

ENERGY CONVERSION FACTORS

- 1kWh = 862 Cal = 3413 Btu = 3.6 MJ
- 1 Cal = .00116 kWh = 3.97 Btu = 4184 J
- 1 Btu = .252 Cal = .000293 kWh = 1055 J
- 1 ft-lb = 1.36 J
- 1 gal gasoline = 31000 Cal = 36.6 kWh = 125000 Btu = 132 MJ
- 1 bbl oil = 1.5M Cal = 5.8 M Btu = 1700 kWh = 6.1 GJ
- 1000 cf nat gas = 260,000 Cal = 1M Btu = 300 kWh = 1GJ = 10 therm
- 1 ton coal = 6.7M Cal = 27 M Btu = 7800 kWh = 28GJ
- 1 Qbtu = 300 G kWh = .17 G boe
- **POWER = ENERGY/TIME CONVERSIONS:**
- 100 Qbtu/yr = 3.35 TW = 172. G boe/year
- 1 Cal/hr = 1.16 W = 3.97 Btu/hr
- 1 horsepower = 746W = 550 ft-lb/sec
- boe = barrel of oil equivalent, Cal = kcal = 1000 cal, J=Joule (metric), kWh = kilo Watt hr, W = Watt (metric)
- k=kilo, M=Mega= 10^6 , G=Giga= 10^9 , T=Tera= 10^{12} , P=Peta=Q=Quadrillion= 10^{15}