

SPACE HEATING FUEL COST COMPARISONS - February 2011

Fuels & Heating Systems	Annual Fuel Utilization Efficiency	Cost/Million BTUs of Heat** (HST Incl.) (10% 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%	\$42.26	\$1,268	\$2,113	\$3,381	7.31	12.18	19.48
Time-of-Day Rate. Cost varies depending on time of use.	100%	\$20.35 - \$51.75	\$611 - \$1,538	\$1018 - \$2588	\$1,628 - \$4,140	7.31	12.18	19.48
Heat Pumps - Air-to-Air	190%	\$22.24	\$667	\$1,112	\$1,779	3.85	6.41	10.25
Heat Pumps - Ground/Water	300%	\$14.09	\$423	\$704	\$1,127	2.44	4.06	6.49
Natural Gas								
Fireplace, Low Efficiency Appliances	70%	\$25.91	\$777	\$1,296	\$2,073	2.31	3.85	6.16
Furnace/Boiler - Medium Efficiency	80%	\$22.67	\$680	\$1,134	\$1,814	2.02	3.37	5.39
Furnace/Boiler / - High Efficiency/Condensing	93%	\$19.50	\$585	\$975	\$1,560	1.74	2.90	4.64
Oil								
Furnace/Boiler/Stove - Old	70%	\$43.84	—	—	\$3,508	—	—	9.12
Furnace/Boiler - New	85%	\$36.11	\$1,083	\$1,805	\$2,889	2.82	4.69	7.51
Furnace/Boiler - Condensing	95%	\$32.24	\$967	\$1,612	\$2,579	2.51	4.19	6.70
Propane								
Fireplace, Low Efficiency Appliances	70%	\$56.79	—	—	\$4,543	—	—	7.21
Furnace/Boiler - Medium Efficiency	80%	\$49.69	\$1,491	\$2,484	\$3,975	2.37	3.94	6.31
High Efficiency / Condensing	93%	\$42.74	\$1,282	\$2,137	\$3,419	2.03	3.39	5.43
Wood - Mixed Hardwood								
Furnace / Boiler / Stove	55%	\$19.62	\$589	\$981	\$1,569	0 ***	0 ***	0 ***
EPA Stove/Fireplace	70%	\$15.41	\$462	\$771	\$1,233	0 ***	0 ***	0 ***
Wood Pellets								
Stove / Fireplace	70%	\$28.13	\$844	\$1,407	\$2,251	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	\$0.12538	Annual base cost of \$129.96	n/a
Electricity (time of day metered)	3412 BTU / kilowatt hour	\$0.0677 - \$0.16062	Annual base cost of \$225.84	Cost varies depending on usage during specific times of day
Natural Gas	947,817 BTU / Gigajoule	\$14.95	Annual base cost of \$216.00	Cost per unit includes 5% municipal tax
Oil	36,500 BTU / Litre	\$0.97	Fuel tank	n/a
Propane	24,300 BTU / Litre	\$0.84	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/sns/mr/firewood
Wood Pellets	16,000,000 BTU / ton	\$274.00	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.