



Updated 09-02-2012 2:21 p.m.



Bruno Comby in front of the inlet duct of its Canadian well. Photo: AA.D. / Metro

"My house is a thermos"

Insulation, pipe system, heat pump: Bruno Comby has built a green house that produces more energy than it consumes

At first glance, it looks like an ordinary suburban house: a cube of beige stucco, a central staircase surrounded by windows, a garage and a pitched roof ... However, the home of Bruno Comby, in Coal (Yvelines), is a real laboratory energy efficiency. "Imagine the green house like the three little pigs, with straw, cob and a fireplace with wood, he says. I am an engineer, I decided to build a modern house with a standard budget. "

The hunt for thermal bridges

By design, he chose a cubic form, which limits the surface in contact with the outside surrounded by unheated (garage, basement, attic), a bay window to the south and few openings north. The structure consists of brick monowall, whose cells trap air. The insulation is nothing revolutionary - thick glass wool and double-glazing quality - but Bruno Comby has searched all thermal bridges (roof, angles, soils ...). "My house is a thermos flask."

At least 15 ° C throughout the year

Outside, it snowed and the thermometer - 5 ° C, but in the living room, it's a pleasant 20 ° C. However, no radiator in sight. The heat comes from the soil and a buried pipe. Bruno Comby dug his garden to pass one hundred meters of pipes that ventilate the house. "At two meters underground, the air is still between 12 and 15 ° C. With a double-flow ventilation, hot exhaust air from my kitchen and my bathroom heats the incoming air and exits at 19 ° C in my air vents. "In summer, the geothermal system provides conditioning.

Get warm water showers

The "engine room" is located in the basement, where stands a high-performance heat pump, which supplies the underfloor heating and hot water tank. Functioning as a reverse refrigerator, it can produce, compression, 6 kW of heat per 1 kW of electricity. Obsessed with energy losses, Bruno Comby leaves nothing to chance: he cobbled a

pipng system to c
evacuations of the
food - "because it

Original French text:

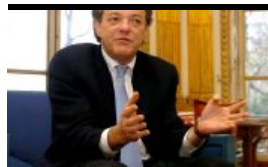
"A 2 mètres sous terre, l'air est toujours entre 12 et 15 °C.

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One euro of electricity per day

All inclusive, for a house of 140 m2, GéoTrouvetou spends

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one euro per day of electricity. With solar panels on the roof, he sold to EDF even more electricity than it consumes. Its carbon footprint is unbeatable: 300 pounds of CO2 equivalent per year, against 10 tons for the average French.

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