



Better Choices
Better Homes
Better Lives



Eco-Solar Home Tour 2017

Sunday June 4 2017 Noon to 4 pm

Belgravia Green NZE Home

Tour Day: Sunday

Address:

Hosts: Effect Home Builders

Parking: Available on Street

Energuide Rating: 100



Summary points why people need to see your home

- **Energy to spare!**
- Belgravia Green has produced more energy than it has consumed for the last three years – with a family living in the home.
- Stand right next to the fully functioning solar electric system while enjoying the view from the large roof deck.
- Come and see the design, the space, and the different technologies used.
- Learn from the builders what it takes to make energy efficient homes.

What will people see and learn about at your home?

- Over-achiever of the Net Zero Energy goal.
- Engineered expanded-polystyrene insulated walls and triple-glazed windows.
- Structural decorative concrete floor used to capture passive solar energy which contributes 32% of the heat required by home.
- Air-source heat pump heating system provides heat.
- A large grid-tied solar-electric system generates surplus of electrical energy.



Eco-Solar Home Tour -2017

Belgravia Green NZE Home

Why is this home on the tour?

- Home consistently produces more energy than it uses.
- Large PV array on both house and detached garage.
- Ultra efficient home featuring high insulation levels, air-source heat pump, and air tight building envelope.
- The builder will be on hand to describe the various energy efficient features of the entire Belgravia Green project.
- Excellent example of passive solar heating energy capture.
- Designed to run on electricity only, eliminating reliance on natural gas.
- Green Home Award Winner (both national and provincial) from Canadian Home Builders Association.

What are the details of this home?

- **Wall Systems** 300 mm (12") thick R-48 expanded polystyrene (EPS) EnerGard system. This is combined with a "PinkWood" material coating to resist fire, water, and mildew.
- **Foundations** Insulating Concrete Forms (ICF) system with additional EPS in the interior walls. The basement foundation achieves a net R-41 rating.
- **Windows** Triple-glazed windows with three low-E solar gain coatings, argon gas fill, and insulating spacers.
- **Insulation** Expanded polystyrene (EPS) (a non-toxic, chlorofluorocarbon-free (CFC) material that is resistant to mould and rot) used under the basement slabs, in the ICF basement forms, and in the EnerGard wall system. Cellulose fibre in attic made from post-consumer recycled paper.
- ❖ **Ventilation** Home tightly sealed to reduce natural heat loss. Good air quality is ensured by incorporating a heat recovery ventilator to exchange the air in the house and recover up to 88% of the heat from the exhausted air.
- **Passive Solar** Structural concrete floor supported with Hambro floor joist system. The floor absorbs, stores and distributes passive solar heat, obtained from sunlight entering the group of south facing windows. Diamond polished finish creates a highly durable, attractive floor.
- ❖ **Solar electricity** 33 module array on house roof. 25 module array on garage. System is grid-tied using net metering. Due to the high performance of house, the solar array provides more electrical energy than the home uses.
- ❖ **Heating Systems** Air-Source Heat Pump designed for cold weather climates. Efficiency ranges from 100%-400% depending on the outdoor temperature. Heat distributed via forced air system.

