



SOLAR HOME DESIGN: "Island Rose"

Passive Solar Home Design with Grid-tied Solar Power, Solar Hot Water and Geothermal System



Passive Solar Design

The Island Rose, designed and built by Suncatcher Solar, has 10% south glass to provide solar gain during the fall, winter and spring. Stone facing on a wall in the living room adds thermal mass to the main floor to moderate the temperature. Overhangs from the roof and the balcony shade the first floor and walkout basement windows to keep the house cool in the summer.

This highly energy efficient home includes in floor heating and a geothermal system, solar hot water and a grid-tied solar power system.



This Island Rose home has been Energy Star Certified with a rating of 91, one of the highest ratings in Saskatchewan.

Energy Efficient Construction

- Insulated Concrete Form (ICF) basement
- Blown in insulation in 2 x 6 walls
- Ceiling insulated to R-50.
- Rigid foam insulation (1") on exterior
- Foil vapour barrier with air gap throughout

Solar and Geothermal Heating System

- Radiant in floor heating on all levels and garage
- 3-Collector solar hot water system
- Geothermal heating and cooling system

Solar Power System

- Utility power by SaskPower
- 2.1 kW grid-tied solar power system
- All systems are electrical - gas was not connected

Other sustainable features, such as greywater heat recovery and rainwater recovery, have also been incorporated in this home.

"We are loving the house. A dream come true! We are so impressed with how much solar heating, hot water and electricity we can get even at the shortest day!"

- "Island Rose" homeowners



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