

Backfill

An Affordable Solar Home



The home incorporates regional materials like cypress siding. Here, the students practice roof disassembly in preparation for the model's trip to the Capitol.



The kitchen includes all the amenities for Louisiana-style hospitality. The undercounter refrigerator-freezer (by Perlick) saves energy by using a single compressor.



Movable steel shutters provide both shade and high-wind protection.



A traditional dog-trot porch separates the kitchen, on the right, from the living room and bedroom areas. The eccentric roof line is a stylized tribute to the vernacular "shotgun" house form.

Last fall, 20 college and university teams from the U.S. and abroad gathered in Washington, D.C., to take part in the 2009 Solar Decathlon. Sponsored by the DOE, the competition involves designing and building a compact home powered exclusively by the sun; the participants assembled their prototypes in a temporary Solar Village on the National Mall for judging. Among them was a group from

the University of Louisiana at Lafayette, which entered the contest with a very specific ambition: to design an affordable Southern vernacular home rugged enough to resist hurricane-force winds.

"From the beginning," says faculty advisor Geoff Gjertson, "we wanted to build not just this one house, but a house that people in our region would really want to live in — a prototype for good, affordable housing that's also sustainable. The FEMA trailer is what we *don't* want to see."

The resulting BeauSoleil Home (beausoleilhome.org) took first place in the Market Viability category. It also nailed the informal People's Choice award, which bodes well for its future prospects. Built with SIPs, it uses a cistern for water needs and incorporates passive-ventilation techniques typical of traditional homes in Louisiana — "real assets following a storm," as Gjertson notes.

The team's newest goal is to make the 800-square-foot house available by 2011, with a target cost between \$120,000 and \$150,000. Meanwhile, the model has been returned to the Lafayette campus, where a fresh batch of architecture and engineering students is using it to gather performance data. It's also open to the public two days a week. — *Dave Holbrook*