

THE NEWS

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80% energy savings cited

Insulation called the key to 'Solarcrete' buildings

by Patricia A. Kelsey

ERLANGER, Ky. — The insulative value of its patented sprayed-concrete, solar building system means documented energy savings of 50% to 80% over conventional construction methods in almost all applications, according to Solarcrete Corp.

The other key feature of the "Solarcrete" system, says the company, is how it is marketed.

The system uses 4-in. to 8-in.-thick polystyrene insulation boards that meet flush, eliminating infiltration gaps inherent in traditional wood stud construction, said Wade Urban, Solarcrete administrative vice president.

A framework of steel bars and wire mesh surround the polystyrene boards, and concrete is sprayed onto both sides of the wall, Urban said.

The system incorporates solar collectors in south walls by encasing the collector tubing in the exterior concrete surface. Solar-heated water is circulated to an insulated thermal storage tank beneath the building. A water-to-air heat pump draws upon the tank for space heating.

Solarcrete also has a retrofit system which involves resurfacing the walls of existing buildings employing the same methods and materials used in new construction.

In marketing terms, Urban said, "we're getting back to the old cottage industry concept of construction . . .

"We started marketing the system through licensing agreements with other builders," he said. The company does not "really manufacture anything, in that we're using local building materials — polystyrene, steel, and concrete — coupled with state-of-the-art technology, and combining them with a new way to form energy-efficient structures," he said.

The system can be applied to residential, commercial, industrial, and agricultural construction, the company said. For example, the system was bid against conventional concrete block construction with loose-fill insulation in the cores and 1 in. of polystyrene on the interior for an R-10 rating and with a ceiling rated at R-20 for a 7,653-ft² retail building in Indiana.

During the first year of operation, the customer reported 84% energy savings on top of initial cost savings of \$79,976, Solarcrete said.

Retrofitting a 2,400-ft² commercial building, also in Indiana, produced energy savings of \$975 over three months, the company said.

And Frank Klespies, Palm Harbor, Fla., the owner of the first Solarcrete home built in the state, reported "complete satisfaction" after two months. "Although I have not yet documented the total electric cost, my estimates indicate the bill will be about \$100 for cooling 2,600 ft²," he said.

Patricia Kelsey, our Florida correspondent, occasionally covers events outside that state.