References

Edelweiss



Uponor involvement

Project highlights

- 1,552-square-foot demonstration home
- LEED® for Homes Platinum
- Extremely low energy demand and operating costs
- Three interwoven options for heat

Products used

- Uponor Radiant Heating System
- Wirsbo hePEX™ piping

Demonstration home in Quebec earns LEED® Platinum

See how our radiant heating system contributed to remarkable heating and cooling cost savings, and the first...
As energy-saving and high-performance homes gain traction, a Québec demonstration home has taken cost savings to a new low with a yearly total of $385 (U.S.) in heating and cooling charges. And this includes the extra electricity costs for a plug-in to power an electric vehicle. The home is the first house in Canada to be certified Platinum under the new version of LEED® for Homes.

The 1,552-square-foot home includes a long list of environmentally friendly products, including a radiant heating system from Uponor. The home cost about $190,000 (U.S.) to build translating into about $122 (U.S.) per square foot. ”You don’t have to blow the bank to have a high performance house,” Mike Reynolds said, co-owner of Ecohome, the designer and builder of the demonstration home.

Project Facts:

Location	Completion
Québec, Canada	2015

Building Type

Single homes

Project Type

New building

1st LEED® Platinum-certified home in Canada

The home, dubbed the Edelweiss House, is a demonstration home and thus has more features than an average home would need. For example, it boasts three heating systems with the primary heating source coming from the sun. “The majority of the heating requirement is met by the windows,” Reynolds said. “Our primary heat source would be passive solar gain.”

In addition, a 10-zone hydronic radiant floor distribution system was paired with an electric boiler to eliminate cold floors (even with a R-32 worth of mineral wool under the slab). Finally, a ductless air-to-air heat pump should work when solar doesn’t provide enough heat. “The radiant system will guarantee that the slab will never get icy,” Reynolds said. And with the harsh Canadian winters, the radiant heat will be much appreciated by homeowners who will feel ultimate thermal comfort and superior air quality with Uponor’s radiant system.

With a goal to use the home as a teaching tool, the Edelweiss House includes finishes, materials and fixtures with low environmental impact including low-flow plumbing fixtures, mineral wool insulation (including that used under the slab), a vegetative roof and interior paints and floor adhesives with zero volatile organic compounds.

“The biggest message we are after is not to look at the building-code base requirement as a target to achieve and then just resign yourself to spending tons of money every month to pump heat into your house, “Reynolds said. “People think the payback is going to be 25 years, and it’s not. The payback starts when your neighbor turns on the heat and you don’t.”

Edelweiss









> You don’t have to blow the bank to have a high performance house.

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