

## CUT YOUR UTILITY BILLS

# Winter Warming 101

**QUESTION:** Should I set my thermostat lower during winter? If so, how low and for how long?

**ANSWER:** It is a common myth that it takes as much energy to reheat a house—in the morning for example—as was saved during the temperature setback period overnight. The amount of heat a house loses through its walls, ceilings and floors is directly proportional to the difference between the indoor and the outdoor temperatures. Air leakage into and out of your house also increases with larger temperature differences.

When the indoor temperature is set lower, the indoor-to-outdoor temperature difference is smaller so less heat is lost from your house. If less heat is lost from your house, your furnace has to use less gas, oil or electricity to create the heat to replace it. The amount of heat used to reheat the house, therefore, is less than the amount saved over the temperature setback period. During the summer, the same concept applies

when air-conditioning.

It saves energy overall if you lower the temperature setting on your central furnace or heat pump thermostat. The dollar amount you can save depends primarily on how low you set the thermostat, how long you have it set back and, to a lesser degree, your climate.

The only time a temperature setback may not be wise is if you have a heat pump with backup electric resistance heat and an old standard thermostat. When it is time to reheat the house and you set the thermostat higher again, the expensive backup electric resistance heater may come on. However, for a long eight-hour setback, you will likely still save overall. That is not true for a short couple-hour setback.

If you use a heat pump, install a setback thermostat specifically designed for heat pumps. These have electronic circuitry to keep the backup resistance heating elements off after the setback period.

There is not a “best” thermostat setting for all homes and climates. The lower you



**Don't let winter weather and thermostat confusion ruin your winter. Learn to control costs and maintain comfort.**

set it, the greater the overall savings. The amount of savings per degree for each nighttime eight-hour setback period ranges from 1% to 3%. Since many people are also gone working during the daytime, the temperature can be set lower for about 16 hours a day. Unless there are some health problems in your family, 62 F is typically comfortable if you are wearing long sleeves or a sweater.

Selecting proper temperatures throughout the day and night can be a bit confusing. You want to balance comfort with energy savings. It is surprising how comfortable you can be at a lower indoor temperature once you become accustomed to it.

In moderate climates, let your comfort dictate how low

you initially set the furnace or heat pump thermostat. As you get used to the lower temperatures and wear a sweater, you will be able to gradually lower it more. In colder climates, excessive window condensation often limits how low the indoor temperature can be set. To set the temperature lower, you will have to reduce the indoor humidity level.

When selecting a new programmable thermostat for setback, choose one that lets you control it from your cellphone or tablet. Schedules can deviate, so you may want to change the setback times and temperatures remotely. For maximum savings and comfort, install a thermostat capable of setting different temperatures in different rooms along with a duct zoning system. ■



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