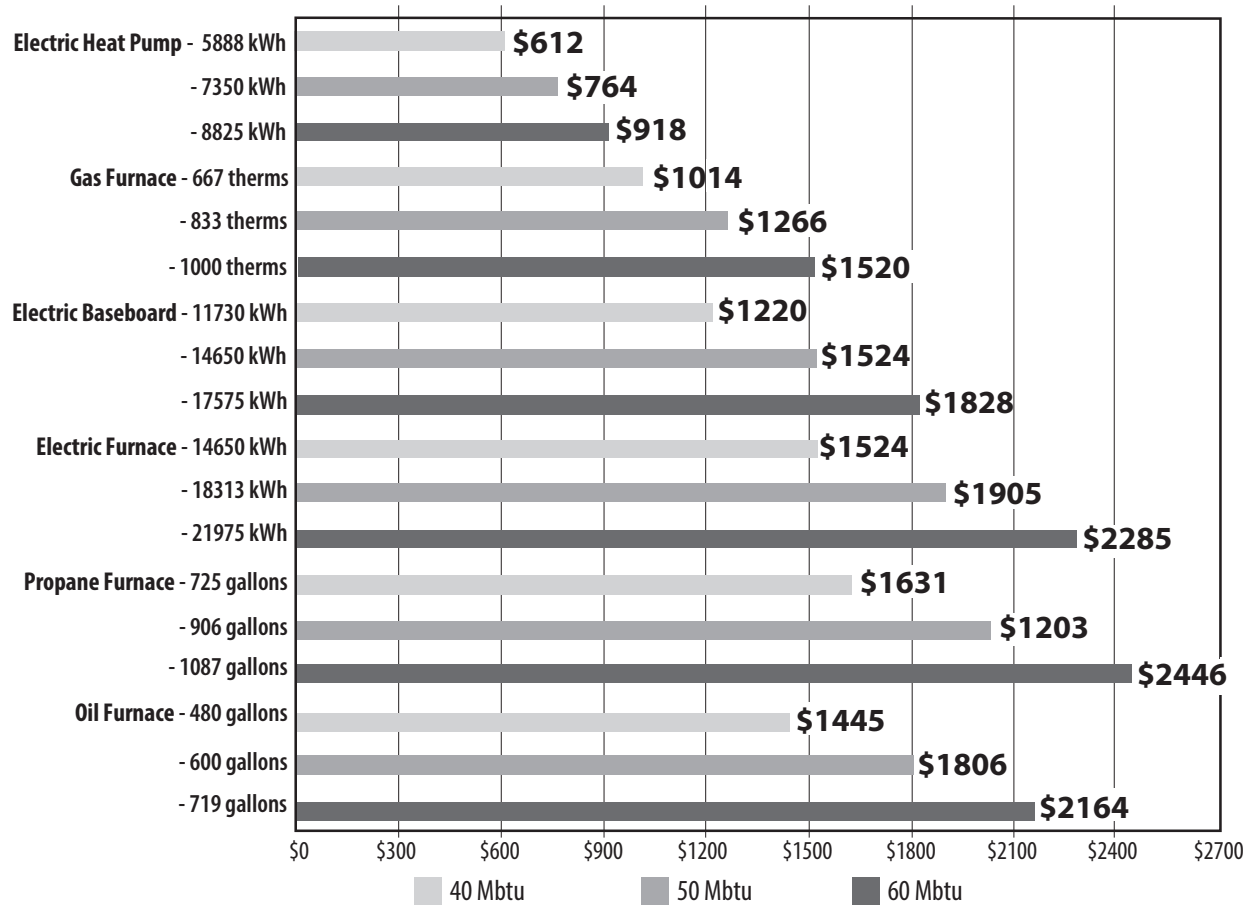


Home Heating Fuel Cost Comparison

The chart below shows a comparison of annual home heating fuel costs based on the most recent information obtained from suppliers in Snohomish County. The chart also shows that electric heat pumps continue to provide a very cost-effective heating source. (Electric costs based on PUD residential billing rate of 10.4 cents per kilowatt-hour.)

The costs are based on the space heating needs for an average single family home. Individual consumptions can vary significantly, depending on thermostat settings, air leakage, house construction, and other factors.

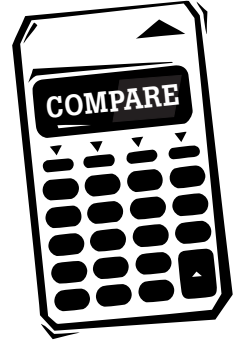
Heating Fuel Cost Comparison



System assumptions:

- Electric heat pump: HSPF 8.5, \$0.104/kWh, 3413 Btu/kWh, 25% duct loss
- Gas Furnace: 80% efficiency, \$1.52/therm, 100,000 Btu/therm, 25% duct loss
- Electric baseboard: 100% efficiency, \$0.104/kWh, 3413 Btu/kWh
- Propane furnace: 80% efficiency, \$2.25/gallon, 92,000 Btu/gallon, 25% duct loss
- Electric furnace: 100% efficiency, \$0.104/kWh, 3413 Btu/kWh, 25% duct loss
- Oil furnace: 80% efficiency, \$3.01/gallon, 139,000 Btu/gallon, 25% duct loss

Energy CO\$T Comparison



Ever wonder what your heating costs would be if you had a different fuel type? Here are cost examples by fuel type for the same amount of heat (1,000,000 BTUs; electric costs based on PUD residential billing rate of 10.4¢ per kilowatt-hour):

<i>If your heat source is</i>	<i>Your heating cost would be</i>
✦ Propane* (80% efficient, \$2.25/gallon)	\$40.76
✦ Oil* (#2 fuel, 80% efficient, \$3.01/gallon)	\$36.35
✦ Electric Furnace* (100% efficient)	\$40.63
✦ Electric Baseboard (100% efficient)	\$30.47
✦ Natural Gas* (80% efficient, \$1.52/therm)	\$25.33
✦ Electric Heat Pump* (226% efficient)	\$17.98
✦ Electric Heat Pump* (264% efficient)	\$15.39
✦ Ductless Heat Pump (300% efficient)	\$10.16
✦ Geothermal Heat Pump* (400% efficient)	\$10.15
✦ Geothermal Heat Pump* (500% efficient)	\$8.13
✦ Wood Stove (60% efficient, \$266/cord)	\$36.94
✦ Wood Pellet Stove (70% efficient, \$254/ton)	\$22.68

**assumes 25% duct loss*

1,000,000 BTUs is produced by:

- ✦ 10.9 gallons of propane
- ✦ 7.2 gallons of fuel oil
- ✦ 293 kilowatt-hours of electricity
- ✦ 10 therms of natural gas
- ✦ 1/12 cord of wood
- ✦ 1/16 ton of wood pellets