

SPACE HEATING FUEL COST COMPARISONS - July 2010

Fuels & Heating Systems	Annual Fuel Utilization Efficiency	Cost/Million BTUs of Heat** (HST Incl.) (8% rebate available)	Average Cost per Year: 1700 sq. ft. house			Average GHG (CO ₂ eq.) emissions in tonnes per Year: 1700 sq. ft. house		
			NEW R2000 - 30 MBTUs	NEW - 50 MBTUs	OLD - 80 MBTUs	NEW R2000 - 30 MBTUs	NEW - 50 MBTUs	OLD - 80 MBTUs
Electricity								
Baseboard/Radiant/Furnace/Boiler	100%	\$39.07	\$1,172	\$1,953	\$3,125	7.31	12.18	19.48
Time-of-Day Rate. Cost varies depending on time of use.	100%	\$19.96 - \$50.74	\$599 - \$1,522	\$998 - \$2537	\$1,597 - \$4,075	7.31	12.18	19.48
Heat Pumps - Air-to-Air	190%	\$20.56	\$617	\$1,028	\$1,645	3.85	6.41	10.25
Heat Pumps - Ground/Water	300%	\$13.02	\$391	\$651	\$1,042	2.44	4.06	6.49
Natural Gas								
Fireplace, Low Efficiency Appliances	70%	\$20.39	\$612	\$1,019	\$1,631	2.31	3.85	6.16
Furnace/Boiler - Medium Efficiency	80%	\$17.84	\$535	\$892	\$1,427	2.02	3.37	5.39
Furnace/Boiler/ - High Efficiency/Condensing	93%	\$15.34	\$460	\$767	\$1,228	1.74	2.90	4.64
Oil								
Furnace/Boiler/Stove - Old	70%	\$35.21	————	————	\$2,817	————	————	9.12
Furnace/Boiler - New	85%	\$29.00	\$870	\$1,450	\$2,320	2.82	4.69	7.51
Furnace/Boiler - Condensing	95%	\$25.89	\$777	\$1,294	\$2,071	2.51	4.19	6.70
Propane								
Fireplace, Low Efficiency Appliances	70%	\$52.41	————	————	\$4,193	————	————	7.21
Furnace/Boiler - Medium Efficiency	80%	\$45.86	\$1,376	\$2,293	\$3,669	2.37	3.94	6.31
High Efficiency / Condensing	93%	\$39.45	\$1,183	\$1,972	\$3,156	2.03	3.39	5.43
Wood - Mixed Hardwood								
Furnace / Boiler / Stove	55%	\$19.28	\$578	\$964	\$1,542	0 ***	0 ***	0 ***
EPA Stove/Fireplace	70%	\$15.15	\$454	\$757	\$1,212	0 ***	0 ***	0 ***
Wood Pellets								
Stove / Fireplace	70%	\$32.74	\$982	\$1,637	\$2,619	0 ***	0 ***	0 ***

Assumptions:				
Fuel Type	Unit of Fuel (BTU's per unit)	Cost Per Unit before HST	Additional costs (not in estimates above)	Other considerations
Electricity	3412 BTU / kilowatt hour	\$0.11796	Annual base cost of \$129.96	n/a
Electricity (time of day metered)	3412 BTU / kilowatt hour	\$0.06028 - \$0.1532	Annual base cost of \$225.84	Cost varies depending on usage during specific times of day
Natural Gas	947,817 BTU / Gigajoule	\$11.97	Annual base cost of \$216.00	Cost per unit includes 5% municipal tax
Oil	36,500 BTU / Litre	\$0.80	Fuel tank	n/a
Propane	24,300 BTU / Litre	\$0.79	Fuel tank	n/a
Wood - Mixed Hardwood	24,000,000 BTU / cord	\$225.00	n/a	Legal cord, 128 cu. ft. Registered Firewood Vendors: http://www.gov.ns.ca/snsnr/firewood
Wood Pellets	16,000,000 BTU / ton	\$324.50	n/a	n/a

* Price vary according to supplier, location, and discount structures.

** Costs are for fuel only. Equipment, maintenance costs, delivery / shipping, tank rentals and parasitic losses are not included in these calculations.

*** Wood and pellet biomass fuels are essentially CO₂ neutral, however, do have other air pollutants (ex. Particulate matter) not considered here.

**** CO₂ estimates do not include fuel transportation or refining emissions that may occur earlier on.