

# Energy Savings for Manufactured Homes

■ Shading ■ Siting ■ Duct Sealing ■ HVAC help ■ Energy-saving enhancements

Energy fact sheet **20**

**M**anufactured homes often have higher energy bills than comparably sized site-built homes. While their construction style poses some restrictions, there are still many energy improvements you can make on a manufactured home that will save you money and increase the home's comfort, health and safety, and durability.

## Prevent Sun from Getting In— Reduce Cooling Costs

Keeping any home shaded saves on air conditioning costs, but it is especially important for manufactured homes. Many of these homes have less insulation than site-built homes, allowing easier entry of the sun's heat through conduction. The lower profile of manufactured homes makes it easier to shade walls and roofs than for site-built homes.

Planting fast-growing shade trees to protect your home from unwanted summer sun can add beauty and value to your home and reduce the need for air conditioning. Shading the east and west sides is particularly important. These walls get the most sunlight in summer.

Carports and porches provide excellent shading for windows. Exterior solar shade screens can effectively shade east and west windows, while providing privacy.

While shading windows on the outside is most effective, using light colored shades or blinds to reflect sunlight back through the glass will also help reduce air conditioning costs. Whenever possible, keep the shades drawn during the day for all windows.

Shading the roof is more difficult than walls and windows. It takes years for trees to grow tall enough to shade the roof. Applying a reflective coating may help reduce cooling costs. Many of these coatings provide some protection against water leaks. In a test comparing three brands of roof coating over a three-month period, the coatings reduced roof temperature by an average of 21-30 degrees over an uncoated roof.

## Site Your Home to Use the Sun

The direction your manufactured home faces can save you money. Having the long sides face north and south, and the short sides east and west will take advantage of the sun's heating in winter and provide the greatest protection from the summer sun. Ideally, the side with the most windows should face south to maximize the winter heating from sunlight.

## Make Sure Your Ducts Are Sealed and Insulated

Many manufactured homes have ductwork for their central heating and cooling equipment that is located outside the home. It is critical that this ductwork be airtight and well insulated. Have a professional test it for leakage and proper insulation.

Ductwork is usually installed in the floor cavity of a manufactured home. This cavity also has insulation that is held in place by sheathing, called the bottom or belly board. Holes in this

sheathing allow heated and cooled air to escape to the outside. Sealing holes in the floor sheathing can save money on your energy bills and help prevent rodents and insects from entering your home.

## Choose High Efficiency Heating and Cooling Equipment

If your home has older, inefficient heating and cooling equipment, consider a replacement system. The money you save on heating and cooling costs can quickly repay the purchase price.

Many manufactured homes have an electric resistance furnace. An electric furnace lowers the first cost of the home, but creates much higher winter heating costs than a heat pump or gas furnace. Upgrading from electric resistance heat to a gas furnace or electric heat pump will save hundreds of dollars a year in utility bills. This is usually the most important energy improvement and can save thousands of dollars over the life of the home.

## Add Insulation If Possible

Since the ceiling, wall and floor cavities for many manufactured homes are sealed, it is difficult to add insulation. However, some models have attic spaces in which you can install extra insulation. Some insulation companies can also blow insulation into the floor cavity. In the Southeastern climate, it is usually not practical to add insulation to the walls or to the outside of the roof.

In new homes, look for a minimum R-value of R-11 for walls, R-19 for floors, and R-30 for ceilings.

## Windows and Doors

Window replacement is rarely cost-effective based on energy savings. If replacing broken windows, use insulated glass with a thermal break for metal frames. Consider low-e glass for unshaded east or west facing windows.

In new homes, look for insulated windows and doors.

## Skirting

Skirting can help protect the belly board and floor insulation from animals and other damage. Most skirting in the South is ventilated and does not conserve energy or save on utility bills.

## Shop Wisely If Buying A New Manufactured Home

Most manufacturers offer energy options for new homes. While these options add to the purchase price, they can save thousands of dollars over the life of your home and greatly increase its comfort and value. Look for an energy efficiency certification sponsored by a local utility or government agency. It can help ensure that energy improvements are designed into your new manufactured home.