

Table 1											
Species	Density	Weight Per Cord	BTU's Per Cord (at 20% MC - air dried)	BTU's per Cord (at 45% MC)	Units needed to produce 1 Million BTU's	Higher HV	Lower HV (NHV)	Units (kg)	C content (average)		CO ₂ output (LHV)
	(lbs per ft ³)	(lbs)	(millions)	(millions)		MMBTUs/ton	MMBTUs/ton	1/MMBTU	Hardwood 47-50%	Softwood 50 -53%	(kg/MMBTU)
Hickory	50.9	4327	27.7	19.39	0.052	16.69	15.29	65.38	48.50%		116.27
East. Hophornbeam	50.2	4267	27.3	19.11	0.052	16.68	15.29	65.42	48.50%		116.34
Apple	48.7	4100	26.5	18.55	0.054	16.85	15.44	64.76	48.50%		115.16
White Oak	47.2	4012	25.7	17.99	0.056	16.70	15.30	65.34	48.50%		116.20
Sugar Maple	44.2	3757	24	16.8	0.06	16.65	15.26	65.52	48.50%		116.52
Red Oak	44.2	3757	24	16.8	0.06	16.65	15.26	65.52	48.50%		116.52
Beech	44.2	3757	24	16.8	0.06	16.65	15.26	65.52	48.50%		116.52
Yellow Birch	43.4	3689	23.6	16.52	0.061	16.68	15.28	65.43	48.50%		116.35
White Ash	43.4	3689	23.6	16.52	0.061	16.68	15.28	65.43	48.50%		116.35
Hackberry	38.2	3247	20.8	14.56	0.069	16.70	15.30	65.34	48.50%		116.19
Tamarack	38.2	3247	20.8	14.56	0.069	16.70	15.30	65.34	48.50%		116.19
Paper Birch	37.4	3179	20.3	14.21	0.07	16.64	15.26	65.55	48.50%		116.56
Cherry	36.7	3121	20	14	0.071	16.70	15.31	65.31	48.50%		116.15
Elm	35.9	3052	19.5	13.65	0.073	16.65	15.27	65.51	48.50%		116.50
Black Ash	35.2	2992	19.1	13.37	0.075	16.64	15.25	65.57	48.50%		116.60
Red Maple	34.4	2924	18.7	13.09	0.076	16.67	15.28	65.45	48.50%		116.39
Boxelder	32.9	2797	17.9	12.53	0.08	16.68	15.29	65.40	48.50%		116.31
Jack Pine	31.4	2669	17.1	11.97	0.084	16.70	15.31	65.33		51.50%	123.36
Norway Pine	31.4	2669	17.1	11.97	0.084	16.70	15.31	65.33		51.50%	123.36
Hemlock	29.2	2482	15.9	11.13	0.09	16.70	15.31	65.34		51.50%	123.38
Black Spruce	29.2	2482	15.9	11.13	0.09	16.70	15.31	65.34		51.50%	123.38
Ponderosa Pine	28	2380	15.2	10.64	0.094	16.65	15.26	65.54		51.50%	123.75
Aspen	27	2290	14.7	10.29	0.097	16.73	15.34	65.20		51.50%	123.12
White Pine	26.3	2236	14.3	10.01	0.1	16.67	15.28	65.45		51.50%	123.58
Balsam Fir	26.3	2236	14.3	10.01	0.1	16.67	15.28	65.45		51.50%	123.58
Cottonwood	24.8	2108	13.5	9.45	0.106	16.69	15.30	65.36		51.50%	123.41
Basswood	24.8	2108	13.5	9.45	0.106	16.69	15.30	65.36		51.50%	123.41

Table 2						Coal	HHV	LHV	kg	C content range		CO ₂ output
						Grade	MMBTUs/ton	MMBTUs/ton	1/MMBTU	low	high	(kg/MMBTU)
						Anthracite	29.74	29.01	34.47	0.92	0.98	120.07
						Bituminous	25.88	24.77	40.38	0.65	0.92	115.48
						Sub-Bituminous	20.93	19.48	51.33	0.45	0.65	122.33
						Lignite	13.55	11.69	85.56	0.25	0.45	125.49