



Shopping for Portable Space Heaters

By Tom Lienhard, PE, CEM

I'm frequently asked if you can have significant energy savings by using a portable electric heater. The answer is it depends.

You typically will not see significant energy savings if you're already using resistance electric space heaters, have zonal electric baseboards, or add a space heater without drastically reducing your overall home or apartment's heating usage.

Reducing the energy needs of your whole house by extreme lowering of the thermostat on your home's heating system and using a space heater in the room you are occupying may save energy – this is called “zoning”. Realize that it may affect the comfort and safe operation of the rest of the house to set the thermostat too low.

It is also not recommended to “zone” by shutting off heat to unused parts of the home. It's smart to consult a heating professional before shutting down forced air ducts and/or supply/return grills since that could cause problems with the reliable operation of your home's heating system, reducing or negating any possible savings from zoning.

Electric space heaters, however, can add comfort to a common area or room that is generally cooler than the rest of the house without increasing the thermostat and energy use for the entire house. This may save a lesser amount of energy but without undesired negative consequences.

How much you spend for a heater will not necessarily affect the energy performance. All space heaters, whether they are electric resistive, resistive ceramic or tube infrared heating units, will generate the same amount of heat based on comparable wattages. For example, running a 1,500 watt heater for an hour, whether it's a basic \$30 unit you can buy at any hardware store or a \$400 unit with a custom wood enclosure, will use the same amount of energy and produce the same amount of heat.

A good tip is to read the on-line product manual before buying a portable heater to make sure the product meets your needs and expectations. And any heating appliance should be operated with strict adherence to safety guidelines. So be an informed shopper, and check with a reliable consumer research organization or on-line sources for feedback on products, and always follow instructions in the product manual.

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