

## **Timely Furnace Maintenance Lowers Energy Use, Cuts Costs** *By Saskatchewan Office of Energy Conservation*

If there is a bright side to rising natural gas prices, it is the environmental benefits resulting from efforts to control costs by conserving energy. Burning less energy means a reduction in the greenhouse gas emissions thought to cause climate change. It also conserves a non-renewable resource for future use.

One way to lower heating costs and reduce environmental emissions is to install a high-efficiency furnace. But even if a new furnace is beyond your budget, there are many lower cost measures that you can take to conserve energy. One of the most important ones is to make sure that your furnace is well maintained.

A furnace working at peak efficiency will use less energy, cost less to operate, and last longer. It will also be safer. To achieve peak efficiency, keep your furnace clean, well lubricated, and properly adjusted through an annual maintenance check. Some of the steps involved can be taken by the homeowner, while others require maintenance by trained service personnel.

Things that you can do yourself include cleaning the furnace by removing any dust and debris around the motor, lubricating the motor if required, and changing the air filters. If you are doing furnace cleaning yourself, ensure that the electric power to the furnace is off before you undertake the maintenance.

Air filters are inexpensive, so clean or replace the filter every month or two during the operating season. A dirty filter reduces airflow, forcing the furnace to run longer to heat your home. This can add significantly to energy costs, since more natural gas and more electricity will be used. The fan in older and conventional furnaces uses a lot of energy. In fact, for the average home, about 20% of the cost of heating is actually electricity used to operate the furnace fan.

Other furnace maintenance—such as adjustments, burner cleaning, parts replacement, repairs, and a venting inspection—is best performed by a licensed heating contractor. Licensed experts know your equipment and the necessary codes to follow. Both SaskEnergy and private contractors provide maintenance.

If you use the Internet, you can make an online request for service at the SaskEnergy website at [www.saskenergy.com/residential/ncservicerequest.asp](http://www.saskenergy.com/residential/ncservicerequest.asp). Or call 1-800-567-8899.

A good maintenance check will consider a number of things:

- Burners will be checked for flame colour. If the flame is orange or red, instead of blue, it may be a sign of inadequate combustion or excess carbon on the heat exchanger. If this is the case, the furnace can be adjusted and cleaned.

- The fan and fan motor should be checked for cleanliness and lubricated. Any dust accumulation should be removed to ensure better operation and prevent overheating. The motor should be secured to prevent loose connections caused by motor vibrations. The fan belt should be checked and replaced if cracked or worn. If the belt is too tight, it could burn out the fan bearing or motor. If it is too loose, it could result in slippage or poor operation of the fan.
- Hot and cold air grills should be cleaned as required and any items that are blocking air flow from these vents moved to promote better warm air distribution. Vent pipes from the furnace to chimney should be checked to make sure that they are properly connected, to prevent carbon monoxide leaks.

There will be a fee for your furnace maintenance check. Make sure that you ask the service provider what the fee is and what the check includes.

One measure that saves energy, money, and greenhouse gas emissions—and costs nothing—is simply to lower your thermostat setting when no one is at home. During the heating season, for every 1°C that you lower your thermostat, you can save 2% on your heating bill. During the cooling season, for every 1°C that you set it higher than 22°C, you can save 3% on your cooling bill.

This winter, try lowering your thermostat by 4 - 5°C while you're sleeping. Then cuddle up under a warm duvet!