



# Eco-Solar Home Tour 2024

Saturday 8 June, noon to 5 pm

## Woodbine NZE Retrofit

**Tour Day:** Sat 8 June

**Address:**

**Hosts:** Homeowners

**Parking:** on street

**Energuides:** 0 GJ/yr



### What will people see and learn about at your home?

- A great time to make bigger efficiency upgrades is when you have no choice but to make major repairs
- Through the addition of insulation and air sealing, we were able to get off gas completely and electrify everything.
- We took advantage of programs like the Greener Homes Grant and the CEIP through the City of Calgary

### What are the main things people will see at your home?

- Outside construction showing depth of added insulation
- Rooftop solar
- Air-source heat pump
- IBC totes for rainwater storage
- Two-way electricity meter, ERV intake and exhaust





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## Woodbine NZE Retrofit

### Why is this home on the tour?

When this 1981 four level split in Woodbine was purchased in 2022, we soon discovered major defects in the house.

Repairing the damage meant, at a minimum, several new windows and completely new house wrap and siding. Also, the furnace was on its last legs, the electrical panel was failing, the crawlspace was wet, and the house regulated heat and cold very poorly. As we have always been interested in lessening our carbon footprint, the addition of an air conditioner seemed like a step in the wrong direction, and as we sat in our 32 degree Celsius house, we began wondering if we could take a very bad situation and take advantage to repair the house to a much higher efficiency standard that would negate the need for an air conditioner. In the end, we opted for a deep energy retrofit and have effectively made this a net zero home.



### What features save on energy costs?

- R24 exterior insulation + R12 original insulation = R36 above grade
- R20 exterior insulation + R14 indoor insulation = R34 Basement Foundation
- Crawlspace was paved with R6 insulation under slab
- Living space in basement has R6 over slab insulation under flooring
- Attic air sealed + R60 cellulose insulation
- 1.47 ACH down from initial 4.41 ACH (although we continue to find and seal gaps)
- ERV fresh air supply
- Heating and Cooling: 2 ton Mr Cool Cold Climate Air-Source Heat Pump rated for -30 Celsius with a 5 kW back up strip (this should really be 8 kW)
- Water heating: Rheem 50 gallon heat pump water heater
- Midea heat pump clothes dryer as there was no good option for a vented dryer and we wanted to minimize exterior penetrations
- 200 Amp service
- 12.7 kW Solar System
- About half the windows are new triple pane. The other half are double pane that previous homeowners installed in 2018.

### What features save on water costs?

- High efficiency toilets and fixtures in progress
- Rain barrels in progress

### Other special features

- Majority of lawn has been replaced by soil, mulch, and fruit shrubs and trees. Working towards the concept of a food forest.

