

NET ZERO

MULTI-UNIT RESIDENTIAL BUILDING



BUILDER Avalon Master Builder

Energy Advisor Cooper Le, 4 Elements Integrated Design

Location Calgary, AB (Climate zone 7a)



15,700
SQFT

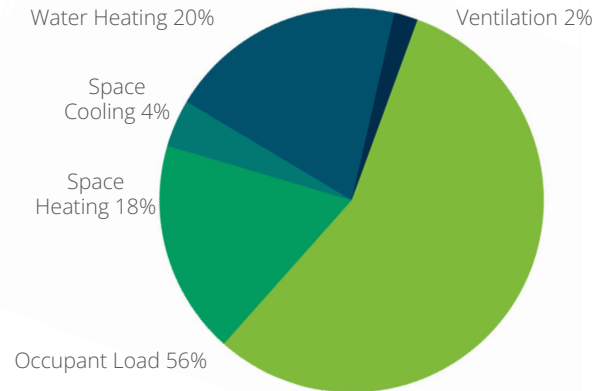
Code-Built
MURB:
661 GJ/yr

This MURB:
436 GJ/yr

This MURB
with Installed
Renewables:
207 GJ/yr



Modelled Energy Use Breakdown



Energy modelling results are from HOT2000 Version 11.11.
The total modelled operational GHG emissions are 46.4 tonnes/CO₂e/yr.

BUILDING ENCLOSURE

Windows:

Triple glazed, Low e

Walls:

R22 batt + R7.5 rigid foam

Ceiling:

R60 blown-in

Foundation:

R20 batt + R10 rigid foam

R15 foam under slab

Airtightness:

1.4 ACH@50 (on avg.)

Envelope:

64% better than NRCan ref (on avg.)

MECHANICALS

Fuel Source:

All-electric

Heating & Cooling:

NZ Upper units: ccASHP +

electric resistance backup

NZr Lower units: Electric baseboards

Water Heating:

NZ Upper units: Heat pump

NZr Lower units: Electric tank

Ventilation:

Lifebreath HRVs

OTHER FEATURES

Units:

16 total

1, 2, and 3 bdrm units

Prefabrication Approach:

Off-site prefab framing

Labelling Approach:

Individual unit

Common Area:

N/A

Building Ownership:

Freehold



"Avalon's Net Zero homes in Zen Sequel have proven that the cost of financing net zero and the utility savings associated with a net zero home have finally come to intersect. Zen Sequel homeowners live in healthier, more comfortable, and quieter homes for the same monthly cost, averaged over the year, as non net zero homes."

- Chris Williams, Vice President