

Maine Energy Systems Quick fact sheet for residential heating using automatically fired and fed pellet burning boilers

TYPE OF FUEL	Pellets	Fuel oil	Propane
	(premium)	#2	
GROSS HEATING VALUE	16,400,000 Btu/ton	138,800 Btu/gal	91,300 Btu/gal
EFFICIENCY	85%	85%	80%
NET HEATING VALUE	13,900,000 Btu/ton	118,000 Btu/gal	73,000 Btu/gal
Assumed cost 3/2008	\$225	\$3.45	\$3.05
Unit	Ton	Gallon	Gallon
Cost/million BTUs	\$16.19	\$29.24	\$41.78

Volumetric, weight and thermal relationships between #2 oil and premium wood pellets

- 1 gallon of #2 oil has the same heat equivalent as 2.5 gallons of premium pellets.
- Wood pellets weigh about 40lbs/cubic foot
- A volume measuring 5' x 4'4" x 5' filled with premium wood pellets would contain roughly the same number of BTUs of heat as a 250 gallon oil tank

Environmental relationship between #2 oil and wood pellets

Wood pellet combustion is as clean or cleaner in nearly all measures than oil burning and is essentially carbon neutral. If the pellet manufacturing plant's electricity comes from wood fired generation, which is common, then the only fossil fuel required is for [bulk pellet] transportation. But if the energy used in the transportation and manufacturing of wood pellets and commonly used fossil fuels is accounted for¹, wood pellets provide a net carbon sink of 93 pounds of CO₂ per million BTU as compared to a net positive addition of CO₂ of 203.5 pounds per million BTU for home heating oil.
