

# Heating Bill Comparison

Date: November 2011

A 2000 ft<sup>2</sup> home in Michigan uses nearly 85.3 million Btu of heat (MBtu) per winter. The annual heating bill is calculated as such:

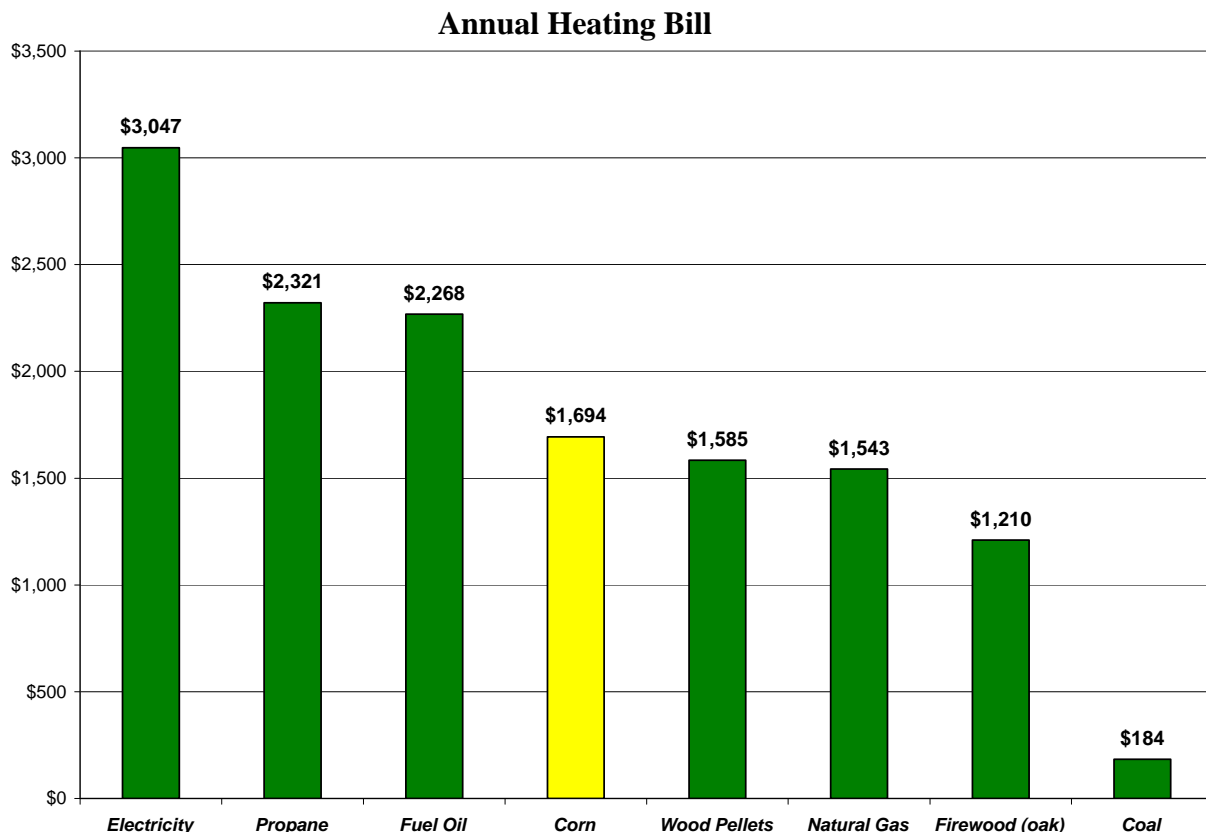


- A = annual heating bill in dollars
- B = Energy demand (MBtu / year) = 85.3
- C = retail fuel price
- D = heat content of fuel
- E = furnace efficiency factor

$$A = \frac{B C}{D E}$$

Fuel	C	D	E	A
electricity	\$0.1218 / kWh	0.00341 MBtu / kWh	1	\$ 3,047
propane	\$2.12 / gal	0.09165 MBtu / gal	0.85	\$ 2,321
heating oil	\$2.95 / gal	0.13869 MBtu / gal	0.8	\$ 2,268
wood pellets	\$200 / ton	15.38 MBtu / ton	0.7	\$ 1,585
corn kernels	\$6.20 / bushel	0.3903 MBtu / bushel	0.8	\$ 1,694
oak wood (dry)	\$200 / cord	28.2 MBtu / cord	0.5	\$ 1,210
natural gas	\$15.82 / Mcf *	1.029 MBtu / kcf	0.85	\$ 1,543
coal	\$43.38 / ton	25.09MBtu / ton	0.8	\$ 184

Mcf = thousand cubic feet



Source: C. H. Schilling, Ph.D., Department of Mechanical Engineering, Saginaw Valley State University, University Center, Michigan 48710; phone (989) 964-2601; email schillin@svsu.edu