



Alliant Energy - Gas Service Manual Appendix

Issued: 2023
Supersedes 2019

A. APPROXIMATE GAS INPUT FOR TYPICAL APPLIANCES

Appliance	Input Btu/hr (approx.)
Warm air furnace, single family	100,000
Warm air furnace, multifamily, per unit	60,000
Hydronic boiler, single family	120,000
Hydronic boiler, multifamily, per unit	75,000
Water heater, automatic storage, 30 gal to 40 gal tank	35,000
Water heater, automatic storage, 50 gal tank	50,000
Water heater, automatic instantaneous, Capacity at 4 gal/min	285,000



ENERGY CONVERSION FACTORS

1 Cf (Cubic Feet) = Approximately 1,000 Btu

C = Hundred

1 Ccf = 100 Cf = 1 Therm

M = Thousand

1 Therm = 100,000 Btu = 100 Cf = 0.1 Mcf

MM = Million

10 Therms = 1 Mcf = 1 MMBtu

Dth = Dekatherm

1 Mcf = 1,000 Cf = 10 Ccf = 10 Therms = 1 Dth

1 MMcf = 1,000 Mcf = 1,000,000 scf

1 Quad = 10^9 Mcf = 10^{10} Therms = 10^{15} Btu

Comparative Thermal Values	1.00 million Btu	24.0 million Btu	0.0916 million Btu	0.125 million Btu	0.139 million Btu	0.150 million Btu	0.003412 million Btu
Natural Gas 1,000 Btu / Cf	1,000 Cf	24,000 Cf	91.600 Cf	125.000 Cf	139.000 Cf	150.000 Cf	3.412 Cf
Coal 12,000 Btu /lb	83.333 lb	2,000 lb	7.633 lb	10.417 lb	11.583 lb	12.500 lb	0.2843 lb
Propane 91,600 Btu /Gal	10.917 Gal	262.009 Gal	1 Gal	1.365 Gal	1.517 Gal	1.638 Gal	0.0373 Gal
Gasoline 125,000 Btu /Gal	8.000 Gal	192.000 Gal	0.733 Gal	1 Gal	1.112 Gal	1.200 Gal	0.0273 Gal
Fuel Oil #2 139,000 Btu /Gal							