Q. Secondary Energy:

a) What is the existing "firming up charge" for secondary energy supplied to NP by Corner Brook Pulp and Paper Limited? How was it determined? How has it been applied in each year since it was instituted?

b) Explain in detail, setting out all calculations and indicating the source of all information as required in Schedule 1.4 of the Cost of Service Study, how the proposed firming up charge was determined. In particulate, explain how each of the estimates related to the gas turbine were derived from the Cost of Service information.

c) Identify and explain each factor accounting for the reduction in this rate as proposed by Hydro.

A. a) The existing firming up charge for secondary energy supplied to NP by Corner Brook Pulp and Paper Limited is $0.01034 per kWh. It was determined in the same manner as the proposed rate (Exhibit JAB-1, page 26), using 1992 test year data, as approved by the Board in the 1992 rate Hearing. The rate has been applied to secondary energy purchased from Corner Brook Pulp and Paper and delivered to Newfoundland Power.

b) The detailed calculation of the rate is attached.

c) While total costs increased, the unit cost for gas turbines has decreased significantly, mostly due to the lower depreciation recorded as the gas turbines have aged. As well, the consequent lower net book value of the gas turbines has attracted less return. Unit costs for Transmission and Terminal Stations have increased only slightly. The

cost per kW is the sum of the Gas Turbine unit costs and the Transmission and Terminals unit costs, resulting in the reduced per kWh rate.

Line No.	1 Description	2 Total		3 Gas Turbine	4 Transmission & Terminals	Source
1	Operating & Maintenance	9,525,036		513,566		Col 3: Exhibit JAB-1, Page 33, Line 4,Column 3
					9,011,470	Col 4: Exhibit JAB-1, Page 33, Line 8,Column 5
2	O&M Overhead	7,045,021			6,646,389	Exhibit JAB-1, Page 33, Line 22 ,Column 5
3	O&M		513,566			Row 1
4	Divided by					
5	Subtotal Production, Transmission and Distribution Production Demand		14,689,207			Exhibit JAB-1, Page 33, Line 12 ,Column 3
6	Multiplied by					
7	Production Demand Overhead		11,401,822			
8			398,632	398,632		
9	Depreciation	8,986,808			8,761,594	Exhibit JAB-1, Page 35, Line 40 ,Column 5
10	Depreciation		133,054			Exhibit JAB-1, Page 35, Line 9 ,Column 3
11	Multiplied by					
12			1			
13	Plus					
14	(Subtotal General Plant, Telecontrol, Feasibility Study & Software Production Demand Depreciation		2,470,658			Exhibit JAB-1, Page 35, Lines 34-38 ,Column 3
15	Divided by					
16	Subtotal Production, Transmission and Distribution Production Demand Depreciation)		3,566,951			
			225,214	225,214		
17	Return	19,642,937				
18	Percent of Total Prod Demand NBV		0.73%			Exhibit JAB-1, Page 26
19	Multiplied by:					
20	(Return on Debt - Production Demand		26,760,190			Exhibit JAB-1, Page 36, Lines 11, Column 3
21						
22	Return on Equity - Production Demand)		1,766,055			Exhibit JAB-1, Page 36, Lines 12, Column 3
23			208,571	208,571		
24	Return on Debt - Transmission Demand		18,231,188			Exhibit JAB-1, Page 36, Lines 11, Column 5
25	Return on Equity - Transmission Demand		1,203,178			Exhibit JAB-1, Page 36, Lines 12, Column 5
26			19,434,367		19,434,367	
27	**Total**	**45,199,802**		**1,345,982**	**43,853,820**	

28	Capacity (kW)					
29	Hardwoods Gas Turbine		54,000			Schedule 1, R.J. Henderson
30	Stephenville Gas Turbine		54,000			
31	Holyrood Gas Turbine		10,000			
32			118,000	118,000		
33	Bay d'Espoir		592,000			Schedule 1, R.J. Henderson
34	Upper Salmon		84,000			Schedule 1, R.J. Henderson
35	Hinds Lake		75,000			Schedule 1, R.J. Henderson
36	Cat Arm		127,000			Schedule 1, R.J. Henderson
37	Paradise River		8,000			Schedule 1, R.J. Henderson
38	Snooks Arm/V. Bight		1,400			Schedule 1, R.J. Henderson
39	Holyrood		465,500			Schedule 1, R.J. Henderson
40	Gas Turbine		118,000			Row 32
41	Diesel		14,700			Schedule 1, R.J. Henderson
42			1,485,600		1,485,600	
43	Cost ($/kW)	$40.93		$11.41		Row 27 divided by row 32
44					$29.52	Row 27 divided by row 42
45	Rate ($/kWh)	$0.00876				
46	Cost ($/kW)		40.93			Row 43
47	Multiplied by (NF Power CP at output of transmission,					
48	lines and substations		953,251			CP, After generation credit and NP generation
49	Divided by					
50	NF Power forecast sales)		4,454,800			
51	Divided by					
52			1,000			To Convert to $/kWh
53		$ 0.00876	$ 0.00876			