

ZERO IN

GET INSIDE THE HOUSE THAT WILL PRODUCE AS MUCH ENERGY AS IT CONSUMES OVER THE COURSE OF A YEAR.



10,591 kWh Estimated total amount of energy needed annually for heating, hot water and appliances

BETWEEN 8,000 AND 8,500 kWh Amount of energy the solar electric system will generate annually

2,500 kWh Amount of energy the solar hot water collectors will produce annually

Rear view of the Mill Creek Net Zero Home.

DESIGN BY HABITAT STUDIO & WORKSHOP LTD.

ILLUSTRATION BY DEREK LUE

1 16-inch walls are filled with cellulose fibre insulation made from recycled newspaper, cutting total heat loss by more than one-third over conventional construction; six-inch walls are fitted with batts of insulation in traditional construction.

2 Large south-facing windows, coupled

with interior concrete floors that absorb heat during the day and then release it during the evening, provide 54 per cent of the home's annual heating requirements.

3 The 6-kW solar electric system, with 12 photovoltaic modules on the roof and 10 on each solar awning, will be one of Edmonton's

largest residential systems when fully installed.

4 Solar awnings will be moved seasonally to orient the solar modules towards the sun for maximum electricity production and to shade the windows in the summer.

5 Solar hot water collectors provide

90 per cent of the home's annual hot water consumption. The remainder is produced by electricity.

6 Interior wood trim and exposed beams were recycled from local sources, including the house that once stood where this one is being built.

7 A grey water collection system flushes toilets

with shower water. Water-efficient plumbing fixtures and toilets will save the equivalent of 734 bathtubs a year of water compared to a new home with fixtures that meet Edmonton's new water-efficient fixtures bylaw.

8 A locally manufactured light pipe – a tube that pipes sunlight into

the room – provides daylight to the windowless second-floor bathroom.

9 A selection of the most efficient appliances, plus the decision to hang-dry clothes instead of using a dryer, will reduce electricity use by 50 per cent over that of a typical new home.