

## ▼ IMPERIAL

## All systems green at 'Kimmswick-1'

### Firm touts environmentally friendly home

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Nestled within the quaint Victorian-style subdivision of the Parc at Kimmswick sits a quiet, seemingly normal, blue house.

While it's colored blue, its heart is green.

Dubbed "Kimmswick-1," the Imperial home is drawing the attention of folks throughout the area as one of the first truly "green" homes in Jefferson County.

The house was built by Applied Energy Solutions (AES) to prove that an energy efficient home can

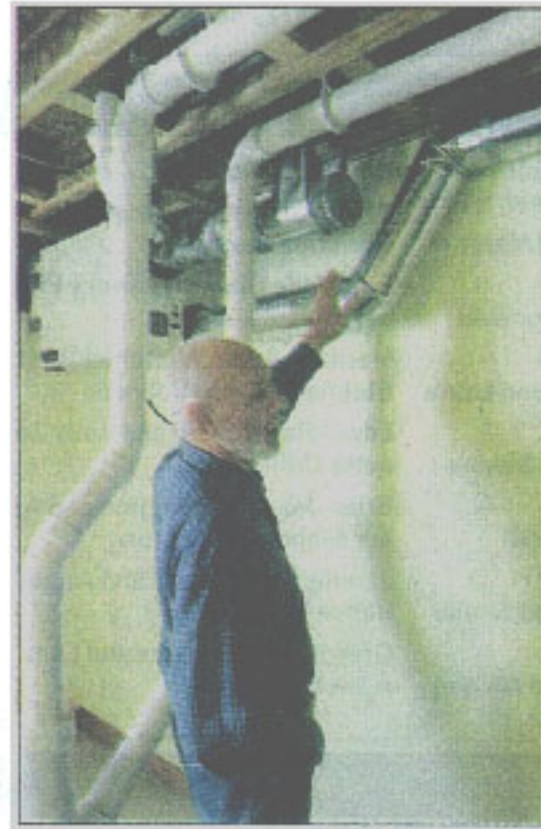
be built with little more cost to the developer than traditional homes.

Designing Kimmswick-1 was close to the heart of Olivette resident Jordan Heiman, an AES senior partner.

"He's 82," said Heiman's daughter, Jill Cray. "This was sort of his last hurrah."

Cray and her husband Don moved into the house in April after leaving San Diego to be closer to Jill's parents. The couple needed a place to live while they look for a permanent home in Olivette, and AES needed someone to test the

▼ See GREEN, Page A6



ANDREW JANSEN PHOTO

Don Cray talks about some of the energy efficient features in his home in Imperial.

## ▼ CONTINUED FROM PAGE A1

## Green: Solar panels can be installed by future owners

effectiveness of Kimmswick-1.

"It's so efficient we expect to be rated as platinum," Don Cray said.

The house is in the process of being certified as Energy Star 5 Plus by the United States Department of Energy and LEED-Homes Platinum by the United States Green Building Council Leadership in Energy and Environmental Design (LEED), the highest rating for both organizations.

According to Heiman, the Green Building Council is an individual organization separate from government agencies. The LEED Platinum rating signifies that the building uses only 40 percent of the energy other homes use.

"The cost of home ownership is not just about the mortgage," Heiman said.

The exterior walls of Kimmswick-1 are constructed of concrete reinforced with steel bars, running from the footing to the roof of the house. Not only does the concrete help prevent energy from escaping the house, but it protects the home against natural disasters.

Jill said that a tornado ripping through the area might take the roof off of the house, but the frame of Kimmswick-1 would survive the storm.

Siding is constructed of cement and cellulose fiber, using a high recycled content.

Windows are double pane. The panes are made of fiber-

glass, creating a tighter and longer-lasting seal. Window shades open from both the top and the bottom of the window, providing both privacy and lighting at the same time. High windows in several rooms allow in added light without requiring window treatments for privacy.

An air lock entry provides a buffer zone between the weather outside and the controlled climate within the house. Motion lights in the front entryway, entrance from the garage and master bathroom preserve energy. The lighting system is fluorescent.

The house was built facing north and south to take advantage of natural lighting. An overhang in the back blocks the higher, shorter summer heat waves but allows in the lower, longer winter heat waves for natural heating and cooling.

"Because the house is built so tightly, it needs artificial circulation," Don said.

The openness of the design and several ceiling fans throughout the house provide the needed circulation. The circulation system pulls air through the fans in the bathrooms, cleans it and disperses it throughout the rest of the house.

During construction, AES tried to minimize waste and used renewable resources. The hardwood floors are made from red oak from the Missouri Ozarks. Appliances are electric and are all energy efficient products.

"All of the exciting stuff is hidden away," Jill said, trekking down the basement steps for a closer look at the functioning organs of the home.

The temperature is regulated from 150-foot wells on the site. The house uses the temperature of the ground for stability. Piping is "super sealed" to prevent leaks using putty instead of tape. Hot water pipes are insulated to contain the heat within the pipes.

Wiring is ready for solar panels to be installed on the roof at the discretion of future owners. The roof was created at the optimum angle for solar panels. Power is currently provided by AmerenUE via wind farms.

Built compliant with the American with Disabilities Act, the main level of the house offers low light switches, wide doorways, a low thermostat and lever handles instead of traditional door knobs. Carpeted door mats are tacked down.

"This house is designed so that a person can go from a new family into old age," Jill said.

Outside, three rain gardens were designed to hold one inch of water. The left pool drains under the sidewalk into the right pool, which drains into the larger rain garden behind the house. While Jill has noticed frogs in the pools, larvicide pellets tossed into the water will

prevent mosquito larvae from surviving. Rain barrels provide easy maintenance in the event of dry weather.

Heiman said thinking "green" will only help the United States achieve true energy independence from other nations. He added that during the gas wars in the 1970s, about half of the oil used in the United States was imported. Now the number has increased to 60 percent.

"We've gone backwards," Heiman said.

In essence, he believes that Americans can take control of the nation's energy situation by building "green." For a little higher mortgage, people can spend a lot less in utilities.

"That's ultimately where we have to be," he said.

For more information about Kimmswick-1, visit the AES Web site at [www.appliedenergysolutionsllc.com](http://www.appliedenergysolutionsllc.com).

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