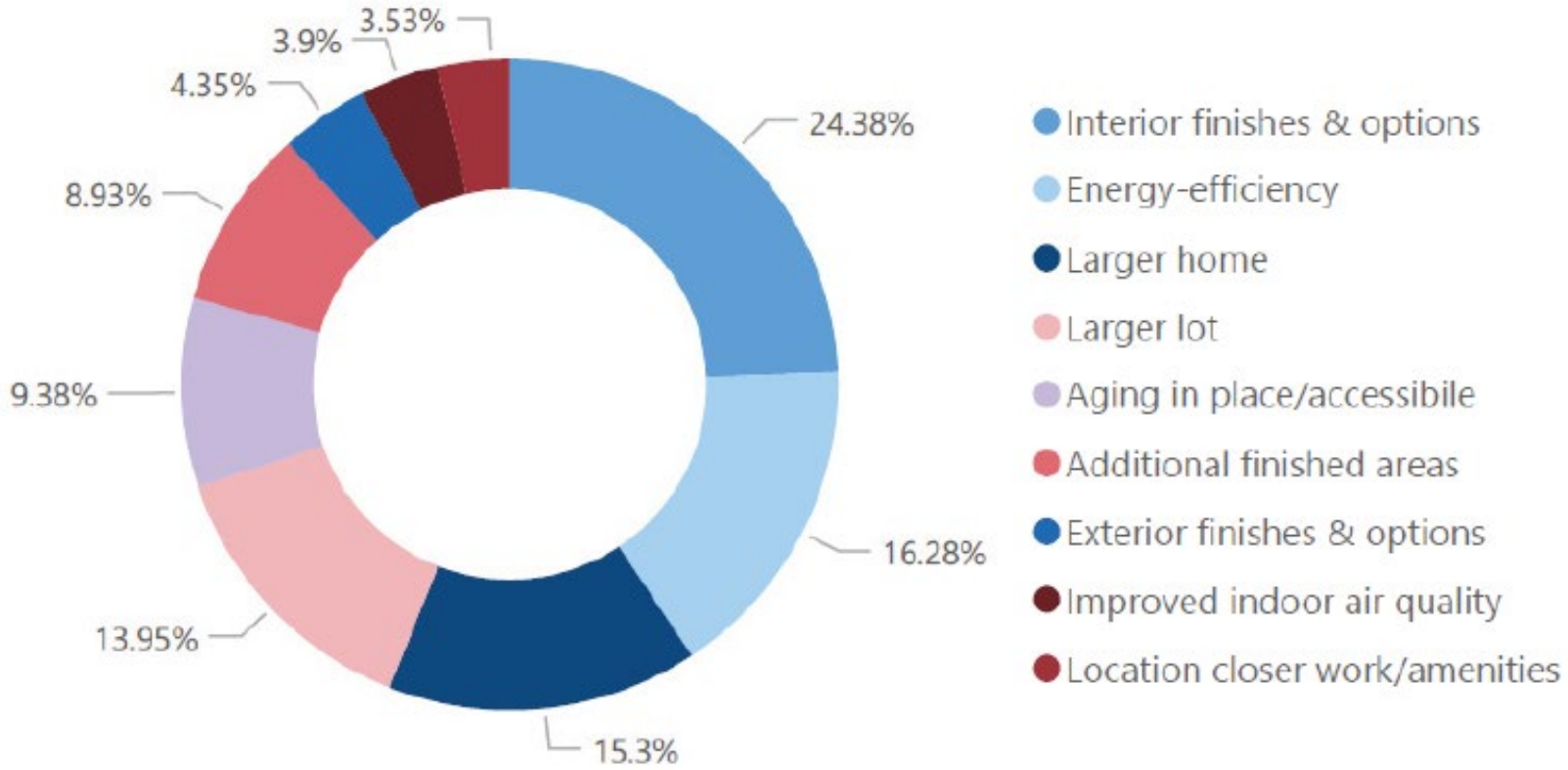


Only 5% of buyers would sacrifice energy efficiency to make their next home more affordable

2023 HOMEBUYER PREFERENCE SURVEY RESULTS

Canadian Home Builders' Association

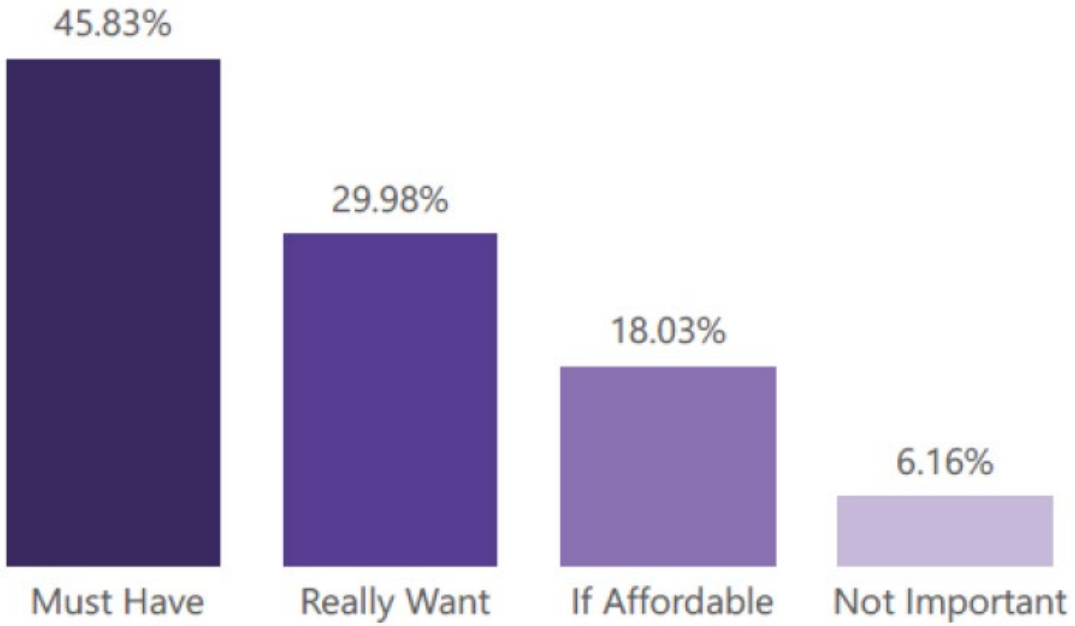
IF YOU HAD AN EXTRA $10,000 TO SPEND



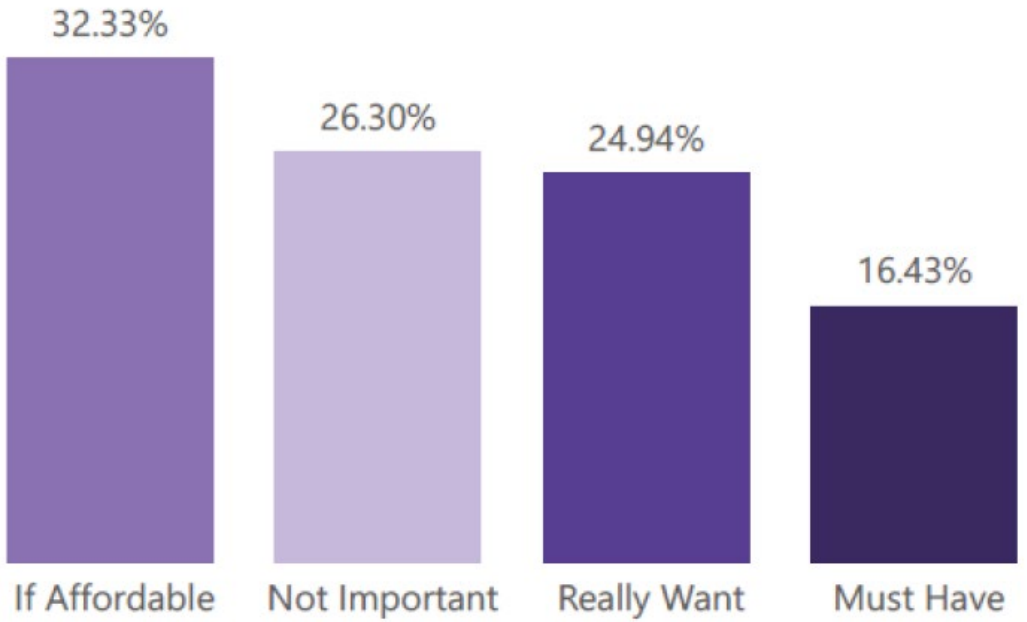
2023 HOMEBUYER PREFERENCE SURVEY RESULTS

Canadian Home Builders' Association

CERTIFICATION/RATING BY A DESIGNATED PROGRAM



USE OF RECYCLED / RENEWABLE MATERIALS



CONSUMER MARKETING & EDUCATION

Canadian Home Builders' Association

2. Inbound Marketing

The flip side of outbound marketing is an inbound marketing strategy. It increases sales by ensuring that the people who want exactly what you have to offer can find you. You can even help people who need you but don't know it yet find you by focusing on education. Nobody wants to be sold to, but when inbound marketing is done right, your customers will sell themselves on your products and services.

Keep in mind the new marketing and sales funnel. This marketing strategy is designed for it, with assets that help people become aware of the solution to their problem, consider your brand, and evaluate purchasing.

Inbound marketing takes a longer time to start up and see results with than outbound; it may not be for you if you need to get to a sale fast. It involves a ton of content creation and search engine optimization to get people to find your website in the first place. However, if you're patient, you can reliably make sales go up at a lower cost.

Inbound marketing tactics:

- Content marketing (Such as Blog Posts)
- SEO
- Social media

Consumer education

1. Outbound Marketing

Reach out to customers and meet them where they are using an outbound marketing strategy. This is traditional marketing; it means getting your brand in front of someone who is not actively seeking it.

This marketing strategy is effective for increasing sales when your ideal audience might not be aware that a solution to their pain points exists, or you need to see results right away.

However, you don't want to cast too wide a net and send your message out to just anyone. Using research to find the people that would actually get value from your website or contact information instead of just being annoyed by your message is crucial.

Outbound marketing tactics:

- Print, TV, and radio ads
- Cold calling or cold emailing
- Trade shows

CONSUMER MARKETING & EDUCATION

Canadian Home Builders' Association

How to Build an Effective Customer Education Strategy That Drives Adoption

CONSUMER MARKETING & EDUCATION

Canadian Home Builders' Association

What does everyone think about fundraising for outbound consumer education marketing efforts?

Who should we partner with? Insurers? Utilities? Lending institutions?

The Role of Testimonials

01 Testimonials are a powerful tool in building trust and credibility for your business

Real-life examples of satisfied customers can have a significant impact on potential buyers

03 To make testimonials more compelling, it is important to include specific details about the customer's experience

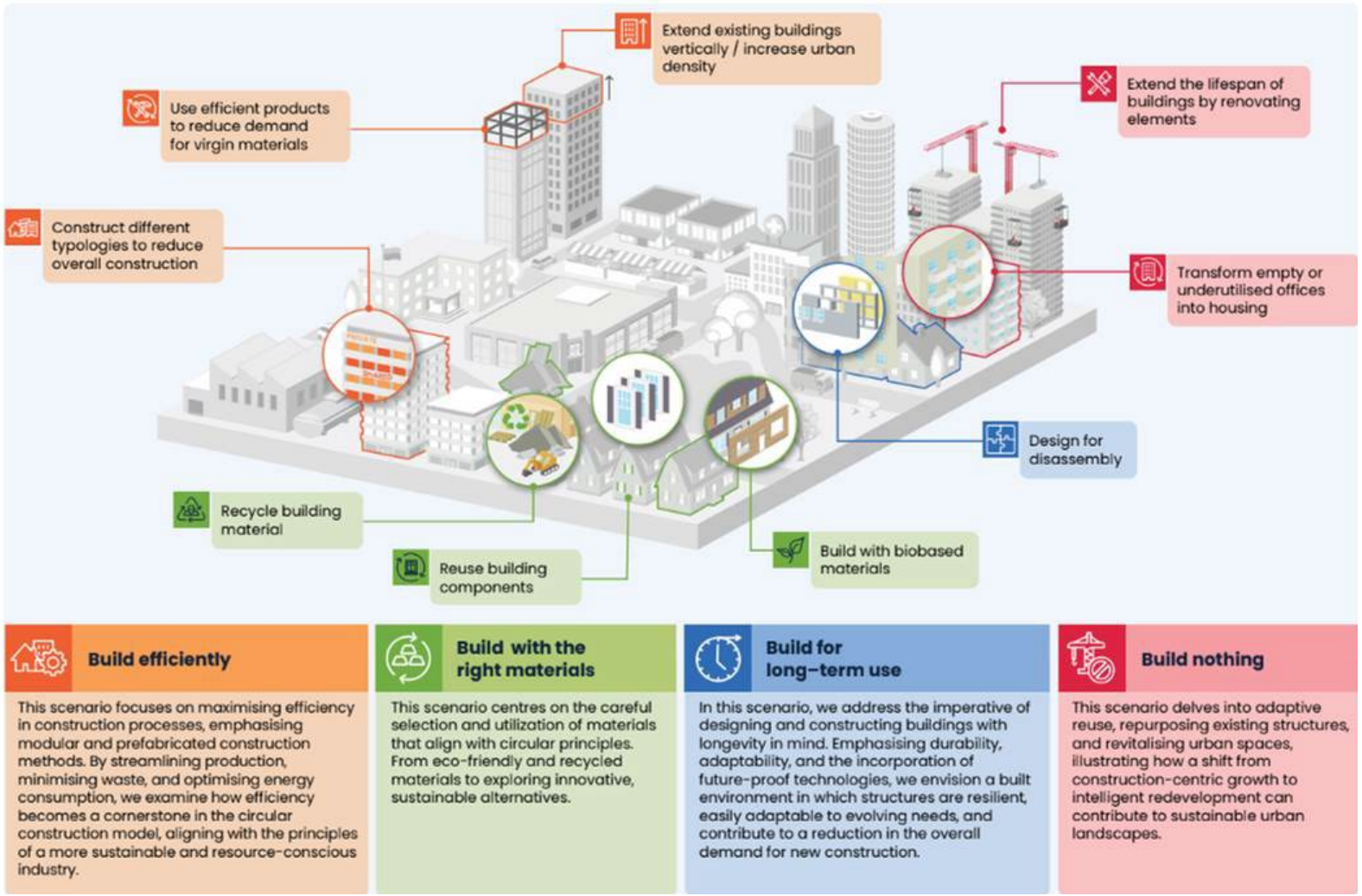
Another effective way to build trust and credibility through testimonials is by featuring case studies

05 When collecting testimonials, it is essential to ensure their authenticity and credibility

Lastly, don't limit the use of testimonials to your website alone

WHAT'S NEXT? CIRCULAR BUILT ENVIRONMENT

Canadian Home Builders' Association



CALL TO ACTION

Canadian Home Builders' Association

We're Hiring!

www.chba.ca/careers

CHBA's national office in Ottawa is seeking a dynamic individual to provide technical support to CHBA's committees and councils on GHG emissions reductions and climate change resilience.

Reporting to Frank Lohmann, this position will provide advisory services on guides, codes, standards, and regulations as they relate to residential construction, and will play a key role in integrating GHG emissions reductions and resilient building practices into CHBA's Net Zero Home Labelling Program.

Technical Advisor, Emissions and Resilience

Session 8
POLL

END OF DAY

Are there any topics you would like to suggest for next year?

68 responses