



TripleGreenEnergy.

RENEWABLE BIOMASS HYDRONIC HEAT AND POWER

Interactive Fuel Cost Calculator

What's your current annual heating bill? \$100,000 Annual heating bill at	What are you paying? \$10.51 per million BTU	You are using 9,517 MMBTU/yr
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Units / year	Annual Cost of heating		\$/MM	\$/unit	unit	BTU / unit	Efficiency
350,766	\$333,228	Oil	\$35.01	\$0.95	Litre	36,175	75%
2,938,576	\$235,086	Electric	\$24.70	\$0.08	Kwh	3,409	95%
315,269	\$94,581	Natural Gas	\$9.94	\$0.30	M ³	35,513	85%
424,565	\$191,054	Propane	\$20.08	\$0.45	Litre	23,595	95%
687	\$103,070	Hardwood	\$10.83	\$150	Cord	25,181,591	55%
893	\$107,193	Softwood	\$11.26	\$120	Cord	19,370,455	55%
690	\$100,000	Wood Pellets	\$10.51	\$145	Tonne	15,332,500	90%
515	\$63,406	Coal	\$6.66	\$123	Tonne	28,402,000	65%
776	\$31,034	Wood Chips	\$3.26	\$40	Tonne	15,332,500	80%
1,324	\$26,479	Wheat straw	\$2.78	\$20	500 kg	8,456,710	85%
1,324	\$26,479	Swamp Grass	\$2.78	\$20	500 kg	8,456,710	85%
1,184	\$17,761	Flax straw	\$1.87	\$15	500 kg	9,455,795	85%

Savings with wood chips		1 year	5 year	10 year	20 year	30 year	
69%	\$68,966	Wood Chips	\$68,966	\$344,828	\$689,655	\$1,379,310	\$2,068,966

John Nosal 204-712-6770

Ian Band 204-806-2378
 Mike Kinsey 1-519-878-1133
 Don Benson Office 204-883-2378
green@TripleGreenEnergy.com
 1555 Highway #210 1 mile east of St Adolphe



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Example Cost Calculation

Coal		Propane		Natural Gas		Wood Chips	
12910 BTU / lb		23595 BTU / Litre		1000 BTU / cu ft		6969 BTU / lb	
Cost / Ton	Cost / MMBtu	Cost / Litre	Cost / MMBtu	Cost / MCF	Cost/MMBtu	Cost / Ton	Cost / MMBtu
\$92.00	\$5.47	\$0.25	\$11.15	\$6.50	\$7.60	\$16.00	\$1.45
\$97.00	\$5.77	\$0.30	\$13.38	\$7.00	\$8.18	\$21.00	\$1.90
\$102.00	\$6.07	\$0.35	\$15.61	\$7.50	\$8.77	\$26.00	\$2.36
\$107.00	\$6.37	\$0.40	\$17.84	\$8.00	\$9.35	\$31.00	\$2.81
\$112.00	\$6.66	\$0.45	\$20.08	\$8.50	\$9.94	\$36.00	\$3.26
\$117.00	\$6.96	\$0.50	\$22.31	\$9.00	\$10.52	\$41.00	\$3.71
\$127.00	\$7.55	\$0.55	\$24.54	\$9.50	\$11.11	\$46.00	\$4.17
\$137.00	\$8.15	\$0.65	\$29.00	\$10.50	\$12.28	\$51.00	\$4.62
\$147.00	\$8.74	\$0.75	\$33.46	\$11.50	\$13.45	\$61.00	\$5.53
\$157.00	\$9.34	\$0.85	\$37.92	\$12.50	\$14.62	\$71.00	\$6.43
\$167.00	\$9.93	\$0.95	\$42.38	\$13.50	\$15.78	\$81.00	\$7.34
\$177.00	\$10.53	\$1.05	\$46.84	\$14.50	\$16.95	\$91.00	\$8.24
\$187.00	\$11.12	\$1.15	\$51.30	\$15.50	\$18.12	\$101.00	\$9.15
\$197.00	\$11.72	\$1.25	\$55.77	\$16.50	\$19.29	\$111.00	\$10.05

COMPUTING FUEL COST SAVINGS

You heat your building with Propane. Your annual propane cost, during the last heating season, was \$75000.

Sample Calculation:

1. Annual Heating Cost using Propane	\$75,000
2. Cost of Litre of Propane	\$0.45
3. Total Litres of Propane Used (\$75,000/\$0.45)	166,667 Litres
4. BTU/Litre of Propane	23,595
5. Total BTUs used (250,000*24,000)	3,932,500,000
6. BTU / Ton of Wood Chips (2,000Lbs*6969Btu/Lb)	13,938,000
7. Tons of Wood Chips used (3932500000/13938000)	282
8. Cost of Ton of Wood Chips delivered	\$36.00
9. Annual Heating Cost using Wood Chips	\$10,157
10. Total Annual Cost Savings (\$75000 - \$10157)	\$64,843
11. Total 10 year SAVINGS	\$648,430

In this case you would have saved approximately \$ 64843 per heating season. The same method can be used to compare