

Fuel Cost Comparison Information

The proper way to compare the cost of different types of fuels is to determine the cost of the energy content of the fuel. The energy content is measured in British Thermal Units, or BTUs. One BTU of energy can raise the temperature of one pound of water one degree Fahrenheit.

In Duluth natural gas is measured in units of one hundred cubic feet (CCF). A CCF contains 100,000 BTUs.

A gallon of #2 Fuel Oil contains 139,000 BTUs.

One kilowatt hour (kWh) of electricity contains 3412 BTUs of energy.

A gallon of propane contains 91,600 BTUs of energy.

A gallon of gasoline contains 125,000 BTUs of energy.

A good way to compare the relative cost of fuels is to determine the cost of 1 million BTUs of energy. **To determine the cost of a million BTUs of energy multiply the cost of a unit of fuel by the factor below:**

Natural Gas	Cost of CCF X 10.0
Fuel Oil	Cost of a Gallon X 7.194
Electricity	Cost of kWh X 293.083
Propane	Cost of a Gallon X 10.917
Gasoline	Cost of a Gallon X 8.0

So to compare the cost of energy in a gallon of #2 fuel oil with natural gas

If fuel oil costs \$3.50 per gallon and natural gas costs \$1.076 per CCF:

The cost of 1 million BTUs is:

Fuel Oil \$3.50 X 7.194 = \$ 25.18

Natural Gas \$1.076 X 10.0 = \$ 10.76

The cost of energy from #2 fuel oil is nearly two-and-a-half times more expensive than energy from natural gas.

Simple paybacks for customers to replace fuel oil furnaces with new natural gas furnaces are often only 3 to 5 years.