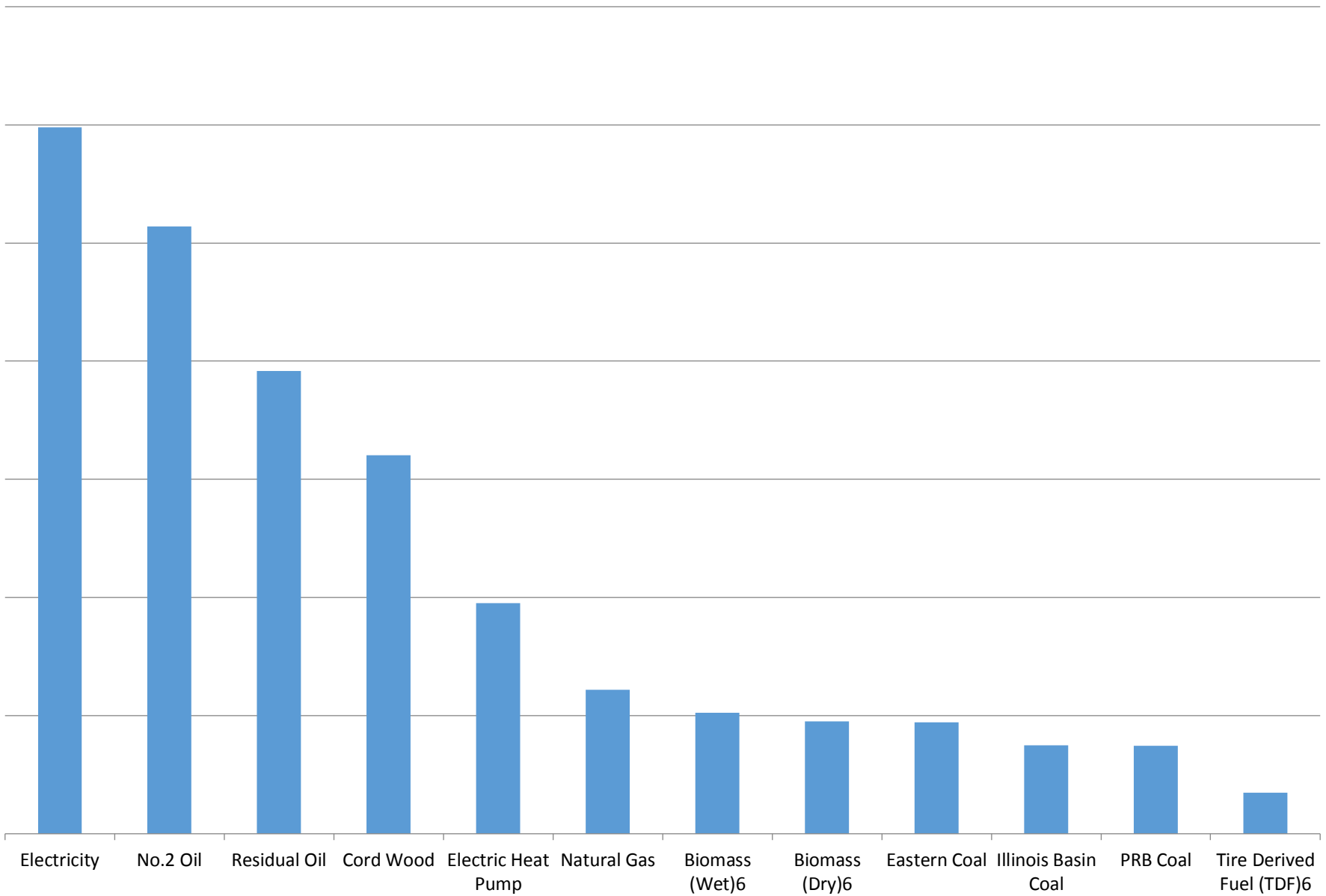


Common Fuel / Thermal Energy Relative Cost Comparison



Common Fuel/ Thermal Energy Equivalent Comparison¹

Industrial and Commercial Applications

Fuel	Delivered Cost ²	Units ³	BTU/Unit ⁴	Conversion Efficiency ⁵	\$/MMBtu Thermal Energy
Electricity	\$ 0.10	\$/kwh	3,413	98%	\$ 29.90
No.2 Oil	\$ 3.00	\$/Gal (139000 Btu)	139,000	84%	\$ 25.69
Residual Oil	\$ 2.50	\$/Gal (152000 Btu)	152,000	84%	\$ 19.58
Cord Wood	\$ 150.00	\$/cord (2600 lbs/cord)	15,600,000	60%	\$ 16.03
Electric Heat Pump	\$ 0.10	\$/KWh Above 20 Deg F	3,413	300%	\$ 9.77
Natural Gas	\$ 0.50	Therm (100000 Btu)	100,000	82%	\$ 6.10
Biomass (Wet) ⁶	\$ 30.00	\$/Ton (4,500 Btu/lb)	9,000,000	65%	\$ 5.13
Biomass (Dry) ⁶	\$ 40.00	\$/Ton (6,000 Btu/lb)	12,000,000	70%	\$ 4.76
Eastern Coal	\$ 100.00	\$/Ton (12,500 Btu/lb)	25,000,000	85%	\$ 4.71
Illinois Basin Coal	\$ 70.00	\$/Ton (11,000 Btu/lb)	22,000,000	85%	\$ 3.74
PRB Coal	\$ 55.00	\$/Ton (8,700 Btu/lb)	17,400,000	85%	\$ 3.72
Tire Derived Fuel (TDF) ⁶	\$ 40.00	\$/Ton (13,500 Btu/lb)	27,000,000	85%	\$ 1.74

1. All information is given for relative comparison purposes. Site specific information can be inserted to obtain more accurate comparisons for an individual site.

2. Costs are considered as delivered to the burner for conversion to usable energy

3. Units are presented as normally seen with a typical "As Received" Higher Heating Value energy content.

4. Btu per unit are given as typical. Site specific information can be inserted to obtain more accurate comparisons for the individual site.

5. Efficiency percentages given are typical for conventional boiler/heating systems including moisture and flue gas losses at a boiler exit temperature of around 350 degrees F. Site specific information can be added to obtain more accurate results.

6. Considered opportunity fuels including fuel at \$15.00/ton plus transportation, processing, handling, and delivery costs to the furnace. Fuel costs can vary widely based on demand and local availability. In some cases the cost of the fuel could be "free".