



Better Choices
Better Homes
Better Lives



Eco-Solar Home Tour 2017

Saturday June 3 2017

Ft. Sask. Passive House

Tour Day: Saturday
Address:
Hosts: Homeowners
Parking: Available on Street
Energuide Rating: Home
Built to Passive House
Standards



Summary points why people need to see your home

- Home was built to Passive House Certification
- Passive House standards used high efficiency windows, doors, very tight building envelope, and additional insulation.
- Most building products and practices were standard.
- Home was designed to accommodate main floor living only as owners progress in age.

What will people see and learn about at your home?

- Home built to certified Passivehouse (PH) Criteria
- Specific heat demand close to 15 kWh/m2/year
- Insulation R-76 in the walls and R-94 in the attic
- Efficient windows & doors imported from Europe
- Very low air changes per hour (tight envelope)
- Heating system is hot water baseboard radiators.

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

- High efficiency windows and doors
- Extreme wall thickness
- High efficiency HRV and boiler.
- Roof shading to reduce summer overheating.



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Why is this home on the tour?

Working in an industry where we were transferred to various locations in Western Canada, we were forced to live in homes that were less than energy efficient. When I retired, we wanted to build our retirement home that was energy efficient and very comfortable to live in. We chose Passivehouse (PH) as our building technique as it was by far the most aggressive we found in the industry. We wanted to see if we could meet the PH criteria in a northern climate. We do not have any solar panels but rely on a very well insulated tight building envelope with high efficiency windows that capture the sun's energy passively.

What features save on energy costs?

- The 16" thick walls of the house are insulated with Roxul along with a 4" internal service wall insulated with Fiberglass. Overall R value is 76.
- The attic is insulated with 30" of blown in cellulose with an R value of 94.
- The foundation is wrapped with 12" of expanded polystyrene.
- The windows and patio doors were imported from Europe as Canada does not make a window that meets Passivehouse standard for our area.
- The doors are from Canada although the frames are imported from Europe.
- The HRV is a Zehnder 300 which operates at 92% efficiency
- The boiler operates at 96% efficiency.

Are there any other special features you want to highlight?

- House built with full accessibility with retirement plans for homeowners to live on the main floor only.

Are there main items that they can't see?

- Foundation was wrapped with expanded polystyrene including the footings and basement floor
- Main support walls were insulated with 16" of Roxul insulation. A service wall inside the vapour barrier was insulated with R-12 fiberglass.
- Attic insulation is blown-in cellulose.
- The vapour barrier for the walls was OSB taped with sealing tape to give a tight building.
- Ceiling vapour barrier was 6 mil poly, but since there are no internal load bearing walls, the vapour barrier was continuous.

