# Southern Living Homes showcases dozens of ways to capture sun's energy

You can go solar.

Whether you want to just dip a toe in the solar ocean or dive head first, the 3,000- square-foot Southern Living Showcase Homes at Furman University has a half dozen examples and applications of how homeowners can harness to sun's power.

Site selection- Where you builds your own house and your house's design are keys to how well you can use the sun. The Cliffs Cottage has a lengthy southern exposure on the long axis of the house that takes advantage of of some passive solar heating. In the sunroom, southern facing windows – with large, overhanging eaves – allow the stone floor to absorb heat during winter months when the lower angle of the sun hits. In summer when the sun is at a higher angle, the overhang protects the sunroom from the sun's rays allowing the stone floor to remain naturally cool in the shade.

The southern exposure also allows solar panels on the roof of the home and on the garage to most effectively absorb maximum sun throughout the year.

"Solar power is not just about power generation," said Frank Powell, a Furman professor interested in the field of sustainability, "it's about minimizing the need as well."

- Two roof-mounted solar panels, each 4 feet by 6½ feet, absorb sun and heat water that circulates through the panels up to 150 degrees. That water is then stored in an 80-galloon tank for use when needed.

David Odell, project manager for the solar applications at the Southern Living house, said a solar water heater can supply up to 80 percent of the hot water needs for a household.

- One full side of the roof of the Cliffs Cottage is blanketed by a 12x20-foot installation of dark-glassed solar panels. A typical 3000-square-foot home would use 3 to 5 kilowatts of power per day. This installation creates 6 kilowatts a day, said Ed Marshall, Furman's director of special projects.

The excess power generated is sent back to the grid for other electric power uses on campus.

- A thick pole, looking sort of like an oversized squareish umbrella, is a dual-axis, solar tracker. The photovoltaic panels on the pole move

throughout the day, tracking the sun to absorb the most sunlight possible.

- "Solar panels are ugly," Marshall said, and that's hwy two trellises in the garden at the Cliffs Cottage are being topped with photovoltaic solar panels that will disguise the telltale dark glass.
- Two, four-vehicle parking "garages" being built near the Southern Living home will have rooftops covered in solar panels.
- A kiosk to be built next to the home will be roofed with peel and stick solar panels.

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