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Texas casita is powered by wind turbine



The so-called Zero Energy Casita, a 1,051-square-foot home nearing completion in the Fort Worth area, will use a wind turbine to generate its power.

Old meets new in an ultra-efficient home in Fort Worth that will use a wind turbine for its minimal electric needs.

The 1,051-square-foot ranch, nearing completion, uses 80- to 90-year old reclaimed barn wood to create a warm, rustic feel. Its efficiency, however, is 21st century, making it "This Week's Green House."

"The [Zero Energy Casita](#) meshes cutting-edge technologies with turn of the century aesthetics," said Don Ferrier, president of [Ferrier Custom Homes](#), its builder.

"The owners wanted the house to look like it's been there 150 years," Ferrier said, so it uses salvaged wood for siding, flooring and beams. "Unique to its core, this house is on a mission to reclaim, reduce and renew."

The two-bedroom, two-bath casita slashes its power needs with well-insulated Weathershield windows and panelized walls known as Structural Insulated Panels or SIPs. For shading, it has a 30-foot-tall oak tree and a stand of 20-foot-tall shrubs.

It reduces the impact of the hot Texas sun with a light-colored Galvalume metal roof over an airspace, which is designed to prevent up to 95% of the sun's heat from entering the attic.

To generate power, the lakefront property on Eagle Mountain Lake will use a 3.7 kW SkySkystream wind turbine, which has curved blades to reduce noise.

On windy days, it will send excess electricity to the grid, which it will then tap when the wind is quiet.



The Zero Energy Casita uses antique reclaimed wood for siding and flooring and wood beams for a rustic look.

Ferrier told *Green House* that the turbine added about \$17,000 to the home's cost, which averaged \$217 per square foot because of high-end finishes. The turbine's costs will be substantially offset by local and federal rebates and tax deductions.



The front porch, built with salvaged cedar posts, extends the living space outdoors.

"People think there's a magic bullet" to building a green home, Ferrier said in the interview. "It's actually a combination of things" such as house siting, a tight envelope and efficient equipment.

Ferrier, who built the first home in Texas to be rated platinum by the U.S. Green Building Council, says he's been building sustainably since 1982.

For a long time, he said, people would ask him: "Why don't you build real homes?"

"Now, green is really big," he said, adding his business is flourishing. His clients are either Baby Boomers who are empty nesters wanting a good investment or people ages 32 to 42 wanting to do the "right thing" environmentally.

The casita, designed by Bundy, Young, Sims & Potter of Wichita Falls, Texas, will be a second home for an older couple.

It has myriad green features: rainwater catchment for irrigation, xeriscaping, tankless water heater, Energy Star appliances, dual-flush toilets, water-conserving showers and faucets, low-VOC and formaldehyde-free finishes.



The ultra-efficient casita plans to meet its minimal electric needs with a 45-foot-tall 3.7 kW SkyStream wind turbine on a hill behind the house.