



BLUESTEM

ELECTRIC COOPERATIVE, INC.

www.bluestemelectric.com

March 2008

Bluestem NEWS

614 E Hwy 24

P.O. Box 5

Wamego, KS 66547

(785) 456-2212

524 Dexter

P.O. Box 513

Clay Center, KS 67432

(785) 632-3111

Simple Facts: Gas vs. Electric Heating Systems

Many times people are confused by inaccurate information they receive from manufacturers and sellers of heating and cooling equipment. But all you need to know in order to make wise decisions when purchasing this equipment are a few simple facts.

First of all, the proper sizing of equipment is of utmost importance for comfort and low utility bills. Once the proper size is known, then you must decide what type of system best suits your needs.

Basically there are three ways that houses are heated: 1) Natural gas furnace, 2) air-to-air electric heat pump, and 3) geothermal heat pump (electricity).

Now, let's consider how efficient they are. And when I talk about heating efficiency, I'm talking about how efficiently the system converts either natural gas or electricity to heat for you home.

A typical gas furnace will be rated at about 80 percent efficiency when it is new and if it is installed properly. That percentage will lessen with each year's use. An 80 percent efficiency rating means that 80 percent of the gas used will provide heat and the other 20 percent goes up the flue. For example, look at your neighbor's

gas flue on a cold winter morning and see the steam coming out.

While I don't recommend this, a gas furnace that is 90 percent efficient can be used. With this unit, about 10 percent of the fuel goes up the flue. At first glance, you might think 80 to 90 percent sounds pretty good. But consider this. Would you purchase gasoline for your car and pump 10 to 20 percent of it on the ground? In my opinion, our nation would not have to worry about shortages of natural gas if we simply didn't waste it.

Another popular type of heating system, an air-to-air heat pump, uses electricity instead of gas. All Doug Rye Homes use electric heating systems. An air-to-air heat pump, properly installed, would operate at an efficiency of around 250 percent. I know what you are thinking. "How can anything be more than 100 percent energy efficient?" Remember, we are talking about how efficiently a unit uses either electricity or gas to move or create heat. Unlike a gas-fired furnace, a heat pump does not actually create heat, it simply moves heat from one location to another. Air-to-air pumps extract the heat from the air. With a heat pump, you use

one unit of electricity and get about 2.5 units of heat.

My favorite system, the geothermal heat pump, is simply the

very best there is. Most geothermal heating systems operate at close to 400 percent energy efficiency! Wow! That's five times the efficiency of the 80 percent gas furnace. As this heat pump is extracting heat from Mother Earth, which is a constant 57 degrees, it is operating on minimal stress and using a very small amount of electricity to move the heat from the earth into the house. With a geothermal system, you buy one unit of electricity (one unit of heat) and Mother Earth will give you three more units of heat for free. (That three units of heat is solar energy that Mr. Sunshine gave us over millions of years.)

Doug Rye, is a licensed architect and the popular host of the "Home Remedies" radio show. You can contact Doug at 1-888-Doug-Rye or visit www.dougrye.com. Source: Arkansas Electric Cooperatives Corporation.



Doug Rye

Bluestem Electric Heat & Water Heater Rebate Program

Energy conservation and efficiency are initiatives that Bluestem supports. Through these measures, less energy is consumed and less energy is required to be produced. The decrease in the production and consumption of energy lowers the energy bill to the cooperative and ultimately to you, our member.

To qualify for any of the rebates, the appliance must meet minimum energy efficiency performance standards that are detailed below. These standards are slightly higher than the required industry minimums.

If you have any questions, please give us a call at the office closest to you: Wamego – (785) 456-2212 or (800) 558-1580, Clay Center – (785) 632-3111 or (800) 297-8725.

The efficiency requirements and rebate amounts will be as follows and must be met in order to receive a rebate.

Water Heaters

- Less than 60 gallons must have a minimum Energy Factor (EF) of 0.93.
- 60 gallons or greater must have a minimum EF of 0.91.
- The rebate for a standard water heater (non-lifetime warranty)

if it is in new construction or replacing gas with electric is \$125, electric-to-electric is \$75 and for a lifetime warranted water heater is \$175.

Air Source Heat Pump

- Minimum unit size of 2 tons.
- Must have a minimum Seasonal Energy Efficiency Ratio (SEER) of 14.
- Must have a minimum Heating Seasonal Performance Factor (HSPF) of 8.2.
- Rebate amounts are \$100 per ton for a 14 SEER, \$150 per ton for a 15 SEER, and \$200 per ton for 16 SEER and above.

Ground Source Heat Pump

- Minimum unit size is 2 tons.
- Open loop - Must have a minimum Coefficient of Performance (COP) of 3.6 and a minimum Energy Efficiency Rating (EER) of 16.2.
- Closed loop – Must have a minimum COP of 3.3 and a minimum EER of 14.1.
- Rebate amount is \$125 per half-ton.

Electric Heat

- Electric resistance heat no longer qualifies for a rebate.

Milliken Wins Home Show Door Prize

Janet Milliken was the Bluestem booth's door prize winner at the Flint Hills Home Show January 26-27 in Manhattan.

Milliken and her husband, George, are Bluestem members and live just south of Manhattan.

Congratulations! We hope that you have many wonderful meals on your new George Foreman grill.



Janet Milliken poses with her George Foreman grill she won from Bluestem's booth at the Flint Hills Home Show.

Lightning & Surge Protection Spring Special

Bluestem is running a **Spring Special** on the installation of the meter base lightning and surge protection ring. The ring will protect your home and certain electrical appliances and equipment from lightning and power surges.

The cooperative is offering you an invitation to sign up for the Power Quality Plus Program. It is easy to take advantage of this great opportunity.

The lightning and surge protection device, installed at your electric meter, will provide protection from lightning strikes and other power surges for your home appliances. You lease the basic package for only \$4.95 per month, added right on to your electric bill. Our technicians do the installation for a one-time fee of \$69.95. **However, if you act before May 31, we'll drop the installation fee to \$34.95.**

As part of the package, when you sign up you can purchase an in-home kit of plug-in surge protection products for individual electronic equipment.

The lease lightning and surge suppression ring comes with a warranty that has a total of \$50,000 in household coverage and \$5,000 per appliance.

To lease the Power Quality Plus system or to get more information on any of the products, call (785) 456-2212 or (800) 558-1580 for the Wamego office, or (785) 632-3111 or (800) 297-8725 for the Clay Center office.