

1 Q. (a) Provide detailed calculations of the interruptible rate credit provided to
2 participating industrials (HGB, page 7, lines 21-25).

3

4 (b) What operating criterion is used to interrupt the customers on the
5 interruptible rate?

6

7 (c) Provide the statistics on the number of interruptions per year
8 requested and the interruptible credits provided for each year since
9 the creation of the interruptible rate.

10

11

12 A (a) In 1993, Hydro entered into an agreement with the Abitibi
13 Consolidated Inc. mill at Stephenville for the supply to Hydro of 46
14 MW of interruptible demand. The rate was determined as follows:

15

16 **For Demand**

17

18 - Capital Cost Estimate for a gas turbine in 1993

19 = $\$50,987,000/50,000 \text{ kW} = \$1,040/\text{kW}$

20 - Capital Recovery based on a uniform amount payment using 11%
21 interest and 30 year life = $0.1150 \times \$1,040/\text{kW} = \$119.6/\text{kW}$

22 - Adjustments to account for terms of service:

23 1. Annual availability – December to March. 70% of LOLE index
24 occurs during this period, therefore $\$119.6/\text{kW} \times 0.70 =$
25 $\$83.7/\text{kW}$;

26 2. Daily availability – partial day with greater weighting for peak
27 hours, i.e. $\$83.7/\text{kW} \times 0.75 = \$62.8/\text{kW}$; and

1 3. Equivalency – adjustment to account for inability to provide
2 voltage support and emergency backups,
3
4 i.e. $\$68.2/\text{kW} \times 0.90 = \$56.1/\text{kW}$

5
6 - Converting the annual estimate to a monthly rate, i.e.
7 $\$56.1/\text{kW} \div 4 = \$14.1/\text{kW}$

8
9 **for Energy**

10
11 The energy rate was based on 90% of the production fuel cost from existing
12 gas turbines for energy interrupted. The energy interrupted was based on
13 the demand interrupted over the number of hours of interruption.

14
15 It was recognized that during the course of negotiations there may be other
16 factors that would arise with respect to conditions of availability and further
17 adjustments to the rate may be required for these changes. As well, since
18 the monthly demand charge for firm service was $\$8.25/\text{kW}$ and the demand
19 credit payment by Hydro was viewed, essentially a discount to the firm
20 service provided. It was decided to offer $\$7.05/\text{kW}$ as the interruptible rate in
21 negotiations, which was accepted by Abitibi Consolidated Inc.

22
23 (b) Hydro has two types of interruptible arrangements. One is power and
24 energy supplied to industrial customers above their Power on Order
25 and is called either Interruptible or Interruptible "A" Power, hereafter
26 called Interruptible "A" Power. The second arrangement enables
27 Hydro to interrupt a portion of the customer's Power on Order and is
28 called Interruptible "B" Power. The arrangement discussed in item (a)
29 above is Interruptible "B" Power.

1 ACI (Stephenville) has the only Interruptible "B" arrangement. They
2 interrupt their load when requested by the Energy Control Center.
3 These interruptions are requested when Hydro must start its gas
4 turbine units to meet winter peak power demands. A request to
5 interrupt is made one (1) hour in advance and the interruption can be
6 up to ten (10) hours per day.

7
8 Customers taking Interruptible "A" Power have that portion of their
9 load interrupted at anytime Hydro considers it necessary to meet firm
10 load requirements. However, at times, these customers will be given
11 the option to continue to receive the Interruptible "A" Power if they are
12 willing to pay for the energy at the cost of Hydro running its gas
13 turbine units. This option is only available when there is sufficient gas
14 turbine capability available. There are no restrictions on timing or
15 duration of these interruptions.

16
17 (c) The table below provides the statistics on the number of interruptions
18 per year requested and the interruptible credits provided for each year
19 since the creation of the interruptible rate.

**Newfoundland and Labrador Hydro
Interruptible B Interruptions**

Season	Interruptions	Energy Credit	Demand Credit	Capacity Payment	Season Total
1993/1994	5	\$41,720	\$7,512	\$1,297,200	\$1,346,432
1994/1995	3	\$37,282	\$6,793	\$1,297,200	\$1,341,275
1995/1996				\$1,297,200	\$1,297,200
1996/1997				\$1,297,200	\$1,297,200
1997/1998				\$1,297,200	\$1,297,200
1998/1999				\$1,297,200	\$1,297,200
1999/2000				\$1,297,200	\$1,297,200
2000/2001				\$1,297,200	\$1,297,200