



HOME HEATING

Minnesota Department of Commerce Energy Information Center

A comfortable and healthy home requires an efficient and sound heating system. You want a heating system that is energy efficient and equipped with safety features to protect your home's indoor air quality.

High efficiency furnaces

Electric heating systems

Furnace safety

It is critically important to recognize that all of the elements making up your home are inter-related. Making improvements such as adding insulation, caulking, replacing windows or remodeling your kitchen can affect the efficient and safe operation of flame-burning appliances. For example, simply adding a kitchen fan will alter the operation of a water heater and many furnaces.

This guide describes how to evaluate your present heating system and helps you decide if and when it should be replaced. If a new furnace is needed, this guide will help you decide what type of unit to install and what features to look for. It also describes how to maintain your furnace.

If you have not had your heating system checked within the past year, do it now. Do not wait until a crisis occurs. A cold night in January, with the furnace faltering or failed, is not the time to assess your heating system.

Is your present furnace good enough?

The best way to assess your present heating system is to compare it with new, improved systems. An old furnace, even when it's running well, may extract only 60 percent of the available heat from the fuel over the heating season. That means only 60 cents of your heating dollar is going into the house as heat; the rest is going up and out the chimney. In addition, furnaces use electricity—many consuming over 1200 kWh a year, which can cost between \$100 and \$300 or more a year,

depending how long and how often the furnace fan runs.

In contrast, many new furnaces are so efficient that they waste less than a nickel of every dollar spent, and consume as little as 25% of the electrical energy your standard furnace may consume. Advances in technology have also brought major safety improvements. Furnaces now bring in air from outside of the home and supply it directly into the combustion chamber. It is vital to ensure that fuel-burning appliances such as furnaces and water heaters have an adequate supply of combustion air. The section on safety (page 7) can help you determine whether your present heating system poses a health threat.

Repair vs. replacement

Before deciding whether to keep or replace your present furnace, find out if it is operating properly. An annual professional check-up will assure you of safe, dependable operation. Furnaces have an average life expectancy of 16 to 20 years. Boilers have a life expectancy of thirty years. If your furnace is over ten years old or has a serious malfunction that will cost several hundred dollars to fix, it is wise to replace it now rather than to repair it. It is always best to start comparison shopping before your furnace breaks down. Shopping for a replacement furnace in an emergency does not allow time to get the best price. Even if the furnace is less than ten years old and would cost more than \$500 to fix, it may be cheaper to replace than to



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