

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 (%)	Annual Energy Consumption	Mechanical Energy Use Intensity (MEUI)	Total Energy Use Intensity (TEUI)
		<i>(no baseload)</i>	<i>(no baseload)</i>	<i>(no baseload)</i>	
		House Energy Target	GJ/year	kWh/m ² /year	GJ/m ² /year
4 (<3000 HDD)	≥300m ³	≥60	≤14	≤25	≤0.20
	<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

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 v11.12, 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.

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