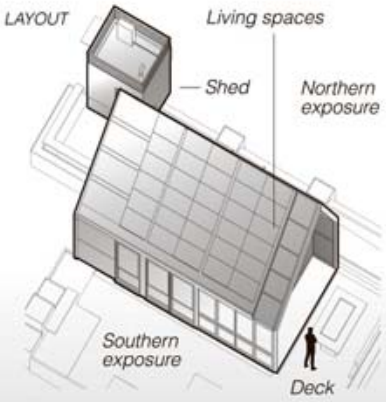
Click here to read the New York Times article

The New York Times

October 13, 2009

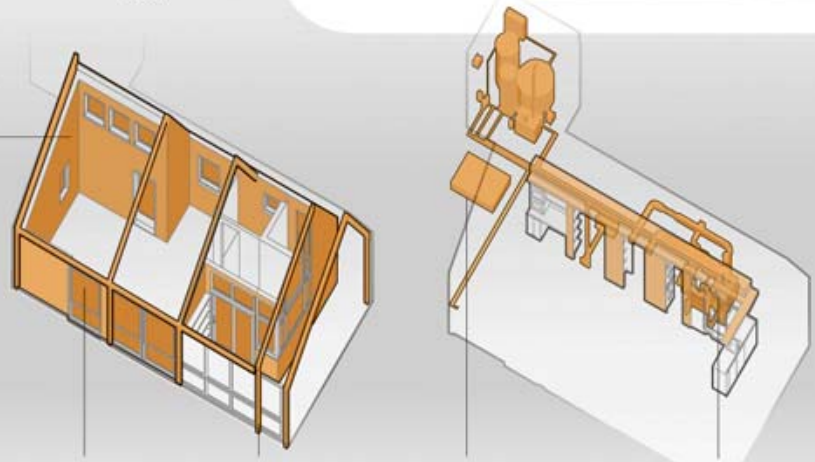
# Built for Comfort

The Solar Decathlon, a Department of Energy competition to design and build an attractive and efficient solar house, has 20 entries designed by students from universities in the United States and other countries. The houses, assembled on the National Mall in Washington, will be judged on aesthetic appeal, energy production and conservation, and other characteristics.




**MINNESOTA**
The University of Minnesota's house has a gable roof that is offset to the north, allowing a larger area for solar panels on the south. The roof angle is optimized for the lower winter sun in Minnesota's northern latitudes.

*DESIGN FEATURES*



**INSULATION**
Polyurethane closed-cell foam has a high insulating value and allows walls to be thinner.

**PHOTOVOLTAICS**
These panels convert sunlight to electricity, and also serve as cladding for the house.

**WINDOWS**
Large south-facing windows let the sun heat the interior.

**WOOD FRAME**
Exterior parts are covered in enameled steel for durability.

**WATER COLLECTION**
Rainwater and water from cleaning are collected and used to irrigate exterior plantings.

**COOLING**
A drying agent reduces humidity of the air that enters the air conditioner, making it more efficient.

**SOLAR THERMAL**
These panels provide heat for water and for a radiant heating system in the floor.

**BIFACIAL PANELS**
Photovoltaic cells on glass absorb light from both sides, increasing efficiency.

**OTHER TEAMS**

**TEAM SPAIN** Photovoltaic cells cover the roof, which pivots on a ball-and-socket joint to follow the sun. In high winds the roof can be locked in place.

**CORNELL** The living spaces are a series of interconnected silos made from corrugated steel, with other agricultural-themed touches.

**VIRGINIA TECH** Movable translucent panels filled with aerogel insulation and laser-cut stainless steel screens give the house a futuristic look.

*Sources: University of Minnesota; Cornell University; Technical University of Madrid; Virginia Polytechnic Institute and State University*

MIKA GRÖNDAHL/THE NEW YORK TIMES