

1 **Q. Provide a comparison of the cost to the consumer to heat a typical home with oil**
 2 **and electricity at current and proposed rates. Provide a comparison of the cost to**
 3 **the consumer of hot water for a typical home using oil and electricity at current**
 4 **rates. In the comparison, show Newfoundland Power's cost of supplying electricity**
 5 **for 1) hot water, and 2) home heating for a typical home.**

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 7 A. Table 1 provides a comparison of the cost to the consumer to heat a typical home with oil
 8 and electricity at current and proposed rates along with an estimated cost of supplying
 9 electricity based on marginal costs.

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 11 Newfoundland Power's cost of supplying electricity for home heating may be viewed from
 12 either an embedded cost basis or a marginal/incremental cost basis. Since electricity rates
 13 are reasonably reflective of embedded costs for each class of service (revenue to cost ratios
 14 are between 90% and 110%), Newfoundland Power's *embedded* cost of supplying electric
 15 heat can be approximated by consumer costs. An estimate of the supply costs from a
 16 *marginal* cost perspective is also provided in Table 1.
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Table 1
Space and Water Heating Costs for a Typical Home
(excludes HST)

	Furnace Oil	Electricity		
		July 1, 2007 Rates	Proposed Rates	Marginal Supply Costs
Space Heating	\$1,762	\$1,357	\$1,418	\$1,625
Water Heating	\$536	\$467	\$488	\$559

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 21 The cost comparisons shown in Table 1 are based on the following assumptions:

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 23 (i) 15,700 kWh per year for space heating and 5,400 kWh for water heating;
 24 (ii) seasonal oil furnace efficiency of 78 per cent;
 25 (iii) 1,874 litres of furnace oil is equivalent to 15,700 kWh, and 645 litres is equivalent to
 26 5,400 kWh for water heating;
 27 (iv) the average price of furnace oil in Newfoundland Power's service area is 76.7 cents
 28 per litre (as posted by the Petroleum Pricing Office of the Board of Commissioners of
 29 Public Utilities on June 21, 2007);
 30 (v) furnace electricity usage is 1,440 kWh per year for space heating and 480 kWh for
 31 water heating;
 32 (vi) furnace maintenance plan costs \$200 per year;

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- 1 (vii) cost of electricity supply to a furnace is based on electricity rates, not the marginal
2 supply costs; and,
3 (viii) marginal supply cost is based on the marginal cost of capacity and energy for
4 supplying the Domestic customer class during 2007 (10.35 ¢/kWh).¹
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6 The costs shown in Table 1 include only annual operating costs and exclude the capital
7 costs related to the purchase and installation of the heating systems. Consumers who use
8 an oil-fired stand-alone water heater usually rent these units from their supplier for an
9 additional \$150 per year. This fee has not been included in the Table 1 comparison.

¹ The estimate of the marginal cost of demand end energy supply to the Domestic Class is provided in Table 17, Appendix A, of the Rate Design Review, Volume 2, Tab 13.