

DOMESTIC WATER HEATING FUEL COST COMPARISONS - February 2011

Fuel & Appliances	Average seasonal efficiency	\$/cubic metre of hot water (All taxes incl. 10% 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%	\$8.81	\$386	\$772	\$1,157	2.22	4.45	6.67	
Electric water heater - new	90%	\$8.32	\$364	\$729	\$1,093	2.10	4.20	6.30	
Time of use - new*	90%	\$4.49	\$197	\$393	\$590	2.10	4.20	6.30	
Instantaneous heater	95%	\$7.88	\$345	\$690	\$1,035	1.99	3.98	5.97	
Natural Gas									
Stand alone heater - conventional	55%	\$5.84	\$256	\$512	\$768	0.76	1.52	2.28	
Stand alone/instantaneous heater - high efficiency	93%	\$3.46	\$151	\$303	\$454	0.45	0.90	1.35	
Indirect tank (with cold start high efficiency boiler)	Winter	90%	\$3.57	\$160	\$320	\$481	0.46	0.92	1.38
	Summer	85%	\$3.78						
Oil									
Stand alone water heater	55%	\$9.93	\$435	\$870	\$1,305	1.13	2.26	3.39	
Tankless coil	Winter	75%	\$7.29	\$585	\$1,170	\$1,755	1.52	3.04	4.56
	Summer	25%	\$21.86						
Indirect tank (with cold start high efficiency boiler)	Winter	75%	\$7.29	\$352	\$705	\$1,057	0.92	1.83	2.75
	Summer	60%	\$9.11						
Propane									
Stand alone water heater	55%	\$12.85	\$563	\$1,126	\$1,689	0.89	1.79	2.68	
Stand alone/instantaneous heater - high efficiency	93%	\$7.60	\$333	\$666	\$999	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	\$0.12538	Annual base cost of \$129.96	n/a
Electricity (time of day metered)	3412 Btu / kilowatt hour	\$0.06770	Annual base cost of \$225.84	Cost per unit could also be \$0.12538 or \$0.16062 if heating water at times other than off-peak hours
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	\$0.974	Fuel tank	n/a
Propane	24,300 Btu / Litre	\$0.84	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.
- ▶ **Adding a solar hot water system can provide 40%-60% of your domestic hot water needs.**