



COLD CLIMATE HOUSING RESEARCH CENTER

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ENERGY FOCUS

The Whole Story Behind Infrared Heaters

Paul Harvey, famous for “*The Rest of the Story...*” spots on A.M. radio, is endorsing a category of heater for which today I will endeavor to tell the rest of the story. I’m no Harvey, so bear with me. And no matter what you read here today, nothing I say is intended to diminish the appeal of advertising.

Heating your home requires energy. For most of us, that means burning fuels like wood, oil, or gas in furnaces or stoves. Then, of course, there are electric heaters that you plug into wall sockets. Mr. Harvey is shilling for a kind of electric heater called an infrared heater. Like other types of portable electric heaters, infrared heaters go anywhere indoors a suitable extension cord goes, can be simple to operate, and require no complicated installation.

Electric heaters appeal as quick fixes to cold areas in our homes. Unfortunately, these days the power used to run electric heaters usually costs more than other sources of residential energy, such as oil or wood, for an equal amount of heat produced. Therefore, the only way you can save money using electric heaters is if you use them selectively to heat portions of your house while turning down your furnace’s thermostat and, consequently, use less energy overall.

For example, you might be able to save energy by turning your furnace’s thermostat down to 60 degrees Fahrenheit and using an electric heater to heat just your bedroom to 68 degrees. This way, you are heating a smaller portion of your home to a full 68 degrees. And, even though an electric heater is an expensive way to generate heat, you are using it to heat a relatively small space. The safest electric heaters are those that do not have exposed heating elements, turn off automatically if tipped over, and are UL listed. Non-electric space heaters that burn fuel should not be used indoors, especially if they do not exhaust to the outside.

Finally, back to Mr. Harvey’s infrared heaters. Strictly speaking, the kind of infrared heater you hear about on the radio is more like a conventional space heater. They consist of infrared light bulbs in a box, which shine on a heat exchanger – usually a piece of copper or other metal – over which a fan blows air. Other infrared heaters emit infrared light directly into a room, which you can’t see because it is beyond the visible spectrum. Most surfaces, including your clothes and skin, will absorb this light and feel warmer.

For certain applications, direct infrared heaters can be more efficient than space heaters because they focus heat on a desired target. For example, if you only want to heat your cat, which is sitting in your favorite reading chair, you can simply point a direct infrared heater at the cat. There is no need to heat

the whole room. But beware. Your cat will be cold again just as soon as it jumps off the chair to chase a mouse. Sometimes people use direct infrared heaters in garages or warehouses where heat is only wanted at certain locations such as work areas. Why spend the money to heat a large building space if you only want to feel warm in one part of it?

The bottom line? Electric space heaters can be convenient and, under certain circumstances, could help you to save a little bit of money if you use them strategically. But they will not cut your heating bill in half unless you use half as much heat. Direct infrared heaters have specialized applications for which they might be better suited than space heaters, but they are not for everyone and use just as much electricity to produce heat as any other kind of electric heater. Sorry, Mr. Harvey.