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Just Say No To Electric Heat

Now that the heating season is starting up I bet many of you are firing up electric space heaters in an attempt to stay warm. While these heaters may be dirt cheap to buy, they can cost you at least ten times more to heat your home – or more - than most other types of heat. There are always exceptions to every rule, of course, so let's take a look at alternatives if electricity is your only option.

The first fact to keep in mind when shopping for an electric heater is that a 1,000 watt heater will deliver 1,000 watts (or 3,413 Btu's) of heat and no more. I point this out because you'll see all sorts of over the top claims for “more efficient” heaters. The “Miracle Amish Mantle Heater” is one such example. It's just a very expensive electric heater – no miracle involved whatsoever! An electric heater delivers the same amount of heat regardless of the technology. The only exception is an electric heat pump, which we'll get to a little later.

The only inexpensive electric heater that will warm you up while still costing you less to operate is one that heats you by radiation – by radiating heat to your body. I'm sure most of you have been outdoors on a cold winter day with the sun shining and you've felt comfortable. But then a cloud comes by, blocks the sun, and you immediately get cold. This is an example of radiant heat. The heat radiating to your body is making up for the cold air surrounding you. This same sort of effect can be achieved with a radiant electric heater in a cold home. It takes a lot of expensive electricity to heat an entire cold room but far less to heat just your body!

I was visiting a home during an energy audit recently and a woman had a free standing, oil-filled electric heater she was using to try and heat her office. It was costing her a lot of money to run and she still wasn't comfortable. I told her about a similar experience I had in an office I used to work in. It was an old Victorian with no insulation in the floor and my legs were always cold when sitting at my desk near a cold outside wall. My boss got an oil-filled electric heater to heat the space but I was always cold. So I bought a small, ceramic radiant electric heater and put it on the wall under my desk. It used a small fraction of the electricity and I had to keep it on its lowest setting to keep my legs from feeling fried! The room temperature was a chilly 60 degrees but I was very comfortable with this little radiant heater under my desk. Think of it this way – why heat an entire room when it's only your body you need to heat?

I saw a similar heater the other day at Hills Flat Lumber called the “Eco-Heater” on sale for \$109.99 and I bet other local hardware stores carry them too. This one mounts on a wall but I've seen others that are portable. Since they work primarily on the principle of radiation they don't need a fan and, as a result, operate silently. The surface temperature of a radiant heater can get very hot so it's important to make sure children can't touch them and flammable (or melt-able) objects don't come in contact with them.

People that don't have gas service or live in an all-electric home might benefit from a heat pump. They're more expensive to purchase but the new models are very efficient and inexpensive to operate. And they also provide cooling! There's a wide variety of models and sizes made to serve a single room or, in some cases, multiple rooms. A heat pump costs about 1/3 as much or less to operate than an electric resistance heater. For example, Mitsubishi Electric and a number of other companies make a unit called a "mini-split" that are becoming increasingly popular in Nevada County. My suggestion would be to call several HVAC companies to get competitive bids if a heat pump sounds like something you could benefit from.

There are a number of older homes out there that simply don't have the space, budget, or both for the installation of the more common, high-efficiency central heating system. So for those folks, a radiant electric heater or a heat pump heat might be just the ticket for staying comfortable without breaking the bank!

Ray Darby is President of Sustainable Energy Group Inc., a Grass Valley company offering energy efficiency and solar services for residential and commercial buildings, from comparing the alternatives through installation and servicing of energy systems of all types. You can reach him at 530-273-4422, via email RayDarby@SustainableEnergyGroup.com, or visit their web site at www.SustainableEnergyGroup.com.