

DOMESTIC WATER HEATING FUEL COST COMPARISONS - February 2010

Fuel & Appliances	Average seasonal efficiency	\$/cubic metre of hot water (All taxes incl. 8% HST rebate avail.)	Typical household annual hot water costs \$			Average GHG (CO ₂ eq.) emissions in tonnes per year			
			Two person (120 litres/day)	Four person (240 litres/day)	Six person (360 litres/day)	Two person (120 litres/day)	Four person (240 litres/day)	Six person (360 litres/day)	
Electricity									
Electric water heater - old	85%	\$8.14	\$357	\$713	\$1,070	2.22	4.45	6.67	
Electric water heater - new	90%	\$7.69	\$337	\$674	\$1,010	2.10	4.20	6.30	
Time of use - new*	90%	\$3.93	\$172	\$344	\$516	2.10	4.20	6.30	
Instantaneous heater	95%	\$7.28	\$319	\$638	\$957	1.99	3.98	5.97	
Natural Gas									
Stand alone heater - conventional	55%	\$5.44	\$238	\$477	\$715	0.76	1.52	2.28	
Stand alone/instantaneous heater - high efficiency	93%	\$3.22	\$141	\$282	\$423	0.45	0.90	1.35	
Indirect tank (with cold start high efficiency boiler)	Winter	90%	\$3.33	\$149	\$298	\$448	0.46	0.92	1.38
	Summer	85%	\$3.52						
Oil									
Stand alone water heater	55%	\$8.02	\$351	\$702	\$1,054	1.13	2.26	3.39	
Tankless coil	Winter	75%	\$5.88	\$472	\$944	\$1,416	1.52	3.04	4.56
	Summer	25%	\$17.64						
Indirect tank (with cold start high efficiency boiler)	Winter	75%	\$5.88	\$284	\$569	\$853	0.92	1.83	2.75
	Summer	60%	\$7.35						
Propane									
Stand alone water heater	55%	\$11.82	\$518	\$1,035	\$1,553	0.89	1.79	2.68	
Stand alone/instantaneous heater - high efficiency	93%	\$6.99	\$306	\$612	\$918	0.53	1.06	1.59	

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	Annual base cost of \$225.84	Cost per unit could also be \$0.11796 or \$0.1532 if heating water at times other than off-peak hours
Natural Gas	947,817 Btu / Gigajoule	\$14.17	Annual base cost of \$216.00	Cost per unit includes 5% municipal tax
Oil	36,500 Btu / Litre	\$0.800	Fuel tank	n/a
Propane	24,300 Btu / Litre	\$0.79	Fuel tank	n/a

* Assumes water heater operates only during off-peak hours. Costs will increase if you manually over ride to allow for heating water during standard-rate or peak-hours. See Nova Scotia Power Inc. rate structure for complete details on time-of-use rates.

- ▶ 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.
- ▶ CO₂ estimates do not include transportation of fuels or refining emissions that may occur earlier on.
- ▶ Water use is an average. Higher water usage, hot tubs etc., will significantly increase costs.
- ▶ Assumed water temperature rise is 44.5 degrees C.
- ▶ For water heated by space heating boiler, it is assumed it also supplies space heat for seven months of the year.