

## Why Should You Use A Heat Pump?

"Heat" or "Cooling" is measure in British Thermal Units or BTU's. All heaters, furnaces or boilers are measured in BTU's. For our comparison, we will look at the cost per million BTU's (MMBTU) of heat pumps, propane and fuel oil. We must also consider efficiency. Every propane or oil furnace or boiler has an efficiency rating. Typically, the newer and higher quality the model, the more efficient it is.

Newer heat pumps are 250%-500% efficient. The formula to determine price per MMBTU is 1,000,000 multiplied by the current unit product price. This figure is then divided by the sum of the efficiency rating multiplied by the BTU's produced by one unit of the product. As you can see from the examples, you spend a lot less money producing heat with a heat pump.

Product prices may vary. Use the formula below to calculate costs based on the current or expected average price.

### Fuel Oil Burner 85% efficient

$1,000,000 \text{ BTU} \times \$3.00 \text{ (per gal)} = 3,000,000 \div \text{by } 119,000 \text{ (.85} \times 140,000) = \$25.21$

### Propane Burner 90% efficient

$1,000,000 \text{ BTU} \times \$2.50 \text{ (per gal)} = 2,500,000 \div \text{by } 82,800 \text{ (.90} \times 92,000) = \$27.17$

### Ground Source Heat Pump 400% efficient

$1,000,000 \text{ BTU} \times \$1.10^* = 1,100,000 \div \text{by } 13,652 \text{ (4} \times 3,413) = \$7.32$

### Air Source Heat Pump 300%\*\* efficient

$1,000,000 \text{ BTU} \times \$1.10^* = 1,100,000 \div \text{by } 10,239 \text{ (3} \times 3,413) = \$9.76$

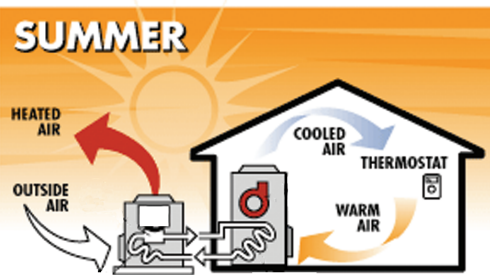
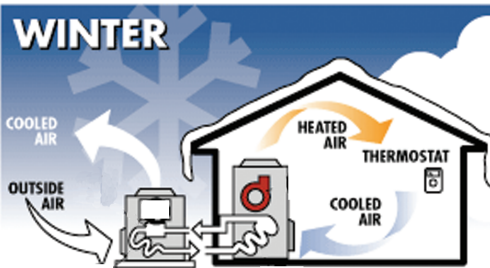
\*approximate cost per kilowatt hour

\*\*air source heat pump efficiencies usually lessen with lower ambient temperatures



For a heat pump to be efficient and effective, it must be properly sized, installed, and operated. There are certain applications where other types of heating and cooling should be considered.

Several local mechanical contractors sell, install and service heat pumps. Please use our website or contact the Claverack office for additional information about these installers.



More information about heating and cooling is available on our website at [www.claverack.com](http://www.claverack.com).



**CLAVERACK**  
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## Claverack Rural Electric Cooperative, Inc.

### HEAT PUMP REBATE PROGRAM



Claverack Rural Electric Cooperative believes that energy efficiency and conservation are key actions in responsible energy management. We believe that heat pumps can comfortably heat and cool many homes very economically. We are excited to tell you about our heat pump rebate program.

In 2008, Claverack started offering rebates to members who install a heat pump. This rebate applies to heat pumps installed within the last 12 months in new and existing homes.

Rebates are based on the type of heat pump installed. A \$100 per cooling ton rebate for air source, and \$150 per cooling ton rebate for ground source heat pumps is available. The maximum rebate amount is \$900.

Stand alone air source heat pump water heaters are eligible for a \$50 rebate.