



# Eco-Solar Home Tour 2022

Saturday 25 June, Noon to 5 pm

## Larch Deep Energy Retrofit

**Tour Day:** Saturday 25 June

**Hosts:** HSS Design Build

**Parking:** on street

**Energuides:** n/a



### Why people need to see your home

- Deep energy retrofit of an existing home
- Larssen Truss insulation system for retrofits
- Geothermal heat pump heating and cooling
- Will demonstrate the process for a deep energy retrofit

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

- Solar PV system
- Geothermal heating and cooling system
- Passive House design details
- The Larssen Truss insulation design
- The use of local materials (charred wood, Rundle stone)

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

- Larssen Truss building envelope retrofit
- Geothermal heat pump
- Passive House windows and details



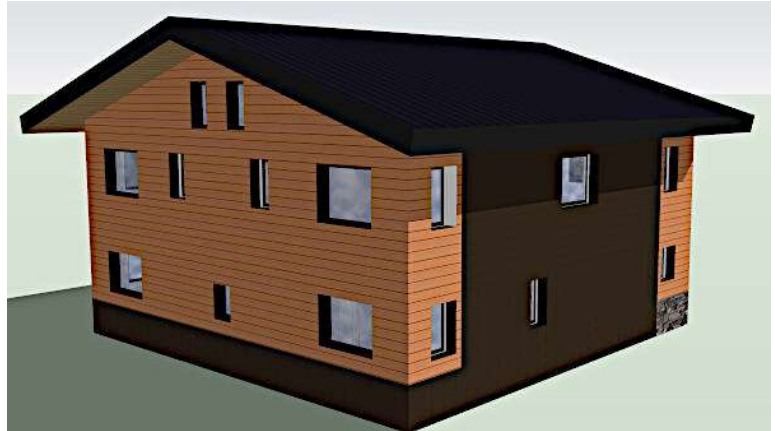


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## Larch Deep Energy Retrofit

### Why is this home on the tour?

Deep Energy Retrofit with renewable heating source. The existing 1997 two storey home which already has solar PV and solar hot water is getting a major energy efficiency upgrade. The retrofit has been designed with passive house principles in mind. Openings to the South are getting enlarged and windows upgraded. The walls are being insulated with the Larssen Truss system and rockwool insulation. The gas line will be abandoned, and a deep well geothermal system and heat pump will be installed for the heating and cooling. More solar PV will be added in the future to make this building Net Zero.



### What features save on energy costs?

- Redesign of openings to maximise solar gain from South. Exterior walls over insulated with a Larssen truss system with 9” of Rockwool insulation, WRB and rainscreen.
- PHI certified windows and Heat Recovery Ventilator.
- This new envelope will significantly reduce heat loss by providing a better air-tightness, more insulation, and reduced thermal bridging.
- The existing gas connection is to be removed. Deep well open loop geothermal system with a heat pump. This will cover all heating, cooling, and most of the domestic hot water demand. Electric backup heaters will be installed.
- The house has existing solar panels as well as evacuated tubes for solar hot water. More PV panels will be added later.

### Other features

- Our proposed design includes a new entry room at the front of the home. The roof of this entry room will include a wrap-around planter box that also extends into the new upper level deck.
- There is one EV charger currently. A second EV charger will be integrated with this retrofit.
- We will be using a mix of local materials such as charred cedar siding, rundle stone, metal siding and timberframe.

