

Home Heating in the 21st Century: A World of Choices

■ As prices rise for natural gas and petroleum based heating products, homeowners are looking for other ways to heat their homes more cheaply.

The heating system option that is best for you will depend on your preferences and your situation. A wind turbine might be a realistic alternative for a farmer with a large acreage, but impossible for a resident who lives in town.

Millville policyholders have most frequently expressed interest in more familiar alternative choices such as corn, pellet and wood burning systems. Here in Pennsylvania, the local availability of hard, clean-burning coal such as Anthracite allows a heating option not available in most areas of the country.

In a world of choices, weigh both the advantages and disadvantages of each system, including your current one. Don't be rushed into making a hasty decision that you'll have to live with for years to come.



LEARNING ABOUT WHAT YOU'RE BURNING

Comparing costs of heating systems can be confusing. Fuels may be solid, liquid, or gas and are measured in different units (gallons, lbs., bushels, etc). Heating comparisons are most frequently measured by comparing fuel required to generate British Thermal Units (BTU's). One BTU is about equal to a burning stick match or a birthday candle.

To compare heating costs across different fuel types, it is easiest to compare the units of each fuel required to generate one million BTU's. If you multiply the number of units (A) required by the cost per unit (B), it equals the cost to produce one million BTU's (C) for this fuel.

Investigate the cost of various systems along with the cost and availability of the required fuel. Be aware the BTU rate may vary depending on the quality of fuel. For example, both hard and soft coal can be used as fuel, but vary in the amount of heat given off. Additionally, investigate the efficiency of the system to calculate the true cost of usable heat produced.

(A)

Bushels of corn needed to produce one million BTU's
2.55

(B)

Price of a bushel of corn (illustration only – insert current local price)
\$4.50

(C)

Cost per one million BTU's
\$11.48

Note: Different heating system types operate at different efficiency levels. Using this example, if corn stoves operate around 65% efficiency, the actual cost to produce one million usable BTU's is $\$11.48 \div 65\% = \17.66 .



What Are Your Heating Alternatives?

- Before investing in an alternate heating source, make sure that the decision makes more than just “cents.”

As traditional fuel costs soar, consumers feel increasing pressure to make money saving decisions. While the alternative system may look more attractive as fuel prices rise, there are advantages and disadvantages for each system. Changing heating systems can be costly. Make sure the system you use fits your lifestyle. Among things to consider:

EFFORT REQUIRED Many alternative fuels can be purchased at reasonable prices. Many require ongoing reloading to keep the furnace burning, along with frequent cleaning of ashes or other spent fuels.

FUEL AVAILABILITY Find a reliable and stable place to purchase fuel for years to come. As costs change from year to year, so will your heating bill.

FUEL STORAGE A dry storage location that keeps the fuel off the ground lowers risks for moisture, rodents, insects, and other pests.

SYSTEM CONVERSION COSTS Calculate the amount of time you anticipate will be required to re-coup your savings, given the cost of conversion.

AREAS TO BE HEATED Knowing the size of the area to be heated and the methods for circulating heat is important. Without a means of circulation, the heater may only provide warmth to limited spaces.

ENVIRONMENTAL IMPACT Alternative fuel combustion systems often may save money, but may contradict personal beliefs regarding higher level of air pollutants.



SAFE INSTALLATION IS CENTRAL TO ALTERNATIVE HEATING

If you elect to change your home heating system, make sure that it is from a reputable company and is certified by Underwriters Laboratory or a similar national organization. We also ask that you notify our office of any changes you have elected to make in your heating system.

It is also critical that it be installed properly by an experienced professional. Most systems provide heat by burning the alternative fuels at high temperatures. Anything less than installation to exact specifications creates risk for the present and for the entire useful life of the system.

Most dealers provide specifications for safe installation. Make sure these guidelines are followed to the letter. Also, some localities have specific building and installation codes. A useful source for installation guidelines has been published in 2006 by the National Fire Protection Agency (NFPA). These guidelines can be viewed for non-commercial use in a non-printable format at www.nfpa.org or can be purchased. NFPA Customer Service can be reached at 1-800-344-3555.

Fire is the obvious risk for an improperly installed system. It is even more important to make sure that there are working fire extinguishers of the proper type that are easily accessible. As with all residences, working smoke detectors and carbon monoxide detectors are a must.

Carefully follow manufacturer's guidelines for regular cleaning of the stove, chimney and venting system. Poorly maintained systems create much higher risks for fire or equipment damage.

Remember, safety is central to an alternative heating system.