

CHANGE
FOR
CLIMATE

Edmonton



Butterwick



Eco-Solar Home Tour 2020

Saturday 6 June Noon to 4:30 pm

Sundance EE Retrofit

Tour Day: Saturday 6 June

Address:

Hosts: Butterwick Construction

Parking: on street

Energuides Rating: n/a



Summary

- This is the first North American demonstration of a mass produced, deep energy retrofit system that is vital to reducing greenhouse gas emissions from our existing buildings to a level our children can live with. It is kind of a big deal.

What will people see and learn about at your home?

- High levels of insulation and air tightness, new retrofit windows on existing affordable housing

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

- People will see the finished retrofit with its crisp new look.
- A 1/2 scale mock up of the panel system, showing construction, fastening, and air and water sealing details
- Posters showing the construction sequence and workflow
- Illustration of the digital capture process





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Why is this home on the tour?

Forty percent of global greenhouse gas emissions come from buildings. That number needs to come down to nearly zero soon. We can build all net zero energy buildings from now on, but we still need to start updating the 80 or so percent of the remaining buildings. Energiesprong in the Netherlands has pioneered industrial scale, affordable, net zero energy retrofits. Energiesprong starts with the digital capture of the existing building's exterior dimensions. This is used to generate CAD drawings of the building that are then used to design wall and roof panels that are built in off-site factories. These panels arrive on site with new insulation, new cladding, and new energy efficient windows ready to be fastened to the outside of the existing building to provide a sealed super-insulated enclosure in a matter of days. This project is the first attempt to implement the Dutch Energiesprong approach in Canada, and perhaps North America. The pilot phase (the first 2 units) of a deep energy retrofit to a 59 unit 1970's townhouse complex in Riverdale will be completed in time for the tour.



What features save on energy costs?

- New prefabricated exterior wall panels that add R30, new, very efficient fibreglass windows, air tightness, and new cladding in one operation. The panels are designed to seal together to create air-tight buildings ~0.75ACH50.
- New roof sections adding R50 of additional attic and sealing off air leakage
- New heat recovery ventilators
- The heating energy of the buildings will be reduced to net zero ready energy levels. The plan is to replace the furnaces with air source heat pumps and disconnected from the gas lines, saving the substantial annual meter cost.

