

Ask an Expert: Temperature Setback Energy Savings

"How much will I save by lowering the thermostat three degrees over an eight-hour period?"



Source: www.energy.gov

Temperature setback is a well-known means for saving energy by maintaining the temperature in a conditioned space at a specified set point when the space is not occupied.

For every degree of temperature setback over an eight-hour period, you can save an estimated 1 percent on heating costs, according to the U.S. Department of Energy. In your case, a three degree temperature adjustment for eight hours will result in a savings of 3 percent. The savings will triple to 9 percent if you extend the setback period to a full 24 hours.

Remember that these are estimates; a number of factors contribute to the energy required to heat your facility. These include insulation levels, ventilation, climate, as well as the condition of doors and windows.

Getting the most from your heating system

Throughout your facility, there are a number of measures you can take to minimize heat loss, increase building comfort and reduce overall energy costs.

- Have your heating system inspected and cleaned by a qualified technician at the beginning of each heating season. This will help to identify any problems and ensure that your system is running at peak performance.
- Change filters every month during the heating season. New filters are relatively inexpensive and worth the cost. Dirty filters reduce heating system efficiency and result in lower indoor air quality.
- Leaky ductwork reduces heating system efficiency and occupant comfort. Inspect your ductwork for leaks and seal with mastic tape.
- For facilities that use boilers for space heating, use inexpensive flue gas analyzers to monitor flue gas levels and adjust air levels as needed. Excessive air levels (over 6 percent) will reduce boiler efficiency.
- Periodically check boiler stream traps for leaks and replace if necessary.
- Clean scale buildup off boilers on a regular basis; scale buildup inhibits heat transfer and reduces boiler efficiency.
- Weatherize windows and doors by filling cracks and putting weather-stripping around gaps where climate-controlled air can escape.
- Adding insulation to walls and the roof saves on heating costs and keeps building occupants comfortable all winter long. The level of insulation will depend on the facility type and climate. The *International Energy Conservation Code (IECC)*, published by the International Code Council and *ASHRAE 90.1 Energy Standard for Buildings Except Low-Rise Residential Buildings*, published by the American Society of Heating, Refrigerating and Air Conditioning Engineers provides recommended insulation levels for commercial buildings.

Try the [Ask an Expert](#) service if you have more questions about how to reduce heating system costs or improve the overall efficiency of your facility.

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