

Passive solar is the main energy feature of this home design.

A passive solar house is designed to take advantage of the energy from the sun to heat the home in winter, and of architectural features to keep it cooler in summer. The house is oriented so that its long dimension is facing south and the south façade is made up of a large percentage of glass openings (both doors and windows) that allow the sun's rays to enter the house in winter when the sun is low in the sky. The house relies on "thermal mass" to absorb the sun's heat and release it slowly through a winter day. In summer, when the sun is higher in the sky, properly designed overhangs and other strategies keep out the sun's rays and aid in the passive cooling of homes.

Energy Efficiency features include:

- **Site oriented to make use of the sun**
- **2x6 framing**
- **Thermal mass**
- **Double pane, low-E Anderson casement windows**
- **24 inch roof overhangs**

The homeowner and the builder, Frank McLawhorn, will answer questions about building a passive solar home.



NCSEA

Sponsored by: North Carolina Sustainable Energy Association
Supported by: American Solar Energy Association