Q. 1 Provide a comparison of the cost to the consumer of hot water for a typical home 2 using oil and electricity at current rates. In the comparison, show Newfoundland 3 4 Power's cost of supplying electricity for hot water for a typical home. 5 A. The cost to the consumer of hot water for a typical home using electricity is \$375 per year 6 (excluding taxes). This cost is calculated assuming energy usage of 5,400 kWh per year 7 and using electrical rates effective September 1, 2002. 8 9 The cost to the consumer of hot water for a typical home using furnace oil is \$359 per year 10 (excluding taxes). This cost is calculated assuming: 11 (i) the hot water is provided directly from the furnace; the amount of furnace oil equivalent to 5,400 kWh per year based on a seasonal 12 (ii) 13 efficiency of 78 per cent (645 litres); 14 (iii) the average price of furnace oil in Newfoundland Power's service area as posted by 15 the Petroleum Products Pricing Commission on December 15, 2002 (50.5 cents per 16 litre): 17 (iv) furnace electricity usage of 480 kWh per year; and electrical rates effective September 1, 2002. 18 (v) 19 20 Consumers who use an oil-fired stand-alone tank usually rent these units from their 21 supplier for additional \$168 per year. This fee has not been included in the above price 22 comparison. 23 24 Newfoundland Power's cost of supplying electricity for hot water can be viewed from either an embedded cost basis or from a marginal/incremental cost basis. Electrical rates 25 26 are reasonably reflective of embedded costs for each class of service as indicated by the 27 revenue to cost ratios being between 90% and 110% (as shown on page 12 of Mr. Henderson's testimony). Therefore Newfoundland Power's embedded cost of supplying 28 29 electrically heated hot water can be approximated by the costs to the consumer for the 30 electricity used. 31 32 The marginal/incremental cost of supplying electricity can be broken down between the 33 cost of supplying energy and the cost of providing capacity. The incremental cost of 34 supplying electrical energy for hot water can be approximated using the short run marginal 35 energy cost of 5.07 cents/kWh shown in the Company's response to Request for Information PUB-221. However, the incremental cost of providing capacity on the 36 37 electrical system for heating water is not available. The Company does not have an 38 estimate for incremental capacity costs that can be used to provide a reasonable estimate of 39 the incremental costs of supplying different forms of heating water.