



# Eco-Solar Home Tour 2018

Saturday 2 June 2018 Noon to 4:30 pm

## Westmount NZE Laneway Home

Tour Day: Saturday  
 Address: 10822A-123St  
 Access from alley  
 Hosts: Andy and Karly  
 Parking: On Street  
 Energuide Rating: 6 GJ/yr



### Summary points why people need to see your home

- Net-zero energy garage suite
- Create an economic revenue model in your back yard
- Both a 6 kW solar PV and a solar thermal collector
- Thermal storage tank stores heat for use after sunset
- Highly efficient building envelope
- Information tables set up by bicycle groups in the City

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

- Quiet and comfortable garage suite which provides revenue and increases density and efficiency of urban spaces
  - Two-bedroom open-concept in 600 ft<sup>2</sup> of living space
  - Building envelope has R45 in the floor,
- R38 in the walls and R105 in the ceiling
- Air-to-water heat pump with hot water storage and hydronic heating
- 6 kW of solar PV and one charging station for an electric car
- Solar thermal collector on south facing wall
- Specialized heat control system
- A University of Calgary research project investigating how this suite operates over time.
- Information on bicycles and bicycle activities in Edmonton





Edmonton, Alberta

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## Westmount NZE Laneway Home

### Why this house is on the Eco-Solar Home Tour...

- This garage suite is a collaborative research project between the University of Calgary and Carbon Busters. It includes a highly efficient secondary suite over a garage. The suite has both photovoltaic and thermal solar collectors and has a storage system and advanced controls to store and distribute heat more efficiently.
- The suite is centrally situated, which encourages the walkability and bikeability of the urban core.

### Features that save on heating costs

- Air-to-water heat pump which provides heating and hot water
- Hydronic heating with large capacity thermal storage (2,600 litres)
- Solar thermal collector on south wall of home
- Advanced control system that maximizes heat production and storage and anticipates and adjusts for heating needs
- Air tight construction with a target of 0.6 air changes/hour
- R45 in the floor, R38 in the walls and R105 in the ceiling
- Efficient windows with high R-value and solar heat gain
- Drain water heat recovery
- CO<sub>2</sub> sensing Heat Recovery Ventilator that reduces ventilation heat loss when the occupants are away

### Features that save on electricity costs

- 6 kW solar PV array generates more energy than is needed annually
- LED lighting and energy efficient appliances throughout
- Very interesting electrical control system that is ready for time-of-day metering on the electrical grid to balance the home's electrical and heating loads against electricity pricing for lowest overall costs

### Features that save on water costs

- Low flow water fixtures are used throughout

