



Eco-Solar Home Tour 2018

Sunday 3 June 2018 Noon to 4 pm

McKernan Solar Home

Tour Day: Sunday

Address:

Hosts: Owners

Parking: On Street

Energuides Rating: 75 GJ/year



Summary points why people need to see your home

- Residential garage solar PV system
- East and West facing arrays
- Offsets 100% of homeowner's annual electrical demands with solar PV system.
- We also focused on creating a positive natural environment encouraging birds, bees and plants.

What will people see and learn about at your home?

- Grid connected solar PV system and its components
- East and West facing rooftop installations
- The ability to offset the entirety of your annual electrical loads with a solar PV system.

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

- 6.21kW SolarEdge DC optimized solar PV installation
- REC345TP2S 72 cell Silver modules (18)
- SolarEdge monitoring portal display

Are there main items that they can't see?

- Attic space and insulation R70+. Equipment not visible from ground such as under modules, optimizers, inside soladeck, etc.
- The main home will not be open but included a large reno
 - Spray foam on exterior walls
 - Extra ceiling insulation
 - Replace furnace with compact glycol heater
 - Glycol radiators in each room
 - Window upgrade
 - Energy Efficiency Alberta Upgrade
 - Lights changed to LEDs where applicable
 - Low flow faucets and showers

Edmonton



3 LEAFS



ATCO





Edmonton, Alberta

Eco-Solar Home Tour -2018

McKernan Solar Home

Why is this home on the tour?

Like most we just want to do what we can to live a positive lifestyle. It's a small 1950's home. Rather than tear it down we decided to do a large renovation and add a garage. We tried to optimize our efficiencies and did what we could to go green. We use a glycol radiator heating system. For power the solar rebate program was a major factor for the decision to go solar. The house and garage build are a 4-year ongoing process (NOTE: Garage solar array install took a mere 3 days). We also used reclaimed items like doors and insulation to save costs. As well as doing a lot of the building ourselves.

What features save on energy costs?

- The solar grid can supply more than 100% of our power needs in optimal conditions.
- The radiators in each room are adjusted individually for savings and comfort.
- LED lighting in the house and garage, and dimmers on lights not changed over.
- No clothes dryer in service for 4 years, we use racks and hanging systems. We use a high-efficiency washer.
- The mowers used for the minimal lawn are a push mower and one old rechargeable electric mower for mulching grass and leaves.
- We finally replaced a 20 yr old fridge with a new energy star one.
- The compact unit that heats our glycol for home heat also doubles as the instant on hot water heater, which can supply an endless amount of hot water on demand.

What features save on water costs?

- We have an extensive garden and use 4 water barrels to store rain runoff. It is surprising how quickly they fill up. Using rainwater made a huge difference on our water usage.
- The lawn is very minimal and has been mostly replaced with flowers, shrubs and trees.
- Low flow shower head.

