

## Fuel Heating Cost Comparison (Montana)

January 1, 2017

Fuel Type	Heat Value/ Therms/Unit	Unit Cost	Unit Cost Per Therm	Appliance Type	Appliance Efficiency	(%, COP, or AFUE)	Cost Per Therm
Wood	200 /Cord	\$150 /Cord	\$0.75	Fireplace	38 %		\$1.97
Wood	200 /Cord	\$150 /Cord	\$0.75	Stove	72 %		\$1.04
Electric	0.03413 /kWh	\$0.116 /kWh	\$3.39	Baseboard	100 %		\$3.39
Electric	0.0529 /kWh	\$0.116 /kWh	\$3.39	Air-Air Heat Pump	1.55	C.O.P.	\$2.18
Electric	0.1024 /kWh	\$0.116 /kWh	\$3.39	Earth-Air Heat Pump	3	C.O.P.	\$1.13
Propane	0.915 /Gal.	\$1.559 /Gal.	\$1.70	Furnace	80 %	AFUE	\$2.13
Propane	0.915 /Gal.	\$1.559 /Gal.	\$1.70	Furnace	90 %	AFUE	\$1.89
Propane (NWE Townsend)	0.915 /Gal.	\$1.026 /Gal.	\$1.12	Furnace	80 %	AFUE	\$1.40
Propane (NWE Townsend)	0.915 /Gal.	\$1.026 /Gal.	\$1.12	Furnace	90 %	AFUE	\$1.25
Pellets	150 /Ton	\$250 /Ton	\$1.67	Stove	80 %	AFUE	\$2.08
Natural Gas *	1 /Therm	\$0.693 /Therm	\$0.69	Furnace	80 %	AFUE	\$0.87
Natural Gas *	1 /Therm	\$0.693 /Therm	\$0.69	Furnace	90 %	AFUE	\$0.77
Natural Gas *	1 /Therm	\$0.693 /Therm	\$0.69	Furnace	64 %	AFUE	\$1.08

Cost per 100,000 Btus delivered as useable heat

British Thermal Unit (Btu) is the amount of energy needed to raise the temperature of 1 pound of water 1° F.

Based on altitude and atmospheric pressure in Helena, MT

1,000 Btu = 1 cubic foot  
 1,000,000 Btu = 1 dekatherm  
 100,000 Btu = 1 therm

\* \$ .25783 per therm natural gas supply

The fuel comparisons shown are based on NorthWestern Energy's delivery and supply rates for electricity and natural gas and are subject to change. Monthly meter charges and/or tank rental charges are not included in the comparisons and need to be included if calculating a change in fuel sources. If you are comparing costs to other fuels or other energy providers, please adjust for fuel or rate cost difference applicable to your market area, and any delivery charge.

For a list of natural gas supply costs in Montana by supplier visit:

<http://psc.mt.gov/energy/pdf/2016%20Gas%20and%20Electric%20Rate%20Summary%20web%20version.pdf>