



The 2005-06 Heating Season – Are You Ready?

Dollar Saving Tips for Homeowners
from the
Consumer Energy Council of America

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The upcoming winter heating season is projected to be the most expensive in recent memory. All of the major heating fuels – natural gas, heating oil, and propane – are at record highs because of increased global demand and the continuing aftermath of hurricanes along the Gulf coast. What can homeowners do? Fortunately there are some simple measures most of us can undertake to reduce the amount of fuel we consume and thereby save energy dollars. Some options cost just a little bit of money, some cost more, and some are completely free. What they all have in common, though, is that they will reduce your overall winter heating bills.

First things first

For many consumers, the first reaction to the high price of heating fuels is to consider switching from one fuel to another. For most homeowners, switching fuels means tearing out perfectly fine heating equipment. The Consumer Energy Council of America's research shows that in any given year 95% of heating equipment does not need to be replaced and incurring the high cost of installing new equipment would be an unnecessary expenditure.¹ Add in the time of interviewing contractors, scheduling site visits, researching equipment, modifying your home to accommodate the new fuel, and the cost of switching becomes even steeper. Then comes the worst part – prices of all fuels have gone up, so switching fuels makes little to no difference at all on your actual monthly heating bills and is not a smart economic decision.

At the Consumer Energy Council of America, we have studied the costs of heating fuels for over 25 years. CECA has produced a series of projections since the early 1980s (when price controls were removed from oil and natural gas) predicting that prices of both fuels would track one another over time. CECA's projections have proven true. The price of one fuel might spike at one point in time and the price of another might spike at another moment, but over the life of a heating system the prices will be comparable. Looking into the future, CECA has concluded that because prices are volatile – and will most likely continue to be so in the foreseeable future because of escalating world demand for fuels from the burgeoning economies of China and India – there is no compelling evidence to suggest that switching from one fuel to another will make economic sense for the consumer.

¹ Heating equipment generally lasts 20 years. Therefore, only one unit in 20, or five percent of units, needs to be changed in any given year. Ninety five percent of units do not need to be changed.

Where to start?

No matter where you live in the U.S., you should be able to find a “home performance contractor” nearby. These professionals come to your home and test the heating system, check for leaks in your ductwork, and point out areas in the house that could benefit from weatherization measures. You should be able to find a contractor who can perform an energy audit on your house for \$100 to \$150. This may sound like a lot of money, but a typical homeowner can save much more than that by having a professional point out the little things to do that can add up to big savings.

In the meantime, pay attention to the house itself – there are signs you can pick up on that will give you a good indication of how the house stacks up in terms of energy efficiency. If you live in a cold climate, does the snow stay on your roof after a snowstorm, or does it melt quickly? If it melts quickly, that means that heat is escaping from your house through the roof. Are there any parts of the roof that melt before other parts of the roof? That can help you pinpoint some problem areas inside the house where warm air is leaking (usually around vent pipes). Are your bathrooms a little chilly? That is often the case when pipes (like water pipes, drain pipes, and venting pipes) create leaky passageways that cause drafts.

Some simple, low cost solutions to reduce heating bills

- If you have forced hot air heating, **close the vents in any rooms that are not used.** This concentrates the heat where you want it.
- **Make sure the damper for the fireplace is closed tightly.** Even better, consider having a top mount fireplace damper installed. This provides tighter seals and prevents heat from escaping.
- **Install a programmable thermostat** – one that can automatically set the temperature higher when you are awake and lower when you are sleeping or at work.
- **Install caulking around windows and doors,** and use weather-stripping to ensure that there are no gaps that are letting warm air out.
- **Tune up your heating equipment** every year or two to keep it running cleanly and efficiently.
- **Draw curtains or drapes over the windows** after sunset to block cold air drafts from coming into the house.
- **Use ceiling fans** to gently push the warm air back down from the ceiling and help it circulate.
- **Set your thermostat back a degree or two.** For every degree lower you set your thermostat, you will save 3% on heating costs.
- **Replace filters** in the forced air systems. The more clogged the filters, the harder the system has to work just to give you the same amount of heat – and the more you pay just to have the same amount of heat.
- **Add more insulation to the attic.** Even though your windows and doors may also be drafty, the majority of your heat escapes through the ceiling. If your attic is accessible, rolling out another layer of insulation is an easy weekend project.

Other considerations

During the winter when the cost for fuel is high, that means that you are also paying a higher price for heating the water in your house. Heating the water in your house represents up to 20% of your energy costs, so finding ways to reduce your hot water needs in the winter will also help keep your overall energy costs down. Some things to consider are:

- **Turn down the thermostat on your hot water heater to 120 degrees.** This is still hot enough for baths, showers, cooking, and washing, but reduces your energy consumption and consequently reduces the dollars you spend.
- **Consider installing a water-saving showerhead.** Most people cannot tell the difference between a regular showerhead and a water-saving one. However, the result is less water used, meaning that there is less water that needs to be reheated, which means you are using less energy and that means saving dollars.
- **Use cold water for washing clothes.** After all, the detergent is doing the work, not the temperature of the water. The colors in the clothes may even last longer.
- **Repair leaky faucets, especially if they are dripping hot water.** It may not seem like a lot, but a steady drip can waste gallons of water during the course of a day. That means that the hot water heater is working harder than normal to keep the water hot – and you are paying for wasted energy.
- **Install a heater wrap around the hot water tank.** A wrap with an R-11 insulating rating is sufficient.

If you have a forced hot air system

Even in new houses, the network of ducts that push the air around often leaks air from gaps, cracks, and other problems. Some estimate that a typical duct system loses 25% to 40% of the heating energy it starts with — meaning that the typical homeowner with forced hot air is spending 25% to 40% more in heating costs than necessary.²

Ironically, duct tape—used for everything from holding up car bumpers to making kitsch clothing—is actually NOT a good choice for sealing ducts. The adhesive backing on the duct tape dries out. There are other tapes, made specially for sealing ducts, available at hardware stores that work well. While at the hardware store, also look for duct insulation if you have ductwork that runs through unheated areas like crawl spaces or attics.

Unfortunately unless there is a visible gap in the basement, crawlspace, attic, or other open area, it is difficult to know whether or not warm air is leaking out of the system and not getting to where it is needed. In this case, a home energy audit from a professional contractor is essential. The contractor can test the system with special gauges and seal leaky ducts within walls and ceilings. Here are some simple tests: if rooms within the house always seems to be at different temperatures, if the air feels clammy or stuffy, or if the whole house seems to fluctuate between being too hot or too cold, then it could indicate that you have leaky ductwork.

² From *Home Energy Magazine* (accessed online at www.homeenergy.com).

If you have an oil heating system

If your oil system is over ten years old, chances are you can save at least 15% to 20% on fuel consumption – and therefore on your heating bills – by upgrading to a flame retention burner for your heating oil system.³ Replacing the burner is significantly cheaper than replacing the entire system, yet at current prices for oil, the payback could be as quick as a couple of years. The older the system, the greater the savings when upgrading to a flame retention burner.

If you need to replace your heating system

If you are in the 5% of homeowners who need to replace a heating system, compare the AFUE rating of different units to determine the efficiency of the heating equipment. The higher the number, the greater the efficiency. For example, if a heating system has an AFUE of 85%, then that means that 85% of the heat is staying in your house while the remaining 15% is going up the chimney. At CECA, we recommend buying a furnace or boiler that has an AFUE rating of at least 85%.

With new heating and cooling equipment, ***bigger is not better!*** If the equipment you are considering is oversized for your house, then it will run inefficiently and cost you more in the long run. Your home energy audit should help you determine the appropriate size for the heating system.

This information from the Consumer Energy Council of America is designed to help consumers save dollars by making smart economic choices on their home heating options.

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³ National Oilheat Research Alliance, *Gold Book for Oilheat Dealers*, 2004.