



MOBILE HOMES

There are about 54,000 mobile homes in Montana. Their low cost (compared to site-built houses) enables more people to own homes. Unfortunately, however, about half of existing mobile homes were built with little or no insulation or other energy efficiency features. They were manufactured before 1976, the year in which a federal housing code was passed requiring the homes to be built more efficiently. The good news is that there are many ways to increase the energy efficiency of your mobile home, which will in turn lower your utility bills and make your home more comfortable. Some steps you can do yourself, and others require the skills of trained weatherization professionals. Both types are well worth the effort.

Mobile Home Construction

The construction process for mobile homes is radically different from that of site-built homes. The floors, walls, and roof are built in assembly line fashion to form the home. Portability is achieved by mounting the home on a steel frame with wheels and using strong but lightweight materials for framing. First the floor, complete with water lines, waste lines, ductwork and insulation, is fastened to the steel frame foundation. The floor is protected by a rodent barrier, a sheet of heavy cloth or paper that also keeps animals out. Next, the furnace (typically a sealed combustion type) and plumbing fixtures are added and then, the interior walls. The homes are assembled from the inside out, with the ceiling/roof portion being the last major component installed. Once the home arrives at its destination, it must be secured on a level foundation on dry ground with proper drainage. If the home is not level or the ground below too moist, weatherization and repair steps will not be effective. Enlist the

help of a qualified professional for these sitting tasks.

Most effective conservation measures.

In the late 1980s, the U.S. Department of Energy sponsored a two-year study to determine the most cost-effective energy conservation measures for mobile homes in cold climates. The study identified the following "top five" measures:

1. **Sealing air leaks and furnace ducts;**
2. **Furnace tune-up;**
3. **Blowing insulation into the home's underside (called the belly);**
4. **Installing interior storm windows; and**
5. **Blowing insulation into the roof.**

Because of the wide construction variations of mobile homes, with the exception of installing plastic storm window kits that you can purchase at a hardware store, these measures will likely require the skills of trained professionals. Though you can also easily seal noticeable leaks around your home's windows and doors, these efforts will have little effect on your energy consumption if the big hidden leaks go untouched—leaks which are most easily found using a blower door, equipment commonly used by professional weatherization crews. If you are on a limited income, you may qualify for free weatherization assistance. Contact your local utility, Human Resources Development Council or tribal weatherization program for details.

Do-It-Yourself Tips

If you cannot enlist professional help, you can still go after some big leaks. Plug all holes around chimneys, vents, water pipes and heating system ductwork. Seek out hidden air passageways in closets and cabinets.

Make sure the rodent barrier is intact and patch it if torn. Once you've stopped all the big leaks you can find, then turn your attention to the little ones—around windows, doors, electrical outlets and light switches. For more information on these and other low-cost energy conservation tips, obtain a copy of Power Bill's Top Ten Energy Saving Tips brochure. There are brochures on water heaters and storm windows, too.

Air quality cautions

Weatherization makes good sense but before tightening your home, it is imperative to make sure all combustion appliances such as furnaces, stoves and water heaters are in good working order and are properly vented. Failure to do so could lead to the accumulation of dangerous amounts of carbon monoxide in your home. This is another good reason to consult with a weatherization professional before taking on a major weatherization job yourself. It's also important to regularly use exhaust fans in the kitchen and bathroom to maintain good indoor air quality and minimize moisture problems. Remember to ventilate constantly when using paints and other chemical compounds in the house.

HERE ARE SOME LOW-COST BUT EFFECTIVE STEPS YOU CAN TAKE TO SAVE ENERGY!

- 1. Install a water-heater insulation blanket and a low-flow showerhead. Also keep your hot water temperature at 120 degrees F;**
- 2. Keep your thermostat at a comfortable temperature (68 degrees is usually adequate) but reduce it at night and when you're away during the day;**
- 3. If you have a forced air furnace, clean or replace the filter monthly. For electric baseboard heaters, clean the**

registers weekly and keep furniture from obstructing the flow of heat to the room;

- 4. Periodically have your furnace checked and serviced; and**
- 5. Try cold water clothes detergent and only wash full loads of laundry.**

For More Information

Properly weatherizing your mobile home is an involved undertaking, and it's okay if you have more questions than answers after reading this brochure. The brochure did its job if it convinced you that weatherization measures can help save you money and make your home more comfortable. The rest is easy. For help, just call your local utility, the Human Resources Development Council, the tribal weatherization office, or the MSU Extension office in your county.

FOR THE HRDC OR TRIBAL WEATHERIZATION OFFICE NEAREST YOU, CALL 1-800-332-2272.