

# Questions about heating your home efficiently this winter?

Many of you are concerned about the rising cost of heating your home, and we have been getting questions about using electricity to help reduce those costs. Here are some of the most frequently asked questions, along with answers and advice to help you make the best decision for your heating needs.

**Question:** *With the cost of oil being so high, is it less expensive to heat my home with electricity than with oil?*

**Answer:** Based on prices as of August 2009, heating a home with an oil-fired system would be less expensive than heating a home with electric baseboard heat. However, heating a home with a geothermal heat pump or a cold climate heat pump would be less expensive than using oil.

At \$4.67 a gallon for oil, it would cost the same to produce the same amount of heat using oil or electric baseboard heat. At \$1.41 a gallon for oil, it would cost the same to produce the same amount of heat using oil or a geothermal heating system.

Angie O.,  
Customer Service Representative



**Question:** *What is the difference between heating my home with oil vs. electricity?*

**Answer:** Both electric and oil systems can provide a home with sufficient heat and keep you comfortable. Electric baseboard heat typically has a separate thermostat for each room. This can make it easier for you to save energy by turning down the thermostats and using less heat in rooms when it's not needed.

Oil-fired heating systems usually have thermostats that control the heat for several rooms, or even just one for the whole house. So to increase the temperature in one room, you also end up increasing the temperature in rooms where it's not really needed, which wastes energy.

Another way to add extra heat to one room without turning up the thermostat is to use an energy-efficient portable electric space heater.

**Question:** *How can I calculate the cost to heat my home with electricity, and compare it to the cost of heating with oil?*

**Answer:** The table below compares the relative costs of different heating fuels. However, calculating the amount of energy to heat a home requires a complex, detailed analysis called a heat loss analysis. Contact a certified energy auditor or heating contractor to perform a heat loss analysis for your home if you want this information.

Based on information from the Energy Information Administration (EIA), part of the Federal Department of Energy, it is possible to convert gallons of oil used into kilowatt-hours of electricity. For example, a home that uses 800 gallons of oil for heating would use about 25,300 kilowatt-hours to produce the same amount of heat. Visit [www.cmpco.com](http://www.cmpco.com) for a link to a more detailed spreadsheet from the Department of Energy to compare heating costs.

## Cost comparison for different heating fuels

Fuel source	System efficiency <sup>(1)</sup>	Cost per unit <sup>(2)</sup>	Cost per million Btu <sup>(3)</sup>
Oil	78%	\$3.66 per gallon	\$33.38
Electric	100%	14.5¢ per kWh	\$42.42
Kerosene	80%	\$4.07 per gallon	\$36.68
Propane	78%	\$3.10 per gallon	\$43.52

(1) Standard efficiencies per federal Dept. of Energy

(2) Electric, oil, & kerosene prices as of 11/28/11

Oil & kerosene prices are state average from Maine Office of Energy Security and Independence

(3) Does not include cost of electricity needed to operate fossil-fueled systems

**Question:** *How much does it cost to run a portable energy-efficient electric space heater?*

**Answer:** Use the simple steps below to calculate the cost.

1. Determine the wattage of the electric space heater
2. Divide the wattage by 1,000 to convert to kilowatts (kW)
3. Determine the number of hours per month your electric space heater is on (remember: appliances like space heaters cycle on and off to maintain a certain temperature)
4. Multiply kW (your answer from part 2) by hours (your answer from part 3)
5. Multiply the total kilowatt-hours (kWh, your answer from part 4) by the current residential price of \$0.147



**Question:** *How do I decide when it makes sense to use an electric space heater instead of just turning up the thermostat?*

**Answer:** Energy-efficient electric space heaters used to provide supplemental heat can save energy and money. At prices as of August 2009, it costs about twice as much to get the same amount of heat from electric space heaters or electric baseboard than it does from an oil-fired central heating system. But to provide extra warmth for just a portion of the space heated by a central heating system, using an electric space heater can be less expensive than turning up the thermostat for the whole house. If the area needing extra heat is less than half the area of the total space, consider using electric heat to add warmth quickly and economically.

**Question:** *I want to completely stop using oil to heat my house, but don't want to have an electric heat system installed. Can I just use several portable electric space heaters to heat my home?*

**Answer:** Although you can save money by using energy-efficient, portable electric space heaters to *supplement* your central heating system, it would most likely cost more to use portable electric space heaters as your *only* source for heat. Plus, water pipes that run throughout your house could freeze where there are no portable electric space heaters, and larger rooms are harder to heat using only a portable electric space heater.

**Question:** *I heat my water with oil. Should I switch to an electric water heater?*

**Answer:** Many people have an oil-fired boiler that provides space and water heating. Generally the cost to heat hot water for household use is less for these systems than the cost of using an electric water heater. For older, less efficient oil-fired systems the cost to heat water for household use is similar to using an electric water heater.

It is less expensive to use an electric water heater than a propane-fired one based on electricity prices as of August 2009. If you only use propane to heat your water and not for space heating as well, electric water heaters can be a lot less expensive than propane-fired ones.

**Question:** *I use a lot of hot water, even in the summer. Is it less expensive to heat my water in the summer with electricity than with oil?*

**Answer:** It depends on the efficiency of the oil-fired system. The efficiency of an oil-fired boiler used only to heat household water is lower than when it's being used to heat your house as well. For older, inefficient systems it may be less expensive to use an electric water heater in the non-heating season.

## More questions?

You can find additional information about heating costs on our Web site at [www.cmpco.com](http://www.cmpco.com)