Comparing Heating Costs

ENERGY SOLUTIONS FOR THE HOME

HOW THE DIFFERENT HEATING SYSTEMS STACK UP AGAINST EACH OTHER

As you know, there are a number of ways to heat your home. All to often homeowners assume they know which heating system is the cheapest to operate without doing any comparisons.

Congratulations! By reading this information you are doing more than the average homeowner. Just by asking questions, requesting cost comparisons, doing research, and evaluating your options, you will become an educated homeowner.

Obviously, there are a number of system and structure issues that influence your heating costs. In order to compare the different heating systems available, it's important to look into the following three main areas.

Factors That Affect Your Heating Costs

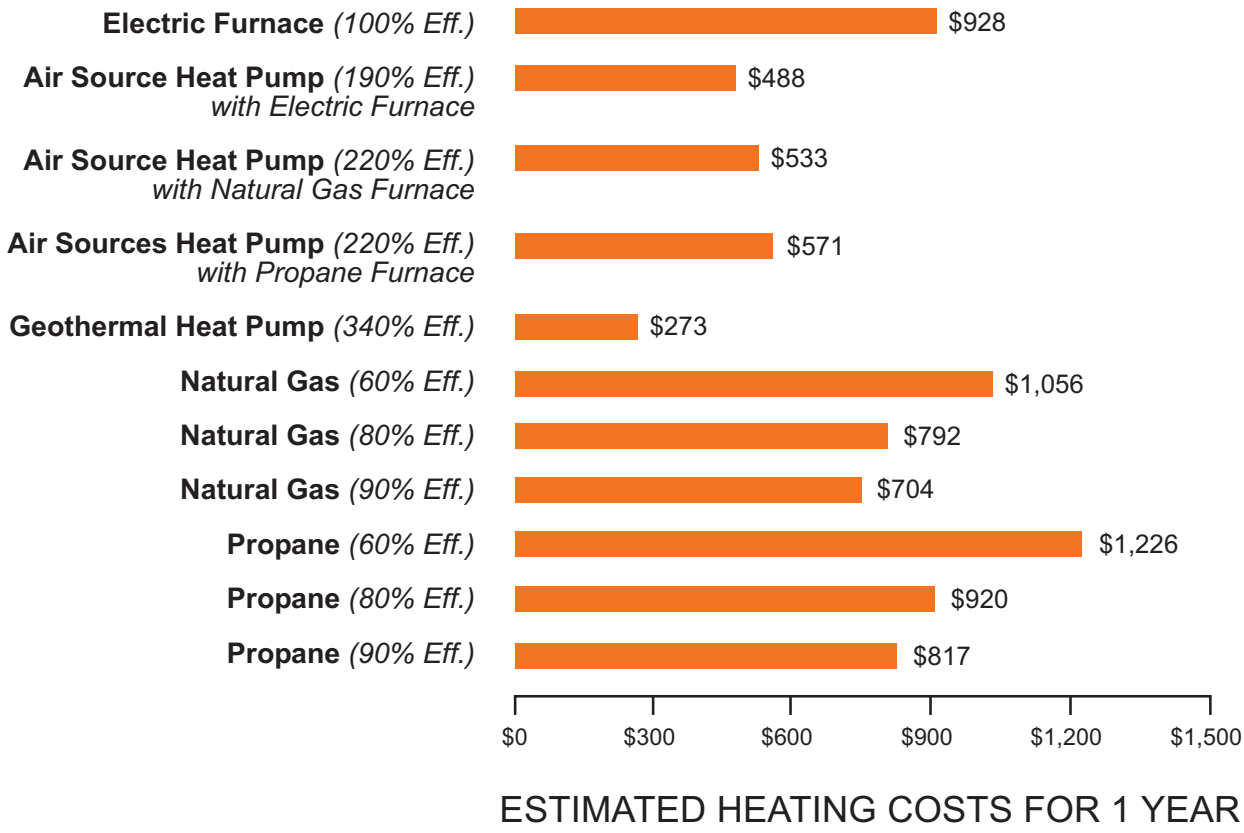
1. **The Heating Load** - is determined by the thermostat setpoint inside (heat) and the outside temperature (cold). Once the temperature difference from inside to outside is determined, a calculation is made to estimate the amount of (heat) lost through walls, windows, doors, floor, and ceiling areas. Heating degree days are used throughout the winter (cold) to estimate the heating cost.
2. **Heating System Efficiency** - With the various heating systems available, there is a broad range of heating equipment efficiencies (80% - 400%).
3. **Cost of Energy** - Determine what your charge for energy will be per unit: electricity, natural gas or propane.

With these factors in mind, lets look at some cost comparisons of the more popular heating systems on the market, based on the following assumptions:

- Ranch Style House = 1,200 square feet
- Heat Loss = 53,747 Btuh
- Insulation levels
  - Side Walls = R-13
  - Basement Walls = R-5
  - Ceiling = R-19
- Windows and Doors occupy less than 15% of total wall area.
- Heating Degree Days = 6500 (approximate average for Nebraska)
- Energy Charges
  - Electricity $.04 /kWh
  - Natural Gas $.80 /Therm
  - Propane $.85 /Gallon
- The formula used for this calculation is:

$$\text{Annual Use} = \frac{\text{Heat Loss (BTUH) x Degree Days x 17}}{\text{Delta T x SPF x BTU's per unit of fuel}}$$

You owe it to yourself to make an educated decision, because you do have options and ultimately the decision you make is the one you will have to live with for years to come.



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