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## Energy Sense: Mobile Homes

Cooperative Extension South Dakota State University

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Website: [extension.sdstate.edu](http://extension.sdstate.edu)

Phone: 605-688-4792

Email: [sdsu.extension@sdstate.edu](mailto:sdsu.extension@sdstate.edu)

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ENERGY SENSE:

# mobile homes



Cooperative Extension Service  
South Dakota State University  
U.S. Department of Agriculture

# mobile homes

With declining energy resources and increasing costs facing us, the need to conserve energy is pressing. This need applies equally to occupants of houses, apartments, and mobile homes.

Whether you already own a mobile home or are considering the purchase of a new one, there are several steps you can take to save energy and dollars and, at the same time, make your home more comfortable.

## Purchasing a Mobile Home

When you purchase a new mobile home, buy according to Mobile Home Construction and Safety Standards issued by the U.S. Department of Housing and Urban Development (HUD), effective June 15, 1976.

A mobile home built according to Subpart F of the HUD

standards meets basic requirements for condensation control, air infiltration, thermal insulation (in the ceiling, walls, and floor) and has a label permanently affixed on an interior wall certifying according to climatic conditions the capability of heating and cooling equipment. The climate of the northern part of the United States requires Zone II certification. The standards are the result of research by mobile home manufacturers and insulation engineers. A home insulated to HUD's performance standards is more comfortable in winter and summer and is more economical to operate than a home with less thermal protection.

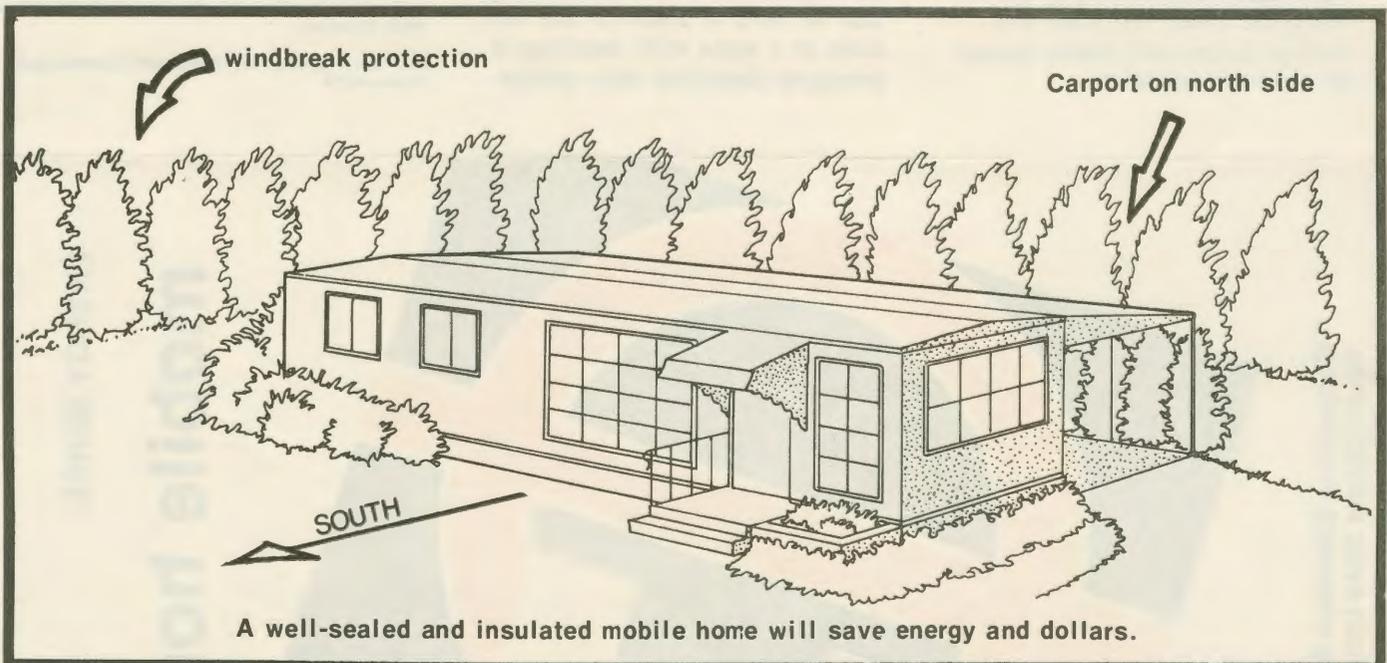
Some mobile homes manufactured today exceed minimum HUD performance standards for thermal protection and are labeled with "Energy Conserving Home" tags, as well as HUD

heating and cooling certificates. You can expect even greater comfort and economy of operation from them.

## Siting and Shading

Much of the comfort you seek in your mobile home and the home's efficient use of energy is determined by its placement or siting. In the northern part of the United States, site a mobile home so that the long sides face north and south. This will give maximum heating value from the sun. Protect your home against prevailing winter winds by building a semi-enclosed car port or by planting a windbreak of evergreens along the north and west sides of the home. A tall fence can also be used as a windbreak.

Well-planned awnings or porches on the southern side,



deciduous trees on the east and west sides, wind protection on the north, and shrubs planted along the mobile home skirt will all help to protect the structure from summer sun and winter winds. Another important consideration would be to site your home so that the kitchen area **does not** have a western exposure.

### Skirting

Full and properly installed skirting on a mobile home acts as added insulation and helps to reduce energy use. Vents should be provided to allow for air circulation, thus preventing moisture accumulation, and for the heating system's air combustion intake.

### Insulation

In most mobile homes, it is possible to add insulation to the roof and floor. A urethane material may be sprayed on the roof to a thickness of 2"-3". Urethane is quite effective in reducing heat loss in winter and heat build-up in summer. It can be coated with a protective sealer to keep it from discoloring and deteriorating. R-19 glass fiber batt insulation may be installed under the floor and held in place with heavy-gauge wire or chicken wire.

### Caulking and Weather Stripping

Air leaks and cracks, however small, increase the cost of heating and cooling a home and can result in moisture entering and damaging the structure. Check your home carefully for cracks and openings around the moldings, joints, nails, splash panels, windows, top seams, doors, roof vents, and wheel housings. Using a caulking gun or putty knife, plug and seal all openings with a quality caulking compound. The best compounds remain elastic when dry and are available in an array of colors to match exterior finishes. Thorough weather stripping around windows and doors will also cut heat losses.

### Plastic Storm Windows

The 1976 HUD standards require storm windows or insulating glass in mobile homes. If storm windows are not available for your present mobile home, or even if you have them, the installation of 4- to 6-mil plastic sheeting over windows will reduce heat loss. You may want to leave one or two windows on the south side of the home uncovered in case there is a warm day when an open window would be desirable. Plastic sheeting can be held in place on the outside of a home with masking or pressure-sensitive tape and re-

moved at the end of the heating season.

### Temperature Control

A daytime thermostat setting of 68°F is recommended for the heating season; a 5°-8° setback is recommended for nighttime hours. Exhaust fans in the kitchen and bathroom are useful for venting excess moisture, but use them sparingly during the winter.

### Heating Systems

A well-maintained gas- or oil-fired heating unit will make the most efficient use of energy. An annual check by a heating contractor before the start of the heating season will help to keep your system operating at maximum efficiency.

Heating ducts are often located underneath a mobile home. This causes excessive heat loss. Cover all exposed ducts with a minimum of R-4 insulation. The heating system should always have an outside vent for combustion air to enter the heating unit. The vent should **never** be covered.

**One in a series of home energy conservation fact sheets.** Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the USDA. Hollis D. Hall, Director of CES, SDSU, Brookings. Educational programs offered without regard to age, race, color, religion, sex, handicap, or national origin. An Equal Opportunity Employer.

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