

Cost of Heating Worksheet

(A) Enter in the local cost of fuel:

(B) Multiply by:

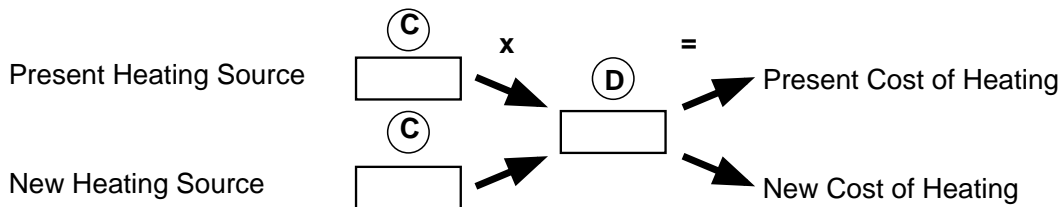
(C) Your cost per 1 Million BTU's*

Electricity	<input type="text"/>	per KWH	x	293	=	<input type="text"/>
No. 2 Oil	<input type="text"/>	per Gallon	x	9.61	=	<input type="text"/>
Propane	<input type="text"/>	per Gallon	x	13.32	=	<input type="text"/>
Natural Gas	<input type="text"/>	per Therm	x	12.5	=	<input type="text"/>
Pellets	<input type="text"/>	per Ton	x	.089	=	<input type="text"/>
Cord Wood	<input type="text"/>	per Cord	x	.073	=	<input type="text"/>

(D) Determine the amount of BTU's used per month (this can vary greatly depending on region, home insulation, heat use, etc.)

Climate	Size of Home	BTU's used per Month
Mild Winter Zone	1500 Sq. Ft.	1.5 Million
Mild Winter Zone	2500 Sq. Ft.	2.5 Million
Moderate Winter Zone	1500 Sq. Ft.	3 Million
Moderate Winter Zone	2500 Sq. Ft.	5 Million
Severe Winter Zone	1500 Sq. Ft.	5 Million
Severe Winter Zone	2500 Sq. Ft.	8 Million

(E) Calculate the present and new cost of heating by multiplying the cost per million BTU's (C) for the type of fuel used, by the amount of BTU's used per month (D). Make sure to check the customer's present heating bill against the amount of BTU's used per month to make sure the amount is correct.



(F) Subtract the new heating cost from your customer's present heating cost to determine savings.

$$\text{Present Cost of Heating} - \text{New Cost of Heating} = \text{Savings}$$

*See the heating cost explanation sheet for details on this formula

HEATING COST EXPLANATION

Electricity:

Unit = KWH (kilowatt hour - 1,000 watts for one hour)
BTU's = 3413 per KWH
Efficiency = 100%
BTU's Produced per KWH = 3413
To achieve 1,000,000 BTU's, you need 293 KWH
Multiplier = 293

No. 2 Oil:

Unit = Gallon
BTU's = 115,620 per gallon
Efficiency = 90% (Approximately - this is net efficiency, not combustion efficiency)
BTU's Produced per Gallon = 104,058
To achieve 1,000,000 BTU's, you need 9.61 Gallons
Multiplier = 9.61

Propane:

Unit = Gallon
BTU's = 91,500 per gallon (4 lbs per gallon)
Efficiency = 82% (Approximately - this is net efficiency, not combustion efficiency)
BTU's Produced per Gallon = 75,030
To achieve 1,000,000 BTU's, you need 13.32 Gallons
Multiplier = 13.32

Natural Gas:

Unit = Therm
BTU's = 100,000 per therm
Efficiency = 80% (700 eff. - this is net efficiency, not combustion efficiency)
BTU's Produced per Therm = 80,000
To achieve 1,000,000 BTU's, you need 12.5 Therms
Multiplier = 12.5

Pellet:

Unit = Ton
BTU's = 7,000 per pound, 14,000,000 per ton
Efficiency = 80% (Approximately - this is net efficiency, not combustion efficiency)
BTU's Produced per Ton = 11,200,000
To achieve 1,000,000 BTU's, you need .089 Ton
Multiplier = 0.089

Cord Wood:

Unit = Cord
BTU's = 19,000,000 per Cord (Alder - a fairly low BTU wood)
Efficiency = 71.7% (Liberty EPA eff. - this is net efficiency, not combustion efficiency)
BTU's Produced per Cord = 13,623,000
To achieve 1,000,000 BTU's, you need .073 Cords
Multiplier = .073